



POST-PROJECT MANAGEMENT AND STRENGTHENING OF USER RIGHTS OVER NATURAL RESOURCES

AN EXPERIENCE OF SUJALA WATERSHED PROJECT IN KARNATAKA

Govinda Gowda, V.

Assistant Professor of Agril. Extension, Dept. of Distance Education
Agriculture College, University of Agricultural Sciences, Bangalore

ABSTRACT

Participatory integrated watershed projects have become a major developmental thrust in recent years to address not only natural resource management but also poverty alleviation & enhance livelihood of rural community. Sujala a community driven watershed development project is being implemented in five districts of Karnataka. The uniqueness of the project lies in the peoples participation in decision making on the nature of development they perceive to be relevant & their empowerment to maintain & share the natural resources & their usufructs on a sustainable manner with their own hands. The Sujala watershed project has adopted a “*Community Centered*” post-project NRM assets maintenance so; that strategies for longevity of soil & water conservation structures, forest management by local communities are further developed & managed on sustainable basis. This paper shares the experience in developing a usufruct procedure in Sujala. It describes the process, methodologies and initial impacts. It further gives some tips and recommendations who wish to practice a user/usufruct rights approach for sustainable natural resource management.

KEY WORDS: Natural resources, management, watershed, Community.

INTRODUCTION:

Property rights and user rights to natural resources have an enormous impact upon the management of natural resources. The roles and responsibilities attached to these rights, and the resulting incentives or lack of incentives, to preserve the natural environment are key to sustainable community based natural resource management. The recognition of community based resource management has led to the devolution of natural resource management from centralized government control to local user groups. The Government has been issuing policy initiatives to encourage participation of rural households in order to strengthen community based institutions for control and sustainable management of local natural resources. Participatory watershed development and joint forest management programmes have been initiated in India since the late nineties involving local people in resource management has envisaged a formidable partnership between the people and the State Government to protect and regenerate natural resources while meeting people’s needs in sustainable manner.

Sujala Watershed Project deals with some of the technical and methodological concerns, i.e. it attempts to develop a holistic approach to sustainable watershed development and management. This paper shares the experience in developing a usufruct procedure in Sujala. It describes the process, methodologies and initial impacts. It further gives some tips

and recommendations who wish to practice a user/usufruct rights approach for sustainable natural resource management.

THE SUJALA WATERSHED PROJECT

Sujala is a community-driven, multi-faceted watershed development project, aimed at developing both private and common lands in an integrated manner. The uniqueness of the project lies in the peoples participation on decision making on the nature of development they perceive to be relevant and their involvement in implementation and maintenance of activities. The Project intends to empower the local people to build a sustainable future with their own hands.

Sujala Watershed Project is a World Bank funded programme initiated during the year 2001 with a total budget outlay of Rs.677.73 crores in five districts of Karnataka viz., namely Kolar, Tumkur, Chitradurga, Haveri & Dharwad covering about 1270 villages and 743 micro watersheds in 38 taluks. . The Project has been implemented in a phased manner with totally three phases; the 1st phase consists of 80 micro watersheds, 2nd phase with 184 micro watersheds & 3rd phase with 470 micro watersheds together aims to treat about 5 lakh ha. The land-based activities and income generation activities together will be benefiting to about 4.1 lakh families.

PROJECT COMPONENTS

Components	Activities
1. Participatory watershed Development	<ul style="list-style-type: none"> • Social Mobilization • PRA analysis • CBO formation & Institution building • Project information dissemination • Entry point activities • Physical Land treatment (Private & Common lands)
2. Farming System Intensification	<ul style="list-style-type: none"> • Participatory Farmer driven research and extension services for farming and livestock activities • Demonstrations • Convergence • IPM, INM Demonstrations
3. Income Generating Activities	<ul style="list-style-type: none"> • Support to vulnerable groups • EDP and Skill training • Setting up of micro enterprises • Linkages and handholding
4. Institutional Strengthening	<ul style="list-style-type: none"> • Monitoring and Evaluation • Development of GIS database • Capacity building for stake holders and partners • Project management and coordination

PROJECT STRATEGIES

- Involvement of NGO's at sub-watershed, district and state levels to facilitate the awareness building, capacity building, participative project planning, implementation and monitoring.
- Formation of Community based organizations like Self Help Groups, Area groups and SWS-EC to enable participation of local / farming communities.
- Establishment of the Sujala Watershed Sangha (SWS) and 14 member executive committee with registration under the Registrar of Societies Act, 1960.
- Technical support through Departments and NGO's for effective and suitable planning, implementation and monitoring of the watershed development activities.
- Capacity building of partners and stake holders on technical, social and environmental issues of watershed development at all levels through UAS Bangalore &

Dhrawad , PNGO-MYRADA, CCTEK, ANSSIRD, KMF, BAIF, WDD, etc.

- Participatory planning, implementation and monitoring of individual and common lands through the community based organizations and emphasis on involvement of landless in common land planning and benefit sharing.
- Cost sharing arrangements for different interventions to enable the feeling of collective and community ownership among the beneficiaries.
- Area Groups are the basic units of planning (SWAP) in case of land based activities and these plans are further consolidated at the Micro watershed levels. Similarly, Self-Help Groups are the basic units of planning for income generation activities and these sub-plans are consolidated at micro-watershed level.
- Environment and Social Assessment for the proposed interventions at the Area group and the micro watershed level for both Land based and IGA to ensure minimal risks from the activities planned before and after.

The core objective of the watershed is to regenerate the deteriorating natural resources through the establishment of different soil and water conservation structures, creating bio mass through forestry, horticulture and livestock activities.

1. Soil and Water Conservation structures: Earthen Bunds, Boulder bunds, Contour bunds, Farm ponds, Check dams, Recharge pits, Nala bunds, RRS, Boulder Checks, Nala revetments, MPTs, Waste weirs, Farm ponds/ Tanks/ Gokattes desilted, Recharge pits,
2. Horticulture: Mango, Sapota, Tamarind, Pomegranate, Orange, Jackfruit, Guava, Custard apple, etc.
3. Forestry
4. Silvi pasture

DIFFERENT KINDS OF WATERSHED ASSETS CREATED

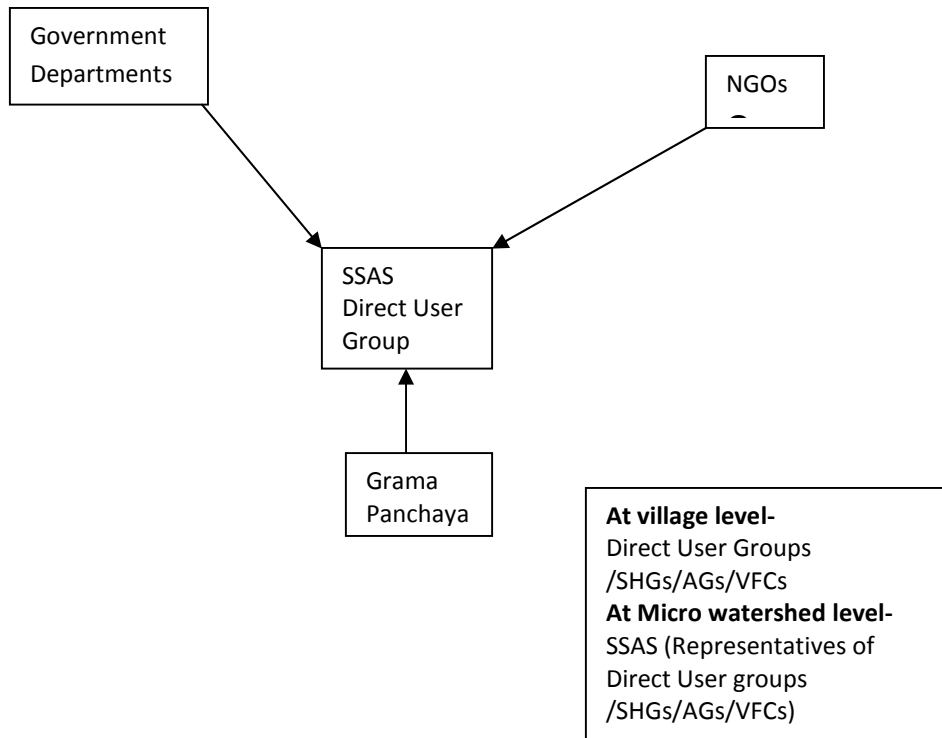
1. **Entry Point Activity (EPA) Assets:** These are the assets created in each villages of the watershed area. Each village has the provision up to one lakh to construct the Entry Point Activity which is of immediate need/utility to villagers as a whole, the following type of EPA assets are created.
 - a) Samudhaya Bhavan
 - b) School buildings
 - c) Anganwadi buildings
 - d) School compounds
 - e) Renovation of Gokatte / Kalyani
 - f) Cattle troughs
 - g) Water supply system and bore wells etc,
- Natural Resource Management (NRM) Assets**

PROPOSED STRATEGIES FOR WITHDRAWAL/ USER RIGHT MECHANISM

1. All the existing CBOs such as SHGs, AGs and VFCs, except the SWS-EC, shall continue to function with its existing status.
2. The SWS-ECs shall be re-organised as Sub-Committee of the concerned Grama Panchayath and shall be called as *'Sujala Samagra Abhirudhi Samithi' (SSAS)*.
3. The members in SSAS shall be broad-based from existing 14 members to 17-21 members with the representation of all Direct Users, SHGs, AGs and VFCs along with participation of concerned Panchayath members.
4. The Sub-Committees formed under Grama Panchayath shall continue to exist after the withdrawal of the project. The Committee shall play the roles of SWS-EC during implementation and also expected roles during post-project period.

5. The interested existing FNGOs may continue to provide support services for CBOs like SHGs, AGs, VFCs and Sub-committees of the GP on voluntary basis as and when required.
6. The SSAS shall maintain same degree of transparency even after the withdrawal of the project.
7. Understanding **water right** needs to start from the local people who use water, their daily experiences, the meaning through which they conceive water rights and the options they have for acquiring water depending on their access to these vital resources.
8. **Direct User Groups** for a particular asset to be formed at village level & be given User Rights for effective maintenance of community structures.
9. The Post-project Phase must become **"Community Centered"** so that strategies for longevity of soil & water conservation structures, forest management by local communities are further developed & managed on sustainable basis.

PROPOSED COMMUNITY MODEL FOR NRM MAINTENANCE & MANAGEMENT



POST PROJECT MAINTENANCE STRATEGY OF EPA ASSETS UNDER SUJALA

Under Sujala, EPA assets were divided in to two categories namely;

1. Institutional Assets
2. Community Assets

INSTITUTIONAL ASSETS

- I. The Institutional assets like School /Anganwadi buildings, school compounds etc are formally handed over to the respective institutions.
- II. These institutional assets will be maintained / repaired by the respective institutions.
- III. The SSAS will closely monitor these institutional structures and bring pressure on institutional authority to take up repairs as and when the damage occurs to the structure.

COMMUNITY ASSETS

- I. The community assets like Samudhaya Bhavan, Cattle troughs, Gokatte /Kalyanis, Community bore wells etc are to be maintained by the respective user groups with a close assistance & guidance of the SSAS.
- II. Large number of Samudhaya Bhavans was established under Sujala Watershed Programme. Each village has one Samudhaya Bhavan. The SSAS will take the responsibility of maintaining these structures. For further maintenance and repair of these structures and also for electricity bills, wall paintings and daily maintenance, the SSAS may collect yearly nominal user charges from all the groups of village (Groups like SHG, UG/AGs, Yuvak mandals mahila mandals etc).
- III. Sharing of Samudhaya Bhavan for meetings, functions etc to be cordial and SSAS will have the right to frame rules & regulations about sharing arrangement for different purposes.
- IV. With respect to Gokatte/Kalyanis/Cattle Troughs/Roads, these structures needs at least yearly once repair and cleaning. So, the SSAS will have to take the repair work with the labour assistance from the community users.
- V. With respect to community bore wells the direct user groups will have to shoulder the primary responsibility of maintenance and repairs, or otherwise the respective development department like PWD, has to take care the maintenance of these bore wells. The SSAS and direct users have to bring pressure on these departments for timely repairs and maintenance.

POST PROJECT MAINTENANCE STRATEGY FOR NATURAL RESOURCE MANAGEMENT (NRM) ASSETS UNDER SUJALA

Under Sujala Watershed programme, two types of assets were created namely:

1. Individual Assets
2. Community Assets.

1. Individual Assets

This category includes all the activities taken up by the individual farmers or area group members on their private lands. The major activities includes earthen bunds, farm ponds, bore well recharge pits, boulder bunds, agro – horticulture, agro forestry etc.

STRATEGY

1. These assets being a private domain shall be maintained by the individual farmers at their own costs.
2. The SSAS need not extend any financial support for the post project maintenance of these structures expect for the vulnerable groups like marginal, SC/ST farmers for whom the SSAS may extend loan from its corpus fund on a nominal interest basis.
3. Technical support will be provided by the Departmental staff & NGOs, on the identification

of damaged structures, preparation of action plans to take up repairs etc,

4. The SSAS shall constantly monitor and assess the damage occurred from time to time in various private structures or can build up pressure on the individual farmer to take up repairs.
5. SSAS will have constant touch with the departmental persons and build pressure on them to provide technical support to individual assets maintenance.

COMMUNITY ASSETS

This category includes all the assets created in the community lands, village forest lands and revenue lands either by a group of farmers or by CBOs. EPA assets are also fall in this category (separate strategy for EPA explained in previous paper). Community assets mainly includes check dams, Nala bund, farm ponds, MPT, RRS, Nala revetment, forestry and horticulture plantations, Silvi pasture etc.

Further, these community assets are classified into two categories:

I. Category –I Assets

II. Category-II Assets

I. Category-I Assets

These are the assets which are being used by few families called ‘User Groups’. The assets like farm pond, check dams, Nala bunds, MPT, EPA assets like community bore wells, water storage tanks, fruit gardens etc.

These assets have to be remain with the community. The responsibility regarding these assets management & maintenance will rest with the respective ‘User Groups’. Each ‘User Group must send at least one representative to the SSAS. With a MoU between the user groups and SSAS/GP which can adopt the following options for their maintenance.

- User Charges may be collected by every user members at the time of certain repair.
- Repairs /maintenance may be undertaken through Shramadan from users.
- Users can generate revenue for the maintenance by taking up certain activities like pisci-culture.
- In case of higher investments the user may also take loan from SSAS on interest basis and also can obtain Grant from Grama Panchayat.

II. CATEGORY –II ASSETS

All usufruct assets, which are auctioned every season/year, where the whole community members are beneficiaries. Eg: Forestry & Horticulture produces (Plantations & Natural forest), Silvi pasture, fishing from tanks, biomass from common lands, Road side plantations, Nala revetment, structures for community use like gully plugging structures eg: check dams, community water harvesting structures etc.

These large number of assets created during the project period are used by entire village communities. The maintenance of these assets requires intensive participation of community. The involvement of women folk has been specially emphasized for maintenance of

assets keeping in view their earlier effort through SHGs to create these assets. The SHG members, AG members and VFC members were also encouraged to shoulder the maintenance responsibility of these assets. The activity or component wise post project maintenance strategy is discussed as follows:

a. Forest and Horticulture plantations and pasture lands

Community members are availing usufruct benefits from these assets and realize the need and their responsibility for their maintenance. All these plantations and natural forest are to be handed over to SSAS for their over all maintenance in the post project period along with proportionate amount of corpus fund. Further, the SSAS can be given options to shoulder the entire responsibility or can be handed over the maintenance responsibility to the particular SHG/AG/VFC and that particular SHG/AG/VFC should have its due representation in the SSAS.

The following strategies shall be adapted for the maintenance of these plantations & pasture development sites as well as natural regeneration areas.

- Watch & ward provision by appointing watcher for a period of three years after the withdrawal of the project.
- Stress on involvement of SHG women, because success of plantations is expected to be higher as they are the real sufferers of natural resource degradations and spend a great deal of their time inside the forest areas.
- Formation of fire control groups during the fire season to combat forest fires which will be supported by entire village community at the time of fire incidents.
- Ban on free grazing and tree felling and collection of penalties for the violators & formation of social fencing and leaving some portion of pasture land for free grazing.
- Plantations done in reserve forest and protected forest areas will be handed over to forest department if those areas are not included in village panchayat.

- SSAS with the support of all the community members can derive a socially acceptable usufruct sharing mechanism.

b. Road side plantations

These are used by the entire village community, maintenance will be assured by using money from SSAS corpus fund, monetary contribution and labour contribution by village community and also grants from Gram Panchayat.

c. Soil and Water Conservation measures

The soil conservation measures in the form of retaining walls and breast walls along the farms and peasants will be maintained by respective beneficiaries. But, structures for community use, such as gully plugging, check dams, farm ponds, MPT etc, the SSAS corpus fund along with the labour contribution will be utilized for small maintenance. For larger investments, the GP grants and other developmental schemes will be looked for as it is a cost expensive activity and needs higher technical inputs.

d. Community water harvesting tanks

Generally, water harvesting tanks which have a potential for pisci-culture activity & for artificial irrigation purposes. These are the income generating sources for village communities from which future maintenance will not be a problem as these users will take repairs & maintenance of these structures with the income generated from the fish rearing activity. In addition, the SSAS and GP will extend financial assistance in the form of loan. The overall supervision will be looking after by SSAS.

USUFRUCT SHARING ARRANGEMENT

For degraded forest & non-forest Government lands: 100% in case of NTPF & 85% in case of other forest produce (Against the 90% & 75% as stipulated under JFPM scheme) shall be shared by the users.

Linkages with Line departments

For the technical and marketing assistance the following line departments will be linked to SSAS and other user groups (Table-1).

ILLUSTRATIVE CASE STUDIES UNDER SUJALA ON THE SUCCESSFUL MANAGEMENT & MAINTENANCE OF CPRS

**Model Common Property Resource Treatment
- A Case study in Malakanahalli village, Itagi Watershed, Haveri**

In Malakanahalli of Kumudvathi micro-watershed of Itagi 1st phase, farmers had united & planted 4200 tamarind, 200 neem, 50 jack, 40 bamboo and other 1000 seedlings at the cost of seven lakhs in nearly 50 acres CPR land during the month of July '03. Villagers have arranged for watering, watch & ward and have applied nearly 27 truck loads of FYM. The maintenance responsibility is being shouldered by the AGs and monitoring responsibility by SWS-EC. AG members have already collected contribution from the farmers for operation & maintenance. Vigorous growth & good survivalence of species is observed in this year. Today it is serving as a model demonstration unit to organize exposure & field visits for many other surrounding sujala farmers.

Table -1

Sl.No	Line Department	Purpose
1	Forest Department	<ul style="list-style-type: none"> • Provides technical inputs on selection of site, selection of seedlings • Land management, maintenance & gap filling. • Pest control • Marketing of usufructs like fruits, NTPF etc.
2	Fishery Department	<ul style="list-style-type: none"> • Technical inputs on rearing of fishlings and marketing linkages.
3	Watershed Development Department	<ul style="list-style-type: none"> • Technical assistance in identifying damaged structures, prioritizing the extent of damage, evolving action plan for repairs.
4	Agriculture Department (Raita Samparka Kendras)	<ul style="list-style-type: none"> • Technical information on farming systems, crop production, vermi culture, IPM, INM, Agricultural implements.
5	Veterinary Department	<ul style="list-style-type: none"> • Information on improved milk production practices, selection of milking cows, growing of high yielding fodders.
6	Department of Horticulture	<ul style="list-style-type: none"> • Technical information of dry land horticulture, crop production, selection of fruit seedlings, cultivation, insect & pest control, marketing aspects, value addition, etc.
7	Department of Sericulture	<ul style="list-style-type: none"> • Technical information on dry land sericulture, sericulture production practices, marketing of cocoons etc.
8	District Krishi Vignana Kendras (KVKs)	<ul style="list-style-type: none"> • Training on location-specific crop production practices & income earning activities • Timely dissemination of technologies to watershed farmers • Soil testing etc,

**Tank foreshore afforestation & Maintenance
- Efforts of AG in creating sustainable livelihoods**

Uttanur sub-watershed in Mulabagal taluk of Kolar district has identified uttanur tank foreshore for reforestation programme. Uttanur 'A'- Area Group members by paying contribution amount started reforestation on 28.7.03 and planted 20,000 forestry seedlings of different species namely Bamboo, Honge, Acacia, Terminalia, Nerale, wild mango, Tamarind, Glyricidia, Neem & other forest species. Today they have developed a model tank foreshore with 95% survivalence of tree species. The unique approaches adopted by the AG for better execution & maintenance of the species are;

- **Watering-** AG members on rotational basis watered eight times during the first year and in subsequent years watering is not required
- **Ban on Grazing-** They have banned open grazing & introduced penalty system
- **Financial contribution-** 10% contribution i.e, Rs. 7000/- is voluntarily paid by the Uttanur 'A' Area Group members. Totally Rs. 7 lakhs spent on this tank foreshore treatment
- **Maintenance-** Entire maintenance responsibility rests with Uttanur 'A' Area Group
- **Watch & Ward-** Three AG members are employed with employment guarantee (Rs. 46/day)
- **Post-project maintenance & Usufruct sharing-** The sub-committee of GP i.e, SWS-EC will shoulder will shoulder the over all responsibility with the assistance from Uttanur 'A' AG. They have planned to share the usufruct 100% in case of NTFP & 85% in case of other forest produce
- **Impact;**
95% survival rate
Employment guarantee to AG members
Improved canopy cover

INITIAL IMPACTS AND LESSONS LEARNT FROM SUJALA WITHDRAWAL PROCESS

1. Natural regeneration of indigenous grass and tree species is observed with very clear differences compared to untreated sites.
2. Improvement in moisture holding capacity of soils is observed
3. Number of surface water bodies is increased
4. A high level of interest and commitment among communities has been sustained, with participating groups applying to expand sites and "new" communities requesting to establish their own sites.
5. Communities have started to produce and sell seedlings from their own nurseries established to supply planting material for watershed sites, on their own initiative
6. Participating communities are coming to realize that not only do their livestock not suffer as a result of watershed treatment, but that they can actually improve fodder supply. The gradual introduction of cut-and-carry systems that appears to be evolving as a result of watersheds may have a significant impact on long term grazing management systems. To date, farmers have demonstrated a great reluctance to even consider controlled grazing in the dry season. The watersheds may promote the essential change in attitude needed for cut-and carry systems to become widely accepted. If so, this may turn out to be one of the most significant impacts of the introduction procedures into the dry tracts.

CONCLUSIONS AND RECOMMENDATIONS

- The introduction of usufruct to encourage community groups to invest in long-term environmental management strategies appears very effective. It in no way compromises Government policy on land tenure issues but gives sufficient security for communities to have the confidence to initiate their own environmental protection plans.
- Treatment itself has been demonstrated to be an extremely effective measure for environmental regeneration. It is simple and cost effective and even on the most degraded lands can show dramatic results in just one season.
- Sufficient short term benefits (in improved forage and thatching grass production) are forth-coming to further animate communities to strengthen and expand their treatment sites. The fact that after only one season, reduced run-off is also identified as a direct benefit from farmers reflects the strength of the approach.
- Currently, the indicators for the process to become self-replicating are encouraging. Every effort should

be made to support such a process of autonomous development - training and orientation of stake holders is a top priority

- A comparative package of policies and measures is needed to address water as a sustainable CPR. The CPR management should become village/ community endeavor of Government, And GOs should participate in people's effort to upgrade & conserve the natural resources.
- Mechanism of sharing benefits of water harvesting structures is a challenge. Policy support & technical solutions are needed to challenge. Policy support and technical solutions are needed to resolve the conflicts between upstream and downstream beneficiaries and the landless poor; responsibility of maintenance needs to be shared between user & the government.
- Conflicting interests between different or multiple users are also seen in CPR management. Community organization should address this problem through developing strong bondage among community members and discourage compartmental and individualist tendencies. Attitude of mutual accommodation is necessary in sharing resources
- The community based natural resource management has partly tried to revive the user right mechanisms but, still in most of the village's local institutions have not been able to establish / implement these rights as there is no legal & institutional back up to enforce these rights. Further, the enforcement/ amendments of laws require long term & it needs multiple institutions involvement. Hence, instead of using user rights every time, the institutions may adopt user privileges concept where in the users has the customary privileges to use the different assets for his benefit. The concept of '**privileged groups**' is gaining popularity till recently and such groups mostly, represent down trodden class with an incentive to use the resources.

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