

WATERSHED DEVELOPMENT AS A RESOURCE CENTRED PROGRAM: A REVIEW OF PARTICIPATORY APPROACH

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ABSTRACT

This paper stems out of the studies on Watershed Management carried out in different institutional settings. The paper focuses on participation of the stakeholders in a resource centred programme taking a stock of socio-economic aspects of the process. Initially the paper deals with the concept of participation with the help of the review of theoretical studies from social psychological perspective. Existing empirical literature is reviewed to derive support for the theoretical hypotheses. Participation is always sought at the end of the project and from above and often misunderstood with partaking. Such process does not last longer and works against the design of the development intervention. We have reviewed the Social Psychological aspects of group participation in order to buttress the concept and point out major lacuna. The process and forms of participation changes across institutions but probably some of the designs themselves ensure failure. We have discussed the methods of organising for Watershed Management and finally listed out the socio-economic constraints in achieving participation of beneficiaries.

I. Introduction

The concept of watershed management involves planning the development of a resource region. It is essential to emphasise here the 'resource region' concept in the process. Resource region incorporates the private property as well as Common Property regimes and therefore the conflicts in resource sharing and use are quite natural without a proper property rights framework. The focus of planning is the optimal and sustainable use of the resources and here it begins with water, land and people. The approach of watershed treatment therefore is holistic and involves quite a few bio-social system. Broadly one can identify eight sub-systems interacting with the stakeholders, namely, Silvi-Horticultural, Pastoral, Livestock, Agricultural, Hydro-geological, Administrative and Social. These all have a dynamic setting and they interface at two levels. First, there are interactions within the bio-systems, as functions of the geographical and the climatic conditions. In these interactions the prevailing technology plays an important role. Usually the results of the technological component are demonstrated under the laboratory conditions, but when it comes to testing or implementation of these on ground level, the institutional, operational, organisational and other social parameters assume

greater importance. Being the components of behavioural sub-systems a direct quantification of such parameters is not possible and therefore one has to resort to proxies represented by responses and opinions. The attempt here is to identify

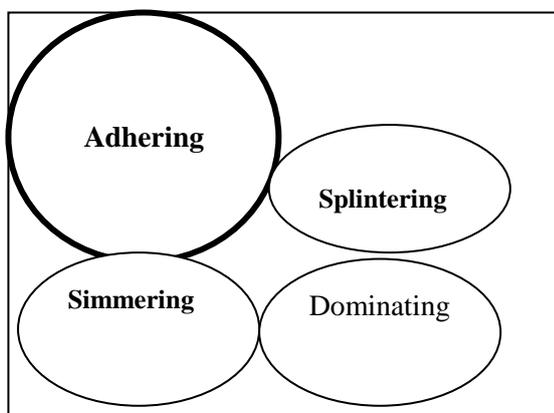
At the second level, the biological sub-system comes the interface with the stakeholders, administrative and social systems. Therefore, the processes of implementation of the programme and people's participation in the program become crucial determinants of the success. The World Development Report (1992) stressed the importance of a participatory approach in creating viable resource management institutions. Watershed Development programme being an area-based programme can only be successful if there is an active support from the communities involved in the region. Peoples' participation in the implementation of the programme becomes crucial, and a pure technocratic solution does not help in any resource centred program.

II. Concept of Participation

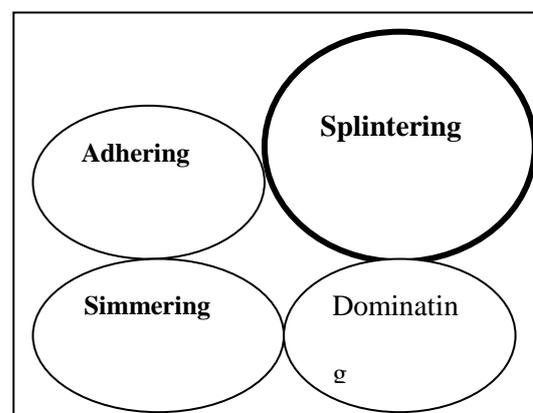
The concept of participation is interdisciplinary but it originates in the discipline of Social Psychology. From a Social Psychological perspective, participation forms an analysis of the group behaviour in a small group or large group. (Cartwright, D and A Zander, 1968). Here one also needs to know the psychological theories of group behaviour. The questions relating group behaviour have also bothered social scientists from the perspective of development initiatives but the fact that it involves basic social psychological parameters is always overlooked. For social scientists, it is the question of success or failure of a group initiative, which is at stake and thus the determinants of success or failures are confused with the factors influencing group behaviour. But for a social psychologists analytically explaining group behaviour has always posed greater challenge and group behaviour takes various forms. Psychological theorists indicate that people join together generally due to common needs, shared goals and imminent common threats (Marvin Shaw, 1971). The definition of the group as well as its sustainability is conditioned by these factors. The group behaviour is dictated by the weights assigned to these factors. Therefore, Ralegaon Shindi becomes a successful watershed and Mokhada did not give similar results (Deshpande and Nikumbh, 1993). The most important conditions for the group to get together are homogeneity, consistency and similarities in skills and abilities.(Penner, 1978). Moreover, the long-term sustainability of the group depends on the composition of the group. Any group participating in a research based program will have four components, sub-groups namely, the dominating, adhering, simmering and splintering. The dominating sub-group consists of the stakeholders who are equipped with social-economic capital to dominate the group decisions. Therefore, if the sub-group is strong in the group dynamics the group sustains for a long but distribution and innovation is always in question. The adhering sub-group contains the stakeholders who generally follow other members and rarely raise objection. The domination of this sub-group also results in sustainability of the group, but at times innovation is

feasible here. The third sub component described here is the simmering constituents of the group. The stakeholders coming under this group are those, who are not quite happy with some of the decisions, but may not express it without some support. They need backup and the larger presence of this component in the group makes it fragile. Last component described above is that of the splintering members. These stakeholders are unhappy over the decisions or some other activities. Often it becomes difficult to internalise them and thus the domination of these components causes the break of the group with slightest provocation. (Cartwright and Zander, 1968; Deshpande, Bhende and Erappa, 2003).

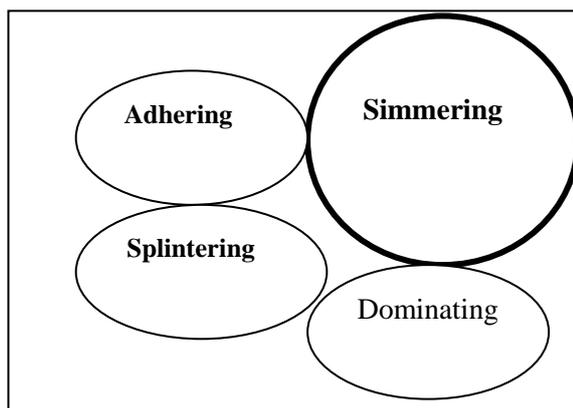
A SUSTAINABILITY VIEW FROM GROUP DYNAMICS PERSPECTIVE



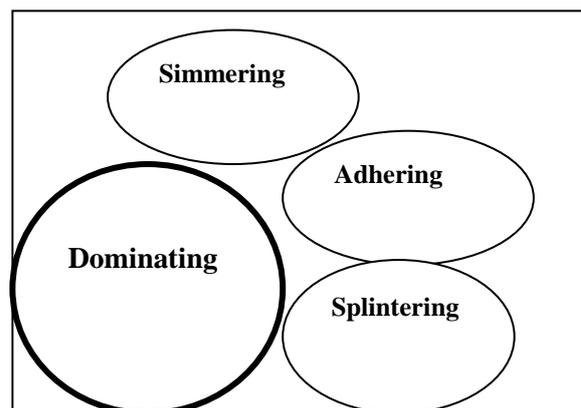
Sustainable with little innovation



Extremely fragile with ill-distribution



Short run sustainability



Assured sustainability but ill-distribution

The essential conditions required for formation of a cohesive development group has also been analysed by Social Scientists. Mancur Olson (1965) makes a very pertinent observation in this

respect. He states that unless the group is small and there exists an outside coercion or some other event threatens the individuals common interests, individuals do not come together by shading away their self interests. Ostrom (1992) prefers to call these pre-conditions as design principles. He has advocated seven design principles in order to achieve a strong and lasting institution. These include:

- i. *Clearly Defined Boundaries*
- ii. *Congruence between appropriation and provision rules.*
- iii. *Choice of collective arrangements*
- iv. *Graduated Sanctions against violating appropriators.*
- v. *A well set conflict resolution mechanism*
- vi. *Recognition of the rights to organise*
- vii. *Nesting of various activities like – Appropriation, enforcement, monitoring, conflict resolution, and governance.*

Ostrom (1992)

However, it is the location or group specificity that decides the pattern of formation and consistency of a group. Two factors namely 'role' and 'status' as Social variables play a significant part. These get further classified into analytical terminologies like 'Relative Roles' and 'Relative Status'; 'Expected Role' & 'Expected Status' and the conflict between the existing and perceived situation plays a significant role in explaining group dynamics. The compatibility between these two components goes a long way in deciding the sustainability of the program (Deshpande and Reddy, 1992).

In the watershed related literature participatory management is defined as a process which operates at various levels right from planning through execution and finally ensuring sustainability for future. This however excludes the necessary and sufficient conditions as well as different forms and layers of participation. Pimbert and Pretty (1997) identified a few forms of participation:

- i. *Passive participation where people are told to share a component of work.*
- ii. *Information participation: Here the participants involve by supplying answers to the questions asked.*
- iii. *Consultation Participants: In this situation the respondents participate as and when they are consulted on the issues. Here the issues are posed from above.*
- iv. *Participating by providing hard resources: In this case the beneficiaries provide the material resources required. This can include land, labour or investment.*
- v. *Functional Participation: This is an institutional form of participation where the participants share the different functions of a formal or informal institution.*
- vi. *Interactive participation Process: This is a true social engineering function, here the participants involve in a close interaction on an issue of their concern and arrive at a consensus solution. There is an inherent flexibility here to have an external initiator.*
- vii. *Self-Generated Participation: When a group of people are confronted with an issue which puts at stake the welfare of one and all, the process generates automatic participation between the stake holders.*

These forms are however not exhaustive and can change in priorities and intensity according to situation (Deshpande and Nikumbh, 1993).

Sharma (1997) viewed the process of participation from traditional efforts culture and mores of people. His observation was from the specific standpoint of an upper Himalayan watershed. In a similar setting, Ostiani and Warren (1995) documented the learning from the field experience of the project on Inter-regional Project for Participatory Upland Conservation and Development. They classified levels of participation into five categories:

- i. *Information need based participation*
- ii. *Participatory Planning Approach*
- iii. *Participatory monitoring and Evaluation*
- iv. *Capacity building provoked participation*
- v. *Participation through contribution.*

A good example of this process can be seen in Sukhomajari watershed study (Chopra et al, 1988). Cohen and Uphoff (1980) identified the basic four layers beginning with decision making and going through implementation, distribution of the accrued benefits and finally evaluating for correction of the shortfalls in the process of implementation. A common feature observed from the above classification of forms is that these authors have specifically concentrated upon the functional aspect and the utility of these aspects is limited to testing of the extent of participation and the depth of involvement (Deshpande and Reddy, 1991).

Participation in any natural resource based programme is essential and at the some time quite difficult (Farrington et al, 1997). The necessity of participation arises out of the inter-linkage between activities, the process of internalisation of externalities and long-run sustainability of the intervention. The difficulties arise as in the psychology of group dynamics any external intervention is viewed with scepticism and takes time to internalise such intervention. In addition to this there are various factors that influence in making or breaking the group.

III. People's Participation and a Resource-Based Programme

Participation in a resource-based programme is different than any other development initiative. It differs in its pre-conditions as well as in the process of such participation. On the positive side such participation comes through quickly if the very availability of the resource base is threatened in a short run (Deshpande and Reddy, 1990). Thus it is often a threat to the sources of livelihood that enforces participation. But on the negative side, the sharing arrangement of the accruable benefits as well as the type of institutions matter significantly. In addition to this, visualising future benefits and repercussions is a difficult task for the society to achieve. Thus sustainability comes under threat. Above all the process assumes greater importance.

The process of participation can be crucial at three stages of development of a project. First, the design of the project should involve the village communities. The commonly followed approach is the Participatory Rural Appraisal (PRA) method, where the participants of the programme sit together to plan the strategy for the treatments of arable and non-arable lands. MYRADA, PIDOW, GTZ, and DFID funded projects have generally followed this process. The success and methods of course varies across the experiments (Deshpande and Reddy, 1991). It is not however an essential component of the watershed experiments taken by NGOs in the country. There are a good number of NGOs that take the participation for granted and plan the watershed treatments in isolation. It is essential to bear in mind that the technology involved is likely to contest the area allocation decisions of the farmers. Second, the involvement of the people comes at the time of planning as well as at implementation stage of the new technologies. At this stage, it is essential to understand the farmers' awareness of the technology and its impact in the overall system of watershed planning. This was tried in the National Watershed Development Programme in its second and third phase (Deshpande and Narayanamoorthy, 1999). This was half hearted in terms of choosing one farmer as "Mitra Kisan" and one livestock tending family member as "Gopal". This was however, a good beginning of involving farmer but by design it would not have spread the technology with the desired speed. In such experiments many times the farmers know only of the names of the terminology used but they are aware of neither its influence nor the necessity of its components in the overall design.

Third, if the perception of the farmer is clear about the concepts involved, then the sustenance of the watershed structures is naturally ensured. Unfortunately, the conflict between the private and social benefits begins at about the time when the treatments are halfway through or nearing completion. Therefore, after the implementation of the strategy the community participation is necessary to sustain the structures created and continue the technology adopted. But it is difficult to obtain at this stage and largely goes by the typology of the institutions emerged in the process (Deshpande and Nikumbh, 1993) keeping these three stages in view, we have analysed below the community involvement in the watershed project.

An important aspect is to analyse the participation of different disciplines in the project region. The participation of different disciplines can be viewed from two different angles. Firstly, from the official or project point of view, the density of work carried out under each component is to be compared with the actual need of the component. This approach may not yield any spill over as the project is planned very systematically and with the involvement of scientists as well as administrators together. Hence, it is difficult to get any answer other than the one indicating perfect planning. The second approach ascertains the participation from the farmers' point of view. The farmers assign different levels of importance to the disciplines like crop husbandry (represented by application of new technology), horticultural plantations, forestry or silviculture and soil conservation.

IV. Communities and their Actions towards Watershed Approach

Soil conservation programs initiated during thirties and continued after independence can be treated as fore runners of watershed programmes in the country. This was followed by ICRISAT's approach of micro watersheds for conservation of soil, harvesting rain water and *insitu* conservation measures. These were technocratic programmes and lacked any community initiatives. Following the initiatives proposed in the mid term appraisal of Seventh Five Year Plan many State Governments initiated watershed development programmes. National Watershed Development Programme for Rainfed Agriculture took shape in its three incarnations. Other such programs under the ministry of rural development were also initiated during 1980s. Initially these programmes were implemented by the State agencies pre-dominated by soil conservation specialist. Though technically sound, these programmes could not achieve the desired success in full measure due to lack of active participation (Deshpande and Reddy, 1992). Probably due to the fact that the implementing agencies adopted a "Top down Approach" and seldom consulted people for whom the project was being implemented. The project was implemented by the technocrats and administered by the bureaucrats. Naturally the technical component dominated the project and social component took a back seat. There were quite a few such models of implementation existing in the country and all these had different focus (see Deshpande and Narayanmoorthy, 1999). A number of line departments within agriculture were involved in the NWDPRA project teams but rarely it was a cohesive group and lack co-ordination among the departments resulted in a partial success of state led programmes. Such failure was intensified by the lack of community involvement.

Consequently, it was felt that reaching the stakeholders without a proper support from institutions is difficult. Non-Governmental Organisations (NGOs) provided such institutional back up for the programme (Deshpande and Nikumbh, 1993). Therefore, in the later phase Non-Governmental Organisations (NGOs) were involved in the planing and implementation of watershed projects. The NGOs could motivate people for planing and implementation of the watershed project (Kerr et al, 1998, Deshpande et al 2003). The activities as well as priorities were decided in consultation with the people. Many a times technology component dominated the focus depending the past experience of the NGOs (see box 1) and non-availability of sufficient technical manpower with the concerned NGOs. There are also examples of hybrid systems in the process of planning and implementation of watershed projects. These systems consist of partnership between the Government and NGOs. Most of the bilateral and multilateral aid and donor agencies insist upon this type of arrangement (Deshpande, Bhende and Erappa, 2003). This system facilitates better participation of the community in decision making and prioritisation of project activities, reduces the overhead costs and provides for better up-keep of durable assets as well as structures created during the development of watershed.

Box: 1

<i>State Run Programmes</i>	<i>Projects Run Purely by Non-Governmental Organisation (NGO)</i>	<i>Projects with Co-ordination of State Agency and NGO</i>
<ul style="list-style-type: none"> ▪ Implemented by technocrats therefore technically sound. ▪ Top-down approach in planning & implementation ▪ Structures and activities do not have location specificities. ▪ Number of line departments are involved in the implementation and this process provokes low co-ordination among them. ▪ High density of administrative staff ▪ High over head charges and therefore chance for more pilferages ▪ Forced participation of the community 	<ul style="list-style-type: none"> ▪ Technically focussed towards NGO's specialisation. ▪ Lack of sufficient and trained technical people that impinges on the span of technical aspects ▪ Non-holistic approach as activities taken up are influenced by past experience or expertise of the NGO ▪ Participative approach in planning and implementation of the project ▪ Less overhead charges and low pilferages ▪ Participation of community is conditioned by the voluntarism of the NGO 	<ul style="list-style-type: none"> ▪ Hybrid approach involves best of both State agencies and NGOs ▪ Technically sound and conditioned by the dominance of the partners ▪ Bottom up and Top down mix up. ▪ Low over-head cost ▪ Approach is holistic in nature ▪ Participation is ensured and people friendly ▪ Focussed on livelihood.

Source: Deshpande and Nikumh (1993); Deshpande and Narayanamoorthy (1999) and Deshpande, Bhende and Erappa (2003).

The community actions towards the watershed approach can best be judged from the functions of the respondents. The reactions of the respondents can be sought for three important factors. First, the awareness attitude and perception of the respondents are quite important. The watershed concept has to be clearly understood by those who participate in it. It is not enough, if they understand the meaning of the concept, but it is also necessary that the beneficiary is fully aware of the importance as well as impact of the treatment. In most of the project areas all the respondents are aware of the world 'watershed' and simple meaning of the treatments. But this can not be enough to understand their involvement. Secondly, the respondents' views about the impact of the treatments also indicate his/her involvement in the programme. Third important aspect of farmers' involvement in the programme relates to their views about the simplicity, affordability, viability and replicability of the watershed components. All these three aspects together indicate the overall involvement of the

farmers in the watershed treatments. The experience of a World Bank aided watershed development project is presented below in table 1.

Table 1: Proportion of Respondents by their perceptions about Simplicity, Affordability, Viability and Replicability of the Watershed Treatments

Sr. No.	Treatments	Simple	Affordable	Viabile	Replicable
1	Contour Bunds (soil)	35.51	15.50	25.65	10.04
2	Contour Bunds (soil and stone)	56.23	16.88	26.06	9.36
3	Contour Cultivation	35.16	20.31	-	-
4	Khus Bunds	90.40	88.09	84.97	71.36
5	Silvi-Pastoral Treatment	41.69	8.88	26.22	8.48
6	Pasture Development	30.51	13.79	37.88	11.86
7	Horticultural Plantation	49.71	10.27	20.84	8.08
8	Nalla training	39.66	14.26	30.87	4.11
9	Nalla Bunding	31.79	10.71	18.57	4.89
10	Water Conservation Measures	14.29	2.56	18.92	0.00
11	Other Treatments	31.82	18.57	14.71	10.13

Source: Deshpande and Rajasekaran, 1995.

V. Role of Institutions

Village level institutions and the rural institutions influence the programmes of agricultural development. Most of the rural development programs are directed through these institutions. Gram Panchayat, Taluka Panchayat Samiti and Zilla Parishad are the components of the three-tier Panchayati Raj Institutions. These are the formal institutions taking part in the developmental activities. Apart from these the co-operatives, educational institutions as well as socio-cultural organisations do participate in development activities. The role of institutions can be analysed from two different angles. First, the village level or higher level (informal) institutions or NGOs take active interest in the developmental projects like watershed project. In such case, the project is planned, initiated, participated and implemented through these institutions. One such example can be the Shetakari Sahayak Mandal of Adgaon or the Ralegan Siddhi experiment of Shri Anna Hajare (Deshpande and Nikumbh, 1993 and Deshpande et al 2003). Here the analysis of involvement of institutions has to be both from the angle of institution as well as from the participants' point of view. That helps to analyse the role of community in implementation process of watershed programs. Secondly, in the case of projects initiated, planned and implemented through the government departments, the role of institutions has to be ascertained indirectly. The Manoli watershed project falls in the category, where the role of institutions is not that of an initiator but of a participant through the cultivators (Deshpande and Rajasekaran, 1995).

Another interesting model is that of KAWAD, wherein the state partnership with NGOs is utilised in order to make the project operative. The whole approach is through improvement of livelihood and there are three layers of decision making. At the first level, the Karnataka Watershed Development Agency, an autonomous body under State Government works at the apex level. The other two levels involve an Implementing Agency and the Partner NGOs (Implementers). The entire process is activated through watershed level committees and Self-Help Groups. This model seems to be more community centred as against the others (Deshpande et al 2003).

VI. Method of Farmers Organisation and Peoples' Participation

Participation in any resource-based programme has to go through a process of seeking the stakeholders concern. It is the process that largely decides the success or failure of the participation. The process goes through three stages namely the initial planning, monitoring and involvement in the implementation. A clear perception about the accruable benefits and an accepted arrangement of benefit sharing brings strength to the organisation. In any resource-based programme the stakeholders are spread in three concentric rings. The first circle or the core of the stakeholders consists of the direct beneficiaries, who get the benefit flow in terms of income or employment immediately after the treatment is completed. In a watershed context this group includes the lower reach farmers, where the moisture enhancement is the first accrued benefit especially in a low rainfall region (Deshpande and Rajasekaran, 1995). In Himalayan Terai region the immediate benefit goes to the upper reach landowners (Deshpande, 1999), and therefore the upper reach farmers become the core group.

Peoples' co-operation is achieved by providing some incentives and best incentive is through financial support. Roping in the Non-government Organisations (NGOs) ensures participation of the community in the watershed development project. The best-suited NGO is the one which has familiarity with the people and aware about the local social dynamics. This plays important role in motivating people to participate in the watershed development project. Moreover, credibility of the NGO, and availability of competent staff with them also impinges on the community participation in the watershed projects. The formation of watershed committees at micro-watershed level providing representation not only to farmers but also to the members of Self Help Group (SHGs), landless labourers and women members helps in participation of the people in the project (Deshpande, Bhende and Erappa, 2003). The financial support for various land based and non-land-based activities ensures active participation of the local communities and the technical support provided by the NGO play an important role in watershed development. Presence of technical persons or group infuses confidence among the participants. In most of the watershed development programmes (ORP/DLDB), technical group had the responsibility to organise the people to undertake project activities, which was probably beyond their capabilities. This group certainly has the capacity to attract the people around them and

convince them about the benefits accruing from the project but that will not *suo moto* ensure the participation. This requires a trained community organiser.

Of all the things, the participation in the watershed project will depend on the characteristics of the group (Olson, 1965). A cohesive and homogeneous group with good leadership is likely to participate in any resource based programme actively. The success of collective action thus depends on the nature of the group, such as its size, its age and its purpose. The group with common goals and interest sustains the participation in program. The participation in the watershed activities thus are influence by the characteristics of the group. The participation of the group is insured if it is super imposed on social and economic parameters of the village. For example, SHGs formed on caste, ethnic, or social lineage or based on economic / wealth statuses are likely to have better participation in the watershed project (Deshpande et al 2003). The group action succeeds if it is based on prevailing social norms and good chances of sustaining the project activities. Hence the choice of the group becomes crucial for success of the participation. The leader of the group conditions the participation in the group. A group led by a person with clear understanding of the tasks involved and who is able to convince the members is likely the ideal group to involve in the watershed development which provide some stability and assured participation of the community.

In addition to above, social and economical behaviour at village level is dictated by wider democratic processes but influenced by local or village level issues. The wider democratic process encompasses state or district level political and economic entities or forces where watershed is located. These wider democratic forces impinge upon the flow of funds, technological assistance, and administrative bottlenecks in the implementation of watershed project. However, if the local democratic forces are much stronger than the wider democratic forces due to immediate political/ social interactions then it influences the participation in the project and also determines the method of participation.

Participation in the project is certainly associated with the level of stakes involved. Higher the stakes, higher the probability of sustenance of the project. If the aggregate stakes are negligible then level of sustenance will also be low. As the stakes increases probability of sustenance also increases and reaches a peak at some level of stakes and then turns asymptotic there after. Within the group, those having larger stakes may participate easily in the watershed project more actively when compared with the people in the group anticipating peripheral benefits from the project. Therefore, tying up of the stakes with watershed activities helps to ensure success. In a recent experiment the watershed committees have taken up Land based activities with Non-land based activities (Deshpande, Bhende and Erappa, 2003). This has ensured the continued stake of the participants.

Success of the project and level of participation also depends on how the project is interfaced with the local or village institutions. In a typical village set up four traditional institutions are important and their involvement determine the success or failure and sustainability of the watershed project. These village institutions are: (i) village political institution like village panchayat (ii) social institutions like community (Jati) panchayat, youth association, etc., (iii) religious institutions like temple trust and (iv) economic institutions like co-operative societies, traders association, farmers association, etc. All this village institutions influential in their own right and influence the participation of the community under their command. Thus any participative process has to take into account the presence of these institutions. Larger the union between these and participating institutions, greater the chances of sustenance. Methodologically it helps to draw up on these for success.

VII. Functions of Participation

There are varied experiences about participation of the community in the watershed development programmes. Some times participation develops or declines with the maturity of the watershed program. There are various factors, which sustain the interest of the group members and helps in promoting or discouraging the participation. Among other things, the major factors, which make or break participation, are: (i) holding of group meetings, (ii) who leads the meetings, (iii) issues at stake and (iv) management of funds. Holding of regular meetings facilitate interaction between the members of the groups and also intra-group discussions which helps in decision making process and enhanced participation by the group members. However, frequent meetings may lead to breaking of the group if splinter component within the group is big enough and influential. A person having better knowledge about the project objectives, goals and activities, etc., would be an ideal leader who should lead the meetings. The leader should have larger or sensitive stakes in the project. In other words, leader should be one of the core beneficiaries or a person whose wealth ranking is influenced by the success or failure of the project. Thus the leader with larger stakes in the project motivates the fellow group members and results in better participation.

Management of funds is important in the nature of participation. Professional management of funds instils confidence among the members and induces active participation. Management of funds deals not only with the funds received from sponsoring or donor agencies but also mobilisation of funds from the community. In order to begin any institution governing watershed in anticipation of benefits, the community or group also has to mobilise some funds. The contribution of funds by individuals generates feeling of belonging in the minds of would be beneficiaries and induces active participation in the watershed projects. Since the watershed project has long gestation period, accrual of benefits take longer time and mobilisation of funds is certainly a difficult task. Participation is

positively associated with mobilisation of funds and thus higher the mobilisations of funds better the involvement of people (due to higher stakes involved). Nevertheless, mobilisation alone does not ensure participation if there are severe failures in the management of funds. Maintenance of funds not only requires professional management of funds, sincerity and commitment for the cause but also calls for thorough understanding of the concepts of the watershed programme (Deshpande, Bhende and Erappa, 2003).

The management of funds can be streamlined by auditing of accounts. Auditing of accounts by internal auditors offers flexibility in program implementation and management of funds. It also provides understanding of major inconsistencies in the expenditure pattern at the ground level. Identification / location of such inconsistencies helps to straighten the auditing framework and rationalising the expenditure pattern of the watershed programme. At this juncture internal and external accountability comes into picture. The accountability is desired with three partners namely, (1) stake holders, (2) funding / sponsoring agency and (3) institutions involved in implementation. The accountability also helps in proper implementation of the watershed programme and therefore nature of participation becomes a direct component of such accountability. Of course this requires some level of autonomy in utilising the funds. However, autonomy provided in utilisation of funds should have well defined checks and balances in the program design.

Another important factor in the functions of participation is the frame and execution of development of schemes. There are various stages involved in the process of planning and execution. Most of the time this is provided or dictated by the funding agencies / authorities. The major steps / stages involved in framing and execution of development schemes are: (i) choice of components, (ii) liaison with donor agencies, (iii) technical and manpower assistance and (iv) developing norms for various activities. These stages are not hierarchical and hence have significant over-lapping areas with each other (Deshpande and Rajasekaran, 1995). Their influence is aggregate in nature towards promotion of participation. The choice of component has to be conducive with the thinking of the group. Among these, the program oriented, stakeholder oriented and technology oriented components work together. A proper combination of these can lead to better execution of the program with enhanced participation. Participation also depends on the liaison with donor agencies as well as the type of relationship executing agency / group has with the donor agency.

The benefactor beneficiary relationship is usually fragile whereas, the partnership with the donor agency can sustain participation of the beneficiaries. This however requires a proper manpower and technical assistance both from the donor agency and the participating group. Presence of dynamic, trained and courteous technical manpower improves participation of the group. In many watershed programmes technical manpower is usually borrowed from the sister / line departments.

This results in super imposition of the culture of the line department on the implementing agency as well as stakeholder group.

While seeking participation in development schemes like watershed programmes it becomes necessary to chart out certain norms or setting of guiding principles in order to seek active participation. These norms have to be developed keeping in view the feasibility of technology, stakeholders' interest and elasticity of their participation with respect to their interests. The ambitious schemes planned with over enthusiasm having better long-term benefits fail to convince the group, and may affect the participation. Among the norms pertaining to participation, the norms related to monetary contribution, a labour sharing and benefit-sharing arrangement assumes greater importance. These together decide nature of participation.

The nature of participation is more important at the completion of the programme. Since the created assets have to be managed as the funding / sponsoring agencies withdraw from the project site. In the management of the assets two important factors contribute towards involvement of the participants. First the assets created should be directly linked to the continuous flow of benefits accrued and second the assets should directly demonstrate such benefits or should have positive externalities for the group.

Monitoring and concurrent evaluation of any land-based programme provides for on line corrections / mid term corrections. This serves to locate the problems in the process of implementation and helps in identifying the nature of participation. The task of monitoring and evaluation however should be assigned to out side agency, which is independent of the development, or executing group. Such processes instil confidence and better liaison among the stakeholders as well as funding agency. The nature of participation finally depends on the existence of proper and well defined conflict resolution mechanism. There are five major areas of conflicts that act as bottlenecks or stumbling blocks in the process of participation. These are: (i) social politicisation, (ii) illegal use of resources, (iii) lack of positive discrimination, (iv) conflict between the accrued benefits between upper and lower reach and (v) displacement to accommodate different watershed structures. These factors dictate the nature of participation.

The social politicisation is the process in which various social groups become strong interest groups. The conflict emerges between them largely due to the reflection of social conflict already existing or dormant in the society. This may be based on caste, community, religion, etc. Even the allegiance of the members / groups to different political parties may result in social politicisation. Similarly in many watershed development programmes, influential participants / group members tend to use common pool resources in such a way where most of the benefits accrue to the concerned

group or individuals (Deshpande and Nikumbh, 1993). The best example can be the location of storm water drains or channelling of excess run off. The lack of positive discrimination among the participants determines the nature of participation in the watershed development programs. The focus is that "all are better off and no body is worse off" as the guiding principle in the distribution of anticipated gains from the developmental activity. This way every participant gains one way or the other. There should be some built in mechanism of positive discrimination to compensate participants from the upper reach in the watershed programme as most of the time lower reach farmers / participants are benefited at the cost of upper reach participants. In the process of watershed development a number of structures are erected / constructed in the field. It is advisable that such structures are located at such a place or on the farms which will not affect the participant significantly. For example location of farm pond on a plot owned by a marginal farmer may deprive him of land and needs to be compensated appropriately so that his livelihood is not affected (Deshpande and Rajasekaran, 1995). Thus the nature of participation is greatly influence by the conflicts arising due to various factors listed above and hence provision of well-defined conflict resolving mechanisms should be included in the project to encourage active participation.

VIII. Constraints in Participatory Management

Watershed development approach is an area programme and thus involves the participation at three levels. Firstly, it is the internal integration of the implementing agency and its vertical integration wit the State bodies. This allows an operational ease to the project team, which is an essential component. Second level of interaction is built while implementing the project and through the continuous involvement of the beneficiaries in the planning and implementation of the programme. This is achieved through the meetings held in the villages and explanation of the programme components to the villagers and farmers of the region. Third level of the participation comes out when the beneficiaries themselves approach the project officer for the purpose of their work. This phase is importance because the farmers themselves initiate the consultation. The real test of awareness comes when the farmers express opinions about the maintenance of the structures and the constraints.

Among the most important constraints felt by the cultivators, five are of vital importance. Firstly, the farmers' involvement should be there from the stage of planning. Usually there are no reservations expressed about the implementation of the project, but the planning process is often completed at official level only. Of course, there are operational difficulties in making the process public and hence its feasibility at ground level has to be worked out more carefully. Secondly, the infrastructural support in terms of marketing and credit facilities is always inadequate to support the incremental production generated. Third, the technical components and stakeholders' requirements do

not match and that creates a major bottleneck. Fourthly, the nalla bunding, nalla training and such land based activities need to be sustained for a longer time and therefore the responsibility of its maintenance should be assigned to any institution immediately after the completion. In the absence of such arrangement, these structures get neglected and do not serve the purpose. Lastly, the location specificity of the project is an important component in its sustenance. Therefore, while planning the treatments this aspect has to be kept in mind.

Box: 2

<i>Constraints</i>	<i>Options</i>
<i>Policy</i>	The planning stage of any programme is crucial for the purpose of participation. Therefore, while preparing the blueprint itself, involvement of the stakeholders is required. Policy itself can have checks and balances for successful implementation of the program.
<i>Institutional</i>	Any area-based programme requires to be routed through village level institutions and must be conducive to the existing institutional structures. Any confrontation on this front can make the programme unsuccessful.
<i>Attitudinal</i>	Participants approach towards the resource based project is crucial for success. A proper attitude can be generated by organisations working with people. Therefore, an institutional information is very critical.
<i>Information</i>	The information about the resource-based programme should be always in public domain and full transparency should be the guiding principle.
<i>Inter Agency Co-ordination</i>	Watershed development involves various agencies both at ground level and also at policy level. A proper co-ordination between these agencies helps in proper logistics of the programme.

IX. Conclusions

In the Indian context we have three types of models of implementation of watershed development programmes. First type of model includes the State funded and implemented programmes having little to do with other Non-Governmental bodies. Second type is characterised by the programme taken up by groups of people or Non-Governmental organisation with / without outside funding. The third typology refers to the programmes undertaken by NGOs or groups of stakeholders with the state partnership.

Countrywide evaluations undertaken of the watershed programmes indicated that the state managed watershed programs have mostly failed to deliver the intended results or at least retain the sustainability (Deshpande and Narayanamoorthy, 2000; Kerr et al 1998). At the same time it was

clearly demonstrated that the programs undertaken in the non-governmental sectors were largely successful in the final impact analysis. These programme's analysis also indicated long term sustainability and equity in the distribution of benefits.

It comes out clearly from a review of analysis of watershed development programmes in the country that participation of the stakeholders is crucial. It is critical at the time of planning and implementation. If at this stage participation is achieved the sustainability of the project is ensured. But participation is a concept, constructed and developed by social psychologist. We have discussed the concept from theoretical point of view and felt strongly that it is used very vaguely in the literature on watershed development. The effective participation is conditioned by the composition of the group which consists of four components namely, dominating, adhering, simmering and splintering. Further we analysed the process of people's participation and a resource based programme. It comes out clearly out of our analysis that the State - NGO partnership seem to be more successful than the other two models. Role of institutions and community participation comes out as critical elements for successful resource management programme. Finally, we have discussed the functioning of participation and operative constraints as reflected through various studies.

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