

PLANNING AND IMPLEMENTATION OF
AGRICULTURAL DEVELOPMENT IN INDIA
WITH SPECIAL REFERENCE TO MAHARASHTRA

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ABBREVIATIONS

AEO	: Agricultural Extension Officer
A.P.	: Andhra Pradesh
APC	: Agricultural Prices Commission
APMC	: Agricultural Produce Market Committee
ARC	: Administrative Reforms Commission
ARDC	: Agricultural Refinance and Development Corporation
ASC	: Agro Service Centres
A.U.	: Agricultural Universities
BDO	: Block Development Officer
BLIS Act	: Bombay Land Improvement Schemes Act, 1942
CAD	: Command Area Development
CADA	: Command Area Development Authorities
CCA	: Culturable Command Area
C.D	: Community Development
CEO	: Chief Executive Officer
CSC	: Central Seed Committee
CVRC	: Central Varietal Release Committee
CWC	: Central Water Commission
DoA	: Directorate of Agriculture
DPAP	: Drought Prone Areas Programme
DPDC	: District Planning and Development Council
EGS	: Employment Guarantee Scheme
FAO	: Food and Agriculture Organization
FSS	: Farmers' Service Societies
GSDA	: Groundwater Survey and Development Agency
HYV	: High Yielding Varieties

ABBREVIATIONS (contd...)

IAAP	: Intensive Agricultural Area Programme
IADP	: Intensive Agricultural District Programme
ICAR	: Indian Council of Agricultural Research
IDCOM	: Irrigation Development Corporation of Maharashtra.
LDA	: Land Development Agency
LDB	: Land Development Banks
L.I	: Lift Irrigation
MAIDC	: Maharashtra Agro-Industries Development Corporation Ltd.
MARKFED	: Maharashtra State Co-operative Marketing Federation Ltd.
MLA	: Member of Legislative Assembly
MLDC	: Maharashtra Land Development Corporation
MP	: Member of Parliament
MSEB	: Maharashtra State Electricity Board
MSFC	: Maharashtra State Farming Corporation
MSSC	: Maharashtra State Seeds Corporation Ltd.
NCA	: National Commission on Agriculture
NDC	: National Development Council
NES	: National Extension Service
NSC	: National Seeds Corporation Ltd.
NSP	: National Seeds Project
o.f.d.	: On-farm-development
PAC	: Public Accounts Committee
PACS	: Primary Agricultural Credit Societies
PAO	: Principal Agricultural Officer
RBI	: Reserve Bank of India
REC	: Rural Electrification Corporation

ABBREVIATIONS (contd....)

RWS	: Rotational Water Supply
SAO	: Superintending Agricultural Officer
SDAO	: Sub-Divisional Agricultural Officer
SFDA	: Small Farmers' Development Agency
SMS	: Subject-Matter Specialists
SSC	: State Seeds Corporations
SVRC	: State Varietal Release Committee
TSP	: Tribal Sub Plan
T&V	: Training and Visit
VEW	: Village Extension Worker
VLW	: Village Level Worker or Gramsevak
ZP	: Zilla Parishad

C H A P T E R - 1

INTRODUCTION

Agricultural development is the end result of the decisions and the efforts of the farmers. It is the responsibility of the Government to bring about conditions in which the farmers take the right kind of decisions and are able to maximise the fruits of their production efforts. As the process of development unfolds, this responsibility increases; and Government's role in agricultural development becomes more and more important.

The role of Government in agricultural development begins with setting its goals and objectives. These are then given a concrete shape in the national Plans in the form of specific production targets. The Plans also spell out the measures which the Government intends to adopt in order that these targets are reached.

Administration, in its wide connotation which includes the Central Ministries, State Government departments, Public Undertakings, and Agricultural Universities, is primarily responsible for translating the blueprint contained in the Plans into action. This would involve decision-making at various levels of administration in consonance with the Plan goals, and coordinated action by different departments and agencies connected with agricultural development.

Administration is quite often seen to be the limiting factor in development. Administrative problems tend to define the boundaries of developmental possibilities.

This is true of agricultural development also. It is however possible to push back the horizon of possibilities in agricultural development by minimising the administrative problems. In order to do this, it is necessary to analyse the problems faced by the administration at various levels. Such an analysis will help in diagnosing whether the real problem is the administrative structure being not quite suitable for implementing the chosen programme, or whether the procedures are responsible for affecting the performance of administration, or whether there is any other inhibiting factor. Only such systematic diagnostic studies in different fields of development will lead to better structures, better procedures and better communication within administration being evolved; which in turn will result in a much better performance by administration in the tasks given to it.

But, surprisingly, the importance of such an enquiry has not been adequately recognised. It is common experience that very important programmes are entrusted for implementation to an unprepared administration. Not enough attention is paid to anticipating the administrative problems that would arise and adopting appropriate measures to overcome them. When things go wrong, hastily conceived remedies are put forward, without any enquiry into their relevance to the problem. There have been many such instances in the field of agricultural development, where remedies to administrative problems, in the form of new institutions or new administrative structures

have been prescribed and adopted; they have not worked, because they were not the right kind of remedies.

Apart from administrative problems there are other limiting factors as well. One of them is the framework in which planning is done. This framework has its own ground rules which do not always facilitate taking what can be regarded as rational decisions in the field of agricultural development. For instance, Planning Commission, in its understandable anxiety to have a bigger Plan, prods the State Governments to increase the State Plan outlays by severely curtailing the non-Plan expenditure. This often results in the neglect of maintenance of irrigation canals, which affects agricultural production. To cite another example, pest control operations undertaken by the State Agriculture Departments are classified as non-Plan, and therefore get a low priority in the framework of planning.

Another factor is the inconsistency between the policy of one wing of the Government and the objectives of another. To illustrate, it is commonly felt that repayment schedule prescribed by the Agricultural Refinance and Development Corporation for long term loans for agriculture are not realistic, and that such an unrealistic repayment schedule results in defaults by the farmers. The insistence by the Reserve Bank of India that farmers should repay the crop loans taken during a crop year before the crop loan for the next year is disbursed is again considered unrealistic. To cite another example, the State Animal

Husbandry department has, for a long time been pleading for a ban on the export of oil cake, as such export reduces the local availability of cattle feed. But as oil cake fetches a good price in the international markets, even public sector undertakings would prefer to export the commodity. Even within the Government of India, while the Finance and Commerce Ministries would favour export, the Agriculture Ministry would like to ban it. Thus the policies of the different agencies whose decisions are very relevant to agricultural development are not always consistent with the attainment of the Plan targets for agricultural development. This is an inevitable factor whose presence is to be recognised and accepted. It is very difficult to bend the policies of the different agencies towards one goal, namely agricultural development, without affecting other aspects of the economy. An obvious example is the policy regarding agricultural prices, which needs to take into account the interests of the producers as well as of consumers. If only the producers' interests are kept in view, it would probably satisfy those in charge of agricultural development; but such a policy could result in a general rise in wages, which, in turn would push up the prices of manufactured goods. This would not be in the long term interest of the economy. Economic development planning is thus a very delicate balancing act.

Another important limiting factor, which is beyond human control is the course of the monsoon. Then there are

social and political factors also at play, which often make administration of agricultural development a very difficult task.

Administration has to perform its tasks and fulfil the expectations of the policymakers in the midst of all these factors. This thesis examines the functioning of agricultural administration. While doing so, the thesis addresses the following questions: What are the tools employed in order to achieve agricultural development? How are the strategies which are adopted, embodied in the Central and State Plans? How is planning for agricultural development done and what are the attendant problems? Which are the different agencies involved in the task of achieving agricultural development? How do they function, and what problems are encountered by them in the performance of their tasks? To what extent these problems can be overcome? What lessons can be learnt from the experience gained so far, in the field of agricultural development?

Agricultural development is a very vast field. It includes crop husbandry, animal husbandry, dairy development, fisheries development, afforestation, agricultural credit, agricultural research, management of natural calamities like drought and floods, infrastructural works like irrigation and flood control, development of cooperative institutions in processing and marketing of agricultural produce, and development of warehousing and marketing infrastructure. Each of the above areas has a wide gamut of activities. Let us take crop husbandry for instance.

It includes input planning and supply, soil and water conservation, agricultural extension, and adoption of specific measures for increasing production, like price incentives, and subsidies on inputs. The subject of "inputs" again consists of many components, like, seeds, fertilisers, pesticides and agricultural implements. Agricultural credit, a very crucial requirement for agricultural development, is by itself a very wide area. It is obviously not possible to cover the entire ground in a thesis. A selection had therefore to be made. Areas where the problems encountered are typical, and which offer useful lessons to administrators and policymakers have been chosen for detailed examination.

Chapter 2 of this thesis contains an account of the evolution of agricultural development strategy from 1951 onwards. In any field of development the administrative set-up has to be carefully chosen; the structure as well as the pattern of communication within administration should be compatible with the chosen strategy of development. Chapter 2 examines what attempts were made in this direction and with what results.

Chapter 3 gives an account of the manner in which planning for agricultural development is done. Planning in agriculture is essentially a multi-disciplinary exercise. Soil scientist would say that without soil no agriculture is possible, and what is most important is to undertake extensive soil conservation and land development programmes, and to teach the farmers to take care of the soil by adopting proper methods of tillage; he would plead for

allocation of more financial resources in the Plan for this purpose. Crop specialists would argue that the most urgent problem facing the country is to increase the production of specific crops like foodgrains, oilseeds and pulses and maximum emphasis should therefore be given in the Plan to provide incentives to the farmers for increasing the production of these crops; and that programmes like soil conservation could wait. Extension experts would argue that what is important is agricultural extension and that with a good extension system, there is no need for special incentives to increase the production of specific crops, as extension alone would bring about quick increases in production; they would therefore plead for a higher allocation of financial resources in the Plan for agricultural extension. Research scientists would emphasise the importance of research and produce elaborate evidence to prove the point that investment in agricultural research has a very high pay-off. A carefully prepared agricultural development plan would strike a balance between these claims and also between the short-term requirements and what is desirable in the long term. A plan emphasising a purely short-term objective would probably ignore items like soil conservation and agricultural research, whose impact is visible only over a very long period. The problems involved in formulating a consistent agricultural development plan within the existing planning framework are examined in Chapter 3.

Chapter 4 contains an account of the different departments and agencies involved in the task of agricultural development. The account is confined to Maharashtra but the functioning of all-India institutions is covered. This account leads us to an examination of how in a typical year the wheels of administration move in relation to agricultural development; this is given in Chapter 5. This chapter described how targets of agricultural production are prescribed and what problems are faced by the administration in fulfilling these targets.

Chapters 6, 7, and 8 analyse the problems in certain selected areas. As mentioned earlier, these areas have been chosen for analysis, as the problems encountered in these areas are typical. Seed and water also happen to be two of the crucial inputs in technology-oriented agriculture.

Employment Guarantee Scheme whose relevance to agricultural development is examined in Chapter 9, falls in a different category. From the First Plan onwards there has been a considerable talk about utilising rural manpower for agricultural development. We find this theme recurring in most of the meetings of the National Development Council during the first three Plan periods. We also find them often mentioned in the Plan documents. After the green revolution, the emphasis shifted to gearing up the administrative machinery to meet the challenges of technology-oriented agriculture, and therefore the attention towards utilising rural manpower for agricultural

development was not very evident in the Fourth and Fifth Five Year Plans. But the interest in this has now revived even at the national level. Since the Employment Guarantee Scheme is the first systematic effort in this direction, the feasibility of such an attempt is analysed in Chapter 9. The various factors which come into play in this area are also described.

Chapter 10 summarises the main conclusions of the earlier chapters and makes suggestions for enabling the administration to meet the future challenges.

C H A P T E R 2

Evolution of agricultural development
strategies in Indian Plans.

C H A P T E R 2

Evolution of agricultural development strategies in Indian Plans

1. Introduction

In the present chapter, an account of the evolution of agricultural development strategies adopted in India since the commencement of the First Five Year Plan in 1951 is given. Alongside the evolution of the strategies has also been the evolution of the institutional and administrative framework designed for carrying out the strategies. The evolution of this framework is also described in this chapter.

2. First Five Year Plan-the beginning of Community Development Programme.

2.1 During the First Plan, agricultural development was sought to be achieved mostly through extension, institutional changes and land reforms. According to the Review of the First Five Year Plan: "It was recognised that structural and institutional changes of a far-reaching character would be necessary if the process of development was to bring forth the desired results not merely in terms of the increase in output but in terms of an increase in the production potential and of the satisfaction of vital democratic and egalitarian urges within the community. The plan indicated various directions in which action would be required in pursuance of this objective: the establishment of a nation-wide national extension and community projects movement, land reforms, the expansion and strengthening of cooperative organisations in credit, in trade, in housing, and in certain spheres of production, reorientation of the banking and credit structure and the establishment of a new relationship between the public and the private sector in the interests of orderly growth."(1) Obviously, the immediate concern was to develop

appropriate institutions for undertaking the task of agricultural development and, in fact, several other aspects of rural development. Reliance on local institutions at the village level, like cooperatives and village panchayats for many aspects of rural development, including, importantly, agricultural development, formed the core of the proposals contained in the First Five Year Plan.

2.2 Extension was undertaken through the Community Development (C.D.) programme. While agricultural production was the main emphasis of the programme, the basic idea underlying the C.D. programme was to bring about an all round development of rural life as a whole, encompassing economic, social and cultural aspects. The two essential elements in community development are participation by the people themselves in efforts to improve their level of living with as much reliance as possible on their own initiative; and the provision of technical and other services in ways which would encourage initiative, self-help and mutual help and make these more effective. The core of the C.D. programme was thus local participation and, Government's participation was, in due course, to be reduced to no more than a catalyst to community action. The First Plan document clearly stated that "people's participation" was "the very essence of the programme."(2)

2.3 This approach towards community development had in fact been tried earlier and programmes on a small scale had been carried out in different parts of India. But it was in the context of increasing agricultural production that C.D. acquired importance in the First Five Year Plan.

"After the **Grow More Food** Campaign failed to produce the

required result, an Enquiry Committee was set up to investigate the causes of failure, under the chairmanship of Shri V.T. Krishnamachari. Their report had much to do with the initiation of the Community Development Project. It pointed out that 'the economic aspects of village life cannot be detached from the broader social aspect; and agricultural improvement is inextricably linked with the whole set of social problems'..... 'that all aspects of rural life are inter-related and that no lasting results can be achieved if individual aspects of it are dealt in isolation'." (3) It was thus considered that the approach and methods of community development are best suited to motivate farmers to adopt better methods of farming, which is within their capacity to do with their own local resources, such as, use of better seeds which they can themselves multiply and store for next year's sowing, use of irrigation from small irrigation works that, through community effort, they can themselves construct and maintain, the adoption of simple soil conservation and crop protection measures which they can easily adopt. Capital resources being scarce in the agricultural sector, it was thought that community development should exploit the advantage of relying on local resources, particularly on the availability of abundant unutilised manpower. Thus the fundamental approach towards agricultural development was to use extension as a method to motivate the farmers gradually to adopt better techniques of production and also to construct the necessary infrastructure for agricultural development through the utilisation of rural manpower.

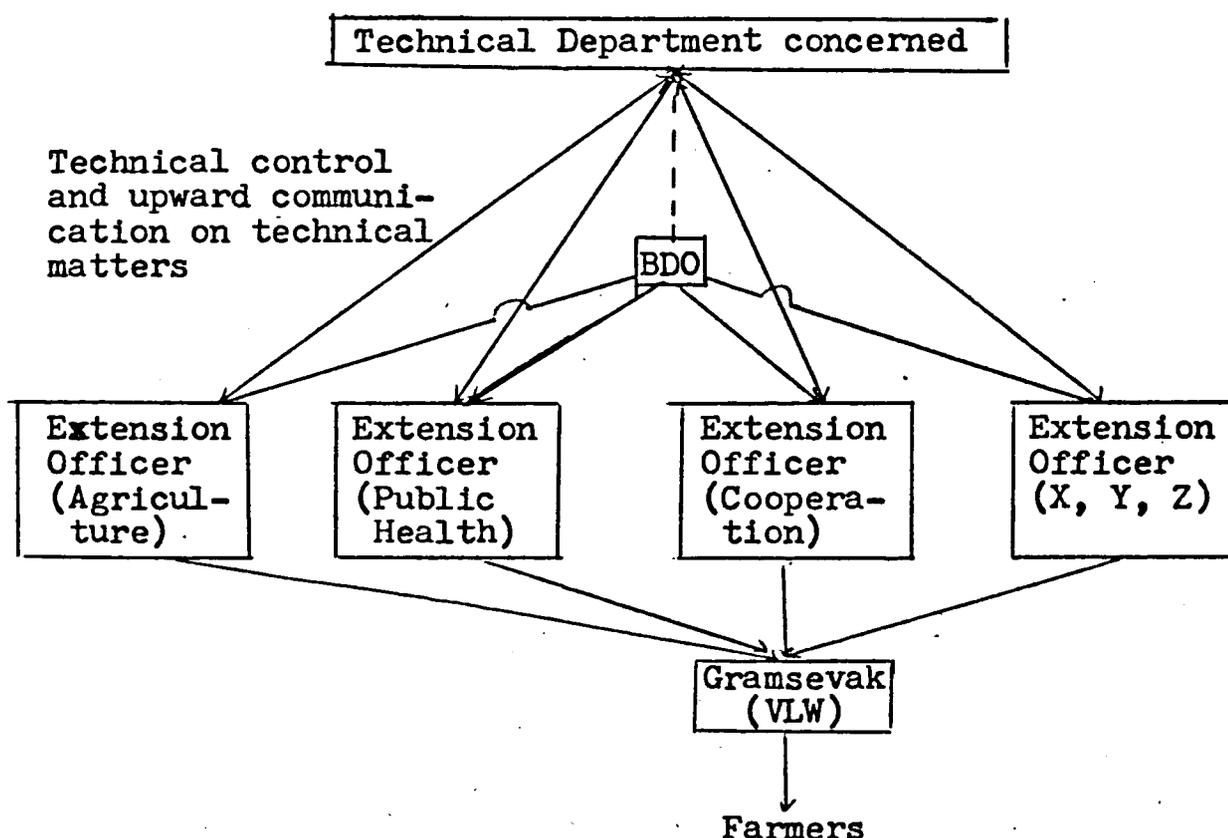
2.4 Along with the C.D. programme, another important development which took place was in the field of agricultural credit. Institutional credit system in the rural sector, existing since

the beginning of the century, was not geared to meet the requirements of agricultural development. The All India Rural Credit Survey Committee appointed by the Reserve Bank of India drew attention to the failure of the existing system to meet the credit needs of agriculture; the Committee pointed out in its Report (1954) that the cooperative credit institutions accounted for only 3 per cent of the total credit availed of by the farmers. The concept of lending for a credit-worthy purpose and the introduction of crop loan were major contributions of the Committee.

3. Administrative set-up - Block Development Officer and the C.D. Block.

3.1 The administrative set up for carrying out the programme was designed so as to be in consonance with the core objective of the programme of bringing about an all round development of the rural area with focus on agricultural development. After some initial experiments, described in para 4.2 of this chapter, the unit of development was eventually to be a C.D. block. The head of the block level administration was the Block Development Officer (BDO). The BDO was assisted by a team of Extension Officers for different fields of work - Agriculture, Animal Husbandry, Irrigation and Works, Cooperation, Panchayats, Public Health, Social Education, Village Industries and Women and Children's Welfare. The idea of a team of extension officers from different departments functioning at the block level under the BDO was considered essential for achieving the basic objectives of the C.D. programme. It was made clear that the

block level set-up was not to be a "sector" by itself functioning alongside other "sectors" like public works, irrigation, public health etc., but is the "medium" through which all the sector departments concerned would function and seek to reach the people. The relationship between the block level set-up and the different sector(line) departments, and the link between the set-up and the farmers are given in the following diagram:



While, at the block level, there were different Extension Officers, they all functioned through the multi-purpose Village Level Worker (VLW) or Gramsevak as he was called. In fact, the gramsevak was to be the only link between the farmer and the block administration. This fitted in with the underlying philosophy of the C.D. programme summed up in the Review of the First Five Year Plan as follows:

"When different departments of the Government approach the villager, each from the aspects of its own work, the effect on the villager is apt to be confusing and no permanent impression is created. The peasant's life is not cut into segments, in the way the Government's activities are apt to be; the approach to the villager has, therefore, to be a coordinated one, and has to comprehend his whole life. Such an approach has to be made, not through a multiplicity of departmental officials, but through an agent common at least to the principal departments engaged in rural work." (4)

3.2 Eventhough it could be debated whether its immediate contribution to agricultural production during the First Five Year Plan was significant, the C.D. programme was nevertheless a significant step in the development of institutional framework for agricultural and rural development. To a considerable extent it anticipated the currently fashionable "integrated approaches" to rural development. To appreciate how much of a departure it then constituted, it is necessary to realise that prior to the commencement of the programme the different line departments were hierarchically structured, each department having its own roots upto the district level or even below. The C.D. programme, for the first time, brought the line functionaries of the different developmental departments like irrigation, public works, public health, agriculture, animal husbandry, cooperation etc. at the block level, under the administrative control (not mere coordination) of the BDO.

3.3 This was not achieved easily, nor did it work smoothly. The technical officers of the block team resented being

brought under the administrative control of a generalist administrator (who was of the rank of a Tahsildar). It was therefore very difficult to obtain technical officers on loan from the respective line departments; recruitment from the open market to these cadres of Extension Officers was not very successful. The line departments who were to provide the necessary technical support to the block level team were at best cool and at worst hostile towards the C.D. programme. The Review of the First Five Year Plan observed as follows:

"Until towards the end of the First Plan there was perhaps a tendency on the part of individual development departments to consider that national extension and community project areas were in some way less their concern than other areas."(5)

3.4 The different line departments did not easily get reconciled to the idea of their "base" being brought under the administrative control of the BDO. There was a good deal of argument about the extent of control of the technical departments over the respective technical officers of the block team. It was recognised that the technical officers of the block team should receive technical guidance from the higher officers of their respective departments and be subject to their technical control. But it was not easy to reconcile this "technical control" with the "administrative" and "operational" control exercised by the BDO. The State Governments drew up detailed instructions demarcating the field of control of the higher technical officers of the line departments and of the BDO. The Manual on Community Development brought out by the then Government of Bombay devotes an entire Chapter to this issue(6). But this conflict could not be easily resolved through

-instructions and circulars.

3.5 In fact, the problem of ensuring a coordinated implementation of any multi-sector rural development project has so far defied a satisfactory solution. The block set-up perhaps came nearest to a solution because the different departmental functionaries at the block level were placed directly under the control of the BDO. Every such move invariably produces a pull in the opposite direction by the line departments trying to break away from such a control. Different solutions, short of such a control, have been attempted in the multi-sector projects which were started later in the 60s and 70s; these are discussed in Chapters 4 and 8. In Maharashtra, when the Zilla Parishads (ZP) were started in 1962, the effective control over the functionaries of the different development departments was kept at the district level. To what extent this solution worked and what problems were faced are described in Chapter 4. The history of agricultural development efforts is also the history of attempts to devise a suitable administrative set-up which would ensure a coordinated working of the different line departments connected with different aspects of agricultural development.

4. Agricultural Development Strategy in the First Plan.

4.1 While the C.D. programme was the medium through which agricultural development was to be brought about, the strategy of agricultural development, as announced in the Draft Outline of the First Five Year Plan, was to concentrate resources and extension in the most favourable areas of the country, so as to obtain a quick increase in agricultural production. The Draft Outline expressed a clear preference in favour of increasing production even if it meant going contrary to the

socialistic fervour of the policymakers. The Draft Outline emphasised that "it is essential that every State should draw up a programme of work for bringing certain areas, one after another, under intensive development, while holding the rest of the State more thinly. Since additional production is the most urgent objective, those areas should be selected where, on account of irrigation facilities or assured rainfall, additional effort is likely to produce more substantial results."(7)

Concern for achieving an immediate increase in agricultural production is obvious from the fact that the Draft Outline even went to the extent of advocating a postponement of land reforms. The argument contained in the Draft Outline was that "on the larger farms production will fall, and, for a period at any rate, on other farms also, and it may well be that the decline in production may have a serious effect on the well-being and stability of rural society as a whole."(8)

4.2 In line with this approach to agricultural development indicated in the Draft Outline of the First Five Year Plan, of concentration of administrative efforts in a few selected areas of promise, the C.D. programme was started in May, 1952 in 55 selected areas comprising 27,388 villages and covering a population of 16.7 million (9). In each of the areas, a "pilot project", called Community Project, was started. Each project area contained about 300 villages with a population of about 2.90 lakhs, and a budget of about Rs.65.00 lakhs for three years. The project was placed under the charge of a Project Executive Officer, assisted by two Assistant Project Officers. The project, for convenience, was to be divided into suitable blocks, but the unit of administration was to be

the entire project. Further, as the idea was more to develop the area covered by the project through intensive efforts, there was no particular concern for identification of such project with a regular administrative unit. In fact, since increased agricultural production was the most urgent objective, the selection of areas was done more with reference to the existence of irrigation facilities or assured rainfall rather than on the basis of existing administrative boundaries. This approach of choosing as the unit of development an area different from the unit of administration was another innovation introduced in the initial phase of the First Five Year Plan.

4.3 Ever since the publication of the Draft Outline of the First Plan, a good deal of political debate started regarding the approach to agricultural development. When quick increase in agricultural production was the immediate need, concentration of resources, both administrative and financial, over a few compact areas with promise of results appeared to be the direct and simple answer. But, at the same time, political and social considerations tended to exert a pull towards spreading developmental efforts over all the areas. This oscillation of policy between concentration and diffusion runs through the evolution of agricultural development administration. The interplay of forces finally settled the First Plan strategy in favour of dispersion. In other words, what finally emerged in the First Five Year Plan was a broad front strategy. The final version of the First Plan clearly stated that a national extension organisation, on the pattern of the

Community Projects would be set up, covering the entire rural area within ten years (10).

4.4 Eventhough the adoption of the broad front approach was perhaps the result of an intense political debate, it should be noted that, at that time, there were no technological options in agriculture, and even an intensive approach in selected areas would not have resulted in quantum increases in production. A creeping increase attained over a large area would, with low technology agriculture, result in a higher overall increase in production. As it happened, the highest growth rate of agricultural production of 3.3 per cent per annum was achieved in the 50s; but the contribution of increase in yield (land productivity) was only 1.3 per cent, and the remaining increase of almost 2 per cent came from extension of cropped area. It has been observed that a large number of districts scattered all over the country, but most of them in the dry areas of Rajasthan, M.P., Maharashtra, Gujarat, A.P. and Karnataka, registered more than 5 per cent growth.(11) These areas would most probably have been left out in a selective approach. The lesson one could draw is that a gradualist strategy, depending upon institutional reform and utilisation of idle rural manpower in order to achieve an increase in agricultural production (which was the only option then available), needed to be broad-front even from economic considerations.

5. National Extension Service (NES).

5.1 Another development which took place along with the shift of approach from concentration to dispersion was the realignment of the boundaries of the C.D.project areas to

conform to natural administrative units. The pilot projects mentioned earlier dealt with the problems of finding out a suitable pattern for intensive rural development. The main question, namely, the establishment of an extension organisation throughout the country as a permanent development structure, stressed by the Planning Commission in the First Five Year Plan, however, remained to be tackled in a systematic way. The Grow More Food Enquiry Committee, which had gone into this question by this time, had recommended that for such an extension organisation, the taluka or tehsil, the lowest administrative unit consisting of 100 to 120 villages, should constitute a convenient development block, in charge of a Development Officer or an Extension Officer. The Revenue Sub-divisional Officer, according to the Committee, should perform the functions of the Extension Officer in his area. The Collector, in-charge of the district, in turn also was to be the Chief Extension Officer for his district. The concept was thus to link the extension organisation with the administrative organisation and bring about a transformation of the existing regulatory machinery into a welfare administration. According to this pattern, while at the block level the development and regulatory functions were kept distinct with the BDO and Tahsildar respectively, at the higher levels of administration, namely, the Sub-division and the District, the same officer who was earlier a purely regulatory officer, was to perform both development and regulatory functions. This arrangement, with only minor changes, has continued till today in most of the States.

5.2 The pilot C.D.projects started in 1952 in 55 areas

were accordingly realigned and redesignated as C.D.blocks in 1953. Under the pattern of the new C.D.block, each block area was to consist of only a population of 66,000. The 55 C.D.projects started in 1952, each covering a population of 2.90 lakhs, were considered equivalent to 247 C.D.blocks ($\frac{55 \times 2.90}{.66} = 247$ approx) (12). The total budget for the new C.D.blocks was fixed at Rs.15 lakhs for three years. The change over from the C.D.projects of 1952 to the new pattern of C.D.blocks of 1953 did not mean any dilution of the intensity of effort in areas already covered by these blocks, as the budget of Rs.65 lakhs for the C.D.project (1952) more or less corresponded to the budget of Rs.15 lakhs for the 1953 C.D.block ($\text{Rs.65 lakhs} \times \frac{55}{247} = \text{Rs.15 lakhs}$ approx). In addition to bringing the C.D.projects to the block pattern, 55 more C.D.blocks of the new pattern were set up in 1953-54.

5.3 After the decision in the First Five Year Plan to cover the entire rural area with the National Extension Service, a plan was drawn up spelling out the manner in which this objective could be achieved. It was decided in 1953 that every new block set up would initially be called NES block. It would receive a budget grant of Rs.5.50 lakhs for a period of 3 years. Each such block would have a permanent NES pattern of staff consisting of 6 Extension Officers and 10 Gramsevaks. After 3 years it would pass into an intensive stage and would be called a C.D.block with a larger budget of Rs.15 lakhs. After 3 years of intensive stage, the C.D.block would pass into what was called the post-intensive stage; only a nominal budget grant was admissible but the permanent extension staff was to be retained. Each NES block would thus go through three

stages: NES block (pre-intensive), C.D.block (intensive) and post-intensive. It was also decided that the areas already covered by the 1952 pilot projects or the 1953 C.D.blocks should be treated as having already entered the intensive stage, and, therefore, eligible for a budget of Rs.15 lakhs for three years.

6. Second Five Year Plan - Democratic Decentralisation.

6.1 The agricultural strategy during the Second Five Year Plan was to be mostly a continuation of that of the First Plan. The NES and the C.D.blocks continued to be the focal points of the strategy which, as mentioned earlier, had two main elements: motivating farmers to adopt better farming practices and mobilising rural manpower to construct labour-intensive agricultural infrastructure works. The Plan states:

"An under-developed economy has large resources in manpower which are not being fully utilised. These resources have to be used for creating permanent assets..... One of the central aims of the National Extension Service is to organise the systematic use of manpower resources, particularly in the rural areas, for works of benefit to the community as a whole. This can be done in a number of ways, for instance, in constructing local works such as village roads, fuel plantations, tanks, water supply and drainage and maintaining existing minor irrigation works. When a large work is undertaken, such as an irrigation project, the national extension and community project personnel should take initiative, with the support of non-official leaders, in organising labour cooperatives of villages interested in work on the canal system and connected activities. This is also possible in

regard to roads and other projects....By harnessing voluntary effort and local manpower resources, physical targets in the plan can be supplemented in many fields and even greatly exceeded. The Second Five Year Plan will provide large opportunities for cooperative action along these lines."(13)

6.2 During the Second Plan, the budget of the NES block was reduced to Rs.4.00 lakhs and that of the C.D.block (intensive stage) to Rs.12.00 lakhs. This decision was taken on account of the constraint on the financial resources available for the Plan. The organisational structure, however, remained the same. It was also decided that the conversion from the NES stage to intensive C.D. stage should depend on the performance of individual blocks and only those which had become ripe for the "intensive dose" should be given the advantage of the additional financial provision. This decision really meant that every NES block had to "earn" its transformation into intensive stage, and would not automatically be converted into an intensive block after 3 years. The implication of this decision was not immediately apparent. Those parts of the country which, either because of the favourable agro-climatic factors or because of local initiative, were able to utilise the budget provisions, could develop faster. In a way, even the broad-front strategy embodied in the NES, resulted eventually in some kind of selective approach.

6.3 A strategy which depended so much for its results on a continual dialogue and fruitful partnership between the administration and the people could not sustain for long without the association of the peoples' representatives with administration. The need for such an association was

expressed in the Second Plan document:

"The need for creating a well organised democratic structure of administration within the district is now being widely felt."(14) This realisation ultimately resulted in the setting up of panchayati raj institutions in many States, as a result of the recommendations of the "Report of the Team for the Study of Community Projects and National Extension Service" (popularly known as the Balwantrai Mehta Committee Report)(15). Democratic decentralisation, as the process initiated by the Team's report came to be called, took different forms in different States. Some States, like Andhra Pradesh and Rajasthan, which took the lead, set up effective democratic bodies at the block level, whereas Maharashtra and Gujarat set up such bodies at the district level. The panchayati raj set-up in Maharashtra is described in Chapter 4.

6.4 Apart from bringing about popular participation in administration at district level or block level, an important feature of the report of the Balwantrai Mehta Team was its recommendation that there should be decentralisation of authority and decision making to panchayati raj institutions. However, since Government of India was initially bearing 100 per cent and subsequently (i.e. during the Second Plan) 75% of the expenditure on C.D.programme, the budget of the C.D.block handed down from the Government of India to the States tended to become rather rigid. The prescription to the block level administration that it should respond to the local "felt needs" was not really reflected in the standard "schematic budgets" of the C.D.blocks. The U.N.Evaluation Mission (1957), which

studied the C.D. programme, had expressed the opinion that "there was sometimes too much rigidity in the application of the community development programme sent out by the Centre." (16) The Balwantraji Mehta Team also came to the same conclusion and recommended that the Central Government should only lay down the policy and prescribe the broad outlines of a scheme and then leave it to the State Governments to work out the details to suit local requirements.

6.5 The chief argument in favour of the creation of democratic institutions at the district level and below was that the representatives of the people would be in a better position than the block level bureaucracy to understand and respond to the people's needs. In fact, understanding people's needs was not as difficult as responding to them within the framework of the schematic budget of the block. To give an illustration: when a BDO visited a village, the villagers pointed out that a local nulla needed to be deepened and trained properly as there was a serious water-logging problem. The BDO was indeed helpless as he was not sure whether his block budget permitted the taking up of this work. A reference had to be made to the State Government which, in turn, referred the matter to the Government of India. There were a number of such references from the BDO. The recommendation of the Mehta Team notwithstanding, the rigidities remained to a considerable extent. This has been commented upon even as late as 1978 by the Asoka Mehta Committee, appointed in 1977 by the Government of India to enquire into the working of the Panchayati Raj Institutions; the Committee observed: "Further, in the process of implementation of transferred activities, here and elsewhere, a number

of orders and directions by the State Government led to the gradual development of subsidiary legislation which would tend to curtail the decision making powers of the elected bodies." (17) This is another recurrent theme in the history of implementation of agricultural development programmes, namely, striking a balance between financial accountability to the authority providing funds and operational flexibility, which often proves intractable.

6.6 Another important recommendation of the Balwantrai Mehta Committee was regarding the different stages of NES/CD blocks. The Committee recommended that it was not conducive to efficient planning and continuity of efforts if there were to be many stages divided more or less artificially, as was the case hitherto in the programme. According to the Committee, the development is to be regarded as a continuous process and transformation from the initial stage to the national extension service and to the intensive stage should in fact be a natural process without any uncertainty about it. Secondly, the financial provision in the post-intensive stage should not be so meagre as to involve a sudden drop in activities which would lead to disappointment and discontent. As a result of this recommendation, the pattern of the C.D. programme was revised by the Government of India from April, 1958. According to the revised pattern, the three stages were to be as follows:

(i) The pre-extension stage for one year with a budget provision of Rs.18,000/- for doing only preliminary work. A skeleton staff of 1 BDO, 1 Agricultural Extension Officer and 5 Gramsevaks was to be provided to prepare the spade work for agricultural extension programmes.

(ii) Stage I with a budget provision of Rs.12 lakhs for a period of 5 years without distinction of pre-extension or intensive stage. During this period, the provision for staff etc. was to be the same as in the case of normal C.D.blocks.

(iii) Stage II which corresponded to the post intensive stage of the old pattern but with a budget of Rs.1 lakh per annum for a period of 5 years. The staffing pattern however was to continue on a permanent basis.

6.7 This revision of the pattern once again restored the earlier equal treatment to all blocks, without rewarding those blocks which had the capabilities of developing faster.

7. The content of the C.D.Programme.

7.1 We have described the administrative set-up under the C.D.programme and the institutional innovations introduced by the process of democratic decentralisation. We shall now examine the content of the C.D.programme from the point of view of the responsibilities cast by it on administration.

7.2 The schematic budget of the Stage I block is given in Annexe (18). It will be seen that items (II), (III) and (IV) pertaining to agricultural development constitute nearly 50% of the non-recurring portion of the budget; out of this a major portion is accounted for by loans for various agricultural purposes. Detailed instructions were given to the BDOs regarding the role of block administration in agricultural development. It was also clearly indicated that agricultural development should be the major concern of the block staff and that:

(i) The amount earmarked for agricultural development cannot be reappropriated for any other items of the block programme

without prior sanction of the Government.

(ii) The workload of the block staff who have to attend to agricultural work in addition to other work should be so adjusted that the requirements of agricultural development receive prior and foremost attention.

(iii) Nearly 70 to 80 per cent of the time of the gramsevaks should be devoted to matters related to the promotion of agriculture.

7.3 It is necessary at this stage to address ourselves to the question of proper and feasible role of administration in the field of agricultural development. Agricultural development is the end result of a number of steps to be taken by farmers, political leaders, social workers and administration and also of policy decisions of the State and Central Governments. It is the responsibility of planners and policymakers to clearly identify and spell out the tasks of administration and these should be within the capabilities of administration. In fact, with what effectiveness administration responds to the responsibilities given to it depends very much upon how clearly its role is defined and whether this is the role which administration is competent to perform. For instance, the construction of an irrigation project can be regarded as falling entirely within the capability of administration, if the necessary resources are made available. Managing the irrigation system and creating physical conditions conducive to the farmers utilising the irrigation potential created can also be said to come within its capability; but making farmers utilise the irrigation potential created lies beyond

its capability. Production and timely positioning of seeds, fertilisers and other inputs fall properly within the sphere of administration, but mobilising rural manpower to construct certain village assets cannot strictly be considered so. Organising village cooperative institutions - by its very definition a voluntary association of people - cannot be considered the area of responsibility of administration. In other words, certain activities in the field of agricultural development require action primarily by administration; whereas, some require concerted action by both administration and the farmers. It is necessary to keep this distinction in mind while discussing the role of administration in agricultural development.

7.4 From the point of view of implementation and the nature of administrative methods to be followed, the contents of the C.D. programme can be classified into the following categories:-

- (i) Matters primarily to be organised by the administration.
- (ii) Matters to be organised by the administration but with substantial help and close cooperation of the people.
- (iii) Matters to be developed primarily on the initiative, and as their own programme, by the people, but, for which, suitable help by way of technical advice and external financial assistance is to be provided by the administration.

7.5 Among the agricultural development programmes entrusted to the block administration, while some programmes like organising soil conservation measures (contour bunding, terracing and levelling), construction of new irrigation works like minor irrigation tanks etc., could be said to

fall under category (i) mentioned above, most of the programmes were really falling under category (ii) or (iii). Thus there were two clearly distinct aspects, namely, what the people should be motivated to do by the block administration and what the administration itself could do. But, in actual practice, these two aspects were not kept distinct and separate. What the block administration was expected to motivate the farmers to achieve, somehow became the targets of the administration itself. Thus detailed instructions were given regarding the preparation of the agricultural programmes for the block, which was to be further broken down into village agricultural plans and ultimately family-wise production plans. (19) What this implied was that the administration was to prepare detailed plans which eventually were to be adopted by the farmers as their own plans. It was somehow presumed that these plans would eventually be adopted by the farmers and, on the assumption that all recommended farming practices would be followed by the farmers, detailed calculations of additional production per acre were required to be done by the block administration. All these efforts ultimately resulted in nothing more than a considerable load of paper work and in due course the preparation of such plans became ritualistic. The real problem was that block administration had very little within its capability to see that plans made for the farmers could be adopted and followed by them.

7.6 Much of the criticism of the block administration and, in fact, of the C.D. programme itself stems from the failure to realise this basic fact, namely, that targets can

be given to administration only of such things which the administration itself is capable of achieving. For instance, it is meaningful to talk of a target for production of improved seeds by the block administration for supply to the farmers. It is equally meaningful to talk of a target for covering a certain acreage with appropriate soil conservation measures like bunding, terracing etc.; but it is not meaningful to give a target to the block administration for bringing a certain acreage under improved seeds, because this is entirely the decision of the farmers. Similarly, it is not meaningful to give a target to the block administration for a certain number of wells to be dug by the farmers. When such targets are given, administration tends to adopt questionable means, which eventually bring discredit to administration.

7.7 Among the different targets given to the administration, it is but natural that administration concentrates on what it can achieve, like construction of buildings, so that the target expenditure for the block can be "booked" somehow, as any surrender of unspent financial provisions at the end of the year was considered to be an index of poor performance on the part of the BDO. If, for instance, in spite of the best efforts of the block staff, enough farmers did not come forward to avail of irrigation loans, (as ultimately it is their decision whether to go in for a dugwell or not), the effort put in by the BDO would never figure in the returns to be submitted by the block administration. Hence, inevitably, there is more concentration on 'visible' achievements within the capability of the administration. This is not

sufficiently appreciated. For instance, the Third Evaluation Report on the C.D. programme says:

"In the operation of the programme there has been excessive emphasis on physical and 'financial' accomplishments-getting the targets achieved, expenditure incurred, buildings constructed etc. and not enough on educating the people into new ways of doing things, on making the national extension service an effective agency for carrying out the total programme of development and reform provided for by the national and State plans." (20)

7.8 Targets, therefore, are meaningful and relevant only in certain areas. While it is true that administration can only respond to people's requirement and that it is not realistic to expect administration to make people automatically respond to the targets given to administration, targets are, all the same, inevitable as means of control and supervision. Once it is accepted that it is one of the functions of the block administration to motivate the farmers to use improved seeds and adopt better farming practices, the question arises: how can the work of the BDO be measured? What norms should the BDO apply while evaluating the work of the gram-sevaks? In an agricultural development strategy built around extension as the key instrument, it is necessary to spell out some means of measuring the degree or the intensity of extension efforts put in. This is one of the dilemmas of agricultural development administration; targets cannot be dispensed with, but, at the same time, excessive emphasis on targets could lead to unhealthy practices.

7.9 To sum up, in agricultural development planning, it

is necessary, therefore, to distinguish between two kinds of targets. The first kind of targets, in areas which are entirely within the ambit of administration, like construction of irrigation projects, production and timely positioning of seeds etc. have real meaning and administration can be held accountable for any shortfall. The second kind of targets, like bringing a certain acreage under improved seeds, seeing that farmers undertake spraying of their cotton crop with appropriate pesticides etc., though they are not entirely within administration's control, are nevertheless relevant. It is necessary, however, for planners to be aware of the danger of basing important plan projections on such targets. This may be illustrated from the Second Plan. The Plan document says: "The targets set out at present in the plan are in the nature of working estimates indicating the increases in production potential arising from various development programmes. It is hoped that through better integration of the agricultural and the national extension programme, it will be possible to fix appreciably higher targets for agricultural production. This problem is at present under discussion between the Planning Commission and the authorities concerned".(21). Appreciably higher targets for agricultural production were subsequently fixed, as indicated in the above quotation from the Second Plan document. In May 1956, the National Development Council called for higher targets of agricultural production than those initially proposed for the Second Plan. The targets were revised as follows:-

foodgrains production from 75 million tons to 80.4 million tons, oilseeds from 7 million tons to 7.6 million tons, sugarcane from 7.1 million tons to 7.8 million tons, and cotton from 5.5 million bales to 6.5 million bales (22). But the basis on which the revision was done was not spelt out, beyond stressing the need

for measures to secure the fullest participation of the people through community projects and national extension service. The National Development Council in the 10th meeting (May 1958) resolved as follows: "The Council stressed the fact that the level of outlay which could be undertaken would depend in degree on the success achieved in increasing agricultural production. Local participation and community effort must be enlisted on the largest scale possible in support of agricultural programmes such as the full utilisation of the available irrigation potential and the adoption of improved practices especially in areas which have irrigation and assured rainfall and intensive efforts should be made to reach every family through the Village Panchayat and the Village Cooperative." (23). It is clear from the above that certain projections and hopes based on fallible assumptions somehow became firm targets.

8. IADP and the swing towards concentrated efforts.

8.1 An important landmark in the evolution of the strategy towards agricultural development was the publication in April 1959 of the Ford Foundation's "Report on India's Food Crisis and Steps to Meet It". This Report strongly emphasised the need to step up food production rapidly. The Report argued: "It is clear to us that food production increases at the rate required ... cannot be realised unless an all-out emergency programme is undertaken, and adequate resources are made available. This means that agricultural development must be given the highest priority among all categories of development for the remainder of the Second Five Year Plan and for the entire Third Plan period". (24). Simultaneously, the Report recommended an intensive and selective development strategy based on a combination of modern practices - improved seeds, chemical fertilisers, pesticides - in irrigated

areas and other climatically well-endowed areas of the country. It may be recalled that this in fact was the strategy advocated in the Draft Outline of the First Plan, and given up later, in favour of dispersion of developmental efforts. As in the First Plan, the argument of the Ford Foundation in favour of a strategy of concentration rested almost entirely on the need to maximise production goals. The Report said: "The immediate potential for increase in wheat and rice production lies in certain districts which have previously shown appreciable increases in yields. These districts have irrigation facilities and the farmers are anxious to apply technological knowledge in order to further increase the yields. Special consideration would be given to about 25 rice districts in Punjab, parts of Uttar Pradesh, Madhya Pradesh and Bihar. In many of these specified districts, yields of rice and wheat can be doubled if the scientific approach is unutilised and all factors of production are made available in optimum quantities". (25). The programme of concentrating attention in certain selected areas, which was launched in the last year of the Second Plan (1960-61) as a result of the above Report was called the Intensive Agricultural District Programme (IADP). It was initially implemented in a few selected districts with immediate production potential. The programme was taken up in 37 districts in 14 States, in three stages.

8.2 Apart from the shift towards a strategy of concentration, IADP was responsible for certain other shifts in the approach to agricultural development. First of all, it marked a departure from reliance on gramsevaks to attend to agricultural development in addition to other aspects of rural development. In the districts selected under IADP special staff positions were sanctioned, in addition to the

existing ones, for exclusive attention to agricultural development. This was the beginning of the view that agricultural extension should be made more professional and should not be entrusted to multipurpose gramsevaks. It emphasised a much more direct involvement of the Agriculture Department in agricultural development programmes, particularly agricultural extension. It was seen, in para 3.1 of this chapter, that with the launching of the C.D. programme, the emphasis was on an integrated delivery of services to the farmers through the gramsevak and on bringing the block level functionaries of the different development departments under the control of the BDO. This policy of integration was reinforced by the Balwant-rai Mehta Team's Report and the process of democratic decentralisation which followed it. The block level functionaries of the line departments, who resented being brought under the control of the BDO, could not also accept the idea of working under the control of a democratically elected body. The strong pull exerted by the line departments away from integration was felt during the Second Plan. The Third Evaluation Report on the Community Development Programme noted:

"The dual control of specialists concerned with different subjects at the block level by the Block Development Officer (whose administrative control may some times go too far) and by technical officers at the district level is not yet working satisfactorily. It has happened in many cases that departmental officers, instead of looking upon the extension or community project as their own agency, have concentrated attention in areas other than those included in the extension and community development programme where they had more

direct control over their specialist staffs. To insist on the correct pattern, of administrative and technical co-ordination at the State, district and block level is obviously of the highest importance for, in the next few years, the national extension service will have reached the entire rural population." (26) With the launching of IADP and the importance attached to the creation of a professional cadre of extension workers solely for agricultural development, the pull away from integration gained momentum.

8.3 Another feature of IADP was that the instructions to the administration were much more specific. In the selected blocks a certain "target" area was to be covered with a specified package of practices, consisting of: i) Use of improved variety of seeds, ii) Seed treatment, iii) Sowing time and methods, iv) Seed rate, v) Space between rows, vi) Fertiliser and manure doses, vii) Inter-culture, viii) Plant protection measures, and ix) Use of improved implements. It was also decided that a large number of demonstration plots should be taken up in areas where the above package of practices were to be introduced.

8.4 The responsibility of the agricultural development administration increased in the areas covered by IADP. When administration required the farmers to adopt a certain 'package' of practices, it also had to supply them with the necessary wherewithal, particularly, credit and physical inputs in time. IADP emphasised the importance of 'timing' in agricultural development and quick response by the administration to the farmers' demands. Earlier, the block level

administration was to achieve things by 'motivating' people, 'enlisting' their co-operation and 'mobilising' idle manpower; naturally the efforts put in or the results obtained were not easily measureable. It was also possible for the administration to escape responsibility by pointing out to the 'apathy' and 'non-cooperation' of the people. But in a strategy which depended on a more technical package, when timely provision of inputs is the prime responsibility of the administration, the functioning of the administrative machinery is constantly put to test. Agricultural development administration became more and more vulnerable and greater demands were made on it.

Earlier, things could not go 'wrong'; now things could go 'wrong' and the administration was answerable. By highlighting the responsibility of the administration for the timely supply of inputs, IADP prepared the administration for the challenges of the technocratic strategy which was soon to follow. The programme has, quite justifiably, been described as a 'pace-setting, path-finding' experimental programme, initiating new ideas in agricultural development (27). With the IADP, the agricultural development acquired a definite strategy with much sharper focus than before.

8.5 Another contribution of IADP was the awareness which it created that for any intensive agricultural development effort resource commitment is inescapable. It considerably strengthened the hands of the Ministry of Agriculture in its demands for higher allocation of Plan resources. This is reflected in the fact that in the Third Five Year Plan, the share of the Agriculture Sector was increased substantially as the following

Table would show:

T A B L E 1

Second and Third Plan Outlays on Agricultural Programmes
(excl. C.D. and Panchayati Raj)

Rs. in lakhs

	<u>Second Plan Outlay</u>			<u>Third Plan Outlay</u>		
	States	Centre	Total	States	Centre	Total
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
i) Agricultural Programmes	25205	2439	27644	57764	11000	68764
ii) Total Plan	204293	255707	460000	402218	407635	809853
% (i) to (ii)	12.33	0.95	6.00	14.36	2.69	8.49

Source: Third Five Year Plan, page 85

To quote the Third Plan document: "In formulating agricultural production programmes for the Third plan, the guiding consideration has been that the agricultural efforts should not be impeded in any manner for want of financial or other resources. Accordingly, finance is being provided on a scale which is considered adequate, and the further assurance is given that if, for achieving the targets of production, additional resources are found necessary, those will be provided as the Plan proceeds." (28)

9. Third Five Year Plan.

9.1 The main thrust of the Third Plan strategy did not materially differ from that of the Second Plan. The C.D. programme was continued. The IADP which had just then been started was superimposed on the C.D. programme in the selected blocks. The Planning Commission, as in the Second Plan, emphasised that the financial outlay provided in the Plan

would have to be supplemented in the rural sector by the use of idle manpower to the maximum extent possible. To quote the Plan document: "The Third Plan envisages concentrated effort in agriculture on a scale calling for the participation of millions of peasant families of agricultural workers in village production plans and in large scale programmes of irrigation, soil conservation, dry farming, afforestation and the development of local manurial resources. One of the main aims of the Plan therefore is to harness the manpower resources available in rural areas. This is to be achieved through the programme of development for which the Plan provides, supplemented by extensive rural works programmes for utilising manpower resources in the villages, especially for increasing agricultural production." (29) In the scheme of emphasis given to village level institutions, namely, co-operatives and panchayats, in the Third Five Year Plan, it was envisaged that the village level extension worker would continue to be the most important agent for bringing about agricultural development at the village level. The Plan document says:

"The growth of agricultural production is of such critical importance that, in the immediate context of the Third Plan, the principal test to be met by the community development movement must be its practical effectiveness as an agricultural extension agency." (30) The Third Plan also envisaged that the concerned subject matter departments would render necessary technical assistance to the multi-functional VLW to enable him to carry out his extension functions satisfactorily. The administrative framework in the Third Plan for the implementation of agricultural development programme

was thus, in the main, a continuation of what was followed earlier except that in the IADP districts staff was given exclusively for agriculture, in addition to the normal complement of block staff.

9.2 But in other respects the Third Plan marked a departure from the strategies pursued earlier. The recommendation of the Ford Foundation's Report was reflected in the emphasis on specific technical aspects of the agricultural development efforts. The Plan document says: "The principal technical programmes for increasing agricultural production, around which intensive work is to be organised are (1) irrigation, (2) soil conservation, dry farming and land reclamation, (3) supply of fertilisers and manures, (4) seed multiplication and distribution, (5) plant protection and (6) better ploughs and improved agricultural implements and adoption of scientific agricultural practices." (31) When we compare this with the statement in the Second Plan document: "The main elements in agricultural planning are: (1) planning of land use; (2) determination of targets, both long-term and short-term; (3) linking up of development programmes and Government assistance to production targets and the land use plan, including allocation of fertilisers etc. according to plan; and (4) an appropriate price policy." (32), it will be seen that the strategy as spelt in the Third Plan had sharper lines. The importance of 'timing' stressed in Ford Foundation's Report was also reflected in the Third Plan:

"The central task of the community development organisation and of extension workers at the block and village levels is to mobilise the rural community for intensive agricultural

development, to impart a sense of urgency and direction to the work of all the agencies operating on behalf of the Government and to ensure that the requisite supplies, services and technical assistance are available at the right time and place and in the most effective manner possible. At the same time the Agriculture Department must place at the disposal of the community development organisation at the block level the supplies, trained personnel and other resources needed." (33)

9.3 The stress on the preparation of village production plans, mentioned in the Second Plan, continued in the Third Plan. But these plans were to serve more as a guide for action on the part of the administration. The village production plans were therefore not merely for adoption by the farmers, but also for adoption by the administration, in order to plan the necessary supplies. To quote the Third Plan:

"In the field of extension, by far the most important task to be undertaken in pursuance of the Third Plan is to give effect to the idea of working out village production plans so as to draw all the cultivators into the common effort and, at the same time, to make available to individual farmers in an efficient and organised manner the credit, supplies and other assistance needed." (34) and again "The success of the village production plan will largely depend on the efficient organisation of supplies, credit etc. and the quality of the technical advice given by extension workers." (35)

9.4 Though its effect on the communication pattern within administration was not realised then, the development of an input-oriented strategy resulted in a two-way communication

within administration. Till then, the pattern of communication was mostly from top to bottom; upward communication, except for routine reports and references seeking clarification, was rare. But increasingly it was becoming difficult for the higher officers of administration to merely hand down 'targets' and ask for reports. The district level functionaries asked for inputs to back up the 'targets'. Very often the boot was on the other leg. We shall return to this theme in Chapter 5 when the annual functioning of agricultural development administration in Maharashtra is described.

9.5 The pull of the IADP towards concentration, was followed by a pull in the opposite direction, towards dispersion. During the Third Plan (in 1965-66) IADP was extended to cover 1596 blocks in 117 districts and was redesignated as Intensive Agricultural Area Programme (IAAP). Later on, it was extended to 150 more districts, but less intensively. While IAAP might have diluted the intensive character of IADP, it nevertheless prepared the administration over a wide area for technology-oriented agricultural development strategy.

10. Fourth Plan and after - the HYV strategy and the decline of the C.D. programme.

10.1 By the time the Fourth Plan was finalised, after an interregnum of three years when Annual Plans were formulated, a clear choice emerged in favour of a strategy based on technology. The emergence of the "miracle seeds" from the research stations, and the performance of Indian agriculture in 1968 (after the three drought years of 1965-67) when a record-breaking gain in foodgrain production of 28 per cent was achieved, were mainly responsible for a decisive shift towards

a technology-oriented strategy. As mentioned in para 9.5, the administrative apparatus was ready in the IAAP districts. The contents of the "package" were, however, different. This strategy adopted during the Fourth Plan has not basically altered till today. The developments since the Fourth Plan have mostly been the setting up of various institutions to provide the range of specialised services required by technology-oriented agriculture, and the consequent administrative readjustments.

10.2 With the HYV strategy, as the new strategy came to be known ('HYV' standing for 'High Yielding Varieties'), once again there was a pull towards concentrated approach in areas of promise. The new strategy depended upon new varieties of seed and fertilisers, both of which were in short supply. Since the yield increases which could be achieved were substantial when the combination of seed and fertiliser was applied in irrigated areas or areas with assured rainfall, the policy of concentration was a natural corollary of the new strategy. The then Agriculture Minister, Shri Subramaniam argued: "If we concentrate our efforts in a given area where we have assured water supply and we have the necessary extension services also concentrated in that area, then it should be possible for us to achieve much better results than by merely dispersing our efforts in a thin way throughout the country." (36) It is interesting to note here that in the 10th Meeting of the National Development Council (May 1958) Shri Subramaniam, who was then the Finance Minister of the then State of Madras, observed that "the entire Plan depended on agricultural production and for the purpose of increasing

agricultural production they had mainly depended on the community development and national extension service. If before the end of the present Plan, the entire area was not covered with community development and national extension scheme, programme for agriculture would to that extent be affected."

(37) These two views indicate the appropriate strategies during the HYV and pre-HYV periods. Gradually, as the position regarding inputs improved, the challenge was to spread the HYV technology over as much area as possible and to convert as many farmers as possible to adopt HYV. Thus, after the Fourth Plan, administration had a two-fold challenge of spreading the HYV message, and following it up with timely supply of inputs and credit and also providing the farmers with necessary extension services.

10.3 Another accompaniment of the new strategy was the importance attached to price incentives to the farmers. It was realised that the adoption of the new strategy by the farmers depended very much on their ability and willingness to undertake investments on their lands, like dugwells, tubewells, electric motors and pumpsets, land levelling and shaping etc., and that for such long term investments to be undertaken, price incentives would be necessary. To quote from the Fourth Plan document: "Although the new technology offers a prospect of bigger returns to the producers, their cultivation costs are higher and hence the special significance of under-pinning the production effort by assured minimum prices. It may be added that while in the past a large portion of the costs of cultivation were imputed, for

the new technology an increasing proportion of the costs are necessarily cash costs. If the minimum support prices are to be effective in facilitating agricultural production, certain aspects of implementation stressed by the Foodgrains' Policy Committee (1966) are particularly relevant. These aspects are: (i) The announcement of prices should be made well before the sowing season; (ii) In order that the guaranteed minimum support prices may help in creating a favourable climate for long-term investment, the prices should be fairly stable over a long period; (iii) Government should provide wide publicity to the minimum support prices and to the effect that it will be prepared to purchase all the quantities offered to it at those prices; (iv) Adequate arrangements should be made at important markets for making purchases at the support prices whenever the need arises." (38)

10.4 Technology-based agriculture calls for many specialised services, and the creation of a number of institutions to provide these services becomes necessary. This was recognised in the Fourth Plan: "In view of the importance assumed by inputs and services such as improved seeds, chemical fertilisers, plant protection, implements and machinery, irrigation facilities and agricultural credit, several new public institutions were promoted and provided with funds to lend support to agricultural production programmes." (39) The Plan mentions, in addition to research institutions, bodies like the National Seeds Corporation, Agro-Industries Corporations (set up in the States), the National Co-operative Development Corporation and the Agricultural Refinance Corporation. Agricultural research, inputs, i.e. seeds, fertilisers and credit,

agricultural extension and irrigation management are perhaps the most important concomitants of high technology agriculture. Some of the major institutional changes that came about in these fields and the new tasks faced by the administration are being briefly described in the following paragraphs.

10.5 Agricultural research was being mostly undertaken by the State Agriculture Departments themselves. In the Government of India a few Central Institutes had been established for taking up agricultural research and some research was also being done through departmental set-up. In 1965, the Indian Council of Agricultural Research (ICAR) was reorganised and the research activities earlier administered by the Union Ministry of Agriculture were transferred to ICAR. During the 60s, Agricultural Universities were established in the states and the research activities of the State Departments of Agriculture were transferred to the Agricultural Universities.

10.6 In the matter of seeds, it was realised that the seed production and distribution would become increasingly complex and required proper institutional arrangement. Accordingly at the national level, the National Seeds Corporation (NSC) was set up and gradually in many States the State Seeds Corporations were set up. A detailed description of the problems involved in the planning, production and positioning of seeds is given in Chapter 6.

10.7 While fertilisers were mostly produced by fertiliser factories in the public and private sectors, a large number of small fertiliser units designed to produce appropriate fertiliser mixtures to suit the local soil conditions and local

agronomical practices were set up, mostly in the co-operative sector. The role of the administration as far as fertilisers is concerned has mostly been to ensure timely movement of fertilisers to the consumption centres. During periods of acute shortage of fertilisers, distribution of fertilisers to farmers is controlled and BDOs are asked to issue permits to individual cultivators, by itself a stupendous administrative task. In many States the handling of bulk of the fertilisers came to be entrusted to the Agro-Industries Corporations or the State Co-operative Marketing Federations.

10.8 In the field of credit, while the short and medium term credit structure was already in existence, it was in the field of long term credit that strengthening of the credit system was found necessary. Following the recommendations of the All India Rural Credit Survey Committee the State Co-operative Land Mortgage Banks, which were mostly supporting agrarian reforms by giving loans to allottees of surplus lands or tenant purchasers, were transformed into Land Development Banks whose primary concern was to undertake the responsibility of long term credit for agriculture. In order to support the State Co-operative Land Development Banks, an Apex Institution called the Agricultural Refinance Corporation was established in 1963 by an Act of Parliament and it started functioning from 1st July 1963. Its activities expanded considerably since 1969-70 as the need for long term investments increased. The Corporation came to be renamed as Agricultural Refinance and Development Corporation (ARDC) in 1975 and its role considerably expanded, particularly during the 70s. With the

nationalisation of 14 Commercial Banks in late 60s, the institutional infrastructure directed towards meeting the credit needs of the agriculture sector became more broad-based and stronger. The ARDC also gives refinance to the Commercial Banks for their long term lending for agriculture. With the growth of institutional credit for long term investments, the practice of giving tagai loans for wells etc. from the block budget was discontinued.

10.9 In the field of irrigation management, Command Area Development Authorities (CADA) were set up in 1973 for selected command areas in order to provide an integrated delivery of services to the farmers. In essence what the CADAs were really expected to perform was not very much different from the purpose for which the block level set-up was earlier organised namely, to bring the different line functionaries under one control so that there could be a co-ordinated approach towards the problems of the farmers. The vital difference was that CADA as an umbrella organisation had its jurisdiction cutting across natural administrative boundaries within a State; and CADA is confined to agricultural production in the command area, while the block organisation was concerned with a wider spectrum of activities, including Health, Education etc. CADA was to be a much more technocratic organisation than the block organisation. How far this experiment has, in fact, been successful and how far it has been able to overcome the inherent problems of co-ordination in administration are more fully discussed in Chapter 8.

10.10 With the growth of so many specialised institutions,

the main problem before the agricultural development administration was one of co-ordination. The question was, who would do the co-ordination? The District Collector was the almost automatic choice for bringing about co-ordination at the district level, but it is well-known that he was, and still is, burdened with too many diverse duties, including law and order, that it was neither fair to him nor to agricultural development to have expected him to be an effective coordinator. At any level above the district level, co-ordination becomes less specific and more general. At higher levels, what is possible is policy co-ordination but not problem-solving co-ordination. Problem-solving co-ordination is possible only at a level where action takes place or where executive decisions are made; this can be effectively done only at the district level or the block level. For instance, let us take the perennial problem of synchronisation of availability of credit with availability of inputs. The problems of co-ordination which arise are mostly at the operational level. The Taluka Kharedi-Vikri Sangh (Sale-Purchase Union) sometimes does not lift the seeds in time from the National or State Seeds Corporation; one of the reasons could be that it is short of working capital; consequently, the farmers who obtain certificates from the credit co-operative for seeds, to be exchanged for seeds at the Taluka Sangh may not be able to obtain them. Sometimes the problem is the other way about; the input supply organisations, like the Seed Corporations or Marketing Federation, do not supply to the Taluka Sanghs the materials in time. Often, there is a delay in the preparation

of the "normal credit statements", which form the basis for the sanction of co-operative credit to the farmers. These problems require to be tackled in the field; that is where an effective co-ordination mechanism is necessary. While the District Collector could not give enough to agricultural development, the BDO was found wanting in both expertise and status. This problem has baffled satisfactory solution so far.

10.11 Going back, for a moment, to the beginnings of the C.D. programme, it was seen in para 2.3 that, when it was realized that agricultural development cannot be achieved without all-round development of the rural community, a multi-disciplinary organisation was set-up to achieve the objective. Whether the assumption was correct or not is not important here; nor is it of relevance whether the BDO's set-up did make any substantial contribution to agricultural development. What is relevant for our discussion here is the fact that the planners did go about searching for an appropriate administrative framework to achieve the Plan objectives. But there was no such evidence in the post Fourth Plan period. Even though the earlier view that agricultural development was organically linked with overall rural development was not shared by many, it was realised that agricultural development certainly required a multi-agency approach. But no administrative set-up corresponding to that of the BDO was thought of. The administrative set-up at the block level was called upon to implement the new strategy. When it was predictably found wanting, new agencies were set up, which were essentially multi-functional, to deal with specific problems; one such example

is CADA. But such piece-meal solutions only amounted to side stepping the main problem. We shall be examining in Chapter 8 the limitations of a special organisational set-up like CADA in achieving the objective with which it was set up.

10.12 In the context of the realities of administrative structure in India the problem of co-ordination cannot be tackled with simplistic solutions, like the one suggested by the National Commission on Agriculture (NCA). The most difficult question to settle is who should be the coordinator at the district level, granting that the District Collector cannot effectively function as the coordinator. The NCA which examined this issue has suggested that there should be a Chief Agricultural Development Officer (CADO). The Commission observed: "Considering that he will be concerned with widest and most significant areas of development in the district, the CADO should enjoy the status and authority necessary for commanding respect and for exercising co-ordination at the district level." (40) CADO is to be drawn from any one of the disciplines like agriculture, animal husbandry, fisheries, forestry, co-operation etc. The Commission has also suggested that CADO will initiate the annual confidential reports of the specialists and other technical officers at the district level. The suggestion basically boils down to a set-up at the district level very much akin to the block level set-up under the BDO, but with a technical specialist as a head. It is very doubtful if these suggestions are implementable. The characteristic feature of the administrative behaviour in India is that while the technical specialists dislike working under a generalist administrator, they dislike even more, working under specialists

of other disciplines. It is difficult to imagine the smooth working of an arrangement in which a Joint Director of Agriculture is the CADO with Executive Engineers and Divisional Forest Officers under his administrative control. No initiative has so far been shown either by the Centre or by the States in implementing this recommendation of the NCA.

10.13 In the field of agricultural extension considerable administrative changes came to be effected. The efficacy of the multipurpose gramsevak for agricultural development began to be seriously questioned. We saw how, when IADP was introduced, extension staff exclusively for agriculture was assigned to the blocks selected for IADP. The arguments in favour of extension staff exclusively for agriculture gained strength as the HYV spread to more and more States. It was argued that the VLWs were not able to spend as much time for agriculture as they were expected to. Though they were required to devote nearly 70 to 80 per cent of their time for agriculture, they were actually devoting far less than that. Paradoxical though it may seem, as agricultural administration became more complex, the time spent by the VLW on agriculture decreased. While inaugurating a seminar on 'Reorganisation of Agricultural Extension' at Hyderabad in July 1978, the Union Minister of State for Agriculture and Irrigation remarked: "The village level extension worker is reported to be a multi-purpose worker with maximum emphasis on agricultural extension. It is however well known that he is used on all kinds of miscellaneous duties and very little time is being devoted to agriculture. Though circulars have

been issued that he should devote 80 per cent of his time for agriculture, I doubt very much whether he spends even 50 per cent of his time on productive programmes, leave aside agriculture." (41) A survey was conducted in Maharashtra in 1979 to assess the time devoted by the VLWs for agricultural extension. This survey revealed that, on an average, 27 per cent of the time of the VLW is spent on agricultural extension for the whole year. Quite apart from the large and somewhat unwieldy jurisdiction of the VLWs, the paper work connected with the village panchayat duties, duties connected with agriculture (other than agricultural extension) like subsidies disbursed, recovery statements of various kinds of agricultural loans, and other duties like family planning, small savings campaign etc. were mainly responsible for the gradual neglect of agricultural extension by the VLWs.

10.14 One of the reasons why VLWs came to be loaded with various kinds of work not initially contemplated in the C.D. programme was that the BDO himself, over a period of time, came to be entrusted with diverse kinds of work. As the activities and the responsibilities of Government expanded, both in depth and diversity, the block level set up came to be regarded as a dispenser of too many diverse goods and services. As the BDO was involved by the Government in various kinds of activities, the entire establishment under the BDO also got dragged into all the activities with which the BDO himself got involved. The argument of the Agriculture Ministry and the State Agriculture Departments that multi-purpose VLWs working under the BDO would never be able to devote

sufficient time for agricultural extension, acquired a considerable amount of credibility and the argument against agricultural extension being entrusted to the VLW began to gain acceptance.

10.15 What really clinched the issue in favour of taking agricultural extension away from the VLW was the fact that along with technological advance in agriculture, agricultural extension needed to be professionalised. It was felt that the effectiveness of agricultural extension depended upon the regularity of visits by the extension worker to the farmer, and the two-way communication between the agricultural universities and the extension workers, so that the findings of research can reach the farmers, and the practical problems of the farmers can reach the universities. Obviously, a part-time extension worker would not be suitable. This accent on transfer of know-how is the core of the Training and Visit (T&V) system of agricultural extension introduced in many States. The introduction of the T&V system of extension is a significant development in agricultural development administration in the 70s. It has so far been introduced in 10 States. A brief account of what it is and how it works is given in the following paragraphs.

10.16 Under the T&V system of extension, the Village Extension Worker (VEW) is the most important element. VEW is assigned exclusively for agricultural extension work. Even other kinds of work related to agricultural development like preparation of village production plans, arranging for the supply of inputs, ensuring that the credit is made available to the farmers in time, report to the BDO if the input supply and

credit disbursement do not go according to schedule, disbursement of subsidies under various schemes, collection of statistics etc. are not to be entrusted to the VEW under the T&V system. The corner stone of the T&V system is the proposition that the effectiveness of agricultural extension depends upon the regularity of visits by the extension worker to the village. In order to ensure this, he would need to be relieved of work which would involve his sitting in an office, preparing reports or writing accounts. In fact, the VEW is not expected to send a single report and his paper work is minimal.

10.17 Each VEW is assigned a certain number of farm families, normally 800 to 1000. The exact number would vary according to local conditions like population density, cropping intensity and accessibility. In order to reach the farmers in his jurisdiction systematically, a VEW would divide the families in his jurisdiction into 8 small groups, with 80 to 120 farm families in each group. He would visit each group regularly on a fixed day of the week covering all the eight groups in a two-week cycle. A certain number of farmers, called contact farmers, are chosen from among each group of farmers. During his fortnightly visit to the group, the VEW is expected to meet and discuss with these contact farmers, involving as many other farmers as possible in the discussions and demonstrations. During each visit the VEW is expected to concentrate his efforts on a few strategically selected recommendations relevant for that particular phase of the crop cycle. For instance, if the particular phase is that of

preparation of land for sowing, the recommendations would pertain to how to prepare the land etc. When the sowing phase commences, the recommendations would pertain to the seed rate, what quality of seeds to be used and so on. The VEW is not expected to deliver a predetermined package of recommendations but he is expected to tailor his recommendations to suit the capacity of the farmers in that group. Initially, the emphasis is expected to be on low cost improvements which the majority can afford within their own resources.

10.18 Above the VEW, for every 8 VEWs there is an Agricultural Extension Officer (AEO). Normally, there are 3 or 4 such AEOs in every block but their headquarters will not be at the block headquarters but will be within their own geographical jurisdiction. The AEO is expected to spend at least four days a week visiting the VEWs in the field. Once every fortnight the VEWs would receive a full day's intensive training in the recommendations to be transmitted for that period, i.e. what is relevant to the coming two weeks. The AEO would also participate in this training session. Thus, during every fortnight the VEW would spend 8 days in visit to each of his 8 groups and one day in training. This training is another key element in the system as it is during this training that the transmission of know-how takes place from the higher officers of the hierarchy to the VEW who, in turn, is required to transmit it to the farmers.

10.19 In order to provide training and technical guidance to AEOs and VEWs and to supervise field work, there is a Sub-divisional Agricultural Officer (SDAO) for every sub-division

comprising about 3 blocks. The SDAO would have the exclusive responsibility for supervising about 8 to 10 AEOs in his jurisdiction. Another feature is that at the sub-divisional level there is a team of 3 Subject-matter Specialists (SMS), one in agronomy, one in plant protection and one in training/communication. The fortnightly training is really given by the team of SMS working under the administrative control of the SDAO.

10.20 A typical fortnightly time-table of the VEW would be as shown below (42):

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
1st fort- night	1	2	3	4	TRA SMS	EXT VIS	H	5	6	7	8	TRA AEO	EXT VIS	H
2nd fort- night	1	2	3	4	TRA SMS	EXT VIS	H	5	6	7	8	TRA AEO	EXT VIS	H

1-8 - Visit farmers' groups - 8 groups per VEW

TRA
SMS - Fortnightly training conducted by SMS.

TRA
AEO - Fortnightly training conducted by AEO

H - Holiday

EXT
VIS - Extra visits, essentially a lag provided to make up visits not made due to reasons like holiday, sickness etc.

10.21 At the district level there is the district head of the extension system (43) aided again by Subject-matter Specialists. Once every month, all the Subject-matter Specialists in the district come to the district headquarters where a monthly workshop takes place. In the monthly work-

remains present. The key link between research and extension is this monthly district workshop, designed to prepare detailed plans for the fortnightly training of the VEWs. The workshop provides the opportunity to the district level officers for discussion with and feedback from the field staff. Thus, training takes place at two levels - fortnightly training of the VEWs by the sub-divisional SMS and monthly workshop of all the SMS in the district, which is conducted by the representative of the Agricultural University.

10.22 The introduction of T&V with its accent on professionalising agricultural extension, has resulted in qualified personnel moving closer to the villages. AEO, who would be an agricultural graduate, is located in his own jurisdiction. A new level, namely, sub-divisional level is introduced; the SDAO and SMS are required to possess post-graduate qualifications. One significant development in the 70s is the sharp increase in the number of professionally qualified agriculturists working at the district level and below, in the various institutions, like Seed Corporations, Cooperative Banks, Land Development Banks, Commercial Banks, Fertiliser handling agencies (e.g. Marketing Federations), private sector organisations dealing with agricultural inputs and so on.

10.23 The administrative structure of the T&V System of

Extension is shown below:

<u>District level</u>	<u>:Principal Extension:</u> <u>:Officer of the</u> <u>:District</u>	<u>:District level :</u> <u>:Subject-matter :</u> <u>:Specialists(SMS):</u>
<u>Sub-divisional level</u>	<u>:Sub-divisional</u> <u>:Extension Officer</u> <u>:</u> <u>:</u>	<u>:Sub-divisional</u> <u>:level Subject-</u> <u>:matter</u> <u>:Specialists</u>
<u>Between Village and Block level</u>	<u>:Agricultural</u> <u>:Extension Officer</u>	About 8-10 per Sub-division
<u>Village level</u>	<u>:Village Extension</u> <u>:Worker</u>	8 per AEO
	<u>:Contact farmers</u> <u>:</u> <u>:Farmer Group</u>	8 Groups of 80-120 farmers in each group

In all States (except partly in Gujarat) the administrative structure of T&V bypasses the BDO. The unbroken chain of command from the Director of Agriculture to the VEW is often mentioned as a key element of the system. Even as a search for a suitable coordinating mechanism at the district and block levels is still going on, the Agriculture Department in most States has broken away from the only umbrella organisation at the block level, namely the BDO's set-up, and has organised itself on the familiar line-department pattern. The T&V set-up in Maharashtra is described in greater detail in Chapter 4.

OUTLAYS ON AGRICULTURE AND ALLIED SECTORS AND COMMUNITY DEVELOPMENT DURING DIFFERENT PLAN PERIODS.

Category	1956-61		1961-66		1966-69	1969-74		1974-79	1979-83
	Second Plan		Third Plan		Three Annual Plans	Fourth Plan		Fifth Plan	Sixth Plan
	State	All India	State	All India	All India	State	All India	All India	All India
1. Agriculture and allied (incl. C.D. & Panchayat). (Rs. Cr.)	470.71	529.00	941.39	1090.21	1166.60*	1425.51	2728.20	3109.00	5800.00
1.1. C.D. and Panchayat (Rs. Cr.)	192.04	218.73	310.13	322.47	99.40*	92.04	115.50	127.00	150.00
1.1. As % of 1(%)	40.80	41.30	32.94	29.60	8.52	6.46	4.23	4.08	2.59

*Expenditure

SOURCE: (a) III Plan, p.85.
 (b) IV Plan, p.65, 186.
 (c) VI Plan, p.20.

10.24 Another development which led to a decline in the importance of the C.D. programme has been the gradual shrinking of allocation of plan resources to the programme. Table 2 on page gives the position regarding this. As per the schematic budget of the C.D. block, discussed in para 7.2 of this Chapter, the bulk of the block budget was accounted for by the expenditure on staff and the provision for loans. After every Plan period, the staff expenditure was classified as non-Plan. The loan provision, in due course, disappeared with the growth of specialised credit institutions. The various sector departments budgetted for their new programmes in their own respective departments. All these factors contributed to the decrease in the financial allocation in the Plan for the C.D. programme. But the BDO's set-up is, all the same, playing a useful role and is recently being involved in the implementation of special rural development programmes for weaker sections. Its role in agricultural development in Maharashtra is described in Chapters 4 and 5.

11. Special programmes and schemes.

11.1 The evolution of agricultural development strategies has seen swings from concentration to dispersion and back, influenced mostly by technological factors and the compulsion to achieve a quick increase in foodgrain production. With the adoption of the HYV strategy in the Fourth Plan, it was clear that the mainstream of agricultural development effort was to be purely production-oriented. When "growth with social justice" was accepted as a political commitment at the time of finalising the Fourth Plan, it was felt that a purely

growth-oriented strategy in agriculture represented by the HYV technology would result in sharp income differences in the rural areas. To quote the Fourth Plan document:

"The small holders and the agricultural labourers represent 52% and 24% respectively of total rural households. On the other hand, the pattern of land-holding is such that only about 19% of the cropped area is comprised within small holdings. In this uneven situation, the new agricultural technology tends to add a further dimension of disparity between those who have the resources to make use of it and those who have not. There is thus the danger of emergence of a sharp polarisation between the more privileged and less privileged classes in the rural sector, the privilege in this instance relating to the resources and tools of development." (44) It was felt that the purely growth oriented strategy in agriculture should be supplemented by special schemes aimed at social justice.

11.2 The first such programmes which were started were the Small Farmers' Development Agency (SFDA) and the programme for Marginal Farmers and Agricultural Labourers (MFAL). These programmes were mainly directed towards making the small farmers, marginal farmers and agricultural labourers more creditworthy by reducing the loan component of the long term investments to be made by them in order to augment their income, by means of subsidies. These programmes also contained other components besides subsidies, with the objective of giving the small and marginal farmers and agricultural labourers a viable production programme within their means. On the recommendation of the NCA, the MFAL was merged with SFDA.

11.3 The second kind of special programmes started during the Fourth Plan period was aimed at the development of ecologically and climatically less favoured regions like the drought prone areas. Here again, the objective was to ensure social justice by concentrating on these regions which were likely to be by-passed by the Green Revolution. The Drought Prone Areas Programme (DPAP) was preceded by Pilot Projects for Integrated Development of Dry Land Agriculture in 1970-71. 24 Pilot Projects were started in three stages and these Pilot Projects were eventually converted into DPAP.

11.4 Tribal Area Development Programme (TADP) started in 1971-72 and Hill Area Development Programme started in 1972-73 were also programmes designed to develop certain special areas and particularly the people living in those areas whose developmental problems were different from those living in the plains and who were therefore to be given special attention.

11.5 These special programmes were super-imposed on on-going mainstream agricultural development efforts. For this very reason special administrative set-up was created in order to implement these special programmes. A more detailed account of these programmes and the administrative problems encountered while implementing them are given in Chapter 4.

11.6 Another response to the fall-out of the adoption of the HYV strategy has been the introduction of specific schemes for the production of specific crops in order to rectify the inter-crop imbalances that resulted from the new strategy. The two major categories of crops which lagged behind were oilseeds and pulses, as they did not have the advantage of technological break-through achieved in the case of cereals. Subsidies for

inputs and price supports for foodgrains in connection with the HYV strategy also contributed to the stagnation in pulses and oilseeds. It has been acknowledged in the IV Plan document that: "the output of pulses which are of particular importance from the nutritional viewpoint has increased only about less than half as fast as that of cereals." (45) Oilseeds also presented a very slow growth in production of only 0.63% per annum between 1949-50 and 1967-68 (46). It was recognised by the Centre that special efforts would be needed to increase the production of crops like oilseeds and pulses which are important for the national economy. Special schemes were therefore introduced for increasing the production of pulses and oilseeds. The manner in which these schemes were formulated and implemented is discussed in the next chapter.

Notes and References (Chapter 2)

- (1) Government of India: Planning Commission: Review of the First Five Year Plan. May 1957, p.12.
- (2) Government of India: Planning Commission: The First Five Year Plan 1953 p.228.
- (3) Mukherji, B.: Community Development in India. Orient Longmans 1961. Chapter II p.16.
- (4) Ibid. p.108
- (5) Ibid. p.114
- (6) Government of Bombay: Manual on Community Development 1959 Vol.I Chapter 14 "Role of Development Departments".
- (7) Government of India: Planning Commission: The First Five Year Plan: A Draft Outline 1951, p.42.
- (8) Ibid. p.99
- (9) Review of the First Five Year Plan p.109.
- (10) First Five Year Plan p.231.
- (11) Alternatives in Agricultural Development: An ICSSR Working Group Report. Allied Publishers 1980 Chapter 2 para 2.2.3.
- (12) Review of the First Five Year Plan p.110.
- (13) Government of India: Planning Commission: The Second Five Year Plan 1956 p.141.
- (14) Ibid. p.160
- (15) The Balwantrai Mehta Committee was, really speaking, appointed to study, among other things, the contents of the C.D.programme and the priorities assigned to different fields of activity in it, and to report on the system, organisation and methods of work adopted for the implementation of the programme with special reference to intensification of agricultural production, coordination between different ministries, departments and agencies. Later on, the National Development Council, at its 8th meeting held on the 8th and 9th December 1956, requested the Committee to enquire into the pattern of the existing district administration and suggest its reorganisation, so that, by stages determined in advance, democratic bodies at higher levels and organically linked with Village Panchayats would take over the entire general administration and development of the district or its sub-division, other than law and order, administration of justice and revenue administration. The Committee

submitted its report on the 24th November, 1957. The Report is a definite milestone in the history of development administration in India.

- (16) Government of India: Ministry of Community Development and Cooperation: Report of a Community Development Evaluation Mission in India, August 1957.
- (17) Government of India: Ministry of Agriculture and Irrigation: Department of Rural Development: Report of the Committee on Panchayati Raj Institutions. August 1978 p.5.
- (18) This has been reproduced from the Community Development Manual (ibid).
- (19) These plans are still prepared by the VLW. Their utility is commented upon in Chapter 5.
- (20) The Second Five Year Plan p.239.
- (21) Ibid. p.62.
- (22) Government of India: Planning Commission: Sixth Meeting of the Standing Committee of the National Development Council Summary Record. New Delhi January 1958 p.37.
- (23) Tenth Meeting of the National Development Council Summary Record. New Delhi May 1958 p.20.
- (24) Government of India: Ministry of Food and Agriculture and Ministry of Community Development and Cooperation: Report of India's Food Crisis and Steps to Meet It. New Delhi 1959 p.13.
- (25) Ibid. p.56.
- (26) Second Five Year Plan p.239.
- (27) Government of India: Planning Commission: Report of the Expert Committee on Assessment and Evaluation, 1961.
- (28) Government of India: Planning Commission: Third Five Year Plan. New Delhi 1962 p.304.
- (29) Ibid. p.49-50
- (30) Ibid. p.336
- (31) Ibid. p.305
- (32) Second Five Year Plan p.261
- (33) Third Five Year Plan p.304
- (34) Ibid. p.337

- (35) Ibid. p.337
- (36) Lok Sabha Secretariat, Lok Sabha debates, Third Series, Vol.XLIX, No.24 (December 7,1965), 6075.
- (37) Summary Record, p.7.
- (38) Government of India: Planning Commission: Fourth Five Year Plan 1969-74. New Delhi. July 1970 p.144.
- (39) Ibid p.115
- (40) Government of India: Ministry of Agriculture and Irrigation: Report of the National Commission on Agriculture Part XIV Chap.62 para 62.3.21, p.194.
- (41) Quoted in Rural Development Digest, Vol.I, No.4 Oct.1978, p.273.
- (42) The time-table is reproduced from Daniel Benor and James Q. Harrison: Agricultural Extension: The Training and Visit System. World Bank 1977.
- (43) The actual designation of the Head of the T&V Extension in the district varies from State to State. In Maharashtra he is called Principal Agricultural Officer.
- (44) Ibid. p.149.
- (45) Ibid. p.118
- (46) Ibid. p.165.

Annexe to Chapter 2 (vide para 72)

Community Development Budget

Estimated Expenditure on a Community Development Block (Basic Type) for a period of three years.

(This budget is only intended as a guide and is to be adjusted according to local conditions.)

(Figures in Lakhs of Rupees)

Heads	Total	Rupees	Dollars	Recur- ring	Non- Recur- ring	Loan	Non- Loan
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I. Block Headquarters—							
(a) Personnel	2-00	2-00	..	2-00	..	..	2-00
(b) Transport (3 Jeeps) ..	0-45	0-21	0-24	..	0-45	..	0-45
(c) Office equipment, furni- ture, etc.	0-15	0-15	..	..	0-15	..	0-15
(d) Project Office, Seeds Store, Information Centre, etc.	0-25	0-25	..	..	0-25	..	0-25
Total ..	2-85	2-61	0-24	2-00	0-85	..	2-85
II. Animal Husbandry and Agricultural Extension Demonstration equipment.							
0-20	0-17	0-03	..	0-20	..	0-20	
III. Irrigation							
IV. Reclamation (including Soil Conservation, Con- tour-bunding, etc.)							
4-00	4-00	..	..	4-00	3-50	0-50	
V. Health and Rural Sanita- tion—							
(1) (a) Dispensary--Recurring Expenditure.							
(b) Dispensary Building ..	0-10	0-10	..	..	0-10	..	0-10
(c) Dispensary Equipment	0-10	0-10	..	..	0-10	..	0-10
(2) Drinking-water Supply ..							
0-50	0-50	..	..	0-50	..	0-50	
(3) Drainage and Sanitation..							
0-25	0-25	..	..	0-25	..	0-25	
Total ..	1-15	1-15	0-03	0-20	0-95	3-50	1-15
VI. Education							
0-70	0-70	..	0-20	0-50	..	0-70	
VII. Social Education (includ- ing audio-visual aids and Women, Youth and Child- ren's programme).							
0-70	0-54	0-16	0-40	0-30	..	0-70	
VIII. Communication							
0-90	0-90	..	..	0-90	..	0-90	
IX. Rural Arts, Crafts and Industries.							
0-50	0-50	..	0-25	0-25	..	0-50	
X. Housing for Project Staff and Rural Housing.							
1-00	1-00	..	..	1-00	1-00	..	
Grand Total ..	12-00	11-57	0-43	3-05	8-95	4-50	7-50

CHAPTER 3

Planning Process in Agriculture

C H A P T E R 3

Planning Process in Agriculture

1. Introduction

Planning in agriculture has different meanings depending upon the level of planning, that is, whether planning is done at the national, state, district or block level. In this chapter, we will examine in what manner planning for agricultural development is done at various levels, as well as the kind of planning that is done or is feasible. District planning in Maharashtra is considered to be the first serious effort to decentralise the planning functions. An account of the district planning process in Maharashtra is given in this chapter. This account leads to an examination of the extent to which there has been real decentralisation of planning, and what the attendant problems are in bringing about such a decentralisation.

2. Different connotations of 'planning for agricultural development'.

2.1 The term 'Planning' in the context of Indian Five Year Plans has a very specific meaning. It denotes either a new investment or a new service or an augmentation of an existing service or a concession or facility (like loans or subsidies). To illustrate, a new irrigation project represents a new investment; so does a power project or a new seed processing plant; they all figure in the Plan (1). The C.D. programme was a part of the Plan as the entire set-up amounted to augmentation of a service; the new T&V agricultural extension project is for the same reason part of the Plan. Subsidies given for various developmental purposes,

like for instance, subsidy on fertilisers admissible to small farmers under various programmes (e.g. SFDA), or subsidy given to small farmers for dugwells, also figure in the Plan (2). So, when we talk of planning in agriculture in this sense, we are really referring to a range of decisions, from investments to subsidies, which figure in the Annual and Five Year Plans.

2.2 Any decision taken by the State or Central Government, with the end objective of increasing agricultural production, would get reflected in the Plan to the extent to which it falls under any of the categories mentioned above. Some aspects of the decision may not fall under any of the categories and they would not then find a place in the financial aspects of the Plan. To illustrate this, let us suppose the end objective sought is to increase the production of oilseeds. Let us also suppose that Government takes a decision to achieve this objective by a combination of the following measures:- appointment of special staff; subsidy on seeds to the farmers; subsidy on pesticides; subsidy on irrigation water for summer groundnut; curtailing release of water for rabi irrigation from irrigation projects and carrying over water for summer irrigation for groundnut crop and restricting sanction of water for sugarcane and pre-monsoon cotton so as to give priority to meet the demands for water to irrigate summer groundnut crop; multiplication of groundnut seeds and supplying them to the farmers through cooperatives; and research programme for evolving better varieties of seed. All the above measures

would not necessarily be reflected in the Plan. The manner of operation of the irrigation system in order to give encouragement to summer groundnut would not be a part of the Plan. Similarly, the efforts going into multiplication of groundnut seeds and their distribution would not figure in the Plan; but if any additional facilities are set up for the purpose, or if additional share capital is given to the State Seed Corporation for the purpose, these would appear in the Plan. Special staff would, as it amounts to a new "service" rendered. But, all the same, all the above measures together constitute the plan for increasing oil-seeds production, if the term 'plan' is used, not in the restricted connotation mentioned earlier in para 2.1 but in a larger connotation. In this larger sense of the term, planning would connote not only the components which would find a place in the Plan, but also how administration plans to function in relation to achieving the given objective, and operate the instruments and facilities provided in the Plan or the assets created thereunder.

2.3 Planning for agricultural development would thus comprise: (i) preparing a plan for new investments, provision of new facilities and services, setting up new institutions, strengthening the existing ones and various kinds of production incentives to farmers, all of which require financial provisions to be made in the Plan (for the sake of convenience, we shall refer to this as 'investment plan') and (ii) preparing an operational plan, which would call for certain policy decisions, but which is essentially a blue-print for administrative action in order to reach the

production targets given in the Plan.

2.4 One often comes across the term "plan scheme" or sometimes simply "scheme" in plan documents. The term "scheme" is merely a terminology to denote those components of the decision package of the kind mentioned above, which get reflected in the financial aspects of the Plan. For instance, in the illustration given above, the 'decision package' would figure in the Plan document in the form of a "scheme" to promote "oilseeds production"; sometimes the word 'scheme' is dropped from the title of the scheme; and it would be referred to as an 'oilseeds development programme' or an 'intensive oilseeds development programme'. A scheme is thus what goes into the Plan document as a part of the financial outlay in the Plan. A Plan is thus made up of a number of schemes - each scheme representing a certain objective. By way of illustration, a few schemes of the agriculture sector from Maharashtra's Annual Plan 1981-82 are cited below: expansion of seed certification organisation; development of taluka seed multiplication farms; strengthening of fertiliser control laboratory; subsidy for pesticides, raticides etc.; subsidy for plant protection equipment (to be purchased by farmers); and increasing area under safflower in non-traditional areas.

3. Role of the Centre in planning for agricultural development.

3.1 Agriculture, under the Constitution, falls under the State List. The elements which constitute the investment plan for agricultural development fall mostly within the purview of the States. There are some exceptions to

this, like investment in fertiliser factories, which are generally in the Central sector because of the scale of financial outlay required, which cannot be met by the States, and investment in all-India financial institutions like ARDC; but, fertiliser factories are considered to be a part of industrial development activity and do not figure in the Agriculture sector in the Plan document, and financial institutions come under the category of Banking, which is a Central subject. At the national level, very little operational planning is done or is possible.

3.2 Nevertheless, initiatives in agricultural development planning in India have mostly come from the Centre. The account of the evolution of the agricultural development strategies given in Chapter 2 makes this amply clear. Many innovative approaches to agricultural development have in the past emanated from the Centre. The C.D. programme, the IADP followed by IAAP, the HYV strategy and the special programmes have all been the result of Central initiative. Even some organisational innovations like CADA were initiated by the Centre. There are some obvious reasons why this has been so. First, the skill and expertise required for evolving a strategy have for a long time been more with the Centre than with the States. In fact, until the Fifth Plan, the States did not have full-fledged Planning Departments. In the initial years of planning, there was a strong political leadership at the Centre; administrative leadership was also with the Centre with the seniormost officers of the Indian Civil Service occupying positions of importance at the Centre. The States, both at the political and at

the administrative levels were, by and large, willing to abide by the prescriptions of the Centre in the matter of planning for agricultural development. Secondly, the urgent problem was stepping up foodgrain production. The problem was how to get stagnant agriculture moving, given the low level of technology. It was both necessary and convenient to adopt a uniform all-India pattern of dealing with the problem. There were not many serious inter-State variations as far as the problems were concerned. In any case, the Centre's prescription till the Third Plan was mostly regarding the administrative and institutional framework. Thirdly, any serious shortage of foodgrains was much more a matter of national concern than the concern of those States where there were pockets of shortages, as ultimately it was the Centre's responsibility to resort to imports.

3.3 Plan schemes for agricultural development, to be operated by the States, require to be incorporated in the States' Plans and voted by the State legislatures. The Centre could make the States conform to its line of thinking by Central assistance which used to flow to a substantial extent through a number of Centrally sponsored schemes. In effect, much of the plan assistance to the States was being tied to or linked with certain specific schemes which the States were required to incorporate in their Plans. Sometimes the States also took the initiative to formulate schemes and sought financial support from the Centre, but such instances were rare, especially in agriculture. Such schemes were called the Centrally assisted schemes.

3.4 We shall illustrate how the Centre initiates planning in agriculture with an example. Let us suppose a decision is taken at the national level to increase the production of oilseeds through certain measures. What generally emerges is a package of measures aimed at achieving the objective, which could comprise additional special staff, subsidies on inputs at certain specified rates and research grants to the ICAR and through ICAR to the agricultural universities to undertake research on oilseeds. All the ingredients of the package of measures settled at the national level are generally such as would require financial outlay to be provided in the Plan. At the national level, it is obviously not possible to spell out further details like the manner in which irrigation projects are to be operated, or the areas where concentrated attention is to be given, that is, operational details. Having decided the total financial outlay in the Plan for this purpose, the Centre then allocates this outlay among the States on the basis of a chosen set of criteria. Some States which offer the best possibilities for achieving increase in production are given more allocation than others. Once the allocations for the States included in the programme are settled, one of two things could happen. Either the Centre would offer to bear the entire cost or would require the States to supplement the Central allocation from the States' Plans; the extent of such supplementation could vary, but most schemes are on a 50:50 basis, that is, Centre and the States sharing the cost equally.

3.5 The Centrally sponsored schemes and the fact that they (along with Centrally assisted schemes which were not many) constituted a source of plan assistance from the Centre to the States acted as an effective financial leverage in the hands of the Centre to make the States fall in line with the national policy and priorities and take up schemes considered by the Centre to be important. If the States did not adopt the Centrally sponsored schemes as suggested by the Centre, they would stand to lose the Central assistance tied to those schemes.

3.6 Many of the Centrally sponsored schemes, particularly those which were purely staff schemes, are converted into non-plan schemes at the end of the Plan period. In official planning terminology they are called 'committed non-plan schemes'. The States are at liberty either to continue them and meet the costs from their non-Plan budgets, or discontinue them. In actual practice, however, the States find it difficult to discontinue these schemes; sometimes they also realise that it is expedient to continue them. The expenditure which they have to incur on these schemes is taken into account by the successive Finance Commissions. To quote from the Fourth Plan document: "Ever since the First Plan, a variety of programmes had been launched through schemes in which uniform patterns of staffing and administrative organisation were laid down by the Centre. They usually carried with them substantial Central assistance during the Plan period. They were called Centrally sponsored schemes. The responsibility for financing the committed expenditure

for these at the end of the Plan fell on the States". (3)

In the initial years, this pattern of Central participation in the States' Plans, using the device of Centrally sponsored schemes (and to some extent Centrally assisted schemes) was largely beneficial. During these initial years, the States too depended largely on Central initiative in planning for agricultural development, for reasons mentioned earlier in para 3.2. But this device of Centrally sponsored schemes was not entirely an unmixed blessing. Over a period, it led to certain unhealthy trends and these are mentioned in the following paragraphs.

3.7 The Centrally sponsored schemes were intended to be used as an effective mechanism through which States could be spurred and induced to fall in line with the national priorities and lay adequate emphasis in their Plans on those aspects considered important by the Centre. But, instead of confining to a few schemes of crucial importance to the national economy, there was a tendency on the part of the Centre towards a proliferation of these schemes. The number of centrally sponsored schemes which were in operation in Maharashtra in the year 1978-79 is given below:

<u>Sector</u>	<u>No. of schemes</u>
* 1. Agriculture and Rural Development	86
2. Housing and Urban Development	6
3. Education	7
4. Welfare of Backward Classes	7
5. Social Welfare	4
6. Rehabilitation of bonded labour	1
7. Village and Small Industries	4
8. Health	19
9. Transport	5
10. Power	1
Total:	<u>140</u>

(* also includes Animal Husbandry, Fisheries and Cooperation).

Many of the above schemes were such where Central initiative was neither crucial nor necessary. For instance, the following schemes carried very little outlay and had a very marginal impact on the overall agricultural development effort 'at the State level: eradication of pests and diseases, weed control, farmers' training and education, improved implements, mixed plantations, dry land farming. Even administratively, it was proving cumbersome to the State Governments to keep records of expenditure incurred on the schemes and claim Central assistance before the end of the financial year. In many instances, queries were made by the Centre as regards the propriety of the expenditure incurred and obtaining Central assistance depended upon satisfactory explanation of such queries.

3.8 Secondly, the schemes contained a certain set pattern of assistance including a pre-determined staffing pattern and were not amenable to modification to suit local conditions. For instance, the Integrated Cotton District Programme (ICDP) was started as a Centrally sponsored scheme in mid-70s. It was originally 100% Centrally funded, and was converted into 50:50 scheme from 1979-80. The components of the scheme (4) are as follows:

Staff and contingencies:- Separate staff for the operation of the scheme has been suggested consisting of project officers, extension officers, gramsevaks (exclusively for the project) and accounts staff. The staff is to be appointed by the State Governments and the cost is to be borne by the State and the Centre equally.

The other components of the scheme are: subsidy of Rs.150/- per quintal for certified seeds, 25% subsidy on plant protection equipment, financial provision for demonstrations at Rs.200/- per ha. for irrigated cotton and Rs.50/- per ha. for rainfed crop, aerial spraying (covering 10,000 ha. the expenditure norm being Rs.25/- per ha. operation charges), ground spraying (1,00,000 ha. coverage, with the norm of Rs.7.50 per ha. towards operation charges), Rs.16.48 lakhs towards production of hybrid cotton seed over 1300 ha. and outlay for the agricultural universities for the production of nucleus and foundation seeds of better varieties of cotton. Statewise break-up of coverage under aerial spraying and ground spraying, as well as the Statewise allocation of the financial provisions for other components of the scheme have been indicated by the Centre.

The pattern given above is standard for all the States. It is not possible for any State to adopt a different pattern of subsidy or introduce a component not given in the scheme at all. For instance, if the Government of Maharashtra feels that under conditions obtaining in the State there should be a subsidy to farmers on hybrid cotton seed (not provided in the scheme) or that the pattern of subsidy for spraying operations should be increased, or that there should be a subsidy on irrigation, it is not possible to modify the scheme to suit these requirements of the State Government. The same is the case in respect of other Centrally sponsored schemes, like the schemes for the production of pulses crops, or the intensive oilseeds development

programme, which were also introduced during the Fourth Plan period.

3.9 Thirdly, the Central Ministries in areas which, like agriculture, are State subjects, and where planning is primarily the responsibility of the States, found in these schemes an opportunity for their own expansion. This, in fact, was one of the reasons why a large number of Centrally sponsored schemes came to be formulated which cannot be considered very crucial.

3.10 Fourthly, too many of these schemes tended to make the States rely too much on Central initiative. This cannot be viewed as a healthy trend from the point of view of strengthening the planning capabilities of the States.

3.11 Fifthly, apart from their rigidity, these schemes present another kind of problem to the States, stemming from the process of planning. The discussions regarding the States' Annual Plans are generally held by the Planning Commission in the months of November-December of the preceding calendar year and the planning exercise at the State level starts much earlier. In Maharashtra, where district planning has been in vogue since 1974-75, the District Plans are formulated even earlier. When the District Plans and the State Plan are given final shape, the State's share of the Centrally sponsored schemes, to be provided in the State's Plan and in the Plans of the concerned districts, is not known as these outlays are indicated by the Centre very much later. At that juncture it becomes very difficult to make adjustments in the State's Plan in order to make adequate

provisions for the State's counterpart share (generally 50%) of the Centrally sponsored schemes.

3.12 During the formulation of the Fourth Plan, the usefulness and the limitations of the Centrally sponsored schemes came up for detailed discussion. The Administrative Reforms Commission (ARC) in its recommendation stressed the "need for allowing full initiative and freedom of action to the States", (5) in the matter of planning and also suggested that Centrally sponsored schemes should be restricted to "a minimum number" having "basic national importance" (6). In accordance with this recommendation of the ARC, the Planning Commission placed its proposals before the National Development Council (NDC) recommending a reduction in the Centre's role in the formulation of the States' Plans. These were "far reaching proposals which, at one stroke, sought to abolish the practice of tying Central assistance with Centrally "approved" schemes and envisaged the allocation and flow of Central assistance predetermined on the basis of certain broad socio-economic considerations, irrespective of the sectoral allocations or the nature of the schemes adopted in the plans of the States. These measures, it was felt, would enable the States to evolve their plans without any dictation from the Centre either about the contents or the nature of the plan schemes, of course within the overall availability of plan resources".(7) The subject of Centrally sponsored schemes came up for discussion in the NDC meeting in May 1968. The States were generally in favour of reduction in the number of these schemes. To quote from the proceedings of

the NDC meeting: "Many States have suggested that the number of Centrally sponsored schemes should be considerably reduced and those that might continue be financed with 100 per cent assistance. There should be flexibility in regard to pay scales, staffing pattern, design of buildings etc."(8) It is interesting to note that all Central Ministries, with the exception of Labour and Employment, suggested the continuation of the Centrally sponsored schemes; Ministries of Food and Agriculture, Health, and Works, Housing and Urban Development suggested additions to the number of these schemes.

3.13 Following the recommendation of the NDC, it was decided to curtail the number of Centrally sponsored schemes during the IV Plan, restricting them only to those which fulfilled the following criteria:

"(a) that they relate to demonstrations, pilot projects, surveys and research; (b) that they have a regional or inter-State character; (c) that they require lump sum provision to be made until they could be broken down territorially; and (d) that they have an overall significance from the all-India angle." (9) In the light of the above criteria a shorter list of 47 schemes (in all sectors together) came to be included in the Fourth Plan (as against 92 originally proposed).

3.14 At the beginning of the Fourth Five Year Plan, the pattern of flow of plan assistance from the Centre to the States was altered substantially. Till the Fourth Plan there was no fixed pattern or formula governing the allocation of Central assistance to the States. Some guidelines were

submitted to the NDC in September, 1955 for determining the Plan outlays of the States for the Second Plan; but the quantum of Central assistance was not predetermined. The same was more or less the practice followed during the Third Plan period: "The National Development Council, it may be mentioned, did not specifically consider the principles for allocation of Central assistance to States either in the Second or the Third Five Year Plans". (10). Central assistance to every State continued to be fixed after the Plan outlay of the State was decided upon. To quote from the Agenda Paper circulated to the Twenty-fifth meeting of the National Development Council by the Planning Commission: "It may be observed that during the first three Plans, stress was laid mainly on the principles which would determine the Plan outlays rather than the quantum of Central assistance. The quantum was largely decided in the light of the gap in the resources of each individual State in relation to the Plan outlay decided upon. The amounts of annual plan assistance were invariably decided at the time of annual plan discussions". (11).

3.15 From the beginning of the Fourth Plan this procedure was replaced by a new one according to which the quantum of the total flow of Central assistance to the States for Plan was to be decided in advance. The inter-State distribution of this quantum of Central assistance was governed by an objective formula, known as the Gadgil formula. The replacement of the pattern of Central assistance, a substantial part of which earlier flowed to the States through a large number of schemes which the States were prodded by the Centre to

adopt as the Plan assistance was tied to them, by a block assistance, was intended to shift the planning initiative from the Centre to the States to a considerable extent. To quote from the Fourth Plan document:

"In order to simplify the procedure for release of Central assistance, to avoid adoption of standard schemes unsuited to local conditions and needs as well as to ensure equity among States in regard to the grant assistance for the Plan, it has been decided that in future there will be no schematic patterns of assistance. Central assistance will not be related to any specific scheme or programme under the State Plans but would be given to the States through block grants and block loans." (12)

3.16 The Gadgil formula together with the new pattern of Central assistance is perhaps the most important single development in the history of Centre-State relationship in planning. It gave considerable freedom to the States to prepare their own Plans and also incidentally, reduced a good deal of paper work relating to claiming Central assistance in respect of a large number of schemes individually. But the new pattern did not keep the number of Centrally sponsored schemes down to the bare minimum; on the other hand, their number increased during the Fifth Plan, as observed earlier in para 3.7. During the pre-Gadgil formula period, the States had to adopt the Centrally sponsored schemes to qualify for Plan assistance tied to such schemes; since the Fourth Plan, the States got their share of Central assistance according to the formula, and they got more if they adopted the Centrally sponsored schemes.

Most States swallowed the bait offered. The following Table gives the expenditure on Centrally sponsored schemes from the Second Plan onwards.

Table showing the expenditure on Centrally sponsored schemes from the Second Five Year Plan onwards.

<u>Expenditure on Centrally sponsored schemes</u>		<u>Rs. in crores</u>
Second Five Year Plan	...	286
Third Five Year Plan	...	223
Three Annual Plans	...	117
1969-70	...	107
1970-71	...	122
1971-72	...	166
1972-73	...	538 *
1973-74	...	399
1974-75	...	269 **
1975-76	...	331
1976-77	...	444
1977-78	...	644
1978-79(B.E.)	...	874

*In the case of loans for emergency agricultural programmes and special welfare schemes and crash programmes for rural employment.

**The reduction is due to the fact that many schemes were converted into non-Plan schemes at the end of the IV Plan period.

(Source: D.T.Lakdawala: "Plan Finances in a Federal Economy". Yojana Vol.XXIII No.9, 16th May,1979).

3.17 The large number of Centrally sponsored schemes came up for discussion once again in the meeting of the NDC held on March 18-19,1978 to finalise the Sixth Plan 1978-83. In this meeting the Chief Ministers argued that: "(i) Most of the schemes are valuable, but they should be

in the State Plan rather than in the Central Plan; (ii) The enlargement of the coverage of Centrally sponsored schemes reduces the amount of Central assistance available to the States as block loans; (iii) Some of the schemes are drawn up too rigidly by Central Ministries and are sought to be controlled in unnecessary detail; (iv) Since the new schemes are taken up after the finalisation of a Five Year Plan, States are placed in difficulty when matching contributions are required." (13)

3.18 As a result of the deliberations during a series of meetings of the NDC and the Committee of the NDC specially constituted for the purpose of examining the issues relating to Centrally sponsored schemes, many schemes were dropped and many which were on the basis of 100% Central assistance were converted into schemes funded by the Centre and the States on a 50:50 basis. The recommendation of the Working Group constituted by the NDC that:

"The Central Government should only lay down broad guidelines leaving the detailed sanctions to the States" was accepted by the NDC. According to Lakdawala :

"It was the view of the National Development Council that this would enable the States to participate in the formulation of the schemes so that they can be adapted to suit the requirements of the States." (14)

3.19 Despite this, the inflexibility of the Centrally sponsored schemes persists. We have already seen how impossible it is to modify the package of the schemes to suit the specific requirements of the different States. In

the very nature of things such a flexibility is so difficult to achieve as to make it an unattainable dream. If every State desires to modify every scheme to suit its own specific needs, the administrative work of the Central Ministries will increase considerably. Further, the Centre's component of the schemes requires to be voted by the Parliament. If every State has its own variation of a Centrally sponsored scheme, every such variation needs to be brought to the notice of the Parliament, according to the budgetary procedures. The kind of uniformity and lack of flexibility which characterise the Centrally sponsored schemes are present even in schemes formulated at the State level, which tend to be uniform throughout the State and ignore the varying requirements of different agro-climatic zones. In the context of district planning which has been in existence in Maharashtra since 1974-75, described in Section 5 of this Chapter, it is often asked what freedom do the District Planning and Development Councils (DPDCs) have to plan for their respective districts if standard schemes are furnished by the State Planning Department and if they (i.e. DPDCs) cannot evolve schemes of their own without getting the approval of the State Government. The difficulty here is also very similar to what has been mentioned earlier in the context of Centrally sponsored schemes. It is no doubt beyond dispute that the more location-specific the schemes are, the more relevant will be agricultural development planning. But administrative realities ultimately act as the limiting factor. Thus there is a dilemma in agricultural development planning, both

centralisation and decentralisation have their own problems; mostly administrative, which have defied a satisfactory solution so far.

4. Operational Planning for agricultural production at the State, District and Block levels.

4.1 In this section we shall see how operational planning in agriculture is done at the State, district and block levels. As observed earlier, at the national level it is not feasible to do a detailed operational planning exercise. But as we go down from the national level to the block level, the planning function is oriented more towards operational planning; at the block level the planning function comprises mostly operational planning. A more detailed account of operational planning at the State, district and block levels is given in Chapter 5 where we examine the functioning of the agricultural development in Maharashtra during a typical year.

4.2 We shall start with the State level and examine the manner in which operational planning is done. We shall take the same example of oilseeds production. At the State level the total production target is translated into areas (in hectares), and targets are assigned to the promising districts. How much seed is available and how much more should be produced, how the seed should be distributed, which are the irrigation commands which should be chosen for the programme (depending on agro-climatic and soil conditions), what policy decisions regarding the operation of the irrigation projects should be taken, are all matters for attention and decision at the State level. There would be many ingredients in the decision package at the State level, which might not figure

in the Plan at all.

4.3 In the case of a Centrally sponsored scheme, it is quite possible that at the State level some more decisions are taken regarding the basic contents of the 'package' handed down by the Centre. For instance, the State Government can decide to enhance the rates of subsidy; or may provide for some incentive not contained in the 'package' at all. But such additions would be at the State Government's own expense; that is, the expenditure on account of such additions would not be borne by the Centre. For instance, in 1981-82, the Government of Maharashtra decided to give an irrigation subsidy of Rs.300 per ha for summer groundnut. In the Centrally sponsored scheme of intensive oilseeds production this subsidy was not included. Therefore the cost of this subsidy had to be borne entirely by the State Government. Sometimes, the Centre itself suggests in which districts a Centrally sponsored scheme should be implemented; this is done in order to concentrate the efforts over a limited area, as there are often pulls at the State level to spread the programmes more thinly. The State Government could then decide to cover a few more districts; the cost of this additional coverage would have to be borne entirely by the State Government. One example of this is the DPAP. In DPAP, the Centre selected certain talukas in six districts in Maharashtra for coverage under the project. The State Government, on its own, took a decision to extend the project to cover more districts; the cost of implementing the project in these additional districts is borne entirely by the State

Government from the State's Plan.

4.4 As we go down from the State level to the district level, different kind of decisions are required to be taken regarding the plan to increase oilseeds production. At the district level (as we have observed earlier), there is little possibility of either changing the basic contents of the 'package' or adding anything to it; 'planning for oilseeds production' acquires a different connotation. One really starts with a given target of coverage (in hectares), a given 'package' and a given financial allocation. The questions which come up at the district level are generally the following: what are the oilseeds on which to concentrate taking into account the potentialities of the district and the established cropping pattern in the district; what about availability of seed, that is, whether the taluka seed farms of the district can provide the seeds or whether seeds need to be indented with the State Seeds Corporation; which are the areas within the district where oilseeds are traditionally grown and where intensive efforts, like publicity to the Government's incentive package, extension work and input positioning will yield quick results; in which irrigation commands within the district an intensive campaign can be taken up; for how many hectares each project can give water during summer for groundnut. In this manner, an 'operational plan' is prepared at the district level. When we go from the district level to the block level, the kind of planning would once again vary; operational planning at the block level is much more detailed. The areas are identified more

specifically , farmers are identified, subsidies disbursed and follow-up is done.

4.5 It is possible to argue, and it is sometimes argued, that what is done at the district and block levels is, really speaking, implementation. It is difficult to draw a clear line of demarcation between planning and implementation. At every level there is some element of planning. It is only a question of what meaning we impute to the term 'planning'. In fact, a good deal of planning for agricultural production (in the wider sense of the term 'planning') does take place and can take place at the district and block levels - the lower the level the more detailed the planning becomes, and there is a blurring of distinction between planning and implementation. The following are some of the aspects which are relevant (these have relevance in the context of Maharashtra and are illustrative and by no means exhaustive) in the context of planning for agricultural production at the block level: (i) To what extent has there been coverage under hybrid jowar (kharif)? What are the potential areas where hybrid jowar has not spread and where intensive campaigns will be necessary? (ii) In some of the Vidarbha districts (with assured rainfall), it is possible to shift some areas from hybrid jowar to hybrid cotton which would give better incomes to the farmers. It is necessary to analyse the problems which the farmers face in doing so, the constraints operating, which of them can be solved at the district level (like supply of certified H-4 cotton seed or meeting the increased credit needs) and in what respects decisions may be required at the State level; (iii) Some marginal lands

with shallow soils are under jowar (non-hybrid) cultivation in Western Maharashtra. It is possible to shift to the cultivation of new varieties of hybrid bajra which would give the farmer better incomes. Identification of such areas, persuading the farmers to change over to hybrid bajra, supplying seeds etc. are matters which require attention at the block level; (iv) In many-drought prone areas, lands which are slopy and undulating and have a poor soil cover are being cultivated and the yields are, predictably, very poor. In due course, these lands tend to deteriorate further. According to experts, these lands really need to be brought under non-arable agriculture, like fodder cultivation or agro-forestry. Identification of such areas, and planning for shifting the agronomic practices and the cropping pattern, fall within the competence of the block level administration.

4.6 In short, the kind of planning that is possible at the block level mostly relates to crop planning or planning for the most appropriate cropping pattern. In fact, this kind of planning is most effectively done at the lowest level. Once such a plan is drawn up, which is necessarily a gradual process (in the sense that it is not possible to draw up a plan for a whole block as a one-shot operation), the block level administration can indicate what tools are necessary to carry out the plan. The plan prepared at the block level would read somewhat like this: (i) During 1981-82 it is proposed to cover _____ ha of marginal lands with fodder cultivation or fodder trees; (ii) Similarly,

_____ ha is proposed to be brought under hybrid bajra from local jowar; (iii)..... and so on.

The block administration would then indicate the tools necessary to actualise this plan. Since the farmers finally have to adopt them, the question is what are the levers which the administration can operate in order to achieve the end objective? It could be mere positioning of seeds in time, sometimes intensive campaign will be necessary, sometimes it will be necessary to take up demonstrations, or it is possible that some incentives are called for (in Maharashtra, for instance, a special cash incentive is offered to induce farmers to shift to fodder cultivation on marginal lands in the DPAP areas), or some infrastructural works may be necessary like land shaping. Whatever are the instruments felt necessary by the block administration would be indicated to the district administration. If it is necessary to formulate a Plan scheme (or schemes) for the purpose, that is, if in order to carry out the plan prepared at the block level it is necessary to make financial provisions in the Plan for offering subsidy or any other incentive, not already covered by any of the existing Plan schemes, or if additional staff is required, the decision will have to be taken at the State level. The reason is that every Plan scheme will have to be incorporated in the State budget and voted by the State legislature, this being a constitutional requirement.

4.7 The above account indicates the possibility of a two-way planning in agriculture; on the one hand schemes formulated at the top to be handed down and, on the other

hand, schemes suggesting themselves as a consequence of planning done at the block level, which can be incorporated in the Plan. While such a two-way communication is perfectly feasible without any change in the present institutional framework, it is not a normal feature. The main reason why this is not a normal feature is that right from the days of the C.D. programme planning initiatives have not been expected of the block level administration. That the block level administration can make a valuable contribution by undertaking a certain kind of planning function has not been made explicit. The Working Group on Block Level Planning appointed by the Planning Commission (known as the Dantwala Committee) has in its Report mentioned this kind of operational planning as an important activity which should be entrusted to the block level administration. To quote from the Report:

"For example, in a command area covering several blocks, the utilisation of the newly available irrigation facilities for increasing productivity and employment can be accelerated through the block level plan which would take up the complementary programmes of land shaping, distributory channels, crop planning, agricultural extension, supply of inputs and credit. Such complementary programme planning requires not only the identification of the needs for various inputs but also a proper sequencing of activities." (15)

4.8 While assigning planning responsibilities to the districts and block levels, it is necessary to spell out clearly what planning functions are proposed to be entrusted to them. The kind of planning functions entrusted to them

should inherently be capable of being carried out at these levels effectively. But this has not so far been followed. Experiments with decentralised planning, like district planning in Maharashtra (emulated by Gujarat and Karnataka) have assigned to the districts planning functions which are in the nature of investment planning. We have observed in para 3.19 that there are obvious limitations to the districts being able to discharge these functions effectively; we shall be looking at this problem more closely in the next section of this chapter. As we go down to the block level, these limitations would increase; planning function at the block level would have very little scope if confined to 'investment planning'. But on the other hand, both the district and the block levels can make useful contributions in operational planning. Operational planning has not, however, been specifically assigned to the district or block levels. The main reason is that 'operational planning', which does not comprise allocation of plan funds for different schemes or projects, is not considered to be a part of planning at all but, as observed in para 4.5 above, taken as a part of implementation. Since implementation is clearly perceived as the task of district and block level administration, it is presumed that there is no need to spell out their operational planning responsibilities, which as we have seen are much wider than mere implementation.

4.9 This lacuna is very much evident in the 'Guidelines for Block Level Planning' issued by the Planning Commission (16). Despite the recommendation of the Working Group on Block Level Planning, referred to earlier, the Planning Commission's guidelines concentrate on what schemes and projects

can be given fund allocation from the Plan at the block level and in what manner Plan funds for this purpose should be given to the block level administration. The concept of decentralised planning is not merely a question of furnishing to the planning agency (at the district or block levels) a list of Plan schemes and requiring them to indicate the financial allocations for them but goes much beyond.

5. District Planning in Maharashtra.

5.1 In order to appreciate the possibilities and limitations of planning for agricultural development at the State level and below, it is useful to examine the decentralised planning in operation in Maharashtra since 1974-75. A brief account of district planning in Maharashtra is therefore given in this section. District planning has many facets like removal of regional imbalances, association of elected representatives of the people with planning; giving an opportunity to the districts to attain full development, having regard to their potential manpower and other resources; and so on. Since we shall be discussing District planning in the context of planning in agriculture, we shall touch only such of its aspects as are relevant for our further discussion.

5.2 Under the Maharashtra Zilla Parishads and Panchayat Samitis Act, a statutory obligation has been cast on the ZPs to promote planned development of the districts by utilising, to the maximum possible extent, local resources and, in order to achieve this, to prepare annual and long-term plans having regard to the plans prepared by the Panchayat Samitis. (17) But, in actual practice, there was no evidence of any such planning function either entrusted to or undertaken by the

ZPs. This was the finding of the Evaluation Committee (1971) (known as the Bongirwar Committee) which examined the functioning of the ZPs in Maharashtra since their formation. (18)

5.3 The first step towards decentralisation of planning functions was taken by the State Government in 1972, when District Planning Boards were constituted. The District Planning Board had the Minister of the district as its Chairman; the members of the Board were: Divisional Commissioner (of the concerned Revenue Division) who was the vice-chairman of the Board, Collector, ZP President, Mayor of the Municipal Corporation and/or the President of the largest Municipal Council in the District, Chief Executive Officer (CEO) of the Z.P., Chairmen of the District Central Cooperative Bank and the District Land Development Bank, Regional Manager of the Lead Bank, and three non-officials to be nominated by the State Government. This Board was to be assisted by a team of officials who constituted the Planning Team of the District; these officials were CEO, ZP, District Deputy Registrar of Cooperative Societies, Deputy Director of Agriculture, District Statistical Officer, Divisional Forest Officer and the District Industries Officer. Every ZP had a Planning Officer from the inception of ZPs. and this officer was to function as the Secretary of the District Planning Board and Member-Secretary of the official team.

5.4 In 1974, the composition of the District Planning Board was enlarged so as to include, in particular, the

members of the State Legislature and of the Parliament from the district. This enlarged body was called the District Planning and Development Council (DPDC). The Minister of the district continued to be the Chairman, and the Divisional Commissioner the vice-chairman of the DPDC. Detailed work of plan formulation, monitoring and review is entrusted to the Executive Committee of the DPDC comprising the Chairman and Vice-chairman of the DPDC, President ZP, Collector, CEO, ZP, and two non-official representatives of the DPDC, and representatives of the financial institutions, municipalities/corporations and the Planning Officer, ZP.

5.5 Certain schemes are categorised as district level schemes and these fall within the purview of the DPDCs. Such district level schemes mostly comprise projects or activities of predominantly local benefit; examples are medium and minor irrigation projects, district and rural roads, various schemes for agricultural development involving subsidies and incentives to farmers, primary and secondary education, rural health, veterinary facilities and artificial insemination centres, chilling plants etc. Projects or activities whose benefits cannot be precisely localised like, for instance, power projects (generation and transmission), agricultural universities, medical research and education, etc. as well as projects of importance for the State as a whole, like major irrigation projects, are designated as State level schemes. The State Plan would thus comprise outlays on District level and

State level schemes. Centrally sponsored schemes are also classified as district or State level by applying the above criteria. If any matching provisions are required to be made in the State Plan in respect of any Centrally sponsored scheme which is classified as district level, the DPDCs concerned need to make the requisite provisions in the plans of their districts.

5.6 Out of the total financial outlay for the State Plan, a certain amount is set apart for district level schemes. It is the announced policy of the State Government that about 40% of the total State Plan outlay would be set apart for district level schemes. The total quantum of district level plan outlay so decided is distributed among the different districts on the basis of a formula similar to the Gadgil formula mentioned earlier. Thus, every district gets a certain financial allocation within which the district level schemes of that district should be planned. The elements constituting the investment plan for agricultural development which would require financial allocation in the State Plan are mentioned below:

(i) Infrastructure; e.g. irrigation projects, soil and water conservation works, rural electrification projects, rural roads, market yards, warehouses, seed processing plants, etc. (ii) Research: grants to agricultural universities for undertaking research programme in agriculture. (iii) Extension (iv) Schemes which provide for various kinds of subsidies and incentives to farmers for various purposes like, for example, subsidy on pesticides, subsidy

on fertilisers, subsidy on certified seeds and so on. Out of the above, some are to be planned at the State level since they are State level schemes and some at the district level. Mostly schemes falling under categories (iii), (iv) and (v) are district level schemes. In category (i), barring major irrigation projects, the rest are mostly district level schemes. Grants to agricultural universities are regarded as State level according to the principle of classification already stated.

5.7 Funds also flow for developmental purposes from institutional sources and these funds do not get reflected in the State Plan. They should, all the same, be taken into account while formulating the Plan, as matching services need to be provided in the Plan for these purposes. For example, funds for long term investments by farmers for agricultural development are made available by credit institutions like Land Development Bank and Commercial Banks. Such investments are mostly in minor irrigation sources like dugwells or lift irrigation schemes. It is necessary that adequate provisions are made in the Plan for rural electrification so that the investments made by the farmers out of institutional funds can be made use of. Loans are also given for purchase of milch cattle and such loaning programmes should get the necessary infrastructural support from the State Plan, like provision of rural roads, chilling plants, etc. When such complementary activities, to be provided for in the State Plan, fall in the category of district level schemes, the DPDC of every district should assess the extent of such provisions required and include them in the Plan of the

district. Thus there needs to be a consistency between the District Credit Plan drawn up by financial institutions and the District Plan.

5.8 While in theory every district is expected to prepare a plan for agricultural development of the district, scope for such a plan formulation at the district level is limited under the present concept of district planning. The districts have the freedom as far as the location of any particular infrastructure project and the financial allocation for the project are concerned. For instance, it is open to the DPDC to say that a minor irrigation project 'A' should be taken up instead of project 'B'. The DPDC can also say how much of the plan allocation should be given to a specific project. But the DPDC cannot introduce a totally new scheme which is not in the approved list of schemes prepared by the State Government. For instance, if the State Government has prepared a scheme for increasing the production of any particular crop by using certain package of measures, the DPDC cannot alter the package or suggest any change in the pattern of assistance provided in the scheme. As remarked earlier, just as the State Government does have the freedom to alter any Centrally sponsored scheme to suit the specific requirements of the State, a DPDC also cannot alter the scheme prepared by the State Government. Thus, though in concept, district planning is expected to decentralise the planning decisions, in actual practice, the DPDCs do not have an unfettered freedom to plan for their own districts.

5.9 While the DPDC cannot introduce any new scheme or

depart from the contents of the scheme handed down from the State level, they have a good deal of discretion regarding the extent of financial allocation to be given to a particular scheme. To illustrate, let us take the scheme of the establishment of gobar gas plants, which is a district level scheme. Under this scheme, subsidy is admissible on a set pattern to those who put up gobar gas plants. It is open to the DPDC to decide how much should be provided for this scheme. Difficulties often arise when the priorities of the DPDC do not coincide with the priorities of the sector department concerned. Taking Agriculture sector as an example, let us suppose that a decision is taken at the State Government level that the taluka seed farms should be upgraded and provided with irrigation facilities so that it would be possible to produce foundation seeds on these farms on a larger scale. From the point of view of seed production for the State this would appear to be a logical decision. But if the DPDCs do not consider this as a priority item and do not make adequate provisions in the district plans for this purpose, then the plan for the Agriculture sector prepared at the State Government level cannot be put through. Another instance is that of grant of subsidy to small farmers on fertilisers. It is an announced policy of the State Government that this subsidy should be given in order to increase the consumption of fertilisers in the State. The success of this policy would depend very much upon provisions made by the DPDCs for this scheme, as this is a district level scheme. There are, in fact, many such instances where a plan for a sector prepared at the State

Government level cannot be put through because the DPDCs may have different views and may not agree with the proposals of the sector department. A particular DPDC may feel, for instance, that it is more important to emphasise irrigation rather than giving subsidy on fertilisers. In such a case it is open to the DPDC to do so. But it does create problems from the point of view of planning for agricultural development for the State as a whole.

5.10 There is another kind of problem attributable to the district planning process akin to what has been described above. To illustrate this kind of problem, let us take the case of the scheme of intensive programme for oilseed production which is a district level scheme. In consonance with the national policy, the State Government has decided that the production of oilseeds should be stepped up substantially and for this purpose liberal incentives should be given to the farmers to produce oilseeds. In order to achieve the production targets, it was calculated that a financial provision of the order of nearly Rs.2.22 cr. would have to be provided in the State's Annual Plan 1981-82. This amounted to a very substantial step-up over the outlay of only about Rs.25 lakhs provided in the State Plan for the purpose in 1980-81. Since not all districts are suitable for the production of oilseeds, the few districts selected for intensive effort are required to substantially increase the provision for the scheme in their own district plans. The concerned DPDCs showed reluctance to do so as they found it impossible to fit the increased provisions required for the

scheme within their district plan outlay. The step up required on one scheme alone, in the case of these districts, amounted to a major share of the incremental financial allocation to them. In the case of Centrally sponsored schemes there is a similar problem. This was referred to in para 3.11 of this chapter. These schemes are also generally concentrated in a few districts and the DPDCs of these districts often find it impossible to provide for these schemes to the necessary extent.

5.11 The DPDCs also show a tendency of deliberately making inadequate provisions for those items which they know are priority items of the State Government which would somehow be taken care of. They feel that if the financial allocation given to the districts is earmarked for items other than the priority items, since the State Government would somehow take care of the priority items, they would finally end up with more than their legitimate quota of financial allocation.

5.12 Another difficulty arising out of the district planning process is that it is often difficult to forecast at the time of preparation of the District Plans, how much of allocation will be required in each district for every scheme. Taking the oilseed scheme for example, the financial allocation for the scheme would really depend upon how many farmers take advantage of the scheme, and this cannot be predicted precisely districtwise. So eventually, in some districts, the amount provided for the scheme may not be fully utilised, while in other districts additional amounts

may be required. The Agriculture Department cannot use the surrendered financial provision in a district to meet the excess expenditure in another district; any surrender on any scheme is diverted by the DPDC for another scheme within the district. There have been instances where farmers could not obtain the promised incentives because the DPDC provisions were exhausted.

5.13 When such instances occur of inadequate provisions by the DPDCs in their district plans which would seriously distort the plan for agricultural development prepared at the State Government level, there are only two alternative courses of action: to accept the provision made by the DPDCs in which case any rational planning for agricultural development for the State becomes meaningless or to alter the plan prepared by the DPDC in which case district planning would lack meaning. The DPDCs quite understandably are sensitive when any substantial changes are made at the State Government level in the district plans prepared by them. In order to bring the plans prepared by the DPDCs closer to the sectoral plans prepared by the different sector departments, district plans are finalised in meetings held at the State level. In these meetings the Minister for Planning discusses with every DPDC, represented at these meetings by the Executive Committee, the plan of the district before finalisation; the sector departments present their case and plead for allocations in accordance with their own sectoral plans. Sometimes, the request of the sector departments could be accommodated; but more often than not the plans prepared by the DPDC are substantially

approved.

5.14 Decentralisation of the planning function is thus not without its problems. The main question is whether the concept of an agricultural development plan for the State runs counter to the concept of district planning, and whether it is possible to harmonise the two concepts. From what has been described above it is clear that any such harmonisation would depend upon a good deal of communication between the Agriculture Department and the planning team at the district level. At present this communication is weak and inadequate. The Agriculture Department (like every other sector department) merely informs the DPDCs how much financial provision is required for each of the schemes. The DPDCs too in their turn merely go through the exercise of "fitting" the demands of the various departments within the financial ceiling. The result is little more than a budgeting exercise. At present the planning team at the district level is weak and lacking in expertise. This is the main reason for the absence of a healthy two-way communication. With a strong planning team at the district level it will be possible for the DPDCs to formulate a plan with better appreciation of the district's resources and potentialities. Such a plan stands a greater chance of being more in alignment with the sectoral plans; it is also possible that well thought out and carefully formulated district plans influence the sectoral plans. But even then, it is unlikely that the dilemma will be fully resolved.

Notes and References (Chapter 3)

- (1) In this Chapter, the term 'Plan' stands for Annual or Five Year Plan.
- (2) There are, however, several hidden subsidies in the economy, particularly where prices are administered. They do not figure in the financial aspects of the Plan.
- (3) Fourth Five Year Plan, p. 56.
- (4) These components have been mentioned in the communication from Government of India, dated 6th June, 1980, addressed to the State Governments.
- (5) Government of India, Administrative Reforms Commission, Report of the Study Team, Machinery for Planning, Final Report. New Delhi 1967, p. 34.
- (6) Ibid. p. 30.
- (7) Planning Commission: Preparation of States' Plans: An Appraisal of the Fourth Plan Experience (mimeo) p.4.
- (8) Twenty-fifth Meeting of the National Development Council: Summary Record, New Delhi. May 17 and 18, 1968. p. 45.
- (9) Fourth Five Year Plan, p. 56.
- (10) Twenty-fourth Meeting of the National Development Council. Summary Record. New Delhi. December 1 and 2, 1967, p. 38.
- (11) Summary Record, p. 6.
- (12) Fourth Five Year Plan. p. 55.
- (13) Thirty-third Meeting of the National Development Council, Feb. 24 and 25, 1979. Summary Record. p. 11.
- (14) D.T.Lakdawala: Plan Finances in a Federal Economy" Yojana Vol. XXIII No. 9, 16th May, 1979.
- (15) Government of India: Planning Commission: Report of the Working Group on Block Level Planning 1978. Chapter II, para. 2.9.
- (16) Government of India: Planning Commission: Guidelines for Block Level Planning. December 1979 (mimeo).
- (17) Section 100(4) Maharashtra Act V of 1962.
- (18) Government of Maharashtra: Rural Development Department. Report of the Evaluation Committee on Panchayati Raj Bombay 1971, p. 84.

CHAPTER - 4

INSTITUTIONAL FRAMEWORK FOR
AGRICULTURAL DEVELOPMENT

IN

MAHARASHTRA

CHAPTER 4

Organisational Aspects of Agricultural Development in Maharashtra.

1. Introduction

In this chapter, the organisational infrastructure that exists in Maharashtra to support agricultural development is described. While the focus will be on the structure and functions of the Agriculture Department, also called the Directorate of Agriculture (DoA), and the ZPs, a brief account is given of the role of each of the many supporting institutions which have been set up. It was seen in Chapter 2 how as the agricultural development strategy becomes more and more technocratic, specialised institutions are required to handle specific tasks. Attempts to organise the agriculture sector on a rational basis soon encounter a dilemma. On the one hand, the most convenient organisation would be the one in which all the necessary services to the farmers can be provided by a single administrative authority through one functionary, something like what was conceived in the CD programme, with BDO as the administrative authority and the gramsevak as the functionary. On the other hand, as technological developments take place, no single administrative authority can possibly attend to all aspects of agricultural development, and one cannot therefore escape the burgeoning of a large number of institutions; orchestration of their functions then becomes a problem. The manner in which the many specialised institutions that have been set up in Maharashtra interact with each other and with the DoA and the ZPs are also described in this chapter.

2. Agencies connected with Agricultural Development

The agencies functioning in the field of agricultural development can broadly be categorised as follows:-

(i) agencies which do the planning and coordination, extension work and serve as nodal agencies in agricultural development - Agriculture Department, Zilla Parishads.

(ii) agencies which create infrastructure - like Irrigation Department (construction), Land Development Agency (LDA) (comprising the soil conservation and ayacut wings of the DoA), Maharashtra State Electricity Board (MSEB), Irrigation Development Corporation (IDCOM), Maharashtra Land Development Corporation (MLDC).

(iii) agencies which supply inputs (seeds, fertilisers, pesticides) - like NSC, Maharashtra State Seeds Corporation (MSSC), Maharashtra Agro-Industries Development Corporation (MAIDC) and Maharashtra State Cooperative Apex Marketing Federation (MARKFED).

(iv) agencies which render a service - credit institutions both long term and medium/short term in the cooperative sector and the commercial banking sector, marketing institutions, mainly in the cooperative sector; other service agencies, like Irrigation Department (maintenance and management), CADA, MSEB, Groundwater Survey and Development Agency (GSDA), SFDA, DPAP.

(v) agencies which conduct research - Agricultural Universities (A.U).

3. Agriculture Department - 1947 to 1962

3.1 We shall begin our description of the set-up and functioning of the above agencies with the Agriculture Department as it is the oldest; and as many of the other agencies

were created by the process of "hiving off" of the activities earlier carried on by the Agriculture Department.

3.2 The pre-independence organisation of the Agriculture Department consisted of a District Agricultural Officer, Agricultural Prant Officers, every Prant Officer looking after 3 or 4 talukas, and below them, Agricultural Assistants. After 1947, four Directorates were constituted in the Department under an Agricultural Commissioner. These Directorates were: (i) Research and Education, (ii) Agricultural Engineering (mechanical and minor irrigation) and Soil Conservation, (iii) Extension, (iv) Animal Husbandry.

3.3 This set-up of the four Directorates did not last very long. First of all, as the animal husbandry activities increased and as it was felt that more importance should be attached to animal husbandry, it was decided to form a separate department for Animal Husbandry. Minor irrigation to the extent of minor irrigation tanks to be constructed by the State, was transferred to the Irrigation Department and the Agriculture Department's responsibility was confined to dugwells and pump sets, i.e. investments in minor irrigation source by farmers. The set-up of independent Directorates under the Agricultural Commissioner was soon changed and the three remaining Directorates were again amalgamated under one Director of Agriculture. The main reason for such an amalgamation was that since extension and research were under two different Directorates there could be no effective coordination between the two and, as a result, in 1948 no seed trials could take place.

3.4 At the district level, the following programmes were being implemented by the District Agricultural Officers:-

- (i) Grow More Food Campaign under which mostly improved seeds were being distributed,
- (ii) Distribution of manures and fertilisers,
- (iii) Schemes for effective use of rural compost, town compost and farmyard manures,
- (iv) Certain special schemes, like intensive paddy cultivation, vegetable development schemes and sweet potato extension scheme,
- (v) Agricultural demonstration centres where improved agricultural practices were demonstrated to agriculturists and
- (vi) Propaganda and publicity.

3.5 The next major change in the set-up came at the commencement of the First Five Year Plan when the CD programme was introduced. The set-up under the CD programme has already been described in Chapter 2. In those blocks where the BDOs' posts were created and the CD programme was started, the Agriculture Department functioned through the BDOs. Since the whole State was not covered by the CD programme immediately, for some time there existed, at the district level, two different patterns. In the areas where the CD programme was not started, the Agriculture Department functioned directly and in those blocks where the CD programme was started it functioned through the BDOs.

3.6 Agricultural research and education, and training programmes continued to be the direct responsibility of the Agriculture Department. Agricultural research was conducted in a number of research stations and crop breeding farms. The agricultural colleges were run by the Department except

two privately run colleges. The success of the CD programme largely depended on the availability of trained gramsevaks; training institutions were accordingly set up in different parts of the State under the Agriculture Department to train gramsevaks and seven gramsevak training centres were functioning by 1960. In addition, Agricultural Schools were run by the Agriculture Department, which offered diploma courses in agriculture; the products of these schools were to be the potential gramsevaks.

4. Formation of Zilla Parishads and the transfer of functions from Agriculture Department to Zilla Parishads

4.1 The formation of the Zilla Parishads in Maharashtra in 1962, marked the next stage in the evolution of the structure and functions of the Agriculture Department. The Naik Committee which was appointed by the State Government to go into the question of the appropriate model of democratic decentralisation for the State made a bold departure from the model recommended earlier by the Balwantray Mehta Committee and adopted by A.P and Rajasthan, of a strong institution at the block level and a Zilla Parishad (district level) assigned only supervisory and coordinating function. The Committee recommended that the first point of decentralisation should be the district level and that there should be an officer of the rank of the District Collector, in charge of the development activities at the district level. The Committee observed: "We therefore feel that the district body is the best operative unit of local administration as it alone will be capable of providing the requisite resources, necessary

administrative and technical personnel and equipment required for a properly coordinated development at the district." (1). The Asoka Mehta Committee appointed by the Government of India in 1977 has, after observing the working of the panchayati raj institutions in different States and analysing the increasing complexities of agricultural development, also endorsed the view that the district should be the first point of decentralisation. The Committee says: "For planning, supervising and coordinating developmental programmes, administrative and technical competence of the requisite calibre is available only at this level, and not at the lower, say, sub-Divisional or Block level. Some States, like Gujarat and Maharashtra have demonstrated the soundness of their choice. Apart from the Administrative Reforms Commission, appointed by the Union Government, a number of Committees appointed by various State Governments in the sixties and the seventies have persuasively commended the Maharashtra-Gujarat model which has treated the District as the first point of decentralisation." (2).

4.2 It is necessary to observe here that the Naik Committee recognised that (i) Coordination would become increasingly important as the process of development advances.

(ii) Operational coordination is best achieved at the district level where the executive officers of most departments are located. (iii) For a coordinated implementation of programmes, a multi-disciplinary organisational set-up is inescapable, where the executive officers of the different line departments are under the administrative control of

the coordinating officer. According to the Report "All departments put together will function as one integral unit under the overall superintendence and control of the chief administrator."(3). (iv) The coordinating officer should be of a high enough status. The Naik Committee in fact recommended that the CEOs of the ZPs should be officers who have already finished their tenures as District Collectors.(4). (v) It is not enough to build an official set-up to bring about coordination. The official set-up needs the backing of a strong political set-up.

4.3 The recommendations of the Naik Committee were accepted by the State Government and Zilla Parishads (ZPs) were set up in 1962. The responsibility for planning for agricultural development has been statutorily cast on the ZPs, under the Maharashtra Zilla Parishads and Panchayat Samitis Act.(5). The Act classified the State's developmental activities into State sector activities, which were to be implemented directly by the departments of the State Governments; and Local sector activities, which were to be entrusted to the ZPs.(6). In planning terminology, the Plan schemes came to be classified as State sector schemes, which were implemented directly by the Government departments, and Local sector schemes, implemented by the ZPs. It must be mentioned here that this Local sector/State sector distinction should not be confused with the district level and State level schemes, labelled as such, in the context of district planning in Maharashtra described in Chapter 3. There are State sector schemes which fall under the category of district level schemes. For instance, minor irrigation is classified as a district level

scheme but all minor irrigation projects with a culturable command of more than 100 hectares are in the State sector. In other words there are several schemes implemented by the State sector departments directly and not through the ZPs and these schemes could be district level schemes. So the Local sector/State sector distinction depends upon whether the implementation is done by the ZPs or by the State sector departments directly.

4.4 Certain activities related to agricultural development were retained with the State sector, i.e. Agriculture Department, like Taluka Seed Farms, Soil Conservation etc. Broadly, activities related to involving the farmers in developmental efforts, which really meant all activities with 'extension' as the preponderant component were made the responsibility of the ZPs; activities in the nature of creating infrastructure like soil conservation etc. were retained with the State sector. There was no reason why this should have been so. In other fields like roads and irrigation, construction of infrastructure like district roads, village roads and minor irrigation tanks were made the responsibility of the ZPs.

4.5 Ever since the ZPs were created, this question of which activities should be entrusted to the ZPs and which activities should be with the State sector, has been debated often and many committees appointed by the State Government have gone into this question and made their recommendations. The earliest of these Committees was the Shaikh Committee set up in 1965. This Committee was required to precisely define the role of the Panchayati Raj institutions in the field of agricultural development. In particular the Committee

was required to examine "the mechanics for bringing about effective coordination among various institutions and agencies dealing with complementary and inter-related aspects of agricultural programmes." The Report of this Committee (7) does not indicate that the Committee really grappled with the problem of coordination. But the Committee did examine some of the schemes retained with the State sector from the point of view of the desirability of transferring them to the Local sector. The Report of the Committee indicates that the ZPs wanted more schemes to be transferred to them, and that the Agriculture Department came up with arguments why that should not be done. The Committee's recommendations were in favour of retaining most of the schemes which had not been transferred, like Taluka Seed Farms etc. with the State sector. The Committee did, however, recommend that the schemes for various cash crops such as cotton development scheme, sugarcane development scheme, oilseeds development scheme, etc. which, ever since they were introduced were with the State sector, should be transferred to the ZPs on condition that the staff borne on these schemes should continue to work exclusively for the schemes. But these recommendations were not implemented. The next important Committee which went into this question was the Bongirwar Committee which in its Report (8) recommended a reversal of the trend of retaining most of the schemes started from the Third Plan onwards, particularly the various cash crop schemes, with the State sector. The Report on the Reorganisation of Maharashtra Administration known as the Heble Commission Report endorsed the view of the Administrative Reorganisation Committee earlier set up by the

Government of Maharashtra: "Certain technical departments of Government continue to have their own independent organisations, in respect of some schemes, right down to the village level, and this is sought to be justified on ground that these schemes require higher technical skill which is not available with the Zilla Parishads. The Committee is not inclined to accept this argument. The tendency to create parallel State organisations down to the village level, if encouraged, will strike at the very root of democratic decentralisation. The vertical organisation of the technical departments of Government, at least so far as extension work is concerned, should end at the regional level. The rest of the organisation should be under the Panchayati Raj institutions."(9). But despite the overwhelming arguments in favour of turning over more schemes to ZPs, the State Sector did succeed in retaining with itself all new schemes started since the setting up of the ZPs, even when they had a substantial extension component, like the cash crop schemes. The basic premise on which the ZPs were started, namely, that all district level development schemes should be entrusted to them was not realised in practice.

5. Important developments in Agricultural Development Administration during 1962-1980

5.1 Four distinct developments during this period deserve mention. First, is the gradual decline of the role of the ZPs in agricultural development. It was seen in Chapter 2 that the pull away from the control of the BDO was discernible from the very inception of the CD programme. After the formation of the ZPs the pull was even stronger, as political

forces also contributed to the pull. Strong ZPs would naturally mean strong ZP Presidents. In fact, in the early years of the ZPs in Maharashtra, the power and prestige of the ZP Presidents were almost comparable to those of the Ministers. The MLAs and the MPs did not conceal their feelings towards the ZP Presidents. If more and more functions were entrusted to the ZPs, then they would have to approach the ZP presidents more frequently for their work, which they did not particularly relish. The Ministers of the different subject-matter departments, like Agriculture, Animal Husbandry, Public Health, Irrigation, Public Works etc. also preferred to deal directly with the official hierarchy than through the ZP Presidents. The senior officials of the line departments, particularly the technical departments were also averse to the inter position of the CEO of the ZP between themselves and their district staff. The smouldering conflict between the generalist administrators, mainly the officers of the Indian Administrative Service (the CEO of ZP is generally an IAS officer of 6 to 10 years seniority) and the technical officers, contributed in no small measure to the stance of the senior officers of the technical line departments. On top of all these, the staff assigned to the ZPs were also not a happy lot - the senior of them like the Executive Engineers resented working under a relatively junior generalist administrator. The rank and file of the staff also felt that their promotion chances would be adversely affected by their being assigned to the ZPs. Finally, the CEOs were not senior officers as contemplated by the Naik Committee but relatively

junior officers, who did not obviously have the necessary status to head a multi-disciplinary administrative set-up. Many of them considered their innings in ZPs as some kind of a compulsory experience to be gone through before becoming District Collectors. All these reasons and forces together contributed to the gradual weakening of the role of the ZPs in agricultural development administration. The retention of cash crop schemes started in the 60s with State Sector is indicative of the trend described above. As a result, the ZPs came to be responsible mostly for foodgrain production, which was really the function they inherited from their precursor, the CD programme. Nevertheless, it must be stated that in Maharashtra (and Gujarat, which has followed the same model of democratic decentralisation) the ZPs play a much larger role in agricultural development than in other States.

5.2 The second development was the proliferation of what were called "schematic staff". The Centrally sponsored schemes largely contributed to the evolution of the structure of the DoA on a "schematic pattern". To illustrate this, let us take the case of the Centrally sponsored scheme of ICDP described in Chapter 3. It was seen that the scheme comes with its own staff component. The staffing pattern suggested for every such scheme would often consist of staff at various levels, district, block and below block; sometimes staff at the headquarters of the DoA are also indicated in the scheme. Such a detailed stipulation of staffing pattern, for every scheme, resulted in separate parallel lines of command in the district, one for every scheme. If three such schemes are in operation in a district, the staffing pattern of these

schemes would be as shown below:

	<u>Scheme 1</u>	<u>Scheme 2</u>	<u>Scheme 3</u>
District	A.O.	A.O.	A.O.
Block	A.S.	A.S.	A.S.
Below Block	A.A.	A.A.	A.A.

A.O.- Agricultural Officer

A.S.- Agricultural Supervisor

A.A.- Agricultural Assistant

Note:- The rank and designation of the staff are only for illustration. It is possible that a scheme has an officer of a higher rank of Assistant Director at the district level.

5.3 To give a concrete example, let us take the scheme of cotton development. The objective of the scheme is given as stepping up production of long staple cotton in irrigated areas. This scheme was taken up in a few selected districts. In these districts special staff was given comprising in all 13 Agricultural Officers and nearly 150 Agricultural Assistants. The number of Agricultural Officers and Assistants per district was decided on the basis of the districtwise targets of coverage (in ha.) given. There was another scheme for cotton development whose objective was the production and distribution of improved seeds of cotton and encouraging the use of fertilisers and plant protection for cotton. Under this scheme, special staff comprising about 50 Agricultural Officers, about 300 Agricultural Assistants and some clerical staff came to be sanctioned in the districts covered by the scheme. There was a third scheme for cotton called the "Package Programme for Cotton" whose objective was the production of Buri L-147 type of cotton. Under this scheme again staff comprising 4 Agricultural Officers and 40 Agricultural Assistants came to be sanctioned in selected

districts. There was a fourth scheme for cotton called "intensive cultivation of cotton in rainfed areas" and this scheme was implemented only in Jamher Block of Jalgaon District. Special staff again came to be sanctioned comprising one Agricultural Officer and 10 Agricultural Assistants for implementing the scheme. There was yet another cotton scheme with the objective of stepping up cotton production by adopting improved practices and under this scheme staff came to be sanctioned at the head office of the DoA. Likewise, schemes for oilseeds development, tobacco development and for other crops came to be started each with its own set of staff.

5.4 One result of this "schematic" structuring of the DoA was that the deployment of personnel was not efficient. All the Agricultural Officers in the illustration of para 5.2 would have jurisdiction throughout the district. At other levels also, the Agricultural Supervisors and Agricultural Assistants would have overlapping territorial jurisdiction; and their jurisdictions would also overlap those of the existing block level staff and VLWs. This would result in a lot of time being spent by staff on touring. A better alternative from the administrative standpoint would be to augment the existing staff strength at various levels, as the number of schemes increase, and to readjust their territorial jurisdiction, so that the staff would have a smaller area to cover, over which they would administer all the schemes. This functional versus territorial jurisdiction is a recurrent theme in all debates on agricultural development administration. While all arguments

have been in favour of territorial jurisdiction, all pulls have been in favour of functional jurisdiction. One contributory factor here has been the behaviouristic trait in administration which impels every functional specialist in the Agriculture Ministry at the Centre or at the State Headquarters of the DoA, to work towards having one of his own men right down at every level of the administrative hierarchy. Thus, in administration, separation seems to be the natural tendency; integration is imposed. It would be interesting to recall the quotation from the First Five Year Plan given in para 3.1 of Chapter 2 to realise how, from a position when nothing short of an integrated approach to rural development was thought of, administration gradually travelled to a position when even an integrated approach to agricultural development was difficult to achieve in practice.

5.5 Apart from what has been stated above, there is another factor which influences the creation of 'schematic' staff. If a scheme does not have provision for staff the question would arise as to how it would be implemented, without additional staff. We have seen in Chapter 3, how suggestions were made in the NDC meetings that the Centrally sponsored schemes can provide a lump sum for staff, leaving it to the States to decide how to augment the existing administrative structure. But this would not be acceptable from the point of view of financial accountability. If a certain provision is made for staff in the scheme, then the staff appointed out of that provision should be exclusively utilised for the scheme. The conditions governing financial accountability thus prevail over the requirements of a proper organisational structure.

5.6 The third development which needs to be mentioned is the change of the set-up at the village level brought about in 1975. Under the C.D. programme, the village level functionary was the

multipurpose gramsevak (VLW). We saw in Chapter 2 how, when the IADP and later on IAAP were started, it was felt that multipurpose VLWs who were entrusted with agricultural development along with other functions would not be able to devote sufficient time for agricultural development. Accordingly in the 175 intensive blocks in 24 districts in Maharashtra, covered under IAAP in the Third Plan period, Agricultural Assistants were appointed exclusively for agricultural development. When the trend elsewhere was in favour of having village extension workers exclusively for agricultural development, in Maharashtra, as a result of the recommendations of the Heble Commission and the Bongirwar Committee, the Agricultural Assistants appointed under the IAAP were converted into integrated gramsevaks. They were added to the strength of the existing VLWs, and the jurisdiction of the VLWs were proportionately reduced. Agricultural Assistants working in the State sector, mostly on cash crop schemes however continued as they were.

5.7 The arguments of the Heble Commission in favour of this integration of Agricultural Assistants with the gramsevaks deserve to be mentioned. The Commission compared the performance of the gramsevaks in the non-intensive (i.e. non-IAAP) blocks with the Agricultural Assistants in the intensive blocks and found that the performance of the gramsevaks in the non-intensive blocks was much better. The Commission observes: "the relative merits of Agricultural Assistants and gramsevaks for agriculture was specifically discussed with the Block Development Officers and Agricultural Officers of Aurangabad, Sillod, Soegaon and Khuldabad Blocks of the Aurangabad Zilla Parishad. All of them were unanimous in their opinion that gramsevaks who had to be entirely relied upon in non-intensive areas gave a good account of themselves in spite of large areas over which they had to operate". (10) On the basis of this, the Commission recommended integration

of Agricultural Assistants with gramsevaks. It is to be observed here that the notion of agricultural extension adopted by the Commission was an extremely narrow one of attainment of coverage under hybrid varieties. When the Commission was actually examining the issue, the immediate problem before the agricultural development administration was to bring more and more areas under hybrids. Agricultural extension does not end there. It does therefore appear that the recommendation of the Commission was based on observations in a single district and that too on the basis of one parameter only, namely, achieving the targets of coverage under hybrids. It cannot therefore be inferred conclusively that the system of integrated gramsevaks is better from the point of view of agricultural development, than the system of village extension workers exclusively for agricultural extension.

5.8 It is sometimes believed that we have reached a stage in agricultural development when there is no longer a need for agricultural extension.(11). This belief is based on the promise that most farmers have now adopted HYV and there is therefore no need to motivate the farmers to use new seeds and fertilisers. This view is obviously not correct. Agricultural extension is much wider than merely motivating the non-adopters of HYV to adopt HYV. Depending upon the level of technology and the level of acceptance by the farmers of innovations in agriculture, agricultural extension has to assume newer and fresher roles. Twenty years' ago, when the prime need of the hour was to convince the farmer of the desirability to use new seeds and fertilisers, that was obviously the main objective of agricultural extension. Even granting that the stage has now been reached when it is no longer necessary to convince the farmers about the benefits

of HYV, the role of agricultural extension does not end here. Agricultural extension needs to adopt a more professional role as the technological level of agriculture increases; it is a continuing education.

5.9 The fourth development of this period was the introduction of special programmes for specific purposes. We have already referred to them in Chapter 2. For these special programmes separate administrative set-up was created, which also tended to distort the structure of agricultural development administration at the district level. For the SFDA a separate society, registered under the Societies Registration Act, was set up, one in each of the districts in which the programme was taken up. SFDA had staff only at the district level and no field staff at all; for all field work below the district level it had to depend upon the block staff. DPAP was started as a Centrally sponsored scheme in six districts in Maharashtra; in two out of the six districts - namely, Solapur and Ahmednagar - the project is more intensive, because of World Bank assistance. In all DPAP districts a separate set-up exists for the DPAP under a Project Officer. In Solapur and Ahmednagar the Project Officer is called Executive Director and is of the rank of a Collector; in other districts, where the programme is less intensive, the Project Officer is of the rank of a Deputy Collector and is working under the control of the Collector. CADA was set up for the command areas of a few selected major irrigation projects, following the recommendation of the National Commission on Agriculture. The objective of CADA is to achieve a higher degree of irrigation utilisation

by providing all services - inputs, credit, extension - under one umbrella. A detailed account of the working of SFDA and DPAP is given later in this chapter and that of CADA in Chapter 8.

5.10 Soil conservation and ayacut development are two major infrastructural programmes implemented by the DoA. Soil conservation works comprise contour bunding, nalla bunding terracing and land development; in some districts of the Western Ghats region, the soil conservation wing of the DoA also undertakes a land development-cum-horticulture programme under which horticulture plantation is done on farmers' lands. Ayacut development is essentially land development in the command areas of irrigation projects; a more detailed account of ayacut development is given in Chapter 7. There are 25 divisions for soil conservation, and 15 divisions for ayacut development. Ayacut divisions working in the command areas for which CADA has been set up have been placed under the control of CADA recently.

5.11 Above the district level, the set-up of the DoA is the divisional level set-up under the Superintending Agricultural Officer (SAO). The State has been divided into 7 agro-climatic regions and each region is one division under an SAO. The SAOs supervise the State sector schemes in their divisions and also give technical guidance to the ZPs. They are, in addition, directly responsible for soil survey, soil testing and analysis and enforcement of quality control of seeds, fertilisers and pesticides to ensure that there is no adulteration of these inputs at the level of the traders. There are also certain miscellaneous projects, like

the Integrated Dryland Project in a few districts, and the Integrated Cotton Project (World Bank assisted) in Amravati district, which are directly supervised by the SAO because these projects themselves are under the control of officers who are of district level rank.

5.12 The peculiar feature of the divisional level set-up has been that there is a Deputy Director for every district in the jurisdiction of the SAO, but this functionary is located at the headquarters of the SAO rather than in the district concerned. He more or less functions as the staff officer of the SAO. Annex 1 gives the divisional level set-up and its relationship with the headquarters of the DoA on the one hand, and the district level set-up, on the other.

6. Recent Developments

6.1 Recent developments have had the effect of substantially altering the set-up of the DoA as well as that of ZP at the district level. The occasion for this reorganisation has been the introduction of the Training and Visit system of extension (T&V) in the State with effect from 1-4-1981. It is proposed to cover the entire State, in phases, over a period of three years, with T&V. The main features of T&V have been mentioned in Chapter 2. It was seen that with the introduction of the T&V, the process set in motion in IADP and IAAP, by the appointment of village level extension workers exclusively for agriculture (a process, which, as observed earlier, was reversed in Maharashtra in 1975) reached its logical culmination. It was also seen that under the T&V, the focus of agricultural extension is on the transfer of know-how from the research

stations to the farmers, and feedback of the farmers' problems to the research stations.

6.2 After the introduction of T&V the entire agricultural development organisation in the district (excepting soil conservation and ayacut development) has been placed under the CEO of the ZP. The staff on all the cash crop schemes (State sector) have been pooled with the staff on Intensive Cultivation Scheme (Local sector) - that is, special staff created exclusively for agricultural development under IAAP - in order to create the T&V set-up. Additional staff positions were created as the staff requirements under the T&V exceeded the staff availability, after pooling the staff on all extension-oriented schemes - both cash crops and food crops - in the manner stated above. The Deputy Director of Agriculture (who was located at the divisional level in the SAO's office) has been shifted to the district as the head of the T&V set-up; he has been designated as the Principal Agricultural Officer (PAO). The set-up in the district before and after the introduction of the T&V is shown in Annexe 2 and 3.

6.3 The main features of the district set-up in Maharashtra after the introduction of the T&V are as follows:-

(i) The existing line of control from the CEO through ADO, and BDO to the VLW will remain undisturbed. This ADO/BDO/VLW organisation under the CEO, will be responsible for planning, and arranging for the inputs. (ii) All the cash crop schemes basically contain three components: staff, subsidies and demonstrations. Staff have been pooled for T&V. Demonstrations are being gradually phased out as an

instrument of spreading the recommended farming practices. It is one of the tenets of T&V that there cannot be a single package of practices which can be recommended to all farmers. The VEW under the T&V is expected to recommend practices according to the capacity of the farmer to invest in cash inputs, his stage of receptivity to new ideas and technology etc. In the same village, for one farmer the message of the VLW may be a very simple one, like increasing the plant population to the optimum level; and for another it may be more sophisticated, like applying an optimum dose of fertilisers. In fact, T&V is expected to overcome the rigidities of a standard 'package' approach. Since 'demonstrations' essentially depend upon 'selling' a 'package' to the farmers, they do not find a proper place in the T&V. As regards subsidies and supply of inputs existing ADO/BDO/VLW organisation is to disburse the subsidies, arrange for inputs and do the necessary paperworks. (iii) There will be no 'schematic staff' as the staff on all the cash crop schemes have been pooled for T&V. (There are, however, a few exceptions, like the staff on the World Bank assisted cotton project in Amravati). (iv) Linkages with the panchayati raj system will be at the district level and the block level. The Agricultural Production Committee of the ZP will take periodical reviews of the working of the T&V. Similarly at the block level, Panchayat Samiti will review its working. (v) Since BDO has no administrative control over the T&V staff, the possibility of work other than agricultural extension being entrusted to the VEWs is expected to be avoided.

7. Other Agencies and Institutions

7.1 Agencies which create infrastructure for agricultural development

7.1.1 Irrigation Department:- Among the agencies which are engaged in creating infrastructure for agricultural development, Irrigation Department is probably the oldest.

Irrigation Department is mostly organised along vertical lines. There is, however, a small Local sector component of the Irrigation Department with the ZPs. The irrigation divisions with the ZPs execute this Local sector component and also maintains all Local sector irrigation works. When the ZPs were started all minor irrigation projects with a culturable command of upto 250 hectares were entrusted to the Local sector. The limit has now been brought down to 100 hectares. At present the Local sector constructs and maintains irrigation tanks (of upto 100 ha. CCA), percolation tanks, lift irrigation schemes and storage bandharas.

7.1.2 Irrigation Development Corporation of Maharashtra Ltd. (IDCOM):- IDCOM was established in the year 1973 primarily with the objective of attracting institutional finance in order to undertake Lift Irrigation (L.I) schemes. Historically, L.I schemes in Maharashtra were mostly being undertaken by groups of farmers on their own initiative after obtaining loans from financial institutions. Such L.I schemes are however mostly confined to the districts of Western Maharashtra where sugarcane is largely cultivated. In other parts of the State, there are very few instances of such privately started and run L.I schemes. In the absence of such initiative in other parts of the State, the ZPs stepped

in and started L.I schemes in the Local sector in many districts, but these schemes ran into difficulties primarily on account of the fact that the water charges levied were not adequate to meet the costs of these schemes. L.I schemes are basically high cost schemes and are not viable for seasonal irrigation. This was the main reason why even the subsidised water charges were found too high by the farmers who did not, consequently, utilise the irrigation facilities. Many of these schemes therefore remained unutilised. Another reason for poor utilisation was the frequent interruption in power supply which reduced the predicability of irrigation water, which, in turn, led to poor demand. There was no organisation to undertake land development of the command areas. Whether the command of an irrigation project is large or small, the problems of land development are essentially the same, and these are described in Chapter 7. Above all, no amount of State initiative could have the same participative character of group initiative, and this was another major factor which led to most of these remaining idle. The setting up of IDCOM was, in fact, one more attempt on the part of the State Government to start and run L.I schemes. IDCOM also ran into the same difficulties. The present position is that IDCOM is not undertaking any new schemes and even most of the schemes already taken up are not running properly due to financial difficulties.

7.1.3 Maharashtra State Land Development Corporation Ltd. (MLDC)

MLDC was established in the year 1972-73 with the intention of attracting institutional finance for undertaking land development works in the command areas of major and medium

irrigation projects. A description of the working of the MLDC and the problems faced by it is given in Chapter 8.

7.1.4 Maharashtra State Electricity Board (MSEB):- MSEB is concerned with providing power connections to the electric motors and pump-sets. For this purpose MSEB's source of finance is mostly from the State's Plan. The Plan scheme of providing connections to electric motors and pump-sets is classified as a district level scheme and depends upon DPDCs for financial allocation. The main difficulty faced by the MSEB, (apart from material shortages) is the inadequate provision made by the various DPDCs for this purpose. In order to augment its resources, MSEB finances some of its rural electrification projects through borrowings from Commercial Banks at market rates of interest. In addition, the ARDC also provides funds to the MSEB for energisation of motors and pump-sets. These funds are channelised through the Land Development Banks (LDB) and Commercial Banks which provide long term loans to farmers for installation of motors and pump-sets. The scheme was introduced by the ARDC in order to ensure that MSEB is enabled to provide power connections to those installations financed by the LDBs and Commercial Banks. MSEB also obtains financial assistance from the Rural Electrification Corporation (REC) which is a Central Government undertaking.

7.2 Agencies which supply inputs

7.2.1 National and State Seeds Corporations:- Perhaps, the most important input in technology-oriented agriculture is good quality seed. The National Seeds Corporation (NSC) was the first institution created for producing and supplying

quality seeds to the farmers. Gradually, State Seeds Corporations have been set up in many States. The working of both these institutions is described in Chapter 6.

7.2.2 Maharashtra Agro-Industries Development Corporation

Ltd. (MAIDC):- At the initiative of the Government of India, State Agro-Industries Corporations were set up in many States primarily with the objective of encouraging and promoting farm mechanisation. The Government of India also agreed to participate in the share capital of these Corporations on an equal basis with the State Governments. MAIDC was set up in 1965 in accordance with this all-India pattern. Initially, MAIDC was to handle the import of farm machinery arranged by the Government of India with Bulgaria and a few other countries of the Eastern Block, and to supply them to the farmers on hire-purchase basis. But in due course this activity tapered off mostly because of the poor quality of these machinery, which did not gain acceptance by the farmers. MAIDC had therefore to look for other avenues of activity, which now include:

(i) Farm machinery:- Distribution of indigenous makes of tractors and manufacture of farm machinery like seed-cum-fertiliser drill, etc. and repair work of farm machinery.

(ii) Fertilisers:- Distribution of fertilisers manufactured by the major producers, as per the directions of the State Government. MAIDC also manufactures fertiliser mixtures and single superphosphate. (iii) Pesticides:- Distribution of

pesticides manufactured by reputed companies and also manufacture of pesticide formulations. (iv) Agro-Service Centres:- Government of India had formulated a scheme for providing self-employment for agricultural and engineering

graduates by utilising them for providing service to the farmers. This scheme contemplated setting up of Agro-Service Centres (ASC) to be owned and managed by such graduates. MAIDC was associated with the setting up of ASCs in the State. The ASCs are given loans by Commercial Banks with interest subsidy provided by the Government of India. They are expected to meet the needs of the farmers for farm implements and various inputs. About 350 such centres have been set up in different parts of the State. MAIDC's role is mostly extending technical guidance and dealership facilities to these Centres.

7.2.3 Maharashtra State Co-operative Apex Marketing

Federation (MARKFED):- The Apex Marketing Federation is concerned with the distribution of fertilisers. The distribution of fertilisers is controlled by Government of India under the Essential Commodities Act. For every season, i.e. Kharif and Rabi, a certain quantity of fertiliser is allotted to every State. Part of this quantity is from indigenously manufactured fertilisers and the rest from imported stock. The quantity to be allotted to every State is decided by the Government of India well in advance of each season after discussion with the State Governments. Out of the total quantity allocated to the State, about 50 per cent of the indigenous fertilisers, and the entire quantity of imported fertilisers, is again reallocated by the State Government to the two major distribution agencies in the State, viz. MAIDC and MARKFED. The remaining half of the State's quota of indigenous fertilisers is marketed by the main producers through their own outlets. While distribution outlets of

MAIDC include ASCs and private dealers in addition to co-operatives, the distribution outlets of the MARKFED are only co-operatives.

7.2.4 In the matter of fertilisers the communication between the DoA and ZPs on one side, and MAIDC and MARKFED on the other mainly relates to movement and positioning. Government of India's allotment of indigenous fertilisers to the State is not necessarily from producers within the State.

Maharashtra is allotted fertilisers from far flung factories like SPIC (located in Tuticorin in Tamil Nadu) and many States located far away from Bombay are allotted fertilisers from Bombay-based factories. There is a reason for this.

Fertiliser being a very crucial input, no State can depend for its fertilisers, on supply from one unit or even on units from one State. Units are often afflicted with technical problems or labour problems. For instance, during the 1980-81 season FCI unit at Ramagundam (in A.P) could not produce the expected quantity of fertilisers owing to technical problems and Zuari (Goa) had a prolonged closure owing to labour disputes. Dependence on units in one State is also risky because of the possibility of severe power cuts affecting the production in these units. These problems interfere with what can be the most convenient and rational allocation otherwise, which would minimise the leads. Criss-cross movement of fertilisers becomes almost inevitable, adding to the Railways' problems. Imported fertilisers are again handled by many agencies - the main producers like the FCI, etc. and also by many Government of India public sector undertakings whose connection with fertiliser marketing is not apparent, like the

Food Corporation of India. Thus Maharashtra receives its indigenous fertilisers from many producers and imported fertilisers from many agencies. The DoA works out a district-wise fertiliser positioning plan which the MAIDC and MARKFED are expected to follow. Even while allocating fertilisers among the districts several factors need to be taken into account: imported fertilisers are also distributed among districts because of uncertainty regarding unloading in the docks; apart from this, imported fertilisers are received in bulk and need to be packed in 50 kg. bags in the docks, and due to lack of facilities, packing is not proper, which makes them not popular with the farmers; in some districts there is a preference for certain varieties of fertilisers, depending upon their N, P, K proportion. The indigenous fertilisers marketed directly by the producers (that is, 50% of the allotment of indigenous fertilisers to the State) are not subject to any distribution control and the producers are free to market them through their normal outlets according to their own plan. But coordination of the marketing activities of the producers and those of MAIDC/MARKFED is done by the DoA and periodical review meetings are also held at the Government level.

7.2.5 There are other areas, as well, which call for co-ordination. According to the pricing formula worked out by the Government of India, the price payable to the main producers by the MAIDC/MARKFED is inclusive of transport upto the block level. The producers, naturally prefer to transport by railways which would be cheaper for them; but given the problem of movement by railways, the main area of coordination

is to persuade the railways to allot more wagons to the producers on one hand, and to persuade the producers to move the fertilisers by road on the other. The Government agencies, namely MAIDC and MARKFED are not eager to lift the fertilisers from the producers well in advance of the season, as they would not like their funds to be locked up in inventories for a long time, as the offtake picks up only when the season is about to start. The producers, understandably, press for quick and regular offtake. So most co-ordination and review meetings result in a blaming war. Often officers of the various organisations who attend the meetings cannot commit their organisations to what solutions appear to be workable.

7.3 The Agencies which render service.

7.3.1 Cooperative Credit Institutions:- The short term credit structure with Primary Agricultural Credit Societies (PACS) at the bottom upto the Apex Cooperative Bank at the State level has been in existence for a long time. Coordination between short term credit and the agricultural development administration is called for at the village level, to ensure that credit and inputs are made available in time. This apparently simple annual and in some parts biannual exercise often presents problems and is one of the unsolvables in coordination meetings.

7.3.2 The long term cooperative credit structure consisting of the State Cooperative Land Development Bank is a relatively recent development. The long term credit structure in Maharashtra was also a federal structure like the short term credit structure consisting of Cooperative Land Development

Banks at the district level. As a result of very weak management of the District Land Development Banks (also called Primary Land Development Banks) which resulted in mounting overdues the State Government reorganised the structure and created a unitary structure with the District Banks becoming the branches of the State Cooperative Land Development Bank. This, however, did not improve the situation and the recoveries of the LDB continue to be poor. While a good portion of the reason for poor recoveries can be attributed to political climate, recoveries also depend very much upon proper coordination between the LDB and the short term credit structure on the one hand, and LDB and the MSEB on the other. There is no built-in mechanism to ensure that the increased short term credit requirements of a farmer who has obtained long term loan from the LDB for minor irrigation are met; nor is it easy to build a mechanism which will be effective. Considering this problem, Hazari Committee(12) recommended the merger of both long and short credit structures. This recommendation has not yet been implemented.

7.3.3 Coming now to the problem of coordination between LDB and MSEB, it does look prima facie very simple that the Electricity Board should give priority in power connection to those who have obtained loans for wells and pumpsets. In order to ensure greater coordination between the Electricity Board and the Land Development Bank, the Executive Engineer of the Electricity Board in every district has been nominated on the Loan Committee of the Land Development Bank in that District. But still, according to the figures available, in a large number of cases where loans have been sanctioned

by the Land Development Bank and the farmers have invested in wells, electric connection is not given in time. According to a survey conducted in 1976, out of 22,863 loan cases in which sanctions for electric motors were given by the Land Development Bank since 1972-73, in 8,626 cases electric connections were yet to be provided. Central Bank of India has reported that in respect of wells sanctioned under the Crash Wells Programme launched by the State Government in 1971, many wells have remained to be energised.

Name of the Taluka	No. of wells financed	Amount disbursed (Rs. in lakhs)	No. of wells Completed	No. of wells energised
Aurangabad	110	10.50	110	81
Sillod	80	6.37	70	31

Bank of India has reported that many farmers disposed off their electric motors and pump-sets after waiting for as long as 6 to 7 years for electric connection.

7.3.4 The Electricity Board's difficulty is that according to their investment norms unless there is a compact group of farmers, it is not feasible to extend electric connection as the investment will have to yield a gross return of 20%. According to the Board, very often, the lending institutions sanction loans even in villages not electrified. The Board's contention is that the lending pattern should conform to their plan for electrification. The financial institutions, on the other hand contend that their lending for minor irrigation has to conform to the groundwater availability and, also to the borrower's capacity to service the loan; since many villages having potential for ground water also happen to be villages

without electrification, it is difficult, according to them, to always adhere to the electrification plan of the Board. This tangle is still to be resolved. It looks as if either the Board has to relax its investment norm or the borrowers (owing to delay in obtaining electric connections) have to remain defaulters. Another interesting thing is that there are equal number of wells where the Board has given power connections but the farmers have not been given loans by the lending institutions. According to the information available with the State Government there were 6,861 cases where lines were ready but motors and pump-sets were not installed, as on 31st March, 1977; this number came down to 5,779 as on 31st March, 1980. The Bank's side of the story is that in many of these cases the farmers are not eligible for loans for any of the following reasons: titles are not clear; groundwater position is not satisfactory; no loaning is possible because of the poor recovery in the concerned taluka; and farmer's holding does not make the loan viable.

7.3.5 As a result of poor recoveries the lending programme of the LDB is affected. LDB's major source of finance is ARDC and according to the discipline regarding recovery prescribed by the ARDC, if any branch of the LDB fails to achieve a minimum of 60% recovery its lending programme is curtailed.

7.3.6 The extent of coordination between several agencies that is required in satisfactory disbursement of long term credit to agriculture can be understood if we look at the different agencies which a farmer has to approach in connection with his investment in the minor irrigation source viz. well and pump-sets: (i) Talathi for land records; (ii) Land Development Bank/Commercial Banks for loan; (iii) Cooperative Society

and all other Banks operating in that area for 'no dues' certificate; (iv) Groundwater Survey and Development Agency (GSDA) for groundwater availability certificate; (v) Electricity Board for power connection; (vi) Electrical Inspector for certifying the power connection; (vii) Irrigation Department for clearance of a well, if the well is situated within a distance of 100 feet from an irrigation canal; (viii) Collector for cement allocation for construction.

7.3.7 Farmers' Service Societies (FSS) were set up in the early 70s at the instance of the National Commission on Agriculture (NCA), which in its interim report recommended the setting up of such societies. NCA felt that there is need for a special type of cooperative institution for making available credit, and other technical and extension services to small and marginal farmers in an integrated fashion. FSS's were to be organised initially in areas having a preponderance of small and marginal farmers. Some features of FSS are: (i) The area of operation of a Block size FSS would be 100 villages covering a population of about 1 lakh, and that of a small size FSS, about 10 villages covering a population of 10,000. (ii) FSS can grant all types of loans - short term, medium term and long term, in agriculture and allied activities. It is also expected to provide working and block capital to rural artisans and to undertake purchase and supply of agricultural inputs, machinery, raw material for small scale industries, consumers' requirements etc. It can purchase and sell agricultural produce and other products of subsidiary occupation like dairying, poultry etc., promote, own or hire processing units, godowns, minor irrigation schemes

etc. on contract basis, with a view to providing seasonal employment to its members. In other words, the FSS is expected to provide integrated credit and other services needed by the small and marginal farmers at one contact point. The FSS is sponsored either by a Commercial Bank or a District Central Cooperative Bank. So far 27 FSSs in 15 districts of Maharashtra have been set up. The bank-wise break-up of these FSSs is as under:-

<u>Sr.No.</u>	<u>Sponsored Bank</u>	<u>No. of FSS sponsored</u>
1.	Commercial Banks	18
2.	District Central Cooperative Banks	6
3.	Marathwada Gramin (Rural) Bank	3
		<u>27</u>

7.3.8 The main problem faced by the FSS is its status as some kind of a transplant organ which the existing system is tending to reject. It was contemplated that in areas where FSS was to be set up the existing PACS should be amalgamated with the FSS. Obviously FSS and PACS cannot both function side by side. This proved to be difficult to bring about. The State Government in fact stayed any such amalgamation in 1977 and this stay was removed in 1979. Because of the difficulties involved in the amalgamation of PACS into FSS, as against a potential membership of 85,516 the FSSs have succeeded in enrolling only about 34,846 members so far. Apart from low enrolment, their activities have not diversified beyond sale of inputs. That this is the situation in the country as a whole is confirmed by the observation of the Reserve Bank of India's Committee (1978): "The FSS thus constitute an important

component of the system of rural credit as visualised by the NCA and the Working Group on Rural Banks. However, for a variety of reasons, the progress achieved in establishing the FSS is far from satisfactory. More importantly, most of them appear to be a highly diluted version of the grand design of the NCA and are hardly distinguishable from the reformed PACS." (13)

7.3.9 It is necessary to observe here that while some institutions become inevitable as the process of development proceeds, the creation of some institutions really amounted to side-stepping the main issue. They almost become surrogates to the real solution to the main problem. Creation of new institutions would only increase the need for coordination and extreme caution is necessary while doing so. In agricultural development there are quite a few instances, where a new agency or an institution, has not only not solved the problem which, in the first place led to its creation, but has created fresh problems. FSS is one such example. Once an institution is created it is seldom wound up. It would linger on in a state of atrophy and engage the time and attention of the administration. It is significant to note that even after the problems involved in the setting up and functioning of FSS were known, the NCA in its final Report (1976) observed: "Following our Interim Report on Credit Services over three years ago, the FSS had developed from an experimental or pilot stage into an integral part of the national development policy."

7.3.10 Regional Rural Banks (RRBs) were set up in 1976, as Government of India felt it was necessary to establish "new

institutions on the basis of attitudinal and operational ethos entirely different from those obtaining in the public sector banks." Each RRB was to be sponsored by a commercial bank (mainly by a public sector bank). One RRB has so far been set up in Maharashtra. The problems faced by the RRB are also very similar to those facing FSS.

7.3.11 In the field of agricultural marketing, the most important institutions are the Agricultural Produce Market Committees (APMC). They have been established under Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963. The primary objective is to eliminate unfair practices on agriculturists and to encourage orderly marketing. These Market Committees manage and supervise market yards and sub-yards at various mandi centres in the State. So far, 227 APMCs. have been established in Maharashtra covering 567 mandi centres, which comprise 227 principal markets and 340 subsidiary markets. The State Government gives assistance to the APMCs for construction of market yards. APMCs are also encouraged to borrow from financial institutions on the guarantee of the State Government.

7.3.12 Other service agencies in the field of agriculture are Irrigation Department (maintenance and management), CADA, Groundwater Survey and Development Agency (GSDA), DPAP and SFDA to which a reference has been made earlier.

7.4 Agricultural Universities

7.4.1 Agricultural Universities were established in Maharashtra in the 60s, as a part of the national policy to establish such universities in various States on the pattern of American Land Grant Universities. This, in fact, was

recommended by the Radhakrishnan Commission (called the University Education Commission) as early as in 1948. This recommendation of the Radhakrishnan Commission was endorsed by the First Indo-American Team in its report published in 1955. This was followed by the Report of the Second Indo-American team (1960) which also made a similar recommendation. With the establishment of the Agricultural Universities, all the research activities carried on by the DoA till then, were transferred to these universities. In addition to research and education, the universities undertake certain activities which are more immediately connected with the agricultural development programmes of the State. These are:

(i) production of breeder and foundation seeds (the role of the universities in seed production is described in Chapter 6);

(ii) extension education:- the universities conduct classes for farmers;

(iii) cost of cultivation surveys:- at the instance of the Agricultural Prices Commission (APC), one of the agricultural universities is entrusted with the task of conducting surveys to estimate the cost of cultivation of certain crops, namely, kharif jowar, sugarcane and cotton. Since the coverage of crops under the Central scheme is inadequate, the State Government has formulated a State scheme of cost of cultivation studies, covering more crops like bajra, rabi jowar, paddy etc., and with increased sample size. This scheme is implemented by all the four agricultural universities in the State.

7.4.2 Originally, the proposal was to create only one agricultural university for the entire State. But, mostly

because of regional pressures, four agricultural universities have been set up, one in each of the four clearly identified administrative regions of the State. This has given rise to a peculiar problem of coordination between the universities. Uttar Pradesh is the only other State which has a similar problem of multiple agricultural universities and a coordinating machinery has recently been set up in that State to coordinate the functions of these universities so that they do not undertake research in the same field and start academic disciplines in the same area of specialisation. In effect, what has been done is some kind of ICAR-like set-up at the State level. A similar arrangement is being contemplated in the State of Maharashtra also. The Randhawa Committee (14) which was appointed by the Government of India to examine the working of agricultural universities in the country, has strongly recommended the setting up of such a coordinating mechanism. When agricultural development administration has to grapple with many problems of coordination of an inevitable nature, one more problem has been added which was not really warranted by circumstances other than purely political.

7.4.3 It has been seriously questioned whether the establishment of agricultural universities was at all a step in the right direction if the objective was to achieve greater integration between agricultural development administration and agricultural research. The Heble Commission which examined this question, has observed: "It may be stated, with respect, that not a single one of the aforesaid objectives is such as could not have been attained by the Department

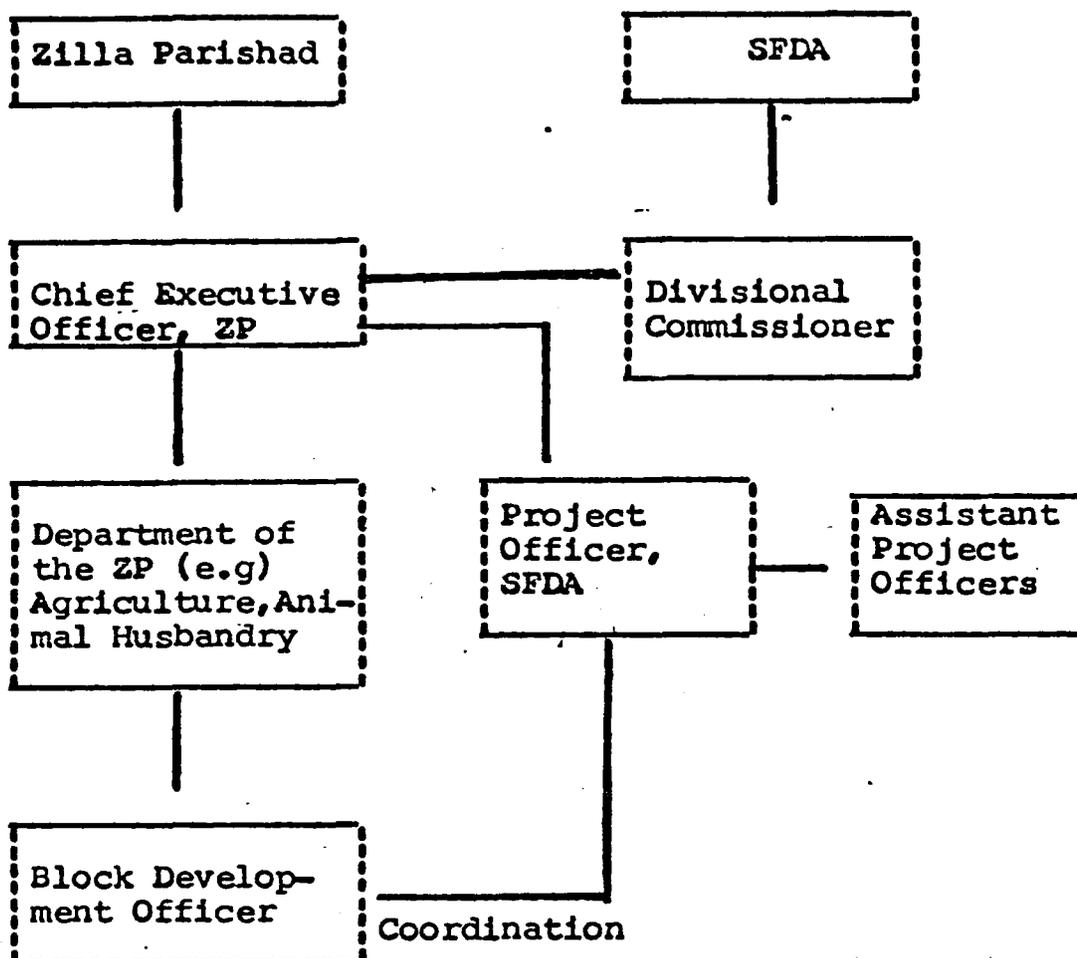
when all the activities were functioning under it in a unitary manner, if the Department had its heart in them. In fact, the question of coordination would, administratively speaking, be far easier to tackle if there is a single line of control from the top. It does not seem that a separate organisation such as the Agricultural University was necessary in order that these objectives be achieved."(15) It is, however, very difficult to agree with the views of the Commission in toto. It is true that the establishment of the agricultural universities resulted in a total lack of communication between administration and research. Prior to the establishment of the universities, the development and extension staff of the Agriculture Department were inter-changeable with the research and education side. After the establishment of the Universities, the research staff did not have any exposure to the problems of the field and vice versa. But these are necessary accompaniments to specialisation in agriculture and the solution lies in forging channels of communication between the two wings, namely, administration and research. In fact, it is one of the claims of the T&V that such communication will be established at various levels.

7.5 Small Farmers Development Agency (SFDA)

7.5.1 SFDA programme is administered by a separate Agency, which is an autonomous body registered under the Registration of Societies Act. SFDA is therefore not a part of any Government department and its budget does not form part of the State budget. There is one such Agency in each of the districts where the programme is in operation. Each Agency is expected to cover about 50,000 small and marginal

farmers. This set-up was preferred in order to escape the inherent rigidities of a departmental set-up and also to ensure that at the end of the financial year the unspent programme funds do not lapse as would be the case if SFDA were a Government department. The Divisional Commissioner concerned functions as the Chairman of the Agency in Maharashtra; the CEO, ZP is the Vice-Chairman. With a view to obtaining better coordination with the concerned line departments at the district level the District Collector, the district level officers of the various departments, representatives of cooperative credit societies, representative of the Lead Bank in the district, etc. are included as members of the Society. There is a full-time Project Officer who functions as the Secretary of the Agency; the staff support to the Project Officer comprises 3 Assistant Project Officers drawn from the disciplines of Agriculture, Animal Husbandry and Co-operation, 2 Field Officers in the grade of Extension Officers, and supporting office staff.

The structure of the SFDA showing its linkages with ZP in Maharashtra is given below:



7.5.2 According to the Planning Commission,

"The functions of each SFDA were to (a) identify the eligible small farmers in its area, (b) investigate and identify their problems, (c) formulate programme incorporating suitable measures to deal with problems and (d) devise ways and means for implementing the programme. The main objective scheme was to make potentially viable small farmers surplus producers. Therefore the major responsibilities of the SFDA are, to help small farmers by organising and arranging services (including custom service and machines and implements) and supplies (e.g. improved seeds, fertilisers, pesticides etc.) required by them at the proper time, arrange for irrigation

in the area from whichever resources most practicable, provide assistance to small farmers in securing loans from Cooperative Banks as well as from other credit institutions, and arrange facilities of storage, transportation, processing and marketing of their produce. In addition, the Agencies were also expected to exploit the possibilities of augmenting the incomes of small farmers, through animal husbandry activities (e.g. dairying, poultry farming, etc.) and even agro-based industries. It was envisaged that the Agencies would try to extend the above mentioned services, supplies, and other assistance, as far as possible, through the existing institutions and authorities."(16).

7.5.3 The main objective of the programme therefore was to devise a viable production programme to the "target group" farmers and to take suitable steps so that these farmers derive benefit therefrom. The Agencies were primarily to function as co-ordinators between the "target group" farmers on the one side and the Government Departments and Institutions which are expected to provide various services to the farmers, like credit institutions, development departments, and extension agencies, on the other. The Agency was not expected to function as a credit institution but to serve as a catalyst for inducing existing credit institutions, both cooperative and commercial, to provide credit to the small farmers. Similarly, the Agency was not equipped to provide extension service to the small farmers but was to rely upon the existing extension organisation to provide the necessary extension service. The SFDA was thus meant to solve the "access

problem" of the small and marginal farmers, as lack of access to credit, inputs, technical know-how and markets, was considered to be the major problem faced by the small farmer.

7.5.4 SFDA is expected to provide access to the "target group" farmers to the following:

I. Agricultural: (i) Supply of Inputs, (ii) Demonstrations, (iii) Supply of Bullocks/and Bullock Carts, (iv) Agricultural Implements, (v) Customs Service, (vi) Horticulture, (vii) Land Development/Levelling, Soil Conservation, and (viii) Storage/Grain Bins.

II. Minor Irrigation: (i) Dugwells/Renovation of wells, (ii) Tubewells, (iii) Installation of pump-sets, (iv) Wells with pump-sets, (v) Community Irrigation, (vi) Other Minor Irrigation Programmes.

III. Subsidiary Occupations: (i) Dairying, (ii) Poultry, (iii) Sheep Rearing, (iv) Goat Rearing, (v) Sheep as well as Goat Rearing, (vi) Piggery, (vii) Fisheries and (viii) Duck Rearing.

IV. Rural Works Programme. The above programmes are implemented or services provided by the existing departments or institutions. For instance, supply of inputs and demonstrations fall within the field of activity of the Agriculture Department; so does the land development work which is the responsibility of the soil conservation wing of the Agriculture Department. Credit for the purposes listed in II and III above is provided by the LDB, DCC Banks (medium term) and other financing institutions, mentioned in Section 7.3 of this chapter.

7.5.5 Subsidies on various counts are admissible to small farmers under the scheme and these subsidies are disbursed by the SFDA. In the case of inputs for instance, the small farmers covered by the SFDA obtain their inputs, just as farmers not covered by the SFDA do, that is, either through cooperatives or through private trade. Subsidy admissible to the eligible small farmers is disbursed to them by the SFDA. In the case of demonstrations, these are arranged by the Agriculture Department, in the same manner as other demonstrations (i.e. under normal Plan Schemes) the only difference is that in the case of demonstrations taken up under SFDA, the cost is borne by the Agency from the budget of the SFDA programme. As regards minor irrigation under the SFDA programme, small farmers are entitled to a subsidy of 25% of the capital cost if they invest in a minor irrigation facility, like dugwells and/or pump-sets; for community irrigation works i.e. irrigation works which benefit more than one small farmer the scale of subsidy is higher. The disbursement of this subsidy to any farmer is linked with the availability of institutional finance for meeting the investment cost of the minor irrigation facility. The presence of subsidy is expected to make the small farmers more creditworthy and thereby improve their "access" to credit. Similar subsidies linked with institutional finance are also available for purchase of milch cattle, etc., that is, for items listed under III of para 7.5.4 above.

7.6 Drought Prone Area Programme (DPAP).

7.6.1 DPAP was initially started as a rural works

programme for providing employment in the drought prone areas on a more sustained basis. After the mid-term appraisal of the programme during the Fourth Plan and in the light of the 'Task Force on IRD' appointed by the Government of India, the objectives of the DPAP emerged as follows:- restoration of ecological balance; raising the productivity status of land and livestock resources and raising the economic status of the poorer sections of the rural society. It thus has two dimensions. First is the ecological dimension. The objective here is to gradually improve the ecology of the drought prone areas by undertaking soil and moisture conservation measures, and afforestation. The second dimension is the insulation of the farmers in the drought prone areas from the effects of drought; the objective here is to devise an appropriate production programme for the farmers in the drought prone areas, which would give them a subsistence livelihood even in years of drought. These two are referred to as infrastructural programmes and individual beneficiary programmes respectively. But, clearly, they cannot be kept distinct and tackled separately. Since under DPAP a watershed is the unit of development, it is not proper to complete only the infrastructural programmes in the watershed, and leave out the on-farm development programmes designed to improve the capability of individual farms, as well as programmes which will augment the incomes of farmers, particularly small farmers, in the drought prone areas, like dairying, sheep rearing etc. The infrastructural and individual

beneficiary programmes which form the components of DPAP are: (i) Soil Survey, (ii) Soil and water conservation; (iii) Crop husbandry, particularly, adoption of dry land farming techniques; (iv) Minor irrigation, both minor irrigation tanks constructed and maintained by the Government, as well as individually and communally owned minor irrigation schemes like dugwells, lift irrigation schemes etc; (v) Forestry and pasture development; and (vi) Income augmentation programmes for small farmers in the drought-prone areas like, dairying, poultry, etc. supported by necessary infrastructure like chilling plants etc..

7.6.2 The main thrust of DPAP really is land-use planning. If we take a watershed or a catchment area as it is otherwise called, the following different kinds of land are encountered:-

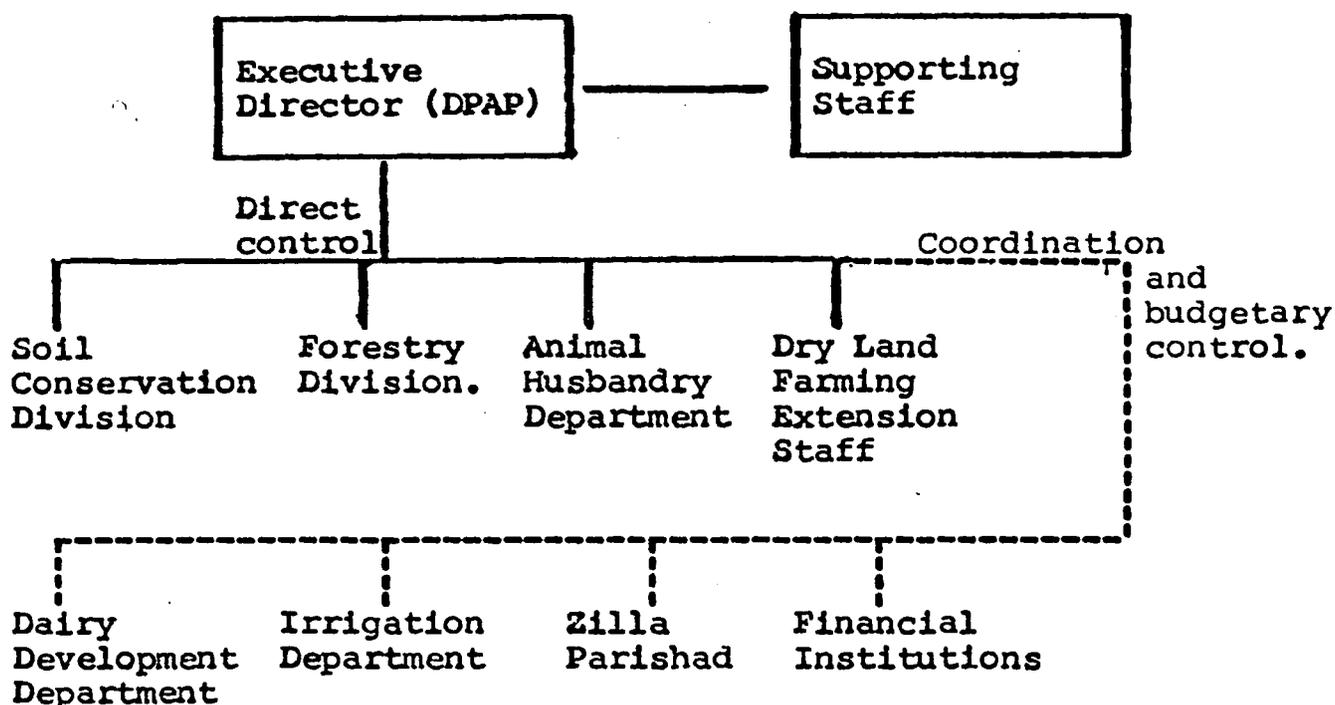
(i) Government/Revenue waste land; (ii) Forest land which may or may not have adequate tree cover; (iii) Land under habitation like village gaothan; (iv) Private land either under cultivation or not under cultivation; and (v) Gairan land which in Maharashtra is under the control of Gram Panchayats. (Out of the above, Sr.No. (iii) can be excluded).

The basic objective of the DPAP is:- (i) to plan an appropriate land use in the watershed on all the above kinds of lands; (ii) in the chosen watershed devise an appropriate production programme essentially based on land as the key resource, which will give the farmers in the watershed a fairly stable income in spite of frequent drought.

7.6.3 In Maharashtra the programme is implemented in 12 districts in all, but the intensity of the programme is not the same in all districts. In Ahmednagar and Solapur, the programme is most intensive, as in these two districts, DPAP is assisted by the World Bank. In Pune, Nashik, Sangli and Satara, the programme is less intense, roughly half the size of the programme of Ahmednagar and Solapur; in these districts the programme is not World Bank assisted, but they are Centrally sponsored all the same, the State and the Centre sharing the outlay equally. In the remaining districts (Aurangabad, Beed, Osmanabad, Jalgaon, Dhule and Buldhana) the programme is financed entirely from State's Plan and is relatively small. In each district the programme is taken up only in certain selected watersheds, so as to retain the essential character of the programme by concentrating resources and administrative efforts over a compact area.

7.6.4 The administrative set-up of DPAP in Maharashtra is different from that of SFDA. In Ahmednagar and Solapur districts where the programme is larger than in other districts, thanks to World Bank assistance, there is an Executive Director (DPAP) of the rank of a District Collector. He controls the budget of DPAP and gets the different components of the programme implemented through the concerned line departments. To this extent there is similarity with the SFDA set-up. But the essential difference is that the project level administrative units of the major departments concerned with the different components of DPAP like the Forests Department, Animal

Husbandry Department, Soil Conservation Wing of the LDA and Agriculture Department are placed under the control of the Executive Director. When such an arrangement is not possible, like in the case of Irrigation Department, where a complete administrative unit cannot be given exclusively for DPAP as the workload under DPAP would not justify it, the Executive Director gets the works executed through the district units of the concerned line departments. The set-up is given below:



The main leverage of the DPAP administration with the departments not under its direct control is the budget; for those components of the programme executed by these departments the funds are released by the DPAP administration. Even at the State level, the DPAP budget is controlled by the Planning Department and not by the respective line departments. To illustrate, the plan funds for setting up a chilling plant as a part of the DPAP would come from the

DPAP budget controlled by the Planning Department and not from the budget of the Dairy Development Department. In some States, like Bihar and U.P, there is a separate department for Area Development, which is in charge of all special programmes, including CADA. Thus the essential features of the DPAP set-up are -

(i) The departments with the strongest commitment to the project objectives are under the administrative control of the Executive Director, like the Soil Conservation Wing of the LDA, Forests Department, etc.

(ii) In order to make the other departments pull together for attaining the project objectives the budgetary control is with the project organisation.

In other districts, where the programme is less intensive than in Ahmednagar and Solapur, the set-up is under the District Collector, who is assisted by a Deputy Collector. Annexe 4 shows the departments and agencies involved in the implementation of the different components of DPAP.

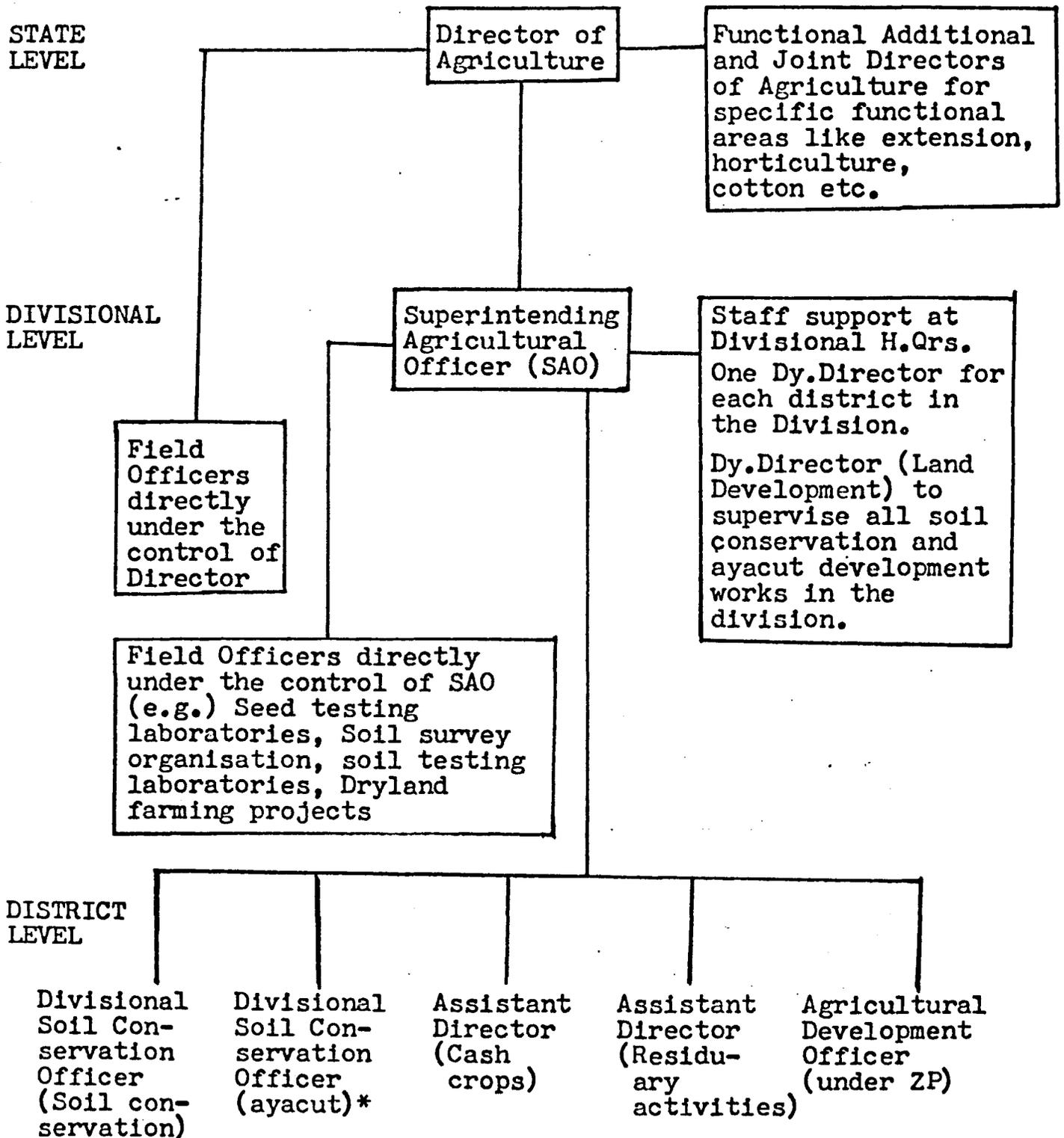
Notes and References (Chapter 4)

- (1) Government of Maharashtra : Co-operation and Rural Development Department : Report of the Committee on the Democratic Decentralisation 1961, para 8.4, page 94.
- (2) Government of India ; Ministry of Agriculture and Irrigation. Report of the Committee on Panchayati Raj Institutions. New Delhi. August 1978, page 37.
- (3) Ibid page 96.
- (4) Ibid. para 8.13, page 103.
- (5) Maharashtra Act V of 1962.
- (6) There is technical distinction between activities which were "transferred" to ZPs and those which were given to ZPs for implementation on "agency" basis. There are also schemes which are implemented by "requisitioning" to staff of ZPs. But these distinctions are not very material for our discussion here.
- (7) Government of Maharashtra : Rural Development Department: Report of the Team of Enquiry into the Role of the Panchayati Raj Bodies in Agricultural Production Programme 1966 (mimeo).
- (8) Government of Maharashtra : Rural Development Department: Report of the Evaluation Committee on Panchayati Raj 1971.
- (9) Government of Maharashtra : Report of the Reorganisation of Maharashtra Administration 1971. para 15.15, page 202.
- (10) Ibid. page 105.
- (11) See for instance, N.C.Saxena: Why not do away with VLWs. Kurukshetra : Vol. XXVIII No. 19. July 1, 1980.
- (12) Reserve Bank of India, at the instance of the Government of India, appointed in September 1975 a Committee on Integration of Cooperative Credit Institutions, under the Chairmanship of Dr. R.K.Hazari in order to examine the feasibility of merging the two structures - namely, short term and long term - functioning in the field of cooperative credit. A detailed account of the various committees which also examine this issue is contained in the Report of the Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAFICARD). (Reserve Bank of India, January 1981).
- (13) Reserve Bank of India: Regional Rural Banks Report of the Review Committee. para 3.26, page 20.

- (14) Indian Council of Agricultural Research, New Delhi. Report of the Review Committee on Agricultural Universities 1978. Chapter XI. para 11.8.
- (15) Ibid page 197.
- (16) Government of India.: Planning Commission. Report on Evaluation Study of Small Farmers, Marginal Farmers and Agricultural Labourers Programme, 1974-75. New Delhi 1979.

ANNEXE 1

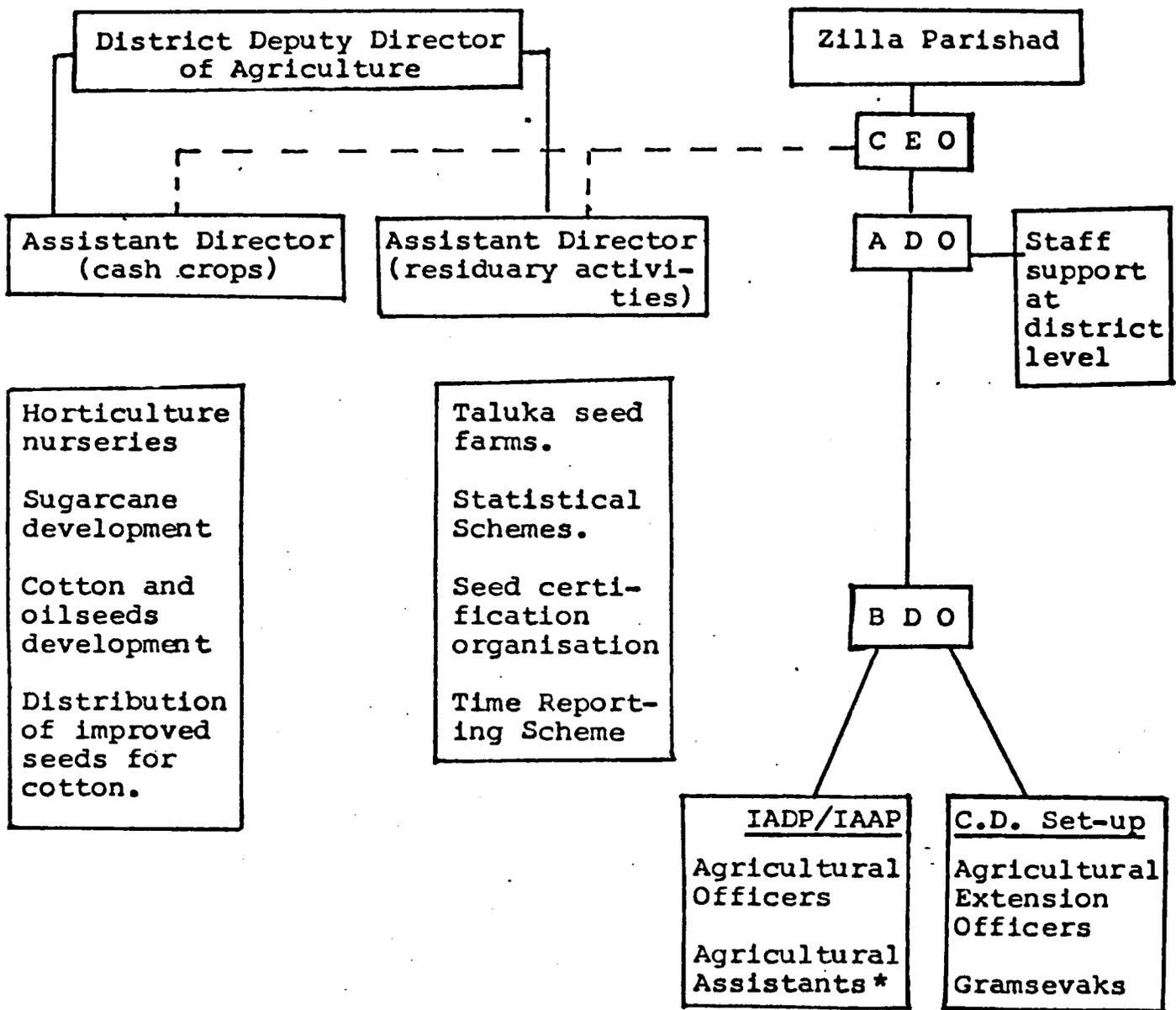
Organisation of the Directorate of Agriculture
(pre-T&V position)



* This officer is not in all district. There are 15 divisions for ayacut; some officers are in charge of more than one district.

ANNEXE 2

District level set-up (pre-T&V)

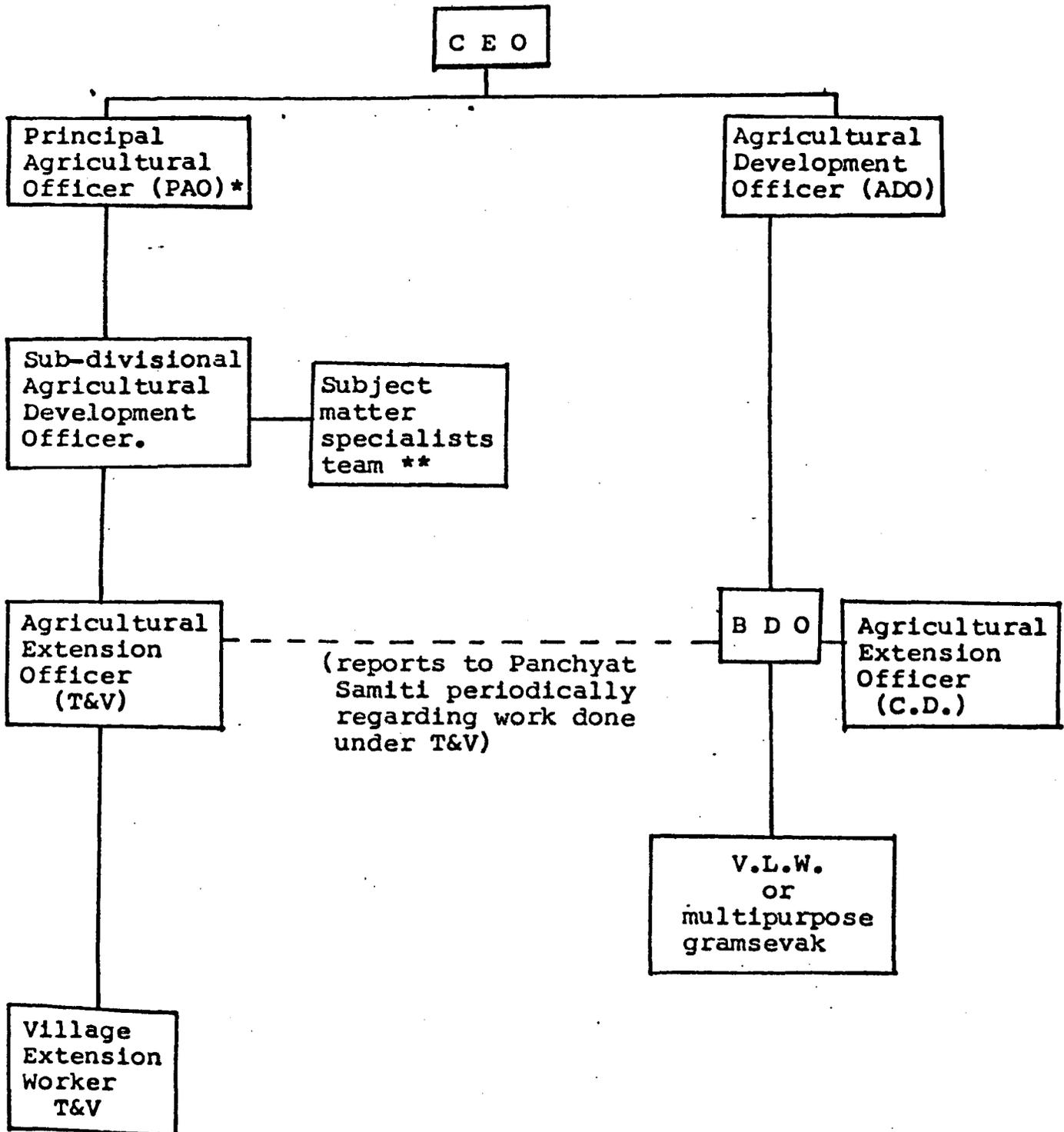


Note : In 1978, both the Assistant Directors, who are in the State Sector, were placed under the administrative control of the CEO. But the schemes were not entrusted to Zilla Parishad under the Act.

* These Agricultural Assistants were integrated with gramsevaks in 1975.

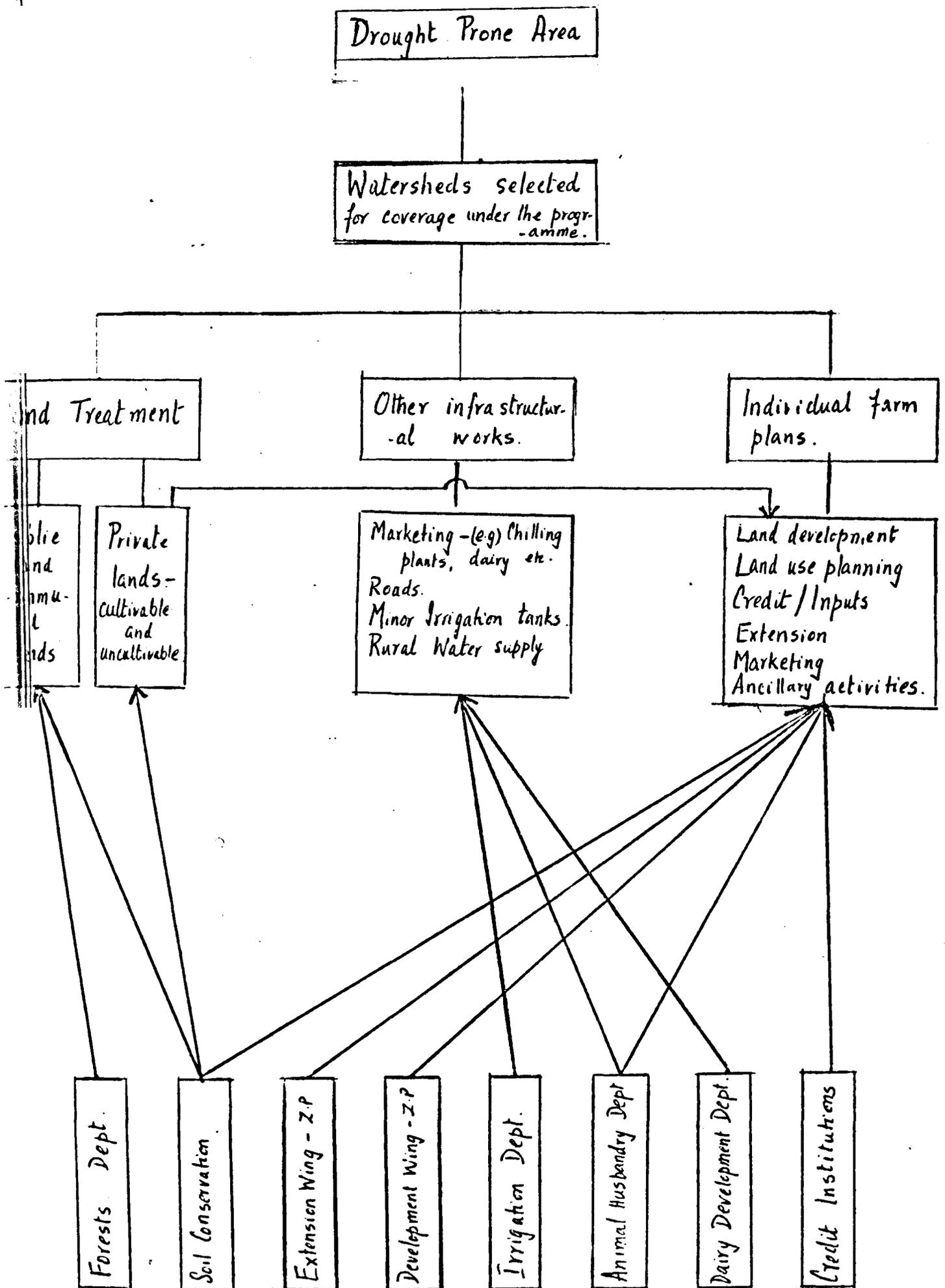
ANNEXE 3

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District level set-up (post T&V)

* The District Deputy Director of Agriculture, who was earlier located in the office of the SAO has been shifted to the District headquarters and designated as PAO.

** There are 60 teams for 90 sub-divisions.



CHAPTER - 5

The functioning of Agricultural Development

Administration in Maharashtra

CHAPTER - 5

The functioning of agricultural development administration in Maharashtra

1. Introduction

In the previous chapter a description of the role of various agencies in the field of agricultural development was given. In this chapter the functioning of these agencies in a typical year is described. In other words, the manner in which the wheels of administration move in relation to agricultural development in a typical year forms the content of this chapter.

2. Targets of agricultural production

2.1 The starting point for agricultural production planning and implementation is the growth rate for agricultural production assumed in the national Plan. This growth rate is broken down into specific cropwise production targets to be attained at the end of the Plan period. In the Sixth Plan (1980-85) an annual growth rate of 4% has been proposed for agricultural production. Production targets to be achieved at the end of the Plan period have been specified for various crops, so that the overall growth rate for agriculture would be 4% per year; targets for foodgrain production, for instance, is 153.6 million tonnes.

2.2 What is done at the national level is repeated at the State level. When the Five Year Plan of the State is finalised, in consultation with the Planning Commission, the production targets for various crops to be attained at the end of the Plan period are settled. For instance, Maharashtra's Sixth

Five Year Plan (1980-85) contemplates an annual average growth rate of 4.6% for agricultural production. This growth rate of 4.6% for agricultural production is broken down into growth rates for individual crops. Thus, the growth rate specified for foodgrains is 4.1%, for cotton 3.6%, for sugarcane 7.2% and for oilseeds 9.9%.(1). The growth rates are then translated into annual cropwise targets. The annual production targets are then divided between kharif and rabi seasons. Thus, for every crop, the kharif and rabi targets are fixed separately every year. Some crops are grown in kharif and some others during rabi, but there are crops which are grown in both seasons.

2.3 The targets of production are then translated into targets of coverage under HYV(2) in terms of area. For instance, the targets assumed for kharif jowar in Maharashtra for the year 1981-82 is 34.07 lakh tonnes. In order to achieve this target, it is necessary to bring a certain minimum area under hybrid jowar, since hybrid jowar production substantially contributes to the total jowar production in kharif; this target area to be brought under hybrid jowar during kharif 1981 is 19 lakh hectares. Similarly, in the case of other crops also where the total production depends considerably upon bringing a certain minimum area under HYV, the production targets are translated into targets of coverage under HYV expressed in hectares. Such cropwise targets of coverage under HYV worked out for the whole State are then broken down into districtwise targets and this exercise is done right upto the village level.

2.4 The role and function of targets in planning for agricultural development was referred to in para 7.9 of Chapter 2. It was also seen in paras 8.4 and 9.4 of that chapter how with the advance of technology, targets become increasingly meaningful, as they function as the starting point for administration to plan its course of action. This is illustrated in the account given in the following paragraphs of the administrative efforts put in, towards the fulfilment of the targets. They also illustrate the observation made in para 9.4 of Chapter 2 that as technology advances, there is an increasing two-way communication between the different vertical levels of administration.

3. Administrative action in relation to agricultural Production.

3.1 The series of administrative steps taken, from about two months prior to the commencement of an agricultural season, - whether kharif or rabi - until the season gets under way, together constitute what is called a kharif or rabi campaign, as the case may be. These campaigns were sponsored by the Union Ministry of Agriculture from 1958-59. The objective of these campaigns was to mobilise all field agencies to carry through certain items of agricultural programme capable of mass adoption. These campaigns with their military overtones proclaimed the earnestness of the Government to solve problems in the implementation of agricultural development programmes. It was expected that the campaigns would instil in the administration a sense of urgency, and, as they involved participation by local non-officials (MLAs, elected members of ZPs and panchayat samitis,

cooperative leaders etc.), also elicit farmers' response. In most States, kharif and rabi campaigns are still undertaken every year.

3.2 These campaigns comprise some visible and some not so visible activities. The visible ones are the meetings held at various levels - block, district and division - attended by both officials and non-officials. The campaigns also involve administrative steps which are not so visible; the important among them are mentioned below:

(i) The requirement of seeds and fertilisers are worked out districtwise and instructions are given to the agencies handling these inputs, viz. MSSC, MARKFED and MAIDC to position them in the districts. Within the district, the blockwise positioning plan is given by the ZPs. Keeping the supply lines open is a matter of major concern of the administration.

(ii) At the block level, the disbursement of crop loan is monitored. The preparation of the 'normal credit statements', the first step towards the disbursement of credit, is watched.

(iii) The water availability from the irrigation projects (particularly relevant during rabi) is ascertained from the Irrigation Department.

(iv) At the beginning of every season, the crop specialists of the agricultural universities organise 3 days' training programme for the agricultural extension workers. These are also attended by the district level officers of the DoA. Research findings of the universities are made known to the field workers. Those who attend these training classes, in turn, give training to the block level staff.

(v) The major bottlenecks and problems relating to inputs, credit or other aspects connected with the season's requirement are tackled at the State level. For instance, planning for HYV seeds is done at the State level; improved local varieties of seeds are produced on the taluka seed farms and are planned at the district level. The manner in which planning for HYV seeds is done and the problems in their production are described in Chapter 6. As regards fertilisers, the major bottlenecks are movement by railways, labour disputes and power cuts afflicting the fertiliser factories, delays in the docks (which affect the supply of imported fertilisers) which are sought to be resolved at the State level and sometimes even at the Central level. Problems relating to credit which require to be tackled at the State level are generally those which require to be taken up with the Reserve Bank (which through its Agricultural Credit Department regulates the short and medium term credit structure) or the ARDC or the Government of India. For instance, 1980 happened to be a year of severe drought in some parts of the State. Many farmers from these areas remained defaulters of crop loans and therefore became ineligible for crop loan during kharif 1981 unless their earlier crop loan was converted into a medium term loan, and this required the sanction of the Reserve Bank. This problem was tackled at the State level. There are other inter-departmental problems requiring attention at the State level. To illustrate, during the State Government's summer groundnut campaign in summer 1981, it was clear that for the success of the programme even defaulters of

irrigation dues should be given irrigation water. This was an inter-departmental problem involving three departments, viz., Agriculture, Finance and Irrigation. Ultimately orders were issued that water should be supplied to defaulters also. There are many such problems where timely action at the State level is necessary in order to make the operations in the field smooth and effective. The meetings held in connection with the campaign provide the necessary feedback from the field for initiating action at the State level.

3.3 In Maharashtra, a detailed Government Resolution prescribing the administrative steps required to be taken during the campaign, is issued two months' prior to every campaign, whether kharif or rabi. The Resolution of Government gives the districtwise targets and indicates in detail, the steps to be taken by the district level administration particularly the CEOs of ZPs. In particular, the Resolution refers to cropwise fertiliser and pesticide consumption targets, timely assessment of credit requirements and disbursement of short term credit by the cooperative societies, and placement of inputs. The Resolution also mentions coordination with the Irrigation Department and the agricultural universities. Actually, the contents of the Resolution do not vary very much from year to year except for the targets which may undergo changes. The activities to be taken up are mostly the same and the Resolution has become an almost ritualistic feature. The preparatory work starts at the block and district levels even before the Resolution is issued. In order to illustrate the manner

in which planning is done at the block/village level for the achievement of targets and the kind of the upward and downward communication which takes place within the agricultural development administration, the work done in Purandar block in Pune district, in connection with the 1981 kharif campaign is described below.

3.4 In October 1980, a communication was sent by the CEO, ZP, Pune, to all the BDOs of the district, indicating the tentative targets for various crops during kharif 1981. A copy of this circular was sent to the District Deputy Registrar of Cooperative Societies. The BDOs were asked to indicate their seed and fertiliser requirements.

3.5 For kharif 1981 a slight departure from the normal procedure was made by the State Government in the manner in which targets were fixed districtwise and cropwise. Normally, as stated earlier, these targets used to be fixed at the State level and communicated to the districts. During the rabi campaign of 1980, this practice of "handing down" of the targets came in for severe criticism, and as a result the State Government decided to modify the procedure for prescribing districtwise targets. For kharif 1981, the CEOs of ZPs were asked to make a realistic assessment of the potential in their districts and to work out the targets for themselves. It was indicated by the State Government to the CEOs that these targets would be discussed with the Government before the final targets were arrived at.

3.6 When the initial letter from the State Government was sent to the CEOs of ZPs requiring them to work out realistic cropwise targets for themselves, CEO, ZP, Pune,

in turn, followed up the earlier communication referred to in para 3.4 by another letter asking the BDOs of the district to do so as far as their respective blocks were concerned. The substance of the communication from the CEO, ZP, Pune to the BDO, Purandar block in this connection is given below: "For the kharif season, the State Government used to fix targets every year for various crops. But despite efforts to attain these targets, it cannot be said that the efforts were always successful. Therefore for the ensuing kharif 1981 season the Government has, taking into consideration the past experience and the discussions in the divisional level rabi campaign meetings in 1980, required every district to work out its own cropwise targets. The cropwise targets for your block may, therefore, be worked out by you and sent to me, along with a statement showing the basis on which these targets were arrived at."

3.7 In response to this communication from the CEO, the BDO, Purandar, worked out the cropwise targets for his block in the following manner: "Cropwise targets worked out for Kharif 1981-82 are given in the enclosed Statement. (the Statement is not given here, as the exact targets are not relevant for our discussion). While fixing cropwise targets, the following factors have been taken into consideration. "HYV Paddy:- HYV paddy is preferred by the farmers and is grown only in the western parts of the block. In the eastern part local variety of paddy viz. "Kali Kusal" is grown over 500 ha. and this variety is preferred by the farmers. Even in western parts in some areas Warangal,

Chimansal and Ambemohar varieties of paddy are grown and these varieties fetch better prices; these are not considered as HYV. The area covered under these varieties is about 300 ha.

Hybrid Jowar:- During the year 1976-77 area under hybrid jowar was 800 ha. This has increased steadily to 3,000 ha. One reason for the increase was the fact that hybrid bajra crop was affected by 'downy mildew' disease and the farmers who grew hybrid bajra were persuaded to grow hybrid jowar. Since 1979-80 again the cultivators have started growing hybrid bajra as varieties resistant to downy mildew have now been introduced. In the irrigated areas crops like vegetables and groundnut are grown instead of hybrid jowar. Therefore, the area under hybrid jowar can at the most be 2,500 ha.

Hybrid Bajra:- As stated above, due to heavy incidence of 'downy mildew' on hybrid bajra in 1975-76 the area under hybrid bajra came down. This area has since increased from 500 ha. to 3,000 ha. after the introduction of downy mildew resistant varieties. The total area under bajra in this block is 20,000 ha.; generally in better soils and areas having irrigation facilities, hybrid bajra is grown and as such the target under hybrid bajra has been shown as 4,000 ha. Remaining 75% to 80% of area under bajra is having very light soils and unfertile; in such area local bajra mixed with karla, matki and hulga crops is normally grown and such area cannot possibly be brought under hybrid bajra.

Hybrid Maize:- Generally, maize is not grown as a sole crop in this block. It is grown with sugarcane as a mixed fodder crop, and as such the target for maize has been reduced."

3.8 At the village level, extension work and propaganda are mainly carried out by the multi-purpose VLW. A detailed village crop production plan is prepared by the VLW in the format given in Annexe 1. The preparation of such village production plans has been in vogue ever since the Second Five Year Plan as we saw in Chapter 2. According to the instructions given to the gramsevaks, he is expected to contact every farmer, ascertain his plans for production and fill the details in the format. He is required to concentrate on non-adopters of HYV and motivate them to adopt HYV, persuade the adopters of HYV to increase their coverage and work out the seed and fertiliser requirements.

3.9 In actual practice how ritualistically the preparation of village production plan is done or how effectively it is done, depends very much upon the initiative of the gramsevak. Considering that only about 25% of the total time of the gramsevak is devoted to agriculture, it is more than likely that most of these forms are filled in a mechanical fashion. Even if the forms are filled after discussion with individual farmers, there is no assurance that the farmers would stick to the plan. The plans do not have any statistical value either. Probably, the only tangible outcome of these forms is the working out of the input requirements of the village which can be done even without filling these forms, on the basis of past consumption trends and intelligent estimates based on targets.

4. Village level meetings

4.1 We shall now proceed to describe the number of meetings which are held at various levels in connection with the kharif campaign. Village level meetings are held in the months of April and May for the kharif season and the following are generally present:- Sarpanch, Chairman of the PACS, Deputy Engineer of Irrigation Department (if his presence is relevant), and Agricultural Extension Officer/Agricultural Officer concerned from the BDO's Office. (For the purposes of kharif and rabi campaigns, all Extension Officers i.e. even those not concerned with agriculture like Extension Officer (Health), etc. are pooled and assigned different zones in the block. At the village level meetings the zonal officer concerned is present).

4.2 According to instructions a separate register is to be maintained by VLW farmerwise, showing the previous year's target and the actual achievement. In the village level meetings, the farmers who did not achieve the production programme worked out and who did not adopt HYV are to be focussed upon so that their problems could be discussed. But in actual practice, those who attend the meetings are generally those who are already adopters of HYV and who are the more vocal elements in the village. The issues raised by them are generally the following: complaints regarding late arrival of seeds, quality of seeds, late disbursement of credit and inadequate credit, non-receipt of subsidies permissible under the various schemes, uncertain and intermittent power supply etc. There are also demands like, demand for an irrigation tank or completion of some incomplete

works or electrification of the village. Individual complaints are also made by the farmers regarding delays in sanctioning loans for wells, pumpsets etc.

4.3 An examination of the record of such meetings taken up during successive years shows that the points raised are generally the same and the replies given are also the same. Actually the plight of those who conduct these meetings is unenviable. While they become the targets of criticism by the farmers, they are often incapable of fulfilling the requirements of the farmers, as many of the complaints pertain to the working of institutions which are entirely outside their control.

5. Block level meetings

5.1 At the block level, a Block Coordination Committee has been constituted under the Chairmanship of the Chairman of the Panchayat Samiti. The membership of this committee comprises the BDO, Agricultural Officer of the BDO's Office, Deputy Engineer (Irrigation) (wherever relevant), the Manager of the local branch of the District Central Cooperative Bank and the managers of branches of commercial banks located in the block, representative of the District Deputy Registrar of Cooperative Societies, representative of the Taluka Sale Purchase Union and Extension Officer (Agriculture), who is the member-secretary of the committee. From the month of April onwards, fortnightly meetings of this Block Coordination Committee are held. The discussion generally centres round the achievement of targets given, the preparation of normal credit statements of the farmers by the secretaries of the PACS, (which form the basis for the disbursement of crop

loans) and the positioning of inputs. By way of illustration of the subjects discussed by this committee the Agenda for one such meeting of the committee of Purandar block is given in Annexe-2.

5.2 Another illustration of the subject of discussion that takes place in block level meetings is drawn from Akot Panchayat Samiti, Akola district. A report placed by the BDO before the Committee is given in Annexe-3.

5.3 In addition to the meetings of the Block Coordination Committee, twice every season, the President of the ZP and the CEO, ZP, hold meetings at the block level when the work of the gramsevaks regarding agricultural production is reviewed.

5.4 The details of the work done by a few selected BDOs during the year 1979-80 are given in Annexe-4. Annexe-5 gives the details of the work done during 1979-80 of a typical Extension Officer (Agriculture).

6. District level meetings

6.1 A committee has been constituted at the district level under the chairmanship of the President, ZP; in his absence, the President of the Agricultural Production Committee of the ZP acts as the Chairman of the Committee. The Committee comprises members of the Agricultural Production Committee of the ZP, Collector, CEO of the ZP, Chairman of the District Central Cooperative Bank, Chairman of the District Marketing Society, Executive Engineer (Irrigation), District Deputy Director of Agriculture and Agricultural Development Officer of the ZP.

6.2 The District Committee holds coordination meetings every week and reviews the preparedness regarding the kharif/rabi production programme. The subjects discussed are the following: (i) Targets given for the district and possible achievement; (ii) Reasons for shortfall; (iii) Position regarding seeds; (iv) Position regarding fertilisers; (v) Position regarding pesticides; (vi) Position regarding the disbursement of cooperative credit and (vii) The progress of the Pilot Projects and so

6.3 Annexe-6 gives the annual calendar of activities of a typical ZP in Maharashtra.

Annexe-7 gives the list of schemes implemented by a typical ZP. These two Annexes illustrate the kind of the activities undertaken at the district level, relating to agricultural development.

7. Divisional level meetings

7.1 At the beginning of every season, kharif or rabi campaign meetings, as the case may be, are held at each of the divisional headquarters. These meetings are presided over by either the Chief Minister or the Minister for Agriculture. Ministers of the departments connected with agricultural development, like Irrigation, Cooperation etc., as well as Ministers hailing from the division are invited, as also the MLAs, MPs, Presidents of ZPs, Chairmen of District Central Cooperative Banks and other prominent non-officials. The Secretaries of concerned departments are required to attend these meetings, but they are generally represented by their deputies. Collectors and CEOs., ZPs of the division and the divisional and district level officers

of all the concerned departments attend these meetings. These are considered to be important meetings where the major bottlenecks which would hamper the agricultural production during the season are discussed and are expected to be solved on the spot. But often the problems are not amenable to easy solutions on the spot. By way of illustration, some of the major points which emerged during the discussion in such meetings in the last five years are given in Annexe-8.

7.2 It will be seen from Annexe-8 that the discussion mostly centres round the bottlenecks in the implementation of the programmes and problems regarding coordination. A few issues of policy are also raised and it is often difficult for those who attend these meetings to say anything specific on these issues. For instance, while local problems of coordination can be sorted out, problems like levying irrigation charges on the basis of number of times irrigation water is released rather than on seasonal basis, lowering the electricity tariffs etc. are not amenable to on-the-spot solutions. There are also some manifestly unreasonable demands. But all the same, these meetings perform a useful role of giving a feed-back to the Government on the problems at the implementational level.

7.3 Annexe-9 gives the details of the work done in a typical year by the SAOs who are the divisional level officers of the DoA.

Annexe - 1Format of the Village Production PlanForm No. 2

Village Kharif and Rabi Production Programme 1979-80.

Village _____ Gram Panchayat _____ Agricultural Zone _____

Panchayat Samiti _____

Sr. No.	Name of farmer	Residing at	Area of land under cultivation (ha.)							Total irrigated area (5) to (11)
			Un-irrigated	Jowar	Other cereals	Cotton	Wheat	Vegetables	Horti-culture	
-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-

Total area under cultivation.	Kharif Programme							
	Jowar							
	Cash				Bank loan			
Local	High Yielding improved	Hybrid	Total	Local	High yielding improved	Hybrid	Total	
-12-	-13-	-14-	-15-	-16-	-17-	-18-	-19-	-20-

Kharif Programme							
Cotton							
Cash				Bank loan			
Improved local	Hybrid	Varlaxmi hybrid	Total	Improved local	Hybrid	Varlaxmi hybrid	Total
-21-	-22-	-23-	-24-	-25-	-26-	-27-	-28-

[For every crop, details as shown above for jowar and cotton are filled, and the format has, in all, 72 columns. The format also contains columns for showing the input requirements].

Annexe - 2Agenda of a typical meeting of the Block Coordination CommitteeItems for the meeting:

- 1) Bank Inspector, Pune District Central Cooperative Bank and the Manager, Bank of India should bring along list of the society-wise members and the consideration of the list from the point of view of checking compliance of orders regarding membership campaign.
- 2) Taluka Kharedi Vikri Sangh, (Sale-Purchase Union), Saswad should submit report regarding fertiliser supply. Further, report regarding balance fertiliser and plant protection chemicals should be submitted in writing.
- 3) The consideration of difficulties in the areas under command of Nazare Project and Nira left bank canal.
- 4) Taluka Cooperative Officer should submit report in writing regarding cropwise and societywise normal credit statements sent to the District Central Cooperative Bank, the number of members as well as the area covered by credit.
- 5) Kharedi Vikri Sangh and Mahesh Agro-Service Centre should bring report regarding sale and balance of seed.
- 6) Any items with the permission of Chairman.

Annexe - 3

A report placed by the BDO, Akot Panchayat Samiti before Block Coordination Committee - Review of the kharif programme, Akot Block, Akola District.

Reasons for non-achievement of hybrid jowar target are:-

- 1) In the panchayat samiti 16,000 ha. are normally under Kharif jowar. It is too much to expect 13,000 ha. to be brought under hybrid jowar which would mean that the percentage of coverage under hybrid jowar would be 81%.
- 2) In the panchayat samiti, the cooperative credit societies issued permits for purchase of H-4 cotton seeds against crop loan for a coverage of 3,661 ha. But MSSC could supply certified H-4 cotton seeds only for a coverage of 1,772 ha. This means that for the remaining area of 1,900 ha. in spite of the availability of credit, seeds could not be supplied. This led to a decrease in the coverage under H-4 cotton.
- 3) The demand for CSH-5 hybrid jowar seeds registered by the BDO with the MSSC was 450 quintals, but the actual supply was only 210 quintals. Due to shortage of CSH-5 jowar seeds, farmers have grown ordinary jowar. This led to non-achievement of coverage under hybrid jowar.
- 4) During the current kharif season, the rains started much earlier than usual and on 13th June, 1980 rains conducive to commencement of sowing operations set in. But at that time, the positioning of seeds was not completed and seeds were not readily available. The farmers have, therefore, sown local varieties (two points have been made in the above, viz. inadequate supply and absence of timely supply of seeds).

The position regarding the credit statements prepared by the cooperative societies is as follows:

	(Figures: area in ha.)		
	Hybrid jowar	H-4 cotton (irrigated)	H-4 cotton(un- irrigated)
1. Credit statements prepared.	13,209	275	11,009
2. Credit statements sanctioned.	13,209	275	11,009
3. Input permits issued	3,661	71	3,974
4. Supply of seeds against society permits.	1,772	42	132 (+720 varlaxmi hybrid cotton)

ANNEXURE 4

Work done by four selected EDO's in the year 1979-80.

Items of work	APRIL				MAY				JUNE				JULY				AUG				SEPT.				OCT				NOV				DEC				JAN				FEB				MAR																																			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																
1. Agriculture	5		1		6	-			15	-			4	10			10	5			7	11			4	4			7	7			8	4			7	2			3	4			3	4			-		3				2				2																					
2. Animal husbandry, Fisheries	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	2			2	1			3	1			1	3			2	3			1	3			2	2			1	1			-		2				2																									
3. Primary Education	2	3			-	-			2	-			1	1	1		6	4			1	3			5	2			3	4			7	-			2	-			3	-			2	-			3	-			5	-			-		-		-		-																	
4. Public health Family planning	3	-			4	-			1	-			1	1			-	1			7	14			5	7			4	-			2	3			2	3			1	-			2	-			2	-			-		-		-		-																					
5. Minor irrigation water supply	10	5			8	-			2	-			1	8			-	1			1	1			1	2			1	-			1	1			1	1			1	-			4	1			2	1			1	1			1	1			1	1			1	1			1	1										
6. Public works-roads, Buildings etc.	1	7			1	-			3	-			2	1			7	-			2	1			3	2			7	4			3	7			5	5			6	5			6	5			6	5			5	5			5	7			7	4																		
7. Rural housing	2	1			2	-			1	-			1	-			2	-			1	-			1	1			-	1			4	3			3	1			2	5			3	5			3	5			3	5			3	5			3	5			3	5			3	5										
8. IED, SFDA	-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-			-	-										
9. Nutrition, School feeding, Child care	1	2			3	-			3	-			-	2			2	4			3	7			5	7			8	6			4	4			6	5			3	2			3	2			3	4			3	4			3	4			3	4			3	4														
10. Recoveries of Govt. dues	1	-			2	-			1	-			-	3			-	8			-	4			-	1			-	1			1	-			1	9			1	6			1	6			15	7			4	7			7	9			7	9			7	9			7	9			7	9						
11. Inspection of Gram sevaks work, Panchayat work	6	2			6	-			10	-			5	4			8	2			4	4			2	6			5	7			8	5			8	5			8	2			5	6			5	6			1	4			1	3			1	3			1	3			1	3										
12. Meetings	10	1			7	-			10	-			6	2			7	-			8	8			9	8			12	8			7	2			7	3			8	3			8	3			5	3			5	3			5	3			5	3			5	3			5	3			5	3			5	3		
13. Office work	14	2			18	-			10	-			11	8			14	9			11	7			9	9			11	8			11	9			15	9			7	7			7	7			11	10			11	10			11	10			11	10			11	10			11	10										
14. Other items incl. Small savings, RES etc.	6	3			11	-			7	-			4	9			7	5			11	6			9	7			6	4			6	3			12	9			8	8			8	8			8	8			2	12			2	12			2	12			2	12			2	12			2	12						

Notes: 1. The above figures were compiled from the monthly diaries of the concerned officers. Diaries for EAO's were prescribed only from July 1980. Diaries for March 1981 were not available.
 2. Figures give the number of days spent on each item of work.
 3. If two or more items of work are in the diary on the same day, entry has been against each of the items.
 4. -: Diary not received

ANNEXE - 5Details of work done during 1979-80 of a typical Agricultural Officer, Panchayat Samiti (PS).

<u>Date</u>	<u>Work done</u>
<u>April, 1979</u>	
3 & 4	Family Planning Campaign, preparation of cases for tubectomy operations, campaign for summer groundnut programme and kharif campaign.
5	Visit to the plot of a farmer participating in summer groundnut campaign. Family Planning campaign and preparation of cases.
6	Tour with the BDO for Family Planning work and preparation of cases
7 & 8	Preparation of information for submission to ADO, ZP in connection with the meeting of Agricultural Officers.
9	Family Planning work and kharif campaign.
10	Preparation of cases for Family Planning.
11	Family Planning campaign and kharif campaign.
12	Campaign for vaishaki moong and work relating to auction of condemned materials.
13	Inspection of a school whose roof was blown by wind.
16	Attended meeting of the BDOs convened by CEO, ZP.
19	Family Planning campaign. Work in connection with the departmental examination for Class IV Government servants. Kharif campaign and discussion with the farmers regarding summer groundnut programme.
20	Visit to the examination centres of the departmental examination for Class IV Government servants, Family Planning campaign, kharif campaign and visit to the areas under summer groundnut.
21	Discussion regarding auction of a tractor.

Date	Work done
<u>April, 1979</u>	
23	Visit to a farmer whose cattle shed suffered damage in fire and assessed the damage.
24	Attended meeting convened by CEO, ZP regarding scarcity of drinking water in the district.
25	Accompanied CEO, ZP on his tour to areas affected by scarcity of drinking water. Visited areas under summer groundnut.
26	Attended training in the district headquarters regarding kharif campaign.
29	Work relating to drinking water supply.
<u>May, 1979</u>	
1 & 2	Summer groundnut campaign and kharif campaign.
4	Discussion regarding auction of condemned property and meeting regarding IRD scheme.
5 to 11	Kharif campaign work, meetings at various places in the PS in connection with kharif campaign.
12 to 15	One day's training class for farmers at two villages. Training classes to farmers at selected villages.
25	Attended meeting convened by MSSC regarding the seed distribution policy during kharif.
27 to 31	Kharif campaign and arrangements for distribution of seeds on credit permits.
<u>June, 1979</u>	
2 to 10	The main work done during this period was contacting the secretaries of PACS at different places in order to find out if credit permits for seeds have been issued.
11	Visit to district headquarters to bring moong seeds.
12	Discussion with secretaries of the PACS regarding issue of credit permits at five villages.
13	Transport of moong seeds from the TSF.
14, 17 & 18	Discussion with the secretary of the PACS regarding issue of credit permits in six villages.

Date	Work done
<u>June, 1979</u>	
19	Accompanied the BDO on tour regarding kharif campaign. Selected farmers to be covered under the IRD programme.
20	Discussion with the bank inspector regarding issue of permits by credit societies and requested, for the remaining villages permits should be issued quickly.
22 to 24	Accompanied Chairman, PS to villages for kharif campaign work.
25	Meeting at district headquarters.
27 & 30	Visit to various villages to survey the sowing operations.
<u>July, 1979</u>	
2 to 4	Accompanied the Chairman, PS on tour to various villages to inspect the crop condition. Gave instructions regarding supply of seedlings to small farmers under the SFDA programme.
5	Discussion with the sarpanch of a gram panchayat, afforestation programme and collected demands from villagers for horticultural seedlings. Accompanied Chairman, PS for crop inspection tour.
7	Discussion regarding credit permits with secretaries of PACS and bank inspector. Discussion with farmers regarding horticulture. Crop inspection.
8 to 16	Accompanied BDO and Chairman, PS on tour to villages for crop inspection. Campaign regarding horticulture. Suggestions to farmers regarding plant protection measures, particularly on H-4 cotton.
18	Attended training class for assessment survey at district headquarters.
20 to 22	Surveyed crop conditions at various villages.
23	Accompanied Chairman, PS on tour.
25	Visited the village of a small farmer.
27	Attended meeting convened by BDO at district headquarters.

Date	Work done
<u>August, 1979</u>	
2	Accompanied BDO on tour to farmers under the IRD programme, whether given subsidy for hybrid jowar and hybrid cotton.
3	Accompanied CEO, ZP on tour regarding survey of crop condition.
5	Work relating to IRD.
6	Visited horticultural nurseries to bring seedlings, to be distributed to the farmers under SFDA.
11	Visited a village on receiving news that there was heavy rainfall, to find out whether there was any crop damage.
12	Submitted report regarding distribution of fertilisers, to ADO, ZP.
13 & 14	Surveyed crop conditions at different villages.
16	Work regarding assessment survey. Discussion with farmers regarding midge fly on jowar.
17	Visited farmers under IRD.
18 & 19	Discussion at district headquarters of ADO, ZP regarding the number of small farmers and the selection of small farmers during rabi season under IRD.
21 to 23	Toured with Chairman, PS regarding apply nutrient work and midge fly campaign.
24	Midge fly campaign.
29 & 30	Attended meeting at district headquarters convened by ADP, ZP.
<u>September, 1979</u>	
4	Training class at the A.U. regarding measures to tackle midge fly attack on jowar.
7	Tour regarding rabi campaign and midge fly campaign.
10 to 14	Toured various villages in connection with midge fly campaign.
16	Attended training class organised for fertiliser inspectors.
19	Midge fly campaign.

Date	Work done
<u>September, 1979</u>	
21 and 22	Accompanied Chairman, PS on tour and extension work regarding plant protection measures, particularly midge fly.
23	Work regarding Family Planning.
24	Accompanied Chairman, PS for Family Planning campaign.
26 & 27	Meeting at district headquarters convened by ADO, ZP.
28 & 29	Family Planning campaign.
<u>October, 1979</u>	
4 to 8	Toured various villages in connection with Family Planning, vasectomy campaign and also midge fly campaign.
10 & 11	Attended crop cutting experiment of assessment survey block.
12	Brought rabi pulses seeds from the TSF to be distributed to farmers under the IRD programme.
15	Crop cutting of the assessment survey block. Groundnut crop competition work.
17 & 18	Work regarding crop competition.
19	Accompanied Chairman, PS on tour regarding Family Planning campaign. Also did work regarding midge fly campaign.
21	Family Planning campaign.
22	Work regarding collection for the C.M's flood relief fund.
25 & 26	Attended meeting convened by ADO, ZP at district headquarters.
28	Accompanied Chairman, PS to the command area of an irrigation project and discussed with the cultivators the difficulties experienced regarding obtaining irrigation water in time. Midge fly campaign.
30	Crop cutting of assessment survey block.
31	Visited district headquarters for bringing wheat seeds to be distributed under the IRD programme.

Date	Work done
<u>November, 1979</u>	
1 to 6	Visited various villages for inspection of cotton crop.
7 & 8	Work regarding crop competition. Was present during crop cutting of the plots covered by crop competition.
9	Discussion with the farmers affected water logging in the command area. Inspected wheat plots. Work regarding assessment survey.
10 & 11	Rabi campaign.
14 & 15	Accompanied Chairman, PS to the command area of an irrigation project and discussion regarding irrigation with the farmers.
16 & 17	Visited villages to listen to the problems of the farmers regarding water logging.
18 to 29	Rabi campaign and inspection of wheat plots.
30	Meeting convened by ADO, ZP at district headquarters.
<u>December, 1979</u>	
1	Visited district headquarters to arrange for the transport of cement to the block for distribution to cultivators under the wells' programme. Cement could not be brought, as truck was not available.
2	Accompanied Chairman, PS on tour regarding rabi crop inspection.
3 & 4	Work regarding transport of cement from district headquarters to block headquarters.
7 & 8	Crop inspection.
9	Crop cutting of the controlled plot under assessment survey.
10	Crop inspection.
11	Accompanied Chairman, PS in connection with veterinary programme.
13	Survey of rabi crop condition.
14	Crop estimation survey and crop cutting.
15, 17 & 18	Crop cuttin.
20	Survey of rabi crop condition.

Date	Work done
<u>December, 1979</u>	
21 to 26	Survey of rabi crop condition and discussion with the farmers regarding plant protection measures.
28	Accompanied ADO, ZP to the command areas of an irrigation project.
29	Lok Sabha Election training class.
31	Survey of rabi crop condition.
<u>January, 1980</u>	
2 & 3	Lok Sabha Election work.
5	Work regarding IRD programme.
6	Lok Sabha Election counting work.
8 & 9	Survey of rabi crop condition. Also assessment of crop loan requirement for kharif 1980-81.
11 & 12	Attended meeting at district headquarters to discuss the water logging problems, to decide growing irrigated wheat and to decide the format of the questionnaire in which necessary information is to be obtained from the concerned cultivators.
13 to 16, 19 & 20.	Surveyed rabi crop conditions in various villages, estimated crop loan requirement for 1980-81 and visited water logged command areas.
21	Attended meeting in Collector's office.
22	Crop cutting.
23 & 24	Rabi crop inspection and crop cutting.
27	Visited command area irrigation project to discuss problems of obtaining irrigation water, with farmers. Inspection of rabi wheat crop.
28	Discussion with farmers regarding incomplete community well dug during 1970-73 scarcity into use, through community effort.
29	Work regarding IRD.
30	Collection of gram panchayat dues.
31	Discussion with the farmers regarding gohar gas plant.

Date	Work done
<u>February, 1980</u>	
2 to 4	Discussion with villagers regarding putting into use of incomplete community wells.
5	Collection of Government/gram panchayat dues. Extension work regarding gobar gas plant and preparation of compost.
6	Visit to cotton plots under ICDP.
7	Crop cutting.
8	Recovery of Government and gram panchayat dues. Discussion with the farmers in the command of an irrigation project regarding their problems.
12	Recovery of Government and gram panchayat dues. Explaining to the farmers the decision of the State Government regarding writing off of interest on loans. Extension work regarding gobar gas plant.
14	Crop inspection and crop cutting.
19 & 20	Recovery of dues. Crop inspection. Collection of loan applications under SFDA.
21	Recovery of dues.
22	Crop cutting.
23	Recovery of dues. Extension work regarding gobar gas plant.
24 & 25	Accompanied BDO on tour regarding recovery work.
26	One day's training class for farmers covered under IRD.
28 & 29	Extension work regarding gobar gas plant.
<u>March, 1980</u>	
1 to 7	Recovery work and crop cutting.
8	Extension work regarding gobar gas plant.
9 & 10	Crop cutting of plots coming under crop competition.
16	Canvassing applications from farmers for loans for gobar gas plant.
17	Recovery work and inspection of summer groundnut plots.

<u>Date</u>	<u>Work done</u>
<u>March, 1980</u>	
19_	Collection of applications for wells under SFDA.
20 to 27	Recovery work.
28	Meeting at district headquarters convened by ADO, ZP.
29 & 30	Recovery work.

Annexe 6Annual calender of activities connected with agricultural development of a typical Zilla Parishad.AprilPlanning for kharif campaign.

Arrangements for opening distribution centres for inputs. Break-up of district targets of different crops into block-wise targets. Instructions to gramsevaks through BDOs for preparing cultivator-wise village production plans. Collecting demand for seed, fertiliser and insecticides.

Conducting orientation training programme to extension staff at district level.

Planning for organisation of demonstration plots.

Planning for pilot project for kharif crops.

District coordination committee meeting to solve the difficulties in implementing kharif campaign and to review progress about arrangements for supply of inputs.

Preparation of the plan for horticulture development.

Planning of kharif crops in the command areas of irrigation projects.

Revalidation of hybrid jowar and bajra seeds.

Selection of farmers for shetinishta honour.

Reviewing the preparation and sanction of normal credit statements for crop loans.

Organising District Coordination Committee for planning programme under Integrated Area Development Programme (IADP).

Organising blasting work for deepening old wells through blasting unit in IAD blocks.

Conducting meeting for HYV programme under IADP.

Selection of cultivators for new wells in IAD block.

Prepare "Farm Plans" for small holders in IAD block.

May

To supervise positioning of seeds and fertilisers at panchayat samiti level through kharedi vikri sangh.

Instructions given to taluka kharedi vikri sangh regarding opening of maximum distribution centres in their jurisdiction.

Appointment of zonal officers for close supervision of kharif campaign work by making frequent visits to panchayat samities.

Organisation of orientation training class at panchayat samiti level and at village levels.

Selection of farmers for organising different kinds of demonstrations.

Formulating the proposals and selection of farmers for kharif pilot projects.

Panchayat samities to follow-up supply of seeds, fertilisers and insecticides through their respective taluka kharedi vikri sangh, with MSSC and other agencies. Verify if the taluka sangh has paid advances to suppliers.

Collect the demand for horticultural plants from the cultivators.

Giving advice to the cultivators for sowing short duration crops under command areas in kharif season for full utilisation of available water by way of double cropping.

To organise meetings of villagers to solve their difficulties in irrigation command areas about field channels etc.

To impart training to cultivators by organising one day training camps in the villages.

To review distribution of permits to the farmers for purchase of inputs on cooperative loan.

To assess demand of rhyzobium culture and place order for the same.

Procurement and distribution of foundation seed for hybrid seed production programme.

To place indent for supply of foundation seed of hybrid jowar and bajra for next kharif seed production programme.

Visit to seed dealers and drawing of seed samples, under the seed act.

Blasting of irrigation wells in IAD block.

Organising meeting at village level for propaganda and publicity of IAD scheme.

Preparation of crop production plan in IAD block.

June

To supervise arrangements for distribution of inputs.

To place indent to nurseries for obtaining the horticultural plants.

supply of rhyzobium culture to panchayat samities.

To organise District Coordination Committee meeting, panchayat samiti level coordination meetings and village level coordination meetings.

To keep liaison between taluka kharedi vikri sangh and MSSC for seed distribution.

To obtain proposals of kharif pilot projects from panchayat samiti and to submit same to the Agriculture Department.

Supply of varietal trial, minikit trial demonstration seed to panchayat samitis for distribution.

Procurement and distribution of foundation seed for hybrid seed production programme under hybrid jowar and bajra to the cultivators for ensuing kharif season.

Visit to seed dealers and drawing of seed samples under the seed act.

Watching progress of permit distribution for seed, fertilisers and insecticides by PACS.

Organising training class at village level for kharif crops under IAD.

Advise cultivators on farm management and maintenance of farm accounts in IAD scheme.

July

To supervise distribution of seed, fertilisers and insecticides through kharedi vikri sangh, private dealers and district marketing officer.

Procurement and supply of horticultural plants to the cultivators from nurseries. Arrangements to be made for bor bunding and mango grafting.

To organise the training class for crop estimation survey, assessment survey on kharif crops and survey in pilot projects.

Visit to fields and guidance to cultivators in IAD block.

Collection of demands for horticulture plants in IAD blocks.

Collection of applications for milch animals and sending proposal to nationalised banks in IAD blocks.

Collection of applications for plant protection appliances under IAD.

Selection of cultivators for pilot project in IAD blocks.

August

Activities as listed under July.

Requirement of rabi seeds to be communicated to Agriculture Department and MSSC.

Revalidation of balance stock of wheat seeds.

September

Organisation of midge fly campaign on hybrid jowar.

Visits to different types of demonstrations and pilot projects.

District Coordination Committee meeting to review the progress of kharif programme and planning for rabi programme.

Organisation of district level orientation training camp for rabi programme.

Planning for pilot projects to be undertaken in rabi season.

Revalidation of balance stock of wheat.

Finalisation of subsidy proposal for pilot project under IAD scheme.

Verification of milch animals, wells, and electric pumps supplied in IAD blocks.

Evaluation work of IAD scheme.

Planning for rabi programme of small holders in IAD.

October

Rabi production campaign. Action for achievement of targets assigned by the Government and arrangement for the distribution of inputs for rabi campaign.

Organisation of orientation training programme for rabi for the extension staff at panchayat samiti and village level.

Planning and organisation of demonstrations on different rabi crops and selection of farmers for the same.

Harvesting of crop competition plots of hybrid jowar.

Supervision of positioning of rabi seeds and rhyzobium culture packets at block level.

Visit to command area of irrigation projects for full utilisation of irrigation water.

To guide farmers for dusting of tur crop against pod borer.

Harvesting of pilot project plots in IAD blocks.

Evaluation of IAD scheme.

Finalisation and accounting of pilot project proposals for subsidy under IAD scheme.

November

Mostly the same as in October.

December

Organisation of rat control campaign, supply of zinc phosphide to blocks.

Planning for summer groundnut, arrangement for supply of seed.

Collection of balance stock of BHC 10% from panchayat samitis.

Enrolment of farmers for rabi crop competition.

Collection of demands for seed, fertilisers and insecticides for ensuing kharif season in IAD blocks.

January

Visit to the demonstration plots and pilot projects.

Visit to the command area of irrigation projects.

Guidance for sowing of summer groundnut crop.

To guide farmers for dusting of gram, safflower crops.

Rat control campaign.

Initial preparation for starting of revalidation work of hybrid jowar and bajra seeds.

Scrutiny of applications of cultivators for preparation of loan case for small holders in IAD.

Collection of applications for blasting from small holders in IAD blocks.

February

Visit to the demonstration plots and pilot projects.

Visit to the irrigation units, command area of irrigation projects.

Selection of farmers and topping bor trees in their fields for budding in rainy season.

Revalidation of hybrid jowar and bajra.

Finalisation of subsidy proposals under IAD scheme.

Field visit and guidance to cultivators in IAD blocks.

March

Planning for next year's kharif production programme.

Requirement of seeds for kharif campaign to be communicated to department.

Harvesting of crop competition plots of wheat.

Conducting crop cutting experiments under assessment survey, crop estimation survey and pilot project survey.

Selection of farmers for Shetinishta honour.

Review progress of preparation of N.C statements for crop loans.

Finalisation of accounts of different items under IAD scheme.

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Annexe 7List of schemes implemented by a typical Zilla Parishad.I. Plan Schemes

(1) Establishment of gobar gas plants, (2) Maintenance of the plant population of groundnut, (3) Minikit trials on groundnut, (4) Increasing area under safflower, (5) Distribution of rhyzobium culture for demonstration plots under pulses crop, (6) Grant of subsidy on pesticides and raticides, (7) Integrated area development scheme (known as Page Yojana which is really the forerunner of the SFDA scheme), (8) Laying out demonstration for oilseed crops, (9) Intensive oilseed development programme for sunflower and (10) Intensive pulses development programme.

II. Non-Plan Schemes

(1) All staff salaries of schemes taken up under the previous plans and all plant protection schemes which are classified as non-Plan schemes. In addition to, following schemes are implemented by the ZPs: (1) Crop competition scheme, (2) Agricultural exhibition and shows, (3) Demonstration schemes, (4) Farmers' training schemes and (5) Irrigation units in the command areas other than those covered by CADA.

III. In addition to Plan and non-Plan schemes of the State Government, the ZPs, from their own cess fund undertake schemes which vary from ZPs to ZP. Mainly these schemes deal with publicity, plant protection subsidies and undertaking small infrastructural works like bandharas, etc.

Annexe - 8Issues raised in the Divisional Level Kharif/Rabi Campaign
Meetings from 1975-76 to 1980-81A : Seeds

- 1) Certified paddy seed should be produced on the fields of the cultivators in the same manner in which certified hybrid jowar seeds are produced. (At present paddy seeds are not certified in Maharashtra, and, uncertified seeds are produced on taluka seed farms).
- 2) Since the cooperatives in the tribal areas are unable to pay the required deposit of 10% of the cost of the seeds to the MSSC in order to lift them from the Corporation, the Corporation should make arrangements to place the seeds with these cooperatives on consignment basis without requiring them to make advance payment.
- 3) In all inaccessible areas of the State, agricultural inputs should be positioned well before the onset of the monsoon.
- 4) Both MSSC and MAIDC should reduce their selling rates so that the cultivators can get seeds at much lower rates.
- 5) The prices of H-4 cotton seeds produced in Gujarat and brought to Maharashtra for sale are higher as compared to seeds produced within the State. The seeds from Gujarat should be sold at the same rate as the seeds grown in Maharashtra.
- 6) MSSC has not supplied seeds even to societies who have paid 10% advance well before the commencement of the kharif season.
- 7) There is a shortage of horticultural grafts/seedlings and efforts should be made to increase the availability of these, particularly in the Western Ghats region.
- 8) The cultivation of potatoes should be encouraged in Western Maharashtra and for this purpose MSSC should undertake the supply of potato seeds.

- 9) The price paid by MSSC to seed growers for the seeds is not attractive enough, with the result the seed production in Maharashtra has come down.
- 10) The cost of wheat seed supplied by MSSC should be on par with the market rates and MSSC should supply them through the ZPs and not through their own sales outlets.
- 11) MSSC should make efforts to produce in each district the seed requirements of that district.
- 12) The rates charged by Government for horticultural grafts/seedlings supplied from Government nurseries in Wardha district are very high. They should be reduced and the rates fixed in consultation with the ZPs.
- 13) The State Government should make arrangements for the supply of vegetable seedlings to small farmers and tribal farmers and these seedlings should be raised on the taluka seed farms so that the rates can be kept at a low level.
- 14) The private seed growers are selling poor quality seeds as truthful seeds. The practice of selling truthfully labelled seeds by private seed growers should be stopped.
- 15) Foundation seed production programme should be taken up in Amravati district.
- 16) MSSC should make arrangements for supplying G-24 groundnut seed in sufficient quantities.
- 17) The cooperative societies handling seeds should place their realistic demands with MSSC well in time.
- 18) The varieties of paddy seed required by the Thane ZP should be supplied by MSSC or the State Government.
- 19) Carry over stocks of seed should be taken back by MSSC from the societies and the ZPs at less cost, after deducting Rs.30/- per quintal.

- 20) Both MAIDC and MSSC should open sufficient number of distribution centres for seeds.
- 21) Seeds should be supplied free-of-cost to the scarcity affected cultivators in Bhandara district.
- 22) An enquiry should be made into the working of the MSSC to find out why seed producers are getting low price for seeds, on the one hand, and farmers are made to pay a higher price for the seeds, on the other.
- 23) There should be a subsidy on pulses seeds supplied by the State Government from the taluka seed farms.
- 24) CSH-8 hybrid jowar seed supplied to the ZP, Solapur was under-sized and infested with store pest. The seed should be taken back.
- 25) The production of groundnut and pulses in Akola district has come down due to inadequate seed availability. Adequate seeds should be distributed in Akola through the ZP.
- 26) MSSC should pack wheat seeds in small lots.
- 27) Hybrid varieties of nagli seed should be produced so that the cultivators in tribal areas can benefit.
- 28) H-4 cotton seed availability in Nagpur division is very low and seed should therefore be diverted from other divisions to Nagpur division.
- 29) Complaints regarding poor quality H-4 cotton seed and Varlaxmi cotton seed should be promptly investigated.
- 30) The State Government seed processing plants in the districts are taking up seeds of the private seed growers for processing on priority. They should give priority to the seed grown under the ZP programme.

- 31) There should be equal rates for horticultural grafts/ seedlings supplied by the Agriculture Department and the Agricultural Universities.
- 32) In view of two continuous years of scarcity in Dhule district, the seeds for the rabi season should be supplied free-of-cost to the farmers.
- 33) Paddy seed resistant to gall fly should be supplied to the cultivators in the endemic areas.
- 34) Supply of CSH-4 hybrid jowar seed treated with carbofuran should be supplied by the State Government on tagai loan (rather than insisting on cultivators obtaining loan from societies) to those cultivators who had tried to grow hybrid bajra but lost the crop on account of attack by downy mildew disease.

B. Fertilisers

- 1) The procedure for actual disbursement of subsidy under the Government's newly announced scheme of subsidy on the increased cost of fertilisers should be simplified so that it will be possible for the farmers to get the subsidy amount without having to produce 7-12 extracts (i.e. Record of Rights) as it is very difficult to get these extracts from the Talathis.
- 2) The cost of fertilisers marketed by MARKFED is much more than the cost of fertilisers marketed by other agencies. This should be investigated.
- 3) Instead of subsidy being granted on the increase in the cost of fertilisers, subsidy should be on the total cost.
- 4) ZP Yavatmal should be asked to distribute rhyzobium culture packets on a large scale.

- 5) There is acute shortage of superphosphate in Osmanabad district and necessary arrangements should be made to stock necessary quantities of superphosphate.
- 6) Since the State is now reaching almost the limit of hybridisation in jowar, further increases will have to come only through increased application of fertilisers. Efforts will therefore have to be made to increase the consumption of fertilisers by farmers.
- 7) Municipalities and Corporations should be asked to take up compost production programme on a large scale.
- 8) More fertiliser distribution centres should be opened in inaccessible areas.
- 9) Fertilisers should be made available within a radius of 5 miles from every village.
- 10) MLAs should be appointed as Members on District Fertiliser Advisory Committees.
- 11) Frequent checking and analysis of fertilisers sold should be done to maintain the quality of fertilisers.
- 12) Necessary technical guidance should be provided to the farmers regarding the appropriate dosage of fertilisers to be applied and also appropriate mixtures of fertilisers to be applied depending upon the soil analysis.
- 13) MARKFED should improve the financial position of financially weak sale purchase unions so that they will be in a position to stock fertilisers; this will increase the number of fertiliser outlets.
- 14) MARKFED should supply fertilisers directly to the Agro Service Centres and the practice of giving discount to these Centres should be continued.

15) Fertilisers should be supplied against 20% of the guaranteed price payable for cotton under the Monopoly Procurement Scheme; this would make the farmers more fertiliser conscious and result in an increase in cotton production in the State.

C : Pest Control

- 1) Pesticides required for stem borer, gall fly, blue beatles, etc. under Eradication Campaign should be supplied on 75% subsidy.
- 2) Steps should be taken to control brown hoppers on summer paddy in Chandrapur district.
- 3) Graft/seedlings of oranges supplied by Government nurseries should be examined for infection of cytrus psylla and these should be supplied for planting only after they are properly sprayed.
- 4) 25% subsidy on pesticides should be made available for all crops and all cultivators.
- 5) Spraying of orange orchards should be undertaken in the Nagpur division under the Pests Act.
- 6) SAOs should be given powers for the purchase of plant protection equipment.
- 7) The scheme for control of army worm and gall fly on paddy should be sanctioned earlier; normally the sanction comes after the infestation starts and valuable crop is lost in the meantime.
- 8) Control measures should be undertaken on blast disease on paddy in Chiplun and Guhagar talukas.
- 9) For control of army worm on paddy in Bhandara district, 50% subsidy should be granted.

- 10) Complaints regarding adulterated pesticides supplied by MAIDC should be investigated.
- 11) Plant Protection Campaigns should be organised by the Government at Government cost on the lines of Malaria Eradication Campaign.
- 12) Revalidation of old stocks of endrine should be expedited and efforts should be made to get the permission of the Government of India to use endrine.
- 13) Utilising the carry over stocks of BHC dust for treating conventional jowar crop against midge fly should be permitted and subsidy for this should be given.

D : Irrigation

- 1) Irrigation Department should take a decision in advance to supply water whenever there is a long break in rains during the kharif season and make this decision known to the farmers.
- 2) In Kharif season, irrigation water is generally made available from 1st July; it should instead be made available from 15th June.
- 3) Even cultivators who have filled in the necessary form No. 7 for obtaining irrigation water are not supplied water. This should be enquired into.
- 4) During the Kharif season, in order to encourage the farmers to give protective irrigation, charges should be levied on the basis of number/times irrigation water is released rather than on a seasonal basis.
- 5) Ayacut work should be undertaken on priority in the command areas of lift irrigation schemes also.
- 6) Since water from Pench Irrigation Project is not utilised, growing of sugarcane should be permitted.

- 7) The penalty imposed on cultivators who have used irrigation water without permission should be waived.
- 8) Farmers who cultivate the lands of the Maharashtra State Farming Corporation on lease basis should also be supplied canal water.
- 9) The State Government has taken a decision to supply water from Jayakwadi during kharif 1981 free of cost. This decision should be made applicable to the other Projects also.
- 10) Lift irrigation schemes which have been out of operation should be revitalised and managed by the Government.
- 11) For the rabi season, water should be made available from the 1st December rather than from 15th December.
- 12) Irrigation water does not reach all parts of the command area due to very heavy water losses. Irrigation Department should take steps to ensure that the entire command area receives water.
- 13) The present practice of levying water charges on irrigation wells in the command areas should be waived.
- 14) Instead of supplying water at 21 days interval, water should be supplied at 10-12 days interval for wheat crop.
- 15) The present stipulation that sugarcane can be grown only on one-third of every holding should be relaxed in the case of small farmers.
- 16) A survey should be taken of water-logged command areas like Katepurna and Morna in Amravati district and drainage schemes should be taken up in these command areas.
- 17) Reasons for only 50% utilisation of irrigation potential created in Yavatmal district should be investigated.
- 18) Pre-monsoon irrigation should be encouraged for cotton.

- 19) Investigation should be done into very low utilisation of irrigation potential in Nanded district on lift irrigation schemes.
- 20) Irrigation charges should be reduced for small farmers.
- 21) Even defaulters of irrigation dues should be supplied water on payment of current water rates.
- 22) Repairs to Purna and Jayakwadi Irrigation canals should be taken up immediately.
- 23) In view of the fact that offtake of irrigation water in Vidarbha is very low, efforts should be made to increase the demand for irrigation water.
- 24) Since giving irrigation water for summer paddy is wasteful use of water, summer paddy should not be encouraged in the command areas of Bagh and Itiadh Projects in Bhandara district.
- 25) Malgajari tanks in Bhandara and Chandrapur districts should be repaired under EGS.
- 26) Water charges for lift irrigation schemes should be reduced and brought on par with those for flow irrigation.
- 27) In rabi season, irrigation for vegetables, water melon etc. should be given.
- 28) Work of construction of field channels in the command areas of Dhom Irrigation Project should be undertaken.
- 29) Work of construction of field channels in Ujani command area to be taken up on priority.
- 30) Many approach roads in the command areas are in very bad condition and they should be taken up for urgent repairs.
- 31) Water from Ozarkhed project should be lifted for irrigating the command area of Palkhed Project, as in the latter command

area there is not enough water to irrigate the entire command area.

32) Permission should be granted liberally to individual cultivators for lifting water from Tapi river.

33) In order to encourage farmers to grow irrigated cotton, irrigation to cotton crop should be given at concessional rates.

34) Incomplete lift irrigation schemes in Haveli taluka of Pune district should be completed.

35) Even though Bagh project has been completed long ago, the construction of field channels has not yet been completed; this should be done immediately. (This point regarding field channels recurs often).

36) Repairs to irrigation canals should be done on priority basis and special funds should be allocated for this purpose.

37) In those irrigation projects where water is not utilised, water should be permitted for being lifted from the canals and allowed to be let into the percolation tanks so that rabi irrigation is possible from wells under the command of these percolation tanks.

38) Permission should be granted for lifting water from the canals for irrigating lands not coming within the command. Instead of perennial irrigation, only seasonal irrigation for 8 months should be permitted in the Kukdi Irrigation Project.

39) Kharif and Rabi crop targets should be fixed separately for both major and medium projects and responsibility for achieving these targets should be that of the Irrigation Department. Planning for rabi should start at least

6 months in advance.

- 40) In order to encourage ratooning of jowar crop free water supply should be made available; since harvesting of ratoon jowar will not be over by February, the higher water rates charged from February onwards should be reduced.
- 41) Permission to lift water from notified rivers should be granted liberally by the Irrigation Department.
- 42) The area under sugarcane in the command areas of Jayakwadi Project should be increased. Unauthorised growing of sugarcane should be regularised.
- 43) Power to sanction additional area under lift irrigation should be delegated to the Executive Engineers.
- 44) All available irrigation water should be fully utilised from the rabi season itself and there should be no carry over for summer season as that results in waste of water due to evaporation.
- 45) The targets given for hybrid jowar in the CADA areas were not adequate. These should be increased and the CADA authorities should be asked to fulfil these targets.

E : Credit

- 1) Formalities for conversion of crop loan into medium term loan under certain circumstances should be simplified considerably.
- 2) In the case of joint khata, the cultivators who actually cultivate the land should be eligible for crop loan.
- 3) Adivasi cultivators who have been given lands under the Adsali Scheme should be eligible for loan assistance and these cultivators should be treated as small farmers.
- 4) In some talukas of Beed district, crop loans for the Kharif 1981 season are not sanctioned even as late as May 1981.

- 5) In Aurangabad division, cooperative banks are not sanctioning loans as per the recommended scale of finance (Kharif 1981).
- 6) In certain areas, despite Government orders to the contrary, recovery of cooperative dues is being done through coercive measures from small farmers. This should be enquired into.
- 7) In Parbhani district, a large number of societies are not in working condition. The members of these societies should therefore be supplied credit and inputs through other societies.
- 8) Agricultural Produce Market Committees who have recovered dues of cooperative societies from farmers through deductions from the price payable to them for their produce, are not crediting the amounts recovered to the societies in time. They should be made to do so.
- 9) Agriculture Department should supervise the utilisation of credit by farmers. (This point was made by a Chairman of a District Central Cooperative Bank).
- 10) Finance required for the control of stemborer on paddy should form part of crop finance.
- 11) Cooperation Department should make attempts to raise the norms for cash components for credit for all hybrid crops.
- 12) Additional branches of Land Development Bank should be opened in Nashik district.
- 13) District Central Cooperative Bank, Parbhani is not sanctioning loans for cotton according to the scale of finance. The Bank should be asked to clarify the position.
- 14) The interest rate on crop loans should be reduced.

- 15) President of the ZP should be associated with the meetings of the LDB.
- 16) Recovery of crop loan after damage to the crop from pest attack is not proper and Government should examine this.
- 17) Small farmers should be supplied bullocks on tagai loans.
- 18) Crop loans given for rabi season are very inadequate. The scale of finance should be increased.
- 19) In Nagpur division, revitalisation of more than 100 cooperative societies is yet to be done.
- 20) Joint Registrar of Cooperative Societies, Nagpur Division should investigate complaints regarding non-release of crop loans by societies in Wardha district, particularly Wegambe and Mahabal Societies.
- 21) A campaign for enrolment of small farmers as members of primary societies should be taken up.
- 22) Adequate credit margin should be made available to the cooperative marketing societies for purchase of fertilisers.

F : Power Supply

- 1) Even in the case of lift irrigation schemes which are not working, the Electricity Board continues to levy electricity charges. This should be discontinued.
- 2) Stand-by electric motors fitted on lift irrigation schemes should not be charged.
- 3) The hours of power supply should be changed to suit the convenience of the farmers and there should be more regularity of power supply.
- 4) The cut in electricity supply, effected by the MSEB for the banana crop should be restored.

- 5) In Nagpur division, in view of the intense heat during summer, supply of electricity should be from 7 A.M. to 11 A.M. instead of from 11 A.M. to 3 P.M.
- 6) Enquiries should be made about idle electric motors in Osmanabad district.
- 7) In many cases, in Jalgaon district, no power connections have been given in spite of advance payments by farmers.
- 8) All complaints regarding electric connections and payment of advances should be examined by a special cell to be set up by the Energy Department and the MSEB should take immediate action in the matter.
- 9) It is enough if electricity is supplied for agricultural purposes three days in a week, but these should be designated days and there should be predictability of supply, instead of as at present supplying electricity on all days of the week at very low voltage and with unpredictable interruptions.
- 10) Six-monthly or monthly payment of bills should be optional and should be left to the convenience of the farmers.
- 11) At present, electricity charges are levied on agricultural pumps on H.P. basis. When there is no supply, these charges should be reduced proportionately.
- 12) Farmers, whose electric connections have been disconnected by the MSEB due to non-payment of bills, should be given special assistance by the Government to make these payments.
- 13) There is lack of coordination, even within the MSEB between the Chief Engineers and the Superintending Engineers. Better coordination should be ensured.

- 14) There is no electric connection in three tribal talukas in Jalgaon district. This should be looked into.
- 15) In scarcity areas, where there is no water in the wells, electricity charges on H.P. basis should be suspended.
- 16) Small farmers, who have been given loans under the Page Scheme, should be supplied electricity on priority and the present practice of charging Rs. 10/- for street lights from village panchayats should be given up.
- 17) In Pune division, a large number of electric motors of the farmers have burnt up due to low voltage. MSEB should compensate these farmers.
- 18) Sub-Engineers of the MSEB should be authorised to effect corrections in the electricity bills.
- 19) Disconnected agricultural pumps should be re-connected immediately by the MSEB even on part payment of arrears by the farmer.
- 20) In many cases, the MSEB has not given power connections to agricultural pumps because of inadequate revenue returns under the Rural Electrification Scheme. In these cases, the farmers are unable to repay bank loans obtained for the pump-sets. This should be looked into by the Electricity Board.

G : Agricultural Research

- 1) KKV, Dapoli should undertake research and evolve improved varieties of karwand and jambul.
- 2) In the Western Ghat region, nagli is generally cultivated by Adiwasi farmers and there has been no research on this crop. New Hybrid/HYV varieties of nagli should be evolved by the A.Us.

- 3) A.Us. should undertake research work on the storage of hybrid jowar.
- 4) There should be a research programme for evolving high yielding varieties of pulses.
- 5) Paddy varieties resistant to gall fly are not available in the State. Agriculture Department should make enquiry with the A.Us. as well as research stations at Hyderabad and Cuttack regarding the availability of such varieties of paddy seeds.
- 6) A.Us. should make efforts to evolve downy mildew resistant varieties of hybrid bajra. (Such varieties have recently been evolved and released).
- 7) A.Us. should undertake research to eradicate "gajar" grass.
- 8) Research on control of diseases on chillies should be taken up by the A.Us.
- 9) Research work should be taken up on ergot disease on bajra.
- 10) A.Us. should also concentrate on evolving better varieties of local jowar; in particular there should be efforts to evolve a variety like maldandi jowar having the same keeping quality and taste but which will give higher yield without sacrificing the fodder content.
- 11) SR-3-9 paddy variety is more suitable for salty lands. This variety should therefore be multiplied and given to the farmers.
- 12) High yielding fine varieties of late paddy should be evolved.

- 13) At present the recommendations of the A.U.s. regarding fertilisers are on broad lines, recommending use of doses of N.P.K.; instead fertilisers to be applied on different crops and on different soil conditions should be prescribed.
- 14) Research on control of pests and diseases of beans and ginger in Satara district should be undertaken.
- 15) Improved varieties of grasses for Mawal area in Pune district should be evolved.
- 16) Early tur high yielding varieties to be made available to the farmers.
- 17) More number of wheat varieties should be made available to the farmers so that incidence of rust can be minimised.
- 18) Paddy was grown in Jayakwadi areas some years' back, but this experiment was not a success. A proper variety of paddy for Jayakwadi area should be evolved by the MKV, Parbhani.

H. Issues relating to implementation of EGS and infrastructural works, like irrigation projects, etc.

- 1) Stem borer on paddy was eradicated and the work was taken up under EGS during the last summer season, i.e. 1980. This should be continued as a regular feature.
- 2) The eradication of gajar weed through EGS should be taken up on a large scale.
- 3) Action should be taken to revitalise and restart all the non-working L.I. Schemes.
- 4) The Legislative Committee on EGS has objected to canal works being carried out through contractors. Taking up canal works only under EGS would delay the completion of these and therefore the works should be permitted for being let out on

contract but out of EGS funds. (This point was made by a Chief Engineer).

5) So far, nalla bunding and percolation tank works were not being taken up on a large scale in Vidarbha. This should be done, particularly in Amravati district.

6) Bridge-cum-bandharas should be constructed on new and old roads wherever necessary so that the bridges will serve a double purpose.

7) Old second class bandharas are to be repaired and until they are repaired, they should be exempted from water cess.

8) The farm lands of flood affected cultivators in Vidarbha are not yet completely repaired. This should be done on priority.

9) Construction of additional godowns should be taken up in Raigad district.

10) Maharashtra State Warehousing Corporation should take up construction of godowns on a large scale in Nashik district.

11) At present, repair works are not being taken up under EGS. Repairs and maintenance should also be taken up under EGS.

12) Advances should be paid to ZPs for taking up rural water supply schemes.

13) Powers of the Collectors to sanction EGS works should be increased.

14) Repairs to paddy bunds in Mawal and Bor areas should be taken up under EGS.

15) Soil Conservation Sub-divisions should be increased in Raigad district.

- 16) Technical defects in the bunding works taken up under EGS should be rectified.
- 17) All damages to bunding works should be repaired at Government cost.
- 18) L.I. schemes are not now being taken up because of failure of such schemes in the past; instead, reasons for such a failure should be gone into and more L.I. schemes should be taken up.
- 19) Under the Tribal Sub-Plan the subsidy for wells should be increased from 50% to 75%.
- 20) The present scheme of horticulture-cum-land development taken up only in the Western Ghat districts and that too restricted to mangoes should be extended to all parts of the State, and should cover all fruits.
- 21) Land levelling programme in Ratnagiri district should be taken up on a large scale under EGS.
- 22) Dry land project on the lines of the Mandrup project of Solapur should be taken up in other areas also.
- 23) Incomplete community wells in Dhule district should be completed at Government cost so that tribal farmers can benefit.
- 24) Western Ghat project should also be extended to more talukas in Dhule district.
- 25) Oilseed crushing complexes should be located where cotton is grown on a large scale.

K; Other miscellaneous issues

- 1) The community paddy nursery scheme should be continued; reasons for failure in the implementation of the scheme in Bhandara district should be investigated.

- 2) Subsidy announced by the State Government for summer groundnut during summer, 1981 has not been paid to the cultivators. This should be done soon.
- 3) As per the present scheme of the State Government, subsidy on pulses is available only in non-traditional areas; this should be made available even in traditional areas.
- 4) Education cess being charged on arecanut should be discontinued.
- 5) Difficulties faced in the export of vegetables should be taken up by the State Government with the Centre.
- 6) The onion procurement centre at Kandhar bazar in Amravati district should be restarted.
- 7) At present there is no subsidy on safflower and this should be given on par with the subsidy available for summer groundnut.
- 8) A programme of dry fruit cultivation should be taken up on a large scale in Amravati district.
- 9) Under the land development-cum-horticulture scheme, under which mango plantations are done by the Agriculture Department on the farms of individual farmers, establishment charges come to 33% of the total cost; since this is very high, establishment charges should not be passed on to the farmers.
- 10) Many posts under ZPs have been pooled for the introduction of the T&V system of agricultural extension; these posts should be given back to the ZPs.
- 11) The definition of small farmer should be changed and the area limit should be increased.

- 12) Special quota of cement should be made available for farmers.
- 13) The possibility of taking up coffee cultivation in Chikaldhara in Amravati district should be examined.
- 14) The difficulties at present being faced by the Agro Service Centres should be gone into.
- 15) Water storage in all irrigation projects should be made use of for providing drinking water to the villages.
- 16) Maximum number of vegetable demonstrations should be organised under the IRD programme.
- 17) In Raigad district, land affected by pollution by chemical industries should be treated properly by the Agriculture Department and the industries should be cautioned.
- 18) Agriculture Department should popularise the use of green algae through demonstrations.
- 19) Collectors should be instructed to give adequate supply of diesel for agricultural purposes.
- 20) Extension work should be taken up intensively to popularise the recommendations of ICRISAT, Hyderabad.
- 21) Pilot Projects for pulses and oilseeds should be organised as was done in the case of foodgrains.
- 22) Pilot projects for safflower in Chandrapur district was successful and therefore growing of safflower on a large scale should be taken up. Agriculture Department should take necessary steps.
- 23) Ratooning of hybrid jowar, at present successfully done in Jalgaon district, should be taken up in other areas also.
- 24) In order to encourage horticulture on a large scale, Agriculture Department should organise mali training courses, in consultation with A.U.s. and ZPs.

- 25) Targets should be given for cashew and jackfruit cultivation in Thane district.
- 26) In kharif and rabi campaign meetings too much emphasis is given only on foodgrains; similar emphasis should also be given for pulses, oilseeds and horticulture.
- 27) Effluent water from railways in Bhusawal should be used for growing crops.
- 28) Rehabilitation work in the Jayakwadi command area should be expedited.
- 29) Forest Department should modify orders issued under section 35 of the Indian Forest Act restricting the area under nagli crop in Thane district.
- 30) Various items of work under DPAP should be carried out with determination by the officials and there should be no excuse for shortfall in performance.
- 31) There should be a special quota of cement for gobar gas plants.
- 32) Government land at Talasari should be given for horticultural nurseries.
- 33) Purchase price of paddy fixed by the Government of India should be increased.
- 34) Export of frogs should be banned as depletion of frog population in Konkan region has given rise to large scale pest attack on paddy crop.
- 35) Divisional Commissioners should hold meetings more frequently at the divisional level to coordinate the work of the various departments.
- 36) The tractor scheme which has been discontinued by Government should be restarted.

- 37) Enquiries should be made about the lower price rather than the price announced by Government, paid to the cotton cultivators in certain talukas of Parbhani district, under the monopoly cotton procurement scheme. -
- 38) Administrative approvals for many schemes sanctioned by DPDC are delayed and therefore powers for giving such approvals should be delegated to the Divisional Commissioner.
- 39) There is necessity to set up a separate organisation for bringing about coordination in agriculture at the village level.
- 40) At present, because of inadequate staff at the district level, GSDA is not able to give certificates regarding ground water availability in time. Necessary steps should be taken to ensure that these certificates are given in time.
- 41) The responsibility for growing wheat in the command areas should be taken from the CADA authorities and given to the Agriculture Department.
- 42) At the district level, Collectors should be made the coordinating authorities in respect of agricultural production programmes so that all bottlenecks arising from lack of co-ordination may be removed.

Annexe 9
Work done by selected Superintending Agricultural Officers
from July 1980 to April 1981.

Items of work	Months				JULY '80				AUG '80				SEPT '80				OCT '80				NOV '80				DEC '80				JAN '81				FEB '81				APRIL '81			
	RAO	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
1. Production and placement of inputs	6		8		6		-		7		7		9		11		4		12		5		5		7		7		8		-		3		4					
2. Infrastructure - soil conservation, ECS	6		4		5		-		7		-		8		2		6		5		4		5		8		4		6		5		-		6		8		9	
3. Coordination with Irrigation department	-		-		-		-		-		-		2		-		2		6		3		1		-		7		-		4		-		7		2			
4. Coordination with financial institutions	-		-		-		-		-		-		-		2		-		2		-		-		-		-		-		-		-		2		2			
5. SFDA, IFAP, Tribal sub-plan.	-		-		-		-		-		-		1		-		1		-		1		-		-		-		-		-		-		-		2			
6. Other coordination work	6		5		6		-		5		6		7		8		4		4		8		1		2		1		1		-		1		1		-			
7. Regulatory functions.	-		-		-		-		-		1		-		-		-		-		-		-		-		-		-		-		-		-		1			
8. Meetings	3		10		3		-		7		8		6		9		9		11		4		6		4		7		5		-		5		5		6			
9. Administrative work	10		8		8		-		6		8		9		7		9		10		6		7		8		11		7		3		-		9		6			
10. Other items of work	6		8		4		-		4		6		9		8		5		6		4		5		3		6		3		7		-		5		7			
		5		10		4		8		4		4		5		7		9		8		5		5		3		5		5		-		4		7				

- Notes: 1. The above information is collected from the monthly diaries of four KDOs.
2. If one day two or more items of work are shown in the diary, entry has been taken against each of the items of work.
3. The figure show the number of days spent on the respective items of work.
4. + : Diary not received.

Chapter 6

Management of Seed Production

C H A P T E R 6

Management of Seed Production

1. Introduction

1.1 Seed is the most crucial input and also the least expensive one in the HYV strategy. It has been recognised that supplying farmers with good quality seeds in time is the primary responsibility of agricultural development administration. Timely positioning of good quality seeds has been found to be a very effective way of increasing the coverage under HYV. Even prior to the new strategy based on HYV, production and distribution of the improved seed was an important component of the agricultural development strategy. The importance of making sufficient quantities of improved seeds available to the farmers was recognised by the Royal Commission on Agriculture (1928) which recommended that seed testing and distribution should be looked after by a separate staff and should be given adequate importance. The Famine Enquiry Commission (1945) and the Grow More Food Enquiry Committee (1952) noticed many shortcomings in seed planning and made recommendations for improvement. During the Second Plan period, the emphasis on the supply of improved seeds to the farmers was reflected in the setting up of taluka seed farms all over the country. These farms were to produce foundation seeds of improved local varieties from breeder seeds obtained from research stations. These foundation seeds were further multiplied through registered seed growers in selected villages.

1.2 Administratively, this was a simple task. The taluka

seed farms were under the control of the DoA which was to make the foundation seed available to the seed growers. The BDO would procure seeds from these seed growers and supply them to the farmers for raising crops. There were, therefore, only two agencies in the field and the entire operation took place within the block. Even technically the task was not complicated. Further, far from a situation of unsatisfied demand for seeds there was, in fact, the situation in which a good deal of motivation and extension efforts were necessary to persuade the farmers to use improved seeds; since improved local varieties did not yield significantly more, farmers generally used their own seeds.

1.3 After the introduction of HYV, both the technical and administrative problems increased; these problems have mostly flowed from the fact that technology has necessitated the participation of a number of institutions in seed production and distribution; there are also inherent problems in planning seed production. In this chapter, we shall examine the problems encountered in planning seed production, actual process of seed production, ensuring quality control and seed movement and distribution.

2. Quality control and the legal framework.

2.1 Realising the need for an appropriate administrative set up to handle the complex problems of seed production, the Government of India set up a Seed Review Team whose task was to outline the steps to be taken by the administration in order to cover the country's cropped area with improved seeds of good quality; the Team, in its Report (1968),

recommended the setting up of three distinct wings in seed administration to look after (i) production and related activities upto distribution (ii) seed certification (iii) Seed Law enforcement. The report of the Seed Review Team was followed by two Interim Reports on Seeds by the National Commission on Agriculture, and then by the main report of the Commission. The reports of the Seed Review Team and the National Commission on Agriculture have mostly influenced the planning for seed production in the country during the 70s. .

2.2 There are essentially two categories of HYV. The first category of HYV consists of self-pollinated crops, like wheat and rice; the second category consists of hybrid varieties, like hybrid maize, hybrid sorghum (jowar), hybrid bajra and hybrid varieties of cotton (H-4, Varlaxmi, etc.). There is an essential difference between these two categories as far as its implication on planning for seed production is concerned. In self-pollinated varieties the farmer can retain the seed for sowing in the following year (as in the case of non-HYV seeds). But such seed retention is recommended only for five years; the recommended agronomical practice is that, after five years, the farmers should obtain a fresh supply of seeds with assured genetic purity and a high germination percentage. But in actual practice, seed replacement according to the recommended practice does not normally happen. Even in Punjab and Haryana, the seed replacement is not more than 10% for HYV wheat and paddy. Some assumptions regarding seed replacement rate are

generally made when planning is done for seed production in self-pollinated varieties.

2.3 In hybrid varieties, seed retention is not possible. A farmer who desires to grow hybrid jowar, for instance, must buy a fresh stock of seeds every year. Therefore, in these varieties, proper planning for seed production for timely positioning of seeds is even more important than in self-pollinated varieties.

2.4 Eventhough in normal parlance, HYV stands for both high-yielding self-pollinated and hybrid varieties, in technical literature the term 'high-yielding variety' is generally used to denote high-yielding self-pollinated varieties to distinguish them from hybrid varieties; all hybrid varieties are ipso facto high-yielding, but the converse is not true. In this chapter the term HYV is used to denote both high-yielding self-pollinated and hybrid varieties of crops.

2.5 In HYV strategy, quality control on seeds is very crucial. The contribution of good quality seeds alone to agricultural productivity is estimated to be in the range from 15% to 20% for self-pollinated crops and much more in the case of hybrid crops. In order to ensure quality control, the Seeds Act (which is a Central Act) was enacted in 1966 and the Rules under the Act were framed in 1968.

Though the Seeds Act is a Central Act, its implementation is done by the State Governments. Basically, the Act prohibits the marketing of seeds of notified varieties which do not meet the minimum standards for purity and germination as prescribed by the Central Seed Committee (CSC) which was

established under the Act in 1968. The Act had envisaged that the CSC could appoint one or more sub-committees for discharging such of its functions as might be delegated to them from time to time. Accordingly, CSC set up individual central sub-committees for (i) variety release, (ii) crop standards and notification, and (iii) seed testing and seed law enforcement. Prior to the setting up of these committees, the work of screening and releasing new varieties was being looked after by the Central Varietal Release Committee (CVRC) of the ICAR between 1963 and 1970; there were also State Varietal Release Committees (SVRC) in charge of purely local varieties. After the setting up of the CSC, CVRC ceased to function; the work of the SVRC was taken over by the State Seeds Sub-Committee constituted by the CSC.

2.6 The Seeds Act and Rules provided for certification of the notified varieties of seeds. A number of seed testing laboratories were required to be set up to subject the seed to tests before they are certified. Under the Seeds Act, certification is not compulsory; what is mandatory is that any notified variety of seed offered for sale must meet certain minimum standards of purity and germination. There are many non-notified hybrid varieties which have been evolved by private entrepreneurs and sold without certification, on the strength of their own brand names and reputation. Many private sector seed companies also sell notified varieties of seeds without certification. Certification is more a safeguard from the farmers' point of view. Farmers generally prefer seeds with the certification tag

at least of those varieties which are common and where there is a possibility of sub-standard seed being offered for sale by private seed companies. In common parlance 'certified seed' refers to quality seed which conforms to the prescribed standards; this may either carry the certification tag or (since certification is not mandatory) the seed producer may guarantee its conformity to the prescribed standards. In this chapter, we shall use the term 'certified seed' to cover both cases.

2.7 In Maharashtra, the seed certification work is looked after by a separate wing of the DoA. This wing is headed by the Director of Seed Certification who has staff at the divisional and district levels. The Seed Review Team had recommended that the Seed Certification Agency should not be a part of the Department; and that in order to preserve its independence it should be constituted as an autonomous body, whose board of management should be representative of seed growers, seed trade, scientists, agricultural universities, DoA and the farmers. But this recommendation is yet to be implemented by many States.

3. Institutional framework.

3.1 There are three stages in seed production, namely, breeder seed, foundation seed and certified seed. Breeder seed is seed of high genetic purity produced by the plant breeder. Plant breeding research is conducted at 11 ICAR institutes and 25 agricultural universities. In Maharashtra, there is one ICAR institute viz. Central Institute for Cotton Research at Nagpur and four agricultural universities.

In order to coordinate research in the breeding of new crop varieties, All-India Coordinated Research Projects are assigned by the ICAR to the different institutes and universities. According to the general understanding among research institutes and agricultural universities, the breeder seed should always be obtained from the original plant breeder who introduces the particular breed. It is possible, as has been done in the case of many hybrid jowar varieties, that the original breeder authorises and recognises breeding of certain varieties by other breeders also. Private seed producers have also taken up research in plant breeding and some of them have succeeded in evolving good varieties of both self-pollinated crops and hybrids. Breeder seed is the source for the production of foundation seed. Breeder seed is generally available in very small quantities and is therefore multiplied under strict supervision to the next stage namely, the foundation stage.

3.2 Foundation seed is the progeny of breeder seed produced to the prescribed quality standards. Foundation seed production has to be undertaken, as stated above, with extreme care and is therefore generally taken up on the university farms. In Maharashtra, foundation seed production is also taken up on the farms of the Maharashtra State Farming Corporation (MSFC) which has qualified staff to supervise the foundation seed production. Foundation seed is thus the intermediate stage between breeder seed and certified seed.

3.3 Certified seed is the progeny of the foundation seed produced to statutory quality control standards as mentioned

in para 2.6 above. It is the seed which is ultimately supplied to the farmers. Eventhough we have described three stages in seed production, Government of India permits two stages at the foundation seed stage itself, called foundation stage I and foundation stage II, in certain varieties as this would help production of more certified seeds from the same stock of breeder seeds.

3.4 The development of institutional framework in seed production started in 1963 with the setting up of the National Seeds Corporation (NSC). NSC was initially engaged in the production of small quantities of hybrid seed and the seeds of some vegetables. In 1965, NSC was given an expanded role of producing foundation seed and initiating a programme of maintaining quality of seed. It also had to arrange for the production and marketing of certified seed. Over the years, the activities of the NSC expanded and by 1974-75 NSC produced 73,000 tonnes of seed i.e. 50 per cent of national output; and this was produced through a large number of contract farmers. NSC also set up seed processing plants in various parts of the country.

3.5 In Maharashtra, intensive efforts to spread HYV started in 1966-67, particularly in respect of hybrid jowar. In the initial years, breeder and foundation seeds were brought from outside the country and supplied by the NSC. The foundation seeds supplied by the NSC were used for certified seed production mostly through contract seed growers (farmers) and to some extent, on the taluka seed farms. The ZPs were involved in seed production right from the beginning

and the work of identifying contract farmers (seed producers), supplying them with foundation seed and buying back certified seeds from them, was done by the ZPs. The ZPs. sent their indents for foundation seeds one year in advance to the NSC as per the stipulation of the NSC. NSC planned its foundation seed production with the various research institutes and agricultural universities on the basis of the indents from the seed producers from all over the country. This system of ZPs. placing orders with the NSC for their requirement of foundation seed continued for about 2 or 3 years. Thereafter, they were asked to place their indents for foundation seeds directly with the agricultural university in their own respective region. This practice continued till 1975-76. In 1975-76, the Government of India launched the National Seeds Project (1) with World Bank assistance. Under the Project, the foundation seed planning for the entire country was again centralised and given to the NSC and all seed growers like ZPs. and private companies were required to send their indents for foundation seed to NSC.

3.6 Periodical swings from centralised planning for foundation seed production to decentralised planning and back again to centralised planning bring out certain inherent problems in seed production in a federal set-up. These are:

(i) All States do not have physical and climatic facilities for the production of foundation seed to the same extent. Therefore, inevitably, foundation seed production needs to be organised in one State to meet the requirements of some other State. Some Central agency, like NSC, is therefore to

be assigned this task. For instance, in Maharashtra the agricultural universities are not able to grow foundation seed entirely under irrigated conditions, due to lack of irrigation facilities. Therefore the production of foundation seed to the desired extent from these universities cannot be counted upon as a certainty. Since foundation seed is the basis for further seed planning, it is safer to plan foundation seed production in two or three States (where irrigation facilities on the university farms may be better). Even if there are drought conditions in a year in one State, the production in the other States can meet the foundation seed requirements. Such planning can be done only by a Central agency. During rabi 1980-81, Maharashtra supplied hybrid jowar foundation seed to NSC for production of certified seeds in A.P. (where due to agro-climatic factors, hybrid jowar certified seeds in rabi is possible); during kharif 1981, Maharashtra obtained hybrid jowar foundation seed grown in A.P. and Karnataka. Such inter-State coordination will be increasingly felt as agricultural development advances and as more and more varieties (even of the same crops) are introduced.

(ii) NSC feels that unless the entire planning is given to it, it cannot discharge its inter-State responsibilities adequately. It is argued that if Maharashtra, for instance, (through the ZPs) plans its requirement foundation seed production on its universities, and if NSC also plans a programme of foundation seed production intended for other States on these universities, then, in case of a shortfall

in production, Maharashtra's requirement would be fully met and NSC's requirement would be met only if there is seed to spare. This would result in NSC defaulting on its commitment to other States for no fault of its own. If the entire planning is done by NSC, then it is possible for NSC to meet the requirements of all the States to the same extent in the event of a shortfall.

(iii) The States, on the other hand, would want the planning with themselves, in respect of those varieties for which they have the facilities in their own States; and would like NSC to help them out in the case of other varieties. Even in the case of those varieties for which they have the facilities in their own States, if there is a shortfall, they would press NSC to make good the shortfall from elsewhere.

(iv) Some States do not show enough initiative in the matter of seed production, and Central initiative, by NSC stepping in, is considered necessary in overall national interest.

3.7 Even within the State, the question arises: whether the seed production should be planned for the State as a whole by one State level agency or whether it should be decentralised and given to the ZPs? The system of every ZP having its own programme for the production of seeds in order to satisfy the district's requirement certainly had its merits. But it also had serious drawbacks. First, not all districts are agro-climatically suitable for seed production. Some districts are suitable

for the production of hybrid jowar seeds, some for hybrid cotton seeds and so on. Agro-climatic conditions ideal for seed production are not necessarily the same which are conducive to crop production; jute seeds, for instance, are produced in large quantities in Maharashtra (in parts of Vidarbha) though the crop is grown in W.Bengal. Secondly, in the event of the failure of seed crop in a few districts, it was not easy to shift seeds from other districts, as these ZPs would not part with seeds for other districts easily. Inter-State problems on the national scene are equally present between districts of a large State.

3.8 When the National Seeds Project was started in 1976, it was decided that the entire seed production should be handled at the State level by one agency and should not be left to the individual ZPs. It was felt that seed production should be concentrated in a few compact areas with favourable factors like nearness to an agricultural university, irrigation facilities or assured rainfall. This approach was in conformity with the recommendation of the National Commission on Agriculture in favour of a compact area approach(2). Accordingly, the Maharashtra State Seeds Corporation (MSSC) was set up in order to meet the requirements of the entire State and it was also decided that seed production would be undertaken only in a few districts fulfilling the criteria mentioned above. Compact area approach vis-a-vis dispersed production of seeds is another vexing problem while planning seed production. Compact area approach certainly has considerable merits. If the seed production is undertaken over a compact area, quality control can be more effectively

enforced. The seed certification agency is required to carry out inspection of the seed plots, at the time of sowing, when the genuineness of the foundation seed used is verified for genetic purity; during the growth of the seed plants, to ensure that minimum isolation distances are maintained from neighbouring plots, to prevent contamination of seed crop from other like crops, for instance, hybrid jowar seed plot from an ordinary jowar plot nearby and so on; and finally, during harvesting, threshing and packing of seeds to ensure that there is no adulteration. All these tasks become far easier and more economical if seed production is taken up in a compact area. But the practical difficulties in adhering to a compact area approach are formidable. Since seed production is a profitable venture for the seed growers, there are pressures from all districts that the benefits of seed production should be spread over a wide area. Secondly, as the quantities required increase, it is difficult to identify competent seed growers within a compact area, fulfilling the essential criteria like know-how, availability of irrigation, financial capacity to bear the risks involved etc.; selecting all the seed growers from a compact area therefore becomes difficult. Most of the States who, when National Seeds Project was started, agreed to a compact area approach, have subsequently approached the Centre with a request to enlarge the Project area. Maharashtra has already enlarged the Project area to cover many more districts. Thus the policy of confining seed production to a few contiguous districts is virtually

given up.

3.9 After the setting up of State Seed Corporations (SSCs) in most States, the question arose as to what would be the role of the NSC, as the SSCs would, in due course, take over the production and marketing of certified seeds. The problems connected with proper demarcation of the respective roles of the NSC and the SSCs and effecting proper coordination between them are still largely unresolved. Even though it was decided that NSC's role would gradually be restricted to inter-State marketing of certified seeds and coordination of foundation seed production, it is difficult to change the role of a national level organisation within a short period. NSC had set up a large network of dealers and production and marketing offices with a large staff. It is not easy to disband such a large set up. Certain very simplistic solutions were offered, like the SSCs taking over the staff of NSC. But this is not easy to implement, as the pay scales are different and questions of seniority are not easily resolved. Solutions which do appear logical and convenient get shipwrecked on the hard realities of administrative problems. Therefore, the role of NSC continues to be very much as before and an additional responsibility of planning foundation seed production and coordination in the matter of foundation seed supply came to NSC as observed earlier in para 3.5. This would also automatically imply that the coordination of breeder seed production should be NSC's. The Sixth Plan (1980-85) recognises the need for coordination here:

"Present arrangement of breeder seed production by the breeders located in agricultural universities and ICAR institutes is not very satisfactory with the result that tremendous shortage of material has been experienced for the last 2-3 years. There are 140 locations where production (of breeder seed) is undertaken. It is proposed to make the NSC responsible for ensuring adequate supply of breeder seeds in collaboration with the breeders." (2)

3.10 MSFC, to which a reference has already been made, is another agency which plays an important part in seed production. In addition to producing certified seeds, it is playing an increasing role in the foundation seed production. The advantage with MSFC is that it has large contiguous tracts of irrigated lands. Seed production under conditions of irrigation considerably reduces the element of uncertainty and would make seed planning easier and more rational.

3.11 The most important link in seed production are the contract farmers, thousands of them produce certified seeds. Seed production is not an easy job which any farmer can undertake. It is a highly specialised job involving greater risks than normal farming and its own peculiar problems, which are described in the following paragraphs.

3.12 Efficient seed production first of all, requires isolation from other nearby crops, as mentioned earlier. Unless all farmers in an area take up seed production of the identical variety on lands which are contiguous, every seed producer is required to keep a certain minimum isolation distance, which varies from crop to crop, between the seed

plot and the nearest plot on which the same kind of crop is grown. This is possible only if the holding of the farmer is large enough to permit such isolation to be achieved. For even two rows of ordinary jowar sown very near to a hybrid jowar seed plot can affect the purity and the germination of the seeds; there are, in every village, some mischievous elements who deliberately spoil the isolation this way. The seed farmer, therefore, seeks to achieve the necessary isolation within his holding itself, by taking the seed plot in the middle, so that the seed plot is surrounded on all sides by his own land; this way he can insulate his seed plot from the mischief of the neighbouring farmers. To do this, his holding must be large enough; if his holding is not large enough, the isolation belt surrounding his seed plot will overlap the holding of the neighbouring farmer; achieving isolation then depends upon how far the neighbouring farmer cooperates. Such cooperation is not easily obtained; it has to be either bought, which increases the costs to be incurred by the seed farmer, or obtained through compulsion, which means the seed farmer should be from the higher social and economic strata of the society. Apart from purely economic factors there are, thus, social factors also in play here.

3.13 Secondly, even if the seed plot is irrigated and is thus made not vulnerable to drought or a break in the monsoon, the possible damage to the seed crop on account of late rains cannot be prevented. Such late rains spoil the germination quality and the seed farmer therefore

stands the risk of heavy rejections. In kharif 1979, because of late rains in the month of October, the seed plots of hybrid jowar were considerably affected and nearly 40 per cent CSH-5 hybrid jowar seed did not meet the certification standards due to poor germination.

3.14 Thirdly, apart from the inherent risks involved in seed production, it also requires technical know-how of a high order on the part of the seed grower. For instance, it is necessary in hybrid maize to detassel the normal lines as soon as the tassel protrudes out of the flag leaf but before it sheds pollen, and this requires constant vigilance for about 10 days until all the females are detasselled. Hybrid cotton seed production is more complicated and much more labour intensive. In hybrid cotton the flower buds of the female line are to be emasculated at appropriate stage in the evening and covered with paper bags to prevent cross-pollination and drying of the stigma. These emasculated buds require to be pollinated next morning using pollen from the male parent and then covered. Distinction has to be maintained between the emasculated but not pollinated, and the emasculated and pollinated, female buds and this is achieved by using papers of different colours. These instances indicate that the seed producer must possess much more know-how and must be able to hire more labour than a normal farmer.

3.15 Fourthly, seed requires very careful post-harvest handling under dry conditions.

3.16 Considering all these factors, the freedom of choice of seed producers is restricted. It is hardly surprising

that most seed producers are relatively big and well-to-do farmers. The oft-heard criticism that administration favours big farmers while allotting seed plots needs to be looked at from the above point of view. The NCA had this to say about this problem: "Besides various other factors, which have an impact on the cost of seed production, the size of holdings is also a crucial factor. The cost of production is likely to be less if the size of holding is large within manageable limits. Efficient and quality seed production demands isolation from other cultivated lands and large scale plant protection measures. These requirements are fulfilled if the land area used for seed production is large and consolidated." (4) While admitting that the inherent problems in seed production favour the big farmers, the NCA recommends measures like the administration taking steps to 'pool the land resources' of small farmers, and 'to educate and encourage them to join together on a voluntary basis' in order to enable them also to become seed producers. It is doubtful if, beset as it is, with enough problems in the area of seed production, administration will be able to achieve this objective. If producing seeds of good quality in the most efficient manner is the objective, it would not be desirable to blur this objective by bringing in other conflicting goals.

3.17 The institutional framework in seed production and the communication pattern are shown in the diagram in Annexe 1.

4. Planning Seed Production.

4.1 We have seen in Chapter 2 how planning for agriculture has real significance only when planning is done for what the administration has to do in order to enable the farmers to achieve the targets of agricultural production assumed in the Five Year Plans. Unless there are visible linkages between the targets for agricultural production given in the Plans and the steps to be taken by the administration in order that these targets are ultimately attained, the term 'planning for agriculture' loses much of its real meaning and significance. The Third Five Year Plan for example, contained details of targets of agricultural production and explained how, in order to reach these targets, village production plans are to be prepared. We have seen that these are all, in a way, planning for what the farmers should do. But it is indeed a surprising fact that none of the Plans (with the exception of the latest Sixth Plan, 1980-85) laid down any targets for seed production, which properly falls within the sphere of administration and where the attainment of targets is entirely within the capability of the administration. Plans did however contain targets for creation of irrigation potential and targets for fertiliser production, which are also, like seed production, linked with the attainment of Plan targets for agricultural production. Ironically enough, there was, in fact, more concern over the availability of seeds during the period when seed was not a very critical input in agricultural production, namely during the period prior

to the onset of the green revolution than is evident during the period since then till mid-70s.

4.2 Really speaking, the awareness of the need to have a plan of action for seed production was evident only after the publication of the report of the NCA. When the interim reports of the NCA on seeds were published, a Joint Working Party was set up in 1974 and the National Seeds Programme was then launched in 1976. This programme was given final shape in 1976 in the form of National Seeds Project (NSP), which was started in Andhra, Haryana, Punjab and Maharashtra with World Bank assistance. This was followed in 1978 by the National Seeds Project Phase II- also assisted by the World Bank, covering some other States, like Karnataka, Bihar, Orissa, Rajasthan and Uttar Pradesh.

4.3 Planning for seed production comprises planning for the necessary infrastructure as well as annual planning of how to operate this infrastructure. As observed in Chapter 3 in the course of the description of the planning process in agriculture, the first kind of planning, namely, planning for infrastructure, would get reflected in the Annual and Five Year Plans, whereas the second kind of planning, namely, operational planning, is something which the administration is to plan on an annual basis. We shall deal with both these components of planning separately.

4.4 The first component of planning for seed production starts with the determination of targets for seed production in the light of targets for agricultural production assumed in the Plan. The next step is to make financial

provisions in the Plan for building the necessary infrastructure like seed processing plants, seed storages, i.e. air-conditioned and dehumidified storages for breeder seed and proper storages for foundation and certified seed, development of the lands of agricultural universities, including provision of irrigation facilities in order to enable the universities to take up breeder and foundation seed production. Financial provisions in the Plan would also be required for augmenting the administrative and institutional framework, like strengthening the seed certification organisation, strengthening research facilities in seed technology etc.

4.5 Problems encountered in the implementation of the NSP are typical of the problems of implementation of any plan for seed production. These are described below. They highlight the difficulties which arise when several agencies are involved in a project and where the pattern of financing also varies from one component of the project to another. The different components of the NSP as applicable to Maharashtra are shown at Annexe 2, along with the implementing agencies and the pattern of financing.

4.6 It will be seen from Annexe 2 that there are built-in factors which would contribute to delays even in the start-up of the Project. Every component requires to be cleared by several agencies before finance could be released to the agency implementing the component. Secondly, the agricultural universities are not equipped to prepare project reports and approach the banks for finance like

industrial entrepreneurs, and to have expected them to do so was not realistic. Thirdly, even though the idea that NSC would do the bulk tendering of the equipment for all SSCs was basically sound, in actual practice it did not work, because the entire tendering had to wait until the last State sent in its proposals. In addition to this, the NSC itself was not managerially and technically equipped to handle such a big job as its organisation was not structured to play the role of a project consultancy organisation and this itself led to delay. Fourthly, the States were not very anxious to set up and activate the SSCs because they were not very enthusiastic about NSP and its requirement that seed production in the States should be confined to a very compact area. All these factors have naturally tended to cause considerable delays in project implementation.

According to the Sixth Plan document:

"Production targets for the year 1979-80 under NSP were 17.86 lakh quintals for main cereal crops. Production in 1979-80 is estimated at 9.06 lakh quintals i.e. slightly more than 50%. One of the reasons for the shortfall in production is that the processing capacity of the State Seed Corporations could not be raised to the desired extent The progress in this sphere has left much to be desired as out of 1.35 lakh tonnes of processing capacity to be added by way of setting up of new plants, actual capacity contributed by the new plants is nil as none of the 19 proposed plants have been commissioned." (5) What is material for our analysis is not the fact of delay, but the

fact that the factors which contributed to the delay have mostly been institutional factors.

4.7 It is possible to draw certain lessons and inferences from the experience of the NSP. First the Project was actually initiated by the Centre and it did take a considerable amount of persuasion to make the States agree to take up the Project. Any such project which requires to be basically implemented by the States, but which is a result of constant prodding by the Centre has this problem of getting the State Governments to get committed to the project idea. This brings out the limitations of Central initiatives in the field of agricultural development. The States felt that during the 70s, before the NSP was launched, there was in fact no Central initiative and seed production was being managed by the States on their own initiative with varying degrees of success and effectiveness. The States would have preferred additional financial assistance to enable them to do, in a better fashion, what they were already doing, rather than making them fall into a straight-jacket of financial pattern and adopt a policy of seed production in localised areas. NSP, no doubt, was conceived with good objectives, but complicated inter-institutional arrangements, combined with the attitude of the States, led to difficulties.

4.8 The problem of complicated pattern of financing could have been avoided if funds for all the components of the Project were provided from the State's Plan. This would have meant that the total burden on the State's Plan on account of the Project would have been very much more

than what it is under the present pattern. For, any amount flowing to the developmental projects of the State from financial institutions like ARDC are not regarded by the Planning Commission as a part of the State's Plan. They are treated as an addition to the State's Plan, funded by augmentation of the State's Plan resources from financial institutions. To illustrate, if the State Government were to finance a seed processing plant from the Plan, then the State's Plan outlay will have to provide for the entire cost of the plant; if, on the other hand, 75% of the cost of the plant is financed through borrowings from financial institutions, and 25% margin money only is provided by the State Government in the Plan, then the burden on the State's Plan outlay would be only 25% and, to this extent, State Government does stand to benefit by seeking recourse to institutional borrowing for bankable projects. Therefore the State Government's own attitude towards the pattern of financing tends to be ambivalent. This is always the dilemma in which the State Governments often find themselves. Obtaining institutional finance does call for a considerable amount of exercise like preparation of a project report in such detail as may be required by the banks or ARDC, fulfilling the conditions of the financing institutions, and so on; whereas financing a project from the budget is relatively easy but it has its own costs.

4.9 The agricultural universities have always felt that while production of breeder seed is their proper role, foundation seed is not their responsibility and they are

not very enthusiastic about production of foundation seed. They have not therefore internalised the project objectives and this partly explains why the farm development plans of the universities have been proceeding rather slowly.

5. Operational Planning for Seed Production.

5.1 Operational planning for seed production involves planning for the production of breeder, foundation and certified seeds every year. During every season, production of all the three stages are required to be planned. Thus, during Kharif 1981, in the case of hybrid jowar it is necessary to plan for the production of (a) Breeder seed, for ~~raising~~ foundation seed in Kharif 1982 which will be used for raising certified seed in Kharif 1983; and which, in turn, can be sold to the farmers for raising commercial crop in Kharif 1984. (b) Foundation seed, similarly for commercial production in 1983. (c) Certified seed for commercial production in 1982. It is therefore clear that planning for seed production should start at least three years prior to commercial production.

5.2 The first step in planning for seed production is to decide how much of the seed should be produced, of each of the three stages, breeder, foundation and certified. One way of deciding the quantity of seed to be produced is to base the seed planning on targets for agricultural production and targets for coverage under HYV. For instance, the Sixth Plan (1980-85) aims at covering an additional area of 20.8 million hectares over the 1979-80 base of 35.2 million hectares under HYV. Likewise Maharashtra's Sixth Five Year

Plan also gives the projected coverage under HYV, crop-wise, during the Plan period. On the basis of this projected coverage under HYV, seed planning can be done. To illustrate, according to the Annual Plan of 1981-82 for Maharashtra, the targeted coverage under hybrid jowar is 19.00 lakh hectares. At a seed rate of 7.5 kg. per hectare for hybrid jowar (which is the agronomically recommended seed rate) the certified seed requirement would be 1.45 lakh quintals. Strictly speaking, therefore, the administration should be in a position to supply this much quantity of certified seed to the farmers. Part of the supply could be through the private sector seed companies, but then, it is the responsibility of the administration to estimate how much will be marketed by the private sector so that the deficit can be made good by seed production in the public sector. But, generally, not all the area brought under hybrid jowar is sown with certified seeds. The seed farmers sell rejected seeds to neighbouring farmers (i.e. rejected by the seed certification agency on account of poor germination or for any other reason) and such seeds are also ultimately planted; the areas so planted are also counted as having been covered under HYV. Further, the farmers do not maintain the recommended seed rate. Therefore, even though theoretically, administration should be prepared to position 1.45 lakh quintals of seed, in actual practice, while seed planning is done, planning is done for about 75% of the requirement. In self-pollinating varieties like wheat and rice, another factor to be considered is the seed

TABLE 1

Details of the target of Commercial Cultivation of H-4 Cotton and availability of Seed

Year	Target of commercial cultivation (hects)	Seed requirement (Qtls)	Availability of seed in quintals			Seed disposed off in quintals		Balance seed in quintals
			Carryover stock	Fresh seed purchased	Total availability	Qty. sold	Deteriorated quantity	
72-73	50,280	1,355	--	1,209.40	1,209.40	337.82	10.02	861.56
73-74	2,66,000	9,462	861.56	6,196.30	7,057.86	4,126.32.500	9.87	2,921.68(*)
74-75	3,00,000	10,500	2,921.68	10,006.24	12,927.92	6,353.33.800	9.23.200	6,565.35
75-76	2,56,693	8,813	6,565.35	5,269.19	11,834.54	3,442.78	78.70	8,313.06
76-77	2,50,000	8,625	8,313.06	--	8,313.06	4,914.77	0.61	3,397.68
77-78	2,85,000	10,187.50	3,397.68	--	3,397.68	3,242.95.800	121.74.050	32.98.150
78-79	2,75,000	6,875	32.98.150	--	32.98.150	9.11.150 +17.07	6.80	nil
Grand Total				22,681.13		22,444.17.250	236.97.250	nil

Note:-(*) A quantity of 1½ kgs seed is accounted for as excess sold by Z.P. Buldhana than actual balance.

TABLE 2H-4 Cotton Cultivation - Targets and Achievements

	Area under H-4 cotton- seed production (ha)	Production of H-4 Cotton Seed (in M.T .)	Area covered under H-4 Commercial cultivation (ha)
<u>1972-73</u> Targets	1200	750	50280
Achievements	965	623	20284
<u>1973-74</u> Targets	980	612	266000
Achievements	1131	1000	133242
<u>1974-75</u> Targets	1110	693	300000
Achievements	1128	896	256693
<u>1975-76</u> Targets	-	-	-
Achievements	168	34	284215

replacement rate. If planning is done on the basis of the ideal seed replacement rate of 20% then it would be unrealistic, considering that the present seed replacement rate in most States is very much below 20%. Therefore, some estimates on how far the administration (extension agency) would be able to push the farmers to increase their seed replacement rate needs to be made. In Chapter X of the Sixth Plan (1980-85) which relates to Seed Development, an account has been given as to how seed planning has been done for the Sixth Plan. It has been mentioned that the targets for seed production during the Sixth Plan have been worked out on the basis of 90% for hybrids (as against 75% in Maharashtra as mentioned above) and 10% replacement rate for self-pollinated crops, that is, wheat and paddy.

5.3 While it does appear logical and scientific to relate planning for seed production with targets of coverage under HYV, it is not without its own problems. The targets for coverage under HYV given in the Plan are generally on the high side. Basing seed production on such targets could result in overproduction of seeds. To cite a specific instance, the cultivation of H-4 cotton was first started in Maharashtra in 1972-73 and Varlaxmi hybrid from 1975-76. In order to encourage the cultivation of H-4 cotton, the State Government decided to be in a position to meet 100% of the seed requirement initially. Tables 1 and 2 give the targets and achievements of seed production as well as the area brought under H-4 commercial cultivation. It will be seen from the above Tables that the seed production was planned more or less on the basis of the targets

of coverage under H-4 cotton , but because the targets themselves were not reached, there was inevitably a carry over of surplus seeds. The loss incurred on account of such a carry over was a subject of comment by the Public Accounts Committee (PAC)(6). The PAC observed that "no steps were taken to educate the cultivators through special extension programme" (for increasing coverage under H-4) and that "seed purchase was made from public funds with total disregard to the fact that the seeds purchased would not be used."

5.4 Plan targets of coverage under any crop can go wrong for a variety of reasons, and it is not correct to infer that there was lack of extension effort, even though this could be true. Taking the instance of H-4 cotton, coverage under H-4 vary due to many reasons. If there are timely rains the coverage under H-4 increases. For instance, in kharif 1980 the monsoon started on time and the H-4 coverage was 2.96 lakh hectares as against a target of 3 lakh hectares, and this was the highest percentage achieved of the target. As a result, acute shortage of H-4 seeds was felt. Another factor influencing the coverage under H-4 is the availability of irrigation water. In Baramati-Phaltan area irrigated pre-monsoon cotton is generally sown from March 15, in Ahmednagar canal area in mid-April, and in the remaining parts from May 15. During 1976-77 irrigation water was not available in time and therefore the area under H-4 decreased. Yet another reason which influences the coverage under H-4 is the sudden shift in the farmers' preference towards other hybrid cotton

varieties. In 1978-79 the Varlaxmi hybrid became very popular among farmers. The target during that year under H-4 was 2.75 lakh hectares and the achievement was 2.52 lakh hectares; on the other hand, under Varlaxmi the target was 25,000 hectares and the achievement was 42,283 hectares. Farmers' preference for one variety as against the other also depends upon market conditions and the prices commanded by the varieties; in Maharashtra where Monopoly Cotton Procurement Scheme is in operation, the prices paid under the scheme for the different varieties influence farmers' varietal preferences. Prices fetched by the competing crops are another factor. In Deccan canal area in Pune, Satara and Ahmednagar districts the competitive crop for cotton is sugarcane. In 1978-79 the area under Varlaxmi hybrid cotton was 20,000 hectares and this area increased to 54,000 lakh hectares in 1979-80; but in 1980-81 due to the higher prices offered for sugarcane, the area under sugarcane increased and that under Varlaxmi hybrid cotton fell to 30,000 hectares.

5.5 It will be seen from the above that while planning for seed production based on the targets assumed in the Plan would appear to be a logical thing to do, it does have its own problems. Another method is to base the planning for seed production on an estimate of future demand. This has been advocated by the World Bank. Estimating the demand for seed is a largely unexplored area of research. A study has been initiated by the NSC at the instance of the World Bank for estimating the demand for seed. Under this study, a 50,000 farmer survey is to be conducted by the Institute

of Agricultural Research Statistics. Simultaneously, NCAER is also to undertake a study on the factors affecting the future seed demand. But it is very doubtful if a methodology can be devised for estimating the demand for seed which would provide working guidelines to do seed planning rationally. The main reason is that the pattern of seed demand depends on many factors which cannot be forecast. We have seen how shifts from jowar to cotton take place if there are timely rains. Even in the same crop, preference between different varieties cannot be forecast with any degree of accuracy dependent as it is on the behaviour of monsoon. For instance, in the case of hybrid jowar, preferences shift between CSH-5 and CSH-1 varieties. If monsoon is early, farmers prefer to sow CSH-5, because in addition to the good yield it offers, it is also better from the fodder point of view; its only disadvantage is its longer maturity period and this disadvantage is offset if the rains set in early. This was what happened in Kharif 1980 when early monsoon suddenly boosted the demand for CSH-5, which caught the administration by surprise as such a sudden jump in demand for CSH-5 was not anticipated. Sometimes, preference for a newly released variety suddenly shoots up. It takes a long time to have enough certified seeds in the case of a newly released variety; the demand grows much faster than seed can be made available and this has been the case for CSH-9 hybrid jowar. In view of these many uncertainties, planning for seed production on the basis of estimated demand is also problematic.

5.6 The uncertainties in seed planning do not end here. Once the quantum of production is fixed, the further details

Targets under HYV programme and seed requirement - Hybrid Jowar - Sixth Plan 1980-85

K : Kharif M : Male
 R : Rabi F : Female
 Q : Quintals

	<u>1981-82</u>	<u>1982-83</u>	<u>1983-84</u>	<u>1984-85</u>	<u>Remarks</u>
1. Target in lakh ha.	K : 19.00 R : 3.50 <u>22.50</u>	19.50 4.25 <u>23.75</u>	20.00 5.00 <u>25.00</u>	20.50 6.00 <u>26.50</u>	1. Seed rate for male and female parents - 5 kg & 7.5 kg. per ha. respectively
2. Certified Seed required in Q.	1,68,750	1,78,125	1,87,500	1,98,750	2. Average yield of certified seed per ha. is assumed at 10 Q.
3. Area in ha. required to be covered under certified seed production in the previous year.	<u>1980-81</u> 16,875	<u>1981-82</u> 17,812	<u>1982-83</u> 18,750	<u>1983-84</u> 19,875	3. Certified seed requirement per ha. for commercial seed production is taken as 7.5 kg.
4. Foundation seed to be produced in the previous year (Q)	<u>1979-80</u> M : 844 F : 1266	<u>1980-81</u> 890 1335	<u>1981-82</u> 938 1407	<u>1982-83</u> 994 1490	4. Average yield of foundation seed per ha. is assumed as Male - 15Q, Female 10Q.
5. Variety-wise split-up of the requirements and area on which production is to be planned by Agricultural Universities.	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>	<u>1982-83</u>	
	<u>Q. ha.</u>	<u>Q. ha.</u>	<u>Q. ha.</u>	<u>Q. ha.</u>	
CSH-1 - (40-45%)	M : 380 25.3 F : 570 57.0	400 26.7 (40%) 600 60.0	*375 25.0 560 56.0	398 26.5 597 59.7	} IS-84 and CK-60A
CSH-5 - (20-25%)	M : 210 14.0 F : 315 31.5	220 14.7 (30%) 330 33.0	280 18.7 420 42.0	298 19.9 457 45.7	
CSH-6 - 10%	M : 85 5.7 F : 127 12.7	90 6.0 (10%) 135 13.5	94 6.3 140 14.0	99 6.6 149 14.9	} CS-3541 and 2219-A
CSH-8 - 10%	M : 84 5.7 F : 127 12.7	90 6.0 (10%) 135 13.5	94 6.3 140 14.0	100 6.7 138 13.8	
CSH-9 - 10%	M : 85 5.7 F : 127 12.7	90 6.0 (10%) 135 13.5	95 6.4 147 14.7	99 6.6 149 14.9	} CS-3541 and 296-A
6. Breeder seed to be produced one year earlier than the year in which foundation seed in (5) above is required(Q)					
					This is calculated assuming the recommended seed rate and the area on which foundation seed production is to be undertaken in the following year.
					*It is assumed that CSH-5 will be more in demand than CSH-1.

TABLE 4

Anticipated requirements of certified, foundation and breeder seeds in respect of various crops by the end of the Sixth Plan (1980-85).

Crops	Area coverage	Requirement in Quintals Million Hectare			
		Certified Seed	Foundation Seed-I	Foundation Seed-II	Breeder Seed
Wheat	1.9	19,00,000	1,14,000	4,560	182.40
Paddy	2.5	7,50,000	14,062	175.77	2.19
Maize	1.82	3,64,000	4,095	61.43	1.87
Sorghum	4.55	5,46,000	12,285	163.80	2.02
Bajra	4.55	2,27,500	2,560	17.05	1.05
Pulses	0.975	3,52,000	35,201	2,346.00	156.39
Groundnut	0.400	6,00,000	90,000	9,000.00	900.00
Other Oilseeds	0.598	6,62,000	9,930	99.30	0.99

Assumptions:

Seed rate/ha. and multiplication ratio

a. Wheat:	100 Kg.	1:25
b. Paddy:	30 Kg.	1:80
c. Maize	20 Kg.	1:200
d. Sorghum	12 Kg.	1:100
e. Bajra	5 Kg.	1:200
f. Pulses	15 to 60 Kg.	1:15
g. Groundnut	160 Kg.	1:10
h. Other Oilseeds	5 to 30 Kg.	1:100

of the seed production programme are to be worked out. Table 3 gives the manner in which this is done. It will be seen that the first step here is to translate the quantities of seed to be produced (in quintals) into areas (in ha) on which production is to be organised. While doing so, some assumptions regarding yield per ha at every stage need to be made. The illustration given in Table 3 pertains to hybrid jowar, but the procedure is the same for other hybrids and self-pollinated crops.

5.7 A similar planning is done at the national level. Chapter X of the Sixth Plan (1980-85) gives the plan for the production of the various stages of seed. This is shown in Table 4. It has been mentioned that it would be very difficult to produce large quantities of breeder seed in case only three stages of multiplication are adhered to, as has been the practice so far. The difference between planning for seed production at the national level and planning at the State level is in the greater degree of detail which a State level plan has to necessarily contain.

5.8 From the above account, it is clear that operational planning for seed production is to be done under conditions of uncertainty. Assumptions regarding demand pattern may go wrong, yield assumptions may go wrong, rejection percentages (during certification) may turn out to be more than what was assumed. While planning under such conditions of uncertainty, it appears logical to err on the safer side, even if it would result in excess production and carry over stocks into reserves. In seed planning, if shortages are

to be avoided, overproduction in some years is inevitable. We shall examine below how far it is feasible to build reserve stocks of seeds, given the various constraints. The cost of carry over is not much as compared to the economic loss involved in some areas not sown with HYV due to shortage of seeds. Detailed economic analysis in this area is lacking. Apart from interest charges on the carry over stock, most varieties of seeds deteriorate in quality and need revalidation. Revalidation losses in the case of hybrid jowar could go up to 25%. In hybrid cotton however, the loss is minimal, if stored under proper conditions of temperature and humidity and it is even stated that the germination percentage increases with storage. But farmers prefer fresh seed to revalidated seed, even though after revalidation, there is really no difference. Private seed growers, in order to push their fresh stock of seeds, also contribute their bit in spreading false notions among farmers. Extension work in this area has not been effective.

5.9 There is a basic difference between a commercial seed producer and a Government agency. A commercial seed producer can produce just enough seed which he can surely sell, as he is under no obligation to meet the demands fully; he can therefore operate at a very safe level where there is no risk of carry over. On the other hand, a Government agency is expected to meet even unanticipated demands, and therefore has to be in readiness with enough stock of all varieties. In a year of surplus, the private sector would succeed in selling all its seed, if necessary, by reducing the prices; a Government agency has far less flexibility in adjusting its

prices and would be left with carry over stocks. In a year of shortage, the private sector would quickly take advantage of the situation by putting up prices; a Government agency, obviously, cannot do so. So in both situations the commercial seed producer gains; and the Government gets criticised.

5.10 There is another angle to this. The cost of carry over would eventually get loaded on to the selling price of seeds. Carry over is essentially a service provided to the seed consumer (farmer) so that his seed requirements are met in time. The margin between the price paid to the seed producer and the selling price would therefore include an element attributable to the cost of carry over. Since the selling prices of the Government agency always determine the general price line, the commercial seed producers also mark their selling prices at the same level as the Government agency, but without incurring any carry over costs. The seed growers do not realise that the apparently high margin of the Government agency includes the carry over costs and feel that a part of the margin could be given to them in the form of higher purchase prices.

5.11 The main reason why Government agencies play a cautious game and would rather operate at a safe level than overproduce and build up reserve stocks is the fact that seed production has always been regarded as a commercial activity by both the Government of India and the State Governments, and the Seed Corporations are therefore expected to show profits. Even when seed production was a departmental activity (before the setting up of the SSC),

TABLE 5

Details of carryover stocks of hybrid jowar seeds in Maharashtra
1976-77 to 1979-80.

Year	Area target	Area actually sown with hybrid jowar	Seed reqd for target area @7.5 kg/ha	Seed reqd for area actually sown with hybrid	Seed actually supplied from Govt sources	Seed carried forward by Govt
	(<u>lakh ha</u> )		(	<u>in quintals</u>)	
1976-77	15.5	12.00	1,16,250.	90,000	43,000	12,500
1977-78	15.0	14.42	1,12,500	1,08,000	60,655	13,345
1978-79	17.21	14.50	1,29,000	1,08,700	48,500	36,000
1979-80	17.80	14.55	1,33,500	1,09,000	44,000	17,055

TABLE - 6

Programme and actual production of Hybrid Jowar Foundation Seed by Maharashtra's Agricultural Universities during Kharif/Rabi 1980-81.

Name of the Parent	Programme given	MPKV, Rahuri				MKV, Parbhani				PKV, Akola				Total availability
		a	b	c	d	a	b	c	d	a	b	c	d	
CK-60A	900	300	200	-	190	300	200	-	30	350	400	-	118	338
IS-84	540	200	200	200	100	140	100	-	118	200	200	-	134	352
2077-A	450	200	120	-	80	100	100	-	110	150	150	-	180	370
3541	900	300	150	-	154	300	400	100	40	300	350	-	352	546
2219-A	400	100	90	80	97	150	100	-	66	150	150	-	118	281
36-A	380	50	30	-	25	150	50	50	-	180	-	-	-	25
PD-3-1-11	180	75	30	30	30	75	40	-	30	30	40	-	-	90
296-A	240	80	15	-	15	80	60	60	20	80	20	-	9	44

All figures in quintals.

- a : Programme given
- b : Programme taken up
- c : Out of (b), taken up in Rabi
- d : Actual production

it was regarded as a commercial activity. This explains why overproduction is followed by cutbacks in production, leading to shortages. In Maharashtra, between 1976-77 and 1979-80, there were substantial carry over stocks of hybrid jowar as the Table 5 would show. These carry overs led to cutbacks of production, resulting in severe shortages in 1980. The view that seed production is a commercial activity always carries this danger of a defensive posture being adopted during years of overproduction, causing shortages in the following years.

5.12 Eagerness to avoid the risk of carry over also leads to shortages of foundation seed. The NSC has been cautious while planning a production programme for foundation seed on the agricultural universities; the universities in turn are also cautious while actually undertaking the programme. As a result, the foundation seed programme has suffered as Table 6 would show.

5.13 This cycle of 'overproduction-carry over stocks-caution-cutback in production-shortages', can be overcome only by a clear recognition of the proper role of the Government in seed production. Seed production is a developmental activity and it cannot be considered commercial, if the administration is (quite justifiably) required to ensure that not only is there no unsatisfied demand for seed but also that the demand itself keeps growing. It is quite legitimate to hold that there has to be a commercial outlook in the matter of selection of seed growers, logistics of transport, processing, marketing etc., but the risk of carry over and the cost of building up reserve stocks

will have to be borne by the Government, if the agencies involved in seed production are not to adopt too cautious an attitude towards the scale of production to be planned. It is interesting to note that while the Government of India incurs heavy expenditure on subsidising fertilisers, the expenditure on carry over stocks of seeds, as a part of a conscious policy, has been almost negligible. A scheme of building up reserve stock of foundation and certified seeds was introduced by the Government of India in 1978. To quote the Sixth Plan (1980-85) document (7):

"The Monitoring Committee has fixed following quantities of seed to be maintained initially in reserve stock:

<u>Crop</u>	<u>(in quintals)</u>	
	<u>Foundation Seed</u>	<u>Certified Seed</u>
Paddy	300	10,800
Wheat	3000	37,000
Maize	190	6,000
Sorghum	860	5,000
Bajra	180	4,000

The achievement in the year 1978-79 was hardly 10% of the targets fixed and those in the subsequent year was only marginally better. NSC could not operate the scheme as it had to borrow funds from the commercial bank for meeting the procurement cost of seed, which overstrains NSC's borrowing capacity." The message that rings through the above quotation is that since NSC is a commercial organisation, it cannot afford to build up reserve stock.

5.14 It is seldom realised how perilously close Maharashtra is to a debacle on the agricultural front as a result of a cautious seed production policy. If due to

a severe drought, both the foundation and certified seed production programmes are badly affected, even if the next monsoon is good, agricultural production, in kharif, which is so critically dependent on hybrid jowar cannot pick up. It takes three years to retrieve from a position of shortage and reach a surplus position. In agricultural economies dependent upon hybrid varieties of food crops, like hybrid maize or jowar or bajra, building up adequate reserve stocks of at least breeder and foundation seeds to meet a **minimum** one year's requirement appears so indispensable a part of the food policy that the fact that it has not been so does come as a surprise.

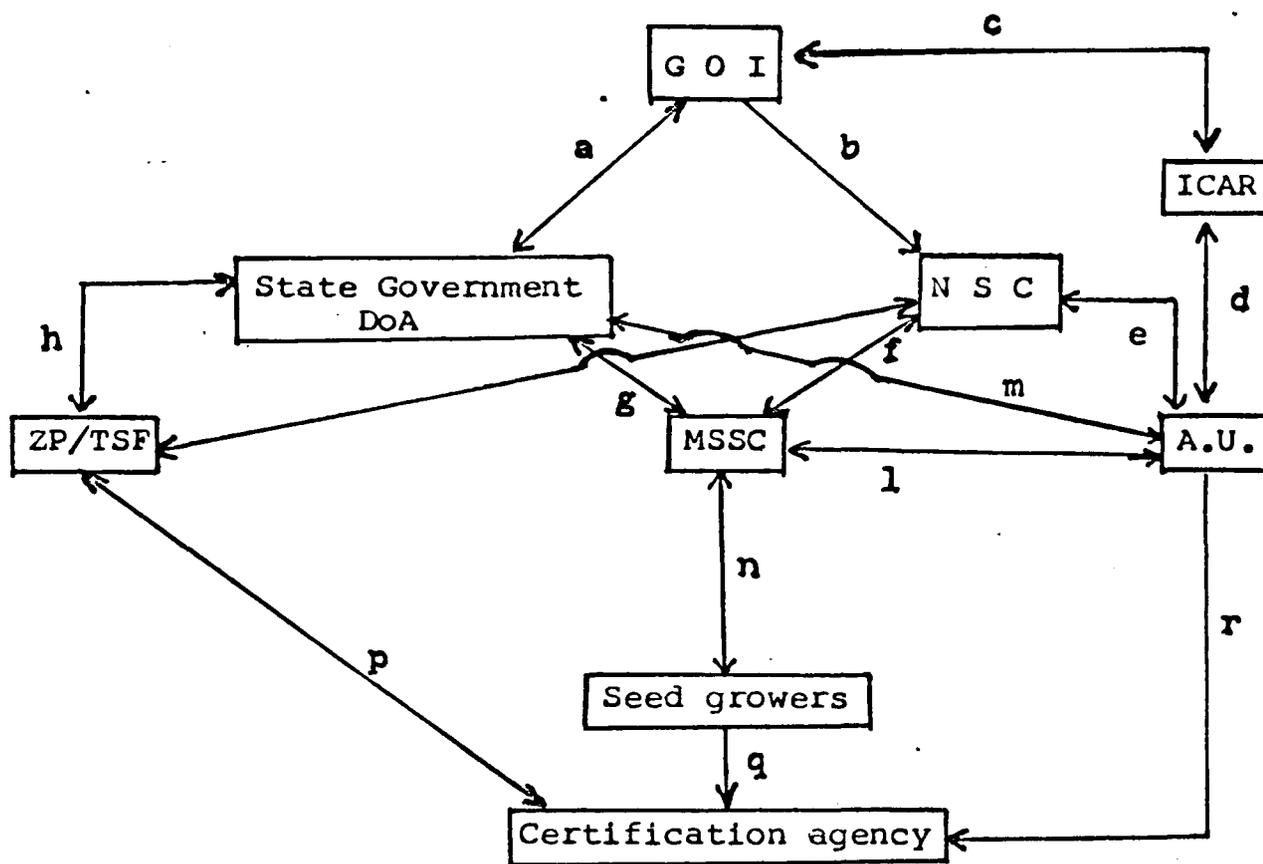
5.15 What has been happening in the field of seed production is illustrative of the fact that the Government sets up various institutions to subserve the end objective of agricultural development. But each institution begins to define its own objective, and carve out a role for itself. Government's own objective tends to undergo a mutation and accommodate itself within the objectives of these institutions.

Notes and References (Chapter 6)

- (1) This is described in Section 4.
- (2) Report of the National Commission on Agriculture Part X p.10.
- (3) This extract is from Chapter X entitled "Seed Development" of the Sixth Plan (1980-85). (mimeo)
- (4) Ibid. para 47.3.1
- (5) Ibid. para 10.10 (mimeo)
- (6) Public Accounts Committee, 6th Maharashtra Legislative Assembly - First Report December 1980 p.6.
- (7) Ibid. Chapter X para 10.14.

ANNEXE 1

Diagram showing the institutions involved in seed production and the communication pattern.



- a. Seed Conference (where all the States participate) is held by GOI at the beginning of every agricultural season. The States communicate their requirements of breeder, foundation and certified seeds to the GOI and also indicate how they plan to meet the requirements that is, how much can be produced by them in their own respective States and what assistance they require from NSC to supply seeds from other States. Maharashtra, for instance cannot produce wheat seeds economically, and gets its requirement from Punjab, Haryana and Rajasthan arranged through NSC.
- b. GOI provides share capital to NSC and reviews its performance in the matter of foundation seed production and meeting inter-State requirements of seeds.
- c. GOI provides funds to the ICAR for research in new varieties, seed technology etc.
- d. A.U.s. send their research proposals to ICAR, as a part of All-India Coordinated Research on new varieties.

- e. NSC places orders for foundation seed on A.Us.. Supply of foundation seeds by A.Us. to NSC.
- f. MSSC places indents for foundation seed on NSC; also indents for supply of certified seeds from other States. NSC places indents on MSSC for supply of certified seeds required by other States, like jute seeds for instance.
- g. State Government/DoA monitors MSSC's performance, gives share capital to MSSC and gives instructions to MSSC regarding blockwise positioning of seeds.
- h. State Government DoA plans production on TSFs; regulates ZP sponsored seed production programme.
- k. ZP/TSF places orders for foundation seed on NSC.
- l. MSSC also places orders for foundation seed directly on A.Us. for its buffer stocking requirements.
- m. State Government/DoA monitors the production of breeder and foundation seeds by A.Us.
- n. MSSC supplies foundation seed to seed growers, including institutional seed growers like MSFC and purchases certified seeds produced by them.
- p. ZPs supply foundation seed to seed growers. Purchases of certified seeds from seed growers are made either by MSSC or MAIDC as ZPs do not engage themselves in marketing of certified seed.
- q,r. Certification of seeds (including foundation seeds) by Certification Agency.

Annexe 2Components of the National Seeds Project

Component	Implementing Organisation	Pattern of financing	Remarks
(1) Seed technology Research	Agricultural Universities	100% ICAR	
(2) Breeder Seed Unit comprising storage and equipment	Agricultural Universities	25% ICAR 75% commercial banks, refinanced by ARDC.	NSC will prepare designs/drawings and specifications for equipment. Commercial bank concerned will then appraise the investment and then ARDC will once again appraise the Project before it is cleared for financing.
(3) Farm development	Agricultural Universities	25% ICAR 75% commercial bank to be refinanced by ARDC.	The Universities are required to prepare a project report which will be appraised and cleared by the State Farms Corporation of India. After the SFCI clears the project, it will be appraised by the financing bank and then again by ARDC.
(4) Seed processing plants	State Seeds Corporation	75% commercial bank to be refinanced by ARDC and the balance being margin money to be contributed by NSC, Govt. of Maharashtra and the participating Seed growers.	Designs/drawings to be drawn up by NSC who will also float the tenders and select the equipment. The project will be appraised by the commercial bank which is to finance the project and also by ARDC which will refinance the bank.

C H A P T E R - 7

Problems of

Irrigation Development and Management

C H A P T E R - 7

PROBLEMS OF IRRIGATION DEVELOPMENT AND MANAGEMENT

1. Introduction and definitions

1.1 Irrigation development and management should be distinguished from the construction of irrigation projects. The phrase encompasses a large number of activities necessary to bridge the gap between the construction of irrigation projects and the full utilisation of the irrigation potential created. In this chapter, it is proposed to examine the problems encountered in the process of bringing about irrigation development, what solutions were put forward to tackle them, to what extent the solutions succeeded, what problems impeded their success and how far it is realistic to expect to achieve in the near future full utilisation of the potential created, given the myriads of institutional and administrative problems.

1.2 The terms gross command, culturable command and irrigable command are frequently used in irrigation literature. The following definitions of these terms are taken from the Report of Maharashtra's Irrigation Commission:-
"Gross command of an irrigation work is the total area to which, by virtue of the local topography, water could be supplied by gravity; this area would also include area not available for cultivation but to which, topographically, water could be led. In practice, it is roughly the total area between the canal on one side and the river on the other.

Culturable command (or CCA) of an irrigation work is the gross commanded area minus the area not available for cultivation.

Irrigable command of an irrigation work is that area out of the culturable command for which water available from the irrigation work in a normal year would, with a given crop pattern, suffice."(1).

1.3 Definitions of some of the other terms which occur in this chapter are given in this and the following paragraphs. An irrigation system comprises storage (i.e. dam) and the means to convey water from the dam to the individual farms which the irrigation system is designed to irrigate, that is, the irrigable command. This conveyance system from the storage to the individual farms was divided, for administrative convenience, into two parts: one part for the execution of which Government (Irrigation Department) was to be responsible, and the other part, for the execution of which the cultivators were to be collectively responsible. The point at which this responsibility passed on from the Irrigation Department to the cultivators was designated as the 'outlet'. Gradually, Government has been assuming increasing responsibility for what was earlier regarded as the cultivators' responsibility. But 'outlet' still remains a distinct stage in the travel of water from the dam to the fields. The conveyance system from the dam upto the 'outlet' is called the parent irrigation system. Main canals, branch canals, distributories and minors convey water from the storage to the 'outlets'; they are called by

different names according to their water carrying capacity. Conveyance of water from the 'outlet' (that is from the parent irrigation system) to the farm boundary is achieved by 'water courses' and 'field channels'; though essentially the same, functionally they are different. A 'water course' is a channel from which water is not delivered to any field. The Maharashtra Irrigation Act, 1976 defines a 'water course' as an idle length of channel between an 'outlet' and a 'field channel'. A 'field channel' actually 'commands' an area, that is, it delivers water to individual farms. Water courses and field channels constitute the capillaries of the system. Annexe illustrates the above terms.

1.4 Land shaping/levelling and means for water distribution within the farm are referred to as 'on-farm development' or o.f.d.works. Field channels, water courses, field drains and the associated structures are referred to as 'common' items, as they serve a group of cultivators, as distinct from o.f.d.items, which are referred to as 'individual', as they serve single holdings. The term 'ayacut development' is used to denote the construction of 'common' and 'individual' items below the outlet. Command area development is more comprehensive than ayacut development and includes provision of roads, marketing infrastructure, supporting services like agricultural extension, etc.

1.5 Technically, the field channel (or a water course) is an extension of the parent irrigation system. As mentioned in para 1.3 the concept of the field channel being a separate entity stems from the policy of delivering water to groups of cultivators rather than to individuals, in order to minimise the involvement of the Irrigation Department in operations at the farm level. The larger the group the

simpler the departmental task. The area below every outlet for which the group of cultivators are responsible is known as the 'chak'. The upper limit of the size of the 'chak' is determined by the size of the stream that the cultivators can manage. Chaks of upto 400 ha. in size, with field channels of capacity upto 5 cusecs are not uncommon in north-western India; some of the earlier irrigation systems in Maharashtra, like Mula (Ahmednagar district), also had 'chaks' of large area. However, because of unsatisfactory experience with communal construction, maintenance and operation of field channels serving such large areas, the trend has been to reduce the size of the chak. At present, the chak is generally 40 ha. in area, with the capacity of field channel of 1 to $1\frac{1}{2}$ cusecs.

1.6 The term 'irrigation potential' as used in official documents has a specific meaning. We have seen in para 1.3 that an irrigation system extends from the storage dam right upto the farm boundary, to which water is delivered by a field channel. At what stage can we say that 'potential' has been created? Obviously, until physical conditions have been created for water to reach the farm-gate, it is not proper to assume that 'potential' has been created. However, historically, as observed in para 1.3, the responsibility of the Irrigation Department has been only upto the point where water leaves the outlet which may be located on a distributory or a minor. In official parlance, as soon as water is made available at the outlet, that is, as soon as the parental irrigation system upto the outlet is constructed and water can reach the outlet 'irrigation potential' to the

extent of area commanded by the outlet is said to have been created. It is in this sense that the term 'potential' is used in the Plan documents as well as in other official literature.

1.7 The end objective of irrigation development is that the impounded water should be used to the maximum extent possible (allowing only for transit losses as per design) for raising crops. The attainment of this objective depends upon the fulfilment of a number of pre-conditions, which are mentioned below:

(i) First, water should physically be able to reach every farm in the command area, which under the project design has been assumed to come under irrigation.

(ii) Secondly, it is not enough if water can reach every farm but it should be capable of being applied evenly over the farm. This would imply carrying out appropriate land development work on the farm (which was referred to as on-farm-development or o.f.d.). The National Commission on Agriculture has emphasised these basic requirements of any irrigation system as follows: "An irrigation project has to supply water for raising crops. Even if all the channels are constructed for the purpose and water is made available at the outlets, an irrigation project cannot be considered complete unless water can be delivered satisfactorily to individual fields. Therefore, in an irrigation scheme, not only the storage, headworks and irrigation channels have to be constructed, but also water-courses, field-channels and drains have to be provided and land levelling and shaping done. In the past, development of irrigation

was considerably hampered due to delay in providing the latter for lack of proper coordination between construction of project and development of commanded area."(2).

(iii) In addition, the irrigation system should meet the criteria of adequacy of water delivered at the farm gate, and timeliness of the supply. Reliability of the system to meet these criteria of adequacy and timeliness without fail is also important. It is worth noting what the National Commission on Agriculture has to say on how crucial 'timing' is to a successful irrigation system:

"The importance of timely supply of irrigation water cannot be overemphasised. If the sowing of wheat is delayed beyond its proper period, the yield drops. In the case of high-yielding varieties, the reduction may be about three quintals per hectare for the first three weeks of delay, and a similar amount for each week's further delay. Likewise, if transplantation of rice is delayed by a month, a heavy drop in the yield of even up to 50 per cent may take place."(3).

(iv) Proper drainage is essential for successful operation of the irrigation scheme. This involves construction of field drains and connecting them to the main drainage system. In the absence of proper drainage, water logging would increase the soil salinity, leading to reluctance on the part of the farmers to irrigate their lands. The problem is so serious in irrigation commands that the Irrigation Commission has devoted a whole chapter to it. (4).

1.8 However reliable the system may be, if farmers are to be motivated to make use of the irrigation system, provision of supporting infrastructure and services is

essential. These are roads, market yards, credit, input supply, agricultural extension, extension in water and land management etc.

2. Evolution of the approach to ayacut development

2.1 It has been stated in para 1.5 that the main reason for the decision to limit Government's responsibility upto the point of chak outlet was the original concept that the responsibility for development below the outlet was that of the farmers themselves. This concept actually evolved out of the earlier irrigation systems, like the Canal Colonies of the Punjab, and the Godavari, Krishna and Cauvery delta systems of the South, where the lands were flat and did not offer much technical problem to the farmers. It was only when projects in the Deccan area like the Tungabhadra and Nagarjunsagar were constructed that technical problems of ayacut development were faced, but the original concept, that it is the farmer's responsibility to undertake ayacut development below the chak outlet, remained and has contributed in no small measure to all subsequent problems relating to the command area development. To quote the Irrigation Commission: "Some of the irrigation projects built since 1947, especially those in the South, such as Tungabhadra and Nagarjunsagar, differ radically from those constructed earlier. Unlike the projects on the perennial rivers fed by the Himalayan snows, these projects have to impound monsoon flows in expensive reservoirs for use during the drier parts of the year. The ayacuts of these projects are undulating and their preparation for irrigated agriculture requires considerable labour."(5)

The Commission subsequently says: "As a result of this

inability or indifference on the part of farmers there is a sizeable gap between the irrigation potential that has been created and its utilisation."(6).

2.2 In 1958, the Planning Commission realised that delivering water at the outlets commanding large areas did not result in the anticipated development below the outlets, and the groups of farmers served by the outlets could not construct the conveyance system from the outlets to their fields. In a communication to the State Governments, the Planning Commission suggested that the Irrigation Department should be made responsible for the construction of water courses at project cost for chaks or blocks upto 40 ha. in area. Beyond this, field channels were required to be built by the cultivators to serve the individual fields within the blocks. It was also mentioned in this communication that the responsibility for the maintenance of both the water courses and the field channels should be that of the beneficiaries. The Planning Commission also suggested that the State Government should have the power through legislation to construct field channels and to maintain water courses and field channels should the beneficiaries fail to do so themselves and recover the cost from the latter.(7). This suggestion of the Planning Commission did not materially alter the earlier approach towards irrigation development, of reliance on farmers' own group action, for works below the Government outlet. The only departure from the earlier situation was that the Irrigation department was to construct the water courses, which do not deliver water directly to any field, and which,

from the farmers' point of view, do not essentially differ from distributories or minors. The expectation was that from the point where the field channel starts, which delivers water to the fields, the cultivators would take over.

2.3 We saw in Chapter 2, how there was, during the 60s, a total reliance in voluntary community action, for the implementation of labour-intensive works of local benefit, particularly, water courses and field channels of irrigation projects. The then Deputy Chairman, Planning Commission, while addressing the Standing Committee of the National Development Council expressed concern over the large unutilised irrigation potential and stated that in most of the States, the failure to use water was due to the fact that distributories and field channels were not provided. He suggested that a "very important part of the work to be done by the villagers related to maintenance of existing irrigation works, including local distribution facilities."(8). The question of utilising idle rural manpower for agricultural development came to be discussed in detail, when the Third Five Year Plan was finalised. In the Agenda Papers circulated to the Twelfth meeting of the National Development Council, the Planning Commission stated as follows:- "The question of harnessing the unutilised energies of the people in the rural areas may be approached along the following lines: (i) There are programmes in which there should be an element of legal obligation on the community or the beneficiaries, for instance, excavation of field channels, maintenance of bunds and channels, contour bunding, etc. In these there should be a general acceptance on the

part of every local community of responsibility for enforcing customary obligations. The idea of customary obligations should be extended to activities vital for meeting the new needs for rural development....."(9).

2.4 The Government of Maharashtra responded to the suggestion of the Planning Commission by laying down certain uniform norms for the construction of water courses. In a circular memorandum, dated 18th June, 1958, a nearly uniform size for water course was laid down according to which the water course was to have a discharge of 1 to $1\frac{1}{2}$ cusecs and the length of the water course was to be about $\frac{1}{2}$ to 1 mile. The construction of the water courses was however to be the responsibility of the cultivators. Obviously, cultivators could not follow this circular and its technical implications. Apart from the technical complexity of the job, the extent of self-management below the outlet envisaged was not capable of being attained. Since progress in the utilisation of irrigation was slow despite this circular memorandum, an official committee was appointed in Maharashtra in 1965 to analyse the problem of utilisation of water in the Ghod and Gangapur Projects in Ahmednagar and Nashik districts respectively. This committee recommended, inter-alia, the adoption of measures like bunding and levelling in the command area in order to accelerate the process of irrigation utilisation. The specific recommendations of this committee are not as important as the fact that the committee highlighted the necessity for the official machinery to assume responsibility for development below the chak outlet. As a result of this recommendation, the work of development

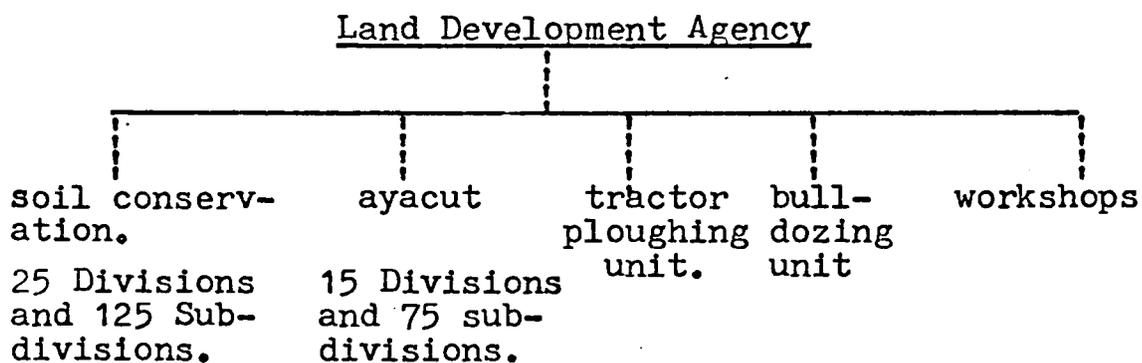
below the chak outlet became the concern of the State Government.

2.5 The State Government (Irrigation and Power Department) issued orders on 29th October, 1965 requiring the Superintending Engineers to take up construction of water courses upto 1/2 to 1/3 cusecs capacity so that they reach closer to the farthest end of the command areas, so as to irrigate blocks of 25 to 30 acres instead of bigger blocks. While these orders constituted a distinct departure in policy (eventhough they meant only the implementation of the Planning Commission's suggestion of 1958), they did not mean that the Government assumed responsibility for taking water to every field. Instead of delivering water at the outlets to large chaks, water was to be delivered to small groups of farmers. But the cost was to be recovered from the farmers, since it was the view that the Government was, after all, discharging what was basically the responsibility of the farmers. The question of procedure then came up. If the State Government were to do the work on the farmers' property, what was the legal basis on which this could be done? It was thereafter clarified by the Government in the Circular dated 28th January, 1966 that the work should be executed under the Bombay Land Improvement Schemes Act, 1942. Under this Act, Government had the powers to take up land improvement work on the farmers' property and to recover the costs from them. The soil conservation work (like bunding, terracing etc.) was already being done under this Act.

2.6 The State Government (Irrigation and Power Department) issued orders on 18th March, 1969 superseding the earlier ones and directing that the work of construction of water courses should be executed by the Soil Conservation Wing of the Agriculture Department under the provisions of the Bombay Land Improvement Schemes Act, without waiting for their construction by the beneficiaries themselves. This was followed by detailed instructions regarding the manner in which the work earlier done by the Irrigation Department was to be taken over by the Agriculture Department. Since then, the work below the outlet has been the responsibility of the Agriculture Department. The Agriculture Department evolved a plan of land development operations consisting of water courses and field channels, field drains, graded bunds with outlets and land shaping, grading and, where necessary, levelling. Subsequently, a separate wing, called ayacut development wing, was started in the Agriculture Department for this purpose, carved out of the soil conservation organisation. The persons taken on to the ayacut development wing were naturally those trained in soil conservation work, primarily contour bunding; they were not engineers and were not trained in hydrology. Over a period they learnt by experience and some of them were given training in hydrology. A central design cell was set up at the State level under the supervision of a Superintending Engineer who was expected to prepare standard design and issue instructions in aligning the conveyance system. The field staff were expected to undertake the ayacut development

work as per standard and type design. The type designs do not work because the topography, that is, ground slopes, soils etc. vary from place to place and the sizes of holdings also play an important role in designing the works, as do their shapes. But given the situation this was the best that could be done.

2.7 In 1973, the State Government established the Land Development Agency (LDA), which comprised 40 Divisions and 200 Sub-divisions of the soil conservation and ayacut development wings of the DoA, the tractor ploughing units, the bulldozing units and the mechanical workshops. The ayacut development wing, comprising 15 divisions and 75 sub-divisions is now a part of the Land Development Agency. The set-up is shown below:



The organisational weakness of the LDA in relation to the task entrusted to it was two-fold. First, as mentioned above in para 2.6 the staff did not have any specialised training in hydrology. Construction of water courses, field channels and drains were no different from construction of canals and distributories as far as the technicalities involved were concerned. Technical input, in terms of qualified engineering staff, below the outlet was thus

negligible. Secondly, even the staff of the ayacut divisions did not stay with the LDA for long, as they could be transferred to the extension and crop scheme wings of the Agriculture Department. In fact, this inter-transferability has impeded the development of a specialised cadre of land development experts within the Agriculture Department.

2.8 It sounds so logical that the department which is responsible for the construction of the parent irrigation system should also be responsible for taking water to the fields of the farmers that the natural question to ask is why was the task of ayacut development entrusted to the Agriculture Department (LDA) rather than retained with the Irrigation Department itself. The Irrigation Commission as well as the National Commission on Agriculture deal extensively with the problem of coordination between the Agriculture Department and the Irrigation Department in the matter of ayacut development. In fact, the setting up of CADA was itself a response to the keenly felt need for coordination. This is illustrative of the commonly observed administrative phenomenon that what can conveniently be given as a task to one department is entrusted to two departments and then elaborate solutions to solve coordination problems are offered. If the ayacut development work had been retained with the Irrigation Department, then at least one point of coordination could have been avoided.

3. Legal framework

3.1 At this stage, the legal position regarding the point in irrigation system at which the responsibility of the Irrigation Department ends needs to be briefly

referred to. Under the Bombay Irrigation Act, 1879 a 'canal' is defined to include all canals, channels, pipes, etc. constructed, maintained or controlled by the Government and a 'water course' is defined as any channel not maintained at the cost of the Government and which is supplied with water from a canal. There is no definition of an 'outlet' or the area to be commanded by an outlet. Therefore, what is material is the decision of the Government as to which components will be constructed, maintained or controlled by the Government. If a decision had been taken, as it was open to the Government to take, that the entire water conveyance system up to the farm gate would be constructed, maintained and controlled by the Government, then it would have been legally in order for the Irrigation Department to supply water up to the farm gate. The only problem here would have been that under the Act the land required for all such works would have had to be acquired under the Land Acquisition Act. This would have presented considerable administrative problems as several small strips of land would have to be notified, measured and compensation paid for. But it was not this administrative problem which was the reason for the decision to limit Government responsibility at the outlet point; what was responsible was the assumption that beyond a point the farmers themselves should be responsible for taking water to their fields.

3.2 The new Maharashtra Irrigation Act of 1976 has formalised the practice followed earlier by defining an

'outlet'. This Act also defines the responsibilities of the Irrigation Department and of the cultivators. An 'outlet' has been defined as an opening of a capacity not exceeding 30 litres per second (i.e. about 1 cusec) to serve a block of land of approximately 40 hectares through which water is delivered either into a field channel or directly on to any land. A 'field channel' is defined as a channel beyond an outlet either constructed by the cultivators or by a suitable agency of the State Government on behalf of the cultivators. This new Act contains provisions enabling the Government to construct field channels if the cultivators fail to do so and to recover the cost from them. In such a case, there is no necessity for acquiring the land required.

3.3 During the 60s it was becoming clear that the original idea that water would be supplied at the outlet, and below the outlet the cultivators should construct the system had to be given up. In practice, since 1965, the Government has been gradually assuming increasing responsibility for taking water up to the field boundary. Initially, in the context of large chaks commanded by the outlets in the earlier projects, a decision was taken to construct water courses upto a more manageable area of 25 to 30 acres and thereafter leave the responsibility for further construction of field channels to the cultivators (vide para 2.5). Later on, after the responsibility for ayacut development was entrusted to the Agriculture Department (vide para 2.6), the Government has been executing the full range of works, both common and individual items,

comprising ayacut development. It is necessary to observe here that even after it became clear that Government agency should assume responsibility for taking water right upto the field boundary, the cultivators were required to bear the cost of works below the chak outlet. There was in fact no legal difficulty in treating all works upto the farm gate as Government works, (in the same category as the parent irrigation system), rather than regarding works below the chak outlets as works executed by the Government on behalf of the cultivators. The problem of land acquisition could have been got over by incorporating in the Maharashtra Irrigation Act provisions analogous to those in the Bombay Land Improvement Schemes Act, 1842. The earlier Irrigation Act of 1879 did, in fact, contain enough flexibility to enable the Government to undertake the construction of conveyance system up to the field boundaries if the Government had wanted to do so, without treating such works as having been done on behalf of the cultivators. Not only was this not done but this built-in flexibility was not retained in the new Irrigation Act of 1976, which has delimited the direct responsibility of the Government at the outlet. As a result of the demarcation of the responsibilities of the Government and the cultivators, the work of ayacut development continues to be executed by the Government on behalf of the cultivators, the cost of the work being recoverable from them. The Bombay Land Improvement Schemes Act, 1842 (BLIS Act) under which the ayacut development work is done provides for such recovery.

4. Operational problems in ayacut development

4.1 It was seen in section 2 of this chapter, how two distinct agencies, namely, the Irrigation Department and the LDA came to be on the scene, in the field of irrigation development, the chak outlet being the meeting point of their respective areas of responsibility. In this section, we shall discuss the operational problems encountered in ayacut development, and in particular, the problems of coordination between the two agencies. We start with the assumption that if every farm situated in the irrigable command is to be given adequate, timely and predictable supply of irrigation water, with a high degree of system reliability, that is, if the irrigation system is to fulfil the criteria mentioned in para 1.7 (iii), then all the elements of ayacut development mentioned in para 1.4 will have to be completed in all the chaks in the command area. We then pose the following questions. Can this objective be achieved if ayacut development of the chak is taken up after the commencement of irrigation? Once water is made available at the outlet for irrigation, is it possible to develop this chak, even gradually, in a manner which will result in the system meeting the criteria mentioned above? Alternatively, can the ayacut development of the chak be taken up and completed, before the outlet is constructed and water is released for irrigation? The answers to these questions will reveal the constraints operating in the field of ayacut development.

4.2 It is sometimes argued that once the parent system is constructed and water is made available at the chak outlet, what is important is to 'open up' the command area by constructing water courses and field channels so that irrigation would commence. According to this line of argument the remaining items of ayacut development can follow in due course. FAO's team of experts support this gradualist approach: "While efficiency can be measured in terms of production per unit of water or of land or of labour, in the Indian context production per unit of water is eventually the essential criterion. However, it is not necessarily the most important factor during the early years of development of a project, when the whole project supply of water may be available to a portion only of the final command area, the canal system not yet being complete. In such circumstances, water is temporarily in surplus. Furthermore, maximum efficiency of water use in a particular project usually requires maximum investment in land development. Where funds, labour, or technical staff are limitations, it may be preferable to defer, temporarily, the final level of efficiency in the interests of maximising the area early brought under irrigation, provided that the prospect of reaching the ultimate desired efficiency is not thereby jeopardized. In short, all partial developments should be designed as logical steps towards eventual full development." (emphasis in original) (10). The proviso in the above quotation is important. It is argued in the following paragraphs that the prospect of reaching the ultimate desired efficiency will be jeopardised unless the water delivery

practices below the chak outlet are radically changed. In fact, one major reason for the so called 'tail-end' syndrome is the adoption of this kind of a gradualist approach, without at the same time changing the water allocation procedures in the chak. The problems involved in bringing about such a change in water allocation procedures are also discussed in this section. The alternative to the ayacut development of the chak in gradual stages, that is, constructing water courses and field channels first, so that irrigation can commence, followed by the execution of other items, is to develop the chak completely before irrigation commences. The feasibility of this alternative is also analysed in this section.

4.3 Let us take the latter alternative first and examine what problems it would present. Whether it is technically feasible or not is beyond the scope of this thesis to analyse. It is presumed that it is technically feasible because, as will be seen below, it has been seriously advocated by the Planning Commission and the ARDC and has also been lately preferred by the Government of Maharashtra. As early as 1968, when the Government of Maharashtra was beginning to assume responsibility for executing works below the chak outlet, a circular of the State Government (dated 8th July, 1968) stated that: "It should be seen that advance action is initiated well in time to see that water courses are ready by the time the outlet is ready and by the time water becomes available." What is relevant for the purpose of our study is whether the administrative and operational problems it would present are so formidable as

to render it infeasible as a viable course of action.

4.4 With the objective of completing ayacut development below the chak outlet before the commencement of irrigation, the Planning Commission, in a communication to the State Government in 1959, recommended that the project authorities, i.e., the Irrigation Department, should mark the position of outlets and also alignments of water courses and field channels at the time of marking the alignment of distributories and minors. The cultivators whose areas lie in the command of those outlets were to be given notice to complete the field channels and land development within a specified time. This specified time, according to the Planning Commission, should be sufficient to give ample opportunity to cultivators to complete the construction of the field channels before water for irrigation becomes available. If, as it happens sometimes, the position of outlets has to be changed for securing a better command of the area, the Planning Commission suggested that an assurance should be given to the cultivators that in such an event the field channels will be redone by the project authorities without any additional burden on the cultivators. This suggestion of the Planning Commission was obviously impractical. First of all, getting the farmers to do the work on their own had already proved impossible; expecting them to undertake the work in a time-bound fashion in advance was too much to expect. The Planning Commission under-estimated the technical complexity of the work. Secondly, the administrative difficulty involved in "re-doing" the field channels, if the original 'outlet' position had to be changed was not foreseen. It is not easy in Government to incur expenditure occasioned by an earlier

Table 1

Statement showing CCA under a few distributories and the areas that could not be irrigated with reasons therefor. (Jaikwadi Project)

- A: water courses/field channels not maintained to desired section.
 B: Outlet incorrectly fixed.
 C: Road crossing/nala crossing not done or maintained properly.
 D: Field Channels destroyed by cultivators.
 E: Other reasons.

Sr. No.	Distributory No.	Total No. of outlets	CCA (ha)	Area that could not be irrigated (ha.)	Reasons
1.	14	35	1094.30	133.64	82.49 - B 51.15 - C
2.	15	94	3095.97	176.13	27.00 - A 1.20 - B 10.00 - C 91.60 - D 46.26 - E
3.	17	38	1038.33	201.68	31.69 - A 113.10 - B 56.89 - C
4.	18	20	772.45	118.06	82.47 - A
5.	21	14	595.97	7.18	7.18 - A
6.	22	34	1347.60	113.02	56.99 - A 46.03 - B 10.00 - C (due to nala crossing)
7.	23	31	1286.58	78.32	68.32 - A 10.00 - B
Total	-	266	9231.10	828.03	

Table 2

The following Table gives the situation in certain outlets near the tail-end.

Sr. No.	Distributory No.	Outlet No.	C C A	Area that cannot be irrigated	Reasons
1.	14	MI Tail R.	38.49	38.49	Water cannot reach outlet
2.	14	MI Tail L.	44.00	44.00	-do-
3.	17	OR 5	31.69	31.69	C (nala crossi
4.	17	OCI-A	56.89	56.89	C
5.	18	M2/DRI	35.59	35.59	C (nala crossi
6.	18	Tail R	46.72	46.72	Distributory silted water cannot reach outlet.
7.	18	Tail L	35.75	35.75	
8.	15	OLI	43.62	20.80	
9.	15	DL II	25.63	10.00	C (nala crossi
10.	15	M2/OL4	41.57	41.57	B
11.	15	M2/Tail	88.00	42.20	D
12.	15	Sm2/Tail	43.61	43.61	D
13.	22	OR 13	35.77	35.77	A
14.	22	M2/OLII	27.22	27.22	A,C.
15.	22	OR II/B	38.82	38.82	B
16.	23	Tail L	27.20	27.20	A
17.	23	Tail R	31.12	31.12	A
18.	23	OL 17	52.71	10.00	D

'lapse' on the part of the administration, viz., the original unsatisfactory location of the outlet. A dilatory procedure of fixing responsibility for the initial 'lapse' and deciding who should bear the 'infructuous' and 'avoidable' expenditure, requires to be followed. Several wrong locations of outlets are not corrected as any such correction would imply that responsibility for the initial wrong location will have to be fastened on someone in the administration and this seldom happens.

4.5 The most crucial element in irrigation development is the correct positioning of the outlet. This requires a considerable degree of coordination between the LDA and the Irrigation Department. A wrong positioning of the outlet or a wrong design of water courses or field channels could lead to areas which were originally supposed to come within the irrigable command now going out of command i.e. water will not be able to reach those areas. Both kinds of mistakes have occurred in the past and since two distinct departments are on the job, LDA has been blaming the Irrigation Department for wrong positioning of the outlets and the Irrigation Department, in turn, would point out the mistakes in ayacut development itself. Tables 1 and 2 give the position regarding areas originally reckoned as coming within the irrigable command having been left uncommanded for various reasons, important among them being given as incorrect positioning of outlets. Whether the loss of command is due to the fault of the Irrigation Department or Agriculture Department is not material to the discussion here; nor is it easy to establish whose fault it is firmly, without a detailed technical analysis.

But the case illustrates the kind of problems thrown up whenever two departments are on the scene.

4.6 Since the positioning of outlets is very crucial to the entire ayacut development, it is not reasonable to expect that the Irrigation Department would furnish in advance the position and the level of the outlets which would not be changed later on. If the Irrigation Department does furnish the above information in advance to the LDA which proceeds to undertake the ayacut development work on that basis, and if, subsequently, realising that the earlier position and level of the outlets indicated need to be changed, the Irrigation Department changes them, the ayacut work that would be done by the LDA on the basis of the information earlier furnished by the Irrigation Department would require to be redone, at least partly. The question will then arise: who should bear the additional cost? This tangle is difficult to resolve and is generally overcome by both departments glossing over the issue; the net result is that water does not reach areas originally reckoned as coming within the irrigable command. The practice followed in Maharashtra so far has been to provide the outlets first and then take up ayacut development. If the detailed survey of the chak by LDA shows that any outlet has been wrongly located, it can be shifted and re-located in the correct position without incurring much additional costs. Even then, there are many instances of unrectified mistakes. Insistence on advance information regarding outlet positions and their levels would carry the danger of increasing the number of unrectified mistakes. We have already observed how the chances of rectification decrease as

the associated 'infructuous' expenditure increases.

4.7 In order to ensure correct indication of the position and level of outlets, in advance, so that ayacut work can commence and can be executed 'chak-wise' ahead of the commencement of irrigation, the State Government issued orders in June, 1979 that the positions of the outlets should be jointly fixed by the Irrigation Department and the LDA. What is meant by joint location was also spelt out in detail in March, 1980. It was laid down that first the Irrigation Department should supply to the LDA the tentative locations and sill levels of all the outlets situated on a distributory; then the LDA would carry out detailed survey of the areas to be commanded by the distributory, i.e. of all the chaks commanded by the outlets to be located on the distributory, and confirm or propose modifications in the locations of either the outlets themselves or their sill levels. In case of any disagreement, the construction Executive Engineer and the Divisional Soil Conservation Officer (of the LDA) should decide the location and sill levels jointly. If this order is implemented successfully then it will be possible to determine the position of outlets in advance and start ayacut development work. This procedure could help in correcting a wrong location later, because the responsibility is shared. But even this cannot ensure that locations, marked jointly, will be correct all along the line. But it is still to be seen how far the new procedure is going to work in actual practice. If for example there is a delay on the part of the LDA to complete the survey of the area commanded by the entire distributory, then pressures would operate on the

Irrigation Department to actually provide the outlets and release water for irrigation as early as possible. This could defeat the very purpose of joint location of outlets. Moreover, joint location will only ensure that one department will not blame the other. But if mistakes do occur, both the departments are likely to close in their ranks and leave the mistakes unrectified, because only a rectification will reveal the mistake. There is also a procedural difficulty in rectifying any mistake, if it would mean re-doing the ayacut developments, since the expenditure on ayacut development is treated as loan to cultivators. The cultivators would, quite justifiably, refuse to bear the cost of such mistakes; as remarked earlier it is difficult to write-off the cost. It is therefore felt that the completion of chak-wise ayacut development before irrigation commences, though very desirable, is unlikely to prove a feasible proposition, and particularly so, when we take into account the fact that agricultural assistants and supervisors of the LDA do not have adequate engineering training for the job.

4.8 Coming now to the first alternative mentioned in para 4.2, let us see what would happen (and in fact does happen) when outlets are constructed and water is made available before the commencement of ayacut development work. It has been observed earlier that pressures operate on the Irrigation Department to construct the outlets and provide water at the outlet as early as possible so that water can be given for irrigation. The Irrigation Department, therefore, tries to minimise the time gap between the construction of the

Table 3

Construction of field channels and o.f.d. works carried out in 1978-79 and 1979-80 in the command areas of some new irrigation projects.

Project	Year	CCA available ha.	Construction of field channels ha.	Land grading, levelling, etc. ha.
Upper Godavari	1978-79	53,594	9,831	9,007
	1979-80	53,594	17,000	8,378
Kukadi	1978-79	2,552	3,258	671
	1979-80	6,000	1,700	--
Bhima-Ujani	1978-79	12,665	4,420	3,151
Krishna	1978-79	13,500	6,768	2,548

Note: 'CCA available' means the area in respect of which 'outlets' have been provided by the Irrigation Department.

Source: Government of Maharashtra, Agriculture and Cooperation Department (Agriculture) Performance Budget, 1980-81.

outlet and the availability of water for irrigation. The LDA on the other hand, would require some time interval between the construction of outlet and the release of water at the outlet for irrigation so that the ayacut development work can be taken up and completed systematically. Often the pressures on the Irrigation Department to release water for irrigation prevail over the requirements of the LDA. As a result, the water courses and field channels are taken up for construction and executed in a hurried fashion, and the entire ayacut development work is not executed satisfactorily. The extent of work on field channels and o.f.d.-on some new irrigation projects carried out in 1978-79 and 1979-80 is given in Table 3.

For the Maharashtra State as a whole, the position relating to the development of the command area is given in Tables 4 and 5 separately for the CADA and non-CADA areas.(11)

Table 4

Statement showing the progress of completion of the different components of ayacut development upto March, 1980. Information relating to 14 major and medium irrigation project under CADA.

Total CCA : 7,90,165 ha.
CCA available for ayacut development : 4,96,266 ha.

	Field channels	Field drains	Graded bunds.	Masonry work	Outlets to graded bunds	Land grading/shaping/levelling.
Achievement	449198	403786	402958	372619	362618	410323
Balance work	47068	92480	93308	123647	133648	85943

Table 5

Statement showing the progress of completion of the different components of ayacut development upto March, 1980 - Information relating to non-CADA works comprising 10 major, 52 medium and 68 minor irrigation projects and 95 Lift Irrigation Schemes.

Total CCA ... : 5,45,394 ha.
CCA available for ayacut development : 4,54,167 ha.

	Field channels	Field drains	Graded bunds	Masonry works	Outlets to graded bunds	Land grading/levelling.
Achievement	428205	352669	353761	337055	312052	402506
Balance	25962	101499	100406	117112	142115	51661

Source: Government of Maharashtra, Agriculture and Cooperation Department (Agriculture), Performance Budget, 1980-81.

The position regarding the construction of field channels and the completion of o.f.d. works for all the CADA areas in India, is given in Table 6 below:

	<u>Table 6</u>	<u>Million ha.</u>
(1) Irrigation potential created under major and medium projects up to March, 1980.	..	27.00
(2) Potential created in CADA projects	..	11.40
(3) Percentage of (2) to (1)	..	42.6%
(4) Progress of construction of field channels out of (2) above:		
(a) Upto end of V Plan	..	2.03
(b) 1978-79	..	0.29
(c) 1979-80	..	0.66
(d) Balance	..	8.42
(e) (d) above as a percentage of (2)	..	73.85%

Million ha.

(5) Progress of completion of o.f.d.works
out of (2) above:

(a) Upto end of V Plan	..	0.79
(b) 1978-79	..	0.08
(c) 1979-80	..	0.13
(d) Total upto March, 1980	..	1.00
(e) (d) above as a percentage of (2)	..	8.77%

(Source: Government of India, Ministry of Irrigation -
Agenda and Notes for the Fifth Conference of State
Ministers of Irrigation. Bangalore, November 10-12, 1980 -
Unpublished).

The above Tables reveal the absence of balanced ayacut development. In fact, the actual situation could be even worse than what the Tables would indicate. This is because the area in respect of which o.f.d. works are completed need not necessarily be out of the area in respect of which field channels are completed. Therefore, the area in respect of which all components of ayacut development are completed could be very much less than the area in respect of which field channels alone are completed.

4.9 In order to analyse the problem in some detail, data were collected for a small area in respect of which outlets were located two months prior to the commencement of irrigation. The data are given in the following Table.

Table 7

Project : Krishna Project Year of Report : 1976-77.
 (Dhom) Right Bank Canal
 0 km. to 27 km.

Potential reported by the Irrigation Department two months prior to irrigation.	3,327.00.ha.
Field channels constructed to supply irrigation.	3,327.00 ha.
Field drains	220.45 "
Graded bunds	591.55 "
Masonry works	642.42 "
Outlets	nil
Land grading etc.	107.43 "
Area that could not be reached with water, i.e. could not be commanded because of absence of masonry structures for road crossings etc.	900.00 "

Source : CADA Administrator, Krishna Project.

It is seen from the above Table that even when there was a time gap of two months it was possible to construct only the field channels, all other components lagging behind. For reliable supply of water it is not sufficient to excavate the field channels; it is equally important to construct masonry structures, because in the absence of masonry structures, the field channels get eroded leading to water losses. Moreover all such eroded field channels are required to be redone to proper slopes by providing drop-structures, division boxes, etc. and such redoing presents problems.

4.10 If the command area is 'opened up' for irrigation before completion of ayacut development, can ayacut

development be completed, in stages, so that eventually all the farms in the irrigable command are ensured adequate and timely supply of water with a high degree of reliability? In other words, reverting to para 4.2, can we achieve the 'ultimate desired efficiency', if we initially concentrate on 'opening up' the command area by constructing water courses and field channels, or, is the attainment of this 'ultimate desired efficiency' likely to be jeopardized? We shall address ourselves to these questions in the following paragraphs.

4.11 The first difficulty experienced by the LDA in doing ayacut work systematically after the commencement of irrigation is in finding contiguous areas free from crops for completing o.f.d. works. In a chak, even if a few pockets have standing crops during rabi, where o.f.d. works are possible, it is difficult to execute the works in that chak in a systematic fashion; and once irrigation starts, there are always such pockets where standing crops in rabi are seen. The problem is not confined to the non-availability of land alone. Field channels carry water as irrigation starts (even if only a few farmers in the chak use the water) and they are not therefore available in dry condition for constructing structures. As a result, construction of masonry structures also lag behind. There are physical limitations to completing all the components of ayacut development in the chak even in two or three working seasons (ie. October-May). Apart from this, another difficulty faced by the LDA is that advance planning of works

under the above conditions becomes difficult. Work tends to get prolonged and quality eventually suffers. Executing the work, in bits and pieces, as and when physically possible, affects optimal deployment of the LDA field staff. According to the prescribed work norms, every Agricultural Supervisor (of the LDA, who is assisted by five Agricultural Assistants) is expected to complete ayacut development over an area of about 480 hectares in one year, i.e. about 10 to 12 chaks. (This work norm has recently been reduced by one-third). Since due to physical limitations, only some items can be completed in the first year, the deployment of the staff is sub-optimal. To optimise the staff deployment, one alternative could be (this, in fact, is being practised) to deploy one charge (i.e. one Agricultural Supervisor + five Agricultural Assistants) over a much larger area, so that this charge executes, over this larger area, those items which are physically possible to execute. It has not therefore been possible to execute ayacut development works chakwise, and the complete development of a chak tends to get spread over several working seasons. When one charge is deployed over a large area supervision becomes impossible making it very difficult to ensure proper quality. Poor quality of the work in turn affects the reliability of the system.

4.12 Owing to the problems of optimal deployment of LDA field staff, the actual output of LDA has decreased, and this in turn pushes up the costs. Initially, the norm of workload for one sub-division of the LDA for command area development work was fixed at 2,400 hectares per annum.

(each sub-division contains 5 Agricultural Supervisors i.e. 5 charges). At this rate, the annual norm of workload for the entire LDA assigned for ayacut development (15 Divisions) comes to 1,80,000 hectares. Since chakwise development could not take place the LDA could not start work on a specific number of chaks and complete their development in an uninterrupted fashion. Each charge of the LDA instead of taking up work on 10 to 12 chaks and completing all the works on them, thus fulfilling their work norms, start work on a much larger number of chaks and execute the different components of ayacut development work on them as and when possible. This makes it difficult to measure the output of the LDA in terms of area (in ha.) over which ayacut development work was completed. Therefore, in order to measure the output of the LDA the different components of command area development are expressed in term of standard development units so that all the activities are reduced to a common denominator. The standard development units for the different components constituting ayacut development are calculated by applying the following ratios:-

i) Field channels	...	...	5%
ii) Field drains	...	...	10%
iii) Graded bunds	...	...	15%
iv) Masonry works	...	...	15%
v) Outlet of graded bunds..	...	...	5%
vi) Land grading, shaping and levelling.	...	...	50%

In order to illustrate the above, if field channels are constructed over 100 hectares the work is considered

equivalent of fully developing an area of 5 hectares. The output of the 15 ayacut divisions of the LDA is given in Table 8 below alongwith the target:

Table 8

Statement showing the workload norms and the actual achievement in physical terms of LDA since 1975. (The norms are calculated on the basis of sub-divisions actually deployed on the work).

Year	Norm (in ha.)	Achievement SDUs ha.	Percent- age of achieve- ment to norm.	Works expen- diture (Rs in lakhs)	Esti- mated expen- diture (Rs in lakhs)	Percent- age of Estimated cost to works cost.
1975-76	79,000	85,000	108%	386.14	252.69	66%
1976-77	1,32,000	85,000	64%	449.09	260.57	58%
1977-78	1,55,000	83,000	54%	504.30	248.99	49%
1978-79	1,34,000	85,000	63%	633.35	402.82	64%
1979-80	1,34,000	78,000	58%	726.82	383.22	53%
1980-81 (upto May 1981)	1,26,000	10,000	--	172.84	78.86	--

It will be seen that the achievement of the LDA has been fluctuating around 55%. As a result of low achievement of the targets, the percentage of the establishment expenditure to the work cost has been increasing as against what is generally considered as an optimum percentage of 25.

Recently, the Government of Maharashtra has revised the work load norm per sub-division to 1,600 hectares per annum. But this will not result in any more economical implementation of ayacut development, but will at the most stave off audit

objections to low output of LDA as compared to the norm.

4.13 The fact that the complete development of a chak tends to get prolonged over a number of years has its repercussions on the recovery of the costs from the cultivators. Unless all the items of a chak are executed, recovery statements cannot be prepared, as the cost incurred over the chak is to be apportioned among the cultivators, according to the areas of their holdings in that chak. Recovery statements are then sent to the Revenue authorities (i.e. Tahsildars) who issue demand notices on the cultivators. There is thus a time lag of at least three to four years between the time when the work was started in the chak and the service of demand notice. In the meantime because of haphazard development of the chak, the work already done deteriorates. The cultivators dispute the recovery, pointing out to the poor quality of work. We shall revert to this in the next chapter when we discuss the problem of mobilising finance for command area development.

4.14 In order to execute the ayacut development works scientifically, particularly land shaping and land levelling, machinery were purchased as a part of the Maharashtra Agricultural Credit Project, financed by the World Bank. From the technical standpoint, machinery would turn out more satisfactory work than human labour on heavy soils. The machinery purchased comprised John Deere Tractors 80 H.P., CAT-D-3 Bulldozers 65 H.P. and the attachments. In all, including spare parts, they cost Rs. 2.60 crores. It has been the experience so far that the utilisation of the

machinery has been very low. The following Table gives the figures relating to utilisation.

Table 9

Year	Type of machine	No. of machines purchased	No. of machines utilised	Total effective/non-effective hours during the year		% utilisation
				Effective	Non-effective	
1975-76	J.D. Tractors	100	52	2848.30	1314.30	2.73
	CAT D-3	40	31	5196.15	781.09	8.42
1976-77	J.D. Tractors	100	76	8506.30	2951.27	6.51
	CAT D-3	40	37	10562.05	1497.13	15.66
1977-78	J.D. Tractors	100	75	8780.13	3596.14	7.07
	CAT D-3	40	38	13694.35	1218.30	19.12

One major reason for poor utilisation is given as non-availability of large contiguous areas of land for the deployment of machinery.

4.15 We shall now examine in what manner the above problem of non-availability of land for o.f.d. was sought to be overcome. The State Government issued a notification on 6th September, 1974 enjoining that lands in the command area taken up for ayacut development work should not be cultivated and should be made available for command area development. The contents of the notification are reproduced below:

Agriculture and Cooperation Department,
Sachivalaya Annexe, Bombay-32.
31st July, 1974.

BOMBAY LAND IMPROVEMENT SCHEMES ACT, 1942 (BOMBAY XXVII of 1942).
No. PPI 1473/105240/N.- In exercise of the powers conferred by section 10(a) of the Bombay Land Improvement Schemes Act, 1942 (Bom. XXVIII of 1942), the Government of Maharashtra is pleased to make regulation as follows:

Where a scheme which has come into force in relation to any area provides for the development of the land in that area for better utilisation of the irrigation potential, and the executing officer considers that for the satisfactory and speedy disposal of the work, it is essential to execute the work on an entire block fed by an outlet at one time, he may, by order, direct that the land fed by that outlet shall not be cultivated for such period (such period in no case exceeding the period from 1st December of any calendar year to 10th June of the next succeeding calendar year) as may be specified in the order; but such order shall ordinarily not be made in respect of the same land more than once:

Provided that, no such order shall be made unless notice of not less than 30 days is given to the person in possession of the land.

4.16 This compulsion was obviously unworkable and the notification was appropriately rescinded in May, 1976. Another solution to the problem which was tried was based on the recommendation of the National Commission on Agriculture. The Commission observed:

"Much of the land development work on the field has to be carried out soon after the rainy season when normally the

fields should be under rabi crops. Since the farmer will not be able to grow the crop he will have to be given a sustenance loan on an ad hoc basis." (12).

4.17 Since the State Governments were not taking action on these recommendations with enthusiasm the Government of India introduced a Centrally sponsored scheme of crop compensation on a 50:50 shareable basis with the State Governments. The following extract from the circular letter addressed to the State Governments by the Government of India (vide D.O. letter No. 11-10/80-CAD, dated the 22nd April, 1980) describes the problem and the essential features of the scheme:-

"Crop Compensation to farmers for on-farm development works.

A major factor responsible for the slow progress of on-farm development works, particularly land levelling and shaping has been the short-working season available with the land development agencies, especially in the areas where the major crop is rabi. The normal working season begins after the harvesting of the rabi crops and lasts till the onset of the monsoon. This comes to less than 90 days in a year, though the establishment and machinery have to be maintained for the entire year. Apart from the slow progress, the short season also contributes to higher unit cost to the farmer as the operational overheads have to be spread out over the smaller quantum of work done.

In such areas, it is essential to increase the working season by undertaking land development works in the rabi season also, for which farmers will have to be given compensation as they would have to forgo the rabi crop.

The loss is to be shared equally between the farmers, the State Government and the Central Government with a ceiling of Rs. 900/- per hectare as the presumed net loss. While all the farmers in the area of operation in the command would bear one-third of the loss to be distributed among those farmers who are actually deprived of the rabi crop, the remaining two-thirds would be shared equally between the State Government and the Centre. In other words, the Central Government would be prepared to meet one-third of the estimated loss to the farmer subject to a maximum of Rs.300/- per hectare. The State Government would contribute an equal amount towards crop compensation.

The estimates of the net loss would vary from project to project depending on the crops sown, the cost of inputs and the price the produce would fetch in the market. Sample studies would have to be made for the purpose for the principal rabi crops in the areas which are proposed to be taken up for land levelling and shaping during the rabi season."

The response to this scheme has not been encouraging.

4.18 The consequences of the gradualist approach to ayacut development seen so far are: (i) the physical problem of completing the chak development even over a period of two or three seasons; (ii) the problem of ensuring a proper quality of work; (iii) the financial problem of higher costs; and (iv) the problem relating to recovery of costs from the cultivators, which in fact flows from (i), (ii) and (iii). These consequences are present in both manual and mechanical execution of works. If these were the only problems, it

could be argued that the increased cost of completing the chak development over a period of two or three seasons should be borne by the Government (rather than passed on to the farmers) in the interest of irrigation development. More supervisory staff could be appointed to ensure quality. In more specific terms since the Government's investment in a major irrigation project comes to about Rs. 10,000 to 12,000 per ha. of (CCA), an additional cost of Rs. 1,000/- per ha. would not make much difference, if irrigation water is utilised fully and efficiently. This argument is similar to what has been stated in the FAO's Report (vide para 4.2) and merits closer scrutiny. We may re-phrase this argument as follows: Let us take one chak and assume that ayacut development work starts after water is available at the outlet for irrigation. Water courses and field channels will be excavated and water will be taken to the individual fields in the chak. Even if o.f.d. works are done gradually and even if the structures are put up later, all that will ensue is inefficient irrigation; more water will be required to irrigate the same crop over the same area. Since in any case availability of water in the reservoir is no problem in the initial stages of the project, we can afford to use up more water to irrigate the chak. By the time the tail-end distributories and minors are completed, full chak development in the upper reaches can be completed and efficiency in water use brought about. The only trade-off here is the cost increase mentioned above which can be taken care of by the Government.

4.19 In order to reply to the above argument, it is necessary to examine the present system of water sanction and water delivery to the cultivators in the chak. In Maharashtra water sanctions are given on a seasonal basis. In the old canal blocks, (like Nira and Godavari irrigation systems) sanctions are generally granted for periods of 6 years or more. Such long term sanctions of water used to be given in the old blocks, particularly for crops like sugarcane, fruits, etc. in order to enable the farmers to plan for such high investment crops on a long term basis. In those commands, where seasonal sanctions are given, on the 1st of October every year, a preliminary irrigation programme is prepared on the basis of the available water stored behind the dam and other factors like the anticipated overall river gains or losses between the dam and the weirs and the trend of water applications in the past. Applications are then invited from the cultivators and these are sanctioned by the 15th of October, to the extent of availability of water. The manner of delivery of water within the 'chak' in accordance with sanctions is known as the 'shejpali' system. Under this, a schedule is drawn up giving the turns of the different irrigators in each rotation. This schedule is worked out on certain assumptions regarding the time that will be taken for the sanctioned area of each cultivator to be irrigated and this time is again estimated on certain assumptions regarding transit water losses, etc. The essential thing to notice here is that it is the area to be irrigated and not time i.e. duration of release of water to the particular farmer which is the essence of the sanction.

Time is indicated in the irrigation schedule prepared more as a guide to the canal inspector. If any area cannot be irrigated within the time indicated, then the time automatically gets extended. According to the Maharashtra Irrigation Act, 1976 and the Bombay Canal Rules, 1934, each farmer is entitled to the amount of water that is required to fully irrigate the crops for which he has obtained a sanction. The canal inspector is responsible for ensuring that the farmers do not use excessive amounts of water and that each farmer gets the water according to his sanction. To illustrate the operation of the system with an example, if the first farmer (who, under the shejpali system is the tail-ender within the chak) starts his irrigation at 8.00 A.M. and it is calculated that in order to irrigate the sanctioned area five hours of irrigation are required, this calculation is done on the basis of certain theoretical assumptions regarding the state of maintenance of field channels, land development of the farmer's land, etc. But these assumptions are seldom realised in actual practice due to the state of disrepair of the field channels and the absence of proper land shaping. As a result, it generally takes much longer than anticipated for the first farmer to irrigate his field. Not only does it take a longer duration, but the duration is not predictable. The second farmer has, therefore, no means of knowing when his turn will come; farmers complain that they call labour only to send them away because water was not available at the expected time. Since under the shejpali system, the farmer is in principle entitled to an adequate amount of water to irrigate the area for which he

has obtained sanction, at the boundary of his field, the system does not put any pressure on the farmer to use water economically. Further, there is no collective pressure on the farmers in the chak to reduce the losses between the outlet and their fields, by maintaining the distribution system below the outlet properly, which is really their responsibility.

4.20 Reverting to the argument of para 4.18 let us suppose that as per the assumed cropping pattern, i.e. assumed when the project was designed, in a chak of 40 ha., 20 ha. can be brought under rabi seasonals, like wheat, for example. Let us also assume, optimistically though, that in respect of 20 ha. applications for water for wheat crop are received and sanctioned. Can irrigation be done, even inefficiently over 20 ha.? The answer is no. For, the rate of discharge at the outlet has an upper limit about 1 to $1\frac{1}{2}$ cusec. If the transit losses (due to structures not provided) and water application loss (due to o.f.d. works not done) are more, then each field will take much longer to irrigate than the duration as per calculation. As a result of such cumulative delays, in one cycle of 21 days (for wheat crop water is given once every 21 days) water cannot be given for the entire area. So the next cycle cannot start on the 22nd day; with the result that for every farmer in this group the gap between two irrigations will be longer than what is agronomically desirable. More water is in fact used, but without helping production much. In other words, while adequacy is ensured by using more water, timeliness is absent.

4.21 Under the shejpali system, it is impossible to achieve timeliness, that is, adherence to the schedule drawn up, unless the ayacut development work is done satisfactorily. The extent of divergence of the actual schedule of water delivery from the one drawn up, is directly proportionate to the extent by which the ayacut development work falls short of prescribed standards. The more haphazardly the work is done, the less the timeliness and predictability of water delivery, and consequently the less the response from the farmers to irrigation, as it does not bring them much by way of benefits. It has been reported that in the Command Area under the Mahi-Kadana irrigation project farmers who had their own irrigation sources (like dugwells, tube-wells) before the project came, still depend upon them (even though pumping costs are higher than flow irrigation rates), largely because of the uncertainty regarding timing in the case of canal water. (13).

4.22 From the foregoing discussion one thing is clear. Timeliness and reliability of water delivery can be ensured only if, (i) the entire ayacut development work is completed before irrigation commences, which we have seen cannot be counted upon as a feasible alternative or (ii) if ayacut development has necessarily to be taken up after the commencement of irrigation, the system of water delivery contains a built-in pressure on the farmers to avoid wasteful use of water by facilitating proper ayacut development. Taking (i) first, even assuming that the ayacut development work is perfectly done so that when water is released for irrigation, the theoretical calculation of time that will be

taken to irrigate the area for which sanction has been given, is actually achieved in practice, - which itself is a far-fetched assumption - there is no incentive to the farmers to maintain the system properly. The only way to build such an incentive into the system is to allocate water by time, rather than by area sanctioned. Coming to (ii), water allocation by time will not only motivate the farmers to cooperate with the LDA in ayacut development; but will also make them either offer their lands for o.f.d. works so that they will be able to spread the given water over a larger area, or to undertake these works on their own, over a period. Again, only allocation of water by time will put a pressure on all the farmers of the chak to come together and maintain the system below the outlet in good shape so as to minimise losses. Thus water allocation procedure is systemically connected with the ayacut development; and water allocation by time is thus as an effective instrument for achieving proper ayacut development. It is in this context that the introduction of the 'rotational water supply system' (RWS) (the name by which water allocation by time is known) has acquired importance recently. Under the RWS what is important is the rationing of water by time and it is the farmer's responsibility to make maximum use of the water that is available to him during the prescribed time. Thus, RWS is essentially the same as shejpali except that a schedule is prepared according to time and the guarantee is of certain flow for a certain duration in order to irrigate the sanctioned area. If the sanctioned area cannot be irrigated within the time allocated to the farmer,

the duration of water supply to him is not extended, as is done in the normal shejpali (vide para 4.19); the farmer whose turn is next would therefore know in advance when his field will receive water.

4.23 RWS is often looked upon as a water sharing method which ensures a more equitable distribution of water than the shejpali. That RWS is a good instrument for achieving balanced ayacut development is a factor not much appreciated. Reverting now to the example discussed in para 4.20 let us see what would be the situation, if instead of shejpali, RWS is introduced. Since the rotation of 21 days will have to be maintained, water will be supplied according to time and not according to the area to be irrigated. Each farmer will receive water for a fixed duration only. If he does not carry out o.f.d. works on his field, the area which he can irrigate within the duration of water supply will be less. There is therefore a motivation for him to get o.f.d. works done in his field. There is also a group motivation for all the farmers in the chak to maintain the system below the outlet properly so that water use can be maximised. Thus with RWS, there is a good chance of proper ayacut development being carried out. The essential element here is that the farmers' interests and those of the administration converge. RWS helps bring about such convergence. To cite an instance, RWS was introduced sometime ago in the Sri Rama Sagar Project, in Karimnagar District, Andhra Pradesh. The most significant achievement of the project authorities is in motivating the cultivators to take up o.f.d. works, by obtaining loans from banks; without o.f.d. works many farmers could not irrigate

their fields. Farmers are generally reluctant to invest in land development prior to getting water. But with extension work and demonstration of warabandi, ('wara' means turn; 'bandi' means fixation; so 'warabandi' is the local expression for RWS) farmers were finally motivated to take up o.f.d. works.

4.24 RWS was introduced in Maharashtra in the Girna canal system over a small area of 308 hectares during rabi 1978-79. Doubts were initially expressed whether the system would succeed on a large scale. In the second season the scale of experimentation was extended to another 10 minors, covering in all, an area of 4,300 hectares. It has been the experience of CADA, Maharashtra, that the results have been encouraging as brought by an evaluation study of the Girna experiment.(14). In this study it is observed that the "myth that irrigators in areas coming newly under irrigation would not take to night irrigation has been exploded on this minor". The system has also established better communication between the irrigators and the Department and has created conditions for the formation of water-management groups of farmers. Water losses have been reduced, because, "the farmer cannot afford to waste the waters, as he knows fully well that if he does not use the water, he will not get water for one or two weeks, depending upon which rotation he missed." (ibid).

4.25 The essential pre-condition to the introduction of RWS is that the canals and the distributories (and minors) should be maintained properly so that at the outlet the designed discharge is obtained.(15). The success of RWS

depends to a great extent on the cultivators' faith in the 'workability' of the system. When RWS is introduced in areas where irrigation is in vogue, the existing field channel system will have to be upgraded, as they are mostly in a state of neglect. In other words, those items for whose maintenance the Irrigation Department is responsible, that is, upto the chak outlet, require to be well-maintained; when RWS is introduced in an existing system, costs in the first year will be more than the normal level of maintenance costs, as the deferred items of maintenance (deferred due to lack of funds) will have to be carried out. The items below the outlet, for whose maintenance the cultivators are responsible, will have to be upgraded and brought upto a good standard; thereafter, the cultivators would come forward for maintaining them at their cost. It has been estimated that such improvements to 'common' items (vide para 1.4) would cost about Rs.175/ha; this roughly comes to more than 1/3rd the cost of new construction of such items. Since in the present scheme of things the cultivators are responsible for the maintenance of works done below the chak outlet, there is no allocation of funds for the improvement of these works in order to bring them upto a certain standard so that RWS can be introduced.

4.26 We shall now examine the reasons for the inadequate financial provisions made by the State Governments towards maintenance of assets created under the Plans. To do this, it is necessary to briefly refer to the Plan/non-Plan dichotomy which tends to keep the financial provisions made for the Plan high, at the expense of the non-Plan sector, under which maintenance is classified. The planning exercise both for the Five Year Plan as well as for the Annual Plan

begins with an estimate of the resources for the Plan in order to arrive at the size of the Plan. Out of the total resources, provision is first made for inevitable non-Plan expenditure. The balance, together with the resources that may be additionally mobilised is available to finance the Plan. Since additional resource mobilisation is always politically difficult, the easier way to increase the Plan size is to curtail the non-Plan expenditure to the bare minimum. Planning Commission, which approves the Five Year and Annual Plans of the States also severely restricts the non-Plan expenditure. 'Non-Plan' sector is looked after by the Finance Commissions. But even Finance Commissions have generally tried to assess non-Plan gaps, rather than 'non-Plan' needs.(16). The developmental impact of non-Plan sector was recognised, rather belatedly, at the time of constitution of the Sixth Finance Commission; the Commission, for the first time, was asked to make recommendations for 'adequate maintenance of capital assets' and for 'upgrading the administration (in backward States) with a view to bringing it to the levels obtaining in the more advanced States over a period of ten years.' (17). The Seventh Finance Commission also went into the question of adequacy of financial provisions for maintenance of assets made by the State Governments, and has made recommendations regarding norms of maintenance of assets created under the Plan.(18). But the Commission itself has observed that while reassessing the revenue expenditure projections of the States, it has, "kept in mind the desirability of the State Governments restraining the growth of non-Plan expenditure generally in

the interest of the provision of services to the taxpayer at the least cost to him, and of conserving resources for the development plans." (Ibid Chapter 2. para 20. page 10). This therefore has been the backdrop of the Commission's recommendations. So, even while recognising the neglect by the States of certain important non-Plan sectors, the Seventh Finance Commission was in fact guided by the overall consideration of "conserving resources for the development plans." But what is more important to observe is that there is no way of ensuring that the States would earmark adequate provisions for maintenance, or utilise the special transfers of resources recommended by the Commission for upgrading the administration in certain sectors, for that purpose.(19). In other words, the special revenue transfers recommended by the Finance Commission in order that the States will be enabled to provide adequately for the maintenance of assets, need not necessarily be utilised by the States for that purpose, and there is no built-in mechanism to ensure that the State Governments make financial provisions in their budgets for the different non-Plan activities to the extent and on the scale indicated by the Finance Commissions. While recommending devolution of taxes to the State Governments as well as grants-in-aid, the Finance Commissions assume a certain level of non-Plan expenditure, but financial provisions are seldom made by the State Governments even upto this level.

4.27 Let us now examine the financial provision made by Maharashtra for the maintenance of irrigation projects. The Sixth Finance Commission had suggested a maintenance norm of Rs. 25/- per ha. per annum of irrigation potential created.

This is inclusive of work-charged establishment but exclusive of regular establishment. This also does not include the maintenance of works below the outlet which, as observed earlier, is the responsibility of the cultivators. According to the orders issued by the State Government in 1974, the norm for maintenance expenditure laid down is Rs. 7/- per acre of irrigation potential created in the case of projects with ungated spillways and Rs. 8/- per acre of irrigation potential created for projects with gated spillways. This works out to Rs. 17.50 per ha. and Rs. 20/- per ha. respectively. The Seventh Finance Commission has laid down a norm of Rs.50/ha. per annum. This includes the cost of work-charged, as well as regular establishment. The cost of regular establishment roughly works out to about Rs. 25/- per ha. Therefore the recommendation of the Seventh Finance Commission is not much different from that of the Sixth and, considering the effects of inflation, in real terms, the norms of the Seventh Finance Commission appear even less adequate. The Seventh Finance Commission has however recommended 20% additional provision for maintenance on account of special repairs. Thus the total comes to Rs. 60/- per ha. or Rs. 24/- per acre. When the World Bank took up irrigation sector in Maharashtra for appraisal in 1978 the maintenance norm suggested was Rs. 50/ha. exclusive of establishment expenditure. This was considered to be the minimum requirement to keep the irrigation system in a proper state of repair. At the Fifth Conference of State Ministers of Irrigation held at Bangalore (10-12 November, 1980), the resolution adopted regarding the maintenance of irrigation

works recommended Rs. 75/ha. exclusive of cost of regular establishment. Table 10 below gives the maintenance provision required to be made as per the recommendation of the Seventh Finance Commission and the provision actually made. It will be seen that even the not too generous recommendation regarding maintenance of the Seventh Finance Commission is not followed.

Table 10

Provisions for maintenance expenditure on irrigation projects in Maharashtra

Category of Project.		1979-80	1980-81
Major	Irrigation potential ('000 ha.)	1124.62	1188.84
and Medium Projects.	Provision required as per VII Finance Commission (Rs. in lakhs)	337.38	385.71
	Actual (Rs. in lakhs)	271.48	306.26
Minor Irrigation Projects (State Sector).	Irrigation potential ('000 ha.)	338.38	363.30
	Provision required as per VII Finance Commission (Rs. in lakhs).	101.50	112.58
	Actual (Rs. in lakhs)	94.53	102.66

Thus even though the Seventh Finance Commission's recommendations are to be effective from the financial year 1979-80, they have not been implemented by the State Government.

4.28 In order to find out how far the actual provision for maintenance falls short of requirement an analysis was done of a part of the Girna System in June, 1979. For an area of 38,000 ha. of CCA the estimated cost of the desirable level of maintenance worked out to Rs. 19 lakhs, that is, Rs. 50/ha. exclusive of regular establishment. The actual grants were Rs. 20/ha. exclusive of regular establishment. For the entire Girna System of 57,000 ha. of CCA the maintenance grant provided was Rs. 11.45 lakhs. Out of this, Rs. 4 lakhs were to be spent on redundant staff (called the C.R.T. establishment) to be compulsorily paid because of awards (what is known as Kalelkar Award) and this expenditure was therefore not useful for maintenance. So, as against requirement of Rs. 32.5 lakhs (Rs. 28.5 lakhs + Rs. 4 lakhs for CRT) for 57,000 ha. the actual provision was Rs. 11.45 lakhs.

4.29 When even the provisions made for maintenance of the system upto the outlet are inadequate with very little chances of any substantial improvement (except in the World Bank assisted projects where because of the stipulations contained in the agreements with the World Bank, financial provisions as per the agreement will have to be made), the possibility of adequate funds being provided for upgrading the distribution net work below the outlet in order to improve the reliability of the network seems to be even smaller. It is against this background that one has to assess the chances of successfully introducing RWS on a large scale in all irrigation commands.

4.30 One aspect of the execution of land development works, which is very relevant to its success, but very seldom seriously noticed, is the human aspect. The staff borne on the divisions and sub-divisions of the LDA are constantly shifted from place to place as and when the works get completed. They do not get even the normal tenure of two to three years at one place. The earlier they complete the work at one command area, the earlier they are shifted. There is thus a built-in administrative problem in completing all the elements of ayacut development in a command area. An allied problem is that of retaining experienced and trained persons within the LDA itself when sub-divisions get shifted from one command area to another very far away. An instance is of transfer in 1979 of one division and two sub-divisions from Gondia in Bhandara district to the Krishna project in Satara District. After representations from the employees' association, it was decided that senior persons belonging to these sub-divisions and division would be retained in Nagpur region itself and absorbed in other vacancies, not necessarily in LDA, so that only junior persons, along with vacant posts, would be transferred to the Krishna project. This presents a problem of not only filling the vacant posts, which itself is a dilatory process, but also the problem of training the newly recruited persons. Even the junior persons who were transferred to Satara often went on leave and pressed for going back to the Nagpur region. The mobility of divisions and sub-divisions of the LDA is becoming increasingly difficult and contributes in no small measure to the difficulties in the proper implementation

of ayacut development works. This situation has created a not well concealed hostility between the LDA and the Irrigation Department. The LDA personnel nurture a feeling that they are required to do the spade work and once it is completed, when they have nothing to look forward to except moving to another command, the engineers enter and take over the real 'plums', namely, water distribution.

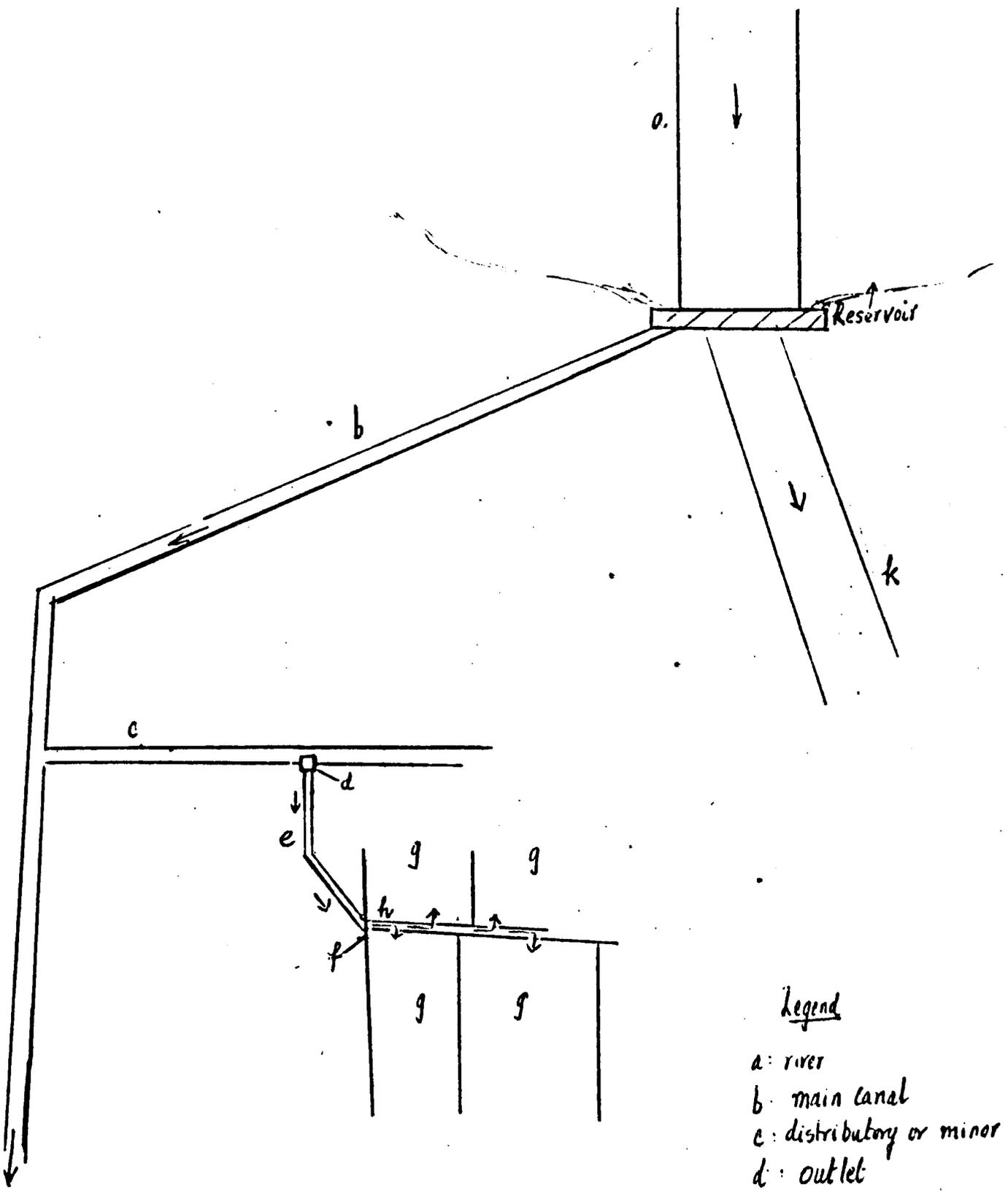
4.31 The above survey of the operational problems involved in ensuring adequate, reliable and timely supply of irrigation water at the farm gate leads to some conclusions. First, the number of agencies involved in any field operation should be kept at the minimum necessary level; increasing the number of agencies in the field would increase the problems of coordination. Secondly, while trying to solve a problem, it is necessary to understand its ramifications and its roots within the system and tackle them all at the same time. Piece-meal solutions, while they consume resources, do not produce the desired results. A 'systemic' approach to problem solving requires policy coordination; in this case for instance, between Finance Department, which provides for maintenance expenditure, and Planning Department, which presses for a bigger Plan.

Notes and References (Chapter 7)

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- (3) Ibid. Chapter 15. para 15.6.43.
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- (8) Sixth Meeting of the Standing Committee of the National Development Council, Summary Record, New Delhi, January 1958. p. 4.
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- (10) Food and Agriculture Organisation, Rome: FAO/World Bank Cooperative Programme: Land Development for Irrigation in India. W.P. 2/78 (Mimeo).
- (11) 'CADA areas' are the irrigation commands for which CADA has been established; 'non-CADA areas' are the remaining irrigation commands.
- (12) Ibid. Chapter 16. Para. 16.7.12. p. 147.
- (13) T.K.Jayaraman: Farmers' Organisations in surface irrigation projects. Two empirical studies from Gujarat State, India. Paper presented at the Workshop on Farmers' Organisations for Efficient Water Use in Irrigated Agriculture. Indian Institute of Management, Bangalore. August 6-10, 1980.
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- (15) S.N. Lele and Others. Ibid.
- (16) N.J.Jhaveri: Seventh Finance Commission's Recommendations: An Evaluation. Economic and Political Weekly, xiii, 51 and 52, December, 1978.
- (17) Government of India: Report of the Sixth Finance Commission. Chapter 1. para 4(v).
- (18) Government of India: Report of the Seventh Finance Commission. Chapter 2. para 37-53.
- (19) N.J. Jhaveri: Ibid.

Annexe (Chapter 7)

Diagram illustrating the terms used in Chapter 7, para 1.3.



Legend

- a: river
- b: main canal
- c: distributary or minor
- d: outlet
- e: water course
- f: field boundary
- g: individual farms
- h: field channel.
- k: river, downstream of the dam

C h a p t e r 8

Financial and Organisational Aspects of Command Area
Development.

C H A P T E R 8

Financial and Organisational Aspects of Command Area Development.

1. Introduction.

In the previous chapter we saw the problems encountered in the process of reaching the irrigation water to the field of the farmer. Our examination was mostly confined to the physical problems involved. In this chapter we shall analyse the problems involved in providing adequate funds for the development of the command area. The setting up of Command Area Development Authorities (CADA) in selected command areas is considered to be a major institutional innovation in the field of irrigation management. In this chapter we shall also examine how far CADA has succeeded in solving the problems in irrigation management.

2. Problems of financing command area development.

2.1 While dealing with the problem of financial resources for command area development (CAD), it is necessary to define the boundaries of our enquiry. Availability of financial resources is a major constraint on all planned development. Therefore the problem of resources for CAD cannot be sought to be overcome by taking the position that the total Plan size should be increased and more funds should be given for CAD. The questions which need to be posed are: Within a given Plan framework, is it possible to allocate more funds for CAD so that the development of command area can keep pace with the creation of irrigation potential? What factors have been responsible for the

level of fund allocation for CAD in the past not being high enough to ensure a balance between the construction of irrigation projects and the development of command area? What efforts have been made so far to tackle the problem of finding adequate financial resources for CAD? We shall take up these questions for analysis in this section.

2.2 Let us first take the main source of funds for CAD—namely, funds from the Plan. It has been estimated that, on an average, an investment of the order of Rs.1600 per ha (1) is necessary for ayacut development alone; unless for every hectare of irrigation potential created, adequate funds for ayacut development are provided, the potential created will remain mostly on paper and cannot be utilised. Considering that the project cost (i.e. upto the outlet) itself is generally about Rs.10,000/- per ha., over a period the plan provision for ayacut development should be about 16% of the provision made for irrigation projects. In addition, provisions will be required for infrastructural works like roads, market yards etc. as well as for supporting services, which would lead to an integrated development of the command area. We shall see what has been the experience here.

2.3 We saw in Chapter 2 how, during the early Plans, it was presumed that the CD organisation would be able to mobilise local manpower resources for the construction of water courses and field channels. No funds were therefore specifically earmarked for ayacut development in the early Plans. By the time the Fourth Plan was formulated, it was apparent that Government would have to assume responsibility

for executing the works below the chak outlet. The Fourth Plan document recognises this; to quote:

"For the optimum utilisation and conservation of water resources, as also for intensifying agricultural productivity, it has been recognised that proper distribution and management of water on the field is essential through measures such as land shaping, construction of field channels and provision of adequate drainage." (2).

But the financial provisions made did not reflect this recognition. As against a provision of Rs.771.36 crores for continuing major and medium projects (not taking into account provision for new start-ups), the provision made for 'area development' of which 'ayacut development' was a part, was only Rs.38 crores. In fact, in view of the almost negligible provisions earlier, much more than the 'rule-of-the-thumb' estimate of 16% was required to be provided in order to clear the backlog. With every Plan, there is an increasing awareness that command area development is essential to achieve the Plan targets for agricultural production, but when it comes to making adequate financial provisions, the necessary balance between the provision for the irrigation projects and that for command area development is not maintained. The figures do indicate how a great deal of cutting of provisions for irrigation construction and diverting them for command area development is necessary and possible.

2.4 During the Fifth Plan, 'Command Area Development' was started as a Centrally sponsored scheme. The flow of Plan funds to ayacut development therefore included,

besides the provisions made by the States, the funds from the Centrally sponsored scheme. Under this scheme, funds were made available to the States mainly to meet the expenditure on the setting up of Command Area Development Authorities (CADA) and on the cost of field channels; the scheme was made applicable to a few selected command areas. The total provision made under the head 'Area Development' in the Fifth Plan was Rs.206.59 crores; this provision was also inclusive of the provision for DPAP. The provisions for major and medium irrigation projects was more than Rs.3000 crores. In the Sixth Plan 1980-85, it has been proposed to achieve a target of 7.5 million ha of additional potential through major and medium irrigation projects; for this purpose a financial outlay of Rs.10,000 crores is indicated. Nearly 50% of this potential will be in CADA areas. (At present CADA areas constitute 42.6% of the total area for which irrigation potential has been created). The provision indicated for the construction of field channels (only in projects covered by the Centrally sponsored CAD Programme) is about Rs.300 crores. This is expected to be matched by provisions in the States' Plan by an equal amount (as CADA is now on 50:50 basis). It has been presumed that this will be supplemented by institutional finance to the extent of Rs.110 crores. We shall deal with the problems relating to institutional finance later in this section, but even assuming that the extent of institutional finance assumed would actually be forthcoming, the total funds that would be available for the CADA areas

alone would come to only about 7% of the total investment in irrigation projects.

2.5 The NCA (3) has estimated the backlog in command area development (in 1975) at 10 million ha. Taking into account additions to irrigation potential that would be created, the Commission has indicated a programme of action upto the year 2025. The Commission has assumed that between 1980 and 1985, the augmentation of potential would be 6 million ha. and the pace of CAD works would range from 1 million ha. to 1.4 million ha. per year. From the Sixth Five Year Plan proposals, it is seen that the additional potential to be created between 1980 and 1985 will be 7.5 million ha. As against this the programme for the construction of field channels during 1980-85, as indicated in the Sixth Five Year Plan 1980-85, would cover an area of 4.5 million ha; and that for land levelling/shaping an area of 1.1 million ha. This programme is only in respect of the projects covered by the Centrally sponsored scheme of CAD. Even assuming that an equal amount of work is done in the non-CADA areas, where the cost is to be borne entirely by the State Governments, it is clear that there will be a heavy backlog of land levelling/shaping work at the end of the Plan period. It is to be noted that while more potential than proposed by the NCA is planned to be created, the pace of CAD works is not proposed to be stepped up correspondingly, and this would increase the backlog rather than reduce it. It is also worth mentioning here that the Sixth Plan 1980-85 mentions utilisation of the assets already created as one of the Plan objectives;

TABLE 1

Year	Expenditure on ayacut development			Expenditure on major and medium irrigation projects				Total Plan (includ- ing EGS)	Total EGS	(8)as %(10)	(4)as %(8)	(4)as %of(10)	
(1)	Plan non- EGS (2)	EGS (3)	Total (4)	Percent- age (3)to(4) (5)	Plan non- EGS (6)	EGS (7)	Total (8)	Percent- age (7)to(8) (9)	(10)	(11)	(12)	(13)	(14)
	(Rs. in cr.)				(Rs. in cr.)				(Rs. in cr.)				
1974-75	6.09	0.11	6.20	1.77	47.33	0.63	47.96	1.31	300.98	13.72	15.93	12.93	2.05
1975-76	5.00	3.56	8.56	41.58	66.73	2.08	68.81	3.02	385.59	34.43	17.85	12.44	2.21
1976-77	5.09	4.89	9.98	48.99	98.41	7.60	106.01	7.16	514.41	49.88	20.61	9.41	1.91
1977-78	4.12	5.66	9.78	57.87	135.30	9.28	144.58	6.41	677.17	49.20	21.35	6.76	1.44
1978-79	10.60	6.60	17.20	38.37	135.58	9.80	145.38	6.74	781.98	68.87	18.59	11.83	2.20
1979-80	4.15	7.52	11.67	64.43	161.00	8.89	169.89	5.23	803.82	89.45	21.14	6.87	1.45

the pattern of financial provisions proposed for the irrigation sector is not in consonance with these objectives.

2.6 In Maharashtra, since 1974-75, the work of ayacut development is being executed mostly under the Employment Guarantee Scheme (EGS); in the initial years of EGS, work done under EGS was relatively less, but it has now increased substantially. In the next chapter we shall analyse the problems inherent in taking up ayacut development works under EGS. Table 1 gives the expenditure on ayacut development in the State since 1974-75, as well as expenditure on the construction of major and medium irrigation projects. This information covers both CADA as well as non-CADA areas. The expenditure from Plan funds shown for ayacut development represents expenditure which could not be financed from the EGS fund, like skilled labour, cost of materials etc. in excess of the permissible limit under EGS. The expenditure pattern would show that even though in Maharashtra the situation is better than the all-India picture (largely thanks to EGS) there is still a substantial lag. Moreover, because of the inherent uncertainties regarding completing any work in a time-bound manner under EGS, a problem we shall analyse in Chapter 9, there is no steady execution of the ayacut development programme, as the percentages in col.(13) of Table 1 would show. In financial terms, it is estimated that in order to cover the existing backlog, an amount of Rs.31.76 crores will be required for non-CADA projects and Rs.41.09 crores will be required for CADA projects, at present day costs. Considering the annual rate of funding (incl. EGS), it will take a few years to clear

TABLE 2

Statement showing spill-over costs beyond March '80 and outlays approved for the Sixth Plan period and Annual Plans 1980-81 and 1981-82 in respect of major and medium irrigation projects.

(Rs. in crores)

Sr. No.	Category of projects	Latest estimated cost	Spill-over beyond March 1980	Outlays									Spill-over beyond March 1982	
				Sixth Plan 1980-85 (assumed)			Annual Plan 1980-81			Annual Plan 1981-82 (assumed)				
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1.	*On-going Major Irrigation Projects	2660.47	2032.84	972.14 (550.93)	30.00 (19.18)	1002.14 (570.11)	141.99 (102.00)	9.50 (7.50)	151.49 (109.50)	1881.35	166.75 (111.96)	9.50 (7.50)	176.25 (119.46)	1705.10
2.	*On-going Medium Irrigation Projects including Flood Control works	427.33	315.66	167.12	10.00	177.12	19.22	0.85	20.07	295.59	30.46	0.85	31.31	264.28
	Total	3087.80	2348.50	1139.26 (550.93)	40.00 (19.18)	1179.26 (570.11)	161.21 (102.00)	10.35 (7.50)	171.56 (109.50)	2176.94	197.21 (111.96)	10.35 (7.50)	207.56 (119.46)	1969.38

* No new major and medium irrigation projects have been included in the Sixth Plan as approved by the Planning Commission. Figures in bracket indicate outlays pertaining to World Bank assisted projects.

the backlog. But during the Sixth Plan, more imbalance will be created and the backlog may actually increase.

2.7 An obvious solution appears to be to divert a part of the outlay on the construction of irrigation projects to ayacut development (within the overall Plan outlay). Any other solution (within the framework of a given Plan size) would mean cutting down the size of some other sector which, apart from being difficult, may affect inter-sectoral balances. Let us examine the difficulties involved in increasing the financial allocation for CAD, by reducing that for the construction of irrigation projects. At the State level, the main difficulty is the problem of too many projects under execution and the pressure to keep work on all of them going at a certain minimum pace; even this requires more funds than what is provided for the Irrigation sector. Table 2 gives the spill-over costs of the major and medium projects under execution in Maharashtra; at the existing level of funding their completion will take several years.

2.8 In fact, the spill-over costs shown in the above Table will actually turn out to be more than what has been shown due to cost increases every year. The extent of cost increase in a few projects selected from different States is given in Table 3 to indicate the magnitude of the problem.

TABLE 3

Original estimated costs and the latest estimated costs of a few major irrigation projects.

Name of the Project	Year of approval/ commence- ment	Rs. in crores		Target year of completion as on 30-6-80
		Original estimated cost	Latest estimated cost	
1.Nagarjunasagar(A.P.)	1959	163.54	533.00	1984-85
2.Pochampad Stage I(A.P.)	1964	40.10	350.00	1984-85
3.Gandak (Bihar)	1961	36.56	415.90	1985-86
4.Kadana (Gujarat)	1966	16.27	91.20	1981-82
5.Malaprabha(Karnataka)	1963	19.19	162.00	1984-85
6.Jayakwadi Stage I (Maharashtra)	1965	38.46	156.40	1984-85
7.Kukadi(Maharashtra)	1968	17.90	140.40	1984-85
8.Warna (Maharashtra)	1966	31.09	128.60	VII Plan

2.9 Thus given the situation of too many ongoing projects to be adequately funded, any reduction in the allocation for irrigation construction would be difficult. There are, in fact, many reasons how this situation of huge spill-over costs came about. Important among them are:

(i) Political pressures, regional interests pressing for commencement of new projects even at the expense of delaying the completion of ongoing ones.

(ii) In order to get more projects cleared by the Government of India, the States show smaller estimated costs initially. Projects already started are used as bargaining points in inter-State water disputes.

2.10 In Maharashtra, there is yet another problem in making adequate financial provisions in the Plan for command area

TABLE 4

Road Works in Command Area Development Authority - Requirements and Provisions.
(Rs. in Lakhs)

Name of CADA	D.P.D.C. (District Level)						State-Level					
	1978-79		1979-80		1980-81		1978-79		1979-80		1980-81	
	Require- ment	Provi- sion	Require- ment	Provi- sion	Require- ment	Provi- sion	Require- ment	Provi- sion	Require- ment	Provi- sion	Require- ment	Provi- sion
1	2	3	4	5	6	7	8	9	10	11	12	13
CADA Aurangabad	112.22	37.70	297.82	28.66	91.81	13.00	-	85.00 (Machinery)	-	190.00		Jayakwadi 210 210 Upper Penganga 20 20
CADA Jalgaon (Girna)	12.80	2.14	12.80	4.80	10.00	3.00	-	-	-	-	-	-
CADA Nagpur (Bagh-Itiadh)	0.50	0.41	10.00	3.07	20.00	0.76	-	-	-	-	5	5
CADA Pune (Bhima)	Nil	Nil	25.00	-	40.00	3.55	-	-	123	123	145	145
CADA Satara (Krishna Warna)	Nil	Nil	7.14	-	Nil	-	-	-	100 Krishna	100 Krishna	115 Krishna	115 Krishna
CADA Ahmednagar (Kukadi)	-	-	-	-	-	-	-	-	65 Kukadi	65 Kukadi	80 Kukadi	80 Kukadi
Total:	125.52	40.35	352.73	36.53	161.81	20.31	-	85.00	228	518	580	580

development, namely district planning. Even though major irrigation projects are classified as State level schemes, and therefore to be funded at the State Government level, the CAD components are classified as district level schemes within the purview of the DPDCs. The DPDCs are often very reluctant to provide funds for command area development arguing that the major irrigation commands have already benefited substantially as a result of investments in irrigation (funded at the State level) and therefore the funds placed at the disposal of the DPDC should be earmarked for other areas of the district. This argument particularly affects the provisions for roads, market yards and the various supporting services in the command areas. Table 4 gives the figures relating to the requirements of and the funds allotted to some of the CADA projects for the construction of roads in the command areas. A word of explanation is necessary why for some projects (like Jayakwadi, Bhima etc.) mentioned in Table 4, full provisions are made at the State level and why these are not 'left to the discretion of the DPDCs'. The reason is that these projects are financed by the World Bank, and the State Government is committed to adhere to a certain schedule of balanced implementation of the projects. For these projects provisions are therefore made at the State level, not only for the construction of the projects themselves, but for all the CAD components also (except the 'individual' components of ayacut development), so that CAD components are taken up side by side with the creation of 'potential'.

2.11 We thus have three categories of major and medium irrigation projects. World Bank assisted projects get fully funded in order to adhere to the implementation schedule laid down in the covenants. Second, come the CADA projects which receive funds from the Centre for CAD works though not fully, as Central assistance is only for a few items, and even in respect of these 50% of the cost is to be borne by the State. Third, come the other (several of them) projects, where the CAD works are entirely funded by the State. It is also worth noting that the World Bank projects absorb a substantial portion of the total funds earmarked for the irrigation sector. The following Table would support this.

TABLE 5

Year	Total provision for major irrigation projects (Rs. in crores)	Provision for World Bank assisted projects (Rs. in crores)	Percentage of (3) to (2)
(1)	(2)	(3)	(4)
1980-81	142.00 (50 projects)	102.00 (8 projects)	71.83%
1981-82	176.25	119.46	67.77%

The above situation has one implication on ayacut development. Funds earmarked for World Bank projects cannot be reduced; in any case, as stated earlier, these are treated as 'composite' projects and adequate funds are provided for CAD also. Funds allotted for non-World Bank projects cannot be reduced since the allocation is already small; the Irrigation Department would require a certain minimum level of funding in order to keep the irrigation staff at the

projects fully engaged. It is difficult to withdraw the staff and suspend work on a project, even temporarily, as this would invite political intervention. The chances therefore of any diversion of funds for CAD from the Irrigation Sector (Construction) outlay are not bright.

2.12 The Planning Commission in its circular dated the 10th October, 1979 addressed to the State Governments has recommended that the water courses/field channels should be constructed at project cost upto blocks of 5 to 8 hectares instead of the project cost covering only work upto the outlets as at present. If this is followed, then it will help matters considerably, as the funds provided under the irrigation sector will be partly utilised to cover certain elements of ayacut development, namely, water conveyance from the existing outlets upto 5 to 8 hectare point. It is understood that the States have not yet taken action on this circular. In Maharashtra, a decision to follow this suggestion has been taken in respect of World Bank assisted projects. It is necessary to examine what the phrase 'at project cost' means. The recommendation of the NCA was that the project report of the irrigation project itself should include CAD components (3) and that this composite project should be taken up for implementation in a balanced manner. The Commission's recommendation, as mentioned above, is being followed in respect of World Bank projects where the composite project, including all the CAD components, is to be implemented over a specific period. But the phrase 'part of the project cost' has a more limited connotation in the circular of the Planning Commission. What is

indicated in this circular is that the funds provided for irrigation projects in the Plan should be utilised partly for the construction of water conveyance below the outlet upto the 8 ha point. The intention is that thereby the existing imbalance between the construction of the parent irrigation system, and the construction of works below the outlet will be reduced. The point is whether, in the background of the above analysis, this will happen. Will the Irrigation Department agree to part with some of its sectoral allocation for construction in favour of an activity which is not within its domain of responsibility?

2.13 The problems relating to making adequate provision in the Plan for command area development have been analysed above. The problem is obviously quite serious. It is however somehow glossed over in the Plan documents which forecast growth rates for agriculture merely on the basis of potential to be created. It is pertinent to ask why the term 'potential' should not be taken to imply only the potential created in terms of areas in respect of which the ayacut development is completed. Only this 'potential' will then figure in the Plan documents and further calculations of agricultural and overall growth rates and targets of agricultural production will then be based on this figure. The Government of India constituted a Committee in 1978-79 on Irrigation Statistics under the Chairmanship of M.N. Venkatesan (CWC Member) to go into the reporting of potential in terms of the area actually irrigable after the distribution system is ready upto each land below the outlet and of the area irrigated. The Report of this Committee is

awaited.

2.14 Another source of funds for ayacut development is institutional finance from the LDB and commercial banks to be refinanced by the ARDC. We have already mentioned how the Sixth Plan 1980-85 places heavy reliance on institutional finance for the execution of ayacut development. This assumption is based on the premise that once potential is created and water is made available at the outlet for irrigation, the cultivators within the chak would, on their own, come forward for taking bank loans for completing the ayacut development works below the outlet. We have already discussed the problems involved here and seen how it would not be realistic to take for granted such a group action on the part of the cultivators. One solution which was thought of was that a Government agency could obtain institutional finance on behalf of the cultivators and complete the ayacut development work. In effect, this would mean that instead of Government spending Plan funds for ayacut development and eventually recovering the cost from the cultivators, it would, in view of the shortage of Plan funds, obtain institutional finance for completing this work. The Government agency which was set up for this purpose is the Maharashtra Land Development Corporation (MLDC) which was incorporated in 1973. When the MLDC was set up, it was thought that it would be able to obtain loans from financial institutions and undertake ayacut development work; and that it would repay the loans to the financial institutions and recover the costs of ayacut development from the cultivators. Its role was therefore to be partly that of a financial intermediary

and partly that of an agency executing the ayacut development works on behalf of the cultivators. But this arrangement was not acceptable to the ARDC which insisted on a direct nexus between the lending institutions and the borrowing cultivators. In other words, according to the ARDC, the borrowers should apply for bank loans and obtain them and MLDC could at best act as a contractor of the cultivators for carrying out the works. The loans would be sanctioned to the cultivators but actually disbursed to the MLDC for executing the works. This arrangement did not work for obvious reasons. First of all, the farmers in the chak are not generally agreeable to borrow. There is a feeling that if Government executes the work out of budgetary funds and treats the cost of works as a Government loan to them, there is a good chance of the loan eventually being written off; whereas it is more difficult to default on bank loans. The second reason why the arrangement did not work was that not all farmers in the chak are eligible for a bank loan even if they applied for them, because of their being defaulters or because of their titles to their holdings not being clear. Unless all the farmers in the chak obtain bank loans, it is obviously not possible for the MLDC to take up ayacut development work. For, the common items of ayacut development are indivisible and will have to be completed even if only a few farmers in the chak take bank loans. The ayacut development of the chak cannot be funded partly from bank loans and partly from Government funds; that will complicate the maintenance of accounts as the rates of interest differ and so do the repayment periods. At present, this is where the matter

stands, and the problem has defied a satisfactory solution for over five years. It is unlikely that under this arrangement institutional finance would flow to ayacut development on a big scale.

2.15 The banks would be happy to give a bulk loan to MLDC. This will be economical and the banks are assured of their recovery since, after all, they have to recover the funds from a Government undertaking. The State Government and the MLDC would also prefer this arrangement, because institutional finance for ayacut development would augment the Plan funds available. The farmers would prefer this arrangement too, for, as far as they are concerned, they do not have to incur a bank debt; the cost of works will be treated as Government loan to them. But ARDC is not agreeable to this; the argument being that since the loan is for a purpose which is really the responsibility of the cultivators, they should be the borrowers. The tangle is yet to be satisfactorily resolved.

2.16 Recently, the ARDC has agreed to release interim finance to the MLDC for ayacut development on the understanding that within 12 months MLDC would persuade the farmers to take recourse to bank loans so that this interim finance could be converted into regular loans in favour of the cultivators. For the ineligible farmers, it has been agreed that, instead of from the banks or from the Government, loans would be given from a special loan account created by the ARDC on the same terms as bank loans. But such a conversion of interim finance into a regular loan is not going to be easy. The difficulties mentioned by the banks and the MLDC are as

follows:-

(i) Lack of adequate staff at the branches of the participating banks for processing loan applications from the farmers. Banks feel that processing a large number of loan applications for small amounts is proving costly.

(ii) There is a peculiar difficulty regarding obtaining the necessary revenue records of the farmers to secure bank loans from them. The cultivators are not much interested in obtaining bank loans. It is the MLDC which is interested in converting the interim finance into a regular bank loan for otherwise, the MLDC will be required to repay the interim finance to the banks which really means that the State Government will have to make the repayment. This would virtually amount to executing the works from Government funds. Short of pressurising the farmers to take bank loans, MLDC is actively campaigning with the farmers to apply for bank loans; to make a reluctant farmer apply for a loan is not an easy task. A farmer who, when he applies on his own for a loan, would take a lot of trouble to obtain the necessary documents (particularly relating to his title, otherwise known as VII-XII extract), is not very much enthusiastic about getting his loan papers completed when cajoled to do so, against his inclination. MLDC has therefore got to do this job of bringing the farmers and the banks together when the concerned parties are not overly anxious to come together. The State Government had addressed letters to all the Collectors to make revenue records available to the MLDC on a priority basis. This has not been happening. MLDC is finding it difficult to get the

Talathis (Patwaris) to certify the extracts of revenue records. MLDC has reported that in the case of Pus Project it had spent almost Rs.1,200/- in getting the extracts from the Talathis and in the case of Bagh and Itiadh Projects, it had to spend almost Rs.15,000/- because, according to the Staff Union of the Talathis they had a right to demand this fee from the Corporation.

(iii) Since the field staff of MLDC who are required to get the ayacut development works executed are busy collecting loan applications and getting the revenue records, they have not been able to find time for executing the works as a result of which the cost of the works and consequently the loan component go up.

(iv) This kind of approach presents another problem, as can be expected. It has been reported that in Gujarat when the farmers received notices for the first time in 1978 from the LDB for paying up the interest for the first two years, they tried to avoid payment by raising many complaints regarding the quality of work done in the chak; some of them even denied having put their signatures on the consent form (for bank borrowing) prescribed by the ARDC.

2.17 The following Table gives the amount of institutional finance required and amount finally made available so far in the last five years.

TABLE 6

Table giving details of institutional finance for ayacut development.

	<u>(Rs. in crores)</u>
	Rs.
1. Projects sent to ARDC	111.21
2. Projects sanctioned by ARDC	67.00
3. Applications for interim finance made.	8.80
4. Interim finance actually released.	3.22
5. Interim finance converted into regular loans to cultivators (as on 29.11.1980)	1.10

From the above position, it is clear that it will not be realistic to rely upon institutional finance for ayacut development on a large scale.

2.18 The Government of India which was very enthusiastic about institutional finance for ayacut development seems to have been somewhat disillusioned . In a communication to the State Governments, dated 9th July, 1980 Government of India (Ministry of Agriculture) has stated that no recourse to institutional finance is to be had for the construction of field channels. Instead, Government of India has proposed Central assistance to the States on a matching basis to meet the initial cost of construction of field channels. This means, initially the cost of field channels will be incurred by the State and Central Governments. Under the scheme, only 50% of the cost will be recovered from the cultivators, the remaining treated as subsidy. We would thus be having

the Centrally sponsored scheme for CADA projects administered by the Ministry of Irrigation at the Centre and another similar scheme for non-CADA projects administered by the Ministry of Agriculture. But ultimately it all comes to meeting the initial cost of CAD from Plan funds, in some form; the source, whether it is one Ministry or another or under one scheme or another is not very material as long as total funds available from the Plan are adequate. We have already seen the inherent problems here.

2.19 Even the World Bank, which is generally in favour of institutional credit being availed of by the farmers for CAD works, has made it clear that in the composite irrigation projects, funds for all common items of ayacut development should be provided from Plan funds. This approach is the latest in a series of solutions tried and given up; in essence it consists of:

(a) Financing all common items from the Plan funds, so that the basic infrastructure for the utilisation of irrigation is prepared; (b) Leaving it to individual farmers to borrow from the banks to get land levelling/shaping work done on their lands; (c) Creating conditions which will motivate the farmers to get land development work on their fields executed, so that water can be applied economically and effectively. Introduction of RWS is one such motivating factor. This aspect was discussed in Chapter 7.

3. Command Area Development Authorities (CADA).

3.1 The problems of CAD have thrown up a good deal of institutional innovations. One such, namely the creation of MLDC has already been referred to. The most important

among these innovations is the setting up of the Command Area Development Authorities (CADA). In this section, we shall trace the history of the creation of CADA, and the objectives of CADA, as visualised when it was set up. We shall also examine whether these objectives have actually been realised. Finally, we shall refer to some of the recent developments in the field of irrigation management which have indicated a new role for CADA.

3.2 The creation of CADA was recommended by the NCA in one of its interim reports. A concrete step was taken towards the setting up of CADA in May 1973. In a letter dated 19th May 1973 addressed to the Chief Ministers, the Union Minister of Agriculture stressed the need for maximising the production of foodgrains in irrigated areas. It needs to be recalled that in 1973 the country was facing a very difficult food situation. It was suggested that for a few selected command areas in every State, a group of specialists in agronomy, soils, irrigation engineering and credit should be set up to consider what should be the best cropping pattern; and that in doing so the group should "particularly keep in mind the need for the introduction and enforcement of a system of equitable distribution of water in each outlet command through a roster system (warabandi or osrabandi) and the timing of watering in accordance with the cropping patterns selected." (5) The other suggestions made to the State Governments were:

(i) State Irrigation Acts should be amended in order to make the introduction of warabandi possible; (ii) requirements of all inputs for all the irrigated areas should be

met on a top priority basis; (iii) in the selected major commands, extension organisation should be strengthened; a coordinating agency headed by a senior officer should be created in each of these irrigation commands which should be in a position to function effectively and speedily.

3.3 These suggestions were followed, in June 1973, with discussions between the Union Ministry of Agriculture and the State Governments.(6) In these discussions there was unanimity in regard to the following points:

(i) Whatever may be the structure of the Area Development Authorities considered appropriate by the States having regard to the local conditions, a unified organisation with a direct line of command should exist in so far as development of irrigation, agriculture, soil conservation and co-operation are concerned. There should also be an in-built system for close liaison with other departments dealing with allied programmes; (ii) For on-farm development, it was visualised that there should be a Land Development Corporation or a Farmers' Service Society for meeting the requirements of funds. Such a Corporation or Society should have an investment programme with owned funds as well as funds obtained from the various financing institutions; and (iii) Proper arrangements should exist for execution of on-farm works on behalf of the beneficiaries whenever this is warranted.

3.4 The measures mentioned above were suggested for adoption by the State Governments in a letter addressed by the Union Minister of Agriculture to the Chief Ministers in August 1973. It was also suggested in this letter that:

(i) State Governments should take immediate action to set up a Command Area Development Authority for each of the selected command areas. The jurisdiction of the Authority would be the gross command area of the project. A C.D.block was to be the unit for determining the jurisdiction of CADA, that is, even if a portion of a C.D.block is in the command area, the entire block would come within the jurisdiction of the authority.

(ii) A separate department should be set up at the State level, to be called Water Utilisation and Command Area Development Department; and the Secretary of this department should be designated as ex-officio Secretary in Agriculture, Revenue, Cooperation, Forests, P.W.D., Irrigation, Planning and Finance Departments, in respect of command areas covered by CADA.

(iii) State Governments should enact legislation which would give clear powers to the State Government for executing all on-farm development work in the command area, including the realignment of boundaries to be carried out even without the consent of the landholders.

Particular mention was also made in this letter of the need to undertake the remodelling and modernisation of the delivery system above the 'one cusec outlet' as well as the need to provide intermediate and major drainage; it was suggested that the State Governments should give highest priority to these items out of funds earmarked for major and medium irrigation schemes in the State Plan. This suggestion clearly implied that the reliability of the existing systems should be improved, a point we discussed in the last chapter,

in the context of RWS.

3.5 CADAs were set up for many command areas in the country during the 70s. CADA is not, strictly speaking, a new programme, like the SFDA or DPAP, but an administrative arrangement introduced with a view to bringing under one umbrella the different departments connected with agricultural development, operating in the command area. CADA, (despite the word 'Authority' in its name) is not a statutory body in most States, but just an administrative unit. It is created by an order of the State Government, unlike the Z.P. which is a statutory body. Its budget is a part of the State budget. The CADA set-up in Maharashtra is given in Annexe 1.

3.6 The functions assigned to CADA differ from State to State. In some States like Maharashtra, the irrigation management is entrusted to CADA, in addition to ayacut development and coordinating responsibilities. Irrigation management includes maintenance and management of the canals, distributories etc., water sanctions and the operation of the system. The organisation chart of a typical irrigation management division is given in Annexe 2. In some States like A.P., these divisions have not been placed under the control of CADA. This is obviously not a satisfactory arrangement.

3.7 Certain questions regarding CADA were, however, not answered when these Authorities were set up, and they still remain unanswered. First of all, what will be the relationship between CADA, which is mainly an administrative unit, and the ZPs which are elected bodies? What is the relationship between CADA which does not have an organisation

either at the district or at the block level for inputs and other services, and the district and block level functionaries of the line departments? Even though, as we saw, it was clearly the intention to have a multi-disciplinary set-up under the control of the CADA Administrator, with the field units in the command area of the different departments, this has not, in practice, happened. In the office of the CADA Administrator, fairly high ranking officers of the Agriculture and Cooperation Departments have been provided as staff officers of the CADA Administrator, but they have no control over the field level functionaries of their respective departments. Whatever cooperation they enlist is more on account of their connections with their line departments than any real administrative authority they wield. Thus, in actual practice, the concept of CADA as a multi-disciplinary set-up has been a non-starter.

3.8 We shall analyse this last statement in some detail. Taking input planning and supply first, it was seen in Chapter 5 how input planning is being done. What, in fact, is happening now is that the CADA Administrators send the requirements of critical inputs like seeds, fertilisers etc. as estimated by them for their respective command areas to the ZPs concerned, who include these in their own estimates of requirements for their districts before sending them to the DoA. The ZPs also independently collect the requirements of inputs through the gram-sevaks even in respect of blocks coming within the command area. There is thus a duplication of functions with a net

result no more effective than what it would be otherwise.

3.9 As regards agricultural extension, even prior to the establishment of CADA, special units called Irrigation Units (each Unit comprising one Agricultural Officer and ten Agricultural Assistants) had been set up in the Directorate of Agriculture (under Ayacut Development Wing of the LDA), in order to take effective steps by way of propaganda, demonstrations, farmers' training etc. in the command areas. It was thought that in addition to the normal extension provided by the gramsevaks under the BDOs, intensive extension was necessary to guide the farmers in their initial years of switch-over to irrigated farming. After the establishment of CADAs, these units were transferred to the concerned CADA Administrators; in the non-CADA areas they still remain with the Agriculture Department. Recently, as we saw in Chapter 4, it has been decided that the entire agricultural extension will be controlled by the DoA under the proposed T&V system of extension. Therefore the Irrigation Units mentioned above have been merged with T&V and placed under the DoA. Thus, CADA will not have agricultural extension to look after.

3.10 The third function envisaged for CADA was to obtain institutional finance for ayacut development works. We have seen the problems relating to institutional finance. What is even more surprising than the problems vis-a-vis the financial institutions are the problems of coordination between CADA and MLDC. It has been reported that MLDC finds non-cooperation from the CADA Administrators as one

of the reasons for its inability to convert interim loan into regular loans to the cultivators.

3.11 Another role envisaged for CADA and what, in fact, is its main role today is the planning and execution of ayacut development works. Till recently, in the command areas covered by CADA, three agencies were on the scene, namely, Irrigation Department whose responsibility was up to the outlet, LDA (Agriculture Department) with responsibility below the outlet and the CADA with responsibility for Command Area Development but with no field implementation agency responsible to it. Its role was mainly one of co-ordination between LDA and the Irrigation Department. The experience however was that such a coordination was difficult to bring about in an effective manner, by an agency (like CADA) to whom the local officials of the line departments, namely, Irrigation and Agriculture Departments, were not answerable. Without either administrative control or budgetary control, it was not possible for CADA to be an effective coordinator. Recently, the State Government has tried to remedy this difficulty by placing 10 divisions out of 15 Ayacut divisions of the LDA directly under the respective CADA Administrators. These units are now administratively subordinate to the respective CADA Administrators. Reportedly, this arrangement has to some extent solved the problem, but the problem now in the CADA areas is coordination between CADA and the line functionaries of the Irrigation Department. In fact, what used to be the problem of coordination between Irrigation Department and the LDA has now become the problem of

coordination between CADA and the Irrigation Department as far as the CADA areas are concerned.

3.12 To sum up, out of the five distinct functional areas in the development of irrigated agriculture, namely, (i) construction of projects, including conveyance system upto chak outlet; (ii) ayacut development work below the outlet; (iii) planning and execution of other components of command area development, like roads, market yards etc. in the command area; and (iv) provision of services, like extension, input supply, credit in the command area; (v) management of the irrigation system, the last four were to be placed under the control of CADA. In practice, in Maharashtra, CADA is in charge of only (ii) and (v) above; in some States, as observed earlier, even (v) is not under CADA.

3.13 The suggestion of the Government of India (vide para 3.4) that at the State level the Secretary in charge of CAD should be designated ex-officio Secretary of other concerned departments was obviously unworkable. Almost every field of development involves the support and co-operation of many functional departments. Let us take the development of sugar factories for example. It involves land acquisition (Revenue Department), supply of cement and steel (Civil Supplies Department), irrigation development in the area to be served by the factory (Irrigation Department, GSDA, LDB etc.), and so on. It cannot be argued that for proper development of sugar factories, the Secretary concerned to be called ex-officio Secretary of all the other departments (connected with different

aspects of sugar factory development) as well. The Secretary of the Power Ministry cannot be designated as the Chairman, Railway Board, just because power generation depends crucially upon movement of coal by the Railways. If the Secretary of every functional area is also made Finance and Planning Secretary, which is really the implication of the suggestion of the Government of India, one can imagine the repercussion.

3.14 On the positive side, the management of the irrigation system is with CADA (at least in Maharashtra) and this has certain advantages. Prior to CADA, once irrigation commenced, the management of the system, like opening and closure of the canals, rotation of water supply to the various distributories, and water sanction and allocation within the chak were given to the irrigation management wing of the Irrigation Department. Side by side, construction work also would be going on, either on the headworks, or on the canals and distributories. LDA was also on the scene for ayacut development below the outlet. Problems of co-ordination would arise between the construction and management wings of the Irrigation Department itself and also between either of them and LDA. With CADA being put in charge of the management of the system and the command area development at least one problem of coordination has been overcome.

3.15 Second, and probably a more important beneficial fall out of CADA is that land and water management will, over a period, become more professionalised. We have seen how the LDA staff lack the necessary engineering expertise

for the job. It is increasingly recognised that this is an area which is acquiring the status of a separate discipline. In Maharashtra (as also in Gujarat and M.P.) an institute has been set up to train engineers in land and water management. Eventually, they are expected to replace the LDA personnel in the command areas. This development was not originally envisaged but is more a by-product of the CADA, which might eventually be CADA's *raison d'etre*. Thus CADA, which was conceived as an umbrella organisation to deliver a package of services to the cultivators, eventually became a highly specialised organisation, with specialism in an emerging discipline. But how soon this will come about is difficult to say. There are already forces retarding this development.

3.16 The idea of a separate cadre for land and water management was mooted first in Maharashtra when the World Bank took up for study the irrigation development in Maharashtra along with the Planning Department of the State Government. The World Bank, Government of India and the State Government agreed that the existing cadre of engineers in the Irrigation Department should be bifurcated into irrigation construction cadre and irrigation management cadre. For instance, in most Electricity Boards in the country, there are separate cadres for power generation and power transmission and distribution. The reasons for this decision were: (i) At present, the irrigation management wing of the department does not attract the best engineers. Engineers posted on the management side are

eager to get back to the construction side. (11) If a cadre of specialists in land and water management is to be built up, the irrigation management engineers should stay within this area of specialism. For, otherwise, the training will be of no avail. But this move is not welcomed by the irrigation engineers; those who are likely to be allotted to the management cadre do not relish the idea of spending their entire career in that field. So, in Maharashtra, the question is still under discussion. The matter came up for discussion in the Fifth Conference of State Ministers of Irrigation held at Bangalore in November, 1980 and the resolution on this question reads as follows:-

"A strong cadre of water management specialists need to be created after giving appropriate training at various levels. The Command Area Development Authorities have therefore to keep close liaison primarily with Irrigation Departments. The Conference, therefore, resolves that the question of placing Command Area Development under the Irrigation Departments needs serious consideration. The Conference, therefore, recommends that the question of the parent Departments in the States for the Command Area Development Authority and building up a strong cadre of water managers should be gone into in depth by a committee comprising the representatives of the Central and State Governments and submit their recommendations for consideration of the next Conference of the State Irrigation Ministers". It is obvious that there is an attempt to shelve the problem. Considering that the Conference of Irrigation Ministers is held once a year, the prospect of any earlier decision on this seems remote.

3.17 If this professionalisation of the management wing of irrigation does not eventually come about, it is doubtful whether the setting up of CADA will have led to any tangible improvement in the state of affairs. The experiment with CADA is an illustration of how mere institutional innovations do not always attain the end objectives. Often they mask the main problem and tend to divert attention from hard choices mentioned in Chapter 7 as well as in Section 2 of this chapter.

Notes and References (Chapter 8)

- (1) This could vary depending on the extent of land development required and the cost of drainage works; in North India where the terrain is even, while the cost of land development would be less, drainage works could cost more. The following Table shows, slopewise, the costs of ayacut development, according to the latest revision in costs.

Table

Slope group %	Common items	Figs: Rs/ha	
		Land level- ling/shaping etc. i.e. o.f.d. items	Total
0 - 0.6	652	509	1161
0.6- 1.0	689	596	1285
1.0- 2.0	778	1157	1935
2.0- 3.0	1010	1622	2632
3.0- 4.0	1289	2353	3642

(Source: MLDC)

- (2) Fourth Five Year Plan: Chapter 11 para 11.25 p.256.
- (3) Report of the National Commission on Agriculture Chapter 16 para 16.5.3.
- (4) Ibid. para 15.5.16 and 16.4.3
- (5) The suggestion essentially was that RWS should be introduced.
- (6) Kurukshetra: Vol.XXVIII No.22 September 1,1980 p.29.
- (7) T.K.Jayaraman: 'A Case for Professionalisation of Water Management in Irrigation Projects in India'. Paper presented at the Seminar on Water Management Practices in Kerala conducted by the Centre for Water Resources Management, Government of Kerala, Kozhikode, on October 11-12, 1980.

Command Area Development Organisation in Maharashtra

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STATE LEVEL

Cabinet sub-committee for Command Area Development under the Chairmanship of the Chief Minister.

Command Area Development Commissioner and Secretary Irrigation Department.

State level committee for recommending crops and inputs for the CADA areas, under the Chairmanship of the Vice-Chancellor of one the agricultural universities.

PROJECT LEVEL

CADA Board with a President (usually the Irrigation Minister) and comprising official and non-official members.

A small Executive Committee of the CADA Board.

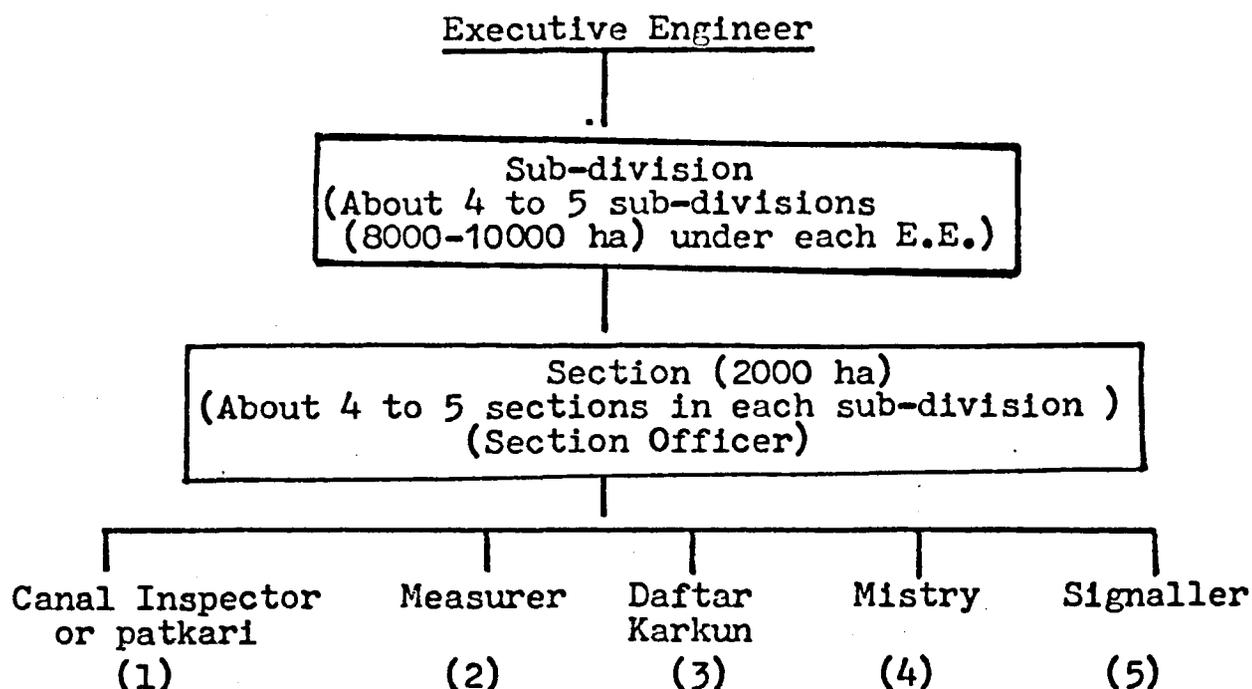
(The Board approves the annual programme of the CADA, reviews its implementation and effects coordination between different departments and development agencies)

CADA Administrator (Superintending Engineer)

Office Staff	Technical Cell under Executive Engineer	Agriculture wing under Dy. Director Agriculture	Credit unit under Deputy or Assistant Registrar of Coop. Soc.	Monitoring and Stat. cell.	Administration and Accounts.
	↓				

Field Staff	Operation and management	Land Development	Soil and water management cell (1)	Agricultural extension (2)	
	Irrigation Dn. (O&M) (Details of Irr. Dn. in Ann.2)	LDA Dn. under Divisional Soil Conservation Officer LDA Sub-div. LDA field staff		Irrigation units	Trial-cum demonstration farms
				each unit headed by Agri. Off. and having 10 Agri. Assts. (number of units given to each CADA vary)	

- (1) Soil and water management cell is a new cell given to only certain CADA areas. The functions of the cell are partly extension oriented as farmers are given training in application of water to the field; the cell also checks the quality of ayacut development work done by the LDA field staff.
- (2) After the introduction of T&V system of extension the irrigation units are phased out.

ANNEXE 2Organisation of Irrigation Division (Operation and Management)
(40000 ha)Functions

- (1) Water distribution to the fields in the chak in accordance with 'Shejpali Patrak' which indicates the date on which each pass holding cultivator (i.e. one who has been sanctioned water) will get water during a given rotation. Every rotation has a 'patrak'; prepare 'panchnama' for unauthorised irrigation-which means: (a) irrigating more area than sanctioned (b) taking water out of turn and (c) breaking distributory at unauthorised point for directing water (d) wasting water.
- (2) Measuring area actually sown and preparing demand statement after comparing with sanctioned area; assessment is according to area sanctioned or sown whichever is more.
- (3) Checking demand statements, revenue collection.
- (4) Maintenance and repairs upto outlet.
- (5) Observing lake and canal levels; maintenance of gauge register showing discharge over distribution system upto 10 cusecs; operation of distribution gates is done by chowkidar or by keyman as per instructions of signaller who gets orders from the Section Officer; conveys messages down the system.

C H A P T E R - 9

EMPLOYMENT GUARANTEE SCHEME

C H A P T E R - 9

EMPLOYMENT GUARANTEE SCHEME

1. Introduction

While the Employment Guarantee Scheme (EGS) is primarily a rural works programme, it is one of the important objectives of the scheme, that the operation of the scheme should result in the creation of durable community assets in the rural areas which would help increase agricultural production. Mobilising rural manpower for resource development for agriculture is thus a very important feature of the EGS. This has, in fact, been made explicit in the following extract from the statement placed by the Chief Minister of Maharashtra before the Maharashtra Legislative Assembly on 20th December, 1974:

"The financial implications of the scheme necessitate that the work to be provided to the rural unemployed must be productive in nature and also calculated to boost production in agricultural sector, as well as in the sector of cottage and village industries." EGS therefore seeks to give shape to one of the key strategies of agricultural development of the early Plans, namely, mobilising rural manpower for achieving increase in agricultural production. It was seen in Chapter 2 how the expectation of the planners, namely, that the C.D. organisation would succeed in doing so, was not fulfilled. In this chapter, we shall examine the performance of the EGS as an instrument for creating assets with a view to stimulating agricultural production.

2. Salient Features of the EGS

2.1 It is necessary at this stage to refer to the salient features of the EGS. The following account is based on the provisions of the Employment Guarantee Act, 1977 and various Government orders issued regarding EGS. The EGS was started in the year 1972-73. During the two years 1972-73 and 1973-74, a large scale works programme for drought relief had to be organised in various parts of the State and the EGS was suspended in areas where relief works were in operation. In addition to the EGS, the Centrally sponsored Crash Scheme for Rural Employment (CSRE) was also in operation during these years. The operational difficulties and deficiencies in the implementation of the EGS were brought to surface during the year 1974-75 and the State Government, after a review of the progress of the scheme, took steps to streamline the implementation of the scheme. In order to raise resources for financing the scheme, the State Government has levied special taxes from the year 1975-76. The proceeds of these taxes, along with a contribution of equal amount from the general revenues of the State, are credited to a separate fund, called the Employment Guarantee Fund (known as EGS Fund). The State Government gave a statutory backing to the guarantee of employment through the Employment Guarantee Act, 1977 which was brought into force from 26th January, 1979. Under this Act, every adult person residing in rural areas of the State has acquired a legal right to get unskilled manual employment.

2.2 The aim of the EGS is to provide gainful and productive employment, gainful to the individual and productive to the economy on approved works to all unskilled persons in the rural areas (including the areas of 'C' class Municipal Councils), who need work and who are prepared to do manual labour but cannot find it on their own. The guarantee of work is restricted to unskilled manual work. The scheme is intended to operate in a manner which would ensure that labour is deployed to the extent possible on the ongoing construction activities in the area capable of utilising unskilled manpower. The District Collector is required under the Act to ensure that the operation of the EGS does not adversely affect agricultural operations and production, and that the scheme is not activated in areas where unskilled employment is available on Plan and non-Plan works in progress. Only labour intensive works of a productive nature which create durable community assets are to be taken up under the scheme. A productive work has been defined in the act as any "work which, in the opinion of the State Government, will directly or indirectly contribute to the increase of production or the absence of which will inhibit the increase of production". The definition of a productive work is thus very wide. To give an illustration, in many areas, owing to the absence of roads, milk routes cannot be opened and the milk produced cannot therefore be marketed. Roads then become 'productive works' according to this definition. All roads cannot, obviously, be considered productive; but this test is seldom applied in practice

in every case. The definition has in practice been stretched to take up works whose connection with production is very tenuous. 'Huts programme' is one example; under this programme huts are built by the Government for the landless and houseless rural poor. It is primarily an ameliorative measure but the unskilled labour portion of the 'huts programme' is taken up under the EGS.

2.3 The labour intensive works taken up under the EGS should be such works of which the cost of unskilled labour component is more than 60% of the total cost. This provision is to ensure that the works taken up under the EGS do have a minimum level of labour intensive character. In other words, if Rs. 100/- are spent out of EGS Fund on any EGS works, at least Rs. 60/- should be accounted for only by the cost of unskilled manual labour. The balance amount of Rs. 40/- is available for meeting the cost of materials, skilled labour, transport of materials, cost of supervisory staff etc. If the cost on account of the latter items exceeds Rs. 40/- the work cannot be taken up under the EGS; or else, to the extent of the excess, funds should be made available from the regular Plan. For instance, when a road work is taken up under EGS, the cost of metalling cannot generally be accommodated within 40%; non-EGS Plan provisions (vide Annex 1) will be required to finish the metalling job. Financial provision made in the Plan for such excess, is called 'complementary Plan provision'. Labour intensive components of regular Plan works are also taken up under EGS, like canal excavation of irrigation projects. Sometimes the work taken up under

the EGS are themselves sufficiently labour intensive and the entire cost, including cost of supervisory staff, can be accommodated within the 40% limit mentioned above; examples are nalla bunding works (which essentially comprise an earthen bund across a flowing nalla for conserving water, in order to improve the sub-soil water table), soil conservation works, afforestation works etc. In such cases, no complementary provisions are required. There are, however, instances when even in respect of these works, cost of supervisory staff cannot be accommodated within the permissible ratio; this happens when the labour strength on these works falls but staff need to be maintained. In such circumstances, the excess staff costs would require to be met from Plan funds.

2.4 The distinction between 'EGS Fund' and 'Plan funds,' as well as that between 'EGS works' and 'Plan works,' require to be explained, since EGS itself is a part of the Plan. The total pool of resources for the Plan, includes resources credited to the EGS Fund; resources which are not required to be so credited are called normal Plan funds. In respect of those components of works taken up under EGS on which expenditure cannot be incurred from EGS Fund, financial provisions will have to come from the non-EGS portion of the Plan. Diagram given in Annexe 1 illustrates this.

2.5 Works taken up under the scheme require to be technically and economically sound. The technical and financial norms to be followed while sanctioning normal development works under the Plan are required to be adhered to even for works taken up under the EGS. In

Table - 1

Distribution of expenditure incurred under EGS according to the category of works

(Rs. in crores)

Sr. No.	Category of works	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	Canals of Major Irrigation Projects.	:	:	0.63 (4.6%)	1.51 (4.4%)	6.48 (13.0%)	7.98 (16.2%)	8.20 (11.9%)	7.55 (8.4%)
2.	Medium Irrigation Projects	:	:	:	0.57 (1.7%)	1.12 (2.2%)	1.30 (2.6%)	1.60 (2.3%)	1.34 (1.5%)
3.	Minor Irrigation Works (Including Percolation Tanks)	:	:	10.04 (73.2%)	15.85 (46.0%)	18.31 (36.7%)	18.07 (36.8%)	21.56 (31.3%)	29.11 (32.6%)
4.	Soil Conservation (including Nala Bunding)	Not available	Not available	1.56 (11.4%)	7.02 (20.4%)	9.74 (19.5%)	8.79 (17.9%)	12.18 (17.7%)	15.74 (17.6%)
5.	Land Development	:	:	0.11 (0.8%)	3.56 (10.3%)	4.89 (8.8%)	5.66 (11.5%)	6.60 (9.6%)	7.52 (8.4%)
6.	Afforestation	:	:	0.37 (2.7%)	0.95 (2.8%)	2.34 (4.7%)	1.69 (3.4%)	1.71 (2.5%)	3.05 (3.4%)
7.	Roads	:	:	0.79 (5.7%)	2.81 (8.2%)	4.42 (8.9%)	5.16 (10.5%)	14.29 (20.8%)	24.24 (27.1%)
8.	Other works and expenditure on staff etc.	:	:	0.22 (1.6%)	2.16 (6.2%)	2.58 (5.2%)	0.55 (1.1%)	2.73 (3.9%)	0.90 (1.0%)
Total		1.88 (100.0%)	1.89 (100.0%)	13.72 (100.0%)	34.43 (100.0%)	49.88 (100.0%)	49.20 (100.0%)	68.87 (100.0%)	89.45 (100.0%)

Figures in brackets indicate percentage of total expenditure.

order to have a close and effective supervision on the works programme, small works costing less than Rs. 20,000/- and works whose components are geographically dispersed are not to be taken up under the scheme, with the exception of afforestation and nalla bunding works. Under the EGS, normally the following works are taken:

(1) Soil and water conservation measures like contour bunding, nalla bunding and percolation tanks. (2) Labour intensive components of irrigation projects, particularly excavation of canals. (3) Minor irrigation tanks. (4) Ayacut development works (classified as 'land development'). (5) Afforestation. (6) Roads. Table 1 would show that these works account for a major portion of the expenditure incurred under the EGS.

2.6 There are broadly four categories of works taken up under EGS, classified according to their linkage with the Plan. Certain Plan schemes like, soil conservation, ayacut development, etc. with a substantial component of unskilled manual labour are required to be taken up only under EGS and funds are not normally provided for them under the Plan, except to the extent of staff component in the case of soil conservation and ayacut development schemes.(1). Then, there are other kinds of works, not normally taken up under the Plan (i.e. if EGS had not been there, they might not have figured in the Plan) which are planned and implemented solely under EGS, like, for instance, several soil and water conservation schemes like nalla bunding, percolation tanks, deepening of irrigation tanks, several road works, etc. These are in fact the works

which can be called the contribution of EGS. No financial provisions are made for them in the Plan; in fact, there is no regular Plan scheme for the construction of percolation tanks. Therefore for these works a lump sum provision is made under EGS in the District Plan. Complementary provisions for these schemes becomes a problem, as there is no regular Plan scheme outside EGS under which complementary provisions can be made. The third category of works are those which are regularly taken up under the Plan, but which are taken up on a larger scale, thanks to EGS. These are works like afforestation, minor irrigation tanks, etc. In the case of these works complementary provisions are required to be made by the concerned departments under the respective sectoral heads in the Plan. Finally, there are works which are regular Plan works, but whose labour intensive components are required to be taken up under EGS, like the canal works of irrigation projects.

2.7 No work under the EGS is to be commenced unless the following conditions are satisfied: (i) The full requirements of labour on various farm operations and other allied activities in the rural areas are first met, in other words, the EGS should not have the effect of syphoning off labour from agricultural operations. (ii) Labour is deployed on the existing Plan or non-Plan construction works within the Panchayat Samiti area or in the adjoining Panchayat Samiti area wherever possible. (iii) Full employment potential of existing works in progress or on incomplete productive works is exhausted. A work under the scheme can be started only if 50 or more persons remain to be absorbed, after fulfilling

the requirements mentioned above. If less than 50 persons come forward asking for employment, they should be absorbed on the ongoing works. Incomplete productive works should have an absolute priority and new productive works should be taken up only if there are no incomplete productive works in the vicinity to absorb the persons who require employment.

2.8 For proper planning of works, a blueprint of works is prepared for each taluka. The blueprint is required to be up-dated every two years. The works included in the blueprint, or in other words, the 'size' of the blueprint should, in terms of labour absorptive capacity, be capable of satisfying the estimated demand for employment in the taluka. But mere blueprint is not enough to take care of the dynamics of the demand for employment. The spatial spread of the demand for employment under the EGS will generally be known only after the course of the monsoon is known and it becomes clear how good or bad the agricultural season is going to be in different parts of the district. Talukas which receive scanty rainfall or uneven rainfall, the pattern of which is not favourable to agriculture, would require more works to be started under the EGS than what would be required in a normal situation. Therefore, every year, within the framework of the blueprint, an 'operational plan' is prepared, anticipating the pattern of demand for employment, so that the departmental manpower required for supervising the works can be mobilised in time. Such an operational plan would reveal gaps in the preparedness of the administration to meet the likely demand for employment

in certain areas, like surveys on works still to be completed, plans and estimates of works to be prepared, machinery (like rollers) to be mobilised and so on, so that steps can be initiated sufficiently in advance to fill the gaps.

2.9 The District Collector is in overall charge of the implementation of the EGS in the district. Recently, the Employment Guarantee Act has been amended, making the Divisional Commissioners responsible for the implementation of the scheme in their respective revenue divisions. (There are at present six revenue divisions in the State). The Collector is competent to sanction works costing upto Rs. 5 lakhs; in the case of minor irrigation works and labour intensive components of major and medium projects, this limit is upto Rs. 10 lakhs. Divisional Commissioners, are competent to sanction road works costing upto Rs. 10 lakhs. Works costing more than the above limits require the sanction of the State Government.

2.10 The works under the EGS are almost always executed departmentally. Exception is made in the case of certain items of tank works, like gorge-filling, which may be executed through piece-rate workers, if it is not possible to execute them departmentally on musters. Works are executed through the field level functionaries of the various departments, such as, Agriculture (LDA), Public Works, Irrigation and Forests Departments; ZPs are also assigned the task of executing EGS works through their own Public Works and Irrigation Departments. Allocation of works among the different departments is done by the

Collector, after assessing the overall workload - both Plan and non-Plan - of the departments. If the existing workload of the departments indicates that they cannot handle the EGS works, in addition to their normal workload, augmentation of staff is done either by creating new posts or by transferring staff from other districts where the demand for employment under the EGS is less. Such an overview is taken by the Divisional Commissioner within the division. Sometimes deployment of staff from one division to another division is done by the Government, though this is not always easy.

2.11 Wages under the EGS are linked with the quality and quantity of work output of the labour. The schedule of rates of wages have been devised in such a way that an average person working diligently for 7 hours would be able to earn a wage equal to the minimum wage for agricultural labourers prescribed in the State. This is to ensure that the operation of the scheme does not affect agricultural operations and, at the same time, the agricultural labour is assured of a minimum wage. EGS thus functions indirectly as a tool for the enforcement of the minimum wage legislation. There is neither a maximum nor a minimum limit fixed for the total earnings of a person under the EGS. Beginning from October 1978, the Food for Work Programme has been linked with the EGS. Under the arrangement, about 10% of the wages is substituted by about 1 kg. of wheat or jowar, that is, if an EGS worker earns a wage of Rs.3/-, he gets Rs. 2.70 in cash plus 1 kg. of foodgrains. At the market price of foodgrains, his real wage would be more than Rs. 4.00.(2).

2.12 Recently, the Employment Guarantee Act has been amended to take up relief works under EGS if the State Government considers that, in order to meet the conditions created by natural calamities, it is necessary to take up such works. Because of this amendment, two consequences follow: first, it is now legally feasible to spend out of the EGS Fund on relief works; secondly, such relief works need not necessarily be 'productive' works as defined earlier. This amendment also provides that when such relief works are taken up under the scheme, wages can be paid at daily rates and not necessarily on the basis of measured output.

2.13 In order to raise resources for the implementation of the scheme, the State Government has levied special taxes and levies as stated below: (i) Taxes on professions, trades, callings and employment; (ii) Additional tax on motor vehicles for the EGS; (iii) Additional tax on sales tax for the EGS; (iv) Special assessment on irrigated agricultural lands; (v) Surcharge on land revenue for EGS and (vi) Tax on non-residential urban lands and buildings under the Education Cess Act, for EGS. Every year, the State Government is required to make a matching contribution from its other revenues equal to the net collection of the special taxes and levies. The net collection of special taxes and levies and the matching contribution from the State Government are credited to a separate fund called the Employment Guarantee Fund (referred to as the EGS Fund) which has been constituted in order to ensure that the resources raised for the purpose of implementation of the

T A B L E - 2

Collection of special taxes and levies for EGS and the expenditure incurred on EGS

(Figures in crores)							
Sr. No.	Name of the Tax/ Levy	1975-76	1976-77	1977-78	1978-79	1979-80 (Revised Estimates)	1980-81 (Budget Estimates)
1.	Tax from Profession, Trades, Callings and Employment.	10.33	17.89	18.47	19.61	23.47	28.28
2.	Surcharge on Sales Tax	-	8.45	16.26	10.11	11.22	14.07
3.	Employment Guarantee Scheme, Surcharge on Meter Vehicles.	0.10	0.80	0.90	1.33	0.88	1.18
4.	Land Revenue	0.06	0.07	0.09	0.25	2.29	2.29
5.	Employment Guarantee Scheme Cess on Irrigated Holdings.	-	0.17	-	0.10	-	4.88
6.	Employment Guarantee Scheme Cess on Urban Immoveable Non-Residential Property.	-	-	0.08	-	0.70	-
Total (Taxes and Levies)		<u>10.49</u>	<u>27.38</u>	<u>35.80</u>	<u>31.40</u>	<u>42.56</u>	<u>50.70</u>
Contribution from general revenues		<u>10.49</u>	<u>27.38</u>	<u>34.46</u>	<u>31.40</u>	<u>42.76</u>	<u>50.70</u>
Total transferred to the EGS Fund		<u>20.98</u>	<u>54.76</u>	<u>70.26</u>	<u>62.80</u>	<u>85.32</u>	<u>101.40</u>
Balance to be transferred		<u>-</u>	<u>-</u>	<u>1.34</u>	<u>-</u>	<u>-</u>	<u>-</u>
Expenditure Transferred to Employment Guarantee Fund.		<u>34.48</u>	<u>49.88</u>	<u>49.20</u>	<u>68.87</u>	<u>84.25</u>	<u>72.00</u>
Balance in the EGS Fund		(-) 13.50(+)	4.88(+)	21.06 (-)	6.07 (+)	1.07 (+)	29.40 (+)

EGS are utilised only for that purpose. If there is any balance in a particular year, the same is carried forward to the subsequent year. The figures of accretion to the Employment Guarantee Fund every year and the expenditure on the scheme are given in Table 2. It was the intention when EGS was launched, to utilise EGS Fund only for EGS. But in actual practice, even though the accounts of the Fund are maintained showing accretions to the Fund and the expenditure therefrom, the Fund balances form a part of Government's pool of resources. Therefore, the balances in the EGS Fund are, in fact, utilised to finance developmental programmes of the Government other than EGS.

2.14 The above account is restricted to those features of the EGS which are relevant for the discussion in this chapter. Details relating to the registration of workers under the scheme and other operational details will be given if and when required for the discussion in this chapter, at the appropriate place.'

3. EGS and the Plan

3.1 It is obvious that if the operation of the EGS is to result in the creation of assets which would help agricultural production, the works taken up under the scheme should, first of all, be completed. An important precondition for the completion of the works taken up under any public works programme is that there should be a commitment of resources, both physical and financial, to ensure their completion. There is hardly any productive asset which can be completed by unskilled manual labour alone. Most productive works have a substantial 'material'

component, like explosives, cement, machinery etc. If a large scale public works programme is going to require such 'materials' to a substantial extent, they have to be planned for, first of all, at the national level when the material balances for the Plan are worked out. Most of the materials required for completing the works taken up under a public works programme are often in short supply and are also required badly for executing normal Plan projects, like irrigation projects, power projects, etc." Thus a large scale public works programme requires a decision at the national level to earmark such materials for the programme, even if it means slowing down some Plan projects. At the State level, financial provisions should be made in the State Plan for such material and other inputs required by the programme to match the input of unskilled manpower. Apart from materials, such inputs would include skilled manpower for conducting surveys, supervising the works etc. Large scale requirement of skilled manpower would necessitate adequate provisions in the Plan for larger number of technical schools or even engineering colleges. It is for this reason that a large scale public works programme, which seeks to create durable assets, must be supported with adequate resources, to be provided in the Plan. The weakness of many drought relief works was precisely the fact that no financial provision existed in the Plan for taking care of the kind of inputs mentioned above in order to get these works completed. As a result, when the EGS was started seriously in 1974-75, after three years of drought relief programme, there were many incomplete minor irrigation

and percolation tank works earlier taken up as drought relief works. Many of them remained incomplete for want of financial provision for cement to complete the waste weirs. It was estimated that completing the works required an investment of more than Rs. 30 cr. Apart from the fact that many works remained incomplete, even those that were completed could not be executed properly. The poor quality of many drought relief works, often commented upon, is mostly the result of inadequacy of machinery like rollers, water tankers, etc. In fact, one of the findings of the evaluation of the EGS done jointly by the Planning Commission and the Government of Maharashtra was that the non-availability of machinery like road rollers and water tankers for road works, air compressors for irrigation works, and of explosives for blasting etc. were the major factors contributing to the non-completion of even works taken up under the EGS (3). This is in spite of the fact that, as mentioned in para 2.3, there is provision in the scheme to take care of expenditure on items other than unskilled manual labour. The position in this regard of relief works is naturally even more unsatisfactory.

3.2 Many works executed under the EGS, even after they are completed, cannot yield any benefits, unless they are followed by further development work. Completion of percolation tanks, for example, requires to be followed up by development of groundwater irrigation sources, like dugwells, borewells or tubewells, and providing them with power connections. Plan should therefore make adequate provisions for such development works also.

3.3 The first necessary step while planning for EGS is that the estimated requirement of funds for the EGS are fully provided in the Plan when it is formulated. This sounds obvious but difficult to achieve in practice. It is admittedly not easy to estimate accurately how many man-days of employment will be required to be provided under the EGS during the year for which the Plan is formulated. But proper planning requires that a reasonably good estimate is done. Secondly, as already observed, complementary Plan provisions are to be made for the EGS works already under execution and those to be taken up during the year for which the Plan is formulated. For various categories of works, the complementary provisions required have been estimated and are available; they are in fact shown in the operational plan for EGS. Thirdly, if it later turn out that the provisions made for EGS in the Plan are not adequate and need to be increased, in order to cater to the demand for employment, not only should the EGS provisions be increased but the complementary provisions should also be increased.

3.4 Let us now see what the implications are of not making adequate financial provisions for EGS when the Plan is prepared: (1) If during the year, the resource position of the State Government improves (due to receipts exceeding the level anticipated when the resources for the Plan were estimated), the excess expenditure on EGS i.e. expenditure over and above the budget provision can be met without much difficulty. This was fortunately, the position in 1978-79 and 1979-80 (see Table 5), but it need not be so always.

(ii) Let us suppose that such increase in the Plan size is not possible during the year, in order to accommodate the increased EGS expenditure. Under such circumstances, the excess expenditure under EGS would have to be met by curtailing other sectors of the Plan or by imposing a cut on the non-Plan expenditure. (Whether EGS expenditure itself can be controlled so as to contain it within the budget provision without violating the principle of guarantee or not, is an entirely different issue which requires a separate discussion and is not germane here. We shall, for the present, assume that since EGS is a guarantee scheme, the expenditure under EGS is not 'controllable' and that, in this sense, the financial commitment towards EGS is open-ended). Such a curtailment of other sectors of the Plan during the year is not desirable; as it upsets the implementation schedule of several projects; non-Plan already pared to the bare bone cannot also take any substantial cuts. Further, and more relevant to our discussion, it would be impossible to make complementary provisions (for materials, skilled components etc.) for the increased portion of the EGS expenditure. Therefore, the essential pre-requisite for a rational planning for EGS which will facilitate the completion of the works taken up under EGS, is that adequate financial provision should be made in the Plan, not only for EGS but also for the complementary items, at the time of formulation of the Plan. We shall now examine the problems in doing so.

3.5 We shall first describe how financial provisions for EGS are made in the Plan, particularly in the context

of district planning. As an illustration of this process, an account of the planning exercise for the year 1979-80 is given below. Out of the total Plan outlay (4) of Rs.762.50 crores, the total district level outlay was Rs. 288.29 crores. An outlay of Rs. 56.33 crores was earmarked for EGS, of which an amount of Rs. 11.55 crores was earmarked for labour-intensive components like canal excavation, etc. of major irrigation projects which are State level schemes. Every major irrigation project is given a separate EGS outlay to be spent on labour-intensive components. The Irrigation Department is expected to carry out these works only under EGS. These works cannot, therefore, be let out on contract, and carrying out these works through the use of machinery, which could happen if they are let out on contract, is thus avoided. Having thus earmarked the outlay for State level EGS (i.e. labour-intensive components of major irrigation projects) the remaining outlay of Rs. 44.78 crores was earmarked for various district level schemes - to which category most EGS works belong - to be taken up under EGS. This process can be exhibited as follows:

<u>Total Plan Outlay</u>			
Rs. 762.50 crores			
State level Rs.474.21 crores	|	District level Rs.288.29 crores	
<u>Of which EGS</u>	|	<u>Of which EGS</u>	<u>Of which EGS</u> <u>Allocated initially</u>
11.55 Cr.	|	56.33 Cr.	44.78 Cr. (20.78)
			Reserved to be allocated as and <u>when required.</u>
			24.00 Cr.

TABLE - 3

Budget provision made and expenditure incurred under the
Employment Guarantee Scheme since inception of EGS till March, 1980.

(Rs. in crores)

Sr. No.	Year	Budget Provisions			Revised Estimates ^②			Expendi- ture cash	Food- grains distrib- uted in tons.	Value of food@grains distribut- ed.	Total expenditure (Total of Col.9 & 11)
		Cash	Value of Food- grains	Total	Cash	Value of Food- grains.	Total				
		Rs	Rs	Ps	Rs	Rs	Rs	Rs		Rs	Rs
1.	2	3	4	5	6	7	8	9	10	11	12
1.	1972-73	5.00	-	5.00	2.23	-	2.23	1.88	-	-	1.89
2.	1973-74	3.71	-	3.71	3.71	-	3.71	1.88	-	-	1.89
3.	1974-75	10.00	-	10.00	15.00	-	15.00	13.72	-	-	13.72
4.	1975-76	50.00	-	50.00	30.49	-	30.49	34.48	1315	0.13	34.61
5.	1976-77	50.00	-	50.00	50.00	-	50.00	49.88	12240	1.22	51.10
6.	1977-78	50.00	-	50.00	55.00	-	55.00	49.20	23440	2.34	51.54
7.	1978-79	56.22	1.78*	60.00	65.00	5.63	70.63	68.87	53000	5.30	74.17
8.	1979-80	56.33	16.50	72.83	81.50	18.90	100.40	89.45	i) 1,14,540 ii) 30,000 iii) 26,000 <u>1,70,540</u>	Wheat 13.74 Jowar 2.58 Rice 3.46 <u>19.78</u>	109.23
9.	1980-81	72.00	18.90	90.90	-	-	-	-	-	-	-

*Food for work was introduced and linked with EGS from October, 1978.

②Revised estimates are the revised budget estimates of expenditure, prepared during the course of the financial year.

TABLE - 4

Plan provisions made and expenditure incurred on State Level and District Level Schemes under the Employment Guarantee Scheme.

(Rs. in crores)

Sr. No.	Year	Budget Provision made under			Expenditure incurred under	
		State Level Scheme	District Level Scheme Distributed to Dist.	Reserve	State Level Scheme	District Level Scheme
		Rs	Rs	Rs	Rs	Rs
1.	2.	3.	4.	5.	6.	7.
1.	1975-76	4.65	15.00	30.35	1.51	32.92
2.	1976-77	10.00	14.94	25.06	6.48	43.40
3.	1977-78	16.60	16.46	16.94	7.98	41.22
4.	1978-79	11.00	20.56	28.44	8.20	60.67
5.	1979-80	11.55	20.78	24.00	7.55	81.90
6.	1980-81	9.25	30.50	32.25		

Table-5

State Level, District Level Plan outlay and expenditure (Rs. in lakhs)

Sr. No.	Year-Description	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
1.	State Plan Outlay	28000.00	35463.67	46120.62	65007.22	74500.00	76250.00	85334.00
2.	State Level Schemes outlay	16685.00 (59.59)	15150.00 (42.72)	25858.90 (56.07)	40442.34 (62.21)	45394.58 (60.94)	47327.00 (62.20)	
3.	District Level Schemes outlay	11315.00 (40.41)	20313.67 (57.28)	20261.72 (43.43)	24564.88 (37.79)	29105.42 (39.06)	28827.10 (37.80)	
4.	State Plan expenditure	30098.00	38559.00q	51441.00	67717.00	78198.00	80382.82	
5.	State Level Schemes expenditure	18783.00 (62.81)	22115.00 (57.35)	31178.00 (60.61)	44683.00 (65.99)	52273.00 (66.84)	52304.82 (65.14)	
6.	District level Schemes expenditure	11315.00 (37.59)	16444.00 (42.65)	20263.00 (39.39)	23034.00 (34.01)	25925.00 (33.15)	28018.00 (34.85)	
7.	Total EGS expenditure	1372.00	3443.00	4988.00	4920.00	6887.00	8945.00	
8.	District level Schemes - EGS expenditure	1309.00	3292.00	4340.00	4122.00	6067.00	8190.00	
9.	(8) as % of (6)	11.57	20.02	21.42	17.90	23.40	29.23	
10.	(7) as % of (4)	4.56	8.94	4.70	7.27	8.81	11.12	

- Note:
1. The term 'outlay' is used to denote the provisions initially made in the plan.
 2. The term 'expenditure' denotes the actual expenditure incurred during the financial year.
 3. 'State Plan' denotes the total plan of the State, inclusive of State Level and District Level Schemes.
 4. Figures in brackets against Sr. Nos. 2 and 3 give percentages to the corresponding year's State Plan outlay.
 5. Figures in brackets against Sr. Nos. 5 and 6 give percentages to the corresponding year's State Plan expenditure.
 6. Only cash component of EGS expenditure is given.

Since it is not possible to anticipate in the beginning of the year what the EGS expenditure in each district will be, approximately 50% of this is reserved, to be allocated to the districts as and when need arises, depending upon the employment required to be provided under the EGS, while the remaining amount is provided in the beginning of the year as a part and parcel of the district Plans. Every DPDC is also given an indication of how much should be provided for EGS. Columns 3, 4 and 5 of Table 4 gives the financial provisions made in the Plan for the State level and district level components of EGS.

3.6 It is seen from Tables 3, 4 and 5 that -

(i) Till the year 1977-78 the EGS expenditure was within the budget provision made; (ii) In 1977 when the Employment Guarantee Bill was introduced, it was estimated that EGS should be in a position to take care of 18 crore man-days of employment and for this Rs. 72 crores would be required for EGS; but still the provisions made in 1978-79 & 1979-80 were very much less than this figure; (iii) The expenditure (cash component) during 1978-79 and 1979-80 has been more than the budget provision and (iv) While the expenditure on State level EGS schemes (which are mostly canal works of major irrigation projects) has generally been less than the budget provision, the expenditure on District level EGS schemes has exceeded the provisions since 1976-77. It is therefore clear that the criteria for a rational planning for EGS mentioned in para 3.3 have not, in actual practice, been met.

TABLE - 6.

(Rs. in Lakhs).

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Financial requirement for completion of incomplete Employment Guarantee Scheme works as on 1-5-1981 in Selected Districts.

Sr. No.	Category of works.	Pune		Sholapur		Satara		Sangli		Kolhapur.	
		No. of incomplete works.	Amount required for completion.	No. of incomplete works.	Amount required for Completion.	No. of incomplete works	Amt. required for Completion	No. of incomplete works	Amt. required for Completion.	No. of incomplete works	Amount required for Completion.
1.	Roads. ..	205	586.44	93	165.71	360	437.00	33	19.18	67	34.52
2.	Canals. ..	98	290.00	823	1162.76	2	1.10	—	—	—	—
3.	M.I. Works. ..	81	97.13	488	572.12	269	352.36	148	270.13	13	24.60
4.	Nalabundings. ..	40	11.00	704	13.42	15	0.69	155	10.00	2	0.23
5.	Other Soil Conservation and L.D.Works. ..	267	17.38	574	105.42	12	0.52	28	1.24	—	—
6.	Afforestation ..	19	37.48	3	1.54	98	5.43	43	24.84	7	2.51
TOTAL ..		710	1039.43	2685	2020.97	756	797.10	407	325.39	89	61.86

District Plan Outlay.

1980- 81	1392.62	992.79	836.29	793.54	815.13
1981-82	1731.05	1346.80	1065.04	1224.63	1126.75

Expenditure on district level schemes and district level EGS expenditure in certain Selected districts.

Table 7

(Rs. in lakhs)

Year District	1975-76			1976-77			1977-78			1978-79			1979-80		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
1. Thane	873.00	133.22	15.3	865.00	241.90	28.0	875.00	245.18	28.0	1255.00	268.51	21.4	1352.33	279.42	20.6
2. Nashik	728.00	173.94	23.9	987.00	233.80	23.7	1192.00	310.83	26.1	1719.00	662.10	48.1	2049.98	1182.74	57.7
3. Dhule	692.00	146.03	21.2	948.00	162.20	17.1	827.00	130.32	15.3	1074.00	466.10	43.4	1260.60	413.03	32.9
4. Jalgaon	623.00	120.58	19.4	880.00	174.00	19.8	894.00	152.44	17.05	950.00	317.47	33.4	1104.98	405.89	36.7
5. Pune	533.00	134.26	25.2	880.00	146.90	16.7	1345.00	241.37	17.9	1683.00	170.52	10.1	1492.40	229.91	15.4
6. Ahmednagar	781.00	324.04	41.5	1135.00	418.30	36.9	1066.00	320.09	30.0	1381.00	684.30	49.6	1665.33	909.14	58.2
7. Satara	382.00	104.25	27.3	559.00	118.10	21.1	686.00	116.77	17.0	872.00	124.21	14.2	982.87	230.46	23.4
8. Sangli	388.00	110.91	28.6	543.00	142.99	26.3	681.00	143.05	21.0	719.00	111.14	15.5	730.42	97.59	13.4
9. Solapur	586.00	275.80	47.1	1034.00	316.50	30.6	1144.00	399.84	35.0	1281.00	385.62	30.1	1256.61	497.20	39.5
10. Aurangabad	745.00	271.12	36.4	1084.00	407.62	37.6	1065.00	326.19	30.6	1029.00	394.41	38.3	1221.54	494.80	44.1
11. Beed	479.00	130.75	27.3	668.00	229.50	34.4	646.00	182.30	28.2	686.00	208.58	30.4	818.88	283.30	34.6
12. Osmanabad	726.00	157.77	21.7	997.00	229.90	23.1	1183.00	247.15	20.9	959.00	271.73	28.3	1004.09	313.00	31.2
13. Buldhana	461.00	89.17	19.3	462.00	72.10	15.6	570.00	38.72	6.8	719.00	77.20	10.7	726.21	110.50	15.2
14. Bhandara	940.00	524.03	55.7	710.00	316.60	45.6	562.00	253.72	45.1	835.00	555.13	66.4	1307.02	945.43	72.3
15. Total of 14 districts	8937.00	2695.87	30.1	11752.00	3210.41	27.3	12736.00	2814.47	22.1	15162.00	9877.00	32.3	16882.36	6458.01	38.2
16. Total of all districts	16444.0	3292.0	20.0	20263.0	4340.0	21.4	23034.0	4122.0	17.9	25925.0	6067.0	23.4	28018.0	8190.0	29.2
17. Percentage of (15) to (16)	54.3	81.9		58.0	74.0		55.3	68.3		58.5	80.7		60.2	78.8	

a : Expenditure on District Level Schemes
b : District level EGS expenditure
c : % of (b) to (a)

3.7 To a considerable extent district planning does contribute to this situation. Table 6 gives the Plan provisions to be provided out of District Plan outlays required for the completion of works taken up under EGS in a few selected districts. These requirements are very substantial when compared to the total outlays on the District level schemes of these districts for the year 1980-81. It is therefore very doubtful if the required financial provisions will be made by the DPDCs of these districts in the District Plans.

3.8 Another factor to take note of is that the expenditure on EGS varies very widely as between districts, some districts having a very high EGS expenditure and some others very low. It will be seen from Table 5 that the district level EGS expenditure as a percentage of the district plan expenditure has been showing an increasing trend. The percentage of EGS expenditure to the district plan expenditure is higher in the 14 districts shown in Table 7. These 14 districts include 12 districts generally known as the drought prone districts; Thane and Bhandara are included because in these districts the EGS expenditure has been fairly high. These 14 districts account for nearly 70% to 80% of the district level EGS expenditure, even though their share of the district plan expenditure has been 55% to 60%. Under the scheme of district planning, if any district, during any year, incurs more expenditure on district level schemes (including district level EGS) than what its share of the total district Plan expenditure should be, the excess is adjusted in the following years

TABLE-8.

Total District level Plan expenditure (including EGs) the 'deemed' expenditure according to the formula and the adjustments.

(Rs. in rounded lakhs)

Year District	1975-76			1976-77			1977-78			1978-79			1979-80		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
1. Thane	8,73	7,79	+ 94	8,65	9,60	- 95	8,75	10,59	- 1,84	12,55	14,17	- 1,62	13,55	13,52	- 3
2. Kalyana	5,96	4,16	+ 1,80	5,40	5,11	+ 29	5,52	4,71	+ 81	5,58	4,81	+ 77	5,12	7,12	+ 2,00
3. Ratnagiri	5,56	7,15	- 1,59	6,38	8,82	- 2,44	9,22	11,32	- 2,10	11,24	13,54	- 2,30	11,14	12,17	- 1,03
4. Nashik	7,28	8,04	- 76	9,87	9,89	- 2	11,92	11,16	+ 76	17,19	12,12	+ 5,07	20,50	13,68	+ 6,82
5. Dhule	6,23	6,21	+ 2	8,80	7,66	+ 1,14	8,94	8,81	+ 13	9,51	10,74	- 1,24	12,70	10,55	+ 2,15
6. Jalgaon	6,92	6,49	+ 43	9,48	8,01	+ 1,47	8,27	3,69	- 42	10,74	9,08	+ 1,66	11,05	11,06	- 1
7. Pune	5,33	8,99	- 3,66	8,80	11,08	- 2,28	13,45	14,61	+ 1,16	16,83	17,16	- 33	14,92	15,36	- 34
8. Ahmednagar	7,81	7,27	+ 54	11,35	8,94	+ 2,41	10,66	9,39	+ 1,27	9,32	9,53	- 61	16,65	12,39	+ 4,26
9. Satara	3,82	5,29	- 1,47	5,59	6,52	- 93	6,86	7,85	- 99	8,72	8,80	- 8	9,83	8,36	+ 87
10. Sangli	3,88	4,85	- 97	5,43	5,98	- 55	6,81	7,27	- 46	7,19	8,05	- 86	7,30	8,26	- 96
11. Solapur	5,86	7,34	- 1,48	10,34	9,03	+ 1,31	11,74	10,40	+ 1,04	12,81	11,21	+ 1,60	12,57	12,52	+ 5
12. Kolhapur	4,62	5,29	- 67	6,32	6,53	- 21	8,10	7,75	+ 35	7,87	8,28	- 41	7,25	8,98	- 1,73
13. Aurangabad	7,45	7,40	+ 5	10,84	9,11	+ 1,73	10,65	9,34	+ 1,31	10,29	9,07	+ 1,22	11,22	12,59	- 1,37
14. Parbhani	3,92	5,11	- 1,19	6,02	6,30	- 28	7,84	7,82	+ 2	8,02	8,52	- 50	9,46	8,64	+ 82
15. Beed	4,79	4,91	- 12	6,68	6,06	+ 62	6,46	6,92	- 46	6,86	6,91	- 5	8,10	8,32	- 22
16. Nanded	4,62	4,58	+ 4	7,41	5,62	+ 1,79	7,96	6,37	+ 1,59	6,17	6,37	- 20	7,63	7,76	- 13
17. Osmanabad	7,26	6,87	+ 39	9,97	8,46	+ 1,51	11,83	9,43	+ 2,40	9,59	9,08	+ 51	10,04	11,76	- 1,72
18. Buldhana	4,61	4,53	+ 8	4,62	5,59	- 97	5,70	6,50	- 80	7,19	7,28	- 9	7,27	7,72	- 45
19. Akola	6,12	5,17	+ 95	6,45	6,39	+ 6	6,81	6,76	+ 5	6,69	6,80	- 11	7,08	8,82	- 94
20. Amravati	4,65	5,55	- 90	5,29	6,85	- 1,56	6,38	8,19	- 1,81	7,71	9,44	- 1,73	7,78	9,43	- 1,65
21. Yeotmal	4,92	5,12	- 20	7,53	6,30	+ 1,23	9,25	7,31	+ 1,94	8,61	7,72	+ 89	8,56	8,71	- 15
22. Nagpur	6,66	6,09	+ 57	7,22	7,51	- 29	9,32	8,23	+ 1,09	9,89	8,57	+ 1,32	9,30	10,38	- 1,08
23. Wardha	3,19	2,63	+ 56	3,08	3,25	- 17	4,06	3,51	+ 55	4,71	3,64	+ 1,07	5,79	4,47	+ 1,32
24. Bhandara	9,40	5,23	+ 4,17	7,10	6,44	+ 66	5,62	5,71	- 9	8,35	6,16	+ 2,19	13,06	8,95	+ 4,11
25. Chandrapur	5,96	6,36	- 40	6,21	7,85	- 1,64	7,40	9,09	- 1,69	10,16	12,25	- 2,09	11,04	10,78	+ 1,06
26. Gr. Bombay	18,89	16,02	+ 2,87	17,80	19,73	- 1,93	21,12	22,61	- 1,49	20,68	25,06	- 4,08	19,62	27,27	- 7,65
TOTAL	164,44	164,44	--	232,63	232,63	--	230,34	230,34	--	254,36	254,36	--	280,10	280,10	--

Note i- a = Actual expenditure, b = "deemed" expenditure; c = adjustments - excess (+), shortfall (-)

by a cut on its plan allocation. This cut essentially affects the non-EGS plan provisions of the district as the level of EGS expenditure cannot be subject to any district-wise ceiling. Table 8 gives the excess expenditure in certain districts, as compared to what is termed as 'the deemed plan expenditure' of that district. It will be seen that districts with heavy EGS expenditure are the districts which face a cut in their plan allocation in the following years; in other words, the more the EGS expenditure in a district, the less the provisions for non-EGS. The complementary financial provisions required for completing the works cannot be made available from the EGS Fund. But for reasons mentioned above non-EGS Plan provisions for completion of the works are not made available by the DPDCs.

3.9 One of the consequences of the inability of the DPDCs to make adequate complementary provisions in the District Plans is that, the land acquisition costs are not provided for. Land acquisition costs cannot be incurred out of EGS Fund and must be provided in the Plan. Due to inadequate Plan provision for this purpose, it has not been possible to pay compensation for those whose lands are acquired for EGS works like roads, percolation tanks, minor irrigation tanks etc. This adversely affects the completion of these works as the landholders do not agree to give possession of these lands. It has been observed in the Joint Evaluation Report (5) that out of the 244 EGS works covered by the sample, 87 works were in progress; out of these in 70 cases land acquisition was necessary, and in 44 of them no compensation had been paid. The total

Table 9

a) Non-EGS expenditure

b) Eligible non-EGS expenditure if EGS is excluded.

District level non-EGS expenditure and the allocation for non-EGS expenditure which each district would have got if the total non-EGS expenditure is allocated among the districts according to the formula

Rs. in lakhs.

Year District	1975-76		1976-77		1977-78		1978-79		1979-80		1980-81	
	a	b	a	b	a	b	a	b	a	b	a	b
1. Thane	740	624	623	761	630	878	986	1090	1076	957	1169	1100
2. Kulaba	585	333	499	405	533	390	520	370	496	504	660	579
3. Ratnagiri	543	573	619	699	907	938	1107	1042	1080	858	1367	986
4. Nashik	554	644	753	784	881	924	857	932	867	968	861	1113
5. Dhule	477	497	718	607	763	730	484	826	852	747	798	859
6. Jalgaon	571	520	774	635	675	720	757	699	699	783	830	900
7. Pune	399	720	733	878	1104	1210	1512	1320	1262	1080	1282	1242
8. Ahmednagar	457	582	717	708	746	778	208	733	695	877	980	1008
9. Satara	278	423	441	517	569	650	748	677	753	635	749	730
10. Sangli	277	388	400	474	538	602	608	619	632	585	655	673
11. Solapur	310	588	717	715	744	862	895	863	760	886	759	1019
12. Kolhapur	447	423	620	517	797	642	777	637	710	635	832	730
13. Aurangabad	474	593	676	722	739	775	635	698	627	892	897	1026
14. Parbhani	326	408	498	499	637	648	653	655	719	612	816	704
15. Beed	348	385	438	480	464	573	477	532	527	589	653	677
16. Nanded	331	366	500	445	587	528	436	490	492	549	544	631
17. Osmanabad	568	550	767	670	936	782	687	699	691	832	804	957
18. Buldhana	372	362	390	443	531	538	642	560	616	546	748	628
19. Akola	547	413	567	506	628	560	542	523	579	624	756	718
20. Amravati	436	444	445	543	599	678	746	726	677	668	840	768
21. Yeotmal	419	410	628	499	834	606	744	594	631	616	903	708
22. Wardha	283	210	274	257	359	291	399	280	448	316	455	364
23. Nagpur	588	487	580	596	821	682	851	659	714	735	902	845
24. Bhandara	416	418	393	510	308	473	280	474	361	633	399	729
25. Chandrapur	517	518	502	622	648	753	922	943	898	763	1101	877
26. Gr. Bombay	1889	1281	1780	1563	2112	1873	2098	1928	1962	1930	2030	2219
TOTAL:-	13152	13152	16055	16055	19084	19084	19569	19569	19820	19820	22790	22790

land acquisition cost of all the percolation tanks sanctioned under EGS till the end of December, 1979 has been estimated at Rs. 40 crores. The annual increase in the number of percolation tanks sanctioned under the EGS is about 500; the annual requirement of funds for land acquisition for these percolation tanks alone would be Rs. 4 crores, apart from the provisions to clear the backlog. Then there are other works also for which land acquisition cost needs to be incurred, like roads, minor irrigation projects, etc.

3.10 One alternative which has been suggested by the DPDCs of the 'heavy-EGS' districts, like Ahmednagar, Solapur and Nashik, is to exclude the district level EGS expenditure while calculating the district plan funds which each district is entitled to. In the illustration given in para 3.5, this would mean that only Rs. 243.51 crores (Rs. 288.29 crores - Rs. 44.78 crores) will be distributed to the districts according to the formula, when the Plan is formulated. At the end of the year, when a review is taken of the actual expenditure incurred on district level schemes, the EGS expenditure would be omitted from reckoning. Table 9 gives the 'non-EGS' actual and 'deemed' expenditure of each district. It will be seen that according to this calculation the 'heavy-EGS' districts would benefit; but the districts where the EGS expenditure is not so heavy, like Kolhapur or Wardha, would stand to lose, as they would then get less allocation for non-EGS district level schemes than they get at present.

3.11 Under this alternative, EGS would virtually be a 'third sector' standing between the 'district level' and the 'State level' schemes. Let us analyse the implications of this alternative. When district planning was introduced, it was decided that about 60% of the total Plan outlay would be set apart for District level schemes; and that the DPDCs would have a large say in deciding the inter-sectoral allocation of this 60% of the total Plan outlay. Even major irrigation projects were initially classified as 'district level' schemes. Some districts, understandably, found it impossible to make adequate provisions for major projects. Therefore major irrigation projects came to be re-classified as 'State level' and the percentage allocation to District Plan was reduced from 60% to 40%. When the scheme of district planning was given shape to, the inter-play between EGS and district planning could obviously not be foreseen. When, gradually, EGS started taking up a bigger and bigger slice of the District Plan outlay, demands started coming from the DPDCs that EGS should be completely kept outside the District Plans, and the 40% share of the total Plan outlay, to be given to the district level schemes, should be exclusive of EGS. If this is accepted, then the State level schemes would not get 60% of the Plan outlay as they do now, but less. If, on the other hand, the EGS expenditure is to be accommodated within the 40% share of the District Plan, but kept outside the 'divisible' pool for the purpose of calculating the 'deemed expenditure' of each district, then the District Plan as a whole would not gain, but as stated above, heavy-EGS districts would stand

to gain. This would give some more non-EGS plan funds to the heavy-EGS districts. But the non-EGS portion of the District Plan as a whole would still get reduced, due to the growing EGS expenditure on the one side, and the ceiling of 40% on District level Plan outlay on the other.

Therefore, even with this modification in the manner in which every district's Plan outlay is worked out, the capacity of the District Plan as a whole to bear the increasing burden of complementary provisions to be made for EGS works would not increase. The complaint often voiced by the DPDCs is that at the State level new programmes (like T&V system of extension, special programme for oil-seeds and pulses etc.) are announced which fall under the category of district level schemes to be accommodated within the 40% ceiling for District Plan. Public commitments are also made regarding intensification of rural drinking water supply programme, introduction of several welfare measures etc. which again burden the District Plan outlay further. If DPDCs are required to make provisions in the district Plans for all these, with the EGS chopping off 25% to 30% of the District Plan outlay, the problem of the DPDCs would appear to be a genuine one. Under these circumstances it is not surprising that making adequate provisions in the District Plans for the completion of EGS works get neglected.

3.12 Let us now pursue the implication of treating EGS as a 'third sector' and keeping it outside the District Plan without reducing the share of the District level outlay, that is, retaining it at 40% of the Plan outlay. From the past trend at least 10% of the total Plan outlay

T A B L E - 10

Budgetted receipts from Special EGS taxes and levies,
State Plan outlay and EGS outlay (cash component).

(Rs. in lakhs)

Description	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	
1. Budgetted receipt of Special EGS taxes of levies	2195	2662	2853	3952	4256	58,33	R. E. for 1980-81 not recei- ved.
2. Contribution from General revenues	2195	2662	2853	3952	4256	5833	
3. Budgetted accrual to EGS Fund	4390	5324	5706	7904	8512	116,66	
4. State Plan outlay	35000	45950	64680	73500	76250	87733	
5. EGS outlay	3049	5000	5500	6500	8150	8800	
6. Percentage of (3) to (4)	12.54	11.59	8.82	10.75	11.16	13,30	
7. Percentage of (5) to (4)	8.71	10.88	8.50	8.84	10.69	10,03	

would need to be earmarked for EGS. This would mean that the State level schemes would get an allocation of 50%. State level Plan includes the major production sectors like power generation and transmission, industry, major irrigation, etc. Planning Commission, during the finalisation of the State's Plan insists on a provision of at least 60% of the total Plan outlay for the irrigation and power sectors. In Maharashtra, the outlay on these sectors was between 40% and 45% during the Fourth Plan, and it has increased from 46% in 1974-75 to 57% in 1978-79. Even with this emphasis, there are recurrent power shortages and Maharashtra has still a long way to go in irrigation development. In fact, if the budgeted accretion to the EGS Fund every year is entirely earmarked for the EGS, the initial outlay for EGS may have to be more than 10% of the total Plan outlay, as Table 10 would show. This would, in turn, imply that there will have to be some slowing down in areas like irrigation and power, with its repercussions on the State's economy. Thus, every available option has its problems. The major lesson here is that if EGS is to be used effectively as an instrument for creating durable assets for agricultural development, a firm resource commitment is inescapable. Whether this should be achieved by cutting down on several welfare schemes (mostly district level schemes) or on major investments is a matter of State policy.'

4. Labour attendance on EGS works and its impact on their completion.

4.1 We have so far seen the problems connected with the financial planning of the EGS works, that is, making adequate

funds available so that completion of the EGS works and the resultant flow of benefits are not hampered by lack of funds. For works taken up under the EGS, the two most critical requirements for completion are financial resources and availability of labour. Let us now assume that adequate funds are made available. Would there still be difficulty in completing the works? An examination of this question will lead us to examine the problems associated with the physical planning of the EGS works. It is necessary to state what we mean by 'completing the works.' When we refer to works taken up under EGS being 'completed', what is meant is that once any work is started under EGS, its execution is not suspended (except of course during heavy rains) until it is completed. Secondly, the execution of the work should proceed at a steady pace employing whatever is the optimum number of persons which can be engaged on that work at a steady rate. That is, the labour attendance on the work should not fluctuate by a wide margin. To give an example, let us suppose that a percolation tank is started under EGS. Normally, a medium sized percolation tank with an estimated cost of Rs. 5 lakhs can give employment to about 250 workers at a steady rate for two working seasons i.e. October-May, during which it can be completed. The number of workers which can be absorbed on the work can vary, within limits; it cannot be very much more than the optimum because at the works site there has to be enough space for the workers to work; similarly the work cannot be carried on with too few workers, as, in addition to the work getting prolonged, the supervision cost will become very high.

Moreover, certain components of works, (like, for example, gorge filling portion of the tank works) will have to be completed in a time-bound manner, once they are taken up; this requires that the labour attendance will have to be maintained at a certain minimum level. Annexe-2 gives the projections regarding the execution of some works under EGS taken from the operational plan (see para 2.8) prepared for Nashik district for the period November 1980 to June 1981. It indicates the manner in which the execution of works is planned. It is seen from Annexe-2 that the progress of the execution of the EGS works as per plan depends upon the availability labour force at the anticipated rate. It is worth quoting what the Joint Evaluation Report has to say on this: "It was noted that even till 1st April, 1978 (the report speaks of 87 works which were in progress as on 1st April, 1976) as many as 78 of these works in progress relating to different categories had not been completed. Some of the important factors which had impeded the progress in completion of works were uncertainty of labour availability, frequent stoppages of work,...."(6).

4.2 Availability of labour steadily at the anticipated rate on any work depends upon several factors. Some of these factors are exogenous to the administration of the EGS, like good or bad agricultural season, avenues of seasonal employment nearby, like sugar factories, etc.; some factors are endogenous; we shall presently describe what these are. The former category of factors which do cause fluctuations in labour attendance are inherent in a scheme like the EGS. To a large extent, (except for the uncertainties of the

monsoon) these factors are predictable. Operational plans, which are prepared after the course of the monsoon is known, are intended to reduce the element of uncertainty in the physical planning of EGS works. The State Government has also issued detailed instructions to the Collectors to prepare a manpower budget, in order to estimate the availability of labour in a given area. Operational plans and manpower budget are expected to take care of the exogenous factors mentioned above. But the second category of factors are to a large extent, within the competence of the administration to regulate. In other words, the availability of labour to any work can, to a large extent be regulated by the manner in which the EGS is implemented. The levers of which the administration can operate in order to regulate the labour attendance on any work are the following:

(i) The number of EGS works which are started in a district - or, more precisely the 'density' of EGS works. (ii) The mix of EGS works started in a district - that is, how many road works, how many canal works, etc. (iii) Planned suspension of certain works in order to mobilise labour to certain nearby works, so that they can be assured of steady labour availability to facilitate their completion. (iv) The location of works started under EGS - that is, whether increasing number of works are started nearer the villages; or more precisely, the average distance of the EGS works in a district from the villages. All the above factors influence the labour attendance on the EGS works.

4.3 Works started under EGS stand a good chance of being completed only when their execution proceeds without inter-

ruption, whatever may be the cause of such interruption, whether shortage of materials, machinery or labour. It has been observed that in many cases, delay in the completion of works leads to further delay, because after a lapse of two or three years revised cost estimates of the works require to be approved and this formality takes time.

There are other reasons also why a project which is temporarily suspended is generally found difficult to be resumed and finished. These are mentioned below:-

(i) Once a project is suspended the supervisory staff are deployed elsewhere. Considering the general shortage of supervisory staff it is difficult to redeploy them again on the suspended project. (ii) Before a project is started there is considerable local enthusiasm and a lot of pressure is brought on the local administration to start the project. Once a project is started and suspended, particularly if it is suspended because of labour shortage, the same local enthusiasm is not evident to restart the same. (iii) The initial phases of a project generally consist of earth work (whether the project is an irrigation project, a percolation tank project or a road project) which is relatively easy to do and where the wages are more as compared to the effort. When an irrigation project or a percolation tank project progresses and reaches the stage of gorge-filling, the lead (i.e. the distance over which the excavated earth is to be carried by the labour) increases, the work becomes strenuous and the wages tend to drop. In the case of road works when the stage comes for metal-breaking and metalling of the road the wages tend to drop.

Table 11

Statement showing category-wise number of works sanctioned and completed under the E.G.S. since its inception till March 1980.

Sr. No.	Category.	N U M B E R O F W O R K S										Percentage of completion at the end of March 80
		sanctioned at the end of March 19					Completed at the end of March 19					
		76	77	78	79	80	76	77	78	79	80	
1.	Labour intensive component of											
	a) Major Irrigation Projects.	296	622	874	1529	2055	50	86	203	901	1404	68.32
	b) Medium Irri. Projects	69	120	197	221	337	7	22	66	80	125	37.09
2.	Minor Irrigation Tanks	935	1049	1147	1397	1781	35	74	169	310	752	42.22
3.	Percolation Tanks	2240	2605	3232	4082	4825	235	602	2035	1415	1870	38.76
4.	Other Minor Irri. Works	925	1252	1260	1525	2489	489	660	718	830	844	33.90
5.	Soil Conservation Works	7136	11317	16814		41071	1297	3309	7989	12322	28712	69.90
				29246								
6.	Land Dev. Works.	423	2993	3789	7346	9903	29	1019	1060	2706	5139	51.29
	Afforestation & Other forest works.	597	1127	1288	1587	2175	78	140	250	452	740	34.02
8.	Road Works.	1489	2081	2831	5130	8083	253	431	746	1261	2178	26.94
9.	Other Works.	54	82	139	241	596	39	40	40	123	206	34.56
	Total:	14158	23248	31621	73315	52304	2512	6383	12276	20900	41970	

At this stage the labour strength also falls and the work is suspended. It is difficult to get labour to do only the remaining arduous portions of the projects.

Therefore, when the labour attendance on a project falling under the category of 'irrigation' tends to drop, it is necessary to close down the other EGS works nearby, particularly road works, and to direct labour to the project.

4.4 Table 11 gives the number of works of various categories sanctioned under EGS and completed upto the end of March, 1980. The completion rate of minor irrigation and percolation tank works is low, as compared to that of canal works, major irrigation projects, land development and soil conservation works. The low completion rate of the first category of works is mainly due to the fact that work on them tends to get suspended. The higher rate of completion of the latter category of works is attributed to the following factors: (i) The State Government has issued instructions to the Collectors that no EGS works should be opened within a distance of 16 km. from the canal works of major irrigation projects. (ii) Since the canal works form part of approved Plan projects, problems like non-availability of land due to compensation not having been paid, lack of machinery, or lack of materials do not arise. (iii) Soil conservation and land development works do not involve any land acquisition. They are taken up on the fields and are therefore easily accessible to the workers. They do not involve any complementary Plan outlay. Since they involve mostly earth work, no machinery is required. Once they are started there are no factors contributing to their stoppage

TABLE - 12,1 STATEMENT.

showing category-wise status of works in 4 selected districts sanctioned under Employment Guarantee Scheme as on June 1960.

Sr. No.	Category of work.	No. of Works Sanctioned.	No. of Works not reported	No. of Works not started.	No. of Works Cannot be Started and Reported.	No. of Works Completed.	No. of Works in Progress	No. of Works Stopped Temporarily.	No. of Works abandoned.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)			
1.	Major Irrigation.	..	Earth work of a dam or reservoir	..	--	--	--	--	--			
2.	Major Irrigation.	..	Canal system Excavation/embankment etc.	..	290	14	2	268	5	138	124	7
3.	Medium Irrigation.	..	Earth work of a dam or reservoir	..	15	--	1	14	--	2	12	--
4.	Medium Irrigation.	..	Canal System excavation/Embankment etc.	..	57	6	2	49	2	19	27	1
5.	Minor Irrigation.	..	Tank (Construction, Canals) etc.	..	419	67	4	348	35	165	147	1
6.	Minor Irrigation.	..	Percolation Tank.	..	1473	204	311	958	35	428	469	6
7.	Minor Irrigation.	..	Village Tank.	..	39	8	--	31	6	--	25	--
8.	Minor Irrigation.	..	Disilting of Village Tank.	..	1	--	--	1	--	--	1	--
9.	Minor Irrigation.	..	Disilting of K-malgajeri Tank.	..	476	23	66	387	46	238	103	--
10.	Minor Irrigation.	..	Construction of field channels of left Irrigation.	..	--	4	--	7	--	5	8	--
11.	Minor Irrigation.	..	Community Wells.	..	--	--	--	--	--	--	--	--
12.	Minor Irrigation.	..	Bandhars.	..	1	--	--	1	--	--	--	--
13.	Minor Irrigation.	..	Other Minor Irrigation Works.	..	42	5	--	37	1	20	16	--
14.	Road Works.	..	Hilly and in accessible area- from 61-81 plan.	..	84	6	--	78	9	26	41	2
15.	Road Works.	..	Hilly and inaccessible area- Other road works.	..	166	9	7	150	2	52	94	2
16.	Road Works.	..	Other areas. from 61-81 Plan.	..	118	4	9	105	1	26	79	1
17.	Road Works.	..	Other areas-Other road works.	..	183	151	12	72	40	317	363	--
18.	Labour Intensive.	..	Drainage Scheme in 'C' Class Municipal area.	..	3	3	--	--	--	--	--	--
19.	Labour Intensive.	..	Water Supply Schemes in 'C' Class Municipal area.	..	--	--	--	--	--	--	--	--
20.	Labour Intensive.	..	Other works in 'C' Class Municipal area.	..	2	2	--	--	--	--	--	--
21.	Labour Intensive.	..	Component of Flood Control Works.	..	5	2	--	3	--	8	1	--
22.	Works other than covered in above.	..	..	..	52	19	1	32	8	18	11	--
23.	TOTAL	..	..	..	4137	527	40	3190	188	1477	1511	14

Table T2.2
STATEMENT
 SHOWING categorywise stage of works in 4 selected districts sanctioned under EGS as on September 1980.

Sr. No.	Category of work	No. of works sanctioned	No. of works not reported	No. of works not started	No. of works sanctioned started and reported	No. of works completed	No. of works in Progress	No. of works stopped Temporary	No. of works Abandoned
1		2	3	4	5	6	7	8	9
1.	Major Irrigation : Earth work of a dam or reservoir	-	-	-	-	-	-	-	-
2.	"- : Canal System excavation/embankment etc.	284	5	6	273	9	129	135	-
3.	Medium Irrigation : Earth work of a dam or reservoir	12	1	-	12	-	1	11	-
4.	"- : Canal System excavation/embankment etc.	55	5	2	48	1	14	32	-
5.	Minor Irrigation : Tank (Construction, Canals etc.)	397	49	4	344	13	67	264	-
6.	"- : Percolation Tank	1347	59	295	993	51	363	369	-
7.	"- : Village Tank	29	1	-	28	2	3	23	-
8.	"- : Disilting of village Tank	1	-	-	1	-	-	1	-
9.	"- : Disilting of ex-Malguzari Tank	496	60	71	365	6	9	350	-
10.	"- : Construction of Field channels of lift irrigation	9	2	-	7	-	-	2	-
11.	"- : Community wells	-	-	-	-	-	-	-	-
12.	"- : Bandharas	2	-	-	2	-	-	2	-
13.	"- : Other Minor Irrigation Works	48	25	-	15	1	4	10	-
14.	Road Works : Hilley and inaccessible area-from 51-81 Plan	68	7	-	61	4	18	39	-
15.	"- : Hilley and inaccessible area - Other road works	161	4	6	151	7	59	84	-
16.	"- : Other areas - From 61-81 Plan	112	4	7	101	4	23	74	-
17.	"- : Other areas - Other road works	822	191	16	615	41	161	489	-
18.	Labour Intensive : Drainage Schemes in 'C' class Municipal Areas	-	-	-	-	-	-	-	-
19.	"- : Water Supply Schemes in 'C' Class Municipal areas	-	-	-	-	-	-	-	-
20.	"- : Other works in 'C' class Municipal Areas	-	-	-	-	-	-	-	-
21.	"- : Component of Flood Control works	3	-	-	3	-	11	2	-
22.	Works other than covered in above.	57	18	-	39	1	15	23	-
TOTAL		3896	431	407	3058	140	849	2035	14

Table 12-3
STATEMENT

Showing Categorywise Stage of Works in 4 selected districts sanctioned under E.C.S. as on December 1960-

Sr. No.	Category of Work.	No. of Works Sanctioned.	No. of Works not reported.	No. of Works not Started.	No. of Works Sanctioned Started and Reported.	No. of Works Completed.	No. of Works in Progress.	No. of Works Stopped Temporarily.	No. of Works Abandoned.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Major Irrigation	1	Earth Work of a dam or reservoir.	--	--	--	--	--	--
2.	Major Irrigation.	1	Canal System excavation/embankment etc.	289	18	264	5	138	120
3.	Medium Irrigation.	1	Earth Work of a dam or reservoir.	14	9	5	--	1	4
4.	Medium Irrigation.	1	Canal System Excavation/embankment etc.	49	14	34	1	9	24
5.	Minor Irrigation.	1	Tank (Construction, Canal etc.)	397	126	3	268	8	81
6.	Minor Irrigation.	1	Percolation Tank.	1363	73	326	964	50	444
7.	Minor Irrigation.	1	Village Tank.	28	--	--	28	1	1
8.	Minor Irrigation.	1	Disilting of Village Tank.	1	1	--	--	--	--
9.	Minor Irrigation.	1	Disilting of ex-Malgujari Tank.	496	96	58	342	2	7
10.	Minor Irrigation.	1	Construction of Field Channels of Lift Irrigation.	6	2	--	4	--	4
11.	Minor Irrigation.	1	Community Wells.	--	--	--	--	--	--
12.	Minor Irrigation.	1	Bandharas.	2	1	--	1	--	1
13.	Minor Irrigation.	1	Other Minor Irrigation Works.	50	25	--	25	1	11
14.	Road Works.	1	Hilly and inaccessible areas-61-61 Plan.	70	8	--	62	1	22
15.	Road Works.	1	Hilly and inaccessible areas-Other road Works.	162	12	7	143	10	69
16.	Road Works.	1	Other areas- From 61-61 Plan.	112	10	6	96	6	25
17.	Road Works.	1	Other areas- Other road Works.	810	173	9	628	18	228
18.	Labour Intensive.	1	Drainage Schemes in 'C' Class Municipal areas.	--	--	--	--	--	--
19.	Labour Intensive.	1	Water Supply Schemes in 'C' Class Municipal areas.	--	--	--	--	--	--
20.	Labour Intensive.	1	Other Works in 'C' Class Municipal areas.	--	--	--	--	--	--
21.	Labour Intensive.	1	Component of Flood Control Works.	3	1	--	--	2	--
22.	Works Other than covered in above.			57	18	--	39	2	9
<u>T O T A L</u>				587	587	417	2905	103	1029
								1766	8

Table 12.4

STATEMENT

Showing Categorywise Stage of works in 4 selected districts sanctioned under Employment Guarantee Scheme as on March 1981.

Category of Work		No. of works sanctioned	No. of works not reported	No. of works not started	No. of works sanctioned started and reported	No. of works completed	No. of works in progress	No. of works stopped temporarily	No. of works abandoned
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	Major Irrigation : Earth work of a dam or reservoir	-	-	-	-	-	-	-	-
2.	- " - Canal system excavation/embankment etc.	306	14	14	278	3	141	134	-
3.	Medium Irrigation : Earth work of a dam or reservoir	13	7	-	8	-	3	3	-
4.	- " - Canal system excavation/embankment etc.	47	6	1	40	3	12	25	-
5.	Minor Irrigation : Tank (Construction, Canals etc.)	402	95	3	304	16	140	146	2
6.	- " - Percolation Tank	1561	145	459	957	64	457	434	2
7.	- " - Village Tank	29	1	-	28	2	1	25	-
8.	- " - Disinfecting of village tank	1	-	-	1	1	-	-	-
9.	- " - Disinfecting of ex-Malgujari Tank	473	89	57	327	9	131	186	1
10.	- " - Construction of field channels of Lift Irrigation	7	2	-	5	1	-	4	-
11.	- " - Community Wells	-	-	-	-	-	-	-	-
12.	- " - Bandharas.	2	-	-	2	-	1	1	-
13.	- " - Other Minor Irrigation Works	54	32	2	20	-	10	10	-
14.	Road works : Hilly and inaccessible areas from 61-81 Plan	76	11	-	65	13	14	35	1
15.	- " - Hilly and inaccessible areas Other road works	163	21	7	135	11	64	60	-
16.	- " - Other areas - From 61-81 Plan	103	5	6	92	4	24	64	-
17.	- " - Other areas - Other road works	837	162	7	668	48	314	303	3
18.	Labour Intensive : Drainage Schemes in 'C' class Municipal areas	-	-	-	-	-	-	-	-
19.	- " - Water Supply Schemes in 'C' class Municipal areas	-	-	-	-	-	-	-	-
20.	- " - Other works in 'C' class Municipal areas.	-	-	-	-	-	-	-	-
21.	- " - Component of Flood Control Works	3	-	-	3	-	2	1	-
22.	Works other than covered in above.	54	11	-	43	1	18	24	-
Total		4131	601	556	2974	178	1332	1455	9

and this itself is one factor which attracts labour to these works.

4.5 Table-12 gives the status of works in four selected districts at the end of June 1980, September 1980, December 1980 and March 1981. It will be seen that while the number of works stopped temporarily is high during monsoon (which can be expected), the number does not reduce appreciably even during the peak EGS months like March and June.

Reasons for suspension of works are: (i) non-availability of labour, due to agricultural season, other works nearby, etc. (ii) lack of machinery for making further progress on the works; lack of rollers is particularly mentioned as the main reason for non-completion of road works. (iii) technical reasons like, want of alignment of canals, revised plans and estimates not approved, agency for skilled work not having been fixed, etc. and (iv) want of technical hands for supervision. Factors mentioned at (ii) and (iv) are in a way, controllable and can be taken care of if adequate funds are provided for these components; factors mentioned at (iii) above are largely attributable to administrative lapse or administrative delay which is an inherent factor in any scheme. We shall, therefore, only analyse those intractable problems, which are, in a way, part and parcel of the EGS and which, by themselves, contribute to the uncertainty of labour availability and hence to the non-completion of works.

4.6 Figures in Table 13 show the fluctuation of labour attendance on EGS works. Granting that, in view of the fluctuation in labour attendance, suspension of some works

Table 11

Districtwise and Monthwise Labour Attendance under the ESE during 1979-80

Sr. No.	District	Labour Attendance at the end of											
		April	May	June	July	August	September	October	November	December	January	February	March
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.	Thane	39093	39306	21938	3692	3007	6093	15089	19807	35494	33136	38501	42965
2.	Kulaba	822	1389	2395	193	545	638	734	924	2342	1415	2251	1514
3.	Ratnagiri	1897	1091	679	150	514	2617	1668	4042	3560	5779	5694	4764
4.	Rasik	94000	96940	105717	90893	41020	48657	38200	35072	57571	64698	67996	61378
5.	Dhule	57520	53372	47011	24430	14218	18773	16270	15463	28106	33981	34981	39820
6.	Jalgaon	26321	26485	18809	13411	10658	6970	7159	6588	14418	24610	27270	29529
7.	Puna	35461	29591	23180	19828	18869	17621	17607	1145	23586	27468	29654	33480
8.	Ahmednagar	128680	121078	154533	208311	177792	116802	75296	79810	84421	61656	49046	57190
9.	Satara	19051	18664	20313	16498	18431	16518	15886	13683	16302	21339	24395	26151
10.	Sangli	6789	5781	5957	6208	8293	8213	7605	9292	7454	7694	7048	8458
11.	Solapur	50360	47870	54242	64960	65696	62904	51842	49343	50908	42339	33227	41396
12.	Kolhapur	1852	1304	251	42	39	64	102	136	803	1167	2807	2977
13.	Aurangabad	35114	42164	55504	55451	31885	30963	18643	20213	30751	38594	30525	27040
14.	Parbhani	26998	28476	26235	19763	14335	14907	11177	9996	10497	13269	15652	20191
15.	Beed	35141	27182	30751	44550	27024	21806	14142	12510	20137	16976	17982	24370
16.	Kandol	28089	16977	20790	18058	17198	20923	12509	12252	17895	24966	17793	30820
17.	Osmanabad	29568	28234	30282	48138	45472	45524	18749	17579	21111	20850	23519	24377
18.	Puldhana	14463	12695	7247	1626	1240	1380	1850	2288	3626	13273	19454	2111
19.	Akola	46410	36322	17294	6235	4408	6044	5094	6378	7168	13940	23678	29369
20.	Amravati	1153	11248	9731	4152	2390	1775	4807	6349	6102	7102	15442	16585
21.	Yavatmal	28155	24294	20719	11906	6548	11041	13984	14063	12444	19789	27117	34150
22.	Nandga	14758	10244	8435	3641	1439	2800	6043	5879	6902	9818	12914	14180
23.	Nagpur	18908	17649	14385	4183	3388	5052	7972	11356	11037	24065	29601	32400
24.	Bhandara	99500	75638	51315	11279	5172	17917	61173	73878	13080	166911	190037	230770
25.	Chandrapur	34309	28242	31229	6183	6018	13229	15303	15547	37900	48827	72046	94280
Total		894472	792256	778942	68314	525654	499041	438504	448975	640973	743631	831873	955770

is inescapable, the question is, whether at least in the case of works like irrigation tanks, percolation tanks, canal works and such other works which have a more direct linkage with agricultural production, conditions can be achieved which would ensure their steady execution till they are completed. In these works, predictability of labour attendance is a very important factor. As stated earlier, some components of these works like gorge-filling will have to be executed in a time-bound fashion, and before these components are actually taken up for execution there must be assurance of adequate labour availability to complete them before the onset of the next monsoon. On the other hand, certain works like road works or soil conservation works can be suspended and resumed when labour is available. Even though such a suspension of any work, as stated above, is not desirable, if the very nature of EGS makes it inevitable that some works will have to be suspended, then it is better that these works are suspended rather than the works of the category mentioned above. The reasons are:-

(i) Normally road works and soil conservation works are taken up nearer the villages where it is possible to attract labour and (ii) These works are relatively easy and can be taken up at any time.

4.7 The difficulties mentioned in para 4.3 in the resumption of suspended works may not be applicable in the case of road works and soil conservation works to the same degree as for other works. We, therefore, come to two categories of works, viz., one category which need to be planned for being completed without suspension, once they are taken up and labour

TABLE - 14.

Trends in the number of works sanctioned and works remaining incomplete in certain selected districts.

Sr. No.	District	No. of works sanctioned at the end of March				No. of Road works sanctioned at the end of March				No. of incomplete works at the end of March				No. of incomplete Minor Irrigation works at the end of March				No. of incomplete Road works at the end of March			
		1977	1978	1979	1980	1977	1978	1979	1980	1977	1978	1979	1980	1977	1978	1979	1980	1977	1978	1979	1980
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
1.	Thane	458	537	2165	2204	308	385	479	518	374	453	1040	1039	54	54	85	82	229	306	400	405
2.	Jalgaon	428	597	1259	1833	--	60	145	250	410	532	967	1288	113	113	101	113	--	57	95	193
3.	Pune	657	938	1095	1373	95	116	205	253	583	535	681	870	95	86	93	104	72	79	166	194
4.	Aurangabad	639	834	6606	12767	--	17	59	147	507	373	5535	1973	159	132	139	210	--	17	30	61
5.	Parbhani	1785	2091	2676	3627	3	3	11	27	1273	1269	1772	1186	10	9	9	13	3	3	11	27
6.	Beed	426	521	632	958	50	92	130	150	373	434	543	819	88	137	156	195	40	77	115	135
7.	Osmanabad	1132	1299	1549	2284	--	16	65	197	979	1029	1259	1579	177	155	214	199	--	12	58	177
8.	Ahmednagar	1344	2917	6296	8242	15	44	409	598	991	1451	3112	1903	330	337	374	342	9	26	304	493
9.	Solapur	4867	6268	7368	8819	64	153	198	225	3152	4152	3784	3859	334	393	528	681	64	101	131	130
10.	Nashik	651	806	1206	1437	56	64	259	469	416	550	950	1113	146	244	303	322	46	54	249	391
11.	Dhule	1758	2596	4538	5404	194	352	721	721	853	1410	2432	2314	20	140	229	233	130	239	503	448
12.	Nanded	305	356	445	796	13	38	59	174	297	332	421	508	55	67	120	79	13	38	59	147
13.	Bhandara	837	904	1115	2093	31	54	257	1064	604	662	813	1322	384	388	380	208	27	48	230	815

1a1 per of incomplete tank works. It is thus clear

availability for which will have to be ensured and another category of works which can be activated during times of greater availability of labour and which can be kept dormant during other months. The question is whether this kind of planning is possible and is being done. Table 14 gives the number of works sanctioned and the number of works remaining incomplete in certain selected districts. From this Table the following inferences can be drawn:-

(i) Even when a large number of minor irrigation works are incomplete, a large number of road works have been sanctioned. In Nashik for example, 244 minor irrigation works were incomplete by the end of March 1979, but still 210 road works were sanctioned. At the end of March 1980, the incomplete minor irrigation works and the road works increased in number.

(ii) In the heavy EGS-districts there is generally a complaint that the viable sites for constructing minor irrigation tanks, and percolation tanks which require a favourable terrain, are getting depleted. This argument has been used for relaxing the norms for taking up these works. Earlier the norm used to be Rs. 45,000/- per million cu.ft. of water impounded and this has now been increased (since 1978) to Rs. 1,00,000/- per million cu.ft. But road works are still being sanctioned, despite the existence of a large number of incomplete tank works. It is thus clear that efforts to mobilise labour to complete the incomplete tanks' works are lacking.

4.8 This raises the fundamental question, namely, whether a conscious labour mobilisation is possible and whether it is in conformity with the principle of guarantee

which is central to the EGS. Since the guarantee is at the district level, such a planning would be strictly in conformity with the statutory position. It is possible, legally, to keep only a certain number of works going and open new works only if these ongoing works cannot absorb all the people who require employment under EGS. But, in actual practice, assurances are given that even though the guarantee is at the district level, work would be provided within a radius of 5 km. from a village. It is this kind of assurance and the resultant expectation created which is responsible for more works being opened. When such works are opened, what happens is that these works tend to divert labour from other works, particularly irrigation works which are generally located away from villages. Both the road works and the irrigation works then remain incomplete. Works which are taken up nearer the villages generally happen to be road works, since road works do not have to satisfy any economic yardsticks and can be taken up anywhere. Road works therefore have the twin attraction of nearness to village as well as being of easy nature, at least in the initial stages.

4.9 There is another reason why road works are more attractive to the EGS labourers and why there are, therefore, pressures for starting more road works. The following Table 15 gives the year-wise cost and wage paid per manday of employment generated. It will be seen that the total wage as a percentage of the total cost of the works has been increasing, indicating, that on EGS works, more and more percentage is being spent on wages and less and less on items other than wages. One possibility is that the works

T A B L E - 15

Yearwise total expenditure on EGS, wage Component, and Wage per manday of
employment generated.

Year	Mandays of employment generated under EGS	E x p e n d i t u r e (Rs. in crores)					A V E R A G E per Manday of employment generated.			
		Total expenditure on EGS	W a g e s		Percentage of wages to total expenditure	Cost ks.	W a g e			
			Cash	Value of feedgrains			Total	Cash	Foodgrains	
1976-77	13.32	51.10	37.13	1.22	38.35	75.04	3.83	2.88	2.78	0.10
1977-78	11.73	51.54	35.79	2.34	38.13	73.98	4.39	3.25	3.05	0.20
1978-79	16.35	74.17	53.73	5.30	59.03	79.59	4.53	3.61	3.28	0.33
1979-80	20.54	109.23	71.98	19.78	91.76	84.00	5.32	4.47	3.50	0.97
1980-81										

Table 16

Category-wise cost and cash wage paid per manday of employment generated during 1979-80.

Sr. No.	Category of work	Mandays of employment generated in (crores)	Cash Expenditure Rs. in crores.		Average per manday of employment generated.	
			Total	Wages	Cost (cash)	Wage (Cash)
1.	2.	3.	4.	5.	6.	7.
1.	Irrigation	8.67	38.00	30.11	4.38	3.47
2.	Soil conservation	3.72	15.73	12.57	4.22	3.37
3.	Land development	1.08	7.52	5.19	6.96	4.80
4.	Afforestation	1.29	3.05	2.69	2.36	2.08
5.	Road	5.64	24.25	20.72	4.30	3.67
6.	Other works	0.14	0.90	0.70	6.42	5.00
Total		20.54	89.45	71.98	4.35	3.50

taken up under the EGS are becoming more and more labour-intensive; another inference is that the works are abandoned or left incomplete as soon as the unskilled portion is completed. The latter inference is supported by the facts relating to the number of incomplete works. Another trend which can be noticed from the Table is the steadily increasing wage per manday of employment generated; that is, an average EGS worker earns more cash wages, despite the fact that after the introduction of Food for Work, there was a slight reduction in the cash wage rate. Here again, one inference is that the EGS labour is increasingly learning to put in more output per day. Another, and a possibly more credible inference is that the supervision is becoming slack and the wages paid for EGS works are disproportionate to the output of work. It is also possible to infer that more and more 'easy works' like mere earth-work of the roads and earth-work of the percolation tanks are being taken up and abandoned as soon as the more difficult portions are to be done.

4.10 The following Table (Table 16) gives the categorywise cost and cash wage paid per manday of employment generated during 1979-80. It will be seen from this Table that barring land development where a separate schedule of wages is operating, road works result in higher wages to the EGS workers.

4.11 The above facts support the following observations:-
 (i) When more works are started in order to create opportunity for employment within a radius of 5 km. from every village, labour attendance at the works increases. Thus labour

attendance increases as the density of works increases. EGS is becoming less and less a scheme guaranteeing unskilled employment within the district on productive works and more and more a scheme for creating work opportunities near every village. Since works which can be started near the villages are generally road works, an increasing number of road works are sanctioned under the EGS and these tend to syphon off labour from other works farther away.

(ii) As labour attendance on EGS works increases, as a direct response to the number of works started, supervision tends to become slack. There is a limit to the number of workers who can be effectively supervised by one overseer, the rate of augmentation of the technical supervisory staff is less than the rate at which labour attendance increases.

(iii) Slack supervision, coupled with the 'easy' nature of works pushes up the wages under the EGS. As cash wages increases so does the kind (i.e. foodgrain) component. As this is subsidised, the attraction of EGS further increases.

(iv) This attracts more people to EGS, and the pressure on starting new works increases. This starts another chain of more demand for labour, more works, less supervision, more wages and so on.

(v) The number of incomplete works tends to go up in sympathy with the number of works, particularly road works sanctioned.

4.12 There is one other factor which needs to be mentioned here. No single department or an officer is charged with the responsibility of ensuring completion of the EGS works. In administration, it is necessary, in order to achieve an

end, to fasten responsibility on a specific department. The Irrigation Department is responsible for the completion of works started under the Plan; so are the minor irrigation tanks, which are essentially Plan works but which are mostly executed under the EGS can be considered as the responsibility of the Irrigation Department. But percolation tanks are not Plan works; therefore, there is no department which is responsible for their completion. While road works which are taken up under the Plan are the responsibility of the PWD, the large number of road works taken up as pure EGS works are not considered the responsibility of the PWD, in fact, the department is reluctant to spare 'their' Plan funds to execute the skilled portion (over and above what can be accommodated within the 60:40 norm, vide para 2.3) of the 'EGS roads', on the ground that these roads would not have figured in 'their Plan'. Collector is responsible for honouring the guarantee, but not for completing the works taken up under EGS.

4.13 In the light of the above analysis, the effectiveness of EGS as an instrument to increase agricultural production is doubtful. There are, as we have seen, problems which seriously hamper proper financial planning of EGS. The promise of EGS has been carried so far that it cannot fulfil the promise and remain as an effective tool for increasing agricultural production; the problems of proper physical planning of EGS seem to be intractable. It is very doubtful if EGS can, in the short run, be freed from the various constraints mentioned in this chapter and made to fulfil its originally intended role.' Probably by utilising resources

less efficiently it can even have the opposite effect - inasmuch as the same resources could have been used more effectively by taking up other programmes under the Plan. It must, however, be stated here, that this examination of the EGS is from one standpoint only, namely its contribution to agricultural development. Its other role, namely, as an anti-poverty programme, and its income redistributive aspects are beyond the purview of our examination here.

Notes and References (Chapter 9)

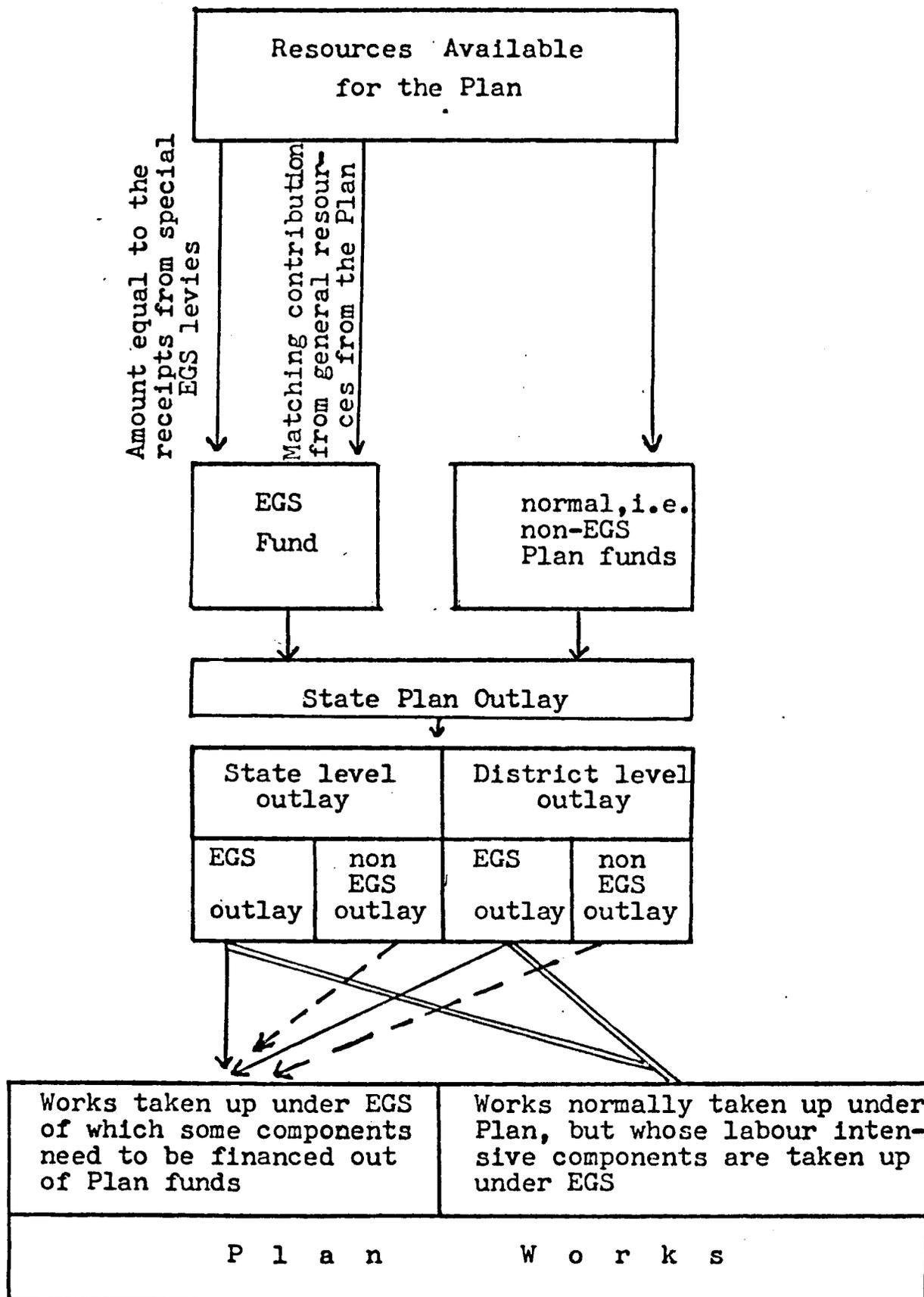
- (1) Normally, staff expenditure is not met out of EGS Fund except in respect of staff charged to works. The expenditure on all supervisory staff is normally debited to Plan funds, the argument being that most of the works under EGS are basically Plan works any way, with only the labour-intensive components implemented under EGS. But as the number of and expenditure on EGS works per se increased, that is, works which, but for the presence of EGS, would perhaps not have been taken up at all as they do not normally figure in the Plan, like percolation tanks, etc., special staff paid entirely out of EGS funds have been created. Sometimes, as in the case of afforestation works, thanks to EGS, there is increased emphasis on certain works. In such cases, staff financed out of EGS Fund has been sanctioned to augment the normal departmental staff.

The position regarding soil conservation and ayacut development works is peculiar. These works were, in fact, being taken up under the Plan even before EGS started and the entire staff paid out of Plan funds. After the commencement of EGS, all these works are taken up almost wholly under EGS, as they do not have much unskilled or material components. According to the cost norms, (vide para 2.3) only 33 1/3% of the cost of the works can be incurred on the staff. But for various reasons, the staff cost often exceeds the norms; that is, staff costs often exceed 33 1/3% of the cost of works. Expenditure on staff is met out of EGS Fund only to the extent of 33 1/3% of the cost of works; staff expenditure in excess of this is required to be provided in the District Plan.

- (2) Recently supply of foodgrains as a part of wages under the EGS has been suspended, following Government of India's decision to suspend issue of foodgrains to the States for the purpose. Cash wages have been suitably increased.
- (3) Government of India: Planning Commission. Joint Evaluation Report on Employment Guarantee Scheme of Maharashtra, April 1976-October 1978. Chapter IV. para 4.21.
- (4) 'Plan Outlay' should be distinguished from 'Plan expenditure'; 'Outlay' refers to the financial provisions made in the Plan when it is prepared, and 'expenditure' refers to the actual expenditure incurred during the Plan period (either one year or five years, depending upon whether the reference is to the Annual or Five Year Plan). It is the normal phenomenon that the 'outlay' and 'expenditure' figures differ.
- (5) Ibid. Chapter IV, para 4.12 (ii).
- (6) Ibid. Chapter IV, para. 4.21.

Annexe 1

Diagram showing the application of Plan resources to EGS



Legend

- - - - - : complementary plan provisions.
- ==== : EGS provisions for taking labour intensive components of normal Plan works.

Annexe-2

Talukawise and monthwise expenditure likely to be incurred and availability of employment.

Taluka : Nasik,

(Rs. in lakhs)

Category	No. of works	Estimated cost Rs.	Estimated expenditure likely to be incurred and availability of employment during							
			Nov. 1980		Dec. 1980		Jan. 1981		Feb. 1981	
			Exp. Rs.	Emp.	Exp. Rs.	Emp.	Exp. Rs.	Emp.	Exp. Rs.	Emp.
Percolation tanks	10	33.57	1.80	45000	1.80	45000	3.00	75000	3.00	75000
Canal works	4	1.03	--	--	0.30	7500	0.30	7500	0.25	6250
Roads	10	15.35	1.90	47500	1.90	47500	1.90	47500	1.90	47500

March 1981		April 1981		May 1981		June 1981		Total		No. of works likely to be completed by the end of June '81.
Exp. Rs.	Emp.	Exp. Rs.	Emp.	Exp. Rs.	Emp.	Exp. Rs.	Emp.	Exp. Rs.	Emp.	
3.00	75000	3.00	75000	3.00	75000	3.00	75000	21.60	540000	---
0.15	3750	0.05	1250	--	--	--	--	1.05	26250	---
1.90	47500	1.80	45000	1.50	37500	1.50	37500	14.30	360000	---

Note: Emp. = Employment during the month in mandays. By dividing this figure by 25 we would get the daily labour attendance planned for.

C H A P T E R - 10

C O N C L U S I O N S

C H A P T E R - 10

CONCLUSIONS

1. Introduction.

In this chapter, we shall bring together the main points emerging from the discussion in the earlier chapters. Section 2 of this chapter discusses the different kinds of problems encountered in the field of agricultural development. Section 3 of this chapter examines the responses which these problems have evoked from the policymakers. The chapter concludes with a discussion on how to facilitate the adoption of more appropriate and specific responses.

2. Problems of agricultural development.

2.1 The discussion in the previous chapters would show that the problem which confronts the administration repeatedly is one of ensuring a coordinated delivery of supplies and services to the farmers. With the spread of HYV, timely supply of inputs became a critical factor. The logistics of input supply and its synchronization with the availability of credit and, where relevant, with availability of irrigation water, became the major areas of concern of the administration. This single problem keeps the administration busy most of the time and absorbs the time and energies of the field level functionaries. The description contained in Chapter 5 of the annual functioning of the agricultural development administration and particularly Annexes 4 and 9 which summarise the work done in a typical year of a few field level functionaries would suggest this inference. While some aspects of the problem require policy coordination,

in most situations the kind of coordination that is needed is on the implementation side. The points raised in the kharif and rabi campaign meetings (vide Annexe 8, Chapter 5) would indicate the kind of field coordination problems which often arise. To a large extent, these are going to be perennial problems. Taking the instance of seeds, we have seen in Chapter 6 the inherent complexities in the production and timely placement of seeds. Given the number of agencies which are associated with the task, and also the fact that several States are also involved, achieving even a working coordination is not easy. We observed in Chapter 2 how, as the technological content of agricultural development increases, setting up of specialised agencies becomes inevitable. The more agencies come into existence the more are the problems of coordination.

2.2 Problems of field coordination are often repetitive; the same problems tend to occur every year and require to be tackled every year. The fact that in one year they were satisfactorily resolved does not by itself guarantee either their non-recurrence or their satisfactory resolution in the following year. To illustrate, H-4 cotton seeds require field testing to be done before they are certified. If in any year, the sowings by the seed growers on seed plots are delayed even by 15 days, (due to any reason, which could be late receipt of foundation seeds by the seed growers from the Agricultural Universities or late onset of rains), the pickings of seed cotton get correspondingly delayed too. Seed production can also be delayed due to late flowering of the seed cotton plants, and this is not

unusual with H-4 cotton. Unless the seed samples are sown on the seed test plots of the Agricultural Universities by February, field test results would not be available to the Seed Certification Agency by May, and consequently, it is not possible to make certified seeds of H-4 available to the farmers before June. In 1981 field tests in Maharashtra were delayed by 15 days due to late release of irrigation water by the Irrigation Department to the seed test plots of the Agricultural University; consequently H-4 certified seeds could not be released for kharif sowing before June 15. Fortunately, late arrival of monsoon that year masked the failure to position seeds in time. While some problems like the onset of monsoon, or flowering problems are beyond human control, the rest are well within human control. There are many such instances where care is to be taken every year to avoid adverse effects on agricultural development due to administrative failure. Sometimes vigilance on the part of administration works; equally often, it does not. In the instance cited above, the Agricultural University probably failed to bring to the notice of the Director of Agriculture in time that there was delay in the release of irrigation water. But even if the delay had been brought to the notice of the Director, there was very little which he could have done in the matter which was within his power; it would not have been possible for him to compel the local official of the Irrigation Department to release water in time. The matter would, in all probability, have got escalated to higher and higher levels on both sides, i.e. Irrigation and Agriculture Departments, and the result would only have

been further delay. Even if, eventually, such a problem does get resolved at the State Government level, there is no assurance that the same problem would not come up next year. As long as different agencies and functionaries whose objectives are different, are involved in the performance of a task, problems arising out of their not pulling together are inevitable. They can be reduced by building a proper coordinating mechanism at every level but cannot be altogether eliminated.

2.3 It is the responsibility of policymakers to accept lack of field coordination as an inevitable factor and frame policies which would minimise its adverse effects wherever coordination is very crucial and the consequences of lack of it are serious. To illustrate, let us take the case of seeds. We observed in Chapter 6 that considering the many imponderables in proper planning and timely positioning of seeds, and the number of agencies involved, a policy of bufferstocking is necessary even though such a policy might have a substantial financial implication for the Government. The instance of H-4 cotton seeds cited in the previous para also underlines the fact that timely availability of seeds to the farmers is too important a matter to be left to depend upon the chance occurrence of the necessary extent of field coordination. Fine tuning of administrative machinery is impossible. Realistic policymaking therefore requires that this factor is taken into account, despite its possible financial repercussions.

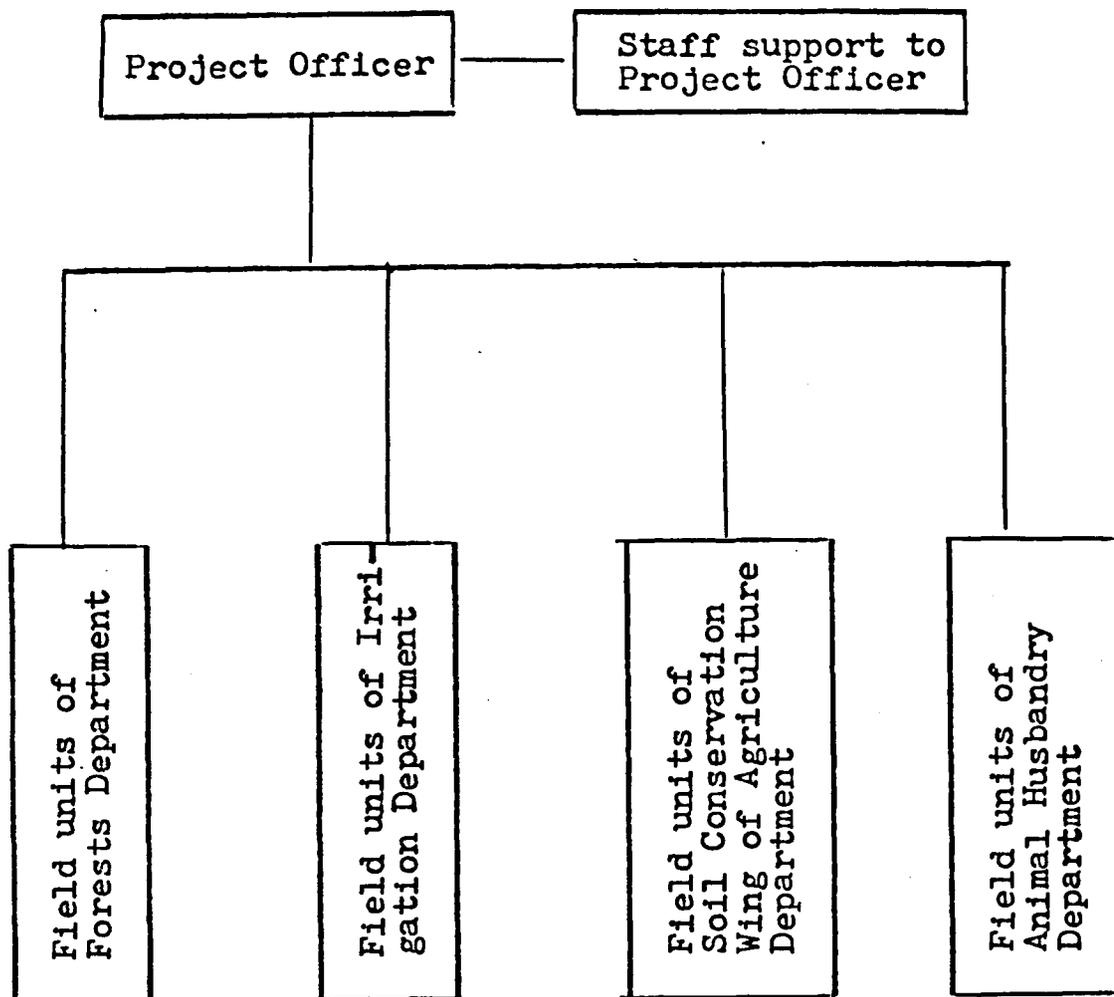
2.4 The second kind of problems relate to the implementation of projects which are essentially multi-disciplinary in character, and which require the participation of many

agencies. (The word 'agency' is used here to denote the line departments of the Government like Agriculture Department, Irrigation Department, etc. as well as autonomous institutions like State Undertakings, Cooperative and Commercial Banks, etc.). In such projects, coordinated implementation of the various project components is crucial to the achievement of the project objectives. One example is the Drought Prone Areas Programme (DPAP) described in Chapter 4.

2.5 The difficulty in ensuring a coordinated implementation of any multi-disciplinary project, arises mostly out of the fact that the participating agencies generally have their own goals and objectives which are not necessarily the same as the project objectives. Let us take the DPAP example to illustrate this. We saw in Annexe 4 of Chapter 4 the number of agencies involved in the implementation of the DPAP. The objective of the soil conservation wing of the Agriculture Department is to achieve a certain output of work in a year; it is not very material to the realisation of its objective where this work is taken up. Likewise, the Forests Department has before it the goal of afforestation of a certain area in a year and prepares its own working plan. The Irrigation Department too has its own plan of executing a certain number of projects every year. In the normal course, in any selected watershed, the activities of these departments would not be carried out in a coordinated manner, as watershed development is not the objective of these departments. For instance, it is quite possible that in a watershed, the Forests Department has completed the afforestation work in the higher reaches of the watershed, but soil conservation works are not

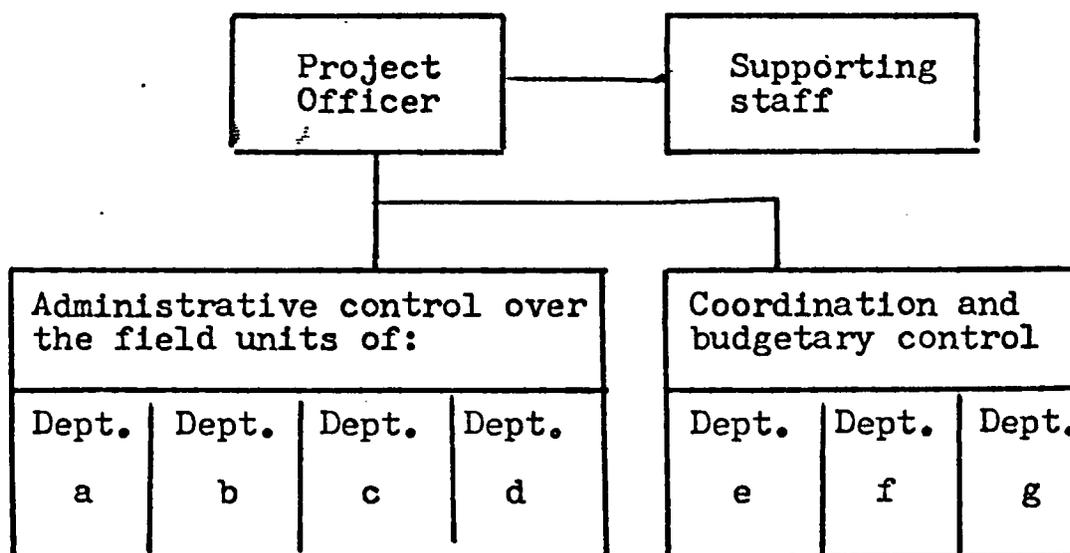
taken up at all. But, for the realisation of the objectives of the DPAP, the soil conservation wing of the Agriculture Department should undertake its programme in the chosen watershed in a given manner and should adhere to a specified sequence. Similarly, the Forests Department should undertake the afforestation programme in the watershed according to a specified schedule. If all the components of the watershed development are not executed in a particular sequence and completed in accordance with the specified time schedule, the objectives of the DPAP would not be fulfilled. What is needed therefore in any such multi-disciplinary project is to ensure that the objectives of the participating agencies converge towards the attainment of the project objectives.

2.6 Such a convergence can be brought about only by setting up a strong project organisation which would be able to exercise enough control over the participating agencies to make them function in a manner conducive to the attainment of the project objectives. The most effective control is administrative control. The Project Officer would, under this arrangement, have the field units of the different implementing agencies directly under his administrative control and supervision. This set-up would be as shown on the next page.



The above organisational design would certainly have a strong central direction and consequently be able to ensure effective coordination. But it is difficult in practice to bring different line departments in the field under the control of a Project Officer. One reason is the reluctance of the line departments to submit themselves to such a control, as we observed in Chapter 2. Another reason is that generally in such projects, the workload in the project area of some of the participating departments would not be adequate to justify earmarking complete field units exclusively for the project. We saw in Chapter 4 that this was the case in the DPAP. We also observed that what was done in the DPAP in Maharashtra was to place under

the control of the Project Officer (who is called Executive Director in Solapur and Ahmednagar), the field units of those departments whose project-related activities would justify deployment of complete units in the project area. These departments, namely; the Forests Department and the soil conservation wing of the Agriculture Department are also the departments whose functions are very relevant to the attainment of the DPAP objectives. As regards the field units of the other departments, the control of the Project Officer over them is the control of the budget grants of the project components implemented by them. The organisation design embodied in the DPAP can be exhibited as follows:



2.7 Thus, the control of the Project Officer over the implementing agencies could be administrative, or budgetary or a mix of both. The strength of the control increases as the field units of more and more departments, particularly of those whose contribution to the realisation of the project objectives is crucial, are brought under the administrative control of the Project Officer. All such projects have to

face the questions. "Which agency will implement which components of the project?" "In what manner would the central project organisation control the field units of the different implementing agencies?" "How can those activities which are relevant to the realisation of project objectives, but which cannot be brought under the control of the project organisation, be coordinated?" In the field of agricultural development there have been instances of multi-disciplinary projects, where adequate attention has not been paid to the organisation design and to the above questions. One such instance is the Command Area Development programme, described in Chapter 8. We observed that the CADA has very weak linkages with the relevant agencies.

2.8 The National Seeds Project (NSP), described in Chapter 6 is an instance of a project where many agencies are involved in the implementation, without a single strong project organisation close enough to the scene of action. The agencies implementing the different components of the project receive their funds from different sources. Yet another weakness of the project is the fact that the funds for the State Seed Corporations (SSC) are routed through the National Seeds Corporation (NSC). Channelising Central funds to a State Government Undertaking like SSC, through a Central Government Undertaking like NSC, carries the danger of inter-institutional rivalries impairing project implementation. This has, in fact, happened in NSP. NSC, instead of regarding the SSCs as effective instruments for achieving the national objective of making more quality seeds available to the farmers, has come to regard them as its competitors

and a threat to its own primacy in the field of seed production. The lesson to be learnt from NSP is that in a project to be implemented primarily by the States, it is necessary to set up at the State level, a project organisation, which receives funds directly from the State and Central Governments.

2.9 The third category of problems in the field of agricultural development are problems involving policy coordination. These problems can, to a large extent, be overcome and it does come as a surprise that they still trouble the agricultural development administration at various levels repeatedly. To cite an instance, it is now accepted that the yield of wheat comes down substantially if it is not sown in time. To quote from the Address of Dr. M.S. Swaminathan, Member, Planning Commission in the Twentieth All-India Wheat Research Workers' Workshop, Pune on August 17, 1981: "Late sown wheat, even with the best of management practices, gives much lower yield than timely sown. In Uttar Pradesh, which has the largest area of irrigated wheat (about 5.5 million hectares), wheat is seldom sown in time. The main reason for this delayed sowing is that water is not available. Canals are usually closed in the months of October and November for repairs and electricity is seldom available to the needed extent. Even when it is available, it is only for a few hours. There is urgent need to draw up a programme for the supply of water, both from canals and wells during November. For this, a policy decision should be taken at the State level in the last week of September and announcement of the schedule of canals and electricity availability is very essential." (emphasis in original). In fact, the need for early sowing of wheat has

been recommended for many years now by technical experts, who have also been urging that water for wheat should be supplied very much earlier. This is not a field problem of coordination but a question of policy coordination at the State Government level amenable to a lasting solution.

2.10 We may cite a few more instances where the policies followed by different departments of the State Government are not in harmony with what is required for a proper planning for agricultural development. In most States, the policies of the Irrigation Department are often not in alignment with the targets of the Agriculture Department. To give an example from Maharashtra, it is generally agreed that early (i.e. pre-monsoon) sowing of cotton would increase the yield of cotton and reduce the risk of pest attack. But according to the policy of the Irrigation Department, kharif irrigation is to commence from July 1, and if water is released in June for pre-monsoon sowing of cotton, the farmers are required to pay irrigation charges for two seasons, namely, hot weather and kharif. The contention of the Agriculture Department is that farmers do not take to pre-monsoon irrigation because of this policy. The argument of the Irrigation Department is that if water is required to be released for pre-monsoon irrigation, storage may have to be carried over, if necessary, by curtailing irrigation during the preceding rabi season and that since this adds to the cost of storage and also increases the water losses, it is only proper to charge the farmers more. Admittedly, this argument has considerable force. But there are many

projects where water in any case is available for pre-monsoon irrigation due to very low utilisation in rabi; this water would go waste if intensive efforts are not made to make the farmers utilise it before monsoon. There is therefore no reason why even for this water, higher irrigation charges need to be levied. A rational solution to the problem therefore would lie in having different principles governing levy of irrigation charges for different projects. This would amount to introducing a new element of policy in irrigation management. It is not the intention here to discuss the merits of the different options available. What is of relevance here is to observe that this is a very important area of policy coordination; the problem is discussed often but solutions are deferred. What, in fact, is capable of a once-for-all solution has become a perennial problem in agricultural development.

2.11 Another area where policy coordination is essential but lacking is credit. It is the common complaint that the crop loans are inadequate. For instance the crop loan for kharif groundnut according to the norms of many District Central Co-operative Banks (DCCB) in Maharashtra is Rs.150/- per acre in cash and an equal amount in kind. This is very inadequate considering that the cost of seed alone would come to more than Rs.150/- per acre, and an equal amount will be required for pesticides and fertilisers; cost of farm operations would also far exceed the cash component of the loan of Rs.150/- per acre. If lack of adequate funds is the reason for the low scale of finance, it can be understood. But many DCCBs in Maharashtra do have surplus funds. Therefore, the problem of inadequate scale of finance can only be attributed to lack of policy coordination.

2.12 Many problems of agricultural development are due to factors so ingrained in the system that no piecemeal solution to tackle any such problem would work unless all those contributory factors of the system which are responsible for the problem are tackled simultaneously; in other words, problems arising out of 'systemic' factors require a 'systems' approach to problem-solving. We saw in Chapter 9 how District Planning in Maharashtra and the formula governing the allocation of Plan funds to the different districts, which is associated with District Planning, influence the rate of completion of the works started under the Employment Guarantee Scheme. The discussion in Chapters 7 and 8 of the problem of command area development would also show that several aspects of the problem are so inter-related that they all need to be tackled simultaneously. For instance, it would be optimistic to try to achieve scientific command area development unless a proper procedure for water delivery below the chak, like warabandi (RWS) is introduced. The introduction of RWS would again depend upon adequate emphasis being given to maintenance of the irrigation system and willingness of the Government to make the necessary financial provision in the Plan for completing the command area development of many of the projects whose execution has been completed in all other respects, even though such a step would result in a delay in the execution of some projects under construction.

2.13 The problem of overdue of cooperative credit which has become a recurring one in agricultural development, is another illustration of this kind of problems. It is true

that to some extent the recovery of cooperative dues depends on political factors. But factors like having an effective extension machinery, timely supply of inputs, reliable power supply, availability of diesel, marketing facility, remunerative prices etc. do have a bearing on the ability of the farmers to repay the loans. In fact, timely disbursement of loan alone can remove one of the reasons for overdues. So it is futile to attempt to tackle the problem of overdues without simultaneously tackling those factors which are responsible; in other words, the problem of overdues, which is only the visible symptom of a malady cannot be removed unless the underlying causes of the malady are traced and remedied.

2.14 The next category of problems encountered in agricultural development have their origin in the formulation of Annual and Five Year Plans. We observed in Chapter 3, while discussing planning for agricultural development, that when the Annual and Five Year Plans are formulated, care should be taken to ensure that the different components of the Plan are spatially and sequentially coordinated. To illustrate, we saw in Chapter 7, in the context of command area development how financial provisions in the Plan for the different components of an irrigation project like head-works, canals and the distribution network should be made in such a manner that these components can be executed in a coordinated fashion. In Bhima project, for instance, while the dam has been completed and can hold the designed storage, the canal work is lagging behind; as a result, during rabi 1980-81 water could reach only about 8,000 ha. as against the designed culturable command area of the

project of 1.65,000 ha. To give another illustration of problems arising out of faulty planning we may cite the imbalance between the financial provisions for rural electrification in the Plan and the lending programmes of the financial institutions for minor irrigation. The problem of many EGS works remaining incomplete owing to inadequate complementary provisions in the Plan, which was discussed in Chapter 9, is yet another illustration of problems of this kind. Most of these problems are remediable by formulating the Plan in such a manner that the various components are balanced. It was one of the objectives of District Planning in Maharashtra to bring about a better synthesis between the different components of the Plan. The oft-mentioned distinction between sectoral planning and area planning lies in achieving this kind of synthesis. We observed in Chapter 3 that the promise of District planning in Maharashtra in this respect is yet to be fulfilled, and that the district planning exercise has come to be one of making financial provisions for a list of schemes handed down by the State Government.

3. Responses to the problems of agricultural development.

3.1 The responses from the policymakers to the problems of agricultural development reveal some underlying patterns. There have been periodical swings between (i) intensive approach concentrated in a few areas, and a broad-front strategy of diffusion of developmental efforts; (ii) centralisation of planning functions, and decentralisation of planning; (iii) faith in democratic decentralisation and reliance on panchayati raj institutions, and concentration of activities in the State Sector that is, outside the panchayati raj

institutions; (iv) integrated approach with allround rural development as the aim, and fragmented cropwise approach to agricultural development and (v) integrated administrative set-up, and fragmented vertically organised hierarchies.

3.2 Some of the above oscillations of policy from one position to the other and back are inherent in any developmental process. But, some of them also indicate a failure on the part of the policymakers to face the problems squarely, come to grips with them and take appropriate remedial measures. There are two major areas where there has been such a failure and we shall discuss these in the following paragraphs.

3.3 The first area relates to agricultural extension. We saw in Chapter 2, how during the First Plan when the Community Development programme was started, there was a firm commitment to the concept that agricultural development cannot be separated from overall rural development. There was a total reliance on the all-purpose VLW for agricultural extension. This concept underlying the Community Development programme was considerably diluted when special agricultural extension staff were appointed in the blocks brought under IADP and later under IAAP. The effectiveness of the VLW in agricultural extension thus came to be questioned as early as mid-60s. It was recognised that agricultural extension should be intensified and should be made more professional. The need for such an intensification and professionalisation increased when in the later 60s and the 70s the technological input in agriculture increased. The logical response should have been

to strengthen agricultural extension further and to build proper linkages between extension and research. This was not done. On the contrary, in Maharashtra the agricultural extension staff appointed under the IADP and IAAP were integrated with the gramsevakas, as we saw in Chapter 4. As regards building linkages with research, even though agricultural universities were started in the various States in the 60s and early 70s, no serious attention was paid to establish a communication link between extension and research until recently.

3.4 This failure to realise that what was needed was really strengthening of agricultural extension led to piecemeal and fragmentary responses to problems as they arose. Such responses resulted in the formulation of special crop schemes, described in Chapters 3 and 4. We observed how these schemes with their parallel hierarchies, one for each crop, resulted in the thrust of agricultural extension getting dissipated; nor did these schemes result in a cost effective manner of deployment of personnel.

3.5 The second obvious area where there has been inadequate response relates to what may be called the "common cold" of agricultural development administration, namely, bringing about field coordination. We observed in Chapter 2 that after the decline of the importance and effectiveness of the Block level set-up as a coordinating force, there has been no serious attempt to set up a strong coordinating machinery in the field. It has somehow been assumed all along that field coordination is really the function of the District Collector who should be able to do it effectively.

We saw in para 10.10 of Chapter 2, that the District Collector has over the years come to be loaded with such a variety of responsibilities that it would be unrealistic to expect him to do a serious job of coordinating the implementation of agricultural development programmes.

3.6 There is another dimension to the claim of the District Collector to be an effective coordinator. Just as the BDO came to be found wanting both in expertise and in stature to effectively coordinate the implementation of agricultural development programmes, an erosion of both the stature and the expertise of the District Collector has taken place and it is extremely doubtful if the District Collector can play this role effectively any longer. During the 60s and the early 70s the status of the district level functionaries of the various departments, particularly technical departments, more or less remained the same as what it was prior to Independence. For instance, the highest officer of the Irrigation Department at the district level was the Executive Engineer; so was the highest officer of the PWD at the district level. The District Agricultural Officer, a Class II officer, was the highest officer at the district level of the Agriculture Department. As the activities of the different departments increased, the status of the seniormost functionary at the district level of each department was also upgraded. Today, in almost every district, Superintending Engineers, are located. Earlier the Superintending Engineer was in charge of several districts, supervising the work of the Executive Engineers, and was not within the coordinating jurisdiction

of the Collector. Now, despite the fact that the Superintending Engineers may have only a district-wide jurisdiction, they still regard themselves as Divisional level officers, and therefore not under the coordinating jurisdiction of the District Collectors. Almost every district also has a Superintending Engineer of the MSEB. The CADA Administrators have jurisdiction spread over more than one district and there are no district level officers of CADA, as CADA is not structured on the basis of administrative boundaries. These officers do not consider it their duty or responsibility to attend the coordination meetings called by the Collectors, but instead, send their second-line functionaries, who, obviously cannot contribute to decision-making. Thus the relative diminishing of the status of the Collector vis-a-vis the other district level officers has made the coordinating role of the Collector rather tenuous.

3.7 Prior to Independence, the District Collector was required to record his assessment of the work of every district level officer, in the latter's confidential report and this was invariably given due weightage while deciding the promotions of the district level officers. These officers knew that their career advancement depended upon what the Collector recorded in their confidential reports. This practice continued for many years after Independence and was then discontinued in many States, including Maharashtra. At present, the Collector's remarks are merely appended to the confidential reports (rather than forming a part of them as before) of the officers and do not naturally

carry much value; they do not influence the career prospects of these officers. This has also contributed to the erosion of the status of the Collectors.

3.8 Another aspect to be considered in the context of the effectiveness of the coordinating role of the Collector is the fact that the subject of agricultural development has acquired a considerable degree of complexity and technical depth and it is not possible to expect a generalist administrator, like the District Collector who has not been exposed to the complexities of agricultural development for any considerable length of time, to deal adequately with the problems presented to him by the field officers of the several departments and agencies connected with agricultural development. Understanding the complexities of a problem is the essential precondition to suggesting a solution that will work. Such an understanding is the result of experience and training. The present day Collectors do not have the benefit of either. The original intention that every officer of the I.A.S. should spend at least a couple of terms as CEO, ZP, during which he would acquire knowledge of agricultural and rural development before he becomes a Collector, has not been put into practice. A Collector cannot therefore be a coordinator because of his authority, which he no longer enjoys to the same extent as before, or because of his knowledge and insight which again most Collectors do not possess to such a degree as would make the district officers of the other departments accept their leadership. It is not therefore realistic to count upon the coordinating role of the Collector as an answer to the field problems requiring

coordination. But, unfortunately, these are aspects which have not been either analysed in depth or faced squarely. The rather evasive answer that field problems of coordination will be taken care of by the Collector only ignores the realities.

3.9 Taking into account the realities of the situation, the only level at which effective coordination seems to be feasible at present is the Divisional level, with the Divisional Commissioner as the coordinating authority. The Divisional Commissioner, being of the same rank as the Secretary to Government, has the necessary status. In Maharashtra the Divisional Commissioners are also the Vice-Chairmen of the DPDCs. This gives them some authority over the Divisional level officers of the various departments. Unlike the Collectors, it is possible for the Divisional Commissioners to talk on equal terms with the Secretaries to Government. Divisional Commissioners can therefore be effective 'chasers' of matters pending for decision with the Government. They can also indicate to the Government what policy decisions are required to be taken in order to facilitate smooth implementation of the programmes in the field. One drawback in this arrangement, however, is the fact that the jurisdiction of the Divisional Commissioner is often unwieldy. One of the reasons for the recent decision to increase the number of Revenue Divisions in Maharashtra is this recognition of the increasing role of the Divisional Commissioner as a coordinating authority in the field of development and of the need to make his jurisdiction more manageable. It should be added here that the institution of the Divisional Commissioner is not present in all the States. The Government of India which,

in other areas of agricultural development has prescribed uniform remedies to be adopted by all the States, has not yet chosen to prod the State Governments to create Divisional Commissioners for bringing about greater field coordination in the implementation of agricultural development programmes.

3.10 There ought to have been a lot more Central initiative here than what has been evident so far. This absence of Central initiative is not surprising. As we observed earlier, any move to bring different line departments under the coordinating authority of any field level functionary, whether it is the BDO or the Collector or the Divisional Commissioner, is never welcomed by either the sector departments of the State Government or the sector Ministries of the Government of India. Therefore, the initiative in the matter would not normally spring from any of the sector Ministries of the Government of India. If at all, the Agriculture Ministry would only be in favour of the State Agriculture Departments organising themselves on the familiar line department pattern without being brought under the coordinating authority of any functionary at intermediate levels. It is indeed surprising that the State Agriculture Departments and the Central Agriculture Ministry, for the attainment of whose objectives a co-ordinating machinery is necessary, are themselves lukewarm towards it. The reluctance at the official level to pursue this can only be overcome by a firm political commitment which was evident when the C.D. programmes and democratic decentralisation were introduced.

3.11 The problem of policy coordination was sought to be tackled by the creation of the office of Agricultural Production Commissioner (APC) at the State level to co-ordinate the working of the departments connected with agricultural development; an arrangement which was recommended by the National Commission on Agriculture. To quote from the Commission's report: "At the same time, there is need for having a single officer of the status of Agricultural Production Commissioner-cum-Principal Secretary to the Government to plan, direct, guide and coordinate the various subjects within agriculture and we strongly recommend that those States where the APC has not been appointed should take immediate steps for appointing one. The APC need not, however, be responsible for routine secretariat work in all the fields but should deal only with the following functions:

- (i) programme planning
- (ii) progress and evaluation
- (iii) overall budget control
- (iv) coordination
- (v) liaison with Centre.

He should have the necessary secretariat units for each of these subjects under him with properly qualified staff. He could have a separate secretariat and he should be in rank only next to the Chief Secretary of the State. All important policy matters in the sphere of agricultural development should pass through him to the Cabinet Minister in charge of agriculture and he should be empowered to take decisions on all major policy issues in the sphere of agriculture." (Government of India: Ministry of Agriculture

and Irrigation: Report of the National Commission on Agriculture, 1976 Part XIV, Chapter 62, para.62.4.4, p.202). Many States, mostly northern States have APCs. Recently Andhra Pradesh has also created the post of APC. This arrangement will be useful and APC can act as a clearing house in respect of all matters requiring policy coordination. But the practical problem faced is the fact that the choice of APC, since he has to be a very senior officer very near in rank to the Chief Secretary, gets restricted to a few who may not have the necessary aptitude for the job. Solutions which are apparently rational do meet with unforeseen difficulties, mostly administrative in origin. Tests of administrative feasibility are seldom applied when solutions are proffered. It is also not feasible to empower the Agriculture Minister to take decisions regarding matters coming within the purview of the Irrigation or Cooperation Minister for instance, even though such decisions may be relevant to the sphere of agriculture.

3.12 While on the one hand, there are areas, as we have seen, where the responses from the policymakers to the problems of agricultural development have been either inadequate or absent, there are, on the other hand, areas where the responses have been out of alignment with the problems. We can illustrate this by referring again to the special crop schemes introduced by the Centre during the Fourth Plan, described in Chapter 3. These schemes still continue to be implemented, and such schemes have become a standard response to the problem of increasing the production

of any particular crop. It is obvious that a special crop scheme covering a very small percentage of the total area under the specific crop and containing a standard package of subsidies on a few items is not going to play a crucial role in achieving quantum increases in production. While their role in increasing the production of the specific crops is marginal, they cast a considerable amount of administrative burden on the field level functionaries, who are required to keep accounts of small amounts of subsidies disbursed to a large number of farmers, and send periodical reports of such disbursements. These schemes have made many field functionaries deskbound.

3.13 Another illustration is the scheme for giving subsidy on fertiliser to small farmers, introduced by the Government of Maharashtra in 1980-81. When the prices of fertilisers increased steeply in June 1980, the State Government decided to subsidise the cost of fertilisers purchased by small farmers to the extent of 1/3rd of the increase but this subsidy was confined to crops other than sugarcane. During 1980-81, the subsidy actually disbursed under the scheme was very small. The main reasons were: (i) farmers had to support their claims with copies of 7-12 extracts from talathis as a proof that no sugarcane was grown; (ii) the quantum of subsidy, on an average about Rs. 10/- per bag (50 kg.) of fertiliser, was not regarded by the farmers commensurate with the labour and cost involved in getting the records from the talathis; and (iii) the administrative work involved in checking each claim was considerable. Despite the fact that the subsidy

actually disbursed was small, the fertiliser consumption in Maharashtra during kharif, 1980 did not show any decline from the consumption in kharif 1979. Actually, since the subsidy scheme was announced after the season commenced, many farmers purchased fertilisers at the increased price, without being aware of the subsidy scheme. Therefore, it can be inferred that the scheme had no effect on fertiliser consumption.

3.14 Responses such as those mentioned in paras. 3.12 and 3.13 above can be attributed to an important factor which often influences the choice of public policy. It is the pressure on the Government to do 'something' novel and tangible about a problem. To some extent, it is this desire of the Central Ministry to do 'something' regarding increasing the production of oilseeds and pulses which influenced the prescription of the initial set of crop-oriented schemes. It is again the urge to do 'something' about the increase in the price of fertilisers which resulted in the formulation of a scheme, which is not only cumbersome to administer, but is also not the response to an articulated need of the farmers. This factor influencing the choice of public policy needs to be looked upon sympathetically, namely, the fact that the Government is very often obliged to 'act'. If a question were to be asked, for instance, "What is the Government doing about the increasing prices of edible oils?", the Government should be in a position to say that certain specific and tangible action has been taken and such an action often comprises schemes like what we have mentioned above. If the reply

merely says that extension work will be undertaken vigorously to motivate the farmers to consume more fertilisers despite higher prices, or to train the farmers in agronomic practices which would make fertiliser application more attractive despite higher prices, then these replies are often considered not dramatic enough to produce an effect in public minds. This factor operates not only in the field of agricultural development but in other fields as well.

3.15 In many situations, the fact that the response turns out to be out of alignment with the problem is also attributable to ignorance at the policymaking level to the nature of the field problems. The essential pre-condition to creating a better awareness at the policymaking level to the field problems is to build into the system an effective feedback mechanism. We may illustrate the importance of feedback by citing the problem of how to make the farmers more fertiliser-conscious. In many parts of the State fertilisers are not available to the farmers within easy distance. It is not possible to increase the consumption of fertilisers unless, first, the average distance which a farmer has to travel in order to obtain them is reduced. Many multipurpose cooperative societies in Maharashtra are financially weak and are not in a position to stock fertilisers to be supplied to the farmers as a part of the crop loan. Therefore increasing the number of fertiliser outlets would, in turn, depend upon the problem of sickness among cooperative societies being satisfactorily tackled. A scheme of subsidy on fertilisers will not therefore really help, unless availability within easy distance is first ensured. This shows that if the response to a problem is to be appropriate the different

aspects of the problem should be known to the policymakers. Only well organised extension machinery providing for a two-way communication can provide such a feedback at constant intervals. We saw how the extension machinery built under the Community Development (C.D) programme came to be loaded with work of various kinds, which in due course made a constant feedback impossible. It is essential therefore to ensure that the newly introduced Training and Visit system of extension does not also get burdened with responsibilities other than agricultural extension.

3.16 But feedback alone is not enough. The response needs to be quick and specific. The planning framework should possess the necessary degree of flexibility in order to achieve this. We saw in Chapter 2 how one of the objectives of the C.D programme was to ensure that the block administration responds adequately to a local problem. We observed that the fact that the BDO had very little discretion to deviate from a given set of standard programmes impaired such a response. Again, in the context of planning for agricultural development, we observed, in Chapter 3, how in the present framework of planning location-specific responses are not possible. To illustrate this, let us again take the example related to fertilisers. The measures to be adopted in order to increase the consumption of fertilisers would obviously vary from district to district, and even within the district from one block to another. In Sangli district, for instance, some blocks are irrigated where the standard of farming is of a high order and sugarcane is widely grown. There are other blocks which are drought-

prone. In the former blocks, the fertiliser consumption is already high; in fact, farmers fertilise their sugarcane more than is required. In these blocks what is needed is better extension, extensive soil analysis and stocking of the right kind of fertilisers depending on soil characteristics. The cost of inputs can be reduced considerably by economic use of the right kind of fertilisers. In the latter blocks, the problem is to motivate the farmers to use fertilisers. The measures to be adopted here would obviously have to be different. Taking another instance, some parts of the drought-prone areas in Maharashtra have the problem of water-logging. Even during years of good rainfall, the farmers are not in a position to take a good crop. But the standard response to the problem of drought is provision of irrigation facilities; DPAP has no scheme for tackling instances of water-logging. Agricultural development cannot be approached with a standard package of responses, settled far away from the scene of problems.

3.17 The future problems will be far more challenging and formidable. They will require far more specific solutions. We shall take a look at some of them. First the number of varieties in each crop will increase. Already different varieties of wheat with different characteristics have been released by the research stations. Similarly, when hybrid jowar was first introduced, there was only one variety; now there are at least four varieties for kharif alone; in addition there are rabi varieties. For every area there will be one variety which is more suitable than others. Introducing the right variety for every area will

pose a considerable challenge to the extension machinery, and input planning agencies. Secondly, in many areas, a change in the cropping pattern, will have to be induced, from the traditional ones to those involving new crops. Such a change will require to be brought about particularly in the newly irrigated areas in order to maximise the benefits to the farmers from irrigation. Thirdly, recent research findings have thrown up new possibilities for the drought-prone areas, with fodder trees like leucaena (ku-babul) and drought resistant grasses and legumes, suggesting a planned change in the farming practices in these areas from conventional agriculture to non-arable farming like agro-forestry, pastures etc. Fourthly, land as a key factor in agricultural development will play an increasing role in agricultural planning. So far what has been stressed is how much of what is to be produced; the approach to agricultural development has been in terms of certain target quantities of production of each crop. This approach to agricultural development from the crops end has resulted in the neglect of land and soil as key factors in agricultural development. What has not been emphasized is the best use for which a given area should be put, taking into account the land and soil characteristics. In order to do so, certain investments will be required like land levelling, land shaping, soil and water conservation measures and so on.

3.18 The above problems would obviously require more discretion to the local administration to decide on the measures to be adopted. This would, in turn, imply a

decentralisation of planning functions. The desirability of decentralised planning has been repeated so often and so much emphasized, and the measure of agreement over its adoption so broad, that there has been very little analysis of the exact meaning, scope and limitations of decentralised planning. What is done in Maharashtra and elsewhere in the name of decentralised planning is not the kind of decentralisation of planning functions that will be useful for agricultural development. We saw in Chapter 3 how in actual practice the function of the District Planning and Development Councils (DPDCs) in Maharashtra is little more than indicating financial allocations for the various schemes handed down by the State Government. We also observed that genuine decentralisation of planning functions is very difficult to achieve as long as the district plans (alongwith all the schemes which form their components) are required to be provided for in the State budget and voted by the State legislature.

3.19 It is in this context that the choice of the district planning body becomes relevant. The choice in Maharashtra is between the Zilla Parishads and the DPDCs. The DPDC is not a statutory body, but merely a committee appointed by a Resolution of the State Government. It cannot therefore take a financial decision. Therefore, every scheme suggested by the DPDC is required to be approved ultimately by the State Government and incorporated in the State budget. The Zilla Parishad, on the other hand, is an elected body with its own budget and enjoys considerable

statutory powers. It is possible for the Zilla Parishads, given the financial resources, to formulate their own schemes relevant to the problems of their respective districts. It is, therefore, a far more effective body for being entrusted with planning in agriculture. But, as we observed in Chapter 4, it requires a political will at the State level to bring about such a decentralisation of planning functions. The question is whether the States which have pleaded for a reduction in the number of Centrally sponsored schemes and a shrinking of Central initiative in planning for agricultural development will in their turn, delegate some of their functions to the Zilla Parishads.

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