

CHAPTER 12

DECENTRALIZED WATERSHED MANAGEMENT: EXPERIENCES FROM THE SOIL CONSERVATION AND WATERSHED MANAGEMENT COMPONENT – NEPAL

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INTRODUCTION

The Natural Resource Management Sector Assistance Programme (NARMSAP) began in February 1998 and is run under Nepal's Ministry of Forests and Soil Conservation with support from the government of Denmark. NARMSAP has five components (Table 12.1). The Soil Conservation and Watershed Management Component (SCWMC) comes under the Government of Nepal's Department of Soil Conservation and Watershed Management and is set to run until mid-2004.

TABLE 1
NARMSAP's five components

	Component	Description
1	Community and Private Forestry Component (CPFC)	Mainly training development of government staff and forest users. This component follows up on the DANIDA-supported Community Forestry Training Project (1989 to 1998)
2	Tree Improvement and Silviculture Component (TISC)	Technical backstopping to the community forestry programme to follow-up on the DANIDA-supported Tree Improvement Project (1992 to 1998)
3	Central Level (Institutional) Support Component (CLSC)	Institutional support to forestry sector institutions - mainly the ministry and departments of forests and soil conservation
4	Soil Conservation and Watershed Management Component (SCWMC)	Implementation of integrated soil conservation and watershed management programmes
5	Community Forestry Field Implementation Component (CFFIC)	Implementation of community forestry programme: taken over from World Bank support in 1999

Source: Sthapit, 2000.

The Nepal–Denmark Watershed Management Project (NDWMP, 1996 to 2001) was a pilot project implemented in Dhading, Nuwakot and Rasuwa districts. One of its main aims was to pilot participatory planning and implementation modalities. Since the project ended, its soil conservation and watershed management activities have continued to receive support under SCWMC. This paper describes SCWMC's decentralized approach to project management.

SCWMC APPROACH

SCWMC has promoted a decentralized and participatory approach to managing watersheds. It works through local groups, promotes holistic planning and has given a good degree of budget authority to these groups. The system aims to be transparent, and encourages transparency and accountability among beneficiaries and government staff.

SCWMC is supporting district soil conservation offices to implement their programmes in 24 sub-watersheds through about 700 community development groups, representing about 30 000 households and covering 1 308 km² in 20 hill districts (Including five sub-watersheds of the three NDWMP districts, and 19 sub-watersheds of 17 other districts).

Working through groups

NDWMP (1996 to 2001) went ahead by involving local people in planning, implementing and monitoring interventions. The local farmers were involved in most steps of the project cycle. Activities were targeted to groups of households and carried out mostly through community-based organizations. The project formed local user and coordination groups at the ward, micro-watershed and settlement levels. The groups formed at the micro-watershed level have proven best for integrated watershed management. The ward-level groups have eased the integration of community plans into village development committees' (VDCs') local government planning. The settlement groups have been best at implementing specific local activities.

Experience led to the project shifting its focus from micro-watershed and ward groups to settlement-level groups. The main problems of micro-watershed groups were that the common interest often did not follow micro-watershed boundaries, and these boundaries are usually not the working unit for other government line agencies. The conclusion was that the micro-watershed was not an appropriate unit for forming user groups and for inter-line agency coordination.

Many of the wards in the three project districts are made up of upper hillside and lower valley areas. The people living in these two type of area in each ward usually have differing needs. For example, people in valley bottoms want improved irrigation, while people on the ridge tops want to protect their water sources. In Rasuwa district these differing priorities led to ward groups being unable to agree on which activities to implement with their limited budgets. In addition, because of the relatively large size of these groups – about 100 households – it was difficult to bring everyone together for regular decision-making meetings. In late 2000/early 2001, the project therefore began to form settlement-wise community groups called community development groups (CDGs). These have worked well, as settlements tend to have a cultural cohesiveness and a common development interest. They have functioned well as appropriate local development units.

Group formation

Although it is best if all households within a sub-watershed join a CDG, the process is voluntary. On the other hand, the project aimed to make sure that no households were left

out because of caste, religious or other kinds of discrimination. CDGs are made up of between 20 and 50 households. The problem with very small groups is that they still need the same input from development workers, as most work is group based. However, groups that are too big can suffer from internal tensions and difficulties in following democratic decision-making. Many CDGs have been registered at their district administration offices as non-governmental organizations (NGOs). These community groups have worked well in SCWMC's soil conservation and watershed management programmes.

Budget support

A key issue has been the level of budgetary support for CDGs. NDWMP (1996 to 2001) aimed to allocate its budgets based on communities' needs. Overall budgets were planned in line with communities' agreed planned activities. This bottom-up planning approach allowed the intended beneficiaries – the communities, with assistance from field staff – to prepare and propose relatively big projects. This helped them to build up their skills so that they can approach other donors for funding.

From early 1998, the project made 50 000 Nepalese rupees (NR) (in 2003 NR74 = US\$1) available to each group, irrespective of its size. However, this led to groups splintering to form new groups that were entitled to the 50 000 rupees. This threatened community cohesiveness. Thus, from financial year 1998/1999, the project moved to allocating an amount to each group based on the number of member households. These funds, mostly for physical works and income-generating activities, are allocated for a five-year period according to the formula given in Appendix 1. This commitment from the project allows groups to plan for five years. This system avoids controversy and has worked well.

All group members have to pay an annual membership fee. The groups have developed good feelings of ownership of their programmes and there has been good local involvement in deciding how the money is spent. The guaranteed limited budgets have led to groups prioritizing their real needs.

Budget transfer

At first, CDGs were not able to carry over unspent budgeted amounts to the following year. This led to groups aiming to finish their budgets by the end of each financial year in any way that they could. The expenditure estimates they prepared were made to match exactly the amount allocated, irrespective of cost and with actual costs usually being less than the estimates. Some groups also prepared fake bills to appear to have spent all the money. This system encouraged the misuse of resources.

SCWMC learned from this, and from the beginning of 1999/2000 changed its strategy to allow unspent budgets to be carried over to the next year for years one to four. However, groups must carry out public auditing of their expenditure and must justify why the money was not spent before they are allowed to carry it over. This has led to groups making better use of their resources by not spending recklessly at the end of financial years and by aiming for cost saving so as money can go for genuine needs.



Group contributions

The amount allocated to CDGs is invariably not enough to meet a community’s development needs. Many CDGs bridge this gap by adding their own contributions of money, labour and materials. The level of contribution has varied, depending on the type of activity, number and status of the beneficiaries, location and other factors. Appendix 2 presents the complex community contribution matrix used up to fiscal year 1998/1999. The communities have since introduced their own contribution system, which is more rigid and has fixed rules.

The initial project approach was to supply resources not locally available to help mobilize internal resources for development. Thus, the project generally paid for skilled labour, transport and materials such as cement that needed to be brought in from outside. Locally available materials and unskilled labour were contributed by group members.

However, this approach resulted in a focus on building large structures that needed more expensive external inputs in order to generate more subsidies to the local community rather than simple low-cost labour-intensive structures. Partnering the poor also became more difficult as they often could not afford the fixed contributions. Figure 1 shows how low-cost structures made from local materials can provide more benefits. In this case, at Chhotetar, Kumpur sub-watershed, Dhading it was decided to build a conservation pond to collect irrigation water. However, instead of digging the pond by hand it was decided to build a raised conservation pond with stone masonry walls and concrete flooring. The cost was estimated at NR85 445, of which the project provided 80 percent and the community 20 percent. A monitoring visit in April 1999 found little water in the tank and cracks in the walls. Simply digging the pond would have been much cheaper and much less costly to maintain.

FIGURE 1
Comparing a cement tank and a mud-walled conservation pond: Kumpur sub-watershed, Dhading

Raised conservation pond with cement-stone mortar wall and concrete floor	Conservation pond with a mud wall covered with vegetation and a clay floor
<ul style="list-style-type: none"> • High cost: needs external project support to build. • Needs engineering design and technical supervision. • Needs skilled labour and construction materials (stone and sand) that may not be available locally and can be costly. Cement is major cost. • Normally single use, such as storing water for irrigation. • Maintenance involves using expensive-to-procure cement. 	<ul style="list-style-type: none"> • Low cost: made by farmers with local materials. • Needs no engineering design and supervision. • Uses unskilled labour and local materials. Normally labour-intensive, using locally available labour. • Multiple use: storing water for irrigation, fish farming, drinking, bathing for livestock, and others. • Farmers can maintain it without external assistance. • Easy maintenance as cracks seal themselves.
	

The cement pond shown in Figure 1 cost NR85 445 to build. It soon developed cracks in its wall and floor. In contrast, any cracks that form in the mud-built pond either seal themselves or are easily repaired. The low-cost mud pond is easily replicated by communities in contrast with the cement pond.

The project changed the system from 2000/2001 to allow groups to negotiate and justify any level of contributions for an initiative (SCWMC, 2003a). This led to attitudinal changes in the groups and made it easier for the project to give preferential support to poor people, according to flexible subsidy norms decided on by communities.

An important part of project staff work became convincing group members to increase their contributions. One strategy for doing this was to make groups compete with each other to carry out more activities with their limited budgets by making higher levels of contributions. Encouraging CDGs to implement more activities from their limited budgets has become a major aim of solid conservation and watershed management. This serves as an important indicator of people's interest.

Holistic planning

Project staff help CDGs to prepare community development plans. However, initially this help was inadequate, leading to plans being prepared with only a few household members who were often the local elite groups. As a result, the plans often reflected the elite groups' needs, and the needs of less well off members were ignored. SCWMC has used vision-based planning and the service, economy, environment and democratic norms (SEED) concept to encourage the more equitable spread of benefits.

Vision-based planning: The project started to use vision-based planning from fiscal year 2003/2004 (SCWMC, 2003b). This involves communities agreeing on and then trying to fulfil a development vision by carrying out a range of activities. It involves identifying needs by mapping community resources and the local social set-up. It helps communities to prepare their own plans by prioritizing and designing activities for proper resource use and sustainability. It also supports the involvement of poor and illiterate people in planning.

Vision-based planning is carried out through participatory rural appraisal exercises. For example, a community may set its development vision as becoming "a well-protected and healthy village". Having a well-protected village could be fulfilled by having a well-managed watershed. Achieving this could involve setting the specific objectives of reclaiming all local degraded lands and applying soil conservation treatments to local gullies and landslides.

The next step would thus be to identify degraded lands on a resource and social map, list measures for reclaiming these lands, and then prioritize the measures and areas for reclamation. Gullies needing treatment would be identified by mapping them, listing the measures for treating them, and deciding which gullies needed treating first.

Fulfilling the healthy village vision would involve all households having access to safe drinking-water and the use of a latrine. To identify the activities needed to provide safe and accessible drinking-water for all households could involve:

- mapping all houses on the resource and social map;
- identifying households that do not have easy access to safe drinking-water;
- assessing all potential water sources;
- listing water source protection measures; and
- prioritizing water source protection measures.

The same exercise would then be carried out to identify the households without access to a latrine. The group, assisted by development staff, can then draw up a list of the activities needed to fulfil the community's vision. The group then has to identify the resources needed to carry out the work, and consider their availability.

This holistic-type planning helps communities to understand their needs, irrespective of caste, religion or wealth. It also helps them to seek assistance from different development agencies, and mobilize and manage local resources.

SEED: Alongside the vision-based planning component, field staff have also introduced the SEED concept to help in local planning. Balanced development should have the four dimensions of service, economy, environment and democratic norms (SEED); (LDTA, 1997). In rural Nepal, the main services are roads and drinking-water, communication, education, health and irrigation systems. The main economic activities are agriculture and cottage industries, and the main environmental activities are forestry, soil conservation and hygiene. Ideally, communities should prioritize activities that can provide services, promote production, protect the environment and promote democratic norms. For sustainability, activities need to be included in packages of measures.

When deciding whether to invest in watershed management activities, a community should analyse the benefits that will accrue and follow social and democratic norms to design the activity by considering all four aspects of SEED. Land-use and erosion control works will protect the environment; building intakes, piping and taps will provide drinking-water; and building ponds will collect water for vegetable farming, thus benefiting the local economy. This makes for a complete package that attends to all four aspects of SEED (Sthapit, 2001).

Accountability and transparency

The component aims to decentralize resource control. This has encouraged community accountability and transparency and had led to community members developing feelings of ownership and responsibility for their programmes. This has reduced the misuse of funds. Many executive members who joined up expecting personal benefits have handed over their positions on committees to more development- and service-oriented people.

SCWMC allows no expenditure of CDG money without authorized people signing bills or vouchers. It assigns budget accountability to the CDGs, and the responsibility for local auditing to the target communities themselves. The component demands that CDG members approve expenditure before the final payment for any activity can be made. Project policy is to cut off funding where misuse is proven until any misused money is recovered. Similarly, to carry over unspent money to the next year involves CDGs holding a general assembly to endorse that year's expenditure records.

RECOMMENDATIONS

System replication

The SCWMC programme has been directly funded by the Danish International Development Agency (DANIDA). The decentralization of budgetary responsibilities is a new venture that demands a process- rather than a target-oriented approach. Replication by government line agencies would need the government to change radically the way its district line agency offices deal with their budgets, especially for budget accountability and carrying over unspent budgets to the following year. This would involve revising programme budgets at the beginning of each new fiscal year to adjust for the carried over amounts. The existing government system for the justified revision of programme budgets is a lengthy and cumbersome process.

It is recommended that budgetary control for local development initiatives is handed over to communities, and community-level planning is adopted as widely as possible. The main need is to convince policy-makers of the benefits of this.

Quality and scope

Communities take the lead in implementing activities. However, lack of timely and adequate technical backstopping from field staff and lack of expertise of community members have often led to poor quality control. This has also been caused by communities trying to implement more work from their budgets by compromising on quality. The component has not acted against community groups for carrying out below standard work.

The new package approach has reduced resource constraints. However, communities want to fulfil the service rather than the environment aspects. This will threaten sustainability in the long run. In addition, since the project decentralized resources, communities have been pressuring field staff to allow them to direct resources away from soil conservation and watershed management to building schools, water supply and irrigation canals – things beyond the scope of the programme.

It is recommended that quality control be improved through building awareness about the consequences of poor-quality work, and that facilitation and technical backstopping be improved.

Administration

Community groups have to account for all their expenditure by presenting proofs to the district soil conservation offices before they can receive their next payments. The project has provided record keeping and accounting training, but many groups, especially those that lack literate people, find it difficult to keep records.

It is recommended that only literate group members are appointed as treasurers. If this is not possible, accountants need to be hired. Line agencies also need to give more support to CDGs on record keeping.

Service attitude

A team of one female motivator and one mid-level technician (ranger, junior technician or overseer) is assigned to provide social mobilization and technical backstopping for every 300 to 400 households. These teams have developed more service-oriented attitudes, but have mostly still not been following a full participatory approach. However, understanding that communities have the right to demand services, while field staff have the duty to provide them, is increasing among communities.

It is recommended that field staff movements and service calendars be made public so that communities are able to monitor how well field staff carry out their duties. In addition, evaluating field staff's performance will make them adopt a more service-oriented attitude.

Group sustainability

A major issue to consider is whether or not groups continue to receive support from the government line agencies that promoted their formation. The problem is that each agency forms its own subject-specific groups, meaning that groups tend to fold once agency support is phased out. This is one of the biggest constraints to group sustainability.

At the end of fiscal year 2002/2003, SCWMC phased out support to about 182 CDGs. Support to a further 317 groups will be phased out at end 2003/2004. Although the less active CDGs are likely to fold; the more active ones are realizing that they need to join with other groups to survive and be active. Some CDGs are refusing to form new groups to implement activities for other line agencies and are pushing for these agencies to work through existing CDG structures.

The difference between CDGs and user groups such as community forestry and irrigation user groups is that CDGs are formed to cover all aspects of development whereas user groups relate to a particular resource and only include users of that resource.

This paper recommends that local people are divided into groups made up of several households based on common interests and physiography and be given a neutral name (such as community development groups) to make it possible for different line agencies to use them. This name is more suitable than subject-specific names such as "mothers' group" or "soil conservation group". Local people should decide on group membership. Such groups should be registered under the Local Self-Governance Act, 1999 on the recommendation of VDCs to give them a legal status.

It is also recommended that the Local Self-Governance Act is amended to empower VDCs and district development committees (DDCs) to make all development agencies use such groups to implement development activities. Getting wards, VDCs and DDCs to channel all local development works through CDGs would also create a continuous institutional linkage and ensure that these groups continue even after a line agency ends its development support. This would enable the more integrated implementation of all kinds of development.

Coordination

Watershed management demands coordinated support from different line agencies. However, the differing policies of line agencies and their lack of coordination often make it difficult to coordinate efforts and services to community groups. SCWMC conducts twice-yearly district- and field-level workshops to coordinate line agencies' support to CDGs.

District technical group workshops are held to bring together district line agency chiefs. These workshops give them the chance to work out how they can integrate their support to CDGs. Participants come from district forest, agriculture, livestock, drinking-water, irrigation, cottage industry, women's development and local development offices. District administration office, CDG representatives and representatives from the local agricultural development bank and police also sometimes attend. DDC chairpersons lead the meetings, with district soil conservation officers acting as secretaries. They usually take place twice a year, with the first at the beginning of the fiscal year to review and plan the support to communities and the second at mid-year to allow community input into line agencies' district plans (SCWMC, 2003a).

Field technical group workshops are also held twice a year for field- and VDC-level line agency technicians. At these fora, field staff from different line agencies work out how to deliver integrated support to CDGs. These meetings are usually held by VDCs, with VDC chairpersons leading them and district soil conservation officers or field-level soil conservation technicians as secretaries. The main objective is to facilitate field-level line agency support to CDGs.

It is recommended that development resources (mainly money) from all sources are channelled through grassroots organizations to promote holistic development. This would promote coordination among different service providers including government and non-governmental agencies and private enterprises. A major problem remains that the district and field technical groups lack any legal basis.

CONCLUSION

Decentralization is crucial to developing community ownership and accountability for development programmes. More grassroots development resources and responsibilities need to be handed over to community groups. Decentralization is the only sustainable strategy for watershed management in countries such as Nepal.

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APPENDIX 1: COMMUNITY DEVELOPMENT GROUP BUDGET ALLOCATION

SCWMC supports CDGs for five years with one year of start-up, three years of implementation and one year of phasing-out, as shown in the following tables (SCWMC, 2003a; 2003b). Transportation costs to the road head are also covered and are payable at the rate of NR50 per household in the first and fifth years, and NR100 in the other three years.

Budget allocation calculations for CDGs per household

"Walking days" and distance from road head													
Days	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
Distance in km	≤ 3	3-9	9-15	5- 21	21-27	27-33	33-39	39-45	45-51	51-57	57-63	63-69	69-75
Physical budget, including all transport cost (NR)													
Year 1	550	575	600	625	650	675	700	725	750	775	800	825	850
Year 2	1 100	1 150	1 200	1 250	1 300	1 350	1 400	1 450	1 500	1 550	1 600	1 650	1 700
Year 3	1 100	1 150	1 200	1 250	1 300	1 350	1 400	1 450	1 500	1 550	1 600	1 650	1 700
Year 4	1 100	1 150	1 200	1 250	1 300	1 350	1 400	1 450	1 500	1 550	1 600	1 650	1 700
Year 5	550	575	600	625	650	675	700	725	750	775	800	825	850
Total	4 400	4 600	4 800	5 000	5 200	5 400	5 600	5 800	6 000	6 200	6 400	6 600	6 800

Example: In year 3, a group that lies one day's walk from the road head gets NR1 300 per household for two days, including one day's on-road transportation costs (NR100) and one day's off-road transportation cost. This group has 35 households and therefore its total due physical budget for programme year 3 is NR1 300 x 35 = NR45 500.

Income-generating activities budget ceiling for CDGs

Budget allocation per household (NR)				
Year 1	Year 2	Year 3	Year 4	Year 5
200	300	600	600	300

Example: In year 3, a CDG of 35 households gets NR600x35=NR21 000.

APPENDIX 2: COMMUNITY CONTRIBUTIONS MATRIX (FINANCIAL YEAR 1998/99)

Type of activity	Material		Transport	Labour		Technical advice
	Locally available*	Needs procuring		Unskilled	Skilled	
Land productivity						
On-farm conservation	●	+	●	●	+	■
Conservation pond	●	■	+	●	+	■
Fruit tree plantation	●	+	●	●	●	■
Grass plantation	●	■	●	●	+	■
Nursery	●	+	●	●	●	■
Natural hazard prevention (including: gully treatment, landslide treatment, torrent control, stream bank protection, degraded land rehabilitation)	+	■	+	+	■	■
Development infrastructure protection						
Irrigation channel protection	●	+	+	●	+	■
Trail protection	+	+	+	+	■	■
Road slope stabilization	+	+	+	+	■	■
Water source protection	●	■	+	●	■	■
Shelter belt/green-belt/buffer strip	+	■	+	+	■	■
Community soil conservation extension demonstrations						
Community	+	■	+	+	■	■
Private	●	+	+	●	+	■

Key:

Notes: *Stone, sand, soil, timber, bamboo, seed, planting material and other resources can be procured locally, paying only labour cost and, in some cases, a nominal royalty.

● Communities contribute 100 percent.

+ Contribution negotiable.

■ Project provides and pays for almost everything.