

THE MYRADA EXPERIENCE

THE INTERVENTIONS OF
A VOLUNTARY AGENCY

in the emergence and growth of

PEOPLE'S INSTITUTIONS
FOR THE SUSTAINED AND
EQUITABLE MANAGEMENT
OF MICRO-WATERSHEDS

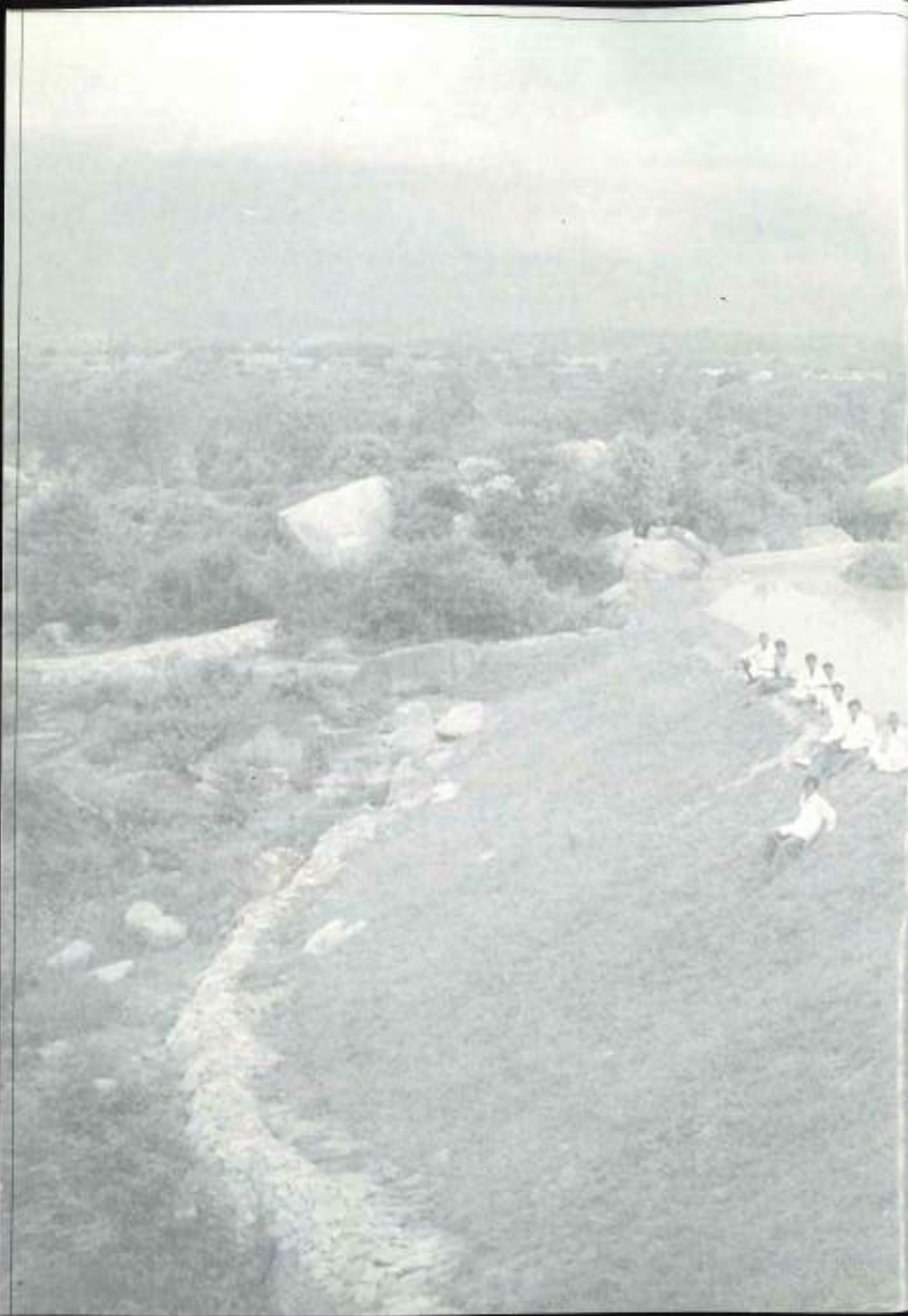
MYRADA

No.2, Service Road, Domlur Layout,
Bangalore 560 071, Karnataka, INDIA.
Tel: 080 5352 028, 5353166, 5354457
Fax: 080 5350982.
email: myrada@vsnl.com
www.myrada.org

Aloysius Prakash Fernandez

2nd Edition: 1994
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This book has been published in the context of the World Bank sponsored Karnataka Watershed Project scheduled to start in 2002. The learnings from PIDOW - MYRADA which started in Gulbarga in 1985-86 (in collaboration with the Govt. of Karnataka and SDC) are still relevant to the watershed management strategy.

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Tel: 080 5352 028, 5353166, 5354457
Fax: 080 5350982
email: myrada@vsnl.com
www.myrada.org

Design and Layout

Communication for

Development and Learning

11/A, 7th Cross, 17th Main, Koramangala 6th Block,
Bangalore - 560095
Tel: 080 5503481, 552 1588
Fax: 080 552 4192
Email: cdblr@bgl.vsnl.net.in
www.cdblr.org

Foreword

MYRADA's involvement with watershed management began with PIDOW in Gulbarga in 1984-1985. Though the initiative for the project came from three IAS Officers posted in Gulbarga District, it was the Swiss Development Co-operation (SDC) that proposed an experiment where both the Government and an NGO would be co-intervenorers in a project which evolved during discussions towards a clear focus on watershed management. The experiment to bring in both the Government and an NGO was supported by officers from the Ministry of Rural Development who considered this as a Pilot Project that could provide several useful lessons for similar patterns of co-intervention which were being discussed at that time.

On the side of the Government, the intervention, which was originally the responsibility of various line Departments, shifted to the Zilla Parishad for a brief period and then moved on to the Dryland Development Board which had a multi-disciplinary team in the field that focused on a watershed programme. For MYRADA to establish a team that could operate effectively in Gulbarga took about two years. SDC's support through these years to strengthen the pattern of co-intervention in operations as well as the focus on watersheds has been consistent and invaluable. It has succeeded in building up a climate of trust and confidence at the field level both among the people and the staff. Peoples' institutions have emerged and stabilised with varying degrees of success. If they are weak in some areas of organisational management, it is due to the failure of the co-intervenorers to provide adequate opportunities, support and time required for new institutions to mature, as well as due to the fact that MYRADA had no model of watershed management but fostered the process of peoples' participation in regenerating a watershed's resources over several years and rejoiced whenever it developed into appropriate and stable institutions.

The initiatives in PIDOW which cover approximately 29 micro watersheds spread rapidly to other MYRADA projects where the process has started in 41 micro watersheds, notably in Huthur (11) Kamasamudram (10) Holalkere (4) H. D. Kote (4) Kadiri (6) Agali (2) Talavadi (2) and Dharmapuri (2). All these projects (except Kote) are located in arid zones with shallow and degraded soils often covered with stones.

The analysis in these pages is based not only on the experience of PIDOW where Government is a co-intervenor, but also of other projects where the Government is not involved. The analysis indicates that a serious effort is required by all intervenors to evolve organisational strategies to remove blocks that have delayed the process through which peoples' organisations for watershed management evolve and mature. While the author would have preferred to defer this publication till the impact of the interventions was proved, beyond reasonable doubt, to be sustainable, the expansion of the model where both Government and NGOs are co-intervenors has added a sense of urgency. Parts II, III and IV which describe the interventions of an NGO during the entry, planning and implementation phases respectively may provide material for reflection by those NGOs entering into similar patterns of co-intervention with Government in Karnataka and in other States.

On July 16, 1993 MYRADA completes 25 years. This booklet is released to pay homage to those who founded and guided the organisation through these years.

A. P. FERNANDEZ
July 16, 1993

2nd Edition:

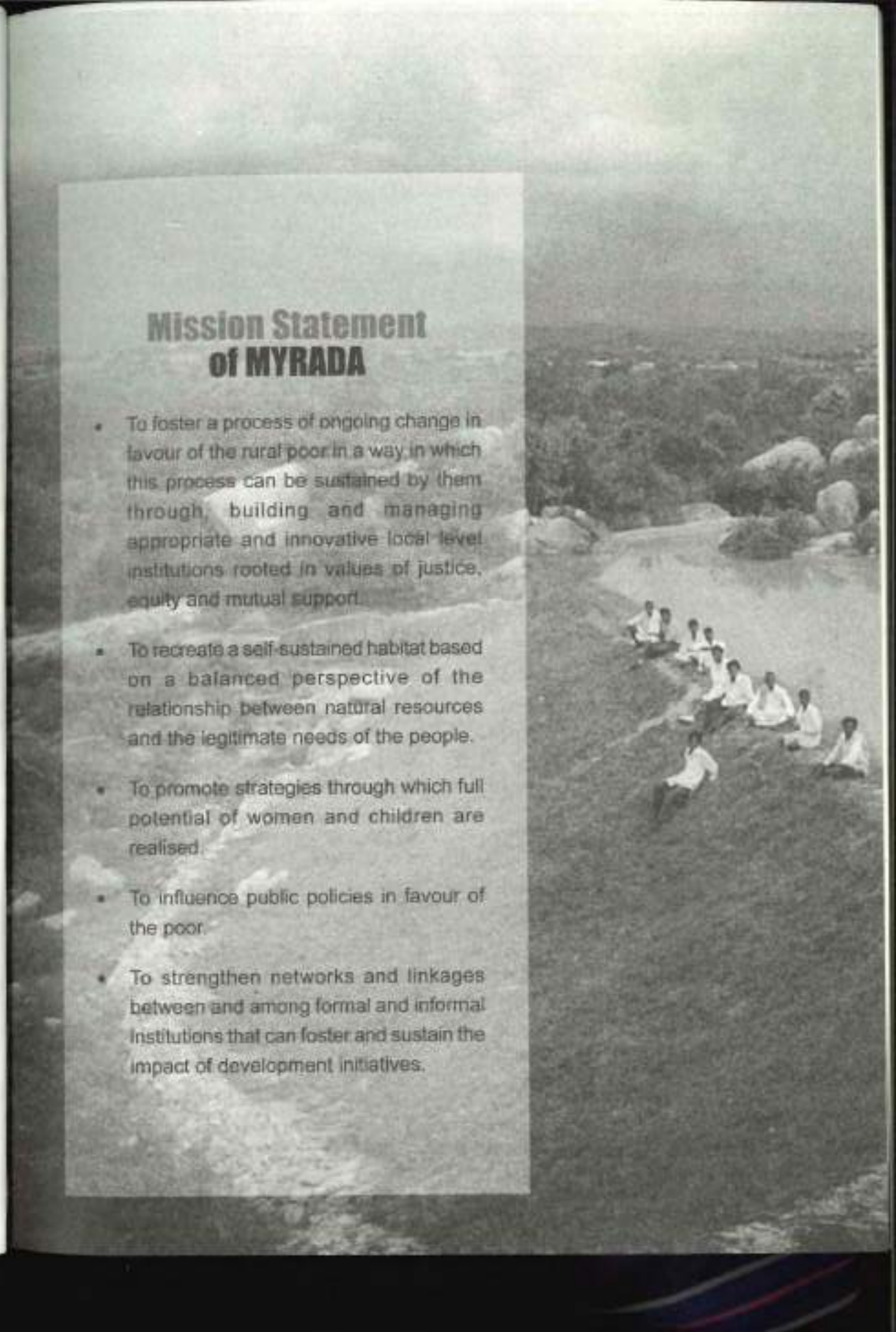
Note: The second edition retains Parts I to V unchanged. Parts VI, VII and VIII incorporate experiences gained since July 1993 and raise other issues that emerged which need to be analysed further.

A. P. FERNANDEZ
December 20, 1994

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Mission Statement of MYRADA

- To foster a process of ongoing change in favour of the rural poor in a way in which this process can be sustained by them through building and managing appropriate and innovative local level institutions rooted in values of justice, equity and mutual support.
- To recreate a self-sustained habitat based on a balanced perspective of the relationship between natural resources and the legitimate needs of the people.
- To promote strategies through which full potential of women and children are realised.
- To influence public policies in favour of the poor.
- To strengthen networks and linkages between and among formal and informal institutions that can foster and sustain the impact of development initiatives.

PART - I



A MATTER OF OBJECTIVES AND PRIORITIES

With the increasing number of watershed programmes in dry and degraded areas where both Government and NGOs are co-intervenors, it is useful to reflect on project experiences like PIDOW¹ MYRADA near Gulbarga where this form of collaboration has occurred for several years. **PIDOW** was projected as a partnership of three - namely, the Government, Swiss Development Co-operation and MYRADA, with the primary objective of enabling the people involved to emerge as the fourth partner who would progressively exercise control of the watershed's resources. MYRADA's role was to ensure that the process of planning and implementation would serve as an important instrument in enabling the fourth partner - the people - to acquire the skills, confidence and organisational expertise required to manage the resources within their watershed, so that productivity would not only increase but be sustained, and the vulnerable sections would benefit equally, if not more than others, from investments, not only during the implementation phase but in a sustained and on-going manner.

The learnings in PART-I, however, are drawn both from PIDOW as well as from other MYRADA Projects.

¹ PIDOW - Participative Integrated Development of Watersheds

Chapter 1

THE CRUCIAL INDICATORS OF SUCCESS

• Sustainability - The key

Of the three objectives namely, productivity, sustainability and equity, experience, both in PIDOW and in other MYRADA projects has shown that sustainability is the key objective, especially where the poor and marginal groups are involved. Any sharp increase in productivity in the initial stage (due to improved varieties of seeds and a larger input of fertilizers made available at subsidized rates under specific watershed projects) is not a significant achievement, unless it can be maintained over a longer period of time after the subsidies introduced by the project come to an end. Success on one field, usually of a bigger farmer or of one with comparatively more initiative and resources is no indication of a successful watershed programme.

The criteria for sustainability which have emerged over several years of experience with watershed management are broader and more diversified than sharp increases in productivity during the early years. They are for example:

In terms of visible indicators:

- marked and sustained improvement in productivity on fields especially of small and marginal farmers in upper and middle reaches of the micro-watershed.
- significant impact experienced by farmers and people regarding improvement in ground water recharge and the understanding that this improvement is linked to improved management of the watershed's surface.
- maintenance of structures (silt traps, gully plugs, stone and

The project aimed to enable the people to acquire skills, confidence and organisational experience to exercise control on the resources in the watershed.

Sustainability is the key objective, especially where the poor and marginal groups are involved.



earthen bunds) and vegetative barriers.

- marked improvement in resilience of crops to long dry spells.
- increased investment for protective irrigation especially through shallow ponds along drainage systems.
- continuous improvement in management and regeneration of all lands in the watershed including private fallows, and of all types of Government and public lands with the objectives of decreasing erosion, managing surface water effectively and increasing biomass for fuel, fodder, fibre, fertilisers, flowers and raw materials for cottage industries.

In terms of skills and institutions :

- adequate skills to construct and maintain all the structures required to control or trap soil and water without outside help.
- gradual extension of effective management by the peoples Watershed Association over all lands in the watershed including lands used for grazing whether they belong to Government or Panchayat, as well as over all private lands lying fallow and over private cultivated lands to achieve the common good.
- ability of farmers to finance (from their own credit group funds) if not further treatment of the watershed at least the repair of existing structures.
- ability of peoples watershed institutions to resolve conflict among different groups in the watershed, and to respond to the needs of those groups whose interests are affected by watershed treatment; for example those who are cultivating lands on upper reaches or steep slopes but which need to be protected, those whose grazing areas are being affected by regeneration measures, those like the landless who have to cope with new management measures which may obstruct

their hitherto free access to watershed resources.

- recognition by intervenors that the peoples watershed association is in control of all watershed activities and that no plans can be imposed or funds and services provided without its involvement at every stage of the process from planning through implementation.

• Equity - Difficult to Achieve, Easy to Pass by:

It is not only productivity that needs to be sustained, it is also the objective of equity. This has proved to be a more difficult objective to achieve especially in areas where resources are already scarce. The landless tend to be marginalised in watershed programmes since the major thrust of investments is on land. The NGO involved has a major role to ensure that this does not occur. During the implementation period, the landless do get work and income; but this must be sustained. In some watersheds this has been achieved by giving the landless a stake in the increased biomass and by increasing their capacity to earn through training and support to start small businesses or cottage industries; they also become members of the credit groups and have access to credit. This focus in turn requires a watershed programme that is broader than investment in land. PIDOW lacked this focus in the initial phases. The marginal farmers and those with lands of low productivity on the upper reaches also fall in the same category as the landless, as they are not able to provide all their needs from the output of their farms; hence these groups too must receive special attention in terms of investment and provision of skills for non farm activities if the objective of equity is to be achieved.

Over the years, emerging evidence has proved that if the objective of equity cannot be sustained, the pressures eroding the management of the watershed's resources and therefore of sustained productivity tend to increase, thus diminishing returns in the long run. It was also evident, even in the early years, that the

people are unable to pursue all three objectives of productivity, sustainability and equity at the same time; efforts to do so resulted in pressures with which they were not yet ready to cope. This is why in PIDOW Gulbarga micro-watersheds were selected where the landless were less than 10% of the population in the watershed. It was assumed that the regeneration of natural resources in the watershed would be adequate to provide this small number of landless with adequate work and biomass to meet their basic needs. Further, the landed families were willing to include them in their credit groups. This in turn allowed the people to focus on achieving the objectives of sustainable growth and all-round regeneration without excessive pressures undermining efforts to achieve these objectives.

Experience in several micro-watersheds indicates that while the objective of equity was difficult to achieve, it was even more difficult to sustain. The vulnerable groups identified in the watersheds are: (i) the landless and marginal farmers who have an economic base that cannot meet their livelihood needs, (ii) women against whom gender relations are often biased and who traditionally have to perform major roles which can and should be shared leaving them more time for nurturing responsibilities and self growth, and (iii) the tribals who tend to be marginalised by the existing economic and political system. To "liberate" these groups requires time and a multi-pronged strategy with significant interventions:

- to equip these vulnerable sectors with the skills required such as literacy, numeracy and those skills necessary to manage their institutions.
- to improve their ability to manage resources, businesses and cottage industries,
- to support them to acquire the confidence to change public policies and influence political decisions in their favour.
- to increase their access to credit, raw materials and markets.
- to enable women to have access to and control of resources and to change attitudes which inhibit their growth and obstruct their rightful place in society.

These three vulnerable groups (and others) require not only special attention from the intervening NGO but also separate strategies for their growth and involvement in watershed activities.

If the objective of equity is not sustained, pressures eroding the management of the watershed's resources and therefore of sustained productivity tend to increase, thus diminishing returns in the long run.

The objective of equity is difficult to achieve, and is even more difficult to sustain.



While all these vulnerable groups need to be given an effective role in watershed management, "how" and "when" in the process this can be achieved with each group are decisions that require insight, empathy and strategic interventions in order to be successful.

The criteria to assess whether the process initiated in the micro-watershed is achieving the objective of equity in a sustainable way, can be identified by each intervenor, but MYRADA's experience indicates that at least the following concerns must be addressed:-

- Do these vulnerable groups have access to credit for their consumption needs as well as for small income generating initiatives? The credit groups in all MYRADA projects have provided this resource base; but in several instances, intervention was necessary to ensure that members of these groups, especially the landless, were included. A regular analysis of the lending pattern is also required to ensure that the landless receive a fair share of loans without undue restrictions or patronage. The NGO also has to intervene to form and support women's groups which manage credit as well as to tackle problems which primarily affect them.
- Are the landless and marginal farmers given access to the increased bio-mass in the watershed? For example are they given priority to harvest and sell or use grasses which have regenerated on private fallow or common lands, even if they have to pay for this right in cash or kind?
- In projects where the treatment activities are supported by grants, do the larger farmers get a major portion of investments? Is this the impression given, even if there is evidence to the contrary? If so, the intervention will acquire an image of a strong bias towards the rich, which will increase the feeling of alienation among the poor.
- Are treatment activities organised, during periods when local people are free, and is priority given to

employ the vulnerable sections living in the watershed, or are they implemented at times convenient to the intervenors (Government and NGOs) and through contractors who bring in labour from outside?

- Is adequate priority given to the provision and upgrading of skills and other support services required for the landless and marginal farmers to diversify and extend their productive base to include small business and industries, besides animal husbandry.
- The strategy to cope with the marginalisation of those tribals who have an adequate production base has to emerge in each watershed. In PIDOW Gulbarga they opted to join other tribal groups rather than non-tribal groups in their own micro-watershed when Apex societies covering sub-watersheds were formed. Intervenor should not insist that tribal groups join the others initially; they first need to acquire the necessary confidence and often prefer to build up wider support through associating with other tribal groups before joining the non-tribals. Care should therefore be taken to ensure that the pressure to build watershed associations does not result in institutions where the tribals will not be able to participate effectively; such institutions would not strengthen equitable relationships.
- The need for gender relations to be more equitable which requires a sharp tilt towards women especially among certain sections of society is keenly felt by many intervening NGOs; but a strategy needs to be worked out which is appropriate to each watershed. Is this happening? In some cases counselling services were required in homes when men reacted negatively to their wives' participation in meetings. Are intervenors equipped to provide this service? Apart from this, the formation of credit groups of women helps to given them access to and control of

resources as well as certain time and space of their own. Are these groups formed and functioning effectively? Do these groups have any role in the management of the watershed's resources? How are wage rates assessed for men and women? These are some issues that intervenors need to address.

- Are these vulnerable groups gaining importance in watershed institutions like credit groups and Watershed Development Associations? Are they emerging as office bearers of these new institutions? Have any of their leaders been supported by the watershed institutions as candidates for elections to local bodies?

These are a few indicators that MYRADA has selected to assess the level of empowerment of socially responsible groups.

While all these vulnerable groups need to be given an effective role in watershed management, "how" and "when" this can be achieved are decisions that require insight, empathy and strategic interventions in order to be successful.



Chapter 2

PEOPLES' PRIORITIES

To which objective do the people give priority? Productivity, sustainability or equity?

MYRADA's experience indicates that people give priority to treatment activities which ensure increased productivity immediately and regularly; which reduce the risk of crop failure significantly and where protective measures for regeneration of biomass are possible and effective. The objective of sustainability is clearly implied in their choice of priorities though productivity may be more visible. The priority given to these two objectives is even more evident when they agree to consider investments as loans instead of grants. Hence we find that even after agreeing to treat the entire watershed, if they are given the freedom to decide in which areas to start, they will work on silt traps which ensure an optimum mix of soil and water as a productive base of higher potential and which also has a high degree of reliability even in long dry spells. In some areas farmers have even resisted erosion control measures on upper reaches since they preferred to have soil coming down and collecting at the silt trap since this was the only area with potential for an assured crop of higher productivity. Alongside these silt traps where the water potential is good, several farmers have dug out shallow wells for protective and supplementary irrigation.

The second priority of farmers especially in the PIDOW Gulbarga area is to integrate activities primarily directed towards soil conservation with the

objective of protection. This is why farmers opt for high boulder walls rather than rounded bunds, which, apart from encroaching in the neighbours' fields and being potential sources of conflict, offer no protection. Even in areas where grazing is controlled during the single cropping season which is common to all, the demand for protection has emerged.

People also give priority to and need no motivation to construct bunds along ownership boundaries, but they hesitate to construct bunds in between, even where the extent of erosion is high and visible. The two common reasons they offer for their reluctance are:

- The area available for cultivation is reduced; cultivation of crops like castor on earthen bunds partly answers this objection, and
- Ploughing operations are more cumbersome. There are other reasons as well, but in general motivation has succeeded in convincing them to take corrective measures which may not be according to the prescribed manual but are maintained since they are of their choice both with regards to size, shape, composition and even layout.

People also work out a strategy to extend management and control over the watershed which in turn influences their priorities. The models depicting the treatment plan that emerge during the participatory planning exercises indicate the need to treat the entire area of the watershed. But initially the strategy adopted to proceed with the treatment areas was regulated by technical requirements to start with protection on the upper reaches, or by financial flows that budgeted amounts for each activity for the year, or by political pressures to distribute the "goodies" to all or even by "ideological" challenges which focused attention on the management of "common lands". As a result the process of implementation was not adequately controlled by the people concerned; the pressures

to perform and prioritise were largely influenced by outsiders. There are clear indications in such areas that people are not committed to sustain some of the structures or other treatment activities. Conflicts have also risen since both the priorities in implementation the pressures to implement the plan were largely imposed from outside. These conflicts which surfaced later had a negative impact on sustainability in PIDOW.

In other micro watersheds in MYRADA, where the people were not under the various pressures mentioned earlier, they evolved an implementation strategy which they considered more manageable though it may not have conformed precisely with what is prescribed by outsiders. When it came to establishing priorities the focus on the management of common lands, which theorists had proposed as a priority did not appeal to people even though they are prone to erosion. They preferred to invest first on lands where the ownership titles were clear. Their choice fell on private lands lying fallow and on degraded temple lands; both categories were protected and regenerated providing fodder, fuel and raw materials. It was only after a few years that they had confidence to extend control over "common lands" used as grazing areas; these were protected in parts only. But their selection of particular grazing areas for protection was influenced by the fact that the village had the traditional grazing rights over the area and outsiders were not allowed to use it; as a result they were confident of exercising effective control of the protected parts. Those areas over which outsiders exercised traditional rights were left to the last. In general it is observed that while people are interested to increase the production of bio-mass especially fuel and fodder, they are not willing to do so at the risk of potential conflict, at least not in the first few years.

This strategy of progressive control beginning with areas, where the titles were clear, ensured that their initial efforts to manage lands were successful; it also avoided conflict in the initial stages when the value (and quantum) of return was not evident and therefore not a major motivating factor to get people to work together. It was after success was visible on private fallow lands, that people came forward to give up their free access to common lands used as grazing areas in order that parts could be protected and allowed to regenerate. MYRADA took the initiative to introduce leguminous grasses such as *stylosanthes scabra* in these protected areas to supplement the traditional

People give priority to treatment activities which ensure:

- increased productivity immediately and regularly
- that the risk of crop failure is reduced significantly
- that protective measures for regeneration of biomass are possible and effective.



grasses that had been continuously grazed leaving little chance for the more nutritious varieties to regenerate.

The peoples response to Horticulture was another instance of differing priorities. Horticulture has been a major component of the Government sponsored Watershed Programme. Initially the objectives were to

- Provide subsidiary income, and
- Encourage a shift from agriculture to horti-culture.

In terms of a strategy, these two objectives were linked together since the plan prescribed plantations on slopes prone to erosion. These lands however, were mainly located on the upper reaches, they were of low quality and were cultivated by the poorer farmers.

Observations of a few watersheds regarding the areas where horticultural trees were planted, however, indicated that all, if not most, were planted on lands in the lower reaches and not where they could have reduced the impact of rain water and curtailed the speed of its flow. The reasons for this pattern were:-

- Horticulturists encouraged planting on "good" lands where the chance of success was high; farmers also gave this objective priority.
- The poorer farmers required as much yield as possible to meet their immediate consumption needs and therefore were reluctant to plant trees which took up space and produced returns only after several years. On the other hand, farmers who had lands lower down and who were reasonably well off were willing to plant trees on their lands.
- In several areas, large parts of the land under cultivation on the upper reaches were encroachments on forest or revenue land; people feared that if trees were planted on these lands, the Forest Department would have a case to claim them.

As a result, though horticulture was given importance by the intervenors, it did not mesh with

the major objective of the watershed treatment strategy, namely the control of erosion; it did provide the basis for alternate incomes but in the long term and not for the poorer farmers who needed this alternate source more than the others.

Chapter 3

PEOPLES' INSTITUTIONS

THEIR ROLE IN SUPPORTING SUSTAINED GROWTH IN PRODUCTIVITY AND EQUITY

MYRADA's experience with the credit management groups provided adequate evidence that to ensure sustainability especially where the majority involved are on the margin or below the poverty line, there is no better way than to assist and support the emergence of people's institutions, primarily of the poor. These institutions evolve their own rules and patterns of management which are appropriate to the resource to be developed and maintained, and impose sanctions which they can enforce in their own area. These are not imposed from above and do not have to conform to official rules and regulations that are standardised and to a large extent centralised. Such institutions must also have access to and control of finance to meet urgent needs both of consumption and production so that the vulnerable groups do not continue to be dependent on the pawn brokers and larger farmers in the watersheds who have been traditional money lenders. These credit groups have provided on-going support towards making the objectives of increased productivity and equity, sustainable.

What is the pattern of peoples institutions required for and appropriate to the management of a micro-watershed?

This question was repeatedly asked in the initial years. MYRADA had no ready answers, but it had the experience of fostering the process of growth and institutionalisation of socially viable or self-help affinity groups; each group had mobilised and managed a common fund to meet the credit needs of its members. These groups also discussed and attempted to solve several local problems which obstructed their all-round growth; they gradually began to provide more than the credit needs of the people. The management of credit and efforts to solve

People's Institutions evolve their own rules and patterns of management which are appropriate to the resource to be developed and maintained, and impose sanctions which they can enforce in their own area.



problems helped the members to acquire skills and confidence required for managing other resources and for resolving conflicts. What is important to note in the context of sustainability, is that these credit groups continued to operate even after MYRADA withdrew support; they have provided a stable institutional base to meet the credit and other needs of the poor.

Could these institutions support the regeneration and management of a watershed? The processes that evolved in various micro-watersheds were studied to discover the answer.

When MYRADA entered the field of watersheds, many institutions, mainly Government related, proposed that each micro-watershed should have a single Watershed Association which would be responsible for all activities in the micro-watershed. MYRADA's initial experience however indicated that this pattern was not appropriate to all micro-watersheds.

Most micro-watersheds were composed of heterogeneous groups; there were big, small and marginal farmers and landless; there were tribal groups in some areas who lived and farmed largely on the upper reaches. Where one Watershed Association was formed with members from these different groups, not only did the powerful dominate to consolidate their own interests, but the Association required MYRADA's constant intervention to function. It became clear that such Associations could not form an institutional base for sustained management of the micro-watershed. The situation was further complicated by the following groups which cut across the above categories. These were:

- **Farmers with lands within the watershed but living outside:** It was more difficult to motivate them to join both the credit groups within the watershed and the Watershed Association; they usually had other sources of income; they did not identify as closely as others to the well-being

of the watershed and were not as concerned about the regeneration.

- **Farmers with lands outside the watershed but living within:** These tended to get left out of group activities; they did not benefit from investments on lands in the watershed and often reacted to being left out; this decreased their commitment to common objectives and institutions.
- **Landless living in the watershed who harvested the resources of the watershed to which they had access:** This group in PIDOW Gulbarga constituted less than 10 per cent of the watershed population and were included in the credit groups of small and marginal farmers; besides they were given access to bio-mass (fuel and fodder) which had increased due to proper management. In watersheds where they constituted a significant number (over 15%), it was found necessary for the watershed programme to include a component to support off-farm livelihoods, besides providing for their needs from the regenerated resources of the watershed. Landless who lived outside the watershed found their access to the watershed's resources increasingly curtailed as peoples' control extended over the area.
- **Tribals:** In PIDOW Gulbarga, they have a separate identity as a group and tend to live on and farm the upper reaches of the watershed. They decided not only to form separate credit groups but also to join credit groups of the tribals from other micro-watersheds to form Apex Societies rather than to join other credit groups of non-tribals in their micro-watersheds. The MYRADA staff expected that, when they consider it necessary and feel confident enough, they will join some of the other non-tribal credit groups in their micro-watersheds to manage and sustain treatment activities.
- **Families living both within and outside the watershed which traditionally used the**

common lands in the watershed to graze livestock; the titles to these areas were not clear; even where they were clear in the past, the use of these lands and creeping encroachments have blurred them over time. These families often find their access threatened by the decisions required to treat the watershed. For the Watershed Association to function it was found necessary to protect initially the interests of those living within the watershed by ensuring alternate sources of fodder and fuel in the regenerated areas or by fostering a change in the pattern of livestock management and grazing.

After several efforts to form only one Watershed Association in each micro-watershed had failed or resulted in associations which were not effective and required constant intervention, MYRADA found that in projects where the basis of an association at the micro-watershed level was provided by the smaller affinity groups, these Micro-Watershed Associations tended to function more effectively. The Lakkenahally case study that follows¹, brings out the roles these credit groups played in the formation and monitoring of the Watershed Association. An overview of the process through which several watershed institutions emerged in MYRADA's projects indicates the following:

- **The basis of all institutions managing the watershed's resources were the self-help affinity or credit groups;** they played a role in forming and monitoring the Watershed Association; they also provided the credit base if funds were required to maintain the structures installed. Initially they ensured that the poorer families had access to credit without having to fall back on larger farmers for their needs; this in turn ensured their independence which was the basis for their effective participation in decision making and sharing of resources - this is what the objective of equity seeks to achieve.
- **There were several such credit groups in one micro-watershed;** in projects where these groups had functioned effectively for a period (before any attempt was made to form a Watershed Association from the among the members of the credit groups) the Watershed Association was stable and functioned effectively.
- **In many larger micro-watersheds these credit groups came**

¹ Described in Part IV

MYRADA found that in projects where the basis of an association at the micro-watershed level was provided by the smaller affinity groups, Micro-Watershed Associations tended to function more effectively.



together to form several Watershed Associations each covering a part of one micro-watershed; they did not form a single association covering the entire micro-watershed as expected initially. There are indications however, that they are willing to send representatives to meetings with intervenors where concerns regarding the entire micro-watershed are discussed.

- In some cases, families with lands in high potential areas like ravines where silt could be harvested came together to form a Watershed Association to treat these areas in the first phase; the membership however gradually expanded to include others.
- The tribal groups in PIDOW preferred to associate with tribal groups in other micro-watersheds rather than with the non-tribal credit groups in their own, since they did not feel confident enough to do so; there may be other marginal groups that respond in similar fashion.

The objection repeatedly raised to the credit groups being formed prior to the formation of Watershed Associations was that, as the credit groups consist only of the poorer farmers and landless. Several families from the vulnerable groups, are not even members of any credit groups. How can they play an effective role in forming the Watershed Association? Also if several farmers owning lands in the watershed but living outside and even few others living in the watershed are left out, how can the watershed association be formed?

A study of Watershed Associations, however, which emerged after credit groups had stabilised, indicates that the membership of WDAs was not restricted to members of the credit groups; it was extended to all interested farmers. The Lakkenahally Watershed Association for instance, not only included members who did not belong to credit groups, but also borrowed money directly from credit groups to enable all its members to benefit, including those who could not borrow directly from credit

groups since they were not members. Though the credit groups formed the basis of the Watershed Association, it was observed that the membership of the Watershed Association was not restricted to members of the credit groups; several others are also admitted since their lands were involved. It was the credit groups however that provided the stabilising base of the Watershed Association, they also protected the interests of the weaker members.

The intervening agencies therefore cannot insist that there should be one Watershed Association or that all the groups should come together in the short term in order to meet the schedules and needs of the intervenors. The process through which a Watershed Association emerges will differ in each watershed. The people, especially the poorer groups, need time and space to build up their skills and confidence to join others. Some groups with initiative who have lands in areas where the potential for immediate returns is high, may come together initially to develop their lands before others take the decision to join the Watershed Association; there may be several Watershed Associations even in one micro-watershed. The responses of the people to come together and with which groups to associate will depend on whether they perceive that their interests will be served by forming particular alliances. The intervening NGO needs to ensure that the various groups have the freedom and confidence to decide which groups to associate with. Where the groups of poorer families are given no option but to join a single Watershed Association formed under pressure exerted by the intervenors, or because they depend on the larger farmers and money lenders and have to abide by their decisions in all matters, the Watershed Associations have failed to function effectively and were unable to achieve the objective of regenerating and managing the Watershed's resources and of ensuring the effective and sustained participation of all the families in planning the implementing treatment activities and in sharing the benefits equitably.

MYRADA's initial experiences therefore indicate that if small homogeneous groups are fostered in a micro-watershed, each operating like credit or self-help groups, they will in turn decide how to associate in order to manage the watershed. It is possible therefore to have several Watershed Associations in one micro-watershed, formed with members of the credit groups as well as with others who are not. The only areas where a single Association has survived is where the farmers involved are a very small number (10-15) and form a homogeneous group.

NOTE: Part VIII which has been added in the second edition provides further insights into the processes involved in the evolution of appropriate watershed institutions. Experiences recorded since the first edition have served to confirm several of the trends that had emerged in the earlier years.

The process through which a Watershed Association emerges differs in each area.

The intervening NGO needs to ensure that the people, especially the poor, have time, space, freedom and confidence to evolve their groups.



Chapter 4

WHY THE SUDDEN SHIFT TOWARDS PEOPLES' PARTICIPATION?

One of the major reasons, presented by several official sources for the change in policy towards fostering people's involvement in watershed management, is the need to shift to low cost but effective structures or technologies because the resource required to achieve the targets of all the projects under various Government sponsored soil and conservation projects are not and will not be available¹: "low cost technologies" the argument runs, will both reduce the large amount of funds required, as well as transfer part of the costs to the people who can install these structures themselves.

The lack of resources does not appear to be the major reason for the failure of conservation programmes in the past. At least in areas where these programmes were implemented, there was no shortage of resources. What was lacking was the will and the institutions necessary to sustain them. Take for example, the Soil Conservation programme in the catchment of river valleys. From 1963 to 1990, an amount of Rs.421.53 crores was spent on soil conservation in River Valley Projects. The major

¹ Estimates of funds required to achieve objectives of Government sponsored programmes range from Rs.1 Lakh crores to Rs.1,60,000 crores.

- River Valley Projects (RVP)	Rs. 25,000 crores
- Drought Prone Area Programme Desert Development Programme (DPAP & DDP)	Rs. 87,000 crores
- Flood Prone Rivers (FPR)	Rs. 6,100 crores
- National Watershed Development Programme (NWDP)	Rs. 40,000 crores

and only objective was to prevent reservoirs from silting up. Hence, the entire land development work in the catchment areas was done free of cost by the Government. When the conservation structures installed were being repeatedly levelled or 'destroyed' by the farmers since they did not fit into their management practices, the Government in several states came down heavily by passing laws and imposing sanctions on such 'wilful' destruction of conservation structures. Laws and sanctions did not improve the farmers' response. Antagonism built up between the Government Departments and farmers; the entire effort was seen as an imposition against which the farmers rebelled. They did not perceive any benefit from these structures; on the contrary the area available for crops decreased due to large bunds; water logging and new gulleys emerged due to lack of adequate follow-up; contour bunds came in the way of ownership rights and ploughing practices and needs; conflicts with neighbours increased and there was no inbuilt motivation or system to resolve them.

Recent studies of strategies in watershed management indicate that basic principles, which should have been obvious throughout, have become "new discoveries". To begin, the benefit of the programmes must accrue to the farmer on whose fields investment in structures has been made. If he received no benefit, and if he also perceives that in the short term the area under crops decreases, without compensating increases in productivity, as promised, he will not maintain conservation structures; he has no stake in them. If we add to this scenario the perception of farmers in the catchment that the immediate benefits of work on his lands accrue to Government or farmers in the command area or lower down, to expect his participation in constructing and maintaining these structures, is to indulge in fantasy.

Further, it is not sufficient for benefits to accrue to the farmer; he must perceive that these benefits will accrue in the short term and that the risk involved

is reduced considerably. MYRADA's experience has shown that even after all the farmers are involved in participatory planning exercises to establish the treatment plan for the entire micro-watershed, if left to themselves, they will select activities and areas which have high potential for quick and high returns at limited risk. They are even willing to consider the entire investment on these areas for soil conservation activities as a loan. This has been MYRADA's experience in arid, undulating areas. Farmers in some watersheds in PIDOW Gulbarga have even opposed measures proposed in the upper reaches for soil conservation because they wanted the soil to come down through the nallas or gulleys. Their aim was to harvest this soil in strategic places and to ensure that there were patches where soil and water combine as a potential productive base with limited risk. In all cases the process through which these decisions were made was difficult; but the building of institutions and transfer of power always is.

The other reason for involving people now presented by official sources is that the Government with the existing machinery at its disposal, will not be able to achieve the required targets within the foreseeable future; hence the only solution is to get people involved. Briefly, case studies of several watershed programmes indicate that the existing government delivery mechanism is not just inadequate, it is inappropriate to achieve the effective participation of people to build their institutions and to ensure sustained development and an equitable sharing of benefits.

The intervening teams in watershed programmes both of the Government and often of the NGO are staffed with "technical" people (engineers, agriculturists, foresters, horticulturists). Yet the major hurdles to peoples' involvement in watershed programmes are not technical; they are institutional and require skills in community mobilisation, conflict resolution and institution building. All these are the building blocks of sustained improvement and effective management of the watershed's resources. While technical intervention has generally been achieved by what is popularly known as the "touch and vanish approach" and at timings suited to the intervenors, community participation and institution building requires regular visits at timings convenient to the people and a close liaison with them. While technical expertise restricts the scope of involvement to what it has to offer, the needs of

Case studies of several watershed programmes indicate that the existing government delivery mechanism is inadequate, and inappropriate to achieve the effective participation of people to build institutions and to ensure sustained development and an equitable sharing of benefits.



people may differ, and if this need is not met with, the possibility of motivating people to work together is reduced. Further, technical expertise arrives with a prepared package of practices and with fixed technical designs which are often inappropriate to a field situation where in one micro-watershed there are 5 types of soils especially on the southern peninsula, and where fixed technical designs of bunds may spill over into neighbours fields and cause conflict. The superior attitudes of some intervenors and the pressure to achieve targets make it difficult for intervenors to listen to and empathise with people without which effective and sustained participation of people cannot be achieved.

Interestingly, some of the above hurdles to participation are not restricted to technical experts; several community organisers also suffer from them. For example, if they intervene and try to impose a pattern of management which may have been appropriate elsewhere, but is not so in this case, the objectives of mobilising peoples' participation and of fostering the growth of their institutions will be difficult to achieve. Fixed ideologies and systems and the need to spend money or achieve targets within a stipulated period are not restricted to Government programmes, but are features of administrative systems, even of some private donors and of operating NGO's. These pressures can reduce the effectiveness of the intervention by undermining the basis not only of effective participation in planning and implementation but also of sustained participation through peoples institutions to ensure that the impact triggered off by interventions continues to grow and become increasingly self-driven. What is required by intervenors is an openness of mind, the ability to listen and share time and ideas and the introduction of methodologies which involve people, and support them to establish appropriate management systems on their own which demand respect and acceptance from the official systems even though they may be different from the institutions that the Government considers as official.

Government intervenors may not be "comfortable" with such peoples' institutions, but they are the only chance left to achieve the goals of the watershed programme.

No further evidence is required to state that intervenors whether Government or NGO can no longer be the major "decision makers". If they are serious to achieve their objective of sustainable micro-watershed management, they need to provide "support"; but this involves a change in their attitudes, their skills and the strategies adopted by them during the entry, planning and implementation phases.

In the final analysis, the objective of sustainability can be achieved only by the people provided they are willing and strategically supported to develop and manage their institutions and resources. Have the intervenors any role to play? They have, because the will and confidence of the people that they can work together has been badly weakened; because privileged families continue to assert traditional rights without, however discharging balancing responsibilities to society which they were earlier called upon to perform; because the institutions of conflict-resolution have by and large disintegrated; because the objective of equity does not flow naturally from the existing socio-political and cultural milieu. Unless these hurdles are removed, the ability of the people to sustain and manage their resources will be undermined. This is where NGOs have a role to play.

PART - II



THE ENTRY PHASE

The interventions described in this Chapter are drawn mainly from MYRADA PIDOW Gulbarga, where both the Government (DLDB¹) and an NGO (MYRADA) are operational partners. As this pattern of project intervention is spreading both within MYRADA and outside where other NGOs and Government departments are planning similar partnerships, a few insights gleaned from the Gulbarga experience during the entry, planning and implementation phases could be usefully shared. Though primarily targeted to projects where Government and NGOs are co-intervenor and operational partners, several elements of the intervention strategy outlined in the following three chapters could also be adapted to projects where the NGO is the sole intervenor.

These chapters do not analyse the pattern of inter-action between the intervening partners, and it makes no attempt to compare the effectiveness and efficiency of two patterns, namely, when both Government and NGOs are involved and where the NGO is the sole intervenor. It also does not analyse the patterns of management within each intervening organisation and the pressures that built up over the years which may have had an impact on organisational responses to peoples' initiatives. These are important areas that need a separate study.

¹ DLDB - Dry Land Development Board

Chapter 1

GOVERNMENT AND NGOs - THE CO-INTERVENORS

MYRADA's experience in participatory management of micro-watersheds began with PIDOW Gulbarga but it extended rapidly to projects in Kamasamudram, Huthur and Kadiri where the topography was characterised by well defined micro-watersheds. There are, however, differences between PIDOW and these projects.

- In PIDOW, the DLDB is an operational partner; it is involved both in planning and implementing the treatment. In other projects, MYRADA is the only intervenor.
- The pressures to achieve annual targets which increased due to administrative delays was a major factor in PIDOW in the early years and was significant throughout.
- PIDOW adopted watershed management as an entry point and focused on it; as a result, the project has not invested resources in fostering livelihoods which are off-land, some of which would also benefit the landless; the entire focus has been on land and water management and on the regeneration of bio-mass. The other projects started by mobilising the poor over a large area in several villages primarily to form self-help groups to manage their credit needs for consumption as well as for income generation. These projects responded to the need to improve incomes not only through higher agricultural productivity (improved inputs and marketing, crop management and minor

irrigation) but also by animal husbandry, small businesses and industries. Education, health, housing and sanitation were other important and supporting components. The focus on off-farm livelihoods was more pronounced in these projects; as a result, the marginal farmers and the landless had opportunities to improve their incomes and to become integrated in the credit groups which formed the basis for the peoples' involvement in the process of their growth in a sustained and organised way. *It was only after a few years that these projects began focusing on the management of micro-catchments in an integrated way.*

- With the DLDB playing a major role in PIDOW Gulbarga, the presence of the Government was highly visible; as a result people tended to consider this intervention like any other in the past, where they were accustomed to receiving all similar inputs on land development as gifts from the Government. Participation was also often considered a hurdle to "technical planning" and "efficient implementation", by Government. Further, when peoples contribution in cash or kind was required, Government played a role more in facilitating their inclusion in the beneficiary list rather than in increasing their stake in the programme which is a necessary factor to motivate them to increase their responsibility and control over the process and to sustain it. These attitudes and perceptions and their consequences in terms of sustainability had to be challenged and re-oriented before people were able to participate as effective stake holders in the planning and implementation of treatment activities.
- The focus on micro watersheds in PIDOW, by limiting the investment to lands within a geographical area, left several groups out of its ambit; for example the landless and those living in the micro-catchment but with lands outside and vice-versa. These groups need to be

integrated at an early stage either through membership in the credit institutions and by the assurance that their access to resources would not be curtailed by the proposed micro-watershed management plan; on the contrary it would support their legitimate access to the increase in resources that is expected, but in a systematic and organised manner that ensures sustainability and equity.

As a result of these features peculiar to PIDOW Gulbarga, the need to identify the several interventions of MYRADA staff during the entry phase was experienced in PIDOW more than in the other MYRADA projects. These interventions did not follow a preconceived pattern; they emerged as a result of the staff being in close touch and reacting continuously with the people; once initiated, the staff continued to keep their fingers on the "pulse" of the process and responded by appropriate interventions whenever its progress was delayed or obstructed. Even in the other projects which had functioning credit institutions in the watersheds before the process of micro-watershed management was initiated, it was necessary for people both to acquire an integrated vision of the micro-watershed and to participate effectively in the planning of the treatment. This was a process that required several appropriate and timely interventions from the NGO, and new initiatives from the people during the "entry phase" prior to planning. Several of the interventions that are described below therefore are also relevant to these projects.

Though interventions described in the next chapter are based mainly on the experience of the MYRADA team in Gulbarga in the context of PIDOW, the experiences from several MYRADA projects like Kamasamudram and Kadiri are also drawn from. No claim is made that these interventions are the only ones possible or that the sequence cannot be changed or that others are not more effective.

The interventions did not follow a preconceived pattern; they emerged as a result of the staff being in close touch with the people and reacting continuously. Once initiated, the staff continued to keep their fingers on the "pulse" of the process.



Chapter 2

NGO INTERVENTIONS DURING THE ENTRY PHASE

• Identify the sub-watershed¹, the micro-watersheds² and the villages or habitats in them.

In PIDOW, the sub watershed is identified by the DLDB; the priority given by the DLDB in the order of treating the micro-watersheds within the sub watershed is conditioned by the need to begin with micro-watersheds in the upper catchment. The criteria used by MYRADA to establish priority, however, included, not only their location in the upper catchment but also:

- the degree of response from people especially to collective action undertaken by them to identify and solve their problems.
- the number of landless; if, for example the number of landless was over 15 per cent, such micro-watersheds were given priority. The budget included resources to support their efforts to improve their off-farm livelihood base.
- the number of farmers who owned lands in the micro-watershed but lived outside it; if this number was over 25 per cent, the micro-watershed was not given priority. It was found that such families often have several sources of income and do not get fully involved in the regeneration and management of the watershed.

¹ Sub-watershed: One catchment comprising several contiguous micro-watersheds.

² Micro-watershed: Approximately 200 - 500 ha

Since they live outside, they tend to be more interested in extracting resources from the watershed rather than to develop them. These watersheds were taken up later, and not entirely excluded; it took much longer in such cases to motivate common action and the emergence of peoples' watershed institutions.

- the degree of latent or potential conflict; if intervention during the entry phase indicated the presence or possibility of severe antagonism among groups, it was decided to resolve these conflicts before initiating watershed activities.

However, with the DLDB playing a major role since 1990-91 in the selection of new watersheds, the major criterion and often the only one, is the location of catchments on the upper reaches. This may present a problem of adjustment for NGOs who have lived and worked in the area before being drawn into a programme which focuses on micro catchments, as they usually support an integrated programme over a wider area which primarily responds to peoples' initiatives, and which takes into account several factors besides topography, when establishing priorities in terms of areas of operation and type of programmes.

In general however, for the treatment in a micro-watershed to be sustained over a long term, MYRADA's experience has shown that the criteria for selection of a watershed have to include factors that go beyond its topographical situation; the response of the people, the existing or potential levels of conflict, the number of landless who live in the watershed and of farmers who do not have a stake in its development are also important criteria in deciding when to initiate treatment in a watershed.

These observations do not suggest that micro-watersheds where these hurdles exist in a significant way should not be treated; they only indicate that if the micro-watershed is to be regenerated and managed in a sustainable way, it is necessary that the intervenors do not insist on

establishing priority in the order of treatment on the basis of topography only.

- While the sub-watersheds are being identified, the staff of the NGO deputed to the sub-watershed need to shift their working base to the sub-watershed in order to establish a close rapport with people; the field workers usually prefer to live in the micro-watershed.

• Collect information

Once a sub-watershed is identified the following information is collected by the NGO from various Government sources:

- Area map and topo sheet of the sub-watershed of which the micro-watersheds form a part.
- Cadastral map and Khatedar list of the villages in the sub-watershed.

In many cases the Khatedar list and revenue boundaries were found to be outdated; verification on the ground therefore is required; this is done later in the process by using participatory methods of information gathering which are open and can be scrutinised by all the villagers.

• Establish a relationship of mutual trust with the people

This relationship would already be established if the NGO has worked in the area prior to introducing the focus on integrated watershed management. It becomes an important part of the process when the NGO is relatively new. In PIDOW, senior staff of the NGO and staff who have already moved to live in the watershed visit the people regularly in places and at times convenient to the people. The staff must prove to the people that these regular visits are different from the "Touch and Vanish" experiences that many have been accustomed to. These visits also help to clear any doubts people may have about the intentions of the intervenors. The common suspicions experienced regarding the intentions of NGO intervenors is that they are canvassing for political or religious affiliations. Besides, peoples' experience of Government intervention in soil and water conservation programmes has seldom been encouraging. The number of visits cannot be specified, but, in the case of PIDOW where the programme tends to work according to a pre-established time schedule, it was at times difficult to allot even one month of intensive contact with the villages; this did

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have a negative impact on the process in some micro-watersheds, where, because of the rush, certain assumptions like the homogeneity of a tribal group could not be tested and later proved to be wrong. The collection of data described under No.2.3, continues concurrently.

It is usually too early in the process to discuss the subject of watershed development during these visits; people have other priorities, either more urgent or where they perceive that results are tangible and immediate.

• Conduct a Jatha

At this stage, a Jatha has proved to be a useful instrument to carry the process forward. During the Jatha, street plays are conducted on the need for literacy and training skills, on the importance of natural resources, on the negative impact of social customs or on any issue that the intervenors find appropriate. The Jatha is a traditional medium and serves to mobilise people, to arouse their curiosity, to make the NGO staff aware of the general problems in the area as well as of the various groups, and even of potential conflict situations; it also helps to build support with all sections and classes in the village; this last objective requires that the NGO staff make a special effort to identify and relate with all groups during the Jatha.

• Organise Village Meetings

These meetings go further than the visits described above. Once the regular visits and the Jatha have helped to identify several groups in the village meetings with each group, at times convenient to the people, are held. The main objective of these meetings is to begin to establish a pattern of group discussion that is organised and recorded. This is an important factor in the process towards training people in the skills required to institutionalise their initiatives and thus later to support sustainable management practices over a long period. These meetings also help the staff of the NGO to acquire further insights into village dynamics and to assess

whether the quality of inter-relationships are conducive to mutual cooperation or not; and if they are not, to identify the reasons why and whether they can be removed. At this stage, if it is evident that the antagonism among groups is high and that there is little chance of them working together, it may be strategic to postpone further planning for treatment in this micro-watershed till the basic hurdles to cooperation are removed and people can identify the benefits of cooperating even in the short term.

The meetings also provide an opportunity for the intervenors to have a general idea of:

- the number and categories of farmers living outside the watershed but cultivating lands or holding grazing rights within the watershed.
- the number of farmers living in but with all lands outside.
- the number of landless and other marginal and vulnerable groups like tribals in the watershed.
- the problems which are common to all or most groups and which of them the people consider a priority, and the reasons why the people have not solved them as yet; whether they would make an effort to solve any of them in the future, and if so, how they propose to go about it. At this stage of the process, adequate and accurate information on these matters is crucial.

Information regarding the number of farmers in various categories need not be collected through traditional survey methods but through informal meetings with groups and individuals. Accurate data on the categories of families is not required at this stage; indicative patterns are adequate.

If the number of landless is above 15 per cent, a decision is required by the intervenors at this stage, to include in the treatment plan, a significant component for supporting off-farm livelihoods of the landless as well as to support a strategy in which the biomass needs of the landless are met in the

short run. If the number of farmers owning lands within the watershed but living outside is above 25 per cent, the intervenors need to ensure that they participate in the process even if they do not cultivate their lands in the watershed. If their lands are left fallow, they are potential areas for regeneration to begin with; the output is shared between the owner and the Watershed Association. In PIDOW, this strategy helped in regenerating several acres of private fallow lands. Those farmers living in the watershed but with lands outside also need to be involved; once they are convinced of the benefits, they spread the message to their area which is often the adjoining micro-watershed; this makes intervention there easier. Besides they are often members of the credit groups that function in the micro-watershed where they live and therefore have a role, both in fostering stability in the Watershed Associations and in providing resources to maintain the treatment after the initial investment ceases.

By the end of the second month, or during the third month, one problem common to all or most groups and which the largest number are willing to tackle is identified and people asked to arrange a meeting where the strategy to solve it evolves during a PRA exercise¹.

• Organise a PRA Exercise with the following objectives:

- To work out a plan with all participants to solve the problem selected earlier by the people as a priority.
- To decide on a strategy to implement this plan; the strategy involves not only agreement by people to achieve what is feasible but more importantly how they will achieve this objective. For example, if the plan is to desilt a tank, the people must decide what can be achieved with the available resources and time; how they will organise their action - they usually divide work and also allot parts to affinity groups; this helps the intervenors to identify alliances based on blood, caste, community, leadership and other social factors which form the basis of the credit management or self-help groups based on affinity to be formed later in the process.

The focus of the exercise, however, is to work out a plan and

¹ PRA Participatory Rural Appraisal

If antagonism is evident in the group, it may be strategic to postpone further planning for treatment in this micro-watershed till the basic hurdles to cooperation are removed and people can identify the benefits of cooperating even in the short term.



strategy to tackle the common problem identified rather than to collect and verify information. It is important that the intervenors do not impose a strategy or an operational plan, for this would inhibit the people from organising themselves in groups where they feel comfortable and are assured of support.

• **Support the Common Action** to solve the problem which was identified. This common action will serve to further energise the people and give them a sense of confidence, that, if they come together they can achieve a common objective. This experience of community action to achieve a common objective has been forgotten in most villages. It is important that the NGO staff do not play the lead role in organising this common action but motivate the various groups to take the initiative. No doubt the NGO staff will have to play a supportive role, which in some cases, has been a major contributing factor to the success of the action. Since villagers normally undertake combined action by dividing up the work among groups which are formed on the basis of affinity, this common action will further help the staff to identify the various affinity groups in the watershed which could develop into the socially viable groups required to manage credit. It was possible, in many micro-watersheds, to organise this common action in the third month after the entry of the NGO.

• **Organise a review by people of their experience while implementing the common action plan and collect/check data and perceptions relevant to social groupings and potential conflict areas:**

This is done through several participatory exercises (PRA) in which all those who were involved in the common action are encouraged to take part as well as those who were not. The output of this exercise starts with the review of the common action but goes beyond to include information on:

- The number of families in categories: large, small marginal farmers, landless, tribals; those that live outside with lands in the watershed and those living inside with lands outside. The following data on these families is required:
their assets, mainly land holdings (use and quality) number of animals and major household assets
the social configuration, caste or community
the family size
their livelihood/income sources - both in cash and kind
- The number/area of community resources (wells, grazing lands) and who uses them.
- The seasonality of work, income and credit needs; useful data as background for timing and focusing investment.
- The history of the village and the history of interventions by outside agencies especially those targeted to conserve soil and water, and peoples assessment of these interventions.
- An assessment of peoples perceptions of intervenors (staff of Government, NGOs, Banks, etc.). It is helpful to identify whether people have negative or positive reactions to particular intervenors; a person who is perceived by people as a supporter and as one who takes his/her job seriously could play a lead role in the process of watershed management.
- The number of affinity groups in the micro-watershed, drawn from an analysis of the common action, the PRA exercises and discussions with several participants.

This information is elicited through several PRA exercises like modelling, mapping, time line, seasonality, wealth ranking, venn diagramming etc¹.

¹ MYRADA's PRA PALM Series

• Expose the Affinity Groups to Credit Management Groups which are working well

MYRADA's experience in all projects confirms that the small and marginal farmers and the landless give priority to their livelihood needs; they require small and quick loans to earn a daily income or to meet their consumption needs. The major sources in the area for such loans are the large farmers, the local shop keepers or middlemen. Due to their continuous dependency on these sources, the poorer farmers and landless do not have the confidence to express their opinions in public or to press for their rights. It is therefore necessary to provide another source for these urgent loans which does not weaken the position of the poor sectors in society but rather strengthens them. This is the reason why MYRADA supports the emergence of small affinity groups which are socially viable, namely the members hold together without the need for continuing outside intervention. These affinity groups form the basis for the Credit Management Groups (CMGs). As a first step in forming these credit groups, the members of an affinity group are exposed to other credit groups in the area or in other MYRADA projects which are working well. The process of formation of these groups as experienced in MYRADA has been described elsewhere¹. Another reason for supporting the emergence of these credit groups is the role they have played in several micro-watersheds. Their role in the formation of the Watershed Development Associations (WDAs) and in monitoring the management of these WDAs as well as in providing funds for treatment activities is emerging as a critical factor in achieving the institutional stability required for sustainable management of the micro-watershed.

• Support the Formation of Credit Management Groups

MYRADA's experience in several projects indicates that these credit management groups (CMGs) are the building blocks on which the Watershed Development Associations (WDAs) or the Implementation Committees (WICs) will rest. It has been observed that the larger farmers do not form these credit groups since they are not in need of urgent, small loans. They however, need to be encouraged to come together so that they can later send their representatives to the WDA/WIC. Classes in

¹ The MYRADA Experience - Alternate Management Systems for Savings and Credit of the Rural Poor. (Aloysius P. Fernandez)

It is important to organise a review by people of their experience while implementing the common action plan and collect/check data and perceptions relevant to social groupings and potential conflict areas.



numeracy and literacy as well as workshops for each group to help every member to participate effectively and to work out simple and appropriate rules and regulations to manage the group's affairs are conducted regularly by the NGO.

• At the end of eight months an initial audit needs to be made of the credit groups to assess their mobilisation of savings, their management of the common fund, and their general performance and progress in developing their patterns and rules of behaviour; briefly the audit should cover both financial and social indicators which are necessary to ensure sustainability.

It has often been asked whether any attempts should be made during the entry phase to introduce elements of watershed management. There is no single answer. General guidelines could be given based on experiences in various areas. Where the NGO is a recent intervenor, or has not been involved in watershed programmes, it is advisable not to introduce any watershed treatment activity during the entry phase. Yet opportunities to create awareness should be seized if they present themselves. For example if the PRA exercises during the entry phase are timed to follow the rains, peoples' attention could be drawn to the impact of erosion which is clear after a heavy shower.

In areas where the NGO is known and has implemented successful watershed programmes, the entry phase may not require all the interventions mentioned above, like the informal meetings, which could be curtailed; but in such cases more time and attention could be given to form and stabilise the credit groups. Experience has shown that if these credit groups acquire the skills necessary to run their meetings, resolve conflicts and decide on credit priorities, the Watershed Associations which emerge are more effective and take control of the process much quicker, enabling the NGO to withdraw and move to other areas.

The intervening NGO has to cope with pressures to "hurry" through the entry phase. To succumb to these pressures is to undermine the major objective of sustainable development and management of the watershed's resources.

An overview of all the watershed programmes that MYRADA is involved in, indicates that it takes several months of interaction (including community action as described earlier), for the people to take the initiative or to respond willingly to any initiative to bring all together. During the entry phase the small and marginal farmers, who perhaps benefit the most from watershed management activities, do not have the confidence to bring together all other groups or even all of their own group. The larger farmers are often willing to try, but they are not trusted since they have a history of putting their interests first; their actions are also often symbolic and geared to demonstrate their continuing influence in the area. They are aware that though people may attend their meetings, few will really co-operate, and even among these, several will respond only because they are dependent on them. There are no doubt a few exceptional cases where the larger farmers provide enlightened and committed leadership.

The lack of trust is aggravated by the history of watershed treatment works which many of the older farmers still recall. The conservation work done free of cost by the Government agencies in some areas during the sixties and seventies focused on contour and earthen bunds which were obstacles to field operations like ploughing, often created new gulleys and took a part of the fields away from cultivation; they also breached regularly due to heavy rains. Since the Government had paid for the works with the main purpose of controlling silting of the tanks and reservoirs lower down, the farmers were not allowed to break these structures. In fact in some States, laws to punish acts destructive of bunds were not only enacted but enforced by enthusiastic and well-intentioned officers. With this background, the new approach

of watershed treatment is bound to meet with scepticism in certain areas where the programme had been a failure previously.

The farmers were also aware that to implement some of the management activities like bunding and drainage, requires the collaboration of several farmers. They often do not have the confidence to approach those involved directly due to several reasons including neighbourly and/or family feuds over the years. This is where an outside agency or a third party which has no particular group or interest to support can start the process that brings people together.

The NGO staff have to build confidence gradually through regular visits at times and in places convenient to people, and by adopting an approach which is supportive, open and willing to listen to peoples' views. The success of the watershed management programme, particularly if measured in terms of achieving equity and sustainability, depends to a great extent on the approach of the NGO during the entry phase. While establishing this relationship of "confidence" the NGO should exercise care that it does not slip into one of dependency. While the image people have of the Government is that the Government "gives money", it is often discovered that the image they have of NGOs is that the "NGO will do it for us".

Experience has shown that if these credit groups acquire the skills necessary to run their meetings, resolve conflicts and decide on credit priorities, the Watershed Associations which emerge are more effective and take control of the process much quicker, enabling the NGO to withdraw and move to other areas.



PART - III



THE PLANNING PHASE

There are two pressures that tend to operate in many projects where NGOs and Government Departments are co-intervenors during the planning phase:

- the almost exclusive focus on physical targets due to the limited conceptual framework of solutions provided for degraded areas, usually described as "treatment";
- the pressure to show quick increases in productivity due to the intervention; as a result the focus is on providing hybrid or high yielding seeds and a subsidised package of fertilisers and pesticides rather than on the effective management and use of lands and other resources where the impact is visible in the long-term. This focus in turn results in inputs moving towards bigger farmers and better lands and further neglect of degraded lands.

Chapter 1

FROM PHYSICAL TREATMENT TO INSTITUTIONAL SUPPORT

The pressure to focus on physical targets and to show quick increases in productivity tends to undermine the basis required for sustainability and equity. The main concern of NGO intervenors during the planning phase is to lay the foundation for these two objectives, which by their nature, can be achieved only in a medium to long term (after 5 years). Attempts to achieve equity in the short term have resulted in conflicts, where the poor, who are powerless and have no assets to fall back on, suffer the most. Sustainability in terms of increased productivity requires the management of lands of a micro-watershed as an integrated unit and the use of resources in a manner that fosters their regeneration. This is in sharp contrast to the objective of increased productivity in the short term which is visible in the first year, since it depends to a large extent on physical inputs. If this increase is to be sustained, then several other inputs are required besides the physical ones. The objective of sustainability requires new attitudes, skills and appropriate institutions and linkages to support results over a long term. The intervening NGO needs to support the process that builds these skills and institutions which will enable the people to develop, manage and maintain the watershed's natural resources and to mobilise financial, physical and technical resources and services from sources including Government and Banks to meet their needs, even after the NGO withdraws and the extra resources provided during the project period are no longer available.

The realisation that further financial resources, if required after the project is over, will have to be mobilised as loans, requires that even during the project period, the people become accustomed to manage investments as loans and not entirely as

Sustainability requires new attitudes, skills and appropriate institutions and linkages to support results over a long term.



grants. In the case study of Lakkenahally¹, where the NGO is the only intervenor, it was the people who decided to convert part of the project grants given to the WDA for "treatment" activities into loans to be repaid to the WDA. In PIDOW, Gulbarga, only the agricultural inputs which were provided as grants were converted into loans by the credit groups but the investment on land development continues to remain as grants; this approach does not help to build up the attitudes and organisation required to manage and sustain the structures on which the initial investment is made. The availability of "easy money" also tempts people to opt for structures which are not appropriate and which they cannot maintain with their own skills and resources.

The major thrust of the NGO during the planning phase, therefore, is not to "treat" the sick micro-watershed but to support the people to develop, manage and maintain their watershed, in a way, that all, including the landless and near landless, benefit. This change in perspective demands several interventions by the NGO intervenor; they are described in chapter 2. It is useful to insist, even at the cost of repetition, that there is no claim made that these are the only interventions possible or recommended or that the order is unchangeable; it is. Besides these interventions which focus on interactions with people, there are several meetings among intervenors at higher levels which are not referred to here.

¹ In Part IV

Chapter 2

NGO INTERVENTIONS DURING THE PLANNING PHASE

• Stabilise Credit Management Groups (CMGs/SHGs)

An ongoing effort is required by the NGO to stabilise the SHGs. They need to develop a culture that will support their growth, not just as organisations set up to implement a project or to receive grants, but as institutions which develop and accept behaviour patterns and norms that are higher than those practised around in society. The indicators of the progress of the SHGs during this phase could be the following:

- regular meetings at least four times a month (one or two for business and others to discuss common issues or for literacy and numeracy classes).
- improvement in group management, especially in the organisation of meetings and maintenance of books and records (this requires specific training inputs from the NGO intervenor).
- regular financial operations like savings, loans and recoveries.
- effective sanctions as regards compliance with group norms concerning organisational behaviour like repayments and attendance at meetings, as well as with those concerning social behaviour (which groups require for stability), like control over drinking, smoking and large families.
- the ability to establish priorities among requests for loans and to resolve conflict situations.
- stabilisation of membership - some may leave or be asked to, and others may be allowed to join.

The NGO needs to ensure that the vulnerable sections (tribals, landless, women) are included in the SHGs, or, if they form a

NGOs need to develop a culture which will stabilise the growth of CMGs, not just as organisations, but as institutions which develop and accept higher norms of behaviour pattern.



significant number, *start groups of their own*. Experience so far indicates that these groups tend to form the basis of the WDA or WIC¹, which emerge later, and to play an important role in monitoring the activities of the members of the WDA/WIC; the intervening NGO therefore needs to ensure that poorer families and marginalised groups participate effectively in the management of these groups.

• Introduce the topic of Micro-watershed Management

The NGO introduces the topic of micro-watershed management at group meetings. The message at this stage is *not too complex* but is limited to the following:

- the concept of *one drainage system*; this could be done through a PRA transect exercise, if possible, after a heavy shower of rain when the drainage systems are clearly defined and the impact of erosion is striking.
- the message that the people *can and must take charge* of any work in their watershed; that they *have the skills*, as is evident from the work that they or others in the area have done in the past; that their *ideas and suggestions* on the design and location of structures, drainage systems and regeneration of resources are important and *take priority*, and that
- they *require institutions* to support the planning and implementation of micro-watershed programme and to sustain at least some of the activities. These institutions *must include representatives from all the groups* who have an interest in the micro-watershed, including the larger farmers, the landless and even those who have lands in the watershed but live outside it.

• Prepare the Sub-Watershed Map

The *drainage map* is required, which is drawn after

¹ Watershed Development Association or Watershed Implementation Committee

enlarging the topo map; this can be done manually. This map, however, will identify only the major drainage systems; the minor systems will be filled in during the PRA exercise. The *survey map* showing the boundaries of private lands and Government lands of various Departments is super-imposed on the enlarged drainage map. Whether the survey map reflects the reality on the ground will be verified during the PRA exercises held later in the process.

• Give adequate attention to field level staff

Wherever the Government is also an intervenor, a *two-day workshop* needs to be arranged at this stage by the NGO with Government staff, especially the *field level staff*, participating. It has been observed in PIDOW Gulbarga that time is devoted to interaction among senior staff of Government and MYRADA, but hardly any time is given to organising workshops and discussion sessions with field level staff *early in the planning process*. This workshop brings together all the staff of the NGO involved in the sub-watershed (of which the micro-watershed is a part), the *field staff only* of the Government and representatives from all the credit groups, including the women's groups. The purpose of this workshop is to:

- give an opportunity to the field staff of the Government and the NGO to express their opinions and concerns *freely*.
- establish a *rapprochement* between Government field staff and the NGO.
- assess the problems Government field staff may face to participate in meetings called by the WDA/WIC at times and in places convenient to the people and to propose solutions.
- expose the Government staff to the working of the SHGs and help them to gain confidence in one another's skills. Government staff who attend SHG meetings are usually surprised that people can mobilise savings and manage a common fund effectively; the NGO points out

that if they can manage their finance they can also manage a watershed!

- place before the groups the *drainage map* and the *survey map* containing the details of land holdings in the watershed and compare them with the actual situation on the ground; this can be done by organising a PRA exercise along with the participants. The Khatedar list can also be verified. Since all groups may not be represented at this meeting, the drainage map and Khatedar list is *finalised* only when the WDA/WIC is formed. This exercise, however, gives the groups of small and marginal farmers, landless, tribals and women an opportunity to participate and gain confidence, which will be required when they participate in the WDA/WIC.
- explain the role that the people will play in planning and implementing the treatment of their watershed and the need to form a WDA/WIC with representatives from *all the groups* in the watershed, including the larger farmers and the landless. The major role of this association, which should be explained and discussed, is that it will be the institution with which the intervenors, including the Government will relate and which will organise and manage all further activities in the micro-watershed.
- fix the date for a PRA to prepare the "treatment map" of the watershed and ensure that the representatives from *all groups* will participate in this exercise.

• Prepare for the PRA Exercise

The initiative is taken by the NGO together with *all the groups* in the watershed. The steps required for preparation of the PRA exercise to prepare the treatment plan for the watershed, are given in separate papers brought out periodically by MYRADA².

• The PRA Exercise

The NGO needs to ensure that the PRA exercise focuses on a few *important and relevant areas*, especially on:

- the status and use of lands.
- the major and minor drainage systems.

² MYRADA PRA-PALM Series

The intervening NGO therefore needs to ensure that poorer families and marginalised groups participate effectively in the management of these self help groups.



- the number of affinity groups (based on caste, community, economic status, blood relationship, similar occupation) and
- traditional practices in the management of resources and construction of treatment structures.

The Status and Use of Lands

- **Private Lands:** The following data is collected:- the types of soils in each cultivated field; which fields are single and which double cropped; which fields are lying fallow and why; whether productivity has deteriorated, and if so, in which areas and to what extent.
- **Common Grazing Lands:** Do they contribute to erosion, especially if located on high or steeper slopes? Are there any traditional or customary rights for grazing, collecting fuel or other resources? Who actually use these lands, when and for what periods? What are the other common resources in the village; who uses them and what is their status?
- **Government Lands:** The following categories need to be identified and marked:- Degraded Forest lands, Revenue, Panchayat and PWD lands and any encroachments on these lands. Who uses them? Are there traditional user rights? What impact do they have on erosion in the lower reaches? What resources do they provide - fuel, fodder, quarrying etc., and who benefits from these resources?

Verify the Major Drainage Systems indicated in the maps collected earlier and incorporate the Minor Drainage Systems in the sub-watershed map. In several areas there will be evidence of efforts made to harvest silt in these systems even if the land is not privately owned; there is potential for conflict in such situations.

The Number of Groups: The various affinity groups need to be identified. This is a difficult task and requires a high degree of sensitivity, experience in

group formation and close interaction on the part of the NGO staff during the PRA exercise to verify if social configurations that emerged earlier during the common action are really "affinity" groups. Most of the families will already be members of the credit groups. But it is necessary to focus during the PRA exercise on vulnerable groups like tribals, landless and women who may be left out, and to ensure that all of them participate in the planning exercise. As for the larger farmers, it is necessary to know how many cultivate or graze their animals in the watershed. Though they will not be members of the SHGs, it is important to involve the larger farmers in the planning exercise and to make them realise that they too will benefit from the overall management of the Micro-watershed.

Traditional Practices still existing and those that have died out: These practices relate to the whole range of land and crop management and not only to structures for the conservation of soil and water. They cover the traditional use of humus and biomass, management of common assets like tanks, drinking and irrigation water sources, fuel plots, cropping patterns and cycles. They also include post harvest activities like selection of seed, storage and marketing. The local trees and those which people have found useful and important in the past also need to be identified.

• Identify perceived threats and support people's responses:

In many micro-watersheds there are usually a few farmers who perceive, at this stage, that their interests will be threatened because of the role of SHGs or because they are grazing their animals on common lands over which they claim certain rights to which others have reluctantly agreed or just because they view the growing confidence of the poorer families as a threat. At this stage however, it is important to avoid open conflict; the people are aware of this danger which threatens to disrupt their initiatives. This is why at the end of the PRA exercise when the people need to select which lands

they intend to manage and regenerate in order to provide fuel, fodder and other resources they usually establish the following priorities:

- They prefer to start with private lands of small farmers which have been lying fallow due to migration and other reasons. The ownership titles to these lands are clear and the watershed association is usually confident of entering into a contract with the owner to share the benefits of regeneration. The groups in PIDOW took the lead in this area.
- Secondly, they opt for revenue lands over which the village has exercised control for grazing or collecting biomass. They protect selected parts of this area for regeneration, leaving the rest for open grazing. They also select non-agricultural temple lands for regeneration as in most cases they are free of other claims, or if there are such claims they can be set aside without open conflict. In PIDOW, Kadiri and Kamasamudram projects there are several examples of this "extension" of people's control over wastelands in their watershed.
- Common lands (Revenue or Kaval) over which several farmers, including those outside the watershed, have exercised grazing rights are usually not included in the plan for regeneration in the early stages as the potential for conflict is high.
- There are highly degraded ravines in some watersheds which farmers have attempted to encroach over the years. Some farmers will attempt to channel investment to construct larger silt traps along these ravines even though they do not have firm titles to the land, since these silt traps are a potential base for sustainable agriculture and quick returns. The decision whether to include these lands or not in the plan should be left to the groups. In many cases they agree to advance funds but as loans to be returned to the group. Kamasamudram is a good example of this development.

Some of the intervening NGOs, however, tend to give priority to the management and control of common lands. This priority of the NGO could be influenced by an ideology which often excludes a set of options from which the people can choose what is manageable and appropriate at a particular time. Other NGOs are reluctant to support investment on silt traps along ravines since the ownership titles are not clear and the larger farmers tend to consolidate their control over these areas. In

It is common for some farmers to perceive a threat to their interests. It is important to avoid open conflict with these groups in the early stages.



many cases, however, due to interventions of the NGO and the SHGs, the landless have acquired the benefit of cultivating on the reclaimed areas. In one watershed where the large farmers claimed traditional rights to cultivate in the ravines, the WDA agreed to invest, but as a loan, in silt traps and diversion drains along ravines in strategic areas, since these measures helped to protect fields lower down from flash floods, as well as to increase patches in the watershed where crops are assured.

Another potential conflict situation is created by the emergence of the SHGs which adversely affects the income of the local money-lenders; this group is often more powerful than the larger farmers since it includes a number of small businessmen and even those with regular jobs usually in the Government. MYRADA has several experiences where these interest groups have sabotaged the formation of the WDA, since some of their members have a role to play in these Apex Bodies where all groups using the resources of the watershed are included. This is why it is important for the NGO to ensure that the credit groups of the small and marginal farmers and the landless are working effectively before attempts are made to form the WDA. In all cases where the WDA was affected due to the reaction of money-lenders, it was the credit groups that took the initiative to overcome hurdles to the emergence of an effective WDA that protected the interests of all groups.

The danger that local farmers with political ambitions will attempt to capture power within the SHGs and watershed associations is always present. The regular change of group representatives which is a feature of all the credit groups makes it more difficult for one person to stay in power for too long. Some groups on the other hand have proposed to put up one of their members for elections to local bodies. Where the groups are functioning effectively they have been able to ensure that local politicians do not undermine their interests within their area of influence.

• Output of the PRA Exercise

In terms of concepts, the people should begin to think of the micro-watershed as one drainage system; to treat it therefore requires the cooperation of all³. Further, the causal linkage between degradation and falling productivity should be made visible, using instruments and techniques during the PRA with which people are familiar; they may not produce accurate data, but will help to encourage reflection and discussion.

In terms of instruments required to prepare the "treatment map", the PRA exercise should fill in the minor drainage systems and verify the boundaries of private and Government lands which are given on the survey maps, as well as the ownership in relation to the Khatedar list. The variety of soils in micro-watersheds even in an area of 200 ha, should also be noted to avoid imposing standardised remedial packages prescribed for particular regions.

In terms of instruments required to implement the "treatment plan", the PRA exercise should produce a basic treatment plan of the area which is understood by the people so that they can explain it to others; the treatment plan lists the types of activities required on private, common and Government lands. If a model could be made and placed within the watershed, it would help to keep interest alive. Models of what the watershed was 50 years ago, what it is today and what people would like it to be, are useful for motivation. A Watershed budget is another instrument which must be drawn up, discussed and accepted publicly. Peoples' contribution in cash or kind for each activity must be agreed upon.

In terms of organisation, the PRA should initiate discussion on the need to set up a WDA or a WIC consisting of representatives from all the credit groups as well as groups of farmers who are not in

³ A major obstacle encountered here is that various Government Departments hold rights over different parts of the watershed and tend to adopt policies and strategies which are exclusive.

the credit groups like the larger farmers and those living outside the watershed but with lands within. Care must be taken to involve the vulnerable groups like the tribals and women.

It is important that the PRA generates a degree of confidence in people as regards their ability to achieve the plan to regenerate and sustain the watershed. This is one reason why outside participants in the PRA should not give "directions" during the exercise or discredit in any way peoples' efforts to manage their resources.

In terms of follow-up, each group should arrange to meet within 2-3 days after the PRA exercise. The agenda for this meeting is suggested later in this chapter.

• Provide space and time to cope with the limitations of PRA

It must be noted that the PRA exercise is not equipped to deal with conflict situations; people do not bring up potential conflict situations since outsiders are present; besides there is usually a high degree of involvement and emotion during the exercise. The intervenors should therefore ensure that the plan which emerges from the PRA exercises is not taken as final. There are also other issues like the basis of payment, whether loans or grants should be given and the need for outside skills and labour, which require to be discussed in detail within the groups in order to provide adequate freedom for all to express their opinions. The people must be given time to discuss the treatment plan and budget and other matters listed below in their groups and return to the intervenors with their comments. Even after these changes, the plan will still be subject to modifications during implementation, but it will be an adequate instrument, on the basis of which, work can begin.

• Post PRA Meeting

Before concluding the PRA exercise, each credit group as well as other groups need to decide on a date to call a meeting of their respective groups. The agenda of the meeting should include, among others, the following items:

- to review the "treatment plan" and to assess whether it is acceptable to the individual farmers who may have been reluctant to express their views during the PRA since they could be controversial or cause conflict, or because outsiders were present - and to arrive at a consensus.

A potential conflict situation is created by the emergence of the credit groups which adversely affects the income of the local money-lenders.

Models of what the watershed was 50 years ago, what it is today and what people would like it to be, are useful for motivation.



- to arrive at a consensus on the budget drawn up at the end of the PRA exercise and on the contribution of each farmer, in cash and kind, towards each treatment activity on his fields.
- to finalise the Khatedar list and boundaries of private and public lands.
- to decide on the basis of payment for work done on private lands; whether on labour days or unit costs and to agree on the rates.
- to decide whether the funds allocated to each farmer for treatment on his own fields should be advanced as a loan or a grant by the WDA/WIC.
- to discuss the budget for work on common lands and the contribution by each family; work on common lands will usually commence later.
- to decide how project funds given as grants by the Intervenor are to be channelled - either through the credit groups to the WDA/WIC or directly to the WDA/WIC.
- to review whether the usual practice of employing contractors or piece workers should be replaced by local labour organised by the WDA/WIC; this is an important issue since the pressure to hire contractors or outside labour is great, especially when the work is supervised by local level Government employees.
- to assess the level of technical support required; from experience in Kadiri, Bangarpet and Huthur we find that people are quite capable of implementing terracing, bunding and establishing silt traps without any outside technical assistance; major drainage systems and weirs (which have low priority) may require technical help though the problem with drainage is more social than technical.
- to agree on the priority of the various treatment activities; it is in this area that technical experts may require to modify their

stand since they follow certain other procedures governing priorities; NGOs also have to revise their enthusiasm for treating common lands before private fallow lands if the people are reluctant to agree to this order.

- to appoint representatives from each group to the WDA/WIC.

If one meeting is not adequate, several may be called to complete these agenda items.

• Consolidation of the "treatment map and plan"

The treatment plan that emerged from the PRA exercise is superimposed on the drainage and survey maps which were verified on the field earlier. In PIDOW Gulbarga this is done by the Government (DLDB) together with MYRADA staff. This document must be placed before the people at the WDA/WIC meeting for modification if required and approval by all involved; meanwhile the people have time to review the treatment plan on their own during their meetings.

• The first meeting of the WDA/WIC

The meeting is called by the WDA/WIC on its letterhead which the NGO intervenor takes the responsibility to print. It is attended by the group representatives, Government and NGO staff from all levels. The NGO may have to play a role in organising the meeting and in helping the members to conduct it. The agenda for the meeting includes the following:

- selection of the President and Secretary (or representatives); the term of these office bearers in the SHGs is one year. This ensures not only a regular change of people in power but also provides opportunities for all members to acquire the skills of leadership. Elections are usually held a few months in advance so that the NGO can provide training to the office bearers of the following year; a similar pattern is suggested for the WDA/WIC.

- decisions on the records to be maintained, who will maintain them and where they will be kept, who will audit the accounts and at what intervals.
- all the relevant issues above which were previously discussed by the groups at their respective meetings need to be reviewed.
- establishment of a system to monitor the quality of work done and to solve the problems that may arise when several farmers are involved in any activity especially the construction of silt traps, bunds, gully checks and drainage.
- acceptance of the consolidated "treatment plan": the meeting ends with all parties involved accepting the treatment plan and signing it as proof of acceptance, but with the clear understanding that changes may be required during implementation. It has been found useful to exhibit the treatment plan in each watershed.
- agreement to a time frame to implement the treatment plan.

The meeting ends with a clear recognition that the WDA/WIC will be the responsible body to implement the treatment plan and that all outside intervenors will deal with the WDA/WIC in all matters.

This shift from the initiative taken by the NGO during the entry phase to the dominant role that the WDA/WIC should play during the implementation is crucial to sustainability. However, it is evident, that to reach this stage, the watershed groups require at least a year of intensive effort to build their confidence and to enable them to perceive the potential for success if they undertake such activities. While on the one hand, the NGO intervenor must make every effort to ensure that all obstacles to the growth of the WDA/WIC and to the transfer of power to it are removed, on the other hand, it needs to ensure that during the process of the growth of these institutions, adequate skills and appropriate attitudes and systems are given time and support to develop. This will ensure that people are able to protect their rights as well as fulfil their responsibilities without allowing outside influences, whether political or otherwise, to destabilise their institutions or capture power.

The NGO intervenor must make every effort to ensure that all obstacles to the growth of the WDA/WIC and to the transfer of power to it are removed. It needs to ensure that during the process of the growth of these institutions, adequate skills and appropriate attitudes and systems are given time and support to develop.



Chapter 3

A FEW GENERAL OBSERVATIONS

Before bringing this part to a close, it may be useful to make a few general observations related to the process during the planning phase drawn from several experiences in micro-watershed management.

- **The experience of mobilisation:** An observation of MYRADA staff is that there have been very minor or no attempts at mobilising the gram sabha over the past 30 years. The last effort made in some villages was during the period when community projects were given an impetus in the fifties and early sixties. Since then, all interventions have been directly to individuals through the several anti-poverty programmes; often these "beneficiaries" were selected by local politicians, representing various interest groups. This approach served to polarise groups rather than to mobilise the entire village. Micro-watershed management, however, requires that all families in the village are involved. Hence, a strategy is required to mobilise people and to sustain their interest; this is an important role that the NGO has to play.
- **The need to broaden options:** Peoples' expressed needs and the opportunities to which they respond are those that concern their livelihood. When their needs are discussed, watershed treatment is usually not given priority. Land use is only a part of the whole livelihood issue; hence the proper management of land and resources must be viewed as a support base to broaden the spectrum of options available to people. The SHGs fulfill this function,

to some extent, by providing small loans for income generation schemes of their choice, but the support must be expanded to include training and upgrading in skills and exposure to alternative sources of employment in and around the area from among which they can select livelihood opportunities which they find manageable and viable.

- **The need for equity:** It is by broadening the set of options that the landless and near landless find sustainable opportunities for their livelihood. As members of the SHGs, they are eligible for loans. The regeneration of fallow lands and wastelands provides them with opportunities to harvest fodder and fuel. Linkages with Government Departments and Banks will further increase their opportunities. Social pressures however, tend to marginalise these vulnerable groups. The nature of the watershed programme, which is land based, also tends to by-pass the women and the landless. The NGO, therefore has to take special care to introduce a bias towards these vulnerable groups without creating conflict at an early stage which will result in further marginalisation of the poor since they are still vulnerable.
- **The need for appropriate structures:** The people in all the watersheds where MYRADA has intervened are engaged in dryland farming. They have adopted conservation measures with locally available materials usually large boulders and flat stones, and in some cases vegetative bunds. They have the skills required to construct these structures. The practice of introducing large structures, involving cement and steel, requires contractors and skills which are often not available locally; it also opens the door to corruption, poor quality of work and above all projects the message to people that they have no control in implementation and that the beneficiaries of the treatment works are outsiders. Appropriate structures are indigenous, low cost and can be

maintained by the local people. These are the structures that the treatment plan should focus on.

- **The need for flexibility:** Many of the appropriate structures do not conform to the structural designs in official manuals. To insist that the official designs are maintained will be to undermine sustainability, since the objectives of people will not be achieved. For example, the shape of structures prescribed in official manuals to hold silt tend to encroach on the neighbour's fields and often cause conflict. The farmer knows that a near vertical wall may result in a few boulders topping over occasionally, but he prefers to replace them when this occurs rather than construct a structure which is entirely stable but would cause conflict with his neighbour. The tendency to recommend a "perfect" remedy is also inappropriate. For example, while "Vetiver" may be practical as an alternative to earthen bunds in some areas, it is surely not a universal remedy as often projected.

The need for equity:
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PART - IV



THE IMPLEMENTATION PHASE

This part and the next which describes the process that emerged in the Lakkenahally micro-watershed provide the beginning of a comparative study of two intervention strategies; one where the Government and the NGO are co-intervenors and the NGO also has to work under pressures that result from this pattern of intervention (PIDOW Gulbarga is an example of this strategy); the other is a programme where the NGO is the sole intervenor (the Lakkenahally case study in the next chapter describes this experience). Both patterns have their respective strengths and weaknesses. The Lakkenahally experience has shortcomings which could have been foreseen and possibly avoided. The pattern of intervention where Government is a co-intervenor is necessary in a country where the Government is and will continue to be a major player in rural development. Learnings from PIDOW, therefore can be applied in other Government supported watershed programmes.

Chapter 1

THE TWO MODELS OF INTERVENTION

There are no doubt "problems" peculiar to projects where there are co-intervenors, which, if allowed free play, obstruct the effectiveness of the intervention. These problems surface particularly during the implementation of the treatment plan and need to be addressed. The co-intervenors need to build up a creative synergy which requires acceptance and a commitment to clear and accepted objectives, a similarity of attitudes and behaviour patterns, a degree of mutual trust and systems of feedback which are open to all parties and where information is willingly shared and discussed. Lines of responsibility cannot be strictly drawn; gaps have to be filled in where they occur by whoever is available without allowing organisational pride to intervene, in order that the process moves forward towards accepted objectives. Failure to create this synergy becomes evident during implementation. During planning the lack of synergy can be glossed over by the reluctance of officials at higher levels to raise difficult issues or the fear at lower levels of creating an impression of insubordination, or even to avoid disturbing good personal relationships.

To achieve the level of synergy necessary for effective intervention is difficult when transfers are frequent and appointments among partners are often made on grounds that have little to do with building a team to achieve the objectives of watershed management more effectively. There are also feelings and perceptions which obstruct the growth of a concerted effort. Often the Government staff at higher levels feel that the NGO is taking undue credit for the work done and that it is weak in planning and technical expertise. The NGO, on the other hand, feels that the gap between what is said about participation at higher levels of Government and

Co-intervenous need to build up a creative synergy which requires acceptance and a commitment to clear objectives, a similarity of attitudes and behaviour patterns, a degree of mutual trust and systems of feedback which are open to all parties.



what actually happens on the field is large; that while the technical input of Government in planning is high, at the field level quality of intervention is not only poor but obstructs peoples effective participation; that according to the roles which were allotted to the partners, it is the NGO who should play a major role in fostering participatory approaches and strategies and not the staff at higher levels of Government who often take on the role of participatory experts which results in conflicting messages. Many of these perceptions may be blown out of proportion due to personalities, but there are surely perceptions on both sides that are justified; they need to be openly and frankly shared and solutions found to resolve and even to prevent such obstacles to effective intervention.

The Lakkenahally case study described in the next part identifies the problems that can arise in projects where the NGO is the only intervenor; repetition of these problems here is therefore unnecessary. This experience and others in MYRADA prove that people are aware of the effects of erosion in their fields; it is also not difficult for them to make the connection between the upper reaches of the watershed and the lands lying lower down and to realise that for the flow of water to be managed, the upper reaches need to be treated; but it takes time and confidence for them to react and to respond in an organised and sustained manner. They seem to need an outside agent in whom they have confidence and who in turn can motivate them to take a first step. Often when they complete a common action successfully, MYRADA staff have asked why they need them when they were capable of planning and implementing the action and were also able to cope with the technical demands of treatment measures. MYRADA has not received a satisfactory answer; is it because the staff are asking the wrong questions or tend to discard answers which due to our background we consider unquantifiable and therefore vague?

Chapter 2

DOES PARTICIPATORY PLANNING LEAD PER SE TO INCREASING CONTROL BY PEOPLE DURING IMPLEMENTATION?

It is often assumed that the quality of the process that governs planning is carried over into implementation. If therefore, the planning process was strongly influenced by a participatory culture, this culture should also influence the implementation of the plan. Our observations over several MYRADA projects, however, tell a different story. In fact, in some projects, what emerges is that, while on the one hand the level of concern to introduce a participatory process in planning is increasing, little attention is given to the level of participation in implementation where the obstacles to participation are more entrenched. As a result the involvement of people in implementation in many micro watersheds especially where Government is a co-intervenor shows a marked decline even in projects where planning is strongly influenced by a participative culture. Fortunately this is not true in all MYRADA projects; yet in general there is need for a closer analysis of peoples' role in implementation, if the objectives of sustainability, equity and productivity over a long term are to be achieved.

A general observation, which may not be true of all watershed programmes is that while participation is being accepted as a significant feature of the process, there is still a long way to go before the final objective of participation is achieved; namely that peoples institutions play a major role in managing in a sustained manner both resources of the micro watershed as well as all the interventions. The present trend is to project the level of participation in planning while playing it down during implementation where in fact the obstacles are greater; if this trend continues, the final objective of introducing participation in the process of watershed management will not be achieved. This is the major concern of the NGO intervenor.

While the level of concern to introduce a participatory process in planning is increasing, little attention is given to the level of participation in implementation where the obstacles to participation are more entrenched.

People's institutions play a major role in managing both resources of the micro watershed as well as all the interventions in a sustained manner.



Appealing maps produced during PRA planning exercises are useful but they do not go far enough on their own.

The reasons for this gap between the levels of participation in planning and in implementation are many and differ from project to project, but there are a few common and important ones which have been identified in projects where both Government and the NGO are intervenors.

The pressure to achieve financial and physical targets: This pressure is noticeable and operates in all MYRADA projects where Government funds and personnel are involved as well as in projects supported by a few donors who operate in a similar fashion. That the budget is an essential tool for planning is accepted, but to make expenditure a major indicator of success is dangerous and leads to a sharp decrease in the space given for the participatory process to play a major role during the implementation. The "target approach" and the "pressure to spend the budget", tend to obstruct the participatory process that evolved during the planning phase from continuing and gathering strength during implementation.

The culture and practice operating in bureaucracies tend to ensure that those who are involved in planning are not those who implement the plan on the field. Planning is an exercise that is traditionally given a status which implementation does not enjoy; those who are involved in the planning exercise usually have the time and confidence required to join in the participatory planning exercises in the field, especially if those exercises have acquired the glow and status that PRA has brought. To have participated in a PRA exercise is becoming one of the indicators of being in touch and up to date with the latest fashion; whether this exercise has helped to foster attitudes and approaches essential to achieve the objective of peoples' management of resources is another matter. The implementers on the other hand tend to be either junior staff (who are usually supervisors) and field level staff with

lower qualifications some of whom have little chance of promotion, but whose job is to implement the plan.

The Government field level staff in PIDOW-Gulbarga have little stake in the participatory process during implementation; on the contrary it is often perceived as a threat. To allow the participatory process to operate is time-consuming, and provides people with the power to monitor their work which they usually resent. Besides the field staff usually live far from the work spot, do not have transport facilities to attend meetings at time arranged by the people, and in some areas they have other duties to perform. Their interests at times do not coincide with those of the people; for example they prefer to hire labour rather than to allow people to organise the activities on their lands or in their watershed. The result of such differences at the field level during implementation is sometimes fed back to superiors as the "non cooperation of people", "lack of technical expertise of the people", "refusal to accept and implement the plan", etc. If an NGO is involved, suspicions are aroused that the NGO is encouraging the people to question Government staff and obstruct their work.

Field level staff of Government and sometimes of the NGO are not willing to make adjustments on the field since they have the onus of justifying these changes and are accustomed to implement an approved plan. They, therefore, are reluctant to allow (much less to foster) any change in the plan which people may want to introduce in the field during implementation, in order to make the structures more manageable or to serve purposes that were not taken into account in the planning exercise. For example in one area the people wanted the boulder bunds not only to prevent soil and water erosion but to also protect their fields from cattle; this requires that the bunds become walls. Now the accepted structures for soil and water conservation are smaller rounded bunds which cannot protect the fields from animals. The field level staff however refused to allow people to change the shape of the structures.

In PIDOW-Gulbarga the prevalent thinking that is expressed in documents governing the project has been that plans will be implemented through functional groups. MYRADA's experience in PIDOW indicates that this approach tends to extend control of the Government and the NGO on the process of implementation. This is because the groups are considered to be extensions of the official delivery system and not institutions in their own right which establish and abide by rules and conventions which may not conform entirely to what Government expects of legal entities but which are adequate to carry out the groups' responsibilities and to establish the groups' credibility; this in turn demands their acceptance and recognition as stable entities by intervenors. Since they are now considered as mere extensions of the delivery system, the field level Government staff expect the groups to "conform" to the plan.

There is also an underlying cultural block which makes it difficult for the "technical experts" who have had input in the treatment plan to accept any change. This attitude, supported by the claim that National and State planning norms based on long practices have been used in planning, ensures that while implementation is done "through the groups" effective power remains with the intervening staff.

One of the reasons often given to justify the need for intervention in the form of "technical expertise" during implementation is that people do not have the skills to construct erosion control structures. In PIDOW the lead role in implementation has been accorded in the strategy document to the DLDB field level staff since the implementation phase is assumed to be dominated by physical activities; this is an assumption which experience does not vindicate. Observations indicate on the contrary that the implementation of the treatment plan depends far more on effective management by the Watershed Development Association than on the provision of technical skills. Further, most of the technical skills required are available with the people. In Kamasamudra where people were not confident to construct larger stone bunds, they acquired the skills by working together with skilled farmers in another micro-watershed. This effort to acquire the necessary skills is important to ensure that the structures can be maintained without skilled labour from outside.

In the PIDOW area there are micro-watersheds where the DLDB did not play a role on the implementation of the treatment plan.

The culture and practice operating in bureaucracies tend to ensure that those who are involved in planning - are not those who implement the plan on the field.

Implementation through functional groups tends to extend control of the Government and the NGO on the process.



The implementation was carried out by the peoples' groups in consultation with one another. MYRADA staff played a role in organising the meetings, in assisting the groups to solve disputes and to mark and assess the work done for payment. All these roles have been performed by the Watershed Association but it was not strong enough. MYRADA was still searching for an intervention strategy especially in terms of appropriate peoples institutions, while the pressures to implement carried the process forward. Implementation in this micro-watershed however went ahead much faster and with a greater degree of control exercised by the groups than in watersheds where the DLDB is involved. There was also no difference between the technical quality of the structures constructed in this watershed and that of the structures supervised by the DLDB field level staff in other micro-watersheds. The question that arises, therefore, in group discussions, is what exactly is the technical value added during the implementation phase by the field level "technical staff" of DLDB?

Observations of land development works carried out by people in other MYRADA projects near Kadiri, Kamasamudram and Huthur where no technical support was provided by the Government and minimal by MYRADA also show that the quality of structures is good. The people have traditional skills in terracing and bunding which are adequate; it is only where major structures like wiers are concerned that outside expertise is required. During planning, however, government staff contribute to technical quality. In areas where the DLDB is not involved, the technical quality of plans and maps prepared during the planning phase is poor.

Chapter 3

THE EMERGENCE OF WATERSHED DEVELOPMENT ASSOCIATIONS IN PIDOW

Till recently in the PIDOW watersheds where DLDB and MYRADA are co-intervenor, there were no effective apex organisations that could legitimately claim to represent all the groups in a watershed and which in turn could demand the right to control the implementation phase. During the past year, however, in the newer watersheds, several groups which have been managing savings and providing credit, have come together to form apex societies. The original assumption made by MYRADA was that there would be one apex society (WDA/WIC¹) for each watershed, but the pattern that is emerging does not bear this out. Left to take the initiative, the families in Marguti Doddahalla sub-watershed have formed two apex societies, one with six credit groups and the other with seven. These apex societies are formed by 2-3 representatives selected by each credit management group. One Apex Society covers families with lands on the right side of the main drainage running through the sub-watershed and the other Apex Society covers those with lands on the left. The larger farmers who own lands (on both sides) have formed a group of their own. There are also other sub-watersheds in PIDOW where a similar pattern is emerging, namely, where there are two or more Apex societies in one sub-watershed. Representatives from the two Apex Societies in Marguti and from the group of larger farmers meet together when common action or decisions are required which involve the entire watershed.

It makes at least a year for all the Apex groups in these sub-watersheds to form a single apex society for the entire sub-watershed. The groups comprising families from the weaker sections, particularly, are apprehensive that their freedom and

Unless these apex institutions are supported to take control of implementing the plan, the degree of effectiveness of the work done from the peoples' point of view and the chances of sustainability will both decrease.

It is these institutions to which intervenors need to transfer power during implementation of the treatment plan.



¹ WDA: Watershed Development Association
WIC: Watershed Implementation Committee

rights may be tampered with by the groups with richer and more influential members.

An interesting development in PIDOW highlights this apprehension by the groups whose members are from the weaker sections of society. When the formation of apex groups in a sub-watershed was discussed with the people, the groups of tribals who lived mainly in the upper reaches of several micro-watersheds, decided to join together to form an apex group which consisted only of tribal groups from several micro-watersheds. The tribal groups decided not to join the other groups within their own micro-watersheds, because they felt a closer affinity with other tribal groups; besides they were apprehensive that they would be marginalised by other groups in their micro-watersheds. From its experience with apex societies of self help or credit groups in other projects, MYRADA expects that the tribal groups in the micro-watersheds will eventually agree to form an apex society with other groups of their micro-watershed, but only after they have build up a level of self reliance and confidence as a result of networking with tribal groups with which they have an affinity. The intervening NGO meanwhile has a role to ensure that the smaller credit groups, especially those with weaker members, are supported to attain a degree of self-reliance in terms of daily needs and unexpected requirements and that they acquire the confidence and skills necessary to protect their rights and their share in the benefits of the programme. Even where an apex society emerges, the NGO should ensure that while it supports the emerging identity of the apex society, the latter should not undermine the strength of the credit groups.

Some of the roles that these apex societies could assume in watersheds have already been taken up by the credit groups in PIDOW. For example, it is the credit groups which have leased fallow land from private farmers; they have also taken over revenue wastelands and degraded forest lands; all these lands have been protected and developed. The members of the groups have been paid a daily wage to harvest

grasses which have been sold as fodder at a profit. It will therefore be counter-productive to handover these roles to the apex societies in these watersheds. To attempt to do so would lead to a conflict which the powerful farmers would relish as it would give them an opportunity to re-establish their influence which diminished as the credit groups gathered strength. The people have decided for the present to limit the role of the apex societies in these PIDOW micro watersheds to implement the treatment plan. This is why they were called "Watershed Implementation Committees" rather than "Watershed Development Associations" as the latter name indicates a much wider role.

It is difficult however to predict what patterns may emerge in a year or two (they will probably vary with each Watershed); but, as stressed earlier, the credit groups must not be weakened in the process. It is however, becoming evident, even to those who "refuse" to see, that unless these apex institutions are supported to take control of implementing the plan, the degree of effectiveness of the work done from the peoples' point of view and the chances of sustainability will both decrease. In PIDOW, while the DLDB's role is to provide technical support, MYRADA's role is to strengthen peoples institutions with the skills and resources to manage their watershed. It is these institutions to which intervenors need to transfer power during implementation of the treatment plan; they should be free to call on the services of the Government or NGOs or to refuse them if considered inappropriate or unnecessary. These WDAs/WICs however, need to be constantly monitored by the credit groups to ensure that a few powerful farmers do not capture the WIC and exploit the resources provided from without and regenerated within. A regular change of office bearers of the WDAs/WICs and annual performance and financial audits of the credit groups and WDAs/WICs will provide additional checks.

PART - V



A Case Study

The previous chapters which draw largely on the experience of MYRADA in PIDOW, Gulbarga, attempt to identify the interventions of an NGO during the entry, planning and implementation phases of a watershed programme. PIDOW, however, has a few features which differ from another project in Kamasamudram where too, a watershed programme has emerged. This Chapter describes the process that developed in one micro-watershed in Kamasamudram.

A Case Study

AN ANALYSIS OF THE PROCESS IN PEOPLES' INITIATIVES TO MANAGE THE MICRO-WATERSHED IN LAKKENAHALLY VILLAGE (MYRADA Kamasamudram Project)

To begin, it will be useful to identify the differences between the PIDOW and the Kamasamudram projects, which have exercised significant influence on the process that developed in each.

- PIDOW focuses entirely on watersheds. Kamasamudram has a larger canvas - it focuses on livelihoods; it was after a few years that treatment of micro-watersheds, in an integrated way, emerged as an important programme. The focus on watersheds also tends to marginalise the landless and those who do not have access to and control over lands and agricultural produce like women.
- PIDOW has three operating partners - The Dry Land Development Board (DLDB), MYRADA and the Swiss Development Cooperation (SDC). More time and effort is required in PIDOW to build and maintain a working relationship given the transfers and changes that affect District administration especially since all the partners are operational. Kamasamudram has close relationships with the Zilla Parishad and Banks but no intervenors other than MYRADA in the watershed programme.
- PIDOW tends to be influenced in a more pronounced manner by the need to fix and

maintain time schedules for planning and implementing treatment works; it also exhibits a higher degree of professionalism at the level of planning instruments; the intervention of field level technical staff of Government during implementation, however, tends to weaken peoples' control over the process.

Lakkenahally micro-watershed covering 210 acres owned by 63 families is intersected by three large ravines which divide it into 3 micro-catchments. The first micro-catchment on which this study focuses and where the treatment plan started, is the largest; it covers 159 acres where 29 farmers of Lakkenahally and 11 farmers of Bodugurki own land, making a total of 40 farming families.

In 1989, a Men's Credit Management Group (CMG) was started in Lakkenahally, but it ceased functioning after a few months. In June 1991, a new CMG was formed with 25 members, (all men) most of whom were members of the group that had ceased to function. Three members have since left or were asked to leave by the group. Of the 22 members, 12 are members of the Watershed Development Association (WDA). During 1991, 2 other CMGs started in Lakkenahally. One is a Youth group with 18 members of whom 3 are members of the WDA. The other is a women's group with 14 members; only one is a member of the WDA but the husbands of 4 women are among the 12 members of the men's credit group who are also members of the WDA.

The three credit management groups function in a manner similar to the other 2358 CMGs in MYRADA's project; they are small homogenous, voluntary and autonomous groups that mobilise savings and develop their own rules and regulations governing the purpose and size of loans, the rates of interest, the schedules of recovery and the sanctions. They meet their members requirements by providing loans for various forms of consumption, small business and cottage industries; briefly, they provide credit and group support (sideways linkages)

to meet their members consumption and livelihood needs.

Discussion about the need for a Watershed Development Association, its membership and functions started in March 1992, nine months after the formation of the men's credit group. It was only on May 8, 1992 that the WDA was formed with 14 members; on September 9, 1992, 2 more farmers were admitted and on October 10, 1992, 13 more, bringing the membership to 29 at the end of December 1992. All the members paid an admission fee of Rs.10/- each. The membership of the WDA was not finalised at one meeting; it developed over a period.

Of the 14 farmers who became members on May 8, 1992, 12 were members of CMGs and all 14 are from Lakkenahally. It was only on September 9, 1992 (four months later) that 2 members both from neighbouring Bodugurki village were admitted; neither of them belonged to a CMG. Of the 13 admitted on October 10, 1992 (one month later) 3 were from Bodugurki and 10 from Lakkenahally; of these 13, only 5 were members of CMGs, all from Lakkenahally.

Out of the total WDA membership of 29 as on December 1992, 24 were from Lakkenahally and 5 from Bodugurki. One of the issues that arises in the formation of the WDA is the membership of the farmers living outside the villages of the watershed but with lands within like the Bodugurki farmers; many watershed groups are reluctant to admit them as members. This WDA has resolved this issue; it admitted the farmers living in Bodugurki not at the beginning but at a later stage.

Only 17 of the 29 WDA members are members of the CMGs; but it is significant that out of the 14 who took the initiative to form the WDA on May 8, 1992, 12 were members of the CMGs. The credit groups in fact played an important role in forming the WDA. The President and Secretary of the WDA are both members of CMGs.

Of the 29 members of the WDA, 15 have patta lands in the ravine and 6 are cultivating without a patta. The remaining have lands close to the ravine. All these lands however, were vulnerable to floods and crops were often washed away; many fields had not been cultivated for several years.

As observed earlier, the membership of the WDA grew in stages. This differed from the experience in watersheds where

For the first time, MYRADA introduced the idea that the families should contribute to the treatment cost.

The membership of the WDA grew in stages. This differed from the experience in watersheds where outside intervenors, often require that membership of the WDA is finalised at the first meeting mainly due to pressure to start the treatment plan.



outside intervenors (Government and NGO), often require that membership of the WDA is finalised at the first meeting mainly due to pressure to start the treatment plan. In Lakkenahally, the WDA started with a core group of 14, 12 of whom belonged to a CMG in Lakkenahally; these 14 members had some claim to lands in the ravine. From this group, it gradually expanded to include farmers who had lands in or near the ravine but who were mostly not members of CMGs (10 farmers out of the 15 admitted in September and October were not members of CMGs). In this case it was membership in the CMGs and ownership or cultivation of lands in the Lakkenahally ravine where the potential for quick returns is high, which were the main motivating factors that led to the formation of the WDA.

The focus on watershed management was introduced in Kamasamudram in 1990, before the Lakkenahally watershed programme began. During 1990-1991 participatory planning exercises using Participatory Rural Appraisal (PRA) techniques were conducted and people began to treat and manage the watershed resources in four micro watersheds. When the Lakkenahally farmers were introduced to watershed management in early 1992, the watershed programme had already evolved in the area and there were visible signs though limited, of impact in at least two micro watersheds. In December 1991 and January 1992, in response to problems raised by the three CMGs of Lakkenahally, in their weekly meetings regarding falling productivity, low moisture holding capacity of the soils and erratic rainfall, the farmers were exposed to two watersheds (Garudakempanhally and Balamande), where results of efforts to cope with these problems were visible. The video on the participatory planning exercise conducted in Garudakempanhally also gave them an idea on how to plan their treatment programme.

On February 22, 1992 a participatory planning exercise (PRA) was conducted in Lakkenahally

watershed in which 75 farmers (including 35 women) owning land in the micro-watershed of 210 acres participated. However, the exercise covered only the first micro catchment of 159 acres for the following reasons:

- It was the largest; besides a large number of the families participating in the PRA owned or cultivated lands in the ravine (or alongside) which dominated this micro catchment.
- Since the ravine was wide, there was good potential for placing silt traps in order to build up adequate soil in spots where water storage potential was high. The water flow through this ravine was the highest when compared to the other two ravines in the micro watersheds. The farmers plan was to hold soil in an area where water potential was high so that the risk of crops failure in these areas, at least would be minimised; with the improved water holding capacity and small open wells which they planned to excavate, they also anticipated a crop of paddy.
- The farmers who cultivated lands in the tank bed lower down realised that the damage by floods rushing through this ravine had the greatest impact on their crops; hence they did not object to the treatment of this ravine as a priority.

A treatment plan and budget was prepared at the end of the PRA exercise. For the first time in the project area, MYRADA staff introduced the idea that the families should contribute to the treatment costs. The suggestion was discussed at length and the groups finally arrived at different proportions of contributions for each treatment activity.

Table 5.1 reproduces :

- the activities selected by the people for the treatment plan but not in the order of priority,
- the cost worked out on a unit basis,

- peoples' contribution towards each activity

Three days after the PRA, a group of 20 farmers who owned/cultivated lands in this micro-watershed together with MYRADA staff discussed the treatment plan. They confirmed the spots, and agreed to the size and type of structures, they verified the costs, and established priorities among the various activities; they also finalised the contribution of people to each activity and the schedule of payments.

Significantly however, the group as a whole made a strong case to the MYRADA staff that the contribution expected at the end of the PRA exercise (given in Table 5.1) was too high. As far as their contribution was concerned the group finally decided that :

- For all the work on private lands there would be a 20% contribution from each farmer. (This refers only to the initial inputs; in the following year the farmers would invest further labour and funds on their own which do not figure here).
- Work on common lands would be paid for entirely by the project; but the people would work at a lower wage than prevalent in the area. Returns from the common lands would support local demand for fodder and fuel and contribute to the common fund.

Evidently the high per centage arrived at during the PRA exercise was discussed in the interim between the PRA and this 3 day exercise. There are indications that since farmers of other micro watersheds, (some of whom lived in a neighbouring village Bodugurki) were present during the PRA, the members of this group had their prestige to maintain and therefore did not question the rates of contribution, which some of them had proposed, but most considered too high. In general, MYRADA's experience indicates that plans made during a PRA exercise cannot be taken as final. The PRA exercise generates a great deal of enthusiasm and participants tend to let emotion rule their decisions which they later review. Often adequate time is not given during the PRA for the final presentation and budget since the field exercises tend to extend beyond allotted time. Since there are also several participants in the PRA whose lands are not actually involved, those whose lands are part of the treatment plan are reluctant to discuss matters like contribution before "outsiders". There is also a strong reluctance on the part of the villagers to discuss, before outsiders, certain

Membership in the CMGs and ownership or cultivation of lands in the Lakkenahally ravine where the potential for quick returns is high, were the main motivating factors that led to the formation of the WDA.



Table 5.1

SL#	Activity	Total Acre/Units	Cost per Unit (In Rs.)	Total Cost (In Rs.)	Contribution Farmer/ MYRADA	Period Season (1992)
1.	Earthen Bunds	80 ac.	600	48,000	1:3	Apr - May
2.	Boulder Bunds					
	a. 2% slope	40 ac.	800	32,000	1:3	Jan - Jun
	b. 3% slope	20 ac.	1,200	24,000	1:3	Jan - Jun
3.	Diversion Channel	400 mts	4	16,000	1:3	May - Aug
4.	Gully Checks	118 nos.	500	59,000	1:3	Jan - Jun
5.	Land Reclamation	23 ac.	200	46,000	1:3	Jan - Apr
6.	Land Levelling	40 ac.	1,000	40,000	1:4	May - Jun
7.	Wasteland Devpt.	5 ac.	500	25,000	1:4	May - Jun Aug - Sep
8.	Bridge	1 no.	10,000	10,000	1:9	Mar - May
9.	Silt Trap	2 no.	3,500	7,000	1:6	Mar - May
10.	Tank Repair	1 no.	3,900	3,000	1:2	March
11.	Farm Pond	4 no.	500	2,000	1:4	May
12.	Silt Application	100 ac.	200	20,000	1:3	Mar - May
Total				3,32,000		

issues that have created or could raise "conflict" between families of the same village. These issues also cover placement of structures and drainage systems where neighbours lands are affected.

The first PRA exercise sets the basis for continued participatory discussions and planning, and therefore it must be undertaken even if the plan that emerges is not final.

On May 8, 1992, two and a half months after the PRA exercise, the people decided to form a **Watershed Development Association (WDA)**, the Lakkenahally Jalanayana Abhivruddhi Sangha; it remains an unregistered body but maintains records and accounts like any formal society. A small **Implementation Committee** of five members, with a President and Secretary was elected at the third meeting on April 27, 1992. At the fourth meeting on May 13, 1992 a resolution was passed to collect

a membership fee of Rs.10/- and to open a Joint Bank Account. On May 14, 1992 an account was opened in the Canara Bank, Kamasamudram (A/c No. 7816/M). The role of the Committee was agreed upon and recorded as given in Table 5.2 (translated from the minutes):

The MYRADA staff at this point were happy with the efforts of the WDA to establish its identity and role, and expected work to proceed apace. This however was not to be. Rumours were afloat that MYRADA would annex the lands once they were treated; some farmers (suddenly!) realised that they would lose cultivable land if field bunds were constructed and that there could be problems with their neighbours since the bunds would spill over into their fields. The staff suspected these rumours were floated mainly by parties whose money lending businesses had been affected adversely as a result of the credit groups activities; but there was no

Table 5.2

Subject	Resolution
Formation of Committee and the responsibility of members	The following five members were selected to form an implementation Committee to monitor the Watershed Activities
	1. Sri Hunumappa S/o. Muniswamy
	2. Sri V. M. Venkatesh S/o. Muniswamy (President & Co-signatory of Bank Account)
	3. Sri Balappa S/o. Sheshappa
	4. Sri Papi Reddy S/o. Chakkamuni Venkata Reddy (Co-signatory of the Bank Account)
	5. Sri R. Muni Reddy S/o. Rama Reddy
The following are the responsibilities of the Committee	
	1. To conduct the Watershed Development Association meetings monthly.
	2. To plan the activities appropriately in consultation with specialists.
	3. To implement the planned activities in time.
	4. To take the measurements of the work done in the watershed and make payments.
	5. To evaluate the programme and to report the same to the Watershed Development Association members.
	6. To monitor the programme funds properly.

concrete evidence to substantiate these suspicions. However, just a few months before these rumours surfaced in Lakkenahally, similar rumours were circulating in another watershed (Garudakempanahally), which was traced directly to local money lenders whose interests had been adversely affected when the credit groups became operational. There were therefore adequate grounds to suspect that the same rumours had carried over into Lakkenahally and that they were supported by the affected parties.

The staff decided to "Play Cool". Meanwhile, there were also requests from other watersheds for MYRADA's involvement which in turn put pressure on the Lakkenahally group, since the staff had always made it clear that MYRADA's response depended on the group's performance.

In general, MYRADA's experience indicates that plans made during a PRA exercise cannot be taken as final. The PRA exercise generates a great deal of enthusiasm and participants tend to let emotion rule their decisions which they later review.



At this stage two members of the Watershed Association of Lakkenahally came forward to start the treatment plan on their fields, one was V.M.Venkatesh, the President and the S.Muniappa who was a member of the WDA (but not of the five member Implementation Committee) on condition that MYRADA provided 80% of costs. When this "initiative" was assessed by the WDA at a later stage it emerged that these two had by-passed the WDA and approached MYRADA directly. When the other members of the WDA were asked why they had not objected, many replied that the WDA had not functioned and that Venkatesh, the President took the decision without consulting others. Some members did not object as they realised that the lands of these two required major treatment, which in turn would help to control the floods through the ravine which affected their fields lower down.

On May 26, 1992, V.M.Venkatesh and Muniappa started the treatment work. The significant features of their work and of the attitudes of other families could be briefly outlined as follows:

- The rest of the community did not cooperate; the reasons that emerged were that these two are SCs¹ and that they had by-passed the WDA, however, it also became evident that the rumours referred to earlier by money lenders had not subsided. But more importantly, the WDA members did not seem to have faith in all the members of the Implementation Committee, even though they had chosen them. One of the results of this lack of cooperation was that these two farmers could not harness bullock carts from the village (though there are 8 in Lakkenahally) and had to hire tractors which raised costs.
- Since the earthen/stone bunds they had to construct across the ravine were large and in strategic areas, they preferred to hire skilled masons from outside the village. As a result the labour costs rose sharply (some masons were paid Rs. 100/- per day).

- The Implementation Committee did not play any part in supervising the work, as it was supposed to do, according to the roles set out for it by the members of the WDA.

Between May 26, 1992 and June 30, 1992 these two farmers presented bills amounting to Rs. 7,398/- to MYRADA, of which MYRADA paid Rs. 6,532/- (88%). Though the Implementation Committee had not played an active role so far, the three credit groups (men, women, youth) now raised several issues regarding the treatment works implemented by these two farmers. When the costs were presented to them, there was a strong reaction along the following lines:

- "Why did MYRADA respond to these two farmers without consulting the WDA?" (The staff accepted their mistake, but pointed out that the delay in starting work due to the false rumours in circulation prompted them to respond to any initiative.)
- "Why should outsiders be hired?"
- "The costs are too high; at this rate the entire budget will be spent on the fields of these two."
- "The rates paid to the tractor owner by Papi Reddy are exorbitant; tractors can be hired for far less."
- "The two farmers had not contributed their share of 20%."

What is significant here is that the CMGs took the responsibility and initiative to question the actions of the President of the WDA (V.M.Venkatesh) and of MYRADA. Their role as monitors of the activities of Watershed Development Association emerged as a crucial one since the WDA had not functioned effectively. MYRADA's experience in several projects where Apex groups have emerged, demonstrates that it is the small credit groups at the grass roots, representing the small and marginal farmers and the landless who have attained a certain

¹ SC - Scheduled Castes

degree of self reliance and confidence, that have gained the freedom and space to question the actions taken by members of the Apex Societies like the WDA. In this particular case, for example, the WDA would have found it difficult to question the amount spent by Venkatesh since he was the President of the Association; these institutional checks and balances are required at every level and at every stage of the process.

As a result of the reaction of the three credit groups, all work in the micro-watershed ceased for two months (July - August 1992). The farmers however, went ahead with cultivation during July as the rains had arrived². During this period members of the credit groups approached MYRADA repeatedly, expressing their unhappiness at the stoppage of work. MYRADA staff replied that they were ready to go ahead, provided the WDA functioned effectively. The issue was publicly discussed at the annual celebration of the mens' credit group on August 1, 1992.

There was another issue that arose at the level of the Implementation Committee which could have had a bearing on its failure to fulfill its responsibilities. Papi Reddy, a member of the Implementation Committee, and a co-signatory of the Bank Account entered into an agreement with a tractor owner to hire his tractor at a price higher than the prevailing market rates, on condition that the tractor owner also levelled his field free of charge. When the other members raised this issue, he resented their questioning and refused to sign the cheques.

During the first half of August 1992, the WDA convoked several meetings which were attended by members of the three credit groups. At these meetings the roles of the WDA were once again reviewed and confirmed. The members also decided to remove Papi Reddy from the Implementation Committee and to appoint G.Venkataswamy in his place. MYRADA was requested to arrange an exposure for the members to other watersheds where treatment works had started³.

² Even in the plan that emerged at the end of the PRA, no treatment work was planned for July since farming operations are usually intensive during this month.

³ Two visits were arranged, one to Garadakeempurhally where the farmers demonstrated how they had constructed gully checks and boulder bunds and another to Bahmande where tank desilting was in progress. The people of Lakkenahally returned with the confidence that they had the capacity to undertake treatment works on their own without outside masons, provided MYRADA staff gave them technical support if and when required for major works.

The role of the CMGs as monitors of the activities of Watershed Development Association emerged as a crucial one since the WDA had not functioned effectively.



On their return from the exposure to other watersheds, the following decisions were taken regarding costs and contributions.

- MYRADA would pay the WDA only 80 per cent of the treatment budget, but as a grant. The WDA however, would not extend grants to individuals for treatment of private lands; 80% of the cost of activities on private lands would be given as interest free loans returnable to the WDAs common fund within 3 years; interest will be levied on amounts outstanding after 3 years.
- Accordingly, the funds given to the two farmers who had started work, namely V.M. Venkatesh and Muniappa were converted into an interest free loan returnable to the WDA.
- Since MYRADA was providing only 80 per cent of the cost of works on private lands, the farmer could borrow the remainder (and more if required) from the credit management group (of which he is a member) at the rate of interest levied by the group or from the WDA at 20 per cent interest per annum.
- Several members of the WDA however, were not members of the credit groups; the credit groups agreed to extend interest free loans to the WDA to enable these farmers to avail of loans. The major reason why these loans were given without interest to the WDA was that all the members of the credit groups anticipated extra employment and income during the lean season; besides the money was urgently required, and the WDA could not make any promise to pay interest as it was not sure how the farmers would respond. The WDA borrowed a sum of Rs.6050.15 from the credit groups for works on private lands upto December 31, 1992.
- MYRADA was asked to assess payment not by labour days but by unit costs, which they expected would work out to be lower.

From August 23, 1992 to September 2, 1992, 54 villagers were engaged every day on treatment works. At this stage there was a significant change in the attitudes of the farmers. There were no longer a few leaders who circumvented the WDA and approached MYRADA directly; the entire village of Lakkenahally as well as farmers of neighbouring villages who had lands in and near the ravine were now fully involved; village bullock carts were made available.

The WDA began functioning. It carried out the functions of monitoring the work and deciding on payments. There was a significant shift from what is sometimes called the "PRA mode of participation" where emotions are high, where the focus is on data collection without adequate analysis and where conflict situations (potential and existing), are quietly forgotten - towards a level of sustained involvement which requires that data is analysed and all issues brought out into the open; which ensures that an appropriate organisation is set up to solve these issues and to introduce progressively an open system of decision making, rules of behaviour, rewards and sanctions in which all concerned are involved in establishing and implementing. If this organisation is found to be fair and useful by the people in the initial stages it has the potential to grow into an institution with a code of conduct observed and a culture shared by all who are involved.

Briefly, there were clear indications at this stage, that there was a significant shift of power from MYRADA staff and a few leaders who attempted to monopolise the benefits, towards the people who in turn responded by supporting the emergence of a renewed WDA and an active Implementation Committee from which one member, Papi Reddy was thrown out.

The works completed between August 23, 1992 and September 2, 1992 and the costs calculated on the basis of units are listed in Table 5.3

Table 5.3

Sl.No.	Particulars	Amount
1	4,540 sq.ft. of stone boulder wall on private fields @ Rs.1.10/sq.ft.	4,994.00
2	Earthen bunds on private fields (payment on the basis of pits excavated - 143 pits)	1,025.00
3	2,171 sq.ft of gully checks on common lands/nallas @ Rs.1.10/sq.ft	2,388.00
Total		8,407.00

However, when an assessment was made on the basis of labour days for the same work, the costs turned out to be lower, contrary to earlier expectations. Table 5.4 gives an estimate of costs calculated by the Implementation Committee for the same work as described above but on the basis of labour days.

Table 5.4

1	9 masons - 32 days @ Rs.50/day	1,600.00
2	1 mason - 6 days @ Rs.30/day	180.00
3	Unskilled workers - 126.5 days @ Rs.15/day	1,897.50
4	Unskilled workers - 124.5 days @ Rs.25/day	3,112.50
5	10 bullock carts @ Rs.75/day	750.00
Total		7,540.00

Reasons for the lower costs on the basis of labour days, given by the WDA, were that as work progressed, people gained experience and were able to do the job in a shorter period; besides since village people were involved, there was a higher degree of commitment when compared to work done by outsiders in the early phase.

Subsequently, on request by the WDA, MYRADA continued to pay at the rate of unit costs as initially agreed and which is the standard used by Government, but the WDA paid farmers on the basis of labour days which continued to be lower; the "profit" was credited to the common fund. With this income the WDA decided to return the loans taken from the credit groups first. Out of the total loan of Rs.6,050.15/- a sum of

There was a significant shift of power towards the people who responded by supporting the emergence of a renewed WDA and an active Implementation Committee.



Table 5.5

Watershed Development Association, Jalandhara Abhivruddhi Sangha, Lakkenahally
Statement of Activities Completed and Costs as on December 1992

Sl. #	Activity	Total Units	Unit Cost (In Rs.)	Total Amount	Project Contribution as Grant converted to interest free loan to members by WDA	Loan Given by CMGs to the WDA without interest
1.	Earthen Bunds	23,700 cft	0.15	3,550.00	2,844.00	711.00
2.	Boulder Bunds	23,464 rft	1.10	25,810.62	20,648.50	5,162.15
3.	Land Reclamation	7.5 ac.	-	885.00	708.00	177.00
4.	Diversion Drain	-	-	-	-	-
5.	Gully Check	13,485.83	1.10	14,835.00	11,868.00	-
6.	Silt Trap	8 nos.	1.10	1,035.00	-	-
7.	Farm Pond	2 nos.	-	2,307.00	-	-
8.	Weirs	1 no.	-	10,377.00	-	-
				58,804.62	36,068.50	6,050.15

Rs.3,500/- was returned to the credit groups by the Watershed Development Association as on March 31, 1993.

Though this case study ends with an assessment of developments upto December 31, 1992, it will continue to incorporate an analysis of the process over the next two years at least; but before bringing this part to a

Table 5.6

Statement comparing Physical Achievement on December 1992 with targets set during PRA in February 1992

Sl. No.		Planned during PRA	Achieved Dec 31, 1992
1.	Earthen Bunds	80 acres	11.5 acres
2.	Boulder Bunds	60 acres	48 acres
3.	Diversion Channel	400 mtrs.	-
4.	Gully Checks	118 nos.	54 nos.
5.	Land Reclamation	23 acres	7.5 acres
6.	Land Levelling	40 acres	-
7.	Wasteland Development	5 acres	16 acres
8.	Stone Weir	1 no.	1 no.
9.	Silt Trap	2 nos.	8 nos(1)
10.	Tank Repair	1 no.	1 no.
11.	Farm Pond	4 nos.	2 nos.
12.	Silt Application	100 acres	-

close, it may be useful to compare the physical achievements as on December 31, 1992 with the targets set after the planning exercise (PRA) in February 1992.

A few observations based on the above analysis could be made, though they are tentative at this stage.

- There are indications that people will give priority to treatment works which hold the promise and potential for quick and high (when compared to the productivity in the area) returns. This is perhaps why silt traps were given priority¹. The objective is to harvest soil where water availability is the highest; it is in these areas, however small they may be, that the farmers insist that they are sure of atleast one crop. They have also excavated two small open wells near the reclaimed areas which provides them with protective irrigation and introduced a paddy crop. During 1992, a total area of 6 acres was reclaimed in this manner in the ravine but only about 2 acres were brought under paddy. MYRADA's experience in other watersheds where people can establish the priority of activities also confirms this pattern. People respond to opportunities for an increase in their livelihoods provided they can be exploited quickly, promise a good return and possibly a change in the cropping pattern to meet their food requirements. Though the WDA members agree with the intervenors that the micro-watershed is one drainage system which needs to be treated in an integrated manner, they often do not agree on the order in which the treatment activities should be undertaken. Observations over several projects indicate that left to their own initiatives, people will give priority to areas where the potential for quick and increased returns is relatively high.

- Activities which are high cost, like land levelling, are not given priority by the group, though individual farmers may demand them. The WDA must be able to resolve this potential conflict situation.
- Where boulders are available and used for traditional field bunds, people prefer them to earthen bunds. To begin with, earthen bunds remove top soil from fields since pits have to be dug for earth, and work is assessed on the measurement of pits excavated. Secondly, these bunds are unstable. Where

¹ Only 2 silt traps were planned but 8 were constructed.

Though the WDA members agree with the intervenors that the micro-watershed is one drainage system which needs to be treated in an integrated manner, they often do not agree on the order in which the treatment activities should be undertaken.



castor and custard apple have been tried as bund stabilisers, peoples' response is good, as they earn a steady income from both; though Vetiver grass is widely recommended it is hardly seen in the fields and peoples' response is poor.

- Another activity which drew enthusiastic response was "wasteland development". Though 5 acres were planned, 16 acres were regenerated. Once the villagers were fully involved in the watershed programme they proposed that a hillock could be regenerated and offered to work at lower wages to construct protection walls around the hillock and to plant saplings of their choice. The grasses were harvested and sold locally by one credit group. It is MYRADA's experience that once the people are involved and are able to take decisions, they come forward with several proposals and the momentum grows.
- The 2 large boulder bunds constructed by V.M.Venkatesh and S.Muniappa were not included in the PRA treatment plan; yet they were constructed by these two farmers who in the first place failed to fulfil their obligations to run the WDA and secondly bypassed the WDA. These farmers were later made to repay the investment by the credit groups. Similar instances where farmers with political or money power have tried to exploit the WDA were encountered in several projects; the need to support the growth of effective credit management or self-help groups to play a monitoring role is therefore an important concern of the intervening NGO.

PART - VI



THE QUESTION OF EQUITY IN WATERSHED MANAGEMENT¹

Equity is perhaps the most difficult objective to achieve within the context of a watershed programme and even more difficult to assess to what extent it has been achieved. Though this chapter raises more questions than it answers, it is an initial and limited attempt to focus attention on the issues related to equity which in most workshops tend to be treated last and hurriedly, left out for want of time or restricted to one marginalised group which distorts the complexity of the problem.



¹ This chapter and the two that follow were written in November 1994 and incorporate experiences gained since the first edition was brought out in July 1993. These chapters have been extracted from a longer document that is part of a major study covering experiences in several countries, sponsored by the International Institute for Environment and Development (IIED). IIED's support to MYRADA while the author undertook this study is gratefully acknowledged. These extracts are included here to meet the need to share our experiences as widely and as quickly as possible.

THE QUESTION OF EQUITY IN WATERSHED MANAGEMENT

When Parts I to V were written about two years ago, there was adequate experience in MYRADA's Watershed Projects to indicate that if the objective of equity was not sustained, the pressures eroding the management of the watershed's resources and therefore of sustained productivity tend to increase, thus diminishing returns in the long run. It was also clear that people are unable to pursue all the three objectives of productivity, sustainability and equity at the same time; they responded to productivity primarily, since the risks of increased investments were lowered and linkages increased. The objective of sustainability required a far greater level of intervention from the NGO since it concerned processes leading to institution building, which demanded considerable time, effort and cooperation from the people; consequently they tried to avoid issues related with equity which have a high potential for conflict.

• A structural image of society

In the initial stages of the PIDOW project this author had a visual experience of some of the issues involved in the issue of equity. A meeting was called of the families living and/or farming in the Wadigera watershed. When all the people gathered together and settled down, the picture that emerged projected the class distinctions that operated. On the floor in front sat those farmers who had lands in the lower reaches of the watershed which were (in this watershed) the most fertile and benefited from protective irrigation. Behind them sat or stood those farmers with lands in the middle reaches;

though the land holdings of some of these farmers were not smaller than those of the first category, the lands were not as productive; besides they were more vulnerable to drought and long dry spells as protective irrigation was not available. People who stood on the periphery were mostly tribals and those with holdings on the upper reaches. The landless hung around. There were no women present initially; but as the meeting went on, they strolled in, more as inquisitive bystanders than as participants.

The discussions were initiated and dominated by the farmers with holdings in the lower reaches who were sitting in front of the group. They also belonged to a higher caste than the others. It was evident that if the marginalised groups were to be given an opportunity to participate effectively, they would have to meet in a different situation. It was here that MYRADA's Self Help Group (SHG) concept became relevant within a watershed management context. The SHGs are small, homogenous groups based on affinity which stayed together without constant outside intervention because the members had common interests, or were of the same community like tribals, had a common ancestor or had the same occupation like basket weavers or were generally of the same economic status. They were called 'socially viable' groups. MYRADA's strategy was to work with each group to provide the members with opportunities for training and self improvement and to use credit as an instrument, which, in the process of managing (saving, lending and recovery) they acquired the skills and the confidence required for institution building and sustainability.

As a result of this strategy, at the end of 1993, there were 103 SHGs in the Gulbarga Project area, and 8 SHGs in the surrounding villages where people had come forward to start SHGs on their own. Of these 103 groups, 58 SHGs were composed of socially or economically marginalised groups like tribals (23 men's groups, 20 women's groups) and scheduled castes (15). Women's SHGs numbered 40, of which

20 were tribal groups. The landless were included in these SHGs; in Wadigera they availed of loans for business and to purchase livestock for which fodder was available due to their access to regenerated areas.

Each of these 103 SHGs had a common fund which the members managed according to rules that they had decided upon. The total common fund of these 103 SHGs amounted to Rs.2.6 million in December 1993. The total amount loaned totalled Rs.4.2 million; the overdues were only Rs.2.6 lakhs. Of these SHGs, 13 had already availed of Bank finance directly under a NABARD scheme which allowed Banks to lend directly to SHGs; in the formulation and operationalisation of the scheme MYRADA's experience has played a major role.

There is a great deal of evidence to show that these SHGs had provided an opportunity for the marginal groups to gain confidence, to manage their affairs, to attain a higher level of independence, since they no longer had to depend on money lenders (usually the larger farmers in the watershed) for consumption or other loans. Several groups took up income generating and infrastructure related activities on their own. Three groups of women have undertaken the responsibility of managing a watershed; the major motivation for this was that the group common fund would benefit from the savings mobilised as a result of supervising the work themselves. These groups play a major role in planning, budgeting and implementing watershed treatment; they are no longer passive spectators or content to remain on the margin when issues concerning their lives are being discussed.

Tribal SHGs have taken a much greater role in watershed planning and implementation and have asserted their rights through lobbying for infrastructural benefits like roads connecting their Thandas, and for bus services. They also decided to form an Apex Association of all the tribal SHGs and to put up candidates for the Gram Panchayat elections.

The landless, especially those who do not provide traditional services like barbers and shop-keepers are still unable to tap the investment flow into land and agriculture. Efforts were made by MYRADA to persuade large absentee landlords to lease land to landless families, but these have not been successful mainly due to existing laws which favour the tenant. The landless however are all members of

These groups play a major role in planning, budgeting and implementing watershed treatment; they are no longer passive spectators or content to remain on the margin when issues concerning their lives are being discussed.



SHCs; they avail of loans for consumption and income generation. They have been confident to take loans for milch animals since they were given access to fodder from protected areas in the watershed. As areas under cash crops increased in Wadigera the need for labour also grew; and is today almost double of what it was in 1987; this has helped to provide the landless and marginal farmers with increasing labour opportunities in their watershed; however, while they are much less dependent on larger farmers than before, they are still not in a position to bargain for higher wages which continue to be depressed below the official rates.

The lesson that emerged from this experience was that though the watershed was one geographical entity on which all the land holdings whether public or private, large or small, were inter-linked, yet it was not a community; several interests collided, relations among them were exploitative; loyalties were far stronger at the levels of the small sub-groups than at the level of the "community". Introduction of measures therefore were also assessed - within this complex set of relationships. If equity was to be achieved, the strategy had to make adequate space in which these groups could grow and attain the skills and confidence required for "effective" participation within the watershed and linkages with the wider community.

• Equitable distribution of benefits - a condition for co-operation

When the planning of watershed measures was discussed, another relevant equity related issue arose. The subject under discussion was the need to introduce contour bunds instead of or in conjunction with boundary bunds which already existed in most cases. Contour bunding requires the cooperation of all the farmers, as they cross private farm boundaries. It was clear that people were reluctant to cooperate even though the benefits were accepted by most.

There was one particularly vociferous group that saw no benefit from contour bunds; in fact they considered them an impediment to higher productivity.

Later it turned out that even those who would benefit were reluctant to agree because if contour bunds were introduced, they would:

- lose the clear demarcation of their property which was to them of the highest priority; in fact most disputes between neighbouring farmers had arisen because one accused the other of encroaching on his lands.
- have to cooperate with their neighbours; in several cases there was already friction between them.

Those who refused to cooperate since they felt that they would be the losers were those who owned lands at the end of the contour bunds which they expected would be flooded and more prone to erosion. In this case equity in terms of the demand for equal sharing of benefits (or at least the expectation of benefits) among all those who had to cooperate for the introduction of a particular conservation measure took precedence over efficient and standardised water and soil management measures. Some of the water and soil conservation structures like contour bunds, though technically sound were not seen as value neutral but as partial to some and not to others.

The approach adopted by the project after discussion with all concerned was to focus on boundary walls and to integrate them with the contours wherever possible. The project also decided to compensate farmers in kind for conservation structures that they had constructed on their own fields instead of levelling them or replacing them with contour bunds or structures with approved (official) dimensions. Smaller bunds of pebbles were also introduced within the fields; this received a mixed response initially but is gradually being adopted.

The lesson intervenors learned was not to impose a technology which demanded a level of cooperation that people were unwilling to offer, much less to sustain, since they knew that the benefits would be unequal. The decision to compensate farmers for measures they had introduced on their own, removed the impression that those with initiative would not benefit from the intervention.

• The trickle down effect favours those comparatively better off

It was evident to people with holdings on the upper reaches that they would not benefit as much from water conservation measures as those lower down. The trickle down effect in this case would favour the better off sections.

The project accepted the position that the physical structure of a watershed and the location of treatment measures tend strongly to favour the lower reaches, at least in the short run. Further conservation measures are generally introduced first in the lower and middle reaches where titles and use of land are clear. It is only later that the upper reaches are treated. The reasons for this delay in treating the upper reaches are many; in some cases the lands are encroached, in others they are degraded forest lands and it takes time to involve the Forest Department in any strategy towards joint forest management; in yet other cases the lands belong to the Revenue Department and there has been open access to them, efforts to restrict access can lead to local conflicts. Where the lands are privately owned, the farmers on the upper reaches who usually belong to the poorer sections give priority to food crops hence efforts to grow trees or use space for conservation are not easily accepted.

The introduction of treatment measures in the middle reaches, moves comparatively faster as titles and use are usually clear. As a result, holdings in the lower reaches benefit and the impact in these areas is visible in the short term. Those with holdings in the middle reaches often state explicitly that do not benefit as much as those lower down especially in the short term. These are major constraints in the strategy for watershed management which do not foster equity; on the contrary they tend to increase the gap between the incomes of the upper and lower sectors of the population. This does not imply that conservation measures in the middle reaches do not have an impact in the short term; they do, but the impact is significant to farmers only if there are

The lesson intervenors learned was not to impose a technology which demanded a level of cooperation that people were unwilling to offer, much less to sustain, since they knew that the benefits would be unequal.



long dry spells during the monsoons, which may not occur every year. Besides since protective irrigation from open wells is not a common feature in the middle reaches, the impact on ground water recharge does not benefit these farmers unless they decide to sink open wells; they take this initiative a few years after the treatment, and usually wait till one farmer takes the risk and succeeds.

MYRADA has lobbied with the Government and Forest Department to treat the upper reaches and to evolve a management system in which the people are fully involved and from which they have clear benefits. Where the lands belong to the Revenue Department several watershed groups have taken the initiative to approach the Government and to allow them to regenerate these lands and to use the biomass. Farmers in the middle reaches have begun to excavate shallow open wells along nullas to provide protective irrigation. **Farmers with holdings on the upper reaches however have benefitted much less from watershed treatment when compared to those lower down.** A strategy has to be developed taking into account their needs if they are to benefit both in the short and long term. Unless this strategy evolves, their commitment to sustain conservation measures in the upper reaches will soon disappear.

• Equity may require a substantial increase in investment in the upper reaches even if average costs per acre rise above official guidelines

Experience from several watershed indicated that even after treatment:

- productivity of farms in the upper reaches hardly increased, while the increase was significant (20-100%) in the lower reaches after 2 - 3 years. Farmers in the upper reaches were also reluctant to go in for hybrids.
- farmers in the upper reaches did not shift to cash crops; it was farmers in the lower and middle reaches that took this risk.

- experiments with horticulture in the upper reaches as a long term income generation source which would also provide tree cover and reduce erosion were largely unsuccessful. The main reason was lack of water for irrigation during the long dry summer and the priority that farmers in the upper reaches gave to food crops.
- even though the upper reaches are treated, soil erosion continues, though on a lesser scale; can this be compensated for?

The strong message that emerges from experience in watersheds where holdings in the upper reaches belong to marginal groups is that the project must be able and willing to invest in improving the depth and quality of soil of the upper reaches. This requires a level of investment that is higher than what is adequate for lower areas; it would also require new measures which are not accepted in the official guidelines for watershed treatment. Intensive agriculture, including various types of terracing on private holdings located on slopes in the upper reaches, though capital intensive, may turn out to be more cost-effective in the long term than horticulture on pasture lands especially in dry zones. Alongside, training of farmers, in management practices which may be new to them and may require much more time and effort on their part than they are presently investing, is required. Unless these decisions are taken and implemented, any significant increase in productivity in these areas will not be achieved; consequently the gap in sustainable incomes between groups farming on the upper and lower reaches will increase and equity will suffer.

• Where ownership, use and expert solutions collide, often affecting equity adversely

Many of the measures proposed by technical "experts" for the upper reaches also did not meet with enthusiastic approval. When trees (horticulture) was a measure proposed, people did not respond positively since some of the areas under

cultivation in the upper reaches were encroached, largely on degraded forest lands; people suspected that if these areas were brought under tree crops, the Forest Department would have a stronger claim to recover the lands. While the legal position would be that these lands should be handed back to the Forest Department, peoples' expectations were that political pressure would finally "regularise" their encroachments if the land remained under crops. People also hesitated to invest time and labour on treatment measures on lands over which they had no clear titles. The related issue was that these families set a priority on food crops for their sustenance and survival; could they be asked to shift to tree crops which gave returns only in the long or medium term? Given the fact that the families with holdings on the upper reaches were relatively poor and marginalised socially, could a win-win strategy be evolved which would meet the objective of the Forest Department (to green the area, not necessarily to own it) as well as the objective of the people (who were willing to experiment with tree crops provided their short term food needs and their user rights to the land were not eroded)? This strategy would support the efforts to achieve the objective of equity without compromising on the need to protect the upper reaches. The policies incorporated in the Joint Forestry Management strategy provide a few spaces for such a win-win solution to evolve, but it still has to be implemented in the field; it also requires modifications to give people a greater role in planning and to protect their interests not only from private parties but also from Government Departments accustomed to control forest products.

• Traditional practices could increase inequity

Traditional practices also have to be reviewed if the basis for equity is to be strengthened. For example, the traditional practice in drought prone areas is to harvest silt, rather than to prevent erosion. The larger farmers and more powerful sections of the community usually own lands in the lower reaches where silt can be harvested. They also tend to have the resources to invest in silt harvesting measures.

The traditional measure of diversion drains to protect fields from flooding is also partially motivated by the objective of harvesting silt lower down even though it deprives the upper reaches of the potential to collect water through other protection measures which encourage seepage. There were cases where

Farmers with holdings on the upper reaches however have benefitted much less from watershed treatment when compared to those lower down.

The project must be able and willing to invest in improving the depth and quality of soil of the upper reaches.



larger farmers holding land in the lower reaches objected to conservation measures higher up since they suspected that their 'silt harvest' would decline.

Though diversion drains have been identified as a traditional practice, intervenors should carefully consider supporting investment in diversion drains since the pressure may originate from farmers with holdings in the lower reaches who are usually more vocal in the initial stages. Measures to hold water in the upper reaches and to encourage seepage should be considered prior to any proposal for diversion drains. The example of Mr. Bheema Rao in Kalamandargi watershed who constructed a water holding measure on the upper reaches needs to be studied and replicated. (refer page 86)

• Investment being related to the size of land holdings is unequally distributed

The larger the land holding, the greater the investment in conservation measures. This situation is aggravated when all investment is from outside with little or no contribution from the land owner, or when the entire investment is given as a grant. The practice that MYRADA has introduced where watershed groups not only plan the treatment measures but also decide on the total budget, on how much each farmer will contribute (this usually depends on the degree of investment on his lands!), on what percentage is a loan and grant (this decision depends on the groups assessment of the farmers ability to mobilise resources and to repay), tends to correct the pattern of unequal investment favouring the larger farmers. This strategy also results in farmers setting their own priorities among conservation measures thus making them more cost effective. The presence of self help groups managing credit also provides a readily available source of funds from where each farmer can borrow to meet his contribution.

• The low priority given to investment for livelihoods in watershed programmes tends to marginalise the landless while extending the potential productivity base of the landed, thus increasing the gap between them and the landless/marginal farmers. Several surveys in MYRADA projects indicated that the landless/marginal farmers find it difficult to broaden their livelihood source base since investment in terms of capital, linkages to input sources and marketing are heavily biased towards agriculture, leaving limited resources to create potential for livelihoods in non-farm related areas. Watershed projects therefore should make adequate provision to support off-farm livelihood sources from the beginning.

• Women and Equity

This part does not distinguish between women in poor families and those belonging to the better off sections. It attempts to analyse whether the interventions made in the watershed have benefitted women or increased the level of their contribution to family prosperity. It focuses more on the 'condition' of women in their material state, namely, on whether they have improved their access to and control of the increased resources like credit, biomass, wages, and of opportunities for income generation and transport to markets, besides easier access to better drinking water, education and health rather than on the 'position' of women in society (namely their relationship with men, and the removal of institutionalised forms of discrimination at the level of the family, society, political life, including laws governing property and hereditary rights).

It must be stated that the objectives of PIDOW Gulbarga Project when it began were:

- to increase productivity through management of soil and water which would in turn foster the introduction of hybrids/cash crops by reducing the risk involved in larger investments;
- to increase biomass especially fuel and fodder.

The objectives of improving the 'condition' of women and their 'position' in society were not included. Studies to assess the impact on women have to take this into account.

There is another trend which needs to be critically analysed, namely to require every project to achieve a wide range of objectives, even if by its very structure it is more suited to achieve some objectives rather than others. What is however of importance is to ascertain whether in the process of achieving certain limited objectives, the project does have unintended results which place marginal groups in a more vulnerable position than they were previously. It is from this angle that studies on the impact of women in watershed programmes are of use. They could help to identify critical areas where further intervention is required to correct these unintended effects if any.

• Womens' Self Help Groups

Evidence from the sources listed above as well as from reports of outside visitors to the group meetings is adequate to claim that the SHGs have created a social space for women over which they have control; they are able to discuss their problems, work towards solutions and meet their credit needs through these groups, thus increasing in self confidence.

That the groups have provided social space for women where they are free to express themselves and to discuss issues that concern them and to set up and manage a common fund as well as small income generating projects, emerges from the study "Gender in PIDOW"² sponsored by the Swiss Development Cooperation

"What has been the impact of sanghas on women's lives? The processes of being organised into sanghas is a novel experience in the lives of women. Women members have learnt to speak and realise the need to participate and create spaces for themselves. Over the years, women have learnt to bring diverse issues to the sanghas for discussion. In recent times, even Ram Janma Bhumi has figured in their discussion. There has also been a gradual shift in the nature of activities that they desire to pursue. Initially, kitchen garden, soakpit etc., used to be discussed. Now many of the sanghas have graduated into discussions

The low priority given to investment for livelihoods in watershed programmes tends to marginalise the landless while extending the potential productivity base of the landed, thus increasing the gap between them and the landless/marginal farmers.



² "Gender in PIDOW", by Bharanmathy Vasudevan and Uma Ramaswamy. Pg 14-15

about smokeless chulas, flour mills, milch animals and mini water supplies. Women have begun to take loans for work-related activities. There are a couple of sanghas which have exhibited a high degree of capacity building. One sangha, with 12 Marathi women, for example, have taken up trading activities in fertilisers, and jowar and ragi by using Rs.5000 that they conserved in the sangha. This was highly appreciated by the village because it came at a time when the village was going through drought conditions. The very same group now wants to take independent charge of 120 acres of the watershed. There is even a case of a woman who has taken a loan of Rs.5000 to purchase a plot of land. There are also a couple of instances of giving house loans for the homeless. The women sanghas are also seen to be involved in entrepreneurial activities like the setting up of a flour mill etc. Some of these need based activities set the women sanghas apart from those of the men. "Yet it must be said that women are comfortable in arriving at a decision after consulting the family. On the other hand, men are quick to take spot decisions. The dynamics of decision making within a household holds the key to understanding the postures that women take in making decisions".

"The presence and success of some of the women sanghas has had a triggering effect, inculcating interest in others to come together and organise themselves. Another offshoot is the emergence of Yuvak Mandals, comprising of the youth of the villages. The Yuvak Mandals have in turn initiated moves to organise girl children on similar lines. Predictably, the women of the Sanghas have been quicker to get disciplined to the norms of savings and credit. Patterns in credit management have begun to emerge. Loans for consumption are taken either initially or in times of crises. By and large, loans are used for income generation and asset formation. Noticeable are certain patterns in

income generation activities. Milch cattle, sheep rearing, kitchen garden, are one set of agro-based activities. The growing interest in animal husbandry and livestock, is in a sense, related to the results of the implementation of the watershed which has improved the fodder crop and ground water recharge.

Several questions surface for introspection at this juncture. The critical issue here, however, is this: How does one involve women in the planning process, so that they can be given a chance to induct their requirements and perspectives into the project portfolios?"

A case study of Limbu Thanda made by two Swiss students in 1994 confirms these findings¹:

"People of both sexes in Limbu mentioned the creation of the SHGs as one of the best innovations brought since MYRADA's intervention."

"Women have access to sources of credit thanks to the SHGs. In most of the cases money obtained from the credit does not concern the woman alone but the whole family. Having the opportunity of getting credit directly is however a novelty for women."

This fact gives them a new status and is certainly the beginning of a long term improvement."

And further

The most important changes in Wadigera due to the collaboration with MYRADA and concerning women's life are of practical and social nature.

Daily life (practical change)

- introduction of the "smokeless chulas" (oven) allowing an economy of fuel and time and representing an improvement in sanitary conditions as well (less smoke).

¹ Reudi and Nancy Lenthé - Bourgeois

Social life

- formation of Self Help Group with all the advantages that it brought along (boldness to voice their opinions, access to credit, learning to sign their names instead of thumb impression etc.)

Even if improving the livelihood of women still represents a huge potential in Wadigera, their status and their daily life has undoubtedly changed."

• An analysis of how the common fund is built up and managed by the SHGs confirms the findings described above.

Table 1 gives a breakdown of the composition of the common fund of 40 women SHGs in PIDOW Gulbarga. Of significance is the high proportion of savings and interest earned from loans which have increased the fund of each SHG; each member therefore has a stake in the group and the group considers the common fund as its own; this attitude influences its decisions on disbursing loans since there is a risk element involved. The amount collected as "fines" also indicates that sanctions are effective; as a result the overdues on the principle and interest are minimal (Table 2). Table 1 also indicates that the SHGs have incomes from other sources; they implemented soil and conservation works, thus reducing costs, which they save; they have group income generating assets, like bullock carts which are rented out; they also have income from the sale of fodder harvested from protected plots.

Table 2 indicates that the average number of loans per member is three. Though a large number has been taken for consumption purposes, including travel and socio-religious functions, the repayment in these categories is over 95 per cent. These "consumption" loans may not have increased incomes but there is adequate evidence to prove that they have lowered the degree of dependence on larger farmers and traditional money lenders, and increased the confidence of women. There are also savings, since the cost of credit provided by the SHGs is lower; besides the interest remains with them. There is also evidence that women have used these loans for purposes which support their well being and that of their children, especially in the areas of health care and daily sustenance; these are areas which men tend to neglect.

How can the women be involved in the planning process, so that they can be given a chance to induct their requirements and perspectives into the project portfolios, is a critical issue.



TABLE 1

COMMON FUND STATUS OF WOMEN SHGs AS ON 30.06.1994

Total Women SHGs	40
Total Members	748
COMPOSITION OF COMMON FUND	
Membership Fee	5,616.70
Share Capital	126.50
Fines	2,190.25
Donation	4,273.35
Savings	279,935.00
Members Contribution	13,400.00
Bank Interest	11,210.35
Interest on Loans	259,855.70
INCOME FROM	
Soil & Water Conservation	12,749.75
Sale of Inputs	566.50
Fodder/Forestry	3,491.00
Group Income Generating Programme	7,816.00
Other	185.00
Working Capital From MYRADA	303,871.75
TOTAL	Rs. 905,287.85
Average Common Fund	Rs.1,210/- per member
Average Savings	Rs. 374/- per member
Average Loan	Rs.2,078/- per member

• Equity in Wages

Evidence from all sources indicates clearly that womens wages are on the average 50 per cent less than what men earn. This difference is the result of cultural, administrative and traditional factors, some of which are described below :

The work that men traditionally perform is considered to be "skilled" and "heavy". Even the Department of Agriculture considers womens work in Agriculture "unskilled". What is more striking and of concern is that even women consider mens' work as more skillful. The study "Gender in PIDOW" quotes a womens group as saying "Our men spend a lot more time in the fields and this itself gives them greater exposure to gain skill".

Further analysis indicates a complex set of interacting factors which influence this disparity. Activities can be grouped into three categories according to certain features that each group has in common :

- Traditional activities like agriculture and animal husbandry which are undertaken regularly every year and take up a comparatively longer period have an impact on life throughout the year. It is these activities with which village life is intrinsically inter-woven; religious, cultural and family practices are largely conditioned by these activities.

In these activities the roles of men and women are more clearly demarcated than in others, when labour in such activities is hired out the roles and rewards of women tend to get conditioned by their status in traditional society; and since traditional society tends to marginalise women and give them lesser importance, atleast as far as the roles in society are concerned their contribution to these activities is also given less value. The intervention in PIDOW did not increase these activities to any great extent, nor

TABLE 2

LOAN STATUS OF WOMEN SHGs AS ON 30.06.1994
GULBARGA

Activity	No. Of Loans	Loan Amount	Principle Recovered	Interest Recovered	Amount Outstanding	Principle Overdue	Interest Overdue
Astra Ole	10	500.00	500.00	315.00	0	0	0
Clothing	14	32,000.00	3,200.00	401.00	28,800.00	0	0
Education	28	7,260.00	3,850.00	452.75	3,410.00	0	0
Food	652	337,546.00	215,911.85	96,522.40	111,634.15	1,094.00	3,707.50
Health	259	97,497.00	54,842.75	14,493.20	42,654.25	550.00	870.00
Loan Clearance	6	14,800.00	9,400.00	1,161.00	5,400.00	0	0
Socio-Religious	258	170,250.00	79,271.50	26,266.50	90,978.50	0	0
Travel	66	30,815.00	15,375.00	5,190.00	15,440.00	0	0
Crop	901	516,040.80	391,756.65	84,108.25	124,284.15	5,150.00	3,980.00
Fodder	1	2,000.00	2,000.00	200.00	0	0	0
Horticulture	2	7,000.00	3,000.00	640.00	4,000.00	0	0
Irrigation	1	1,000.00	0	0	1,000.00	0	0
Land Development	28	18,476.90	11,675.00	2,808.00	6,801.90	0	0
Land Purchase	4	10,700.00	4,700.00	1,435.50	8,600.00	0	0
Cow/Buffalo	81	261,650.00	106,147.00	21,373.23	155,503.00	0	0
Bullocks	12	16,000.00	7,400.00	1,435.50	8,600.00	0	0
Sheep/Goat	7	10,900.00	5,700.00	2,475.00	5,200.00	0	0
Insurance	16	4,460.00	1,560.00	106.00	2,900.00	0	0
Petty Business	4	7,000.00	400.00	42.00	6,600.00	0	0
House Construction	5	5,100.00	2,665.00	712.00	2,435.00	0	0
House Electrification	1	300.00	300.00	48.00	0	0	0
House Repair	5	2,745.00	745.00	30.00	2,000.00	0	0
TOTAL	2361	1,554,040.70	930,399.75	260,809.85	623,640.95	6,794.00	8,557.50

did it attempt to change the roles that women played in traditional activities; however the introduction of threshing machines did have an unintended impact by decreasing the work load of women.

- In the second group are activities which are traditional but are not regular and do not play a major role in the life of society and the family; examples of such activities are water and soil conservation measures. These sporadic activities are not implemented by all the families; the degree of involvement of each family in these activities depends largely on the type and extent of land, potential for harvesting silt, the degree of initiative and hard work that the family has and the opportunities for alternative wage employment. The PIDOW Project raised the level of involvement in these activities to a very large extent. Analysis of the wage pattern during these activities indicates that women did receive a higher wage proportionate to the work they did when compared to what they received in agriculture. The distinction however, between skilled work done by men and unskilled work undertaken by women continued to operate resulting in women receiving lower wages than men.
- In the third category of activities fall a few which are relatively recent. A good example is the forestry nursery raising programme. Decentralised nurseries run by groups of women have emerged all over the Project area. Many of these nurseries earn an income by selling saplings which they had maintained for periods of three to six months. Experience in Gulbarga indicates that in such recent activities, women play a relatively dominant role, both because these activities are suited to women and also because they are not conditioned by traditional practices. Studies indicate that in nursery raising, women's wages are comparatively more than what men earn.

The study "Gender in PIDOW" arrives at similar conclusions. It relates the "resource involvement" of men and women with the economic compensation they receive in three areas, namely Forestry, Water and Soil Conservation and Agriculture. The study does not define the indicators it includes under "resource involvement" and what standard it has used to assess each indicator; and therefore it has to be taken in a general way. The study concludes that in the activities of women related to agriculture which are considered to be unskilled, their resource involvement amounts to 60 per cent compared to the contribution of men which is only 40 per cent, while the economic compensation of women is only 40 per cent of the total while that of men is 60 per cent.

In activities related to Water and Soil Conservation where women's work is still considered unskilled while men are the "Key players", women's and men's contribution in terms of resource involvement is equal; the economic compensation women receive however is only 40 per cent of the total whereas men receive 60 per cent.

In the case of forestry there is a significant change. Women have been identified as the "key players" in this sector. The "resource involvement" of men is 30 per cent and that of women is 70 per cent. The economic compensation of women is 70 per cent and that of men is 30 per cent. This does present an equitable picture.

PART - VII

INDEGENOUS TECHNOLOGIES

The technologies that this chapter deals with are restricted to "treatment" structures in PIDOW; improvements in agriculture and horticulture are not included. If physical structures play an important role in "making water walk", soil regeneration through balanced inputs of which biomass is a major component, brings the "soil back to life". MYRADA's experiments with soil regeneration which have taken off successfully in other projects are not described in this part.



Indigenous Technologies

Though MYRADA is supporting watershed management strategies in seven projects, the issue of 'indigenous technologies' has arisen only in Gulbarga, chiefly because it is only in Gulbarga that the Government (DLDB) is involved. The DLDB adopted standard practices as regards what treatment measures to introduce, the design of structures, type of materials used in structures as well as unit costs. A team¹ was commissioned by SDC to study the potential of indigenous technologies in the Gulbarga Project area. The team identified the following indigenous technologies:

- Boulder bunds on field boundaries.
- Boulder/Earthen bunds as interceptor structures.
- Diversion drains.
- Waterways
- Rills Managements with stalks (Redgram) and stones.
- Silt harvesting structures.

In a recent exchange of experiences within MYRADA regarding 'indigenous technologies', the following distinctions were made in an effort to clarify the various issues involved:

1. Awareness of the need among farmers for treatment measures to manage water and soil.

¹ Led by Dr. B. G. Rajashekar and Dr. N. K. Sanghi with staff from DLDB and MYRADA, hereafter referred to as the Indigenous Technology Team (ITT).

2. Design of structures.
3. Types of measures to control soil erosion and water run off.
4. Skills required to construct structures.
5. Materials to construct structures.
6. Cost of structures.

• Awareness of Conservation Measures

The awareness of the need for measures to manage water and soil is not new; it is evident that it has been the basis of traditional management practices in all the areas where MYRADA is working; boulder and earthen bunds, silt traps, diversion channels and interceptor structures of different materials including natural vegetation on fields have been constructed as far back as people can remember.

The ITT's report records several examples of such traditional practices, for example:

"Mr. Bheema Rao Janakatte an enlightened farmer of Kalamandargi, in Gulbarga Project has successfully utilised the Nala adjacent to his lands. During his father's time an earthen embankment was built across the Nala. Three silt traps were also made to trap the silt and now the whole Nala is recovered and fully exploited."

"Recently Mr. Bheema Rao, has made a percolation tank on the up stream side of the recovered land, mainly to provide moisture to the reclaimed land."

"A well shaped, technically sound, spill way is also provided for the percolation tank and the tank itself is built using porous materials so that water may seep through."

(Report of the ITT, Page 4)

The ITT report continues

"Mr. Monu Naik, an enterprising farmer of Limbu Thanda has built a boulder dam about 10 years ago. He kept raising the dam one to two feet every year.

And he has been able to harvest 0.75 acre of excellent top soil which supports a dry paddy crop during the main season and Bengal Gram on residual moisture."

"Even though the rain ceased in July good amount of moisture was seen below the surface."

"Based on the success he built two more checks on the upstream side."

"In the last two years he was able to harvest 10-12 bags of paddy (65 kg/bag), (2800 kg/Ha) and 0.5 - 1.0 bag of Bengal Gram (100 kg/bag) and this is far more productive than uplands." (ITT Report, Page 6)

And further

"More adventurous attempts are now going on in Limbu Thanda (a tribal colony) on the upper reaches of the Watershed."

"Both uplands and nalas are being exploited here."

"Taking incidental soil erosion, as an opportunity those farmers have trapped the soil in the wider areas in the valley by creating boulder dams."

"These structures are also maintained."

"These dams are raised periodically as and when silt accumulates."

"Bunding is believed to hold the soil and improve the yield to the tune of 25%". (ITT Report - Pages 5 & 9).

What is however clear is that the awareness of the need to manage soil and water and measures to achieve this objective is 'indigenous'. If adequate measures were not undertaken by farmers or if there has been no major improvement during the past 20-25 years, the reason is not "lack of awareness"; there are other reasons; for example:

- Poor soils, especially 'C' class.
- Preference to work on more productive fields, leaving their marginal lands fallow or cultivating with minimum investment.
- Increasing awareness of alternate wage income.
- Increase in the regularity and length of dry spells during the Monsoons.

The awareness of the need to manage soil and water as well as the measures that are needed to achieve this is 'indigenous'.



- Decline in seed quality of traditional varieties of cereals.
- Increase in price of inputs.
- Large families resulting in decrease in size of holdings, making them non-viable.
- Unorganised markets - low prices after harvest; low staying power of marginal farmers.
- Growing need for cash income.
- Break down of village society making co-operation among farmers increasingly difficult.
- Lack of skills and confidence required to set up and manage new co-operative institutions after the traditional system has collapsed or is no longer appropriate to cope.
- The sharp increase in land prices during the past five years, particularly in areas where farms are being developed by city/town people and where granite is available for quarrying; farmers prefer to sell drylands rather than invest in conservation measures.

• The Added Value of Intervention

The basic requirement of watershed management is cooperation. MYRADA's intervention has motivated people to co-operate and to build institutions which they find relevant to their needs and which they can manage. The intervention has provided farmers with the support to improve their skills to manage these institutions and to set up the systems required to make them sustainable. One result of this new approach towards co-operation has been the regeneration of fallow lands; largely private fallows in some projects like Gulbarga, and revenue wastes like in Kadiri, Ananthapur District. These blocks especially on the upper and middle reaches have helped in a significant way to conserve run off and reduce soil erosion. Though this was not identified as a traditional measure by the ITT Report, the people responded spontaneously once the basis for co-operation was established

and the titles to the land were clear and the potential for conflict reduced to manageable levels.

MYRADA's intervention also resulted in a greater effort to construct watershed treatment measures; people had stopped investment on dry and marginal lands, instead they sought out and obtained alternative sources of employment, largely wage labour and often migrated seasonally. MYRADA's intervention allowed them to earn while they worked on the lands within their watershed including their own fields.

There are features in the traditional approach to the management of soil and water that differ from the blueprint followed by the Government. Both approaches however are based on defensible strategies and reasonable perceptions. They need to be harmonised in a win-win strategy, in developing which, the intervening NGO plays a critical role. Generally, for example, farmers tend to treat the lower catchment first, they attempt to harness silt along waterways, thus creating a micro situation where both soil and moisture are brought together to provide an optimal base for a secure crop. In one watershed, farmers actively discouraged soil conservation measures in the upper reaches, as they perceived that those measures would slow down the collection of silt in the traps lower down. To them soil erosion was an opportunity rather than a problem. They were even willing to contribute in cash and kind (upto 60%) to construct these silt traps. These silt deposits are often the only areas where farmers in drought prone areas are ensured of a crop. Further, these areas where silt is "harvested" provide an opportunity to cultivate paddy - a crop to which farmers give priority.

In contrast, the standard Government approach is to treat the upper reaches first in order to control erosion and check water velocity and to work from the ridge to the valley; this is an appropriate strategy that takes into account the entire watershed, especially the upper and middle reaches

where the poorer farmers mainly own land. A compromise has to be arrived at, by fostering regeneration of the upper catchment, while allowing farmers to take the initiative to harvest silt lower down. This is where the ability to co-operate and the institutions required to support co-operation assume importance. The role of the intervening NGO to initiate the processes leading to appropriate and sustainable conservation measures is critical; without this intervention, conflicts easily surface obstructing progress.

If the efforts to innovate in the area of physical treatment measures diminish and cease after the project is over and the intervenors withdraw, the impact of intervention will not be sustainable. The NGO needs to ensure that innovation becomes an integral part of watershed management. This requires that individual farmers continue to respond to emerging problems and opportunities for improvement in the areas of soil health and surface water management. In many cases, individual farmers will hesitate to take the initiative unless they have the support of the watershed institutions. It is therefore necessary that the peoples institutions which emerge in the watershed include the support of innovative efforts as part of their responsibilities; this will ensure that if co-operation of several farmers is required to support individual initiative, there will be an institution which has the credibility and responsibility to initiate a process to ensure that there is adequate give and take for a solution to evolve in which no party is a loser and where there is no conflict either latent or open. Briefly put, the process of innovation itself should become sustainable.

Intervention in terms of conservation measures as well as management systems required to maintain them on the upper reaches also requires the support of the Government institutions since it involves lands belonging to various Departments. In PIDOW Gulbarga, committees function both at the District and State levels where existing policy and practice are reviewed, making them more supportive of the role of peoples institutions and traditional technologies in Watershed planning and management. If people are to have the space to develop management systems to sustain conservation measures appropriate to the upper reaches, NGOs have to intervene also at the level of policy, especially in the Forest and Revenue Departments.

MYRADA also introduced the idea in Gulbarga that measures already adopted by farmers should not only be respected but also

The role of the intervening NGO to initiate the processes leading to appropriate and sustainable conservation measures is critical. Without this intervention, conflicts easily surface obstructing progress.



compensated for. The Government agreed, provided these treatment measures could be integrated with the over-all plan. After a survey, of these traditional measures in the Gulbarga Project area, the Soil and Water Conservation Department compensated farmers in 1989-90 for the conservation work they had done on their fields. This is in contrast to the prevalent practice of implementing a treatment plan even though it may require that existing structures are levelled or destroyed. This decision to pay farmers for their initiative raised the value of their conservation efforts in their eyes; they were more eager to discuss and follow-up plans for maintenance of these structures. The lesson learnt therefore was that if sustainability is one of the major objectives, it will be easier to achieve if farmers' traditional practices and initiatives are not only recognised but also compensated for as part of the over all watershed treatment plan.

• Design of Structures

The design of structures raised a great deal of controversy between 'technical staff' namely engineers, on one hand, and staff involved with community organisation on the other. In fact the differences in design between what was proposed by people and what the technical staff (both from Government and MYRADA) considered to be technically sound were limited to one or two cases of structures mainly boulder bunds and boulder checks on field boundaries. While people wanted boulder bunds especially in fallow lands, to be raised in order to provide protection from cattle and to restrict access - which they considered a priority since they rarely visited these lands, the staff considered these structures solely for the purpose of erosion control, hence they were designed as low and rounded structures.

Where field bunds (earthen) were prone to be washed away at the lower boundary corners of fields, farmers constructed boulder bunds at the corners which allowed water to run through but controlled soil to a

large extent. These boulder bunds were vertical towards the lower field of the neighbour. This did make them unstable, resulting in a few boulders toppling over occasionally and were therefore declared to be technically unsound; but the farmer did not mind replacing a few boulders; he gave priority to good relations with his neighbour which a sloping and stable bund would have strained, as it would encroach on the neighbour's field.

"Farmers prefer to have a trapezoid shape with one side more or less vertical; the vertical side coincides with the boundaries (so that it does not encroach on the neighbour's field) and the inner (upper) side tapers." (Report of ITT - Page 3).

"When constructed with local skill (they) seem to be quite stable." (Report of ITT - Page 7).

During the Joint Evaluation of 1991 (in which SDC, DLDB, MYRADA and farmers representatives participated) the farmers in Wadigera reported the following:

"Wrongly placed and designed gully checks (designed and located by technical staff) led to flooding in some farmers fields as a result of which there were fights in the Sangha and the farmers then went and dismantled the checks."

(From Joint Evaluation Report Group III)

These were not major issues but they generated a great deal of 'heat' and hours of discussions. The reactions were far out of proportion and could only be explained by the inbuilt attitudes of technical experts who find it difficult to accept that people have traditional skills which in most cases are adequate and appropriate to the situation, given the fact that farmers have several concerns with which they have to cope with in order to live within the community.

An overview of the design of structures in all MYRADA projects indicates the following. The design depends:

- on the farmers priorities or objectives which are usually multiple, whereas technical staff focus on the limited objectives of soil and water management.
- on the social context; the farmers give priority to living in harmony even if it requires a reduction of the area where they harvest soil or an increase in the work required to maintain a structure which may be unstable but avoids conflict with the neighbour.

• Types of Traditional Measures

There are various traditional measures to control soil erosion and water run-off; some have been listed by the ITT and referred to earlier in this chapter; gully checks, land development and terracing - are all "indigenous" measures. Priority has been given to some of these measures, especially to silt traps, and to terracing on irrigated



Redgram stalks are available in large quantities in Gulbarga District. The practice is to put bunds using the stalks. Due to non-availability of labour (owing to migration after harvest of Redgram crop) farmers burn the biomass. MYRADA Kodli (Chincholi) project has taken initiative to revive the practice. Each Farmer is given incentive to make Redgram Stalk bunds in the field.



The Redgram stalk bund starts degrading and at the end of two years. It makes excellent compost which is ploughed in.

Rather than introduce new measures, MYRADA has given priority in all its projects to revive traditional practices and to remove obstacles to their rapid spread.

lands as the potential for returns is high, while others have been neglected; but evidence of all these measures is adequate to prove that they have been practiced for a long time. Introduced technologies like field ponds have not caught on except in restricted areas within projects and even here their acceptance by people has been limited. Rather than introduce new measures, therefore, MYRADA has given priority in all its projects to revive traditional practices and to remove obstacles to their rapid spread.

Recently in the Gulbarga Project, objections have been raised by experts to diversion drains which collect run-off from the upper reaches and channels it to waterways and natural nalas. The reason given is that in drought prone areas, diversion of water from the fields is a waste of a scarce resource. Yet people have opted for such diversion drains in some watersheds where the upper reaches are extensive and slopes high; they point out that even in areas of scarce rainfall, there are occasions when there is a heavy downpour in a short period resulting in flash floods and creation of new gulleys and rills in the fields; this can happen within a few hours resulting in heavy damage to crops. This is one reason why farmers with holdings not only in the middle and the lower reaches of the watershed opt for diversion drains. Many farmers when asked whether these drains would deprive their fields of water, replied in the negative; on the contrary they said that these drains increased water percolation and gradual seepage which had a positive effect on crops. While this could be a valid perception it could be difficult to prove or disprove. The ITT report (page 4) describes the case of Mr. Bheema Rao who constructed a percolation tank on the upstream of his lands to provide seepage moisture to the lands lower down. This "tank" is part of a large drain which also serves the purpose of a diversion drain during a flash flood. The ITT report also identifies "diversion drains" as an expression of indigenous technology; they have been constructed by farmers

in the area long before the projects intervention.

Whether structures using cement/concrete should be introduced is another issue that triggers debate. MYRADA has strongly discouraged the use of such structures, as gully checks and silt traps. In areas where the rainfall is around 500 mm. with soils that do not have a good percolation potential, like in the Kadiri and Kamasamudram project areas, MYRADA supports people's proposals for mini



A weir constructed with effective involvement of people holds water (photo 1), while another weir lower down constructed earlier was always dry (photo 2). Note the wall protecting a large area in photo 1.

dams and weirs mainly to hold water for domestic use with an added objective of percolation; however, people play a major role in identifying the site and supervising the construction of such structures.

Engineers whether working with Government or NGOs have been trained in the use of cement and concrete; these structures are expensive and have limited use in watershed management. Besides,

wherever these structures were constructed in Gulbarga, the quality of the construction was below standard. This the people realised. It was evident that there existed a major gap between the knowledge and capacity of technical staff to draw blue prints which are of high quality, and the actual implementation of structures where the quality is usually below standard since they are implemented by contractors without adequate supervision and where unit costs were not transparent. The possibility that local people could supervise the construction of appropriate measures is often not considered. In Kadiri project, a weir was located by the people, designed by an engineer and constructed by a contractor but, under close supervision (of costs and quality) by the people who checked the laying of each stone and called on MYRADA engineers only when they suspected that the quality of the materials used was poor and the costs high. This weir has proved to be a success; a large body of water is stored and used by the community (Photo 1). In comparison, a weir constructed by contractors lower down in the same nala is a failure. The people were not involved in any stage with this weir. (Photo 2).

Indigenous technologies have also spread rapidly once they were revived. There is adequate evidence in Gulbarga that boulder bunds have spread as a protective measure around fallow lands, even outside the project area. The primary objective may be to identify ownership rights and to protect the land, but the result is the regeneration of the protected area. Though the protection of all private fallow lands in a watershed may not be an indigenous measure, it caught on and spread rapidly; this does indicate that it was a measure that the farmers had considered appropriate to restrict access to fields, to manage soil and water and to provide biomass; these boulder walls could not be introduced as they required a level of co-operation and investment which had to be triggered off from outside, and supported by inputs ranging from lobbying for policy change (for example, allowing the Forest Department to work on private lands on one hand and the people to regenerate degraded forest areas on the other) to raising adequate finance.

Technical objections were raised to the use of boulder bunds as a water conservation measure in some projects. However, farmers pointed out that while it is true that water seeps through these bunds, it is also evident that as silt collects, seepage is controlled and reduced considerably. There are also local

Indigenous technologies have spread rapidly once they were revived in Gulbarga. Boulder bunds have spread as a protective measure around fallow lands.





Private lands lying fallow are leased to the Watershed Committees. Protected and regenerated, they yield a rich harvest of biomass as well as act as an effective soil and water conservation measure.

practices which help to improve the water holding capacity of boulder bunds, for example, in Gulbarga "small pebbles are filled inside the boulder bunds; they work as a filler and trap soil; the inner side is filled with soil; the soil filling checks water and allows the grass to grow; this gives additional support to the boulder bunds." (ITT Report - Page 4.)

Further, wing walls to prevent gulleys forming on either side of bunds have been constructed by farmers on their own; they are far more lasting and effective when constructed with boulders than with earth which requires stabilisation and cannot withstand a sudden flash flood.

The start given by Gulbarga not only to recognise these local structures as indigenous efforts but also to remove obstacles that hinder their spread and to compensate farmers for taking the initiative to construct them, must be incorporated in watershed management policy all over the country.

• Skills required to construct structures

There is adequate evidence emerging for all MYRADA's projects, that the people have the skills

required to construct traditional structures using locally available materials. These skills therefore can be called "indigenous". If structures requiring cement and concrete are introduced, outside skills are required. There were a few cases where people of a watershed did not have adequate skills to construct silt traps which were particularly large; in one such case, in Kolar District, after realising that imported labour was expensive, they learnt these skills from a neighbouring village where similar work was being undertaken.

The conclusion arrived at by MYRADA is that local people have adequate skills to construct appropriate conservation structures; there has been no value added by contractors or technical staff either from the Government or NGOs in the construction of traditional measures. The major obstacle to their spread is not the technical competence of people but the technical "pride" of intervenors together with administrative and legal hurdles, financial constraints and the breakdown of local institutions to support co-operative endeavour.

• Materials to construct structures

It was only in Gulbarga that the issue of what materials to use was raised. The reason was that the Government's policy provided only for earthen bunds while local people were more familiar with boulder bunds; boulders were available readily, often in the fields and people had used boulders in most of the structures that they had constructed on their own.

The ITT Report confirms this widespread practice in Gulbarga:

"Boulder bunds are a result of stones recovered from the land after each ploughing."

"Stones picked are used to boundary bunds or may be heaped in corner."

"Bigger stones, if not available are dug out and used for building boundary bunds. Arrangement of stones requires skill; they have to be laid in such a way that the bund is stable. A few people in the village have to skill to do this."

"Even round boulders have been used to make stable boulder bunds." (Report of ITT - Page 3)

This author recalls a meeting in 1986 when the Soil and Water Conservation Department insisted that boulder bunds could not be approved since there was no standard to measure work done¹; besides the distances from which boulders were lifted differed in each case. It was suggested that the people in each watershed could be asked to work out the norms of payment on their own; the people responded immediately and worked out a system which was finally accepted by the Department. As a result boulder bunds were adopted as part of the recommended practices of the Department in 1987. This is evidently an acceptance of an indigenous practice; as a result, farmers who had constructed boulder bunds on their own were compensated for in 1989-90.

• **Vegetative Structures** especially *agave* has been used in all MYRADA projects to harvest soil and reduce water flow in small gulleys. The degree of success differs, and depends to a large extent on annual replacement of plants that have been uprooted - mainly by rodents (and often by a community that catches and feeds on rodents) and on rainfall or water collection near the plants.

Lantana has been used extensively in parts of Huthur and Talavadi to stabilise diversion drains. In Kadiri and Gulbarga where *Custard Apple* grows in the wild, it has been planted on bunds where it plays a stabilising role and also provides income from fruit and fuel. It survives under harsh conditions and is not browsed. Farmers have taken the initiative to dibble seeds and to plant saplings on bunds. Briefly this plant is multi-purpose and non-browsable and is preferred to single purpose vegetation. The market for fruit is easily accessible and the fruit does not get damaged during transport.

MYRADA has used *vetiver* in parts of Talavadi but only as a bund stabiliser. No initiative has been taken to introduce *vetiver*

¹ The official yardstick was based on the "burrow pit" which required that the material be "dug out" and not collected as in the case of boulders.

The start given by Gulbarga to recognise these local structures as indigenous efforts and to remove obstacles that hinder their spread and compensate farmers for taking the initiative to construct them, must be incorporated in watershed management policy all over the country.



purely as a live bund. There are many reasons for this. Initial failures in dry areas where the rainfall was below 500 mm. and spread over 2 months, with an occasional short burst if cyclones hit the area later in the year, discouraged further trials. The general feedback from experiments with vetiver is that it takes hold in areas where water is available and soils deep; hence it would be appropriate in irrigated fields or in high rainfall areas. Deep soils are not available in several projects like Kadin and Kamasamudram or Challakere. As a result, vetiver has not caught on and spread. Further though it is a multi-purpose grass since the roots are also marketable, the market is limited to certain areas. In general, however, especially in arid zones, vegetative checks need the backup of physical structures since they take several years to stabilise.

• Cost of Structures

An analysis of costs in several projects indicates that unit costs tend to be higher when the treatment plans are made by Government or by intervenors including NGOs who have not involved the people in the process leading to watershed management and the growth of appropriate peoples institutions, and when people are marginal to the planning, budgeting and implementation exercises. On the other hand when people are involved in the process of planning and budgeting, costs are reduced; differences however do emerge between project areas and within projects. Trends and patterns of peoples' contribution in MYRADA's projects also indicate that their contributions differ with each measure; the higher the priority they give to a treatment measure, the greater is their contribution; this pattern is visible in all low cost measures where outside labour and contractors are not involved or required.

There are two approaches in mobilising peoples involvement and contribution for treatment measures:

1. Where the intervenors (Government and NGOs) are the "key players" in budgeting (even

though the planning exercise was participatory) and then ask people to contribute; in such cases, people play a marginal role in implementation.

2. Where the people take the lead role in planning and budgeting.

Experiences of both approaches indicate that in the first case the budgets are invariably higher than in the second; peoples contributions are also lower in absolute and relative terms; often they view their contribution as a "cost" and a "condition" of investment when they are not actively involved in budgeting and implementation.

In the second approach, where people are in control of planning and budgeting (with support from outside when asked for) the budgets tend to be lower than the first and the contribution of the people higher. Besides, the people view their contribution more as an investment in which they have a stake and which they will maintain, rather than as a 'cost'. It is also significant that they contribute in this approach to the common fund of the SHG. Table No.7.1. gives a picture of costs and contributions in Ningchennala where MYRADA was the sole intervener.

PIDOW MYRADA GULBARGA

Statement of Total Expenditure incurred at Ningchennala Mini Watershed, Kalamandargi

Note: In this mini watershed the DLDB/Government was not involved

Table 7.1

Name of the Activity	Total Budget Planned	Total Expenditure (SDC/MYRADA)	Farmers Contribution in kind	Total Expenditure 31.8.94	Farmers Contribution to SHG by Cash
Soil & Water Conservation (including tank catchment treatment, tank desilting and bund strengthening)	671,214.00	562,034.42	93,973.41	656,007.83	27,355.25
Forestry	603,455.00	371,185.00	0	371,185.00	14,574.50
Horticulture	92,000.00	22,935.00	3,980.00	26,915.00	0
Community Action	75,000.00	46,102.00	12,310.00	58,412.00	0
Agriculture Inputs	125,000.00	56,487.00	0	56,487.00	0
TOTAL	1,566,669.00	1,058,743.42	110,263.41	1,169,006.83	41,929.75

a. Total area of the watershed	850 acres
b. Total treated area of the watershed	800 acres
c. Cost/Acre invested by SDC/MYRADA for all line activities mentioned above	Rs.1,323.00/acre (Rs.3,267.00/ha)
d. Cost/Acre invested by SDC/MYRADA and farmers	Rs.1,461.00/acre (Rs.3,608.00/ha)

Table 7.2 compares costs incurred when people are in control of the process of planning and budgeting (Col.1) with the official rates (Col.2). Column 1 provides unit costs (actuals) in cubic metres of the structures introduced by people in Kalamandargi mini watershed. The plans and budgets were drawn up by the people during a PRA exercise after a preparatory phase; people also supervised the implementation of the plan; they fine-tuned the wages due to each person on the basis of the distance each

¹ Participatory Rural Appraisal

farmer had to transport boulders to construct bunds or other structures. MYRADA provided the role of a catalyst. Column 2 provides unit costs per cubic metres which are the official rates of the DLDB².

² Dryland Development Board

Table 7.2

COMPARATIVE STATEMENT OF COSTS OF WATERSHED STRUCTURES

Activities	GULBARGA PIDOW KALAMANDARGI (MW) (MYRADA ONLY) 1991-1993 Col. 1			GOVT. / DLDB KARNATAKA 1992-1993 Col.2
	Total Cost (Rs./cmt)	Project's Cont. (Rs./cmt)	People's Cont. (Rs./cmt)	Total Cost (Rs./cmt)
Earthen Bunds	3.25	2.60	0.65	6.50
Boulder Bunds	13.80	11.04	2.76	18.00
Diversion Drains	3.25	2.60	0.65	9.00
Gully Checks	25.00	20.00	5.00	38.00 with lead 18.00 without lead
Nala Training with Boulder Pitching	13.60	11.04	2.76	19.00
Water Way	4.40	3.52	0.88	6.50
Trenching	-	-	-	-
Land Reclamation	-	-	-	-

PART - VIII

FEATURES AND ROLES OF
WATERSHED INSTITUTIONS

During the past one and half years, since the first edition of this booklet was published, the issue of sustainability emerged as a major concern within MYRADA. While it was evident that appropriate peoples institutions are the basis of sustainability, the nature of these institutions and the roles they would have to play have emerged during the last one and half years. This chapter attempts to share the learnings that emerged from reflection within MYRADA on the process and growth of peoples institutions in watershed management.



FEATURES AND ROLES OF WATERSHED INSTITUTIONS

• The first learning concerns the number and size of people's institutions in a micro-watershed.

Experiences in watersheds across MYRADA's programme indicate that the strategy proposed by several research and Government related institutions, that each Watershed should have one Association or Sangha was not appropriate. The social configuration of the 'sangha' did not necessarily coincide with the geographical unit of a watershed (whether micro, sub or mini). That it may coincide in some cases is not ruled out especially where the number of families is small - less than 20 in a micro-watershed. But generally, even the smallest micro-watersheds, where intervention was initiated, covered over 40 families; several groups would emerge if the people were given the freedom to decide. MYRADA's experience in organising groups indicated strongly that groups larger than 15-20 tended to have inbuilt pressures to disintegrate. They were large enough to accommodate different interest groups as well as socially distinct configurations based on caste, blood, occupation, creed or origin. These large groups were not 'homogenous'. To stay together they required constant intervention by outsiders like NGOs. Internal pressures that went against smooth and regular functioning of the group caused constant latent friction. As a result intervenors had to spend far more time and energy keeping these large groups together than actually helping them to acquire the skills required to manage resources (credit, watersheds, community plantations, forests,

etc.). It became clear therefore that the basic social grouping even within a micro-watershed had to be what MYRADA began to describe in 1987 as 'Socially Functional Groups' or groups that did not require an outside intervenor to stay together. These groups were usually small (around 15-20 members), had common interests and were largely homogeneous in terms of caste, class, livelihood base, etc. As their roles developed and expanded, they began to be called "self-help groups" (SHGs).

MYRADA was asked why these self-help groups in MYRADA watershed projects were motivated to save and manage credit. The members of credit groups acquired considerable management experience while conducting the affairs of the SHGs. They learned to set priorities, to take decisions and risks, to draw up rules of behaviour, to resolve conflicts and to apply sanctions effectively for non-compliance. They learned the art of co-operation. They acquired the skills required to sustain co-operation and to set up and maintain the systems necessary (like records) to make co-operation a regular behaviour pattern - in a word to institutionalise co-operation. These skills and systems are absolutely necessary for managing the resources of a watershed. They cannot be easily acquired during a watershed programme since the process of watershed development is still heavily guided and influenced by intervenors who insist on technical specifications and guidelines in terms of 'how' to go about watershed treatment as well as 'what' is to be done and 'where' and by 'whom'. The 'transfer of technology' approach within a delivery system leaves little room for local peoples institutions to develop. The self help group therefore provides a training situation, using credit as a tool or instrument. Credit is an appropriate tool because it is familiar to all and also because it meets a felt need. Successful management of their common fund gave the group confidence that they can achieve certain objectives provided they were willing

to observe certain rules and create a culture that motivates people to support each other. The SHGs established a culture that was required for the resources of a watershed to be managed in a sustainable manner.

This learning, however, immediately raised the issue that several peoples groups in one micro-watershed would make the implementation and maintenance of an integrated treatment plan difficult to achieve if not impossible. Moreover, since MYRADA's groups did not include large farmers, how could these be involved in watershed management?

In several micro-watersheds, throughout the Gulbarga Project, more than one self-help group has emerged. Maragutti micro-watershed for example, has seven such groups; Kalamandargi has four, others have three to five. There were also a few large farmers who did not join any of these groups but were represented when watershed activities were discussed. To cope with this situation, Apex Societies emerged; they were referred to in some places as Watershed Implementation Committees (WICs) and in others as Watershed Management Committees. These Apex Societies at the level of the micro-watershed were formed by representatives of farmers who had lands in the micro-watershed but did not live in it, as well as of large farmers. These Apex Societies were mainly involved in coordinating the implementation of the treatment plan and in dealing with outside intervenors; in some cases they supervised the work done on farmers' fields and later assessed the work before sanctioning payments; in some cases the funds for treatment works were given to the Apex Societies, in others, funds passed directly to individual farmers after the Apex Societies confirmed that work was completed according to specifications. In one project (Kamasamudram) the Apex Society borrowed funds from the SHGs to enable farmers to complete the treatment work on their fields; they also played a key role in solving disputes that arose during implementation.

There are four SHGs in Kalamandargi (Gulbarga) mini watershed. Two representatives from each SHG are members of the WIC; the roles and responsibilities of the WIC were established by the SHGs in a joint meeting; they are as follows:

- To involve farmers in implementing the soil and water conservation works on their land.

The basic social grouping even within a micro-watershed had to be what MYRADA began to describe in 1987 as 'Socially Functional Groups' or groups that did not require an outside intervenor to stay together.



- to supervise the soil and water conservation work and to resolve conflicts.
- To mark out the work according to the PRA plan, to measure the work done and decide on payment.
- To make payments based on the quantity as well as on the quality of work.
- To work out the farmers contribution according to the condition of the land, of the family and work involved in transportation of material.
- To collect the contribution from the farmers to the SHG as well as to the Project (in cash to the SHG and labour to the Project).
- To allocate and ensure employment to the landless labourers and poor farmers.

• The second learning concerned the management of cash transactions.

Handling funds and making decisions on the quality and quantity of work are crucial areas for effective and sustained participation of people; they must therefore be transparent and seen to be just. In many areas where treatment measures had been undertaken previously, people were not aware of budgets and expenditure; they suspected that staff and contractors had been the major beneficiaries. Hence they viewed these measures more as a benefit to others, than to them. Their commitment towards maintaining these measures was therefore weakened. The Kalamandargi WIC has decided on the following procedure to manage funds: (Note that in this watershed the Government Departments were not involved):

- The WIC members first verify the quantity and quality of works carried out in the farmers land; they prepare a statement of works done and the amount to be paid; MYRADA technical staff and SHG representatives scrutinise these statements. Sanctions for poor quality or shortfall are imposed - usually delayed or revised payments; these decisions are made in the presence

of the WIC and SHG members in the field of the farmer.

- The WIC submits the requisition for funds to the concerned Watershed Manager along with the signature of the Extension Officer; both are MYRADA staff.
- The Watershed Manager draws the required amount from the office and pays the farmers in the presence of the WIC and SHG members. Payment is made weekly on a fixed day.
- After making the payment, the Implementation Committee members and in their absence the SHG representatives sign the payment voucher along with the farmer, Extension Officer and Watershed Manager.
- The WIC collects the cash contribution of the farmers to the SHG and remits it to the Bank Account of the SHG to which the farmer belongs.
- True copies of the payment vouchers are handed over to the SHGs for their reference.
- A separate measurement book for soil and water conservation measures and forestry is maintained in each SHG to monitor the progress of the work.

• The third learning concerned the maintenance of the treatment measures

The issue of maintaining the treatment measures has been debated for sometime. Initially the intervenors expected the Apex Societies at the level of the micro or sub watershed to take on this role; but they have not taken the initiative. Meanwhile it is the small SHGs which have emerged as the appropriate institutions to maintain resources which benefit the community or members of the SHGs. For example, it is the SHGs that have entered into agreements with farmers to regenerate and maintain their lands which were lying fallow.

In Gulbarga, over 35 such agreements have been negotiated. This strategy has converted lands which were neglected and added to soil erosion into regenerated parks which increased bio-mass and played a more effective role in managing soil erosion and water run-off than bunds. The following is a sample of one agreement in Wadigera between the SHG and an individual farmer:

Rs.5/- Stamp Paper

AGREEMENT (Translation)

I, Sri Narayan Amba Rao Joshi, s/o, Sri Amba Rao Patwari Joshi aged 65, resident of Wadigera village, Kamalapur Mandal, Gulbarga Taluk and District, hereby make this agreement with the Wadigera Gramabhivruddhi Sangha on this fifth of March, Nineteen Ninety Two.

On this day I have agreed to lease my land - Survey No.105, of approximately 20 acres (non agricultural) to the Wadigera Gramabhivruddhi Sangha for a period of 10 years to be developed into a forest plot with the help of PIDOW MYRADA, of my own free will. The produce from the land will be shared with the Wadigera Gramabhivruddhi Sangha taking 30 per cent to be shared by its members and the remaining 70 per cent to me.¹ I will not interfere in any of the works. In case there is any dispute with regard to the sharing of produce, I agree to let the Wadigera Gramabhivruddhi Sangha to solve the issue.

Yours sincerely,

Narayan Rao Amba Rao Joshi
Kamalapur

Witnesses :

1. N.V.Reddy
2. Tulasa Reddy

All signs therefore point towards the SHGs and not the Apex Societies as the peoples' institutions which will play a major role in maintaining the treatment measures; the roles they have played so far depend on the resource to be maintained.

¹ In subsequent agreements during 1993-94 sharing of produce was on a 50-50 basis.

The self help group provides a training situation, using credit as a tool or instrument.

The SHGs established a culture that was required for the resources of a watershed to be managed in a sustainable manner.



- If it is a common resource, like revenue wasteland and private fallows which are protected and from which all the members derived benefits regularly (usually in kind) and periodically (both in cash and kind) the SHGs have taken the initiative to acquire, develop, manage and maintain it; but the SHGs role has differed in each set of activities. The cost of efforts to acquire this common resource have been shared by the SHG and the intervenors; the SHG usually contacts the owner of the private fallow land and negotiates an agreement; the NGO plays an important role in lobbying with the Government for the release of revenue lands and to permit the Forest Department to work on private lands which are leased to the SHGs. The activities involved in developing this resource (boulder walls, planting, gap filling, etc.) have been funded by the intervenors with the SHG organising the work and contributing labour at lower rates than prevalent in the area. Activities regarding management of this resource are taken on by the SHG where the members are confident that they have access to and control of the produce and adequate protection from cattle. Where therefore, the boundary walls do not offer full protection from cattle, the SHG is reluctant to manage the resource since stray cattle grazing in the area would result in conflict situations. In such a situation in Wadigera they asked the project to pay for a watchman to manage the area. Consequently, the responsibility shifted to the project. Where structures have required repair, the SHGs have by and large organised free labour except in cases where the damage was extensive.

It must be noted however, that the initiative to manage a common resource where titles and user rights are not clear is not taken by the SHG. The SHG prefers to enter into an agreement with and develop areas where the rights to land both in terms of ownership and use are clear, like private fallows and temple lands. As regards the management of revenue lands, it is only after a

few years, when they have gained confidence, that the SHGs take the initiative since these lands have had open access, while in some cases traditional grazing rights have been exercised. The potential for conflict in these areas is therefore high.

- If the resource is large, like weirs constructed with cement, the SHGs have not agreed to maintain them². Their position is that they do not have the resources and skills required to maintain such structures. MYRADA staff, however, are of the opinion that if people place a cash value on water collected in weirs which is used by domestic animals for drinking and wallowing, as well as for washing clothes, adequate revenue can be mobilised to pay for maintenance. In the new Kadiri Project one farmer has entered into an agreement with the SHG (that supervised the building of the weir and manages it) to lift water for irrigation; the amount he pays the SHG depends on the crop he grows and on the area under irrigation. Water for animals and domestic purposes, however, especially in drought prone areas where MYRADA's projects are located, is considered a basic need. To levy a charge for domestic use therefore can hardly be considered. Farmers in the valley, however, whose wells, used for irrigation have been recharged significantly due to water conservation measures in the upper reaches could be asked to pay for the extra water available.

• **The fourth learning concerned the purposes for which loans were given from the common fund of the SHG.**

Though no restriction was made on the purpose of loans that the SHG could give from the common fund to the members, yet, since the focus in watershed programmes is on the provision of agricultural

² In MYRADA's Kadiri (Old) Project in Ananthapur District, where 4 large weirs were constructed, they were handed over to the Government when MYRADA withdrew.

inputs, most of the loans given to SHG members tend to be for agriculture. In fact the only funds given directly to farmers by the Government in Gulbarga were for agricultural inputs. For these reasons, the largest number of loans in Gulbarga SHGs, as well as the largest amount is for agriculture. This is significantly different from the experience in other projects where consumption needs, including repayment of loans to money lenders to release mortgaged lands and fruit bearing trees get priority. As a result of this focus on agriculture, loans for other purposes in Gulbarga were discouraged either because funds were not available after agricultural loans were provided or because funds were given only for agriculture and could not be reallocated for other purposes. This resulted in the members using funds for consumption needs which were taken as loans for agriculture or on some other pretext. Since these loans were not approved in the SHG, they triggered off accusations of misappropriation. Shankar Reddy of Wadigera, for example, could not get a loan to take his wife to the hospital which was an urgent need; he was forced therefore to use the funds returned by the Milk Society; yet he was not a dishonest person; in fact he was the member who had maintained proper accounts and records; though he returned the money of the SHG later, the damage was done and sustainability undermined.

• **The fifth learning was that every effort should be made to remove the impression that the intervention is a total grant**

The people need to have a stake in the investment in the watershed if they are to maintain it. There are several examples of how this has been attempted. In Wadigera, the Watershed Association which has been functioning well in the early period decided to convert all grants given by the Government, for agricultural inputs into loans returnable to the Association. As a result the common fund of the SHG was built up with recoveries from agricultural inputs amounting to Rs.2.4 lakhs.

In later watershed programmes both in Gulbarga and elsewhere in MYRADA, the watershed associations decided to motivate farmers to contribute both in cash and in kind; they listed the various treatment measures and established priorities; the contribution from each farmer varied depending on the value he placed on each measure. For example, farmers tend to contribute much more to activities from which they expect immediate returns, like silt traps; while measures involving cement

Indications reveal that SHGs and not Apex Societies emerge as the people's institutions which will play a major role in maintaining the treatment measures.

Every effort should be made to remove the impression that the intervention is a total grant.



and concrete get lower priority and hence lower contributions. The community is also not willing to contribute to works which benefit an individual farmer entirely, though in several cases the SHG has advanced loans to these farmers to implement these measures from which they benefit exclusively.

In MYRADA Huthur project, each farmer agreed to return a certain per centage of the investment made by the Project on his private fields to the SHG of which he is a member. The per centage of his contribution and the schedule of recovery varied in each case and was decided upon at the SHG meeting in which he was an active participant. An audit of 9 SHGs in Huthur conduct in September 1994, indicates that

farmers in most cases have kept to this agreement over the past two to three years. A trend has been started which can now be strengthened.

It was noticed that whenever people had a stake in the investment made in a watershed, they organised themselves to maintain the treatment measures, provided they participated effectively in planning, budgeting, prioritising, designing and implementing the measures introduced, thus strengthening their sense of ownership.

Table 8.1

Amount Paid to SHGs, by Individual Farmers For Project Investment on Private Lands in Huthur

	Name of the Sangha/Village	Amount
1.	Basaveshwara Sangha Andekurubana Doddi	17,608.00
2.	Laxmi Mahila Sangha, Basavanagudi (Women)	9,682.00
3.	Venkateshwara G.A. Sangha, A.K.Doddi	4,092.00
4.	Rajeshwari Mahila Mandali, Boodipadaga (Women)	30,361.00
5.	Chamundeswari Mahila Mandali, K.Kathri (Women)	1,244.00
6.	Mahadeswara Sangha, Keredoddi	6,500.00
7.	Karaiiah Sangha, Arekaduvina Doddi	5,157.00
8.	Biligiri Rangaswamy Sangha, K.Kathri	9,400.00
9.	Shakti Sangama, Arabagere	29,367.00
	Total	113,411.00

MYRADA GULBARGA PIDOW PROJECT KAMALAPUR, GULBARGA Tq. & District

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SCALE - 1":50,000

Drainage Line Map of PIDOW Project Area

