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EVALUATION OF IMPLEMENTATION PHASE OF RURAL DEVELOPMENT PROJECTS: A CASE STUDY FROM GUJARAT, INDIA

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SUMMARY

For their successful implementation, rural development projects need sufficient care with regard to the various organisational options at a fairly early stage in the project cycle. In particular, when there is no previous experience in handling a project—such as a watershed management project requiring a multidisciplinary team for its implementation—a great deal of planning is called for in assembling the team. It is also necessary to spell out the various tasks assigned to each member of the team and to fill key positions with adequately skilled persons. Furthermore, at the higher executive levels, what is critically needed is a reactive capacity to meet unexpected problems and take unplanned action. In addition, the principle of management-by-exception is much more valid in the implementation of rural projects, since critical linkages with external agencies are not always easily made and support from internal staff belonging to various disciplines is not often readily forthcoming. In these circumstances, the chief manager has to look to those areas which are deviating from the normal—or desired—course and take timely and corrective managerial action.

INTRODUCTION

Evaluation studies of various completed rural development projects have shown that the 'software' components, generally referring to the institutional infrastructure—such as the network for the administrative system for directing the project activities—are just as critical as the technicalities of the project.[1] The failure of many projects has been traced to the weakest link—the organisation and management phases—although efforts had been made to treat organisation as part of the design stage and management as part of the implementation phase of the project cycle. Such efforts had, however, been feeble and the resultant effects less than optimal.

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Concern, in this paper, centres around the vital spheres of the 'software' components of a project. Although there are many studies available on this subject, the objective of this paper is to show that, although substantial inputs have been applied at a fairly early stage of a project—for example, 'design' and the evolution of a proper organisation—these have tended to be ignored at the implementation stage, mainly because of the inability to recognise deviations from the expected course of events and to apply the principle of management-by-exceptions. The empirical evidence on which our data are based is drawn from a recently completed watershed management project in the drought-prone hill areas in the State of Gujarat, India. The paper is organised into three sections. The main features of the project and its design are described in the first section, the management and implementation phases being critically evaluated in the second section. The final section presents a summary discussion and lists some policy conclusions.

LIST OF ACRONYMS

APC	Agricultural Production Commissioner. An officer with the rank of Secretary to the State Government, supervising agricultural production in the State Government.
DAO	District Agricultural Officer.
DDO	District Development Officer. An officer who functions as the Chief Executive Officer of the District Panchayat, an elected local self-government body at the apex level in the district.
DOA	Director of Agriculture, heading the State Directorate of Agriculture.
DPAP	Drought-Prone Area Programme undertaken by a specially set up Agency under the State Government in the scarcity affected districts. The Agency expenditure is partly financed by the Central Government.
DSCO	Divisional Soil Conservation Officer in charge of soil conservation activities in the district.
EO	Extension Officer working at the block level in the district.
IAS	Indian Administrative Service, members of which body working in the district are the District Development Officer and the Collector. The latter is in charge of magisterial functions.
JDA	Joint Director of Agriculture in the State Directorate of Agriculture, either assisting the DOA at the State level or at the regional level as the regional head.
PO	Project Officer in the DPAP Agency who is also the Secretary of the Agency at the district level.
RFO	Range Forest Officer belonging to the State Forests Department working at the district level.
SDSCO	Sub-divisional Soil Conservation Officer working in the district under the direction of the Divisional Soil Conservation Officer.

TASP Tribal Area Sub Plan. A special programme at the district level for the tribal community.

TDO Taluka Development Officer. The Chief Executive Officer of the Taluka Panchayat, an elected local self-government agency, one step below the District Panchayat.

VLW The grassroots extension worker working at the village level or at a village group level and under the control of Panchayati Raj institutions.

THE PROJECT DESIGN

Development efforts in the drought-prone areas—that is, those areas with adverse water balances, low or erratic distribution of rainfall, degraded landscapes and an eroded soil structure—have, until recently, consisted of soil conservation measures which were carried out under rural works programmes for generating compensatory employment. They consisted mainly of earthen bunds around the boundaries of cultivable land which had, more often than not, no reference whatsoever to contour, slopes or natural water-carrying channels. This naturally resulted in wasteful expenditure and minimum returns from physical infrastructures which could not withstand even one fierce monsoon, since they were erected without regard to slopes and contours along which the water could flow.[2] Therefore, a scientific approach was needed which took into account not only slopes and contours but also the soil type and structures, watercourses, and so on, in order to fully realise the gains achievable from soil conservation measures. The technology package underlying the new approach is known as watershed management and is directed towards greater productive use of natural resources in the river basin or catchment area such as water, soil and vegetative factors. This includes land improvements, rehabilitation and other technical projects.[3] The objective behind watershed management is—by means of soil conservation and moisture preservation measures—to enable the farmers to raise at least one crop outside the rainy season.

Watershed management in private lands

Whilst watershed management in the catchment area is aimed at serving the dual purpose of saving the soil and keeping it under optimum vegetative cover and of prolonging the life of storage reservoirs by reducing siltation, watershed management in cultivated lands needs special efforts such as bunding, terracing and gully plugging to conserve soil moisture. Cultivated lands in the rain-fed areas of India are broadly classified into high rainfall areas (31 % with 1150 mm and above), medium rainfall areas (34·5 % with 750 mm to 1150 mm) and poor rainfall areas (34·5 % with rainfall up to 750 mm). These last two types of area are well known for poor cropping efforts and hence have received national attention ever since the 1880s when the Famine Commission recommended protective measures. Further, intensive research has also been undertaken for the last thirty years on dry farming

practices aimed at moisture conservation for growing crops.[4] Certain useful practices known as the Bombay Dry Farming System have also been evolved.[5]

In addition, construction of farm ponds is also taken up in watershed management projects for large farms where water is stored in a tank at the lowest level by directing all surface run-off by laying the plots with contour strips. The stored water is utilised for supplementary irrigation to protect the crops at critical times.

Development administration in the district

Since agriculture as a subject falls within the autonomy of the States in the present Indian federal organisation, the formulation and execution of the watershed management projects are the full responsibility of the State Governments although technical guidance in terms of preliminary surveying and planning, and financial assistance, in terms of loans and subsidy assistance are made available by the Central Government.[6] An organisational chart of the agricultural administration for Gujarat State is shown in Fig. 1.

Watershed management projects are carried out in the State of Gujarat by the Directorate of Agriculture operating under the Department of Agriculture whose political head is the Minister for Agriculture and whose administrative head is the Secretary to the Government. In the Directorate of Agriculture, an Additional Director of Agriculture supervises the project implementation and reports to the Director. Under the Additional Director there are three regional heads. Under these

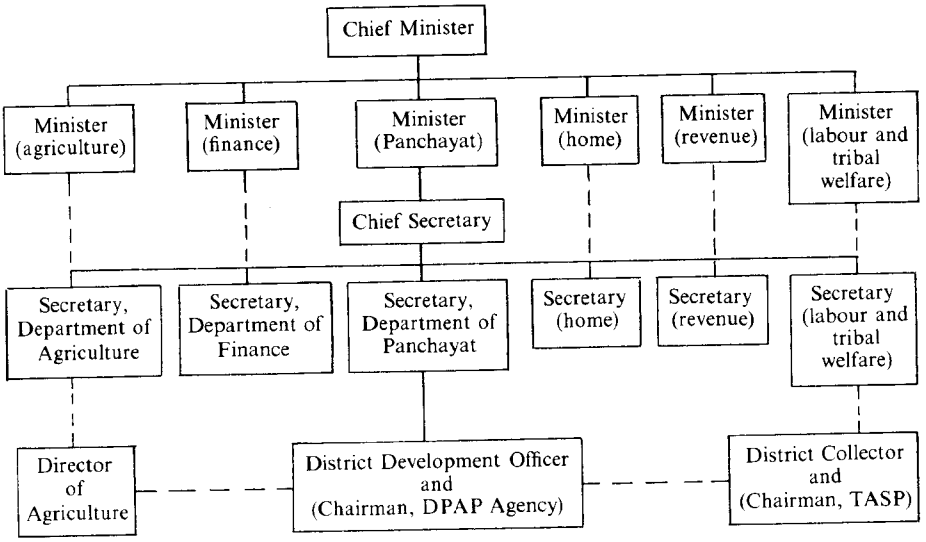

Fig. 1. Organisational chart for agricultural administration at the state level in India.

are Divisional Soil Conservation Officers (DSCOs), one for each district, with supporting staff, and under each of these are two or three Sub-divisional Soil Conservation Officers (SDSCOs) for each district with their technical staff to carry out the work. It is the sub-division which takes up the project and implements it. The usual target assigned is 2000 ha a year for soil conservation work.

The enabling legislation is the Bombay Land Improvement Schemes Act, 1942, as applicable to the State of Gujarat, under which the consent of farmers is obtained before the infrastructural improvements are undertaken. Such consent is necessary since, under the financing procedure, a debt burden is imposed on the farmers and they are required to repay, annually, over a ten-year period, for the investment expenditures carried out on their lands.

Agricultural production activities, including the preparation of plans, the supply of inputs, minor irrigation and extension, are entrusted by the State Government to the elected local self-government institutions in the districts. The institutional structure is known as the 'Panchayati Raj', a decentralised democratic system on a three-tier basis, with the 'District Panchayat' at the district level, the 'Taluka Panchayat' at the taluka (or block) level—the level below the district since each district consists of ten or more talukas—and, finally, the 'Gram Panchayat', at the village—or the third and the lowest—level. At the district level, the elected President of the District Panchayat is assisted by an executive team consisting of officers belonging to agriculture, minor irrigation, animal husbandry and other development departments. The executive team is headed by a District Development Officer (DDO) who is a member of the Indian Administrative Service. The District Agricultural Officer (DAO), who looks after agricultural production and extension function under the DDO as a member of the executive team, is of the same rank as the DSCO who is in charge of the soil conservation activities carried out by the State Directorate of Agriculture.

Drought-Prone Area Programme Agency

Some districts in the State of Gujarat fall into the poor rainfall zone. Such districts frequently suffer from drought conditions consequent on the failure of the monsoon and have been designated Drought Prone Areas. As part of the area development programmes financed by the Central Government, special efforts have been undertaken in these districts to develop groundwater resources and undertake soil conservation measures to enable the farmers to carry out improved dry farm practises, as well as subsidiary occupations such as cattle rearing and poultry keeping schemes.[7] The farmers in these areas are assisted with credit facilities arranged through commercial and co-operative banks with appropriate subsidies to small and marginal farmers. These schemes are drawn up and implemented by a State Agency called the Drought Prone Area Programme (DPAP) Agency. The Agency is headed by the DDO, assisted by the Project Officer who functions as the chief executive of the Agency. The chief functions of the Agency are to draw up

various schemes for creating income-earning assets for individual beneficiaries and to arrange for credit to acquire them through the banks and co-operatives.

Special Tribal Area Programme

In addition to the regular developmental activities entrusted to the local self-government institutions, the State Government has separate developmental projects for tribals in those districts which have a high proportion of tribal inhabitants. These projects are executed through different departments such as the social welfare, fisheries, education, animal husbandry and agriculture departments. In order to promote co-ordinated action in the tribal area districts and to enable full utilisation of funds provided in the State budget for various departmental schemes towards tribal development, an area plan known as the Tribal Area Sub-Plan (TASP) is drawn up with different departmental funds, shown separately earlier, as integrated under the new scheme and implemented. To supervise the implementation of the TASP, a Project Administrator is appointed for each such district. He ranks one below the DDO. To direct the TASP implementation, a Committee of Direction, with the District Collector as Chairman, has also been set up. This meets monthly to review and monitor the progress of the implementation of various schemes. (The District Collector, also known as the Deputy Commissioner in some States, is the chief representative of the Government in the districts in India and belongs to the Indian Administrative Service. In the past he was the chief co-ordinator in the district. However, with the emergence of the Panchayati Raj, the developmental functions in the district, notably in the States of Maharashtra and Gujarat, are co-ordinated by the District Development Officer who is of the same rank as the District Collector. However, the Collector continues to be in charge of law and order in the district.) The DDO and TASP Project Administrator are member and member-secretary, respectively, of the Committee of Direction. Besides the Committee of Direction there is an Advisory Body comprising about 70 persons who include officials of various departments functioning in the district and social workers.

Thus, it may happen, in a given district, that four agencies are involved in agricultural development activities. For example, the District Panchayat, with its full strength of agricultural staff ranging from the DAO down to the village level worker (who is the last link in extension wing), may be engaged in various production-oriented activities. The DSCO, who is a state officer coming within the direct line of command of the DOA, takes up conservation work in the district by virtue of powers vested in him by the Land Improvement Schemes Act. However, he is handicapped by a lack of agricultural extension personnel to assist him and has to depend upon the District Panchayat for all assistance and support in the area of extension.

On the other hand, the DPAP Agency, which is presided over by the DDO, does not carry out any work but only acts as a lobby for facilitating credit flows to the

weaker sections of the district with regard to soil conservation measures, the construction of wells, the installation of pump sets and other asset creating activities. Further, the Agency provides subsidies to the small and marginal farmers in order to reduce their debt burden to the lending institutions. Although the Agency has a skeleton extension wing, it has to draw support from the District Panchayat and the Soil Conservation Division in the district. Fortunately, the Agency is headed by the DDO, who happens to be the chief executive of the Panchayat, and hence the support of the Panchayat and the co-operation of other officers in the district are assured.

In the case of the fourth agency –the TASP –the Project Administrator, who is in charge of the preparation of schemes and their implementation, has to seek and secure the support of various technical and developmental department heads in the district. The Committee of Direction, consisting of the Collector as Chairman and the DDO as a member, provides leadership and guides the experts in preparing schemes and their implementation. Most such schemes are directed towards the creation of income-earning assets such as wells, implements and the like, and these assets are obtained through credit facilities from the lending institutions operating in the district. The major part of the TASP funds are for subsidising the cost of these assets.

Need for an integrated approach

Viewed against the above background, the introduction of yet another development project needs a proper appreciation of existing administrative structure and of the need for co-ordinated action. The Watershed Management Project not only aims at creating infrastructural improvement but also at transmitting more up to date knowledge of farming and better agricultural practices under moisture conservation conditions. Further, it also envisages adding certain subsidiary occupations such as cattle rearing and poultry keeping. In addition, the farmers are also to be helped with crop loans for purchasing seeds, fertilisers and insecticides in order to reap the benefits of improved infrastructural facilities. Therefore, what is desired is an adoption of an integrated approach towards the development of natural resources and the promotion of a more optimum level of utilisation of such resources.

Such an integrated approach cannot be undertaken by the State Directorate, which is exclusively for land improvement work, and implemented without the active assistance and support of other agencies employed in the area. Bearing this in mind, the Directorate prepared a project report for a watershed management project with an organisational design of a multidisciplinary character.

Project area

The area in which the project (for complete details of various project cycle phases see reference 8) known as the Mahi-Sukhi (MS) III watershed project is located, is one of the least developed areas, subject to frequent water scarcity in the low

monsoon rainfall years of the State. It is in the District of Panchmahals, situated on the northeastern side of the State with boundaries touching Rajasthan and Madhya Pradesh States. Most of the district is hilly with an elevation of 300 to 900 m in the eastern part. The main mountain is of the Aravally system. The chief physiographic units are hilly and undulating uplands, mountainous foothills and valleys adjoining Rajasthan and Madhya Pradesh. The annual average rainfall recorded ranges from 548 mm to 2067 mm, a major part of which occurs during June to September. The average number of rainy days a year is 52. Heavy erosion occurs during the first two months of the rainy season when lands remain barren, as compared with the latter part of the monsoon season. After the monsoon is over, soil moisture is the limiting factor and evaporation increases until it attains its peak in the summer. A tribal population known as the 'Bhils' makes up 39% of the total population. Their agronomical practises are primitive with a negligible use of improved seeds, fertilisers and pesticides. Since no irrigation facility is available, cultivation is chiefly confined to the rainy season.

The chief crops grown in the rainy season are maize—the staple diet of the tribals —coarse paddy, rice and groundnuts. Maize is grown where lands are sloping and paddy on flatter lands where soil moisture is available. Groundnuts of the erect variety are taken, along with coarse millets. During the winter if soil moisture is available, unirrigated wheat or grain is grown. If no minor irrigation facilities, such as wells, are available, there is no cultivation in summer. Such a poor cropping intensity has been forcing the tribal population to seek both farm and non-farm employment in the neighbouring districts of the State.

The project was initiated in 1975 and, as a result of substantial planning, the project report, known as *Action Programme of Watershed Management for MS III Project* was finalised in 1976. The land classification and ownership details of the project area are shown in Table 1. The project consisted of components such as contour bunding, terracing, gully plugging, the construction of farm ponds, field channel construction from an existing minor irrigation tank in the project area for the conveyance of water to individual farmers' fields, pasture land development and afforestation. The first five items were to be carried out by the Soil Conservation Department and the last two by the Forest Department. The activities in cultivators' fields were to be undertaken under the Land Improvements Schemes Act after obtaining the consent of the farmers since the costs of investment infrastructure were to be recovered from them as per the standard procedures. The project design also visualised the involvement of various extension staff in the district under the District Panchayat, which oversees and guides agricultural production, and extending support services in terms of credit and the supply of inputs.

Project implementation

The Action Programme emphasised the need for a multidisciplinary approach to

TABLE I
SURVEY DETAILS OF MS III WATERSHED PROJECT

(*a*) *Land classification details*

Class	*Area in hectares*	*Treatment needed*
I	22·00	Conservation: Irrigated farming
II	500·00	Contour bunding, land shaping and land levelling
III	206·00	Terracing
IV	143·00	Gully plugging
V	19·00	Pasture development
VI	100·00	Afforestation
Total:	990·00	

(*b*) *Land use and ownership*

Land use	*Area in hectares*	*Percent*
Privately owned crop land	871·00	88·00
Government pasture land	19·00	2·00
Government forest land	100·00	10·00
	990·00	100·00

provide rural areas with technologies based on the available resources for controlling the environment.

It observed:

> 'An integrated and intensive programme of development on a watershed basis for irrigation, soil and water management, agricultural production, livestock, forestry and fisheries, along with institutional credit will bring about the desired impact in rural development.'[9]

The implementation strategy was to entrust the responsibility of integration to the TASP Project Administrator by co-ordinating and reviewing the progress from time to time. This was because the project villages happened to fall within the tribal area. The Action Programme visualised a multidisciplinary implementation team consisting of the Project Officer, the Range Forest Officer, the Junior Engineer, the Agricultural Supervisor (Soil Conservation), the Extension Officer (Agriculture), the Extension Officer (Co-operation), a stockman and two progressive cultivators from each village covered by the project. The Action Programme laid down a schedule of various activities in the project ranging from physical infrastructure work to agricultural extension. The period of the project was three years and soil conservation work was concentrated in the first two years whereas, in case of input supplies and extension, the quantum was much more in the later part of the period.

IMPLEMENTATION PHASE OF THE PROJECT

The execution of that part of the project concerned with soil and water conservation was entrusted to a newly created sub-division of soil conservation set up in late March, 1977. This sub-division was known as Sub-division River Valley Projects, expenditure on which was partly financed by the Government of India on a 50% basis. Hence, the staff pattern had to be on the lines suggested by the Central Government. Instead of five charges, as given to a regular State sub-division, there was only one charge, consisting of one agricultural supervisor and five agricultural assistants. A Junior Engineer, to specifically look after the engineering part of the work, was part of the central pattern. Central Government aid, to the extent of Rs. 50,000/- for works, was given in late March, 1977 and the Sub-division for the River Valley Project started work in April, 1977. Its headquarters were fixed at Jhalod.

However, staffing was the most pressing problem, especially the post of chief of the sub-division. A suitable person was not immediately available. Hence, a stop-gap arrangement was made by assigning the position, on a temporary basis, to the SDSCO at Santrampur, who was associated with the MS III Watershed Project from the planning stage. The immediate reaction of the SDSCO, Santrampur, was to ask for additional staff on the State pattern, at least one additional charge consisting of one supervisor and five agricultural assistants. The proposal was turned down by the DOA. Therefore, the SDSCO, Santrampur, utilised one charge from his own staff to supplement the Jhalod Sub-division's charge and started the works.

Set-up for project management information systems

The Action Programme indicated that monitoring would be done by the JDA in charge of soil conservation in the Directorate. The SDSCOs are normally required to send monthly, quarterly and annual reports in regard to soil conservation work which is carried out as part of the State activities. Since the sub-division at Jhalod was implementing the Watershed Project as a centrally sponsored scheme, certain periodical information had also to be transmitted to the Government of India through the State Government Directorate. The proformae were extensive in coverage and very detailed in regard to the work component pertaining to soil conservation. However, these forms did not refer to the flow of inputs to the farmers through co-operative societies in terms of seeds and fertilisers, or their utilisation and credit supply to them through co-operatives or commercial banks.

Co-ordinating and controlling project activities and resources

Since the major work component of the MS III Watershed Project was soil and water conservation resources, the sub-divisional soil conservation office bore the full burden. Although the Action Programme stated that the SDSCO would function as

a Project Leader for the Project Implementation Team, no such team was set up. No extension officers were assigned to the sub-division. Instead, the DOA wrote a letter, in February, 1977 to the TASP Project Administrator asking for his help in the co-ordination and execution of the project. He suggested that the Project Administrator co-ordinate the activities for furthering the objectives of agricultural development in the watershed project area.

The TASP Project Administrator, immediately after receipt of the letter from the DOA, called a meeting which was attended by various officers dealing with development activities in the district. Certain important decisions were made at the meeting with regard to transmitting the credit needs of the cultivators to the co-operative society and the branch of a nationalised commercial bank at Jhalod, arranging for a subsidy to the tribals as under the TASP and the DPAP Agency, conducting a one-day camp on dry farming at the Farmers' Training Centre and the DPAP Agency making available the services of an agricultural supervisor (Extension) and six VLW's to pay special attention to agricultural development in the watershed project villages.

The above decisions were in the right direction and the rôle of the TASP Administrator, under whom the Project Leader had to function, as visualised in the Action Programme, was correctly being evolved. Since only the infrastructure investments in the project area were directly undertaken and as no other funds were earmarked for any extension work or for providing subsidies to farmers in regard to their loans for production purposes, or funds for crop demonstration and the like, assistance had to come solely from other agencies operating in the district, such as the DPAP Agency for subsidy assistance towards loans, the District Panchayat for extension advice through its DAO and VLW's, and the TASP for similar subsidy assistance. Co-ordination of such assistance had to be arranged and be continuous.

Government orders were not passed to appoint a TASP Administrator as a Government co-ordinator. Only an informal letter from the Directorate of Agriculture was addressed to TASP and the action taken by him was prompt. However, he did not follow it up with further periodical meetings. If a Government order had been issued appointing him as the Co-ordinator with all the officers designated as members of the project implementation team, it would have carried weight and authority. Since this was not done, the TASP Project Administrator found it sufficient to hold one meeting and he stopped there. However, since the DPAP Agency and TASP operated in the Santrampur Taluka, input supplies and credit flows with subsidy assistance were looked after on their own without any external pressure.

Mobilisation of internal and external support

Institutional support arising from the understanding of the project objectives, as well as commitment to the targets as spelt out in the schedule of activities listed in the Action Programme, was secured through the formal administrative channels by the

SDSCO, Santrampur, who was initially responsible for planning and implementation and, later on, by the regular appointee who took up the post in June, 1978. The administrative channel normally included hierarchical control over staff by 'carrot and stick' methods of recording a favourable or adverse note about their work by their superiors in their annual confidential records. Another way of obtaining the wholehearted support of staff was to provide them with minimum facilities such as housing if they had to work in a project area far from the main urban centres. This was done in the present case. The work-charge staff were allowed to stay at Sukhsar, close to the project site, and were allotted vacant residential buildings, provided with officer accommodation, at the inititative of the TASP Project Administrator.

However, the efforts to seek and secure support from—and establish linkages with—other staff were only minimal. The visualised project implementation team, consisting of - in addition to the three officers of the SDSCO—extension officers, never materialised and the initiative was left to the SDSCO without any formal backing in terms of authoritative orders or instructions. The SDSCO's own attempts to enlist assistance were only feeble. Even the assignment of co-ordination work among various extension agencies and credit agencies to activate production efforts to the Project Administrator TASP was only a half-hearted attempt. In the absence of any formal assignment, the Project Administrator left the course of events to drift after an initial meeting with the extension officer and other executive officers working in the area under the TASP.

As regards obtaining the beneficiaries' participation, the Action Programme envisaged the membership of two progressive farmers, from each of six villages covered by the project, in the Project Implementation Team. Since such a team did not come into being, intended beneficiaries never had an opportunity to take part in decision making. In the course of implementation of the project, the Member in charge of Agriculture of the Planning Commission of India, New Delhi, visited the project site on 21 August, 1977 and talked to the farmers. He was accompanied by the DOA. In a note after the visit he wrote that, although he was impressed by the physical works on the site, he was left with the impression that the agricultural extension was not closely following the soil conservation work. Although the DOA seems to have promised him a better co-ordinated approach, hardly anything was done. There was no follow-up of any sort—apart from a copy of the visit note endorsed to the Project Administrator nor any fresh action from the State Government.

Here we come to an important aspect of project management. Apart from establishing downward linkages (internal support) and horizontal linkages (external support), it is necessary to have an upward linkage with the higher executives. In a government this means the policy level. The DPAP had suggested to the State Government that it create an extension cell, consisting of one supervisor with six VLW's, especially for the watershed project. This suggestion was also backed by the

TASP. But this request was turned down by State Government in the Agriculture Department. An effective lobbying by the DOA in favour of the proposal would have made things different.

Methods, techniques and framework in co-ordinating projects

Although officially the watershed project was not declared an Integrated Rural Development (IRD) Project, the elements of IRD are obvious. It is a project aimed at the utilisation of normal resources through conservation measures and at increasing the productivity of land and labour. Secondly, the project area is inhabited by tribals whose income-creating opportunities are sought to be increased through infrastructural investments and production loans for buying inputs, along with 50 % subsidies to lessen their burden and extension efforts.

Just as Small Farmers' Development and Drought-Prone Area Programmes are monitored and concurrently evaluated and co-ordinated at the highest State Government level, the watershed projects should have been similarly handled at the Secretarial level. In the absence of such an arrangement, the DOA was looking after the implementation and effecting co-ordination. However, it is apparent that the level of authority was not sufficient for it to have an impact on project implementation.

Evaluation and analysis of implementation stage

The present case study fully illustrates the well-established fact that good ideas do not fully materialise unless proper care is taken at the implementation stage. The saddest thing in the current case is that, whilst so much time and attention was paid to technological component in the earlier stages of pre-planning, planning and the feasibility study preparation, there was not much attention paid to problems of actual implementation of the watershed management project. It was assumed that the presence of the existing extension machinery in the district would take care of the situation. This expectation was proved wrong.

The following are the critical deficiencies observed in the project implementation phase.

(1) In the same way as investment planning began as early as May, 1975 before its finalisation in April, 1977, project implementation planning should have been similarly started earlier. This was especially necessary since there was no prior experience of similar projects in the State and since there was an acute awareness that a water management project is something more than a mere technological exercise.

(2) Project implementation planning, apart from delineating an organisational structure such as a multidisciplinary team, includes spelling out the various tasks assigned and the filling of key positions with adequately skilled persons.

(3) The TASP Project Administrator, as the project co-ordinator, was brought in only at the last moment. There was no government order laying down his function.

Further, in the course of implementation, when the Member (Agriculture) of the Planning Commission of India visited the project, the TASP Project Administrator was not even called to accompany him. Only the DOA accompanied the Member and thus there was no intimate discussion on project administration touching the vital aspects of extension.

(4) The Project Implementation Team visualised in the Action Programme was not set up when the project work started but was left to the TASP Project Administrator to sort out from his own resources. Finding them inadequate, especially in extension and for mobilising credit flows, he left the task of finding additional staff to the DDO in charge of the DPAP Agency. The Agency took it up with the State Government but could not succeed. Further, when the DOA was specifically informed by the Member of the Planning Commission, that extension was a weak link in the system, the former could have reacted. However, the reactive capacity to meet the unexpected problem and to take unplanned action was not forthcoming in suitable measure. It is not only the management function to be proactive, i.e. to meet a framework of incentives and constraints to lead the innovation process, but also to react to matters as they evolve, since rural development is a complex process which cannot be tied down to a network of activities.

(5) One of the serious missing links in the project implementation phase was the lack of popular participation. The project implementation team was supposed to contain two beneficiaries from each of the six villages in the project but, since the team was not set up, popular participation was an unfulfilled aspiration.

(6) Perhaps if the TASP Project Administrator had been required to report the flows of credit and inputs as part of monitoring, the Directorate would have been made aware of the weaknesses arising out of a lack of effective co-ordinating machinery. However, the Project Administrator was never asked to report the happenings in any manner.

(7) This leads us to examine whether a rural development project could be left to be supervised and monitored by a technical head or should be in the hands of a high level general administrator, as is the case of the special programmes such as the DPAP and the Command Area Development Programme (CADP), for effective monitoring and supervision at the State level to be located in the Agriculture Department itself. He would look to those areas which are deviating from the normal or desired course and take corrective management action. This would be based on the principle of management-by-exception. In a complex rural development project, where critical linkages with external agencies are not easily made, targets in terms of credit flows and inputs, laid down as guidelines, are not easily achievable. Watching the areas of exception and deviation and taking appropriate corrective action by way of reactive approach to effect changes in management is more desirable. The principle of management-by-exception is more applicable in this sphere than elsewhere.

CONCLUSIONS

The case study of the project, whose implementation phase was evaluated in detail, has at least two of the four ingredients which mark an Integrated Rural Development Project. These are infrastructure creation and agriculture production, whereas the elements omitted are social services, such as health and non-formal education, and small industry, such as primary processing and non-farm management. However, it is apparent that a development administration approach needed for an IRD project, having all the four key elements, is no doubt required also in the present case, despite the absence of the other two.

Of the four recurring types of organisational strategy —traditional line departments, local or sub-national agencies, integrated development agencies and special project management units—the appropriate agency in the particular case under discussion happens to be the local development organisation which is the District Panchayat. Here, one can locate the primary responsibility. Any agency below it, such as a multidisciplinary team as visualised by the Action Plan has no authority of its own, not to mention its capability of implementation. The District Panchayat, having an executive team of top district development officials, headed by the DDO as the chief executive, has the optimum administrative capability at the local level. It is also close to ground level, having elected representatives from the district. Government can assign all the development projects, designed from time to time to deal with special situations or as part of a grand national strategy, to this organisation, along with resources and technical staff on deputation.

The District Panchayat, having one of the highest ranking officers of the IAS in the district as the chief executive, along with other heads of development departments on deputation from the Government, can maintain objectivity and uphold general State policies under the remote control mechanism. This particular organisational option was not considered at the project design planning stage. What was considered, however, was only a multidisciplinary team without any authority in terms of legal power, resources and leadership, to command respect and support from – and acceptance by –the developmental department heads. It is, therefore, vital to consider such an organisational design right at the beginning of the planning stage which can successfully execute the project.

At the implementation stage, the problems faced were with regard to the software aspects of technological change. The linkages with the extension were observed to be minimal. Effective monitoring and concurrent evaluation would have saved the situation, assuming that the reactive capacity to effect management corrective action is forthcoming. Such a reactive capacity can come only from an appropriate level of authority and with vision. Whilst the Secretary to the Government, Department of Agriculture, is at the policy making level and hence cannot be burdened with such supervisory activity, a middle level official, close to policy yet near to implementation level, can be entrusted with these responsibilities. In certain

States in India this rôle is admirably played by an officer known as the Agricultural Production Commissioner (APC), who is a field level officer of the same rank as Secretary to the Government, endowed with powers of decision making in the light of policy laid down by the Government. This obviously eliminates the role of the DOA, a technical head who supervises the co-ordination function of an inter-disciplinary nature at the district level. In the absence of an APC, the co-ordinator's rôle at the highest level above the DOA can be assigned to a Joint Secretary to the Government, which is a second-best alternative since the Joint Secretary is very much of a Secretariat level officer, whereas what is required is a senior person at the field level.

Despite these obvious deficiencies in the project implementation phase, the extension message did, to some extent, reach the farmers, although less than optimally, and credit has flowed in the project area. This is mainly due to the presence of the existing institutions – the District Panchayat, with its own extension machinery, the DPAP and the TASP. Those changes which were to be exogeneously introduced by the Project Implementation Team, co-ordinated by the TASP Project Administrator, did not, however, come about in a clear manner.

Thus, the foregoing discussion would show that substantial attention and care should be paid to project preparation stages not only touching technological content but also organisational design and structure that will promote effective innovation and consequent development of a sustained nature. Mere statements of intent or desire are not enough but concrete action in regard to organisational structure and reactive capacity to meet challenges and unplanned events, as they arise, are necessary. This is especially so if the projects are launched to benefit the underprivileged target group.

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