

understanding that overall savings (if any) shall be retained by the SHG as its common fund?

- Could SHGs facilitate a group-centered approach in which the WC may act as a facilitating body rather than as an implementing body? In such a setup, should the contributions paid by group members be deposited in the account of WC or the concerned group?
- Is it possible to organize UGs for community-oriented works (like WHS, development of common land, etc.) through credit and thrift activity? If it is not possible, could they be organized at least through thrift so that they have some sense of belonging to the group?
- Should user groups be organized by taking members from the community (who may be unorganized) or should its members be drawn from the already organized SHG?
- Should the UGs meet on a regular basis or only as per need, in order to be considered sustainable?
- Would allocation of usufruct over community oriented structures/measures help in improving the sustainability of groups?
- Is the concept of a centralized WA (for a unit watershed) appropriate or should it be decentralized (as sub-WA) separately for each habitation within a unit watershed?
- Should membership in the WA be restricted only to members from organized SHGs and UGs or should it be open to others as well?
- Should there be an annual membership fee for WA members?
- How should the WA be empowered in order to make it a decision-making body (so that WC could work as its executive body)?
- Should members of the WC come only from organized SHGs and UG or also from unorganized community under the watershed?
- How can a downward accountability system be facilitated in the WC so that it is answerable not only to the WDT/PIA but also to the community/WA?
- Is it appropriate for the WC to directly release the RF to SHG or should it be released through a federation of SHGs (created either at village level or at cluster level)?
- What are the methods by which operational modality can be improved during the implementation phase so that contractorship is eliminated and genuine contribution is collected from actual users? Would involvement of SHG in implementation of works help in overcoming the above problem?
- Is it possible to further decentralize management of the

watershed programme in such a way that the WC receives the fund and then transfers it to mature SHG for implementation of works?

- How can the management system within the office of WC be improved so that it becomes more efficient and cost effective? Would a job-specific contractual system improve the efficiency of the watershed secretary and volunteer than a regular monthly salary?
- Could the WC start some income-generating activities (like input agency, collective marketing etc.) so that it remains active even after the project period?

#### 4.4. Sustainable Utilization of Natural Resources

Social regulation (against over-exploitation) of natural resource is one answer to the problem of 'open access' by the community. This is particularly relevant for management of community-oriented natural resource. In this connection, the following points need to be considered:

- Whether pumping of surface water should be allowed, particularly when it is collected near those WHS that are meant for percolation?
- Whether digging of new borewell (by individual farmer) should be allowed in watershed area or there should be a social ban on digging of such borewells. In which case, should community-oriented borewells be allowed?
- Whether the developed water resource in the project area under the watershed programme should be used for crops with high water requirement or restricted to only water-efficient crops?
- Whether digging of irrigation borewell (even if it is community-oriented) should be allowed within the buffer zone of drinking water borewells.
- Whether there should be a limit regarding the depth to which irrigation borewells may be dug, with an understanding that ground water below a certain depth is reserved exclusively for drinking?
- Whether social fencing should be ensured for 1-2 years on common land before making an investment on development of biomass through new plantation?

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"Physical structures would sustain - if only community structures do so"  
- A. K. Goel

#### POST-PROJECT SUSTAINABILITY IN THE WATERSHED PROGRAMME - A CONTINUING CHALLENGE

A.K. Goel, N.K.Sanghi, B.Renuka Rani, Sai Maheswari and Waheeda Munawer

*The development of drylands on watershed basis is now a well-accepted strategy in the country. At present, more than Rs.900 crore is invested annually on watershed development projects through different organizations. Sustainability of development, however, continues to be a concern. The participation of people in the programme has not yet been upscaled to the desired level despite adoption of the latest guidelines of the Ministry of Rural Development (MORD) and Ministry of Agriculture (MOA), Govt. of India. Issues and options related to sustainability are briefly discussed in this paper.*

#### Overall Suggestions and Policy Considerations

1. **The need to maintain limited contacts beyond the project period:** The contact between Project Implementation Agency (PIA) and the community usually ends abruptly soon after the completion of the project, at which stage the community is not properly prepared for carrying out new activities during the post-project period. The proposed contacts beyond the project period, even to a limited extent, would require specific provision of budget (under the management component) and periodic availability of resource personnel. The current approach adopted by a few international organizations such as Andhra Pradesh Rural Livelihood Project (APRLP 2002) and Society for Elimination of Rural Poverty (Anonymous 2002-b) in Andhra Pradesh to continue some work in completed and ongoing watersheds is a step in the right direction. This is helpful in providing the required support to the watershed community for carrying out new jobs, and also allows PIA members to critically examine the manner in which the whole programme has been facilitated so that lessons, particularly those related to sustainability, could be learnt.
2. **Adoption of batch concept regarding allotment of watershed:** Usually, 8-10 micro-watersheds are allotted to each PIA in a single installment. Field experience has shown that the quality of the watershed programme, particularly with respect to sustainability, is considerably improved if a batch concept is followed in allocation of watersheds as being done by Commissionerate of Rural Development in Andhra Pradesh. In the first batch, each PIA may be given 2-3 watersheds, so that it could concentrate its efforts and generate a working experience for proper application in watersheds allocated in subsequent batches. The district-level Project Management Agency could also improve its efficiency through consolidation of learning from each batch. The original guidelines can be suitably modified through office circulars for new watersheds in subsequent batches.
3. **Sustainability of social structure for sustainability of physical structures:** In the participatory approach, people are themselves expected to carry out repair and maintenance of structures constructed under the project. This cannot be carried out smoothly unless a sustainable institutional mechanism is available. Under the watershed programme only Self Help Groups (SHGs) which are organized through credit and thrift activity, are found to be sustainable. All other bodies, namely User Group (UG), Watershed Committee (WC) and Watershed Association (WA), are by and large not sustainable. That is why repair and maintenance of physical structures is not taking place in the majority of watersheds, in spite of sufficient funds being available in the Watershed Development Fund (WDF). Initial field experience has shown that other bodies of the institutional setup could also become more sustainable if their members are drawn from successful SHGs rather than from the unorganized community (Ranjan 2002, Fernandez 1994).
4. **Integration of social resource management with natural resource management:** Under the ongoing watershed programme, heavy emphasis is laid on both social resource development and natural resource development. However, both of these components are developed independently of one another. Towards the end of the project, they remain 'stand alone' outputs without any significant bearing on each other. This is one of the reasons why sustainability of natural resource development is low in spite of adequate investment on social resource development. Integration of both these components shall lead to demand-driven planning, implementation of works without contractors and genuine contribution from the community (APRLP 2002). It will also facilitate self-monitoring of the programme, which is a crucial requirement for proper empowerment of community-based organizations (CBO).
5. **Proper management of withdrawal strategy:** In the majority of projects, no specific attention is paid towards withdrawal strategy, with the result that a dependency syndrome continues until completion of the project, leading to subsequent unsustainability. Under the participatory approach, people are supposed to take over the entire project management responsibility (namely planning, implementation, monitoring, etc.). The role of outsiders is facilitation. Although the intention is genuine, in reality the community is not able to assume the required responsibility, especially in the initial stages. Hence outsiders should initially work like a PIA through active collaboration with the CBO, but make conscious efforts to gradually change the role in such a way that it becomes a project facilitating agency (PFA). In fact, it would be appropriate if gradual change in role from PIA to PFA is regularly monitored as one of the items by the project management agency so that dependency syndrome is reduced. The withdrawal strategy would require not

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only conscious efforts towards gradual change in role but also building the capacity of the CBO to maintain community-oriented assets and also to perform other activities that require continuation beyond the project period.

6. **Monitoring of sustainability in early stages:** During the project period, major emphasis is usually given to monitoring only the physical and financial progress. Hardly any attention is paid towards monitoring participatory processes related to overall management of the project. Field studies have shown that low sustainability after the project period has been essentially due to lack of adoption of participatory 'processes' during the project. It is also recognized that different stakeholders do not adopt proposed processes because these are not monitored periodically. Post-project sustainability in the watershed programme need not be assessed after completion of the project. With increasing understanding about processes involved in participatory management of the watershed programme, it is now possible to measure sustainability even during the early stages (Anonymous 2000-a)

### 1. Background

In the past, lack of sustainability in watershed development was essentially due to adoption of a top-down approach. After the mid-1990s, there has been a major shift towards a participatory approach. A number of useful mechanisms and instruments are now available in project guidelines for facilitation of the proposed participatory approach. These include organization of the community into a new institutional setup; direct funding to the community; contributory approach; demand-driven planning; implementation of projects without contractors; investment on indigenous technologies; involvement of autonomous Project Implementation Agencies; creation of a corpus fund for repair of physical structures; and provision of revolving fund for livelihood development.

Field studies, particularly in Andhra Pradesh and Karnataka, have shown that although there is a considerable improvement in the degree of sustainability, the ultimate goal is still elusive despite use of the above mechanisms and instruments. Highlights of studies carried out on post-project sustainability in watershed projects are briefly discussed in the following pages.

### 2. Post-Project Activities that should be carried out by the Community

There are five types of activities that should be carried out by the community after the project period is completed:

- Repair of physical structures constructed during the watershed project
- Sustainable utilization of the watershed development fund (WDF)
- Proper utilization of the revolving fund (RF)
- Proper functioning of the new institutional setup created under the project.
- Sustainable utilization of natural resources developed under the project

### 3. Present Status of the Post-Project Activities

A broad picture of each of these activities is given below

### 3.1 Repair of Physical Structures constructed under the Watershed Project

During the project period, the watershed budget has by and large been used for constructing three types of structures/measures:

- Boundary-based earthen bunds
- Water harvesting structures
- Plantation in common land

It has been seen that, in many cases, boundary-based earthen bunds (without stone waste weirs) have breached, leading to even greater intensity of flow at the breached point, and thus causing high risk of erosion in the lower fields. Wherever these bunds were in good condition, they conserved not only soil and moisture but also organic manure within the same field, with the result that there was a significant increase in productivity of rainfed crops.

Water harvesting structures (WHS) have undoubtedly improved the water table, with the result that additional areas have been brought under irrigation. Each of these structures has benefited a group of nearby farmers having their own wells. The functioning of these structures has been by and large satisfactory. However, wherever there was unusually heavy rainfall, some of these structures have been damaged. At present such damaged structures are not being repaired in spite of the fact that sufficient funds are available in the WDF. Strangely, this has happened even in watersheds where the structures have been constructed on the demand of concerned users and also where actual users have contributed to the construction.

Common land has been developed in a limited number of watersheds. By and large the community members have themselves chosen the tree species to be planted. Arrangement for social fencing has varied from watershed to watershed. Formal allocation of usufruct could not be done in most cases. It is not certain how long such plantations would survive after the project period.

### 3.2. Management of the Watershed Development Fund

On an average, about Rs. 15-16 lakh has been invested by the Government in each watershed. During the implementation phase, about Rs. 0.80 lakh has been deposited in each watershed by the community as its contribution towards various works implemented under the project. In the majority of cases, this contribution has been deducted out of labourers' wages even for individual oriented works on private land. The above corpus fund is supposed to be used towards repair and maintenance of community-oriented structures / measures. As indicated earlier, some of the water harvesting structures have already breached, but have not been repaired in spite of funds being available. This is mainly due to the fear that the money may not be recoverable from the groups.

### 3.3. Management of the Revolving Fund

Under the MORD-funded watersheds, a part of the budget from the community organization component has been used as a RF for supporting land-based and non-land-based livelihoods. It was thought that the above provision might motivate people to organize themselves into groups besides helping in enhancing productivity and income.

In a number of cases, RF has been given to new SHG organized under the watershed project. Many of these groups were not properly strengthened, when the RF were given to them. In many cases, members have done only savings in the groups but did not circulate the money even to their own members. In some cases, the RF received from the project has been equally distributed among all members, and members have not returned the money even to their own group. The purpose for which the money has been used is also not clear, as there was no specific sanction of micro-plans before release of the RF. Due to these precedents, many project directors or watershed committees often do not use the RF.

### 3.4. Functioning of the New Institutional Setup created under the Project

**Self-Help Groups :** Only those SHGs that are organized on the basis of social affinity (and through credit and thrift activity) are found to be sustainable beyond the project period. Other SHGs that are organized on the basis of similarity in livelihood (for developing a specific enterprise) but without credit and thrift activity, are not found to be as sustainable. At many places active involvement of old SHGs (credit and thrift groups), which were organized by agencies other than watershed projects, has also not taken place even though they were of good quality.

**User Groups :** The existing UGs organized for development of natural resources are not able to meet regularly, particularly after the completion of developmental work. It is understandable that the UGs associated with development of private property resources need not meet regularly. However the UGs associated with development of common property resources should meet regularly to manage and utilize the developed resource properly. Sustainability of even such UGs is found to be low.

**Watershed Association :** The existing setup of a centralized WA (one association for all habitations under a particular watershed) is found to be unsustainable after completion of the project period. It has been unable to play the desired role of a decision-making body even during the project period. The WA has not been able to satisfactorily manage the WDF and RF. Frequency of meetings and participation of members has also been poor.

**Watershed Committee:** In the existing setup, the WC has representatives from organized groups as well as from the unorganized body of the WA. In the majority of cases, the WC is found to be unsustainable, particularly after the project is complete. Its stewardship of the programme during project period has also been unsatisfactory, due to lack of downward accountability to the community, lack of regularity in meeting of all members, inability to implement the programme without contractorship, and inability to collect genuine contribution from actual users.

### 3.5. Utilization of Natural Resources developed under the Project

During the project most of the effort is devoted towards new development of natural resources. Hardly any attention is paid to improving efficiency in utilization of already developed resources. 'Open access' to natural resource by the community is considered to be the main cause of degradation, particularly in the case of community-oriented resource such as groundwater and biomass in common land.

Water harvesting structures constructed under the project have significantly increased the area under irrigation. The efficiency of utilization of new water resource, however, continues to be low. A major part of the developed resource is being used for crops like paddy that requires high amounts of water. The number of individual-oriented borewells has also increased in watershed areas. Resource Rich Families (RRF) usually dig these borewells and the water is used for crops with high water requirements.

The development of common land resource has by and large been given low priority under the watershed programme. Even where common land has been

developed, very little attention has been paid toward allocation of usufruct to Resource Poor Families (RPF). This inadvertently leads to an 'open access system' for all members of the community, particularly after the withdrawal of project support for a watchman.

### 4. Major Issues and Options for improving the Situation

While analyzing the present scenario, a number of issues related to post-project activities were noted that require looking into. Efforts are also under way to search for innovative projects where such issues have been addressed and viable solutions evolved to deal with them. However, even when such projects have been identified, it remains to be seen whether their solutions can be applied and replicated. Hence, the major issues and possible options have been raised here so as to provide leads for further perusal.

#### 4.1. Repair of Physical Structures

- Should construction of stone waste-weirs be made mandatory in cases where earthen bunds are constructed on field boundaries? This may be particularly important in areas having more than 500 mm rainfall per annum.
- Should construction of boundary-based waterways also be considered under the project, particularly in situations where runoff amount below the waste weir is likely to be high, as otherwise it may increase the risk of erosion in the lower fields?
- Could boundary-based stone bunds also be encouraged under the project, at least in areas where stones are readily available within the same field or in a nearby area?
- Should the existing low level of contribution (5-10 percent) be retained even for stone bunding or could it be increased to at least 25-30 percent?
- What type of social and management aspects should be addressed before sanction of WHS (with particular reference to organization of user groups, modality for collection of contribution, ownership of WHS, modality for repair and efficient utilization of water resource)?
- What are the requirements that must be fulfilled before beginning the development of common land? This may particularly include social fencing, availability of preferred species of plants in the identified nursery, formal allocation of usufruct, etc.?
- Who should pay the contribution for development of Common Property Resource?
- Is it possible to provide usufruct to community in common land? Should it be given to all members of the community or only to resource-poor families? Should women SHG

also be considered for the above usufruct? What should be the operational modality for allocation of the right?

#### 4.2. Sustainable utilization of the Watershed Development Fund and the Revolving Fund

- Should the WDF be used as a grant or as a loan for repair of breached WHS?
  - What is the suitable institutional arrangement through which the required amount under WDF could be given to UGs (in such a way that WA could conveniently recover it for subsequent use)?
  - Should the WDF be used only for repair of structures or for other purposes as well?
  - Should the repair of WHS be carried out by WA through WDF or do other sustainable arrangements need to be evolved? What are the options? Could legal ownership of WHS be transferred to user groups with the understanding that they shall repair the structure through payment of a cess amount on a periodic basis? (Anonymous 2002-c)
  - Should the RF be given to those groups which have done only matching savings or to those, which have done not only matching savings but also successful circulation of money to group members?
  - Should the RF be given to the groups as a grant (for internal circulation among the group members) or as a loan (to be returned for subsequent circulation to other groups in the same village)?
  - Should it be given without any restriction on its use or after due approval of a micro-plan for specified purposes? Should it be used also for inputs that were already adopted by farmers at their own cost (during the previous 1-2 years)? Or should it be given only for buying new inputs that farmers are already convinced about, but have been unable to adopt earlier due to financial constraints?
  - Should the RF be released directly to SHGs or be routed through a federation of SHG at village/cluster level?
  - Should the RF be given to only new SHGs organized under the project or can it also be given to old SHGs, if they meet the criteria and agree to use it for the purpose for which the fund has been created?
- #### 4.3. Strengthening of New Institutional Setup
- Should SHGs be organized for only landless families or for land and water resource-owning families as well?
  - Is it possible to induct men also into SHGs? Should this step be taken also for men from those families whose women members are already in one or other SHGs?
  - Could SHGs take up the responsibility of implementing other's work (as per Standard Schedule of Rates) with an