

Working Paper 220

**Panchayats, Hariyali
Guidelines and Watershed
Development:
Lessons from Karnataka**

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PANCHAYATS, HARIYALI GUIDELINES AND WATERSHED DEVELOPMENT: LESSONS FROM KARNATAKA

N Sivanna¹

Abstract

The focus of the study is to examine what is happening on the ground in terms of practices and processes, and the role of principal actors in such processes striving to implement such as the Hariyali Guidelines for the effective management of watershed development. More specifically, the study aims at assessing the extent of autonomy that the institutions like grama panchayats have in the implementation of watershed development activities. An important aspect of the study has been assessing the governance issues such as transparency in identifying priorities and spending, and more importantly, the issue of accountability, as per the design and set guidelines. An important lesson that emanated from the analysis is that no institution or organisation --- be it a panchayat, an NGO, a government department, or a CBO --- can work in isolation or independent of others. Hence, it is necessary to create complementarities among these formal and semi-formal governing institutions for addressing different natural resource management needs.

Introduction

In recent times, decentralised planning and implementation of natural resource management (NRM), along with the effective involvement and participation of local institutions and communities, have been receiving importance and publicity (Baumann and Farrington 2003, Ramakrishnan *et al* 2002, Lele 2004, Kumar 2007). Any reform initiated in this direction purportedly increases resource user participation in NRM decisions and benefits by restructuring the power relations among the central, state and local governments and communities through the transfer of management authority to local-level organisations. Falling in this line is the efficient and sustainable use of the most important of all natural resource, 'water', which is seen as *sine qua non* of development, engineered through watershed management.

As water is the basic requirement for sustenance of life, its conservation has been recognised since time immemorial. This is more so in agriculture-dominated economies like India where two-thirds of the cropped area is dependent on rainfall without any protective irrigation (Reddy 2000). Watershed management is a policy response to the increasing environmental crisis leading to non-sustainability in agriculture, especially in dry land/ semi-arid regions (Deshpande and Narayanamoorthy 1999, Shah 2006). Further, managing watersheds for rural development in developing countries is a relatively new concept and in many ways, it is also much more complex than the original concept. It is concerned not only with stabilising the soil, water and vegetation, but also with enhancing the productivity of resources in ways that are ecologically and institutionally sustainable (Farrington *et al* 1999). This apart, the participation of the community members or beneficiaries, as a collective voice, in the watershed management is seen as the most crucial aspect (Kerr 2002, Deshpande and Narayanamoorthy 1999) and is almost a guiding principle for achieving the project goals.

Watershed approach has conventionally been applied for arresting rainwater runoff, its harvesting and *in situ* soil and moisture conservation. This has been achieved through treatment of wastelands/degraded lands to achieve their greening under various programmes of the Central and state governments.

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Watershed Development Guidelines and Panchayats

In order to streamline and institutionalise the process for implementing watershed development projects, the Government of India has been framing necessary guidelines. One can broadly observe four phases of the guidelines. Initially, these were prepared under the Ministry of Agriculture, Government of India, in the mid-eighties. Following four major projects funded by the World Bank, these were modified and issued as NWDPR (National Watershed Development Project for Rain-fed Areas) guidelines in 1986. Following the report of an Expert Committee, these were modified and re-issued in 1991 as new guidelines of NWDPR under the title WARASA (Watershed Areas' Rain-fed Agricultural Systems Approach). A committee, constituted by the Planning Commission under the chairmanship of C H Hanumantha Rao, modified the guidelines to streamline various projects. The guidelines, introduced first in 1995, were based on the recommendations of the Committee (1994), and were later revised in 2001. The Hariyali Guidelines were framed in 2003. The revision was to make the guidelines more focused, transparent and easy to understand. One of the significant aspects of the Hariyali Guidelines is providing a crucial role for panchayats in implementing watershed development activities.

While exploring the critical link between the panchayats and the watershed development guidelines, Baumann (1998) identified three very important questions: What kind of decentralisation is necessary for watershed management? Does the involvement of PRIs (Panchayati Raj Institutions) in the implementation of the guidelines require institutional change or involve institutional conflict? How can one support local collective action and how do PR (Panchayati Raj) and the guidelines compare in this respect? In answering these questions, he observed that: "Panchayati Raj and the guidelines are both systems that aim to decentralise control over development to local communities. The former is a constitutional part of Indian democracy and the latter is an executive order of a ministry. Apart from the fact that they both aim to decentralise, they differ... in their legislative status, objectives and approaches... The usual objection to gram panchayats being made responsible for watershed management is that they are too big and do not coincide with watersheds". However, it is more than likely that a grama panchayat will not coincide with a watershed, but it does have a mandate to make a plan for natural resource management within its boundaries (Kumar 2007, Upadhyay 2003). There is no contradiction in establishing watershed committees within a grama panchayat. This, indeed clearly makes a case for entrusting grama panchayats with the responsibility of implementing watershed development activities.

With the passing of the 73rd Constitutional Amendment, much emphasis has been laid on the decentralisation strategy since it is believed that decentralisation of power to the local units of government and management is one of the best ways of empowering the people, promoting public participation and increasing efficiency. The PRIs, as legally established institutions, possess statutory and constitutional rights and the mandate for natural resource planning (Baumann 1998). Farrington (OIKOS and IRRR 2000) has identified some positive aspects of PRIs for handling, planning and implementing common property resource (CPR) activities. According to him, the panchayats have the potential to integrate watershed management into wider development activities. Further, they have the capacity to draw the services of line departments, have powers to levy and collect taxes and more importantly, they have the powers to prepare development plans according to the people's wishes. All these attributes make a strong case for involving the panchayats in planning and implementing CPRs, specially the watershed development programme in a decentralised natural resource management (DNRM) framework.

Hariyali Guidelines

The Government of India, in 1994, scripted specific guidelines for implementing watershed development activities. The guidelines for watershed development (GWD), revised in 2001, aimed at bringing local communities to the centre stage and moving the administration towards a facilitating role. An important aspect of the GWD was that it was able to focus more on enhancing the quality of rural livelihood support systems, by giving special attention to poverty alleviation, it encouraged village communities to use simple and affordable technological solutions (Hooja 2004). In order to bring uniformity in coverage and implementation pattern, the Guidelines for Watershed Development were brought out by the Department of Land Resources, Ministry of Rural Development, in 2001, which were revised in 2003 and called Guidelines for Hariyali”.

The new Hariyali Guidelines speak of harnessing every drop of rain water for irrigation, horticulture, floriculture, pasture development and fisheries to create sustainable sources of income for the village community and more importantly, for providing clean drinking water to all parts of rural India. The most radical change proposed by the Hariyali Guidelines is making panchayat bodies the sole managers of watershed development activities. Other institutions that had hitherto participated effectively in watershed management were completely sidelined. Moreover, the Hariyali Guidelines have also reduced the budget for community development and capacity building (Hooja 2004).

The Hariyali Guidelines (HGs) aimed at empowering panchayats, especially the grama panchayats, for planning, executing and managing the watershed development activities. Under this new initiative, all watershed development activities would be implemented through the panchayats by providing them with necessary administrative, technical and financial support (Government of India 2003). The Guidelines also aimed at empowering panchayats at all the three levels -- district, taluk and village-- and it was expected that with the devolution of necessary powers, the grama panchayats/grama sabhas would perform far better than the watershed associations/ committees since they are:

1. equipped with statutory rights and mandate for natural resource planning;
2. potential enough to plan according to the people's wishes and integrate watershed management into wider development activities;
3. able to draw on the services of line departments in an integrated manner and put political pressure on line departments at higher levels;
4. equipped with the powers to impose local taxes or user charges; and
5. committed to “reservations” for representation of women and weaker sections as per the constitutional provisions.

The Hariyali Guidelines entrust entire responsibility of implementing the watershed activities to the panchayats. As per the guidelines, the projects will be implemented mainly through the Zilla Parishads/ District Rural Development Societies (DRDSs). At the district level, Zilla Parishad/Panchayat (ZP) will be the nodal authority having the power of approving the selection of watersheds, appointing Project Implementation Agencies (PIAs), approving the action and treatment plans of the projects. The Chief Executive Officer (CEO) of the Zilla Parishad will have the power of maintaining the accounts and signing all statutory papers such as utilisation certificates. The Zilla Parishad is entitled to recover funds and take appropriate action if the projects are not properly implemented or funds are mis-utilised.

At the field level, the Grama Panchayat (GP) is entrusted with the responsibility of implementing the projects under the overall supervision and guidance of project implementation agencies. An intermediate

panchayat, the Taluk Panchayat (TP), may be the implementing agency for all the projects sanctioned. The project implementing agency will provide necessary technical guidance to grama panchayats for preparing development plans through participatory rural appraisal exercise. The grama panchayats will have the responsibility of monitoring and reviewing the overall project implementation and setting up institutional arrangements for post-project operation and maintenance, and further development of assets created during the project period. The process of implementing watershed development activities is as follows:

- Conducting benchmark survey of the watershed area and PRA exercises,
- Preparation of action plan and watershed treatment plan,
- Finalisation of action plan and watershed treatment plan by WDT and submitting the same to project implementing agency,
- Submitting plans for the approval of Zilla Parishad,
- Releasing funds,
- Monitoring, reviewing and evaluation by the Zilla Parishad/State Government/Central government,
- The approved plans to include all the arable and non-arable land, including degraded forest lands and the government, community and private lands.

Focus of the Paper

The foregoing description of guidelines leaves ample scope for the process to be all-inclusive, participatory, transparent and accountable. More importantly, the planning and implementation of watershed development activities is entrusted directly to the panchayats, especially the grama panchayats. However, prior to the Hariyali Guidelines, the involvement of panchayats was not given serious thought as they were found lacking in political and administrative support, and more so in funds. Further, the reason that has been often cited is that they are governed by the rural elites, and are more prone to corruption. As a consequence, there was a lack of consensus and clarity on giving any importance to panchayats in the implementation of watershed projects until the introduction of Hariyali Guidelines. Set in this backdrop, the focus of the paper is to examine what is happening on the ground in terms of practices and processes and the role of principal actors in the implementation of the guidelines. More specifically, to study the nature and impact of these guidelines (with the involvement of panchayats) in achieving the goals of watershed development programmes. Thus, the paper intends to address the following issues:

- The various institutional mechanisms that were evolved and practised for ensuring effective and result-oriented implementation of watershed development projects,
- The positive or negative outcomes of implementing watershed development activities through the guidelines,
- The structural and institutional constraints that the panchayats had to face, both internally and externally, while implementing the project activities,
- The kind of vertical and horizontal linkages in operation between the participating institutions and the stakeholders.

Framework for Assessing the Implementation of Watershed Development Programme

The implementation of any development programme revolves around various concepts and factors which include not only the political, administrative and financial factors but also the institutional and environmental ones. All this needs to be understood in a decentralised natural resource management perspective. While taking note of this, a conceptual and institutional framework was developed for understanding the programme implementation under the Hariyali Guidelines.

A Conceptual Framework

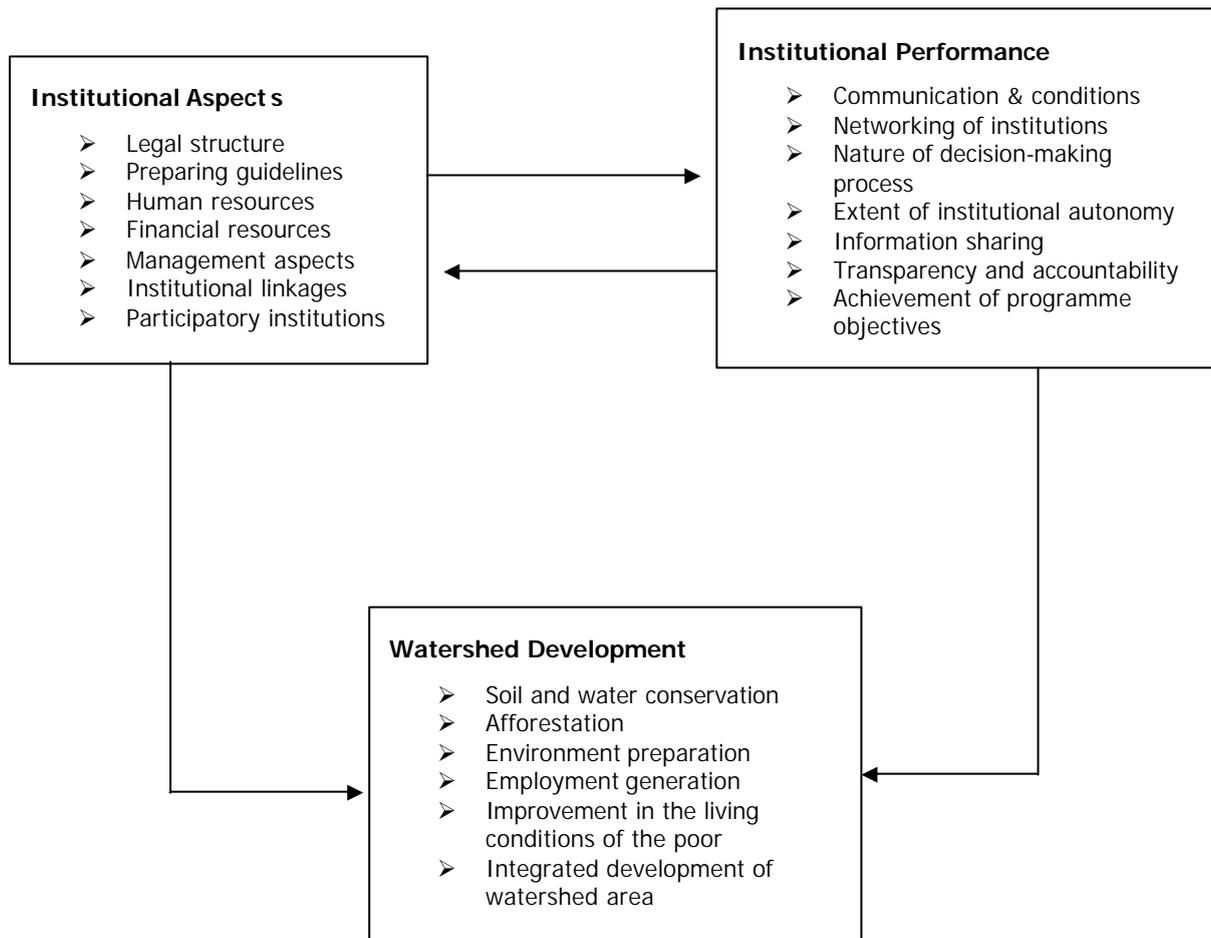
The prime focus of the paper is to emphasise how decentralised institutions like the grama panchayats would manage natural resources. As per the Eleventh Schedule to the Indian Constitution, maintenance of common property resources is one of the obligatory functions of the PRIs. Therefore, these grassroots-level decision-making institutions have the responsibility of managing the resources in addition to carrying out other administrative and developmental activities. Seen in this context, decentralisation thus refers to the process of transferring decision-making powers in all these areas to lower levels, with appropriate allocation of rights and responsibilities. The paper argues that more decentralisation of the governance of natural resources is desirable both in itself, as it increases the democratisation of governance, and because it leads to more efficient, sustainable and equitable outcomes (Lele 2004). Set in this background, an attempt is made here to understand the roles and functions of participating institutions and organisations and their interplay, in terms of horizontal and vertical linkages, in facilitating a programme like watershed development and its contribution to evolving an eco-social system.

The conceptual framework developed for the study revolves around identification of issues and problems in natural resources such as forestry, water and land, environmental aspects and livelihood activities. These resources need to be managed by adopting a decentralised approach where the local-level institutions and communities would be able to participate actively and manage them effectively and efficiently. This, in fact, facilitates collective action and collective choice (Ostrom 1990) among the participants, leading to participatory development and management of resources. However, all this is possible provided there is an equal commitment by the governmental system and the civil society. The government must evolve necessary strategies in the form of laws and legislation and policy initiatives to address these issues and problems, and take the support of the civil society organisations, which work closely with the affected people and also understand better the problems and issues concerning the NRM. In order to accelerate the system's processes and actions, media and the public should play a key role.

Institutional Framework

In the backdrop of the above conceptual framework, the paper further develops an institutional framework for understanding the implementation of watershed development projects, which aim to harness natural resources like water, soil and land. Using this framework, an attempt is made to analyse plan formulation and plan implementation of watershed programmes under the Hariyali Guidelines. The framework delineates both institutional requirements and their

An Institutional Framework for Implementing Watershed Development Project



desired levels of performance for achieving the objectives of the watershed development as enumerated in the guidelines. The institutional aspects help to understand whether an institution like grama panchayat, coming as it is under a basic legal structure, has assured access to human, technical, financial resources and its management systems. The institutional performance provides an opportunity to assess the performance of not only the panchayats and but also of other participating institutions and organisations in achieving the programme results effectively, using their institutional and technical resources.

Objectives of the Paper

Keeping in view the research issues and the conceptual and analytical frameworks, the following objectives are framed, which are interrelated in nature:

1. To critically examine the implications of the Hariyali Guidelines for implementing watershed development activities,
2. To study the organisational strengths (institutional and administrative innovations, strategies and measures) and constraints of the panchayats and other associated institutions in implementing watershed development projects, and
3. To examine the vertical and horizontal linkages in facilitating the project implementation process.

Methodology

In order to analyse the objectives of the paper, the research team conducted intensive field work in two selected grama panchayats-- Huchagondanahally (hereafter HG Hally) grama panchayat and Karadi grama panchayat-- in Tiptur taluk of Tumkur district (Bangalore Division) in Karnataka. The rationale for selecting the district lay in the fact that Tumkur district was one of the first few districts to implement the Hariyali Guidelines through the involvement of the grama panchayats. The required data were collected through survey and interview methods that covered the activities carried out by the participating institutions and organisations -- line departments such as Forestry, Agriculture, Animal Husbandry, Horticulture, Fisheries and Sericulture, Self-Help Groups (SHGs) and User Groups (UGs) -- that had received the funds. The unit of inquiry was the grama panchayat, which is a lower tier in the three-tier system of panchayati raj. Selection of grama panchayats was done in consultation with the officials of the Zilla Panchayat and the office of the Deputy Conservator of Forests, Tumkur district. To collect required information, a structured questionnaire was administered and one-to-one interviews were conducted with the key functionaries involved in the implementation of the project activities. Focused Group Discussions (FGDs) were also held with the panchayat members, stakeholder groups, SHGs and community members. An important aspect of the study was assessing the governance issues such as transparency in identifying priorities and spending, and more importantly, the issue of accountability as per the design and set guidelines.

Watershed Development Programme in Karnataka

Karnataka is predominantly a rural and agrarian state. Agriculture plays a key role in the State's economy. However, as is the case elsewhere in the country, a large percentage of its rural population lives below the poverty line. With a view to improving the quality of life of the rural population and reducing the incidence of rural poverty, the State has adopted a two-prong strategy of promoting overall development and implementing number of target-oriented grassroots-level development programmes (Aziz 2003).

Agriculture in the State is both diversified and segmented. Vast stretches of drought-prone regions and sporadic patches of irrigated area characterise Karnataka's agrarian structure. Rain-fed areas constitute a large share of the agricultural land of the State and face severe agro-climatic and resource constraints. Agriculture sector engages more than 60 per cent of Karnataka's work force. The share of agriculture in GSDP decreased from 33 per cent in 1993-94 to 25.3 per cent in 2000-01 (Deshpande *et al* 2006).

Karnataka has given priority to watershed development because 75 per cent of the cropped area here depends on low and uncertain rainfall. It has a geographical area of 190.49 lakh ha and the net cropped area is 100.79 lakh ha. Out of this, 20.32 lakh ha are irrigated and 80.46 lakh ha are rain-fed areas. The rain-fed areas are have no prospect of ever getting any irrigation facilities. The State depends on dry land for more than half of its food production. Consequently, more emphasis is laid on dry land farming in the State by way of developing dry land areas on watershed basis. The State has the highest proportion of drought-prone area (79.87 per cent of geographical area) among all major states in the country, and in absolute terms, it has the second largest area (152.2 lakh ha) under drought zone, which is next only to Rajasthan (218.95 lakh ha). The rain-fed areas contribute around 62 per cent of the agricultural production in the State. Karnataka has adopted various types of watershed development programmes financed by the government as well as private organisations. Roughly Rs 775.89 crore was spent on watershed development programmes up to the end of March 2003. At present, the State is implementing 3,681 micro watersheds under different schemes. The Department of Watershed Development is planning to develop about 21.92 lakh hectares of untreated land by spending an amount of Rs 1,250.47 crore under different ongoing schemes in the next 5 or 6 years (Deshpande *et al*, 2006). To achieve

better co-ordination in planning, implementation and supervision in watershed programmes, the Government created this Department on April 1, 2000. All the watershed schemes and projects in the state sector, the Central sector schemes, externally aided projects and the district sector schemes were expected to be implemented through this Department (Karnataka Agricultural Policy 2006).

Study Area

The working of any institution is conditioned by the given socio-economic and political framework. It is imperative to look into the environmental factors which play a significant and imposing role in shaping the organisation and its functioning. They are interdependent, inter-related and frequently interact with one another. The interaction between environment and governance is very relevant at the grassroots level, especially to natural resource management.

Selected District Profile

Tumkur, the headquarters of the district, is 70 kilometres away from Bangalore. The district has 10 revenue taluks, of which 5 are declared as backward by D.M. Nanjundappa Committee. There are around 500 revenue hoblies, 2,537 villages and 12 towns in the district. The population is 25.85 lakh as per the 2001 census, 80 per cent of which is rural. The average literacy rate is 67 per cent, with more male literates outnumbering the females.

Land Use Pattern

The land use data reveal that of the total geographical area of 1,064,755 hectares (Government of Karnataka 2006), the forest area is around 45,177 hectares, 151,405 hectares come under land not available for cultivation, the uncultivated land is about 162,240 hectares, the fallow land 123,246 hectares and the remaining 621,099 hectares is available for cultivation. Only 24 per cent of the cultivated area comes under irrigation as Tumkur district has no perennial rivers. There are 12 major tanks and only one major channel, Hemavathi. Out of the total net area (132,699 hectares) irrigated, 2,470 hectares come under canals, 10,273 hectares under tanks, 2,680 hectares under wells, and 117,246 hectares under bore-wells. The major food crops of the district are paddy and ragi, whereas coconut and groundnut are commercial crops. The average rainfall is around 767 mm. As far as agricultural land-holdings are concerned, there are 203,464 marginal farmers, 107,342 small farmers, 71,288 semi-medium farmers, 32,248 medium farmers and 4,831 large farmers.

Selected Taluk Profile

Tiptur is one of the 10 taluks in Tumkur district. Tiptur town, the headquarters of the taluk and also the revenue sub-division, is located at a distance of 70 kilometres away from the district headquarters, Tumkur. The taluk has 26 grama panchayats, with 222 inhabited and 9 uninhabited villages. The total population of the taluk is 216,539. The rural population is 163,783 as against the urban population of 53,043. The proportion of rural population to the total population of the taluk is 75.61 per cent. In the taluk, the male population is 109,629 and female 107,197. Of the total population of the taluk, the Scheduled Castes number 26,589 and Scheduled Tribes, 6,309. There are 22,011 agricultural labourers working in the taluk.

Land Use Pattern

In Tiptur taluk a majority of the population is directly engaged in agriculture either as farmers or as agricultural labourers, as it is their main source of livelihood. The total geographical area is 77,451 hectares of which the total cultivable area is 68,884 hectares. The forest coverage is 595 hectares; around 7,130 hectares fall under uncultivable area and 1,623 hectares under fallow land. Out of the net irrigated area of 13,902 hectares, 5,805 hectares come under tanks, 212 hectares under wells and 7,885 hectares under bore-wells. As there is no canal irrigation in the taluk, the farmers depend heavily on rainfall which is recorded at 520.2 mm on an average. The major crops grown in this rain-fed area are ragi, paddy and jowar, followed by commercial crops like groundnut. The taluk is known as "Kalpavruksha" since coconut is grown in abundance in 35,585 hectares. As regards the land distribution pattern, there are 23,874 marginal holders operating in about 47,342 hectares of land, 10763 small farmers holding 48,895 hectares of land, 8,325 medium farmers operating 39,352 hectares and 4,304 large farmers holding 21,567 hectares. In total, there are 49,034 farmers holding 103,005 hectares. The taluk has 1,994 hectares of land coming under watershed area.

Socio-Economic Profile of Selected Grama Panchayats

The empirical study was conducted in two grama panchayats of Tiptur taluk-- HG Hally and Karadi. The socio-economic profile of these two grama panchayats is presented in Table-1.

Table 1: Socio-Economic Profile of the Selected Grama Panchayats

Sl. No.	Indicator	H G Hally	Karadi	Total (%)
1.	Population			
	Male	4929 (51.25)	2861 (49.46)	7790 (50.58)
	Female	4689 (49.75)	2923 (51.54)	7612 (49.42)
	Total	9618 (100.0)	5784 (100.0)	15402 (100.0)
2.	SCs	1857 (19.31)	1119 (19.35)	2976 (19.32)
	STs	273 (02.84)	100 (01.73)	373 (02.42)
3.	Agriculture families	1532	886	2418
4.	Land Details (in ha.)			
	Total cultivable area	3392 (92.51)	2409 (79.64)	5801 (86.69)
	Forest area	207 (05.64)	530 (17.52)	737 (11.01)
	Gomala	68 (01.85)	86 (02.84)	154 (02.30)
	Total Geographical area	3667 (100.0)	3025 (100.0)	6692 (100.0)
5.	Water source			
	Irrigated area (in hectares)	416	586	1002
	Tanks	06	04	10
	Wells	38	38	76
	Other sources	-	41	41
6.	Land holding			
	Marginal	2788 (50.61)	786 (47.32)	3574 (49.85)
	Small	836 (15.17)	387 (23.30)	1223 (17.05)
	Medium	617 (11.20)	285 (17.16)	902 (12.58)
	Large	1268 (23.02)	203 (12.22)	1471 (20.52)
	Total	5509 (100.0)	1661 (100.0)	7170 (100.0)
7.	Crops			
	Ragi		Ragi	
	Paddy		Paddy	
	Jowar		Jowar	

Note: Figures in parentheses indicate percentages

The socio-economic profile of the selected grama panchayats reveals that the male population (50.58 per cent) is more than the female population (49.42 per cent). Interestingly, in Karadi grama panchayat, the female population (51.54 per cent) has an edge over the male population (49.46 per cent). The population of SCs/STs is just around 21 per cent of the total population. With regards to land use pattern, the HG Hally grama

panchayat is better placed than the Karadi grama panchayat. Almost 93 percent of the total geographical area in HG Hally grama panchayat is suitable for cultivation, while the cultivable area in the Karadi grama panchayat about 80 per cent. The forest covered area is quite less and it is just 11 per cent for both the grama panchayats. Put together, the total area that comes under irrigation is around 17 per cent and the remaining area is rain-fed. The sources of irrigation are mainly bore-wells and tanks, which are almost dried up due to paucity of rains. The main crops grown are ragi, paddy and jowar. The coconut crop is the principal commercial crop which fetches substantial income to the farmers. In both the grama panchayats, there are 2,418 agricultural families. In terms of the landholding sizes, almost 50 per cent are marginal farmers (MFs), followed by 20 per cent large farmers (LFs), 17 per cent small farmers (SFs) and 13 per cent medium farmers (MM-F).

Socio-Economic Profile of Selected Watershed Villages

To carry out a detailed study, two watershed villages, termed project villages, were selected, namely, Hindiskere in HG Hally grama panchayat and Nyakenahally in Karadi grama panchayat. The table below provides information on the socio-economic profile of these two villages.

Table 2: Profile of the Selected Watershed Villages

Sl. No.	Indicator	Hindiskere (HG Hally GP)	Nyakenahally (Karadi GP)	Total (%)
1.	Population			
	Male	1781 (51.71)	860 (51.68)	2641 (51.02)
	Female	1731 (49.29)	804 (48.32)	2535 (48.98)
	Total	3512 (100)	1664 (100)	5176 (100.0)
2.	SCs	786 (22.38)	60 (03.60)	846 (16.34)
	STs	128 (03.64)	-	128 (02.47)
3.	Agriculture families	578	266	844
4.	Land Details (in ha.)			
	Total cultivable area	1015 (67.71)	554 (75.07)	1569 (70.14)
	Forest area	32 (02.13)	-	32 (01.43)
	Gramathana	24 (01.60)	84 (11.38)	108 (04.83)
	Uncultivable area	428 (28.56)	100 (13.55)	528 (23.60)
	Total Geographical area	1499 (100)	738 (100)	2237 (100)
5.	Water source			
	Irrigated area	177	200	377
	Tanks	04	02	06
	Wells	206	100	306
	Other sources	-	-	-
6.	Land holding			
	Marginal	1126 (42.53)	257 (44.39)	1383 (42.86)
	Small	383 (14.46)	118 (20.38)	501 (15.52)
	Medium	272 (10.27)	70 (12.09)	342 (10.60)
	Large	867 (32.74)	134 (23.14)	1001 (31.02)
	Total	2648 (100)	579 (100)	3227 (100.0)
7.	Crops	Paddy	Paddy	-
		Ragi	Ragi	-
		Jowar	Jowar	-
		Cereals	Cereals	-
		Pulses	Pulses	-
	Coconut	Coconut	-	
8.	Watershed area under the project (in hectares)	508	512	1020

Note: Figures in parentheses indicate percentages

As seen from the above table, the male population (51.0 per cent) is more than the female population (49.0 per cent). The population of SCs/STs is just around 18 per cent of the total population. The information on land use pattern of the two selected watersheds reveals that out of the total geographical area, 68 per cent and 75 per cent of the area come under the cultivable area of the two watersheds, respectively. Put together, 70 per cent of the area is found to be suitable for cultivation. Only 1 per cent of the area is identified as forest area. Significantly, one-fourth of the total area falls under uncultivable zone and 5 per cent under gomala. The area under irrigation, taking both the villages together, is around 24 per cent and the remaining area completely at the mercy of the rain Gods. The sources of irrigation are mainly bore-wells and tanks, which are almost dried up due to depletion of underground water. The main crops grown are ragi (a staple crop), paddy and jowar. In these areas too coconut is the principal commercial crop, which fetches substantial income to the farmers. In the two watershed areas, there are 844 agricultural families. A similar pattern emerges as regards landholding sizes in these watershed villages: 43 per cent are marginal farmers, followed by 30 per cent large farmers, 16 per cent small farmers and 11 per cent medium farmers. Under the project, 508 hectares of land in Hindiskere and 512 hectares in Nyakenahally are identified as potential areas for implementing watershed development activities.

Hariyali Guidelines as Implemented

A close examination of correspondence between the agencies (line departments and panchayats) concerned with the implementation of the Hariyali Guidelines delineates a reality check of the internal dynamics that govern the implementation of the guidelines. More importantly, the horizontal and vertical linkages that prevail among implementing and participating departments and institutions, their problems and constraints in meeting the goals of the watershed programme are revealed. The following pages throw light on these aspects.

To implement project works, 30 micro-level watersheds, covering all the 10 taluks of the district with a ratio of 1:3 (each taluk to implement 3 watersheds), were chosen by the district-level watershed committee, headed by the Adhyaksha of the Zilla Panchayat. As a follow-up action, the Deputy Conservator of Forests (DCF), the Project Implementing Agency (PIA), identified watershed areas after consulting the local leaders/people. Efforts were also made by the PIA to look into technical conditions by conducting PRA (Participatory Rural Appraisal), prepare master plan/action plan for selecting watersheds, which were similar to the identifications done by the Karnataka Remote Sensing Agency, Bangalore. In a similar way, the grama panchayats (GPs) were entrusted with the responsibility of identifying micro watersheds, preparing village maps and contour maps, and collecting details pertaining to the population, livestock, land etc. from the 2001 census. The GPs had to observe the following guidelines for identifying watershed areas:

- take into account soil conservation, water conservation, afforestation, horticulture and income-generating activities while preparing action plans,
- prepare action plans with the help of experts and the local people,
- discuss with the ACF (Assistant Conservator of Forests) the issue of taking the approval of grama panchayat and send the draft plan to CPO (Chief Planning Officer of Zilla Panchayat) and to Zilla Panchayat for the approval,
- prepare a five-year integrated action plan and submit it for the approval of the Zilla Panchayat so that the ZP would release the funds,
- constitute a team, including officers from the departments of agriculture, forestry, horticulture and animal husbandry and a social scientist, and direct the team to tour the watershed areas to create awareness, to study the area and to give training to farmers.

In order to educate and sensitise the functionaries about the objectives, the processes and the modalities involved in implementing the Hariyali Guidelines, the PIA had organised a one-day brain-storm meeting and a training programme for all the adhyakshas and the secretaries of the GPs. Following this, the PIA had sent a calendar of activities to all adhyakshas/ secretaries of the respective grama panchayats for preparing an action plan by calling grama sabha meetings. The line authorities, grama panchayat members and community members participated in transect walks for collecting necessary information and it was discussed in grama sabha meetings. The proceedings of the meetings were videographed and documented by the officials of the Zilla Panchayat. During these meetings, a collective and consensus decision was taken for identifying beneficiaries, selecting works sites and works to be taken under various development sectors under the project. Keeping in view the decisions taken in grama sabha meetings, the Watershed Development Team (WDT), along with the officials of respective departments and functionaries of the grama panchayats, prepared a five-year perspective plan and a year-wise plan for implementing the project works. The tables 3 and 4 provide information on the details pertaining to allocation of funds covering a five-year period and allocation per watershed.

Allocation of Funds

A close look at Table 3 below indicates that the allocation of funds was done for meeting two important requirements– the administrative expenditure and execution of the project works. Further, the allocation was done keeping in view the specific requirements of training, community development and, more importantly, executing the works under different development sectors like forestry, agriculture, animal husbandry, horticulture, sericulture and fisheries. These funds were devolved both to the PIA and the GPs covering 30 watersheds in the district. For this purpose, a perspective plan for five years – from 2003-04 to 2007-08 – was prepared. The year-wise allocation shows variation in terms of percentage fixed viz., 15 per cent for the year 2003-04, 30 per cent each for the years 2003-04 and 2004-05, 15 per cent for 2006-07 and 10 per cent for the year 2007-08. Out of the total allocation, 5 per cent each was earmarked for administration, training and community development. Incidentally it is less than the 10 per cent allocation (for training and community development) made in the previous guidelines. Under the project, six development sectors were included and they were allocated a fixed amount. As noted from the Table, 30 per cent of the total project was allocated to agriculture, 35 per cent to forestry, 10 per cent to horticulture, 4 per cent each to animal husbandry and sericulture, and 2 per cent to fisheries. Of the six sectors, the forestry sector claimed a major share (Rs 315 lakh for five years) followed by the agriculture sector (Rs 270 lakh).

Table 3: Allocation of Funds for Administration and Works to 30 Watersheds-by Sector-wise yearly allocation

Details of expenditure	% fixed	Sector –wise yearly allocation (in Rs lakh)					Total amount (Rs in lakh)
		2003-04 (15%)	2004-05 (30%)	2005-06 (30%)	2006-07 (15%)	2007-08 (10%)	
PIA							
• Administrative expenditure	5	9	9	9	9	9	45
• Training cum community developme	5	27	9	9	-	-	45
Grama Panchayats							
A. Administrative expenditure	5	9	9	9	9	9	45
B. Works							
• Agriculture	30	31	92	73	41	33	270
• Forestry	35	50	100	100	45	20	315
• Horticulture	10	5.5	23	40	15	6.5	90
• Animal Husbandry	4	-	11	14	6	5	36
• Sericulture	4	3.5	12	11.5	5.5	3.5	36
• Fisheries	2	-	5	4.5	4.5	4	18
Total	100	135	270	270	135	90	900

Source: Project documents

Watershed-wise Allocation

The watershed-wise allocation of funds provides a similar pattern. An analysis of the data presented in the following Table indicates such a pattern.

Table 4: Allocation of Funds for Administration and Works ---Watershed---wise and Sector---wise

Programme	% fixed	Sector-wise yearly allocation					Total amount (Rs in lakh)
		2003-04 (15%)	2004-05 (30%)	2005-06 (30%)	2006-07 (15%)	2007-08 (10%)	
PIA							
• Administrative expenditure	5	0.30	0.30	0.30	0.30	0.30	1.50
• Training cum community development	5	0.90	0.30	0.30	-	-	1.50
Grama Panchayats							
A. Administrative expenditure	5	0.30	0.30	0.30	0.30	0.30	1.50
B. Works							
• Agriculture	30	1.03	3.06	2.44	1.37	1.10	9.00
• Forestry	35	1.67	3.33	3.33	1.50	0.67	10.5
• Horticulture	10	0.18	0.77	1.33	0.50	0.22	3.00
• Animal Husbandry	04	-	0.37	0.47	0.20	0.16	1.20
• Sericulture	04	0.12	0.40	0.38	0.18	0.12	1.20
• Fisheries	02	-	0.17	0.15	0.15	0.13	0.60
Total	100	4.50	9.0	9.0	4.50	3.0	30.0

Source: Project documents

The computed information reveals that each watershed implemented by the grama panchayat received about Rs 4.5 lakh (for the year 2003-04) for expenditure on administration, training and for executing sector-driven development works. The PIA received funds only for administrative expenses, conducting training programmes and initiating community development activities. Similarly, the grama panchayats received funds for meeting the administrative costs and implementing project works. As seen from the table, the cost fixed for administration was almost the same for all the five years; there was a slight variation for executing the project works. The sector-wise allocation per watershed shows that during the five-year period the forestry sector averaged Rs 2.10 lakh, followed by the agriculture sector Rs 1.80 lakh, horticulture Rs 60,000, animal husbandry and sericulture Rs 24,000 each and fisheries Rs 12,000. Put together, each watershed received Rs 30 lakh during the five-year period of the project.

Performance of Grama Panchayats and Line Departments

Using the institutional framework, we looked into certain institutional and performance indicators for assessing the overall functioning of the grama panchayats and line departments in implementing watershed development activities in the two selected villages. The indicators were: functioning of grama sabha, nature of decision-making process, communication process and coordination, inter-institutional linkages, extent of following the guidelines, participation of user groups including SHGs, skills and capabilities of institutions and personnel involved, capacity building, extent of institutional autonomy, wage-employment generation, improvement in living conditions of the poor, environment awareness among the community and benefits accrued and the project village as a whole. The following pages throw light on the positive and negative aspects of implementing the Hariyali Guidelines for achieving the goals of the watershed development project.

Sectoral Achievements under the Project

The present study was conducted in two watersheds – Hindiskere and Nyakenahally – coming under the two grama panchayats of Tiptur taluk. As per the available records, both the grama panchayats had prepared a five-year plan covering the period from 2003-04 to 2007-08 and annual plans as per the guidelines issued by the PIA. The period selected for the study was between 2003-04, 2004-05 and 2005-06.

A close look at Table 5 indicates that there was a uniformity while allocating funds to grama panchayats on the pattern evolved by the PIA according to the guidelines. As a result, the forestry sector was allocated more funds than other sectors like agriculture. All the sectors, except agriculture, had performed reasonably well in the initial year of the programme but not so well in the subsequent years. As noted in the Table, the year 2003-04 recorded that only 45 per cent of the targets were achieved in the two watersheds. On an average, 47 per cent of project objectives were achieved by the two panchayats. The low performance, according to the officials of the forest department, was due to the lack of functional coordination and support from the agriculture department. But this was denied by the officials of the agriculture department who pointed out that the poor performance was due to non-receipt of funds in time. As revealed from the Table, during the year 2003-04, under the Hindiskere watershed project, the agriculture department did not receive the allocated amount, and in 2004-05, it received only Rs 50,000 as against the allocation of Rs3.06 lakh and in 2005-06, Rs 1.44 lakh.

Table 5: Statement Showing Sectoral Achievements: GP-wise and Sector-wise for the Period from 2003-04 to 2005-06 (Rs in lakh)

Sector	HG Hally GP			Karadi GP			Allocation per GP per sector
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	
Forestry	1.07 (1.67)	2.16 (3.33)	1.15 (3.33)	1.07 (1.67)	1.15 (3.33)	1.90 (3.33)	8.33 (43.0)
Agriculture	- (1.03)	0.46 (3.06)	1.43 (2.44)	- (1.03)	1.62 (3.06)	- (2.44)	6.53 (34.0)
Horticulture	0.17 (0.18)	0.51 (0.77)	0.50 (1.33)	0.17 (0.18)	0.41 (0.77)	0.50 (1.33)	2.28 (12.0)
Animal Husbandry	-	0.11 (0.37)	0.10 (0.47)	-	0.10 (0.37)	0.10 (0.47)	0.84 (04.0)
Sericulture	0.12 (0.12)	0.05 (0.40)	0.38 (0.38)	0.11 (0.12)	0.03 (0.40)	0.15 (0.38)	0.90 (05.0)
Fisheries	-	0.17 (0.17)	0.05 (0.15)	-	0.17 (0.17)	0.05 (0.15)	0.32 (02.0)
Total	1.36 (3.00)	3.46 (8.10)	3.61 (8.10)	1.35 (3.00)	4.48 (8.10)	2.70 (8.10)	19.20 (100.0)
Achievement in Percentage	45.33	42.72	44.57	45.0	55.31	33.33	

Source: Office of PIA and GPs

Note: Figures in parentheses indicate allocation per sector and in the last column the percentage to the total

Similar was the case with the Nyakenahally watershed project. Seen in terms of sector-wise allocation, forestry got a major share (43 per cent) followed by agriculture (34 per cent), horticulture (12 per cent), animal husbandry (4 per cent), sericulture (5 per cent) and fisheries (2 per cent). Notwithstanding this, the initial spirit and zeal that was shown in the first year simmered down considerably in the ensuing years.

Field Observations

Discussions with the officials of the line departments, the secretaries, the adhyakshas, senior members of the two grama panchayats and some village leaders revealed to a great extent the internal dynamics in the processes of implementing watershed development activities in the two watershed villages. These revelations do

have a larger implication for the governance process, seen in terms of transparency, accountability and responsive governance. The details are as follows:

One of the important requirements of the guidelines was that the grama panchayat should be in the forefront in the preparation of action plans, selection of items of works and their execution. However, in preparing the plan and budget estimates, both the PIA and the WDT played a significant role and relegated the grama panchayats and grama sabha to the role of approving the plans prepared. This, indeed, pointed towards a centralised planning process. As a result, the grama panchayats did not publicise the details of plan estimates by putting them on their respective notice boards and the public had no access to any information, especially about sector-wise allocation. The WDT also helped in constituting user groups of farmers, the landless and women during the grama sabha meetings. However, discussions with the members of these groups revealed that the formation was just notional as their roles and responsibilities were not clearly defined.

As for the beneficiaries' contribution, there was not much discussion on deciding the type and amount of contribution. After discussions with the functionaries of the forest department and the grama panchayat and after cross-checking with the interviewed beneficiaries, we came to know that only in the horticulture and sericulture sectors, cash payments were made by the farmers. The beneficiaries in the forestry and animal husbandry sectors worked in their own lands in a majority of cases and their contribution was treated as *shramadan*. An important disclosure was that the farmers, who paid in cash, by and large belonged to better-off sections of the villages. In some cases, attempts were made by the officials to collect contribution by deducting the wages of the labourers, who were mainly agricultural labourers and farmers with small holdings.

The grama sabha meetings were called for selecting and prioritising the works, identifying and selecting beneficiaries and selecting work sites like road-side plantation, check dams and farm ponds. However, except for the first meeting, no other grama sabha meetings were called in the two project villages, either to discuss the progress made or monitor the project activities.

With regard to the execution of works, the discussions indicated that the works were executed as per the action plan approved by the grama panchayat. However, necessary changes were also brought in by the implementing officers after obtaining the grama panchayat's permission. For instance, as per the circular, 50 plants were to be distributed under the afforestation programme per farmer. But it was changed when the local people sought distribution of 25 plants each, as this would enhance the coverage, with more farmers participating as beneficiaries.

It was interesting to note that the agriculture department independently prepared the plan and also implemented it. The department did not coordinate either with the grama panchayat or with the forest department while carrying out its assigned activities. There prevailed a strained relationship among the agriculture department, the forest department and the grama panchayat. There was absolutely no proper communication and understanding among the three in implementing the project works. This clearly showed the inter-departmental problems and lack of coordination which, in fact, came in the way of implementing the watershed projects under the Hariyali Guidelines.

On financial transactions, it was told that the payments (through cheques) for the works executed were always made by the grama panchayats, since they were also the purchasing authority. For this, the grama panchayats were maintaining two accounts, namely, Plan Implementation Fund and Plan Maintenance Fund. By and large, the payments were made through labour contractors representing labour groups. The payments were made as per State Schedule of Rates (SSR) and measurement book. However, no user group was entrusted with the responsibility of making payments. Further, as reported, there were delays in releasing the funds. There were two versions for the delays: one indicated that the delay was due to non-receipt of utilisation certificates to

be submitted by the departments concerned, and the other version was that it was due to seasonal variations. The plantation activities were undertaken only during the rainy seasons. This apart, according to the members of the two panchayats, there used to be a long delay because the department of forestry took a long time for approving the list of farmers selected under plantation activity, although the list was prepared by its own field staff.

There was a strong feeling among the officials that the user groups hardly participated in the implementation of project activities, specially, in monitoring and supervising and never functioned as 'watch and ward'. In fact, under project guidelines, the beneficiary contribution was assessed in terms of their participation in watering of plants and watch and ward activities, and more importantly, in post-management activities. The beneficiaries were also expected to share 10 per cent of the project cost either in terms of cash contribution or labour. But when this brought to the notice of the beneficiaries during our field visits, we were told that the officials hardly interacted with them at the time of implementation. Since the forest department had appointed two '*vanarakshakas*' to function as 'watch and ward' for the activities like road-side plantation, the beneficiaries did not feel their own participation was necessary. There was a general feeling among the beneficiaries that the way the watershed project was implemented, it appeared as if it was a department programme and not a community-driven programme.

With regard to prioritising the project activities, it was reported that since 70 per cent of dry land was fit for forestry and horticulture-based activities, the grama sabha decided in favour of afforestation activity in both the villages. Also, there was a circular (9-7-04) from the Director, Area Development Programme (ADP), Department of Rural Development and Panchayat Raj (RDPR), Bangalore, to all CEOs to give importance to forest-based works as per Para 26/4 of the Hariyali Guidelines. Hence, top priority was given to plantation activities not only in these two, but also in all other watersheds in the district. This was mainly due to the fact that the selected PIA was none other than the department of forestry itself. Thus, as observed by the officials of the departments like agriculture, animal husbandry and watershed, there was a hidden agenda of promoting forest-based activities under the project.

Under the project, each farmer was given around 50 fruit-bearing plants, both grafted and non-grafted ones. However, the survival rate, in terms of success, was just 60 per cent, particularly in farm lands, and 40 per cent in road-side plantation. In fact, when we went around the villages, the plants were drying up due to poor watering and lack of protection. There were also instances of plants being stolen. Initially, many farmers even sold the plants to their relatives living in neighbouring villages. The interviewed household members observed that "the officials should have regularly monitored the work of the *vanarakshakas* and our questioning had no impact on them as they were made accountable only to the forest department". However, there was no cash contribution from the beneficiaries for undertaking plantation activities.

The rapport between the forestry department and the panchayats was not all that good. Discussions with the panchayat members revealed that key functionaries, like the Adhyaksha and the secretary of the grama panchayat and the range forest officer, who were the joint signatories, played a key role in implementing watershed activities and they had a perfect understanding in the project dealings. The other members were not even consulted or apprised of the project activities.

Interviews with the secretary, the Adhyaksha and some members indicated that the grama panchayat was finding it difficult to pay enough attention to watershed activities, as it had many more responsibilities. With the recent transfer of district sector schemes like minor irrigation, water supply, housing schemes and other statutorily assigned works and responsibilities, the grama panchayat was finding it difficult to prioritise its own developmental activities. As a result, the responsibility of implementing the watershed works was entirely

entrusted to the Assistant Conservator of Forests and the Range Forest Officer attached to the forest department. It almost became a departmental scheme with the grama panchayat playing the second fiddle, just releasing the funds to respective line departments and occasionally monitoring the works!

The marginal farmers, small farmers and landless households were given an improved grass variety, 10 fruit-bearing plants and 5 grafted fruit-bearing plants for maintaining the kitchen garden. The health check-up for the animals owned by farmers including landless beneficiaries, was arranged free of cost. The distribution of plants was made taking into account factors such as the farmer having water providing facility like borewell. 50 plants were given to farmers with such facility and 10 to farmers without it. Landless workers, who were agricultural labourers, were involved in employment generation activities such as digging pits, construction of check-dams and culverts.

Under the project, around 50 plants (during 2005-2006) were planted in an acre of land. 10 to 15 labourers were employed for 20 days between 6 am and 3 pm. A uniform wage of Rs 69 was paid to both men and women based on SSR rates. However, there were instances of delayed payments causing inconvenience to labourers. The plantation activity was taken up generally during the rainy season. Both grafted and non-grafted plants were distributed to farmers. Grafted sapota, mango, jackfruit, tamarind, *nerale* (*Eugenia Jambolana*), *honge* (*Dalbergia Oujeinensis*), eucalyptus and fodder seeds were distributed. However, the beneficiaries and the panchayat members felt that the forester and the forest guards did not follow the list prepared by the grama sabhas while distributing the plants to beneficiaries. The forest guards favoured their own people. This was mainly due to non-presence of community members in the form of watershed committees as existed earlier.

Significantly, all the farmers were found demanding fruit-bearing plants irrespective of the size of their landholdings. On an average, 600 plants such as jackfruit, *honge*, neem, *hippe* (*Bassia Latifolia*) and eucalyptus were planted on the road-side, near small hillocks and in gomala. Check-dams were constructed and monitored by the agriculture department, but there was no monitoring either by the forest department or the panchayat functionaries. Adding to this was the non-cooperation of non-beneficiaries. It was reported that the non-beneficiaries used to leave their livestock such as small ruminants, goats and sheep for grazing and also cut the plants planted on the road-side.

Members of the user groups revealed that there was hardly any meeting between them and the implementing officer and the grama panchayat members. Due to party politics and the predominant role played by the forest officials (like the range forest officer, forest guard, vanarakshakas) and the Secretaries of the grama panchayats, there was hardly any scope for people's participation. Furthermore, a close examination of the documents of the grama panchayats revealed that most of the decisions were taken by the general body of the grama panchayat rather than by the grama sabha. Grama sabha meetings were called only once in the early stage of the project and thereafter no such meetings were held. Change of works, list of beneficiaries and addition and deletion of names was done by the grama panchayat at the behest of either the adhyaksha/secretary or the range forest officer. Wherever party politics was present, the implementation was slow. Monitoring and supervision by the panchayat members was not taken seriously.

Seen in the above context, the officials of the forest department were, by and large, actively involved in the execution of the works like road-side plantation and construction of check-dams. The people felt that both the grama panchayat and the department officials were hand in glove in making easy money. The youth of the villages, who were aware of the functioning of watersheds under Sujala and NABARD schemes, felt that the present arrangement was unsuited as it lacked community participation in decision-making. Social mobilisation and training was not given much importance under the project. The selection of SHGs was on an ad-hoc basis at

the behest of the president or the secretary of the panchayat. This clearly made a case for having community-driven micro watershed associations and committees.

Summing Up

The foregoing analysis of the institutional performance of the grama panchayats and line departments, vis-à-vis the PIA in implementing watershed development programme revealed both positive and negative aspects. A close look into the organisational and functional dynamics of these implementing agencies showed to a great extent the internal processes concerning plan formulation and plan implementation. Collaborating closely with the grama panchayats, the PIA was able to create an atmosphere of mutual trust and cooperation, and this to some extent enhanced the quality of the project works. In fact, the very decision to work through PRIs, which were legally established institutions, had in a way given scope for some degree of transparency and accountability, particularly in view of the project's efforts to strengthen the democratic functioning of these village-level institutions. As a support measure, the PIA was able to devolve functions and responsibilities to the grama panchayats with a view to making them resourceful and sustainable over time and thereby create an atmosphere of mutual trust and cooperation. Thus, the grama panchayats were given an opportunity to make effective use of project resources and thereby make the process all-inclusive, transparent, accountable, and responsive (see, for example, Farrington *et al* 1999; Baumann 1998).

Notwithstanding with such positive aspects of project implementation, there were some contentious issues cropping up between the panchayats and the other participating institutions. Discussions with the members of the two grama panchayats revealed that there still existed a feeling of alienation or incongruous relationship among the grama panchayat and the line department officials. This was mainly because of the fact that the officials of the forest and agriculture departments often tended to ignore the importance and involvement of the local members in carrying out the project activities. The panchayat authorities felt that the panchayats should have a final say in matters concerning the identification of project activities and allocation of funds. Some senior members of the grama panchayats and a few village elders felt that the panchayats were treated as a 'Post-Office' or as a 'Clearance or Delivery Point' for the PIA.

A closer look at the different stages of implementation of the Hariyali Guidelines reveals that there were even instances these very guidelines being defied. In many cases, the department of forestry, the PIA, did not take the grama panchayats into confidence while taking crucial decisions. Even departments like agriculture complained against the forest department for its unilateral role in taking decisions. One of the important findings of the study is the near absence of community participation in the implementation, except for its symbolic participation here and there. During the field visits, we could hardly see any intense dialogue between the beneficiaries and the implementing agencies, be it the grama panchayat, the WDT or the PIA.

The Hariyali Guidelines completely ignored the importance of Village Watershed Committees (VWCs) and Watershed Associations (WAs) and their role was assigned to grama panchayats. As a consequence, there was a void between the community and the implementing agencies. Similar experiences have been reported from elsewhere (see, Parthasarathy Committee Report 2006, Joy *et al* 2006). In this regard, the Parthasarathy Committee commented that the institutional arrangement provided by the Hariyali Guidelines has not been working well.

Policy Recommendations

Watershed management is regarded as a time-consuming and process-intensive programme needing a lot of attention from the implementing officers. The Secretary of the grama panchayat was the most sought-after officer and was totally engaged in both watershed-related works and regular activities of the panchayat. Thus, he was overloaded with too many responsibilities. It is suggested here that the post of the secretary should be upgraded and also he/she should not be burdened with the additional charge of another grama panchayat. To meet this requirement, the government should fill the vacant posts of secretaries and also provide additional technical staff to manage the developmental activities of the grama panchayat. The Parthasarathy Committee also stated similar views in its review of the grama panchayat secretary's work schedule (Shah 2006).

An important lesson that emanates from the analysis is that no institution or organisation – be it a panchayat, an NGO, a government department or a CBO – can work in isolation or independent of others. Hence, it is necessary to create a synergy among these formal and semi-formal governing institutions for addressing different natural resource management needs. This institutional arrangement would certainly necessitate them to work as one organisation, integrating and synergising these institutions/organisations for carrying out NRM activities in the decentralised NRM framework (Kumar 2007, Sivanna and Reddy 2007). There is a need to forge a partnership among these institutions to carry out watershed programmes further. In fact, this was very much emphasised in the Tenth Plan (Planning Commission).

Set in the above direction, state governments like Karnataka, after the initial experience of implementing the Hariyali Guidelines, have recently initiated policy measures to reconstitute sub-committees for watershed development under Section 61(A) of the Karnataka Panchayat Raj Act, 1993. As per the circular from the Director, Area Development Programme, Department of Rural Development and Panchayat Raj, Bangalore (dated 07-07-04), the CEOs of ZPs were authorised to constitute a sub-committee with following office-bearers:

- Adhyaksha of the grama panchayat as President of the Samithi
- GP Member representing the micro watershed
- Three members from SHGs
- Three members from stakeholders
- Officer from watershed development department --- as secretary/treasurer
- The president and treasurer as joint signatories
- As per Section 11, Hariyali Guidelines, the Watershed Development Department to function as PIA.

Under this new institutional arrangement, the Secretary of the grama panchayat has no role to play and it is now being given to the member of the village watershed committee to be decided by the Watershed Development Department which will act as the PIA. Set in this direction, the Secretary of the Department of Rural Development and Panchayat Raj, Government of Karnataka, issued an order (No. RDP/351/GPA/2003 dated 6/5/2005) giving approval to Indo-Swiss Participative Watershed Project to implement a pilot intervention project at Bot hni Grama Panchayat in Aurad Taluk in Bidar district. The Director, Panchayat Raj, is the State-level coordinator of the project. This new institutional arrangement may function as a more responsible management system as it is directly answerable to the people it serves. The responsibility for improving the project and deciding on all aspects of the project rests with the grama panchayat.

Notwithstanding all this, there is an immediate need to strengthen the PRIs, especially the grama panchayats, in terms of devolving appropriate powers, functions and resources. However, this needs a strong "political will" of the respective state governments to initiate the policy measures. Based on the findings of the

study and emerging discussions on the involvement of the PRIs in the implementation of watershed development programmes, this study makes the following recommendations:

1. Ensure well-defined rights of panchayats over natural resources,
2. Upgrade the skills and capabilities of grama panchayat members and local officials in NRM activities so as to overcome the technical deficiencies,
3. Provide grama panchayats with additional trained technical staff
4. Devolve more political powers and independent planning functions to panchayats,
5. Ensure synergy among PRIs, NGOs and CBOs for effective management of the natural resources in an integrated and decentralised NRM framework. This is possible only by constituting village watershed committees as sub-committees of the GPs (as practised in Karnataka and also suggested by the Parthasarathy Committee). In Karnataka, the NGOs like FES (Foundation for Ecological Security) in Chintamani taluk and SDC (Swiss Development Corporation) in Aurad taluk, under Indo-Swiss Participative Watershed Project, are working directly through grama panchayats for implementing watershed development activities, by constituting sub-committees under Section 61(A) of the Karnataka Panchayat i Raj Act, 1993.

Till their demands are met, the panchayats would necessarily have to play a secondary and coordinating role to sub-committees or any locally constituted participatory committees or organisations in implementing watershed development programmes. Also, in such a scenario, convergence or synergy between these grassroots-level organisations would be a distant reality. One should wait and see to what extent these new measures would be translated into reality.

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Abbreviations and Acronyms

ACF	Assistant Conservator of Forests
ADP	Area Development Programme
CBOs	Community-Based Organisations
CEO	Chief Executive Officer
CPR	Common Property Resources
DCF	Deputy Conservator of Forests
DNRM	Decentralised Natural Resource Management
DRDA	District Rural Development Agency
FES	Foundation for Ecological Security
FGDs	Focus Group Discussions
GSDP	Gross State Domestic Product
GWD	Guidelines for Watershed Development
HGs	Hariyali Guidelines
LF	Large Farmer
LL	Landless
MM-F	Medium Farmer
MF	Marginal Farmer
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-Governmental Organisation
NRM	Natural Resource Management
NWDPRA	National Watershed Development Project for Rain-fed Areas
PIA	Project Implementing Agency
PRA	Participatory Rural Appraisal
PRIs	Panchayat Raj Institutions
PR	Panchayat Raj
RDPR	Rural Development and Panchayat Raj
RFO	Range Forest Officer
SC/ST	Schedule Caste/ Schedule Tribe
SDC	Swedish Development Corporation
SF	Small Farmer
SHG	Self- Help Group
SSR	State Schedule of Rates
UG	User Group
UNDP	United Nations Development Programme
VWC	Village Watershed Committee
WA	Watershed Association
WARASA	Watershed Areas' Rain-fed Agricultural Systems Approach
WDT	Watershed Development Team
ZP/TP/GP	Zilla Panchayat/Taluk Panchayat/Grama Panchayat

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