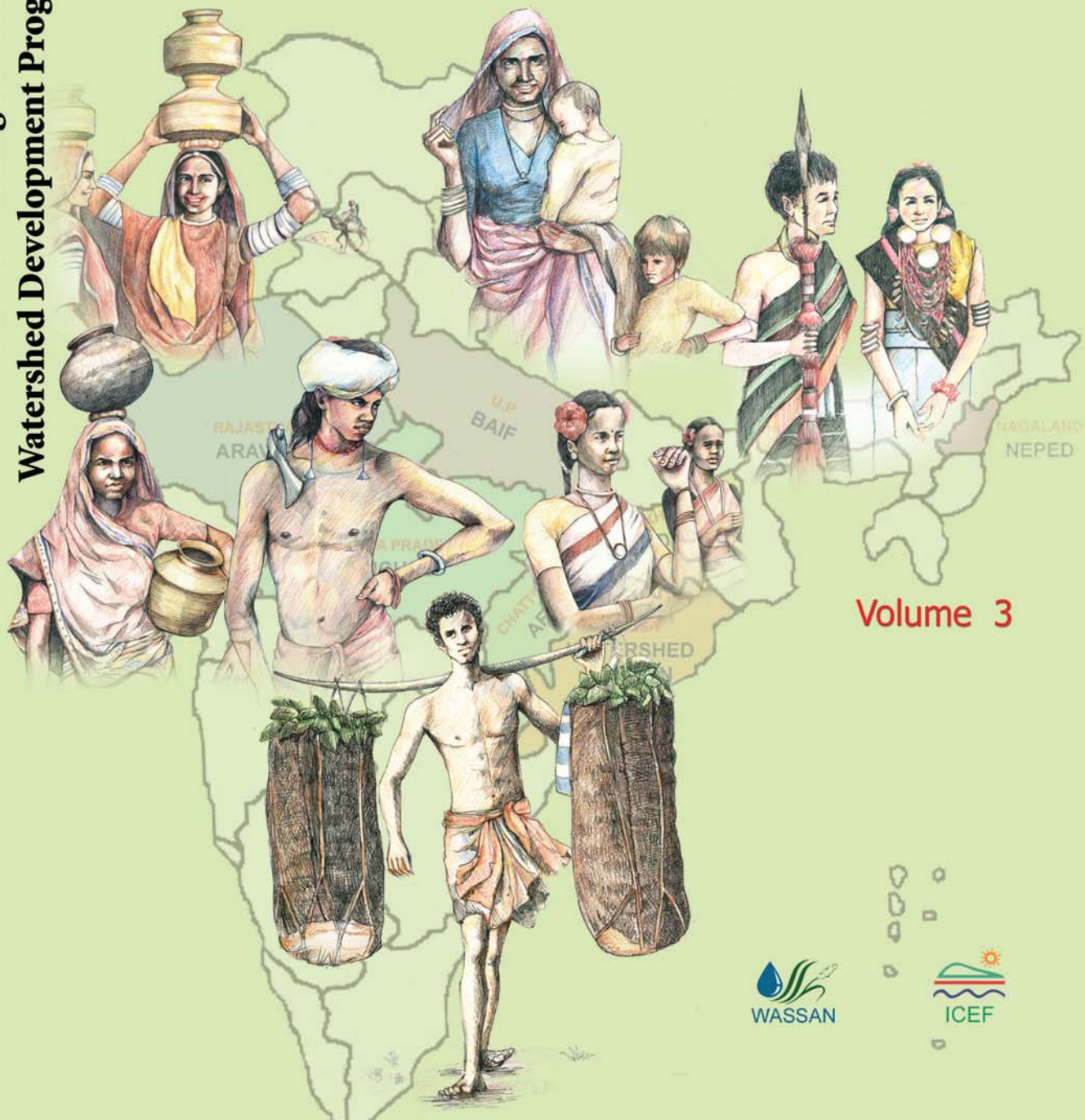
Understanding Processes of Watershed Development Program in India

Indepth View of Critical Themes

Institutions, Finances and Equity



Volume 3

WASSAN

ICEF

Report of the Study anchored by WASSAN and Facilitated by ICEF

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Volume 1 : Birds Eye View of Processes: Status across States, Facilitators and Donors
Volume 2 : Process Index
Volume 3 : Indepth View of Critical Themes: Institutions, Finances and Equity
Volume 4 : Policies and Possibilities: Compilation of Good Practices
Volume 5 : Making them Better: Gap Analysis, Enabling &Disabling Factors And Recommendations
Volume 6 : Recommendations at a Glance

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Acknowledgements

Understanding Processes in Watershed Development Projects in India is an interesting experience for me. It gave an opportunity to visit and see different villages in different parts of the country; interact with the villagers and understand their life; develop friendship with facilitating agencies (government and non government) and understand their efforts and finally to put them together in the form a report….

I do not claim to have made a perfect job this gigantic task. "Understanding" of processes means developing clear insights into the culture, history of voluntary action, roles of state, civil society organizations, communities in development processes and making sense of watershed projects in the local context. Study teams made their best efforts to grapple with the above issues and captured the processes at the field level in different states.

The study is largely conceived as a local initiative, to set an agenda for action at the field level in each state. Thus the role of study partners in the study is very important not only in conducting the field study but also in taking the agenda forward. I sincerely thank all of the study partners for their active engagement, support and interest in the agenda of strengthening processes in watershed development projects. I particularly thank the coordinators of the study teams Yogesh Agarwal, Abhishek, Sanjoli (ARAVALI, Rajasthan); Rashmi, Hargovind Singh (AAK, Utter Pradesh); S Srivastava, Devangan, Ravi Kumar (AFPRO, Chattisghad); Yoganand, Alak (PRADAN, Jharkhand); K G Vyas (NCHSE, Madhya Pradesh) Bhasker Reddy, LN Padhi, Ravnder Guada, Prabhaker Nanda, Mr Das, Kalpana, Bijoy, Prabhakaer Nanda (Orissa Watersehd Development Team, Orissa); Dr Supong, Lotha (Directorate of Agriculture, Government of Nagaland). Without their support, the study could not have taken place.

B N Yugandhar, Member Planning Commission was the inspiration to the process study. He always thought that the strong participatory processes could address several key concerns of the current watershed projects. He believed that developing a set of tools that could systematically diagnosis the watershed processes is an important requirement of the project. I hope this study meets some of his expectations. I thank him for his support and guidance from time to time, during the course of the process study.

Several members of WASSAN team took responsibilities for conducting and completing the study - conceptualization, field work, comprehending field data for analysis, preparing reports and giving feed back and project management. I thank the entire team of WASSAN. Among the team, I particularly thank Neelesh K Singh, N K Sanghi, Ravindra, K Suresh, Ramesh, Sirkanth, B Rama Chander, Surendrantah, Pavan, Bakka Reddy, Sridevi, Srinivas,

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Writing reports is one side of the story, while giving constructive and creative feedback is another story. I immensely benefited by the feedback I received from MV Sastry (Center for World Solidarity), Uday Shankar (Trustee WASSAN), Rama Mohan (CWS), Dr N K Sanghi, Ravindra, K Suresh (WASSAN), Dr Amita Shah (Gujarat Institute of Development Studies), Dr J Venkateswarlu, Ram Kumar (Inter Cooperation) and members of nodal agencies. I thank all of them. In this context, I would like to particularly thank M V Sastry and Dr Amita Shah for the insights they provided, after a careful reading of the report. Their feed back challenged me to explore deeper insights of the processes of watershed development projects.

The study teams would have spent time with about 2500 persons in all the selected watersheds to understand the watershed related processes. These are members from watershed committees, user groups, SHGs, facilitating teams, government staff, donors and several others. I thank all of them for their support and interest in sharing their experience with our study teams.

The study and the report are the outputs of the motivation and support that we received from India Canada Environment Facility, New Delhi. I sincerely thank M Satyanarayana, Dr Mihir Maitra and Dr Jaya Chanterjee of ICEF team. Their contribution is invaluable in setting the agenda for policy advocacy in watershed development context.

During the field work and report preparation, I was away from home for long periods of time and busy with myself, even when I was at home. They missed me so much, while I was engaged with this study and its report, but also supported me in the entire process. I thank them for all their support.

I hope this report would contribute to the ever growing literature on watershed projects in India. I also hope this report would make the policy makers, academicians, donors and field level facilitators to little more sensitive to the importance of processes in watershed development projects. Ultimately, I thank the readers and users of the reports.

Thanks...

M V Rama Chandrudu

WASSAN

Foreword

India – Canada Environment Facility (ICEF) was established in 1992 consequent to the signing of a Memorandum of Understanding between the Governments of India and Canada. ICEF was set up with the mandate of enhancing the capacity of Indian organizations to undertake environmentally sustainable development and management of land, water and energy resources, providing support for programs that specifically address the inter – relationships between poverty and environmental degradation, community participation and for public awareness of environmental issues.

In keeping with the importance of watershed management as an integrated approach for arresting environmental degradation, improving livelihoods and sustaining ecological balance, and its potential for boosting the national economy, ICEF has supported several watershed development projects all over the country, from Nagaland in the east to Gujarat in the west, and from Uttaranchal in the north to Kerala in the South. These projects provided replicable models for sites with vastly diverse topography environmental challenges and cultural regimes. In several cases follow up initiatives were funded by ICEF to strengthen community processes in the post watershed development phase of projects completed earlier. The projects were implemented in partnerships with government departments, institutions and NGOs.

ICEF projects gained considerable success in transforming their areas and influencing similar practices in the region and elsewhere, largely due to the participatory processes followed, which bonded all the key stakeholders and elicited from them self motivated participation. The project for Strengthening Participatory Processes in Watershed Development Program in India, supported by ICEF and implemented by Watershed Support Services and Activities Network, (WASSAN), Hyderabad seeks to synthesize processes followed across projects and create synergies and best practice guidelines to help policy makes and practitioners alike. It focused on the way watershed projects are planned, implemented and managed by communities, and captured the roles of the various actors. The study also provides an opportunity for several key players in the sector to conduct a "reality check" to constantly update themselves with the field level realities.

The process study conducted with the support of ICEF is an innovative study in several ways – the focus of the study is on "processes" of the watershed projects, unlike many

studies which focus on "impacts"; it is also conducted by a variety of actors – NGOs, government officials, academicians, resource organizations and others; it covered several states and involved several organizations; the observations were shared and analyzed collectively by the study teams.

The study also captured the roles performed by several actors in this process. Comparisons were made possible with the help of "Process Index" which is an interesting and useful contribution of the study. The concept of "Process Index" has high potential and wider applications. Policy makers can take a serious note of such instrument which can establish the health of processes of any large scale development project.

I commend the efforts of WASSAN and its partners in documenting and disseminating the wealth of experience and lessons the project has garnered. I am sure that it will lead to better practices and enhanced results for the benefit of the millions who depend on effective watershed management for improving their quality of life. These reports call for urgent action to improve policy support for helping communities to manage their own resources.

M. Satyanarayana, IFS

Director
ICEF

About the Study and Reports

"Understanding Processes in Watershed Development Projects in India" is an attempt to bring focus on the processes of the watershed development projects. It is an attempt to provide feed back to the policy makers, donors and field level facilitators on the processes at the field level. It is an attempt to assess, diagnose and compare process at field level in different projects. The main purpose of the study is to strengthen the participatory processes in watershed development projects and its policies.

The study was conducted in seven states of India – Rajasthan, Uttar Pradesh, Jharkhand, Chattisghad, Orissa, Madhya Pradesh and Nagaland. In each state, a local nodal agency anchored the study. A detailed methodology consisting of several tools was designed together by WASSAN and its partners. Through these methodologies and tools, experiences and responses of several actors in the field were gathered and carefully documented. A total of 55 watersheds were profiled in the seven states. 30 projects were from Government of India supported and Line Department facilitated projects; 15 projects were from Government of India supported and NGO facilitated projects; 3 projects were funded by bilateral projects; 7 projects were funded by International NGO Donors and facilitated by local NGOs.

Each state team prepared a report profiling the watershed processes of the state. Processes from all watersheds from all states were consolidated by all nodal agencies together. Based on this process data, the process analysis of the watershed development projects was conducted. The process data generated from the field work has rich contents, depth and numerous dimensions. To justify the objectives of the study and present various dimensions of watershed processes, the report is presented in six volumes. This note gives a brief profile of each of these volumes.

Volume 1 : Birds Eye View of Processes: Status across States, Facilitators and Donors: This volume presents the basic features of the process study – objectives,methodology, sample, conceptual framework and basic analysis of the processes. The project management cycle of the watershed projects was taken as the basis for conducting the process analysis (Phases, Key Events and Clusters of Key Events). The "process data" is presented for every key event, as per the project management cycle. A "Two-Dimensional" analysis was conducted to reflect the variations of processes in various

states (Dimension 1- Regional influences) and various projects (Dimension 2 - Donor and Facilitator combinations). At the end of process data analysis, processes are classified into "most common processes" and "rare processes". Specific conclusions and further analysis of process is not done in this volume.

Volume 2 : **Process Index:** In this volume, the process data is further analyzed to make it "comparable". An attempt was made to "quantify" processes of each key event, based on the nature of process practiced in that watershed. The "non-participatory" processes get low scores, while "participatory" process get high scores. Based on this scoring, "Process Index" was developed for every key event of the watershed project. This "Process Index" was used to assess the health of processes at each cluster of key events, compare one type of project with another (a project in UP funded by Government of India and facilitated by line department could be compared with another project in Rajasthan, funded by International NGO and facilitated by local NGO). The application of Process Index is discussed in this volume in terms of diagnosing, measuring, monitoring and identifying the solutions to the weak processes. This analysis combines three dimensions of the process data – Process followed in a Key Event; Region in which the project is located and Facilitating Agency (Donor and Facilitator combination). So this analysis is called "Three Dimensional" analysis of watershed processes.

Volume 3 : **Indepth View of Critical Themes: Institutions, Finances and Equity:** There are several themes of special interest in watershed projects. Of these important and interesting themes were analyzed in this volume: Institutions, Financial Aspects and Equity Issues. Process dimensions of the above three themes and other related data was systematically analyzed from the sample watersheds. Several tools were used to analyze the data on the above issues and draw lessons (Adequacy analysis, frequency distribution, Analysis of PRA data, etc). The main conclusions of the analysis are presented at the end of each section. Limited experiences indicate the feasibility of integrating strong institutional processes; equity based approaches and financial prudence in watershed development projects. However, they could only establish the possibilities. It is important to develop such enabling conditions when the project is implemented on a large scale. The integration of above concerns in watershed projects is also largely a result of concern, commitment and orientation of the project facilitating agencies. Without this basic ingredient, it is difficult to expect watershed development projects to be sensitive to concerns like participation, equity, gender and transparency. The choice of sensitive and capable facilitating agencies and policy framework of watershed projects are equally important in ensuring the integration of important concerns in the watershed projects.

Volume 4 : **Policies and Possibilities: Compilation of Good Practices:** Each village is a bundle of stories. Each person could add a new dimension to the watershed experiences. While conducting the field work, study teams gathered some interesting stories,

anecdotes and experiences. They establish the possibility of an idea, an approach, and a new way of looking at the same old project. This volume consists of all such interesting experiences from several watersheds. These stories try to fill the gaps in the process analysis of previous chapters. This volume adds life to the entire set by bringing human dimension to the watershed projects and its processes. Initial idea was to integrate these experiences in to the previous volumes itself. But this gives very little space for narrating the basic idea and does not justify the inclusion in other volumes. This volume is a bunch of flowers, exhibiting the color of watershed processes and their successes. There are also few thorns, which indicate the future challenges. Each story is an independent experience and allows the reader to start anywhere. However, it is important to note that the main purpose of these stories is to briefly narrate the possibility and establish the evidence of the experience. The stories do not give an exhaustive picture or a "complete" picture of the experience. This feature of this volume could be interpreted as both strength as well as weakness of the volume.

Volume 5 : Making them Better: Gap Analysis, Enabling &Disabling Factors And Recommendations: This volume conducts a detailed and systematic analysis of processes. Gap analysis is conducted for each key event of the project management cycle. The designed and desirable processes are narrated followed by processes followed on the ground (most common and rare). These are analyzed to give a picture of critical concerns and implications. The enabling and disabling factors behind the processes were also mentioned. These insights are drawn from several sources – process (soft) data, hard data, discussions with the facilitators on the selected themes, case studies, policy changes in the state/ districts, etc. Based on such a thorough analysis of processes, recommendations are proposed for making the watershed process better. As a principle, all recommendations were proposed based on "evidence" on the ground. The evidence could be from a small number of watersheds or even a single watershed. The main idea was to pick up the "real experience" and "up scale" the lessons and principles through policy reform. While making the process improvements, the need for revisiting the watershed approach itself was recognized. An attempt is made to make a distinction between "watershed project" and "watershed approach". An indicative list of complementary project is mentioned, as part of recommendations. A set of necessary instruments is proposed to ensure that processes get adequate support in the watershed projects and approach. These instruments are – project management tools, plurality of institutions and critical support systems.

For easy reference and are classified into different categories to indicate the nature of action required and given in *Volume 6 :* Recommendations at a Glance

INTRODUCTION

Guidelines of Watershed Development projects issued by Government of India attempted to upscale several lessons from innovative and successful projects, which established the feasibility on a small scale. Such small innovations are still adding new dimensions to the watershed approaches. These additions are making the program not only interesting, meaningful, but also complicated. The centrality of participatory process in small scale projects makes them so special that large scale development initiatives struggle to replicate, even after creating enabling policy directions, in the form of Guidelines.

These observations and conclusions could be made from the analysis of certain "Themes of Special" interest in watershed context. In this Volume, an attempt is made to conduct an in-depth analysis of selected "themes of special interest" to provide deeper insights of the watershed projects. Though there are several themes of interest, this section covers the following themes only:

- Institutional Aspects
- Financial Aspects
- Equity Issues

Importance of the selected themes :

The selected themes have a clear bearing on the project and its processes. Design of institutional arrangements is a major innovation in the project approach as well as policy. These arrangements are supposed to facilitate the participation of the communities in the decision making processes of watershed management. Similarly, the financial aspects of the project are also very revolutionary in the watershed development projects. For the first time in India, a major chunk of government funding is directly transferred to the community based institution and entire project finances are expected to be managed at local level, by the watershed institutions. The equity aspect of watershed projects is always a hotly debated topic. Critiques of watershed project question the rationale of state support to watershed approach/ projects as they consider that these projects are inequitable. "The benefits of investments go to the landed farmers and there are no benefits to the resource poor" –is the most common argument one could here, in these debates.

Tools Used for Analysis:

In this volume, an attempt is made to analyze the "process dimensions" of the above three themes and draw some useful insights. Several tools were used to conduct this analysis:

- Profiles of institutions and component wise investments are prepared and analyzed
- Relevant key activities were clustered to give a deeper insight on the selected themes
- Process Indices were developed for the above theme using the methodology (as explained in Volume 2)
- Observations from PRA exercise were compiled and analyzed
- Data collected from watershed committees/ facilitating agencies/ records/ internet was organized and analyzed
- Adequacy analysis was conducted to indicate – Deficit, Normal, High Funding Several units are devised to compare the efficacy of investments for different components of project under different conditions
- Frequency Distribution of practices and investments was conducted to categorize projects

Limitations of the Study on Special Themes:

The following are the limitations of this study.

- Omission of several other important and interesting themes
- Small Data base for some themes
- Process data was generated from PRA exercise on some themes, which may be contested
- Regional variations could not be brought out, in the absence of consistent and reasonable data from all sample states.
- Absence of Gender Disaggregated Data in some cases
- Over lapping Issues

Reasons for Omission of Other Themes of Interest:

Issues like gender concerns, capacity building support systems, role played by district level project authorities, inclusion of forest lands, appropriateness of technical interventions, impacts of watershed projects, cost benefit analysis of watershed investments, selection process of facilitating agencies, monitoring systems of the project and several other, which are equally important and interesting, but were not taken up for the study. The process study could not include all these themes of interest in this volume, for the following reasons.

- Non availability of uniform data from a reasonable number of watershed projects (E.g.: The data could not be generated from majority of watersheds on training and capacity building theme).

- Absence of field level facilitators of the projects (mainly WDT and PIA) during the field work as the sample projects were largely completed watersheds.
- Lack of orientation of the study teams and gaps of the methodology to capture the key issues on the above themes in a systematic and consistent manner

As a result of such limitations, several important themes could not be part of this volume. By stating this limitation upfront, an attempt is made here to prepare the readers with reasonable expectations.

Small Data Base for Some Themes:

Availability of relevant, complete and consistent data on the themes of interest from all the projects was a major challenge of the process study. For e.g., the component wise investment on watershed project was not available from several projects (30 projects out of 55 sample watersheds), in spite of best efforts made by the study teams. Similarly, PRA exercises were conduced in only limited number of watersheds by the study teams. The "usable" data from these watersheds was gathered to make an analysis of the selected special theme to generate useful insights. Since these observations do not represent the entire sample watersheds, one could consider this aspect as a limitation of the study and analysis.

PRA Based Data:

Institutional functioning, equity in investments, gender dimensions and several other themes were discussed with communities through participatory rural appraisal tools. The data generated (observations, quantified data, patterns) were carefully documented. This is the only data base for certain themes –such as institutional functioning/ roles performed by the members, etc. One could question the validity and consistency of such data, as this highly depends on the context in which a particular PRA was conducted, participating members and nature of facilitation.

Absence of Regional Variations:

As the data is inconsistently available and not all states could generate the data on a given theme, variations across the states could not be compared, in this volume. Some times, the comparative analysis was also not possible, even in case of types of projects.

Absence of Gender Disaggregated Data:

Though gender disaggregated data was available, which made the analysis more meaningful, the same was not possible in all cases. Gender disaggregated data was not available particularly in terms of investments. Based on the available data, gender dimension was integrated with equity. This approach could be seen both negatively as well as positively..

Overlapping of Issues:

It is a common knowledge that all the above themes are over lapping and inter-connected. As a result, the analysis might appear repetitive.

Part 1

Themes of Special Interest : Institutions of Watershed Development Projects

The most important difference between the previous generation watershed projects and the participatory watershed development projects is the "institutions of communities". The Guidelines of MoRD, GoI (1994) initiated a community controlled and managed natural resource management process by creating "institutional space" for the communities. User Groups, SHGs, Watershed Committees, Watershed Associations are the basic forms of institutions. Apart from managing project activities, these institutions received project funds directly, from the GoI/state governments, through DRDA. It is expected that these institutions of local community would ensure better planning and execution of watershed works; better targeting; proper management of assets and equitable distribution of watershed benefits. Since watershed project interventions might have equity related limitations or inbuilt positive bias towards the landed/ resource rich communities, there is a need to counter this tendency. Institutions such as watershed committee, SHGs and user groups are platforms in which the resource poor families are expected to become members and benefit from the project interventions.

In this section, the experiences of communities in terms of watershed institutions are discussed. The following themes are covered.

Section 1 - Profiles of Key Actors

- ✦ WDT and PIA
- ✦ Chairman add Secretary
- ✦ Watershed Committees

Section 2 - Functioning of Watershed Committee

Section 3 - Institutional Space for Resource Poor

- ✦ Functioning of Institutions and Equity Issues (Case Studies)
- ✦ Roles Performed by Men and Women Committee Members from Weaker Sections in the Affairs of Watershed Committee

Section 1:

Profiles of Key Actors:

Creating sustainable and functional institutions is not an ordinary task. Facilitating teams require considerable commitment and conviction on the role of institutions. This commit-

ment should be supported by adequate field level action by the promoters of the institutions. These institutions need considerable support, nurturing and guidance during the initial phases. The facilitating agency/ teams need to "allow" these institutions to grow and take up new challenges, in due course of time. For facilitating this entire process, it is important that the facilitating teams, leadership at the village and members of the institutions have strong belief on the core concerns of participatory development processes. In this section, the profiles of facilitating teams, leadership of the watershed institutions and watershed committee members are analysed. The composition of these institutions/ facilitator teams is considered as an indicator that reflects the equity considerations of the institutions.

Profile of Watershed Development Team:

The sample watersheds have mainly three types of donors – Government of India; Bilateral and International NGO funded. There are mainly two types of facilitating agencies – Government Departments (GO) and Non Governmental Organizations (NGOs). In case of GoI funded projects, it is expected that each PIA/ facilitating agency would have a team of four persons for a unit of 10 micro watersheds. This team is called "watershed development team (WDT)". This WDT should be constituted for both GO and NGO PIAs. Even in case of INGO funded projects, dedicated teams are placed to facilitate the execution of watershed development team. However, in this case the size of the team is small, when compared to that of GoI funded projects. In large number of cases, the difference between PIA and its WDT is hardly perceived by the local communities/ institutions. The Watershed Development Teams provided considerable inputs and played a major role in the project on behalf of/ along with PIA. The WDT symbolized the interests, philosophy and values of the PIA (NGO and GO). So this analysis mainly focused on the profile of the Watershed Development Teams.

The analysis mainly focused on the following parameters.

- Gender Balance and Adequacy
- Education
- Specialization
- Experience

Gender Balance within WDT and Adequacy:

It may be noted that complete data was not available for 8 watersheds out of 55 watershed projects. The current analysis reflects the data of about 47 watershed projects (85% of total sample). The total number of WDTs for the 47 projects is 158. Out of which, 95% of them are male and only 5% are female. The number of watersheds handled by each PIA (from which the sample watersheds are selected) ranged from one project (in case of INGO

NGO projects) to 20 or 25 projects in case of some GoI GO PIAs. Assuming that on an average, each PIA has about 10 micro watersheds, the average number of WDT members is 3.4 per PIA (per a group of 10 micro watersheds). Ideally, the number of WDT should be 188. There is a deficit of about 30 members. There is also considerable turn over of the WDT members. The gender balance of the watershed development teams is also grossly lopsided. There are hardly any women members in the WDT. This has a strong influence on the level of gender integration of the watershed development projects. MP, UP, Orissa and Nagaland have no female members among the WDT.

Wherever, there was a good sharing of responsibilities between men and women, there was a good gender balance within the WDT members. This is particularly observed in case of INGO NGO projects, which had considerable achievements in terms of gender integration in watershed projects. Another practice that is particularly observed with INGO NGO projects is human resource deployment from other projects of the NGO to watershed activities. Officially, the NGO had one or two persons for facilitating the projects, whose costs were met by the project/ donor. But they creatively supplemented the team with local persons/paid staff, who worked almost full time for the project. These local resource persons/ paid staff functioned from the watershed village itself in most of the cases. These members were generally women from the local villages. This practice of having local persons (particularly women) helped to generate considerable confidence among the women of the village on the watershed processes. These local resource persons are paid staff of the organization, and are different from local volunteers/ paraworkers/ secretaries. It is interesting to note that the capacities of the institutions are also built through the constant hand holding support to the village level functionaries.

Educational status of WDT Members:

The educational profiles ranged from non-graduates to Phds. 24% of the total are under Graduates and post graduates and Phds constitute about 28% of the total. 48% of the WDT are graduates. Most of the Phd candidates are from MP. These highly qualified WDT belong to line departments, in most of the cases. Though they were designated as WDT, they did not perform several functions of a typical WDT.

Large portion of WDT belong to "generalist" category. Graduates from local colleges worked as WDT in large number of cases. Though the engineering works are dominating in the projects activities (about 40 to 60% budget was spent on water resources), the average number of engineers is not even one per PIA. However, the engineer is still considered to be an important and powerful member of the WDT. Similarly, the average number of "qualified" social workers per PIA is also less than one. Women members of WDT largely belong to "general" category. Women with professional background are working as WDT only in limited number of cases (agriculture).

Table -1

Sl. No	State	No of WSD	Profile of WDT Members														
	Education		Non graduate			Graduate			Post Graduate			Above			Total		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	M	8 (0)	0	0	0	18	0	18	4	0	4	12	0	12	34	0	34
2	C	5 (3)	6	1	7	5	1	6	4	0	4	0	0	0	15	2	17
3	J	7 (0)	5	0	5	14	2	16	6	2	8	0	0	0	25	4	29
4	R	8 (0)	5	0	5	19	2	21	5	0	5	0	0	0	29	2	31
5	O	6 (2)	11	0	11	6	0	6	3	0	3	1	0	1	21	0	21
6	U	6 (2)	9	0	9	5	0	5	3	0	3	1	0	1	18	0	18
7	N	7(1)	1	0	1	4	0	4	3	0	3	0	0	0	8	0	8
8	Total	47 (8)	37	1	38	71	5	76	28	2	30	14	0	14	150	8	158
	Specialization		Agriculture			Social Scientist			Engineer			Other			Total		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	M	8 (0)	2	0	2	7	0	7	4	0	4	21	0	21	34	0	34
2	C	5 (3)	0	0	0	0	0	0	0	0	0	15	2	17	15	2	17
3	J	7 (0)	6	1	7	4	1	5	8	0	8	7	2	9	25	4	29
4	R	8 (0)	9	0	9	8	1	9	1	0	1	11	1	12	29	2	31
5	O	6 (2)	2	0	2	0	0	0	7	0	7	12	0	12	21	0	21
6	U	6 (2)	2	0	2	0	0	0	8	0	8	8	0	8	18	0	18
7	N	7(1)	3	0	3	0	0	0	0	0	0	5	0	5	8	0	8
8	Total	47 (8)	24	1	25	19	2	21	28	0	28	79	5	84	150	8	158
	Experience		No Experience			<3 years			>3 years			Total					
			M	F	T	M	F	T	M	F	T	M	F	T			
1	M	8 (0)	25	0	25	0	0	0	9		9	34	0	34			
2	C	5 (3)	15	2	17	0	0	0	0	0	0	15	2	17			
3	J	7 (0)	2	1	3	2	0	2	21	3	24	25	4	29			
4	R	8 (0)	8	1	9	8	1	9	13	0	13	29	2	31			
5	O	6 (2)	5	0	5	1	0	1	15	0	15	21	0	21			
6	U	6 (2)	0	0	0	0	0	0	18	0	18	18	0	18			
7	N	7(1)	3	0	3	0	0	0	5	0	5	8	0	8			
8	Total	47 (8)	58	4	62	11	1	12	81	3	84	150	8	158			

* Number in Brackets indicates the number of watersheds from which data is not available.

Experience No

< 3 years >3 years To-

Experience of WDT Members:

Experience profile of WDTs indicates that the projects are in the hands of inexperienced WDT members. 40% of members do not have any experience or experience of only few months. About 10% of WDT have experience of less than 3 years. Remaining 50% of WDT have more than 3 years of experience. 50% of women and 40% of men WDT members have no experience. Majority of inexperienced WDT belong to MP and Chattisghad. Experienced WDT are spread over evenly in Jharkhand, Rajasthan, UP and Nagaland. Jharkhand has highest number of experienced WDTs.

Some of the Critical Concerns related to WDT:

- o Disproportionate number of projects and WDT size
- o Uneven workload distribution in case of GO PIAs
- o Low salaries
- o No support for women members
- o Heavy Turn over
- o Low level of capacity building inputs to develop skills and orientation
- o Scarcity of professionally qualified persons.

In limited number of cases, one could see highly motivated and committed WDTs (male and female; local and outsiders; highly qualified and moderately educated). Such experiences are mainly from INGO NGO projects. The local villagers who worked for watershed projects eventually got absorbed into the facilitating NGOs, as staff. In large number of PIAs, the WDT members are not in high spirits. Lack of experience and support from the leadership put them in inconvenient situations several times. They were not mentored to perform and excel their roles. In some cases, the WDTs eventually became conduits for corrupt practices. There is considerable difference between the WDT of a committed facilitating agencies and of non-committal facilitating agencies.

Profile of Chairman and Secretary of Watershed Committee:

The watershed committee is the executive body for watershed projects at the village level. For all practical reasons, the committee is the top most decision making body at the watershed level. The chairman/ president of Watershed Committee and Secretary are the two key actors in the functioning of the watershed committee. Their orientation and profile clearly indicate the nature of the watershed development projects. The profile of these two members is presented in Table No:2 Land holding, caste, education and gender are part of this profile. This data was not available completely in about 44% of the watersheds. The following conclusions could be made from this profile:

The chairman is generally from the landed section. Large farmers, medium farmers and small farmers occupy the position of Chairman of the watershed committee in equal numbers. Landless persons functioned as secretary in 5% of the watershed projects. However, in

MP more number of office bearers belong to marginal farmers, when compared to any other state. The caste composition of the office bearers indicates that 45% of office bearers belong to ST/ SC category. About 20% to 25% office bearers belong to others/ OBC. Male domination is strongly visible in the office bearer's positions of watershed committees. Only in one watershed, a woman was selected as chair person. There is no woman as secretary in any of the sample watersheds. All secretaries are obviously literate, while about 11% of the chairmen were illiterate.

The functioning of watershed chairman and secretary was largely guided by the philosophy and values of the facilitating agencies. When the local leaders became chairman or secretary, they were little more autonomous, when compared to others. In limited number of cases, the facilitating agencies made considerable efforts to build the capacities of the office bearers to perform their roles. When compared to secretaries, the chairmen received low level of capacity building inputs. In subsequent sections, an analysis of institutional space is made, to provide deeper insights into the functioning of the watershed committee.

Table -2

Profile of WC Office Bearers

State and No. of WSD		Class*					Caste					Gender				Education	
Chairman		NA	LL	SF	MF	LF	NA	SC	ST	OBC	Others	NA	M	F	NA	illiterate	literate
M	8	3	0	1	3	1	0	6	0	2	0	0	8	0	1	1	6
C	8	4	0	0	2	2	6	0	0	1	1	1	7	0	2	0	6
J	7	0	0	4	2	1	0	0	3	3	1	0	7	0	0	0	7
R	8	6	0	1	1	0	5	0	2	1	0	5	3	0	5	3	0
U	8	8	0	0	0	0	1	4	0	1	2	1	6	1	1	1	6
O	8	2	0	4	1	1	6	1	0	0	1	2	6	0	4	0	4
N	8	1	0	2	2	3	0	0	8	0	0	0	8	0	1	1	6
Total	55	24	0	12	11	8	18	11	13	8	5	9	45	1	14	6	35
Secretary																	
M	8	3	0	0	5	0	0	6	1	1	0	0	8	0	1	0	7
C	8	4	0	0	2	2	6	0	1	1	0	1	7	0	2	0	6
J	7	0	0	5	1	1	0	0	3	3	1	0	7	0	0	0	7
R	8	6	0	1	1	0	5	0	2	1	0	5	3	0	5	0	3
U	8	8	0	0	0	0	1	4	0	0	3	1	7	0	1	0	7
O	8	3	3	2	0	0	6				2	2	6	0	4	0	4
N	8	1	0	2	2	3	0	0	8	0	0	0	8	0	1	0	7
Total	55	25	3	10	11	6	18	10	15	6	6	9	46	0	14	0	41
Chairman		44	0	22	20	15	33	20	24	15	9	16	82	2	25	11	64
Secretary 75			45	5	18	20	11	33	18	27	11	11	16	84	0	25	0

* LL: Land Less; SF: Small Farmer: MF; Marginal Farmer: LF: Large Famrer

Profile of Watershed Committee Members:

Some key indicators such as caste composition, land holding and gender balance of the committee members were selected to assess the composition of the watershed committees.

Caste Composition of Watershed Committees – State Wise Analysis:

The share of different caste and class groups in watershed committee is an indicator of equity in the institutional space of the project.

37 of the sample watersheds (69%) have members from scheduled tribes. Nagaland, MP, Chattisghad, Orissa and Rajasthan are among this group. Understandably all the watersheds in Nagaland have only ST members. UP is the only state, which does not have any ST representation in the watershed committees.

22 watersheds have SC members. UP has maximum number of watersheds with SC members (in 7 of the watershed committees out of 8; 88%). In Chattisgarh 5 watershed committees have SC representation. Madhya Pradesh has only 2 watersheds (25%) with SC members.

The number of watershed committees with OBC representation is 26 (47%) and representation of others is 16 (29%). All the 7 watershed committees in Jharkhand have OBC representation. 4 watershed committees in Orissa, UP, Rajasthan and Chattisghad (50%) have members from OBC community.

5 watershed committees in UP (63%) have representation from other categories. Only UP has highest number of watersheds with representation from others category. Nagaland and MP do not have single watershed committee with representation from other castes. Chattisgarh and Jharkhand have 4 watershed committees each with representation from other castes. 2 watershed committees in Rajasthan and 2 in Orissa have representation from other castes.

Table -3

PIA/ Project Wise Responses					Pattern of Responses on Caste Composition of Watershed Committee Members (% of WC with SC/ST/ OBC/Others)	State Wise Response							Total
GOI GO	GOI NGO	Bila-teral GO	Bila-teral NGO	INGO NGO		M	C	J	R	U	O	N	
47	47	0	0	29	SC	25	63	38	88	38	29	0	40
70	67	100	0	71	ST	88	88	50	0	88	71	100	69
47	60	0	100	29	OBC	38	50	50	50	50	100	0	47
30	40	0	0	14	Others	0	50	25	63	25	43	0	29
30	15	2	1	7	Total	8	8	8	8	8	7	8	55

Caste Composition of Watershed Committees-Projects/ PIA Wise Analysis:

Representation of ST communities in watershed committees was fairly high in all categories of projects and PIAs. 70% of watershed committees in GoI and INGO supported projects have ST members.

Watershed committees in bilateral projects do not have any representatives from SC communities. GO PIAs and NGO PIAs have equal % of watershed committees with SC members (47% each). 2 watershed committees under INGO supported projects out of 7 (29%) have SC members.

Share of watershed committees with OBC members is relatively high in case of NGO PIAs – 9 out of 15 watershed committees (60%) in case of GoI supported projects. About 14 out of 30 watershed committees (47%) have OBC members in case of GO PIAs.

The 3 watershed committees under bilateral projects do not have any members from "others" category. However, 6 out of 15 watershed committees in case of NGO PIAs (40%) and 9 out of 15 GO PIAs (30%) under GoI projects have members from "other" castes. Only one watershed committee in case of NGO PIAs under INGOs (14%) has members from 'other' castes.

Watershed Committee Profile and Land Holding – State Wise Analysis:

The details of land holding of watershed committee members were not available with 18 out of 55 watersheds (33%).

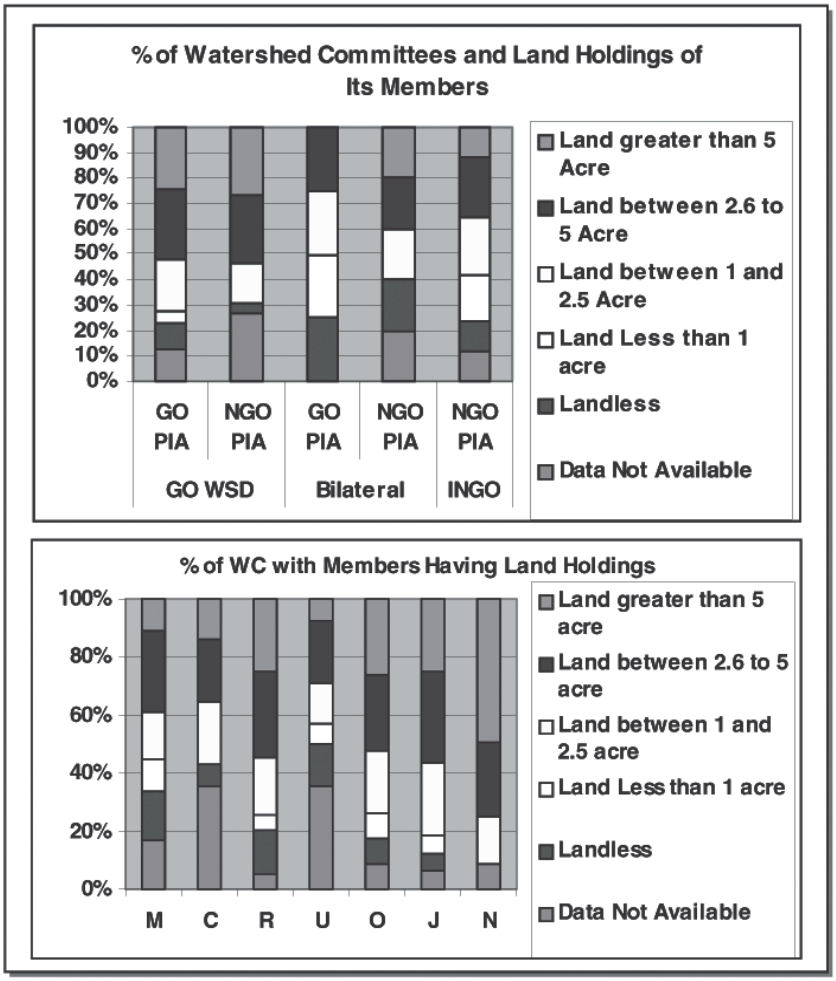
Only 12 watershed committees (22%) had representation of landless persons. Number of watershed committees with representation from landless persons did not cross 3 (out of 8) in any state. Jharkhand and Chattisghad had only one watershed committee each with representation from landless families.

Members with less than one acre of landholding were represented in only 7 watersheds out of 55 (13%). Orissa and MP have 2 watershed committees each with such representation.

23 out of 55 watershed committees (42%) have representation of members with land between 1 and 2.5 acres. 5 watersheds in Orissa and 4 each in Jharkhand and Rajasthan have such representation.

30 watershed committees out of 55 (56%) have members with land holdings between 2.6 - 5 acres. 6 watershed committees each in Rajasthan and Orissa and 5 in Jharkhand have members under this category. 3 watershed committees (38%) each in Chattisghad, UP and Nagaland have representation of members with land holdings between 2.6 to 5 acres.

26 out of 55 watershed committees (47%) have representation of members with more than 5 acres land. Nagaland, Rajasthan, Orissa, Jharkhand have more than 50% of watershed committees with members having more than 5 acres land.



Watershed Committee Profile and land Holding – Project/ PIA Wise Analysis:

Both the GO PIAs under bilateral projects had watershed committee with representation of members from all categories of farmers.

In GoI supported projects presence of landed community in the watershed committees was higher and visible, when compared to bilateral and INGO supported projects.

Share of watershed committees with landless persons is higher in case of bilateral projects and INGO supported projects. In case of GoI funded projects, watershed committees under GO PIAs have better representation of landless (7 out of 30 watershed committees; 23%), when compared to NGO PIAs (1 out of 15 watershed committees; 7%). NGO PIAs under GoI projects have relatively low share of watershed committees that have accommodated persons with smaller land holdings.

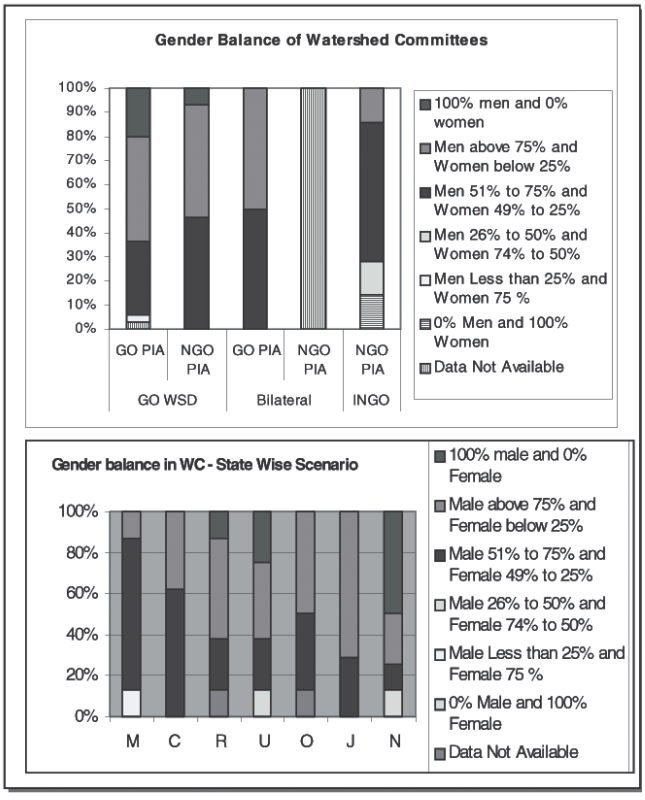
More than 50% of the watershed committees under GO PIAs in GoI funded projects have significant presence of landed community (persons with land holdings above 2.5 acres). In case of INGO funded projects, number of watershed committees with representations from different land holding categories is equal.

Table - 4

PIA/ Project Wise Responses					Pattern of Responses on Particulars of Land Holding and WC Membership	State Wise Response							Total
GOI GO	GOI NGO	Bila-teral GO	Bila-teral NGO	INGO NGO		M	C	J	R	U	O	N	
27	47	0	100	29	Data Not Available	38	63	13	63	25	14	13	33
% Of Watershed Committees Having members with the following landholdings													
23	7	100	0	29	Landless	38	13	38	25	25	14	0	22
10	0	100	0	43	Less than 1 acre	25	0	13	13	25	14	0	13
43	27	100	0	57	Between 1 and 2.5 acres	38	38	50	25	63	57	25	42
60	47	100	0	57	Between 2.6 to 5 acres	63	38	75	38	75	71	38	56
53	47	0	0	29	More than 5 acres	25	25	63	13	75	57	75	47
30	15	2	1	7	Total No of Projects	8	8	8	8	8	7	8	55

Watershed Committee Profile and Gender Balance – State Wise Analysis:

Watershed committees are expected to have equal and/or adequate representation of men and women members. The gender profile of the watershed committees reveals the following points.



Domination of men is a very visible feature of watershed committees. 7 out of 55 watershed committees (13%) have only men and no women. These watershed committees are mainly in Nagaland (4 out of 8; 50%); UP (2 out of 8; 25%) and Rajasthan (1 out of 8; 13%).

On the contrary, there is only one (2% of total watersheds) all women watershed committee, which is in UP. Thus UP has the distinction of having all men and all women watershed committees. Higher representation of women (above 75%) in watershed committee was observed in one watershed in MP.

43 out of 55 watershed committees (78%) had both men and women representation. However, the number of women members in these committees is lower than the men. In all the states, majority of the watershed committees fall under this category.

Gender Balance in Watershed Committees – Project/ PIA Wise Analysis:

Men dominated watershed committees is the most common phenomenon in all types of projects and PIAs.

In case of GoI supported projects, domination by men is more in watershed committees under NGO PIAs. One Watershed Committee under GO PIAs has more women members. However, 6 out of 30 committees (20%) formed by GO PIAs have all men members. One NGO PIA under GOI funded projects (7%) also formed all men committee.

INGO supported watershed projects have demonstrated relatively more gender balanced approach in forming watershed committees. Apart from forming a committee that consists of only women, this category of projects has also tried to form the watershed committees that have relatively more women members.

Table - 5

PIA/ Project Wise Responses					Pattern of Responses on Gender Balance in WC	State Wise Response							Total
GOI GO	GOI NGO	Bila-teral GO	Bila-teral NGO	INGO NGO		M	C	J	R	U	O	N	
3	0	0	100	0	Data Not Available	0	0	13	0	13	0	0	4
0	0	0	0	14	0% Men and 100% Women	0	0	0	13	0	0	0	2
3	0	0	0	0	Men Less than 25% and Women 75 %	13	0	0	0	0	0	0	2
0	0	0	0	14	Men 26% to 50% and Women 74% to 50%	0	0	0	0	0	0	13	2
30	47	50	0	57	Men 51% to 75% and Women 49% to 25%	75	63	25	25	38	29	13	38
43	47	50	0	14	Men above 75% and Women below 25%	13	38	50	38	50	71	25	40
20	7	0	0	0	100% men and 0% women	0	0	13	25	0	0	50	13
30	15	2	1	7	Total (Nos)	8	8	8	8	8	7	8	55

Section 2

Functioning of Watershed Committee – State Wise Analysis:

The functioning of watershed committee was observed by analyzing the data on two indicators – Maintenance of register and frequency of meetings.

The related information was not available in 12 out of 55 watersheds (22%). The watershed committees and PIAs could not furnish the documents/ records to indicate the functioning of the watershed committees. This clearly indicates the non-functional role of watershed committees or the domination of PIAs in these watersheds. Nagaland (4 out of 8; 50%), Orissa (3 out of 8; 38%) and Chattisghad (2 out of 8; 25%) rank high in this category.

In 8 out of 55 watersheds (15%), though the committee met (frequently or occasionally),

the related records were not maintained. 3 Watershed committees in UP (38%) and 2 each in MP and Nagaland (25%) fall in this category.

Combining these two categories, one could say that 6 out of 8 watershed committees in Nagaland (75%), 4 watershed committees in UP (50%) and 3 each in MP and Chattisghad (38%) are either dysfunctional or performing at a very low level of effectiveness. This forms 37% of total watershed committees (20 out of 55).

Remaining 35 watershed committees (64%) maintained records. All watershed committees in Jharkhand (100%) and 7 in Rajasthan (88%) were reported to be performing better. In states like MP, Chattisghad, Orissa the watershed committees maintained records of the meetings (5 watershed committees in each state; 63%). Only 2 watershed committees (25%) in Nagaland maintained records of the meetings.

Absence of data on this theme was more visible in case of Nagaland and Orissa. 2 of the 8 watersheds in UP (25%) never met. One watershed committee each in MP and Chattisghad (13%) also did not meet during the project period even once. Irregular meetings of watershed committee were observed in one each in MP, Rajasthan, UP, Orissa and Jharkhand. Three watersheds in Chattisghad (38%) and 4 in Nagaland (50%) also had irregular meetings.

Six watershed committees each in Jharkhand (86%) and Rajasthan (75%); 5 in MP (63%) and 4 in Orissa (50%) had relatively regular meetings. Nagaland (1 out of 8; 13%) and Chattisghad (2 out of 8; 25%) reported relatively poor performance of the watershed committees in terms of regularity of meetings.

Functioning of watershed committee – Projects/ PIA wise analysis

Records related to the watershed committee were not available in majority of INGO supported projects. 4 out of 7 watershed committees (57%) supported by INGOs could not furnish the records of watershed committee to the study team. Though the villagers could share the details of the meetings, the documentation of these meetings seems to be fairly week in these watersheds. Similarly, in case of GoI supported watersheds also, related data was not available (6 out of 30; i.e. 20% in case of GO PIAs and 2 out of 15; i.e. 13% in case of NGO PIAs).

The watershed committees under GoI NGO projects that maintained records of the meetings are 12 out of 15 (80%). 18 out of 30 watershed committees under GoI supported projects (60%) also maintained records of the project. 3 out of 7 watershed committees under INGO (43%) projects maintained records/ books regularly. Performance of watershed committees under bilateral projects is also found to be fairly of high quality.

The regularity of watershed committee meetings was observed in 27 out of 55 watershed committees (49%). In the remaining 28 watershed projects, the meetings either did not take place at all (4 out 55; 7%) or data was not available (12 out 55; 22%) or the meetings

were irregular (12 out 55; 22%).

Performance of watershed committees in bilateral projects was high (100% of watershed committees met regularly). Under GoI supported projects 10 out of 15 NGO PIA supported watershed committees (67%) also met regularly.

Table -6

PIA/ Project Wise Responses					Pattern of Responses on Frequency of the WC meeting	State Wise Response							Total
GOI GO	GOI NGO	Bila-teral GO	Bila-teral NGO	INGO NGO		M	C	J	R	U	O	N	
20	13	0	0	57	Not Available	13	25	13	25	38	0	38	22
10	6	0	0	0	Never met	13	13	0	25	0	0	0	7
33	13	0	0	0	Irregular	13	38	13	13	13	14	50	22
37	69	100	100	43	Regular	63	25	75	38	50	86	13	49
Pattern of Responses on Maintenance of Records of WC Meetings													
20	7	0	100	57	NA	13	25	13	13	38	0	50	22
20	13	0	0	0	No	25	13	0	38	0	0	25	15
60	80	100	0	43	Yes	63	63	88	50	63	100	25	64
30	15	2	1	7	Total	8	8	8	8	8	7	7	55

Watershed Association:

Watershed Association has become a nebulous institution. The Grama Sabha was considered as the watershed association, if the watershed area was coterminous with the Grama Panchayati area. The formation of watershed association was not a clearly defined process and many communities did not recognize this institution. Wherever they were formed, it was only a formality.

Process Followed:

In 41 out of 55 watersheds (73%), watershed association was not formed or communities could not remember its members/ functions/ role in the watershed project. In MP and Chattisghad, the operational policy at the state itself did not have provision for forming watershed association. Similarly, watersheds in Nagaland also did not form watershed association where the local village councils functioned as watershed associations. Watersheds in Orissa (6 out of 8; 75%), Rajasthan (4 out of 8; 50%), Jharkhand and UP (1 each out of 8; 13%) formed watershed associations.

50% of Bilateral GO projects did not form watershed association. Majority of GoI supported watershed projects did not form watershed associations. 23 out of 30 GoI GO projects (77%) and 11 out of 15 GoI NGO (73%) fall in this category.

4 GoI NGO (27%) and 6 GoI GO (20%) projects formed the watershed associations. Under bilateral projects, the lone NGO PIA formed watershed association. Though not required, one INGO NGO formed watershed association.

In majority of watersheds under all categories of projects/ PIAs, the formation of watershed association was a formality. Wherever they were formed, more number of NGO PIAs in bilateral and GoI funded projects were involved.

However, functionality of these watershed associations is not a well-defined process. The bye laws of the watershed association were invariably prepared by PIA. A standard format of the bye laws were used in all cases without any discussion on the content. Watershed Committee was a more visible institution when compared to watershed association in most of the watersheds.

Table -7

PIA/ Project Wise Responses					Pattern of Responses on Whether Watershed Association was formed?	State Wise Response							Total
GOI GO	GOI NGO	Bila-teral GO	Bila-teral NGO	INGO NGO		M	C	J	R	U	O	N	
77	73	50	100	57	No	100	88	86	38	75	25	100	73
20	27	50	0	14	Yes	0	0	14	50	13	75	0	22
3	0	0	0	29	Data NA	0	13	0	13	13	0	0	5
30	15	2	1	7	Total Nos	8	8	7	8	8	8	8	55

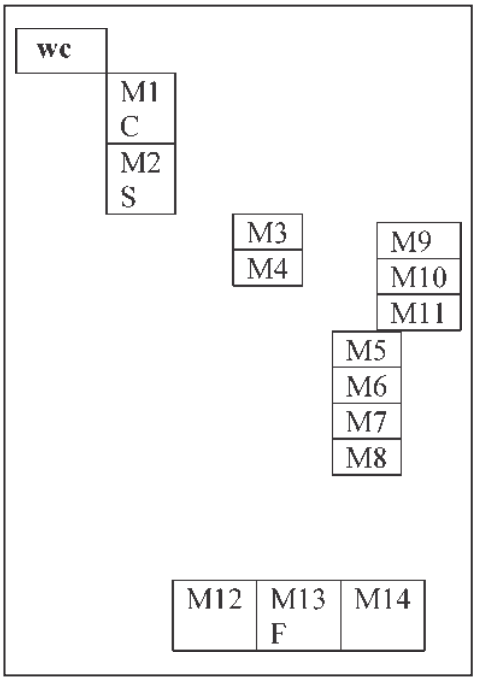
Section 3 :
Institutional Space for Resource Poor
Functioning of Institutions and Equity Issues:

Even if an institution is vibrant and performing efficiently, it may not be sensitive to equity related issues. The representatives of vulnerable groups may not get adequate "space and support" to express their views and take their agenda forward. To understand the "equity in reality", the process study teams conducted PRA exercise on the functioning of the watershed committees. These exercise gave a good insight into the space that each member gets in the decision making process. Observations from three of such Participatory Rural Appraisal exercises are briefly mentioned here.

Case Study 1: Watershed Committee in Thoria, Rajasthan

Watershed committee in Thoria comprised of 14 members. Representatives of Dhanis (hamlets) constituted the watershed committee. The population size of the Dhani decides the number of representatives from that particular Dhani. Thoria being the largest and the central Dhani of all, it acted as the meeting point of the members of the committee. This dhani also had maximum representatives (5 Nos) in the committee. The important portfolios like the chairman and the secretary of the committee were held by them. The village being a Gurjar (OBC) dominated village, the watershed committee had maximum members

belonging to the community. Out of five dhanis, there is only one which has dalit population. Two dalit members from this dhani were also nominated in the committee.



The functioning of the committee members were analyzed through a PRA. The main observations are mentioned here. Ramchandar (Secretary M2 Gurjar, Rich) and Haroop Gujar (M1, Chairman, Gurjar, Rich) were equally responsible within the committee. When the committee is unable to take any decisions, the decision making responsibilities are left to these two members. Their decisions were readily accepted by the other members of the committee. Ramchandar is not only the secretary of the watershed committee, but also the Sarpanch of the village. As a result, he could control the functioning of the committee. Haroop Gujar was the patel of the village and villagers had good faith in him. He was also knowledgeable about plantations.

At the second level Baldev (M3 Gurjar, Rich) and Veeram (M4 Gurjar, Middle class) were active and participated in watershed activities. They were regularly present during the meetings and made some good contribution in decision making. They also undertook supervision work in all the Dhanis.

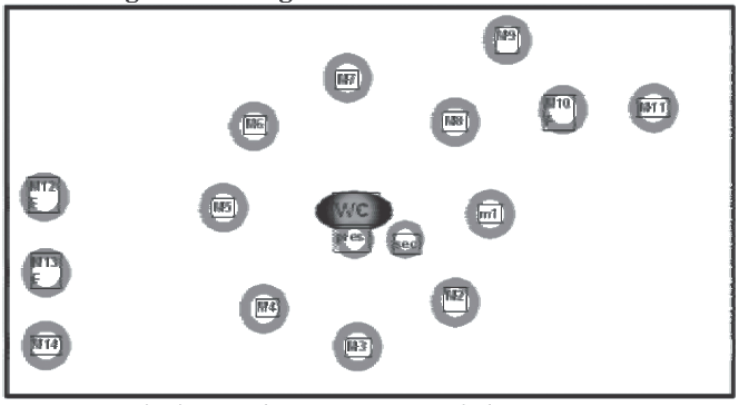
Bhawar lal (M5, Gurjar, Middle Class), Lal Singh (M6, Gurjar, Rich), Paanchu Ram (M7, Gurjar, Poorest), and Randev (M8, Gurjar, Poor) were categorized to be at the same level in terms of their involvement and participation in watershed committees. They participated during the meetings but did not make any major contribution. They largely involved themselves in the supervision work.

Jagdish (M9, Dalit, Poorest), Chitarmal (M10, Gurjar, Poor), and Devaram (M11, Gurjar, Poor) were usually present during the meetings but were largely passive listeners. They got involved in the committee activities only when they were asked to.

Hameera ji (M12, Gurjar, Poorest), Jayati bai (M13, Dalit, Poorest) and Dhanna (M14, Gurjar, Poorest) were some of the members who did not make any difference to the committee. They were hardly present during the meetings and did not play any role as the members of the committee. Since Jayati is the only one woman member in the committee, she hesitated to participate in the committee meetings. Apart from this, she lived in Ratangarh Dhani, which is far way from the main village. She would have participated more regularly, if there were more women members in the committee.

Case Study 2: Watershed Committee in Khora Meena

Susheela Devi is the surpanch of the village. She was the person who was solely responsible for getting the proposal passed for Khora meena. She was so influential that she could get the watershed delineation revised in favor of Khora meena. She enjoyed an exceptional confidence of the people. Others rarely contradicted her decisions. She had a freehand in nominating most of the committee members. In spite of having such high level confidence of communities, she was not a visionary leader. Her understanding of the project was fairly limited. If she believed in institutional development, the village could have experienced a different process of empowerment. But this was not to be. The village tells story of a dominant leader, bu
not a story of collectiv
leadership….



VENN diagram showing the closeness of different members:

WC: Watershed committee; Pres: WC chairman; Sec: Secretary; M: Committee Members; F: Female members.

All the members belon
to "Meena" communit
(Schedule Tribe). Wate
shed committee com
prised of 16 member
of which only 4 were fe
male. The Committe
Chairperson (Sushil
Devi, Rich) was the mos
active member of th
committee. Apart fron
the Chair Peron and Secretary, eight other members of the WC were also considered to be active and close to the committee. However, there were variations among their participation. The most active among them was Raghunath (M1, Rich) as he sipecialized in masonry work. Next to him was Chitirmal (M2, Rich) who was also a ward panch. His proximity to the Chairperson and personal interest in the committee activities has made him a significant face in the committee. Shankar (M3, Rich) who actively participated in supervision related tasks. Remaining 5 members seemed to be equally involved. (They belong to average and poor categories).

Bhagwanaram (M9, Poor) was once used to be a very active member of the committee but due to an accident, he lost his leg and could not cope with the work. Kamala (M10, Average) participated to a certain extent and also was more regular than rest of the women. Kala (M11, Poor), the daughter in law of Kishor (M14, Poor) was almost a dummy figure and rarely participated in the meetings. Kishor was an active member but very irregular as he was living in a remote area. He also had some other engagements. Munni (M12, Poorest) and Shanti (M13, Average) belonged to the same circle as Kishor but their presence hardly meant anything to the committee. There were hardly present in any of the meetings. In spite of having a woman Chair Person, the women participation was not found to be as expected.

Bhagwanaram (M9, Poor) was once used to be a very active member of the committee but due to an accident, he lost his leg and could not cope with the work. Kamala (M10, Average) participated to a certain extent and also was more regular than rest of the women. Kala (M11, Poor), the daughter in law of Kishor (M14, Poor) was almost a dummy figure and rarely participated in the meetings. Kishor was an active member but very irregular as he was living in a remote area. He also had some other engagements. Munni (M12, Poorest) and Shanti (M13, Average) belonged to the same circle as Kishor but their presence hardly meant anything to the committee. There were hardly present in any of the meetings. In spite of having a woman Chair Person, the women participation was not found to be as expected.

Who did what and How much?
Gender Analysis of Watershed Activities in Kadampura, UP

Activity	Men	Women
Check Dam	*****	*****
Big Bunds	*****	*****
Small Bunds	*****	*****
Compost Pit	***	********
Earthen Dam	*****	*****
Vermi Compost	*** *	******
Waste Weir	*****	*****
Outlet	*****	*****
Grain Bank	***	********
Tree Plantation	***	*******
Vegetables	****	******
Goat Rearing	**	********
NRM Committee	Nil	**********
SHG	***	********
Mahila Mandali	Nil	**********
Gram Chetana Samiti	*****	*****
Pipe Line for Irrigation	*****	*****
Repairing of Well	****	******
Supporting the releasing		
Land from Mortgage	*****	*****
Supporting purchase of		
bullocks	*****	*****
Rally on Violence Against		
Women	Nil	**** *******
Bal Mela	*****	*****

Case Study 3: PRA in Kadampura, UP:

A similar PRA exercise was conducted in Kadampura, UP to understand the functioning of the watershed committee. Here the main difference is in the profile of watershed committee itself. The entire committee is constituted by women of the village. The village is also homogeneous village in terms of caste. The initial discussions revealed that the women members divided the responsibilities of watershed committee and all of them performed those functions well. The reason for this performance seems to be that several institutions of women were established in the project. Institutional membership is the main influencing factor in the above involvement of women in the decision making institution such as watershed committee. SHGs are not perceived as merely financial institutions, but a change facilitating collectives. These platforms not only gave economic independence but also provided an opportunity to its members (mainly women) to gain collective strength to fight

injustice and shape their livelihoods opportunities. There are many examples to indicate that women are now in public life, get recognition and support. To understand the responsibility sharing of men and women in the context of watershed projects, a gender analysis of watershed activities was conducted. PRA tools were used to understand "who did what in different watershed activities". Mostly women in the watershed villages identified different interventions and discussed what men did and what women did. They used stones to indicate share of work load between men and women. This reflected the key roles performed by women in a project. The support of men was also visible in several activities. The main change was observed in the attitude of men, who started supporting women at home/ for domestic chores. The equity concerns are deeply reflected in the functioning of this watershed committee, which is platform for women. The poor women gained collective strength and control over the decision making institutions.

Roles Performed by Men and Women Committee Members from Weaker Sections in the Affairs of Watershed Committee:

A similar PRA exercise was conducted in 17 watersheds (out of 55 sample watersheds). Of these seventeen projects, 5 projects belong to GoI NGO category; 8 projects belong to GoI GO category; 2 projects belong to bilateral projects and remaining two belong to INGO NGO projects. In each PRA, the committee members from the weaker sections of the village were identified (Both male and female members) and their involvement in the watershed committee affairs was profiled. On an average, about 5 persons were selected for this analysis from each watershed. However, in five watersheds, the participation of women members is almost negligible. So these watersheds represented the participation of only men members of watershed committee (from weaker sections). The participation of about 82 watershed committee members (from resource poor and weaker section) is profiled (12 women members and 70 men members), through these participatory rural exercises. It may be noted that in two watersheds (out of 17), the members could not remember whether they belonged to watershed committee or not. But occasionally they got involved in the affairs of watershed committee. The exercise included this data also. Such "ignorant" members are not uncommon in the watershed villages. This data indicates the involvement of resource poor persons in the affairs of watershed committee.

Methodology of Conducting PRA:

- The participation of the selected members is mainly assessed in the following critical functions of the watershed committee.
  - Formation of Watershed Committee
  - Planning Process
  - Contribution
  - Supervision of quality

- The participation of the selected committee is assessed against the following parameters.
  - Attending meetings (Physical presence)
  - Asked for opinion (Whether anyone asked for the opinion of the selected members)
  - Expressed opinion (Whether the selected members could express their opinion?)
  - Agreed with opinion (Whether the selected members agreed with the opinion of others)
  - Influenced opinion (Whether the selected members could influence the opinion of others)
  - Decision taken (Whether the selected members could take decisions)
  - The PRA mainly focused on whether men and women members could take part in the above process or not (Yes or No).
  - The data generated from each PRA was categorised as per the type of projects (GoI GO; GoI NGO; Bilateral: INGO NGO projects).

Main observations from this exercise are mentioned below.

The participation of men and women in several parameters of participation is uniform in case of Bilateral Projects and INGO NGO projects. All the men and women members of these committees were found to be active in several processes of functioning of watershed committee. In case of GoI GO projects and GoI NGO projects, the participation of men and women committee members (from resource poor families) was very fluctuating.

Formation of Watershed Committee:

It was observed that women members largely attended the meetings and agreed with other's opinions. They hardly had any role in other processes of decision making. In case of GoI NGO projects, the role of women was slightly better. Some of them could participate in other aspects of decision making (expressing opinion, influencing opinion and actually taking opinion).

In case of men, the situation was very fluctuating. Majority of men were physically present in meetings and generally agreed with others opinion in majority of cases. However, the non-participation of men even in these two processes is also not uncommon.

Compared to GoI GO projects, majority of men participated in other processes in GoI NGO projects. This reflects that even men (from weaker section of the village) had limited opportunities to participate in the overall functioning of the watershed committee.

Planning Processes:

Participation of women committee members is fairly negligible, in all processes of watershed committee functioning, in case of GoI GO projects.

However, women members were more active in several processes of watershed committee functioning in case of GoI NGO projects. About 25% to 75% of women members could

participate in all the processes of watershed committee functioning, in GoI NGO projects. Participation of men in the functioning of watershed committee is slightly better in planning stage. When compared to GoI GO projects, participation of men was slightly higher in different processes of planning, in case of GoI NGO projects.

Contribution:

In this case, the participation of women is lower than the previous stages in case of bilateral projects. The involvement of women reduced marginally in the case of INGO NGO projects.

The involvement of women was fairly minimal in all processes related to contribution at watershed committee level, in case of GoI GO projects. The role played by men was also fairly reduced in these projects.

The role of women did not change significantly in case of GoI NGO projects. However, the role of men members reduced significantly in case of GoI GO projects, in relation to committee's functions on contribution.

Supervision of Quality:

While there is a marginal change in the role played by men and women in case of INGO NGO and bilateral projects, there is a considerable reduction in the roles performed by men and women members in case of GoI NGO and GoI GO projects. Supervision and quality control are largely out of the agenda of these members.

Conclusions from the PRA Exercises:

From the above exercises and analysis of the PRA outcomes, one could make the following inference and conclusions.

The role played by men and women committee members from resource poor families is fairly consistent in case of INGO NGO projects. This indicates the efforts made by the facilitating agencies to empower the representatives of resource poor families in the functioning of the watershed committee. In case of bilateral projects, the role of men and women is reasonably high.

In case of GoI GO projects, the role played by members from resource poor families is fairly low and inconsistent. This clearly indicates the low attention paid by the facilitating agency to strengthen the roles of men and women of resource poor families. In case of GoI NGO projects, the role played by members from resource poor families is highly fluctuating. The efforts by the facilitating agencies to strengthen the role of men and women are not consistent and adequate.

There is a strong need to make the mandatory provisions of Guidelines meaningful by providing adequate support and capacity building inputs to the members from resource poor families. This support should be fine tuned to both men and women. While women are generally in low levels of participation, men from weaker sections are no better.

Table -8

Key Event and	GOI - NGO (5)				GOI - NGO (5)				Bilateral - NGO (2)				INFO-NGO (2)				All WSDs (17)			
	Y*		N*		Y		N		Y				N		Y		N			
Y	N																			
	W**	M**		W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
M	WC Formation																			
Meeting Attended	3	22	1	4	3	20	1	16	2	5	0	0	2	3	0	0	10	50	2	20
Asked for Opinion	2	12	2	14	0	16	4	20	2	5	0	0	2	3	0	0	6	36	6	34
Expressed Opinion	2	15	2	11	0	19	4	17	2	5	0	0	2	3	0	0	6	42	6	28
Agreed With Opinion	4	21	0	5	3	19	1	17	2	5	0	0	2	3	0	0	11	48	1	22
Influenced Opinion	1	13	3	13	0	14	4	22	2	5	0	0	2	3	0	0	5	35	7	35
Decision Taken	1	20	3	6	1	26	3	10	2	5	0	0	2	3	0	0	6	54	6	16
	Planning																			
Meeting Attended	3	22	1	4	2	18	2	18	2	5	0	0	2	3	0	0	9	48	3	22
Asked for Opinion	1	10	3	16	0	16	4	20	2	4	0	1	2	3	0	0	5	33	7	37
Expressed Opinion	3	7	1	19	0	17	4	19	2	5	0	0	2	3	0	0	7	32	5	38
Agreed With Opinion	4	24	0	2	3	19	1	17	2	5	0	0	2	3	0	0	11	51	1	19
Influenced Opinion	3	17	1	9	0	15	4	21	2	4	0	1	2	3	0	0	7	39	5	31
Decision Taken	3	20	1	6	1	21	4	15	2	5	0	0	2	3	0	0	8	49	5	21
	Contribution																			
Meeting Attended	3	18	1	8	0	10	4	26	1	4	1	1	1	3	1	0	5	35	7	35
Asked for Opinion	3	6	1	20	1	5	3	31	0	5	2	0	1	3	1	0	5	19	7	51
Expressed Opinion	2	6	2	20	0	5	4	31	0	4	2	1	1	3	1	0	3	18	9	52
Agreed With Opinion	2	12	2	14	0	7	4	29	1	5	1	0	1	3	1	0	4	27	8	43
Influenced Opinion	2	7	2	19	0	9	4	27	0	5	2	0	1	3	1	0	3	24	9	46
Decision Taken	2	7	2	19	0	4	4	32	0	5	2	0	1	3	1	0	3	19	9	51
	Supervision of Quality																			
Meeting Attended	2	14	2	12	0	4	4	32	1	3	1	2	2	3	0	0	5	24	7	46
Asked for Opinion	1	13	3	13	0	2	4	34	1	3	1	2	2	3	0	0	4	21	8	49
Expressed Opinion	1	16	3	10	1	3	3	33	1	3	1	2	2	3	0	0	5	25	7	45
Agreed With Opinion	4	17	0	9	4	12	0	24	1	4	1	1	2	3	0	0	11	36	1	34
Influenced Opinion	1	12	3	14	1	0	3	36	1	4	1	1	2	3	0	0	5	19	7	51
Decision Taken	1	7	3	19	0	3	4	33	1	4	1	1	2	3	0	0	4	17	8	53

*Y: Members participated in this key event/ step; N: Members did not participate in the key event/ step; **M: Men and W: Women

Institutions of Watersheds - Conclusions:

Institutional arrangements of watershed development project are clear departure from the previous approaches. The analysis of the process data and insights from the field work/ case studies provide a wide spectrum of experiences and lessons. The main conclusions from this exercise are mentioned here.

1. Institutions of watershed development projects are meant for making decisions around issues related to watershed management. Provisions of watershed guidelines make the representation of resource poor families mandatory. This reflects the equity concerns of the policy framework. While operationalizing this policy, there is variety of experiences.
2. Equity in institutional space begins with formal membership in institutions of decision making. When representatives of poor and vulnerable get an opportunity to be members of such institutions, they will have an "opportunity" to influence the decision making process. However, the study indicates that facilitating agencies paid little atten tion to equity issues in establishing the institutions of watershed (mainly watershed committee).
3. Creating formal membership for women and vulnerable communities is considered as an administrative process and was completed without much thought. Such members of watershed committee were passive in most of the cases.
4. Analysis of functioning of members of watershed committee indicates that limited number of committee members was active. These active members were generally male and belong to upper caste and rich families. In the absence of any facilitation support, this "dominance" of elite continued in most of the watersheds.
5. Apart from gender, caste and class barriers, physical proximity (main village and hamlets) is also a factor that influenced (in a negative manner) the functioning/ participation of members from weaker sections/ vulnerable communities.

In limited number of watersheds, the leadership and membership of the watershed committee were with the vulnerable groups (mainly women). Similarly, there were also experiences in which a reasonable representation of poor and vulnerable groups was ensured in the watershed committees. The membership profile of such committees was a result of commitment of the facilitating agencies towards equity issues in institutional space. The functioning of such committee and its members was also found to be effective and all members of the committee were active in the functioning of the watershed committee. They could also work along with relatively powerful members of the village (men and upper caste), with the continued support from facilitating agencies.

Part 2

Themes of Special Interest :
Financial Aspects of Watershed Development Projects

Financial arrangements of watershed development projects of MoRD, GoI have revolutionized the rural development projects. For the first time in India, a major chunk of fund (initially about 16 lakh/ 500 ha/ 5 year time period) was directly transferred from Government of India to institutions of watershed communities, through District Rural Development Agency. The watershed committee and watershed association were made responsible for managing these funds. For supporting them, local person was identified to function as watershed secretary. The funds were expected to be transferred to SHGs as revolving fund and to user groups for developing natural resource linked asset base. The watershed development team is expected to build the capacities of the watershed level institutions to manage finances of the project. The user groups were also expected to make genuine voluntary contributions, which will be accumulated to form Watershed Development Fund. This fund will be in the control of watershed development committee/ association and meant for maintenance and management of natural resource base/assets of the village. This is an innovative arrangement for sustaining the collective action for resource management in a sustained manner. The local institutions were expected to be oriented on sustainable and equitable means of resource management including financial resources.

The process study teams obtained a detailed information on processes, expenditure on different components at watershed committee level, component wise expenditure, fund flows, etc. This section of the report elaborates the issues related to financial aspects of the watershed development project. This section is organized into the following sub-sections/ parts.

Section 1 - GoI and State Level Project Funding

Section 2 - Processes Related to Financial Aspects and Transparency:

Section 3 - Adequacy Analysis

- Basic Issues related to funding of watershed development projects
- Factors that influence adequacy of funding
- Framework of Adequacy Analysis
- Parameters for Comparison - Use of Different Types of Units

- Conducting Adequacy Analysis – Comparing Investments
- Conducting Adequacy Analysis - Comprehensiveness/ Completeness of Interventions
- Conducting Adequacy Analysis – Deficit, Normal and High Funding through Frequency Distribution of Projects as per investments

Section 1:

Funding Support to Watershed Development Projects from Ministry of Rural Development, GoI:

Most of the watershed projects are centrally sponsored projects. There are mainly four types of programmes under Ministry of Rural Development that support watershed development projects in the country: Integrated Wastelands Development Project (IWDP); Drought Prone Areas Programme (DPAP); Desert Development Programme (DDP) and Employment Assurance Scheme (EAS).

All these schemes operated independently in a scattered manner until Guidelines of MoRD (1994) brought them together under one common framework and developed a uniform approach for implementing the watershed development projects. In this part, an analysis of the funding support from these four schemes is made. The analysis focused mainly on the seven states.

Area Covered:

The total area covered under various schemes of MoRD, GoI is about 525452, since 1994. Of this, DPAP and EAS almost share equal parts (14% and 12% of total area) in the selected states. Similarly, area covered under IWDP and DDP is also almost equal (8% and 9% of total area) in the selected states. Total area covered in the selected states is about 42% under MoRD funding.

Of the selected states, Rajasthan and Madhya Pradesh covered almost equal share of area (14% and 15% of total area respectively). These two states constitute about 70% area of the selected states. Of these seven states, Jharkhand and Chattisghad belonged to Bihar and Madhya Pradesh, before they were separated. So the data of these two states is not separately available. In spite of having drought prone area, UP and Orissa could cover smaller areas under these schemes (4% and 3% respectively). Nagaland received more of MoA projects. In all projects, the coverage under MoRD ranged from 37% to 55% of the total covered area under that scheme/ project. However, some of the states like UP and Orissa seem to be inadequately covered under MoRD schemes/ projects, when compared to their potential. In Orissa, several other projects are also operating. But in case of UP, the focus on watershed based approach seems to be fairly low. From this point of view, coverage of UP state could be considered as “inadequate”.

No of Projects:

Data on projects under EAS is not available. Total number of projects under the remaining projects/ schemes is about 33714, under MoRD between 1994 and 2005. Of these projects, 40% of the projects were implemented in the selected seven states. Majority of these projects are from DPAP (24% of total projects in the seven states). Majority of DPAP projects were implemented in MP from among the sample states (8%). Except Nagaland, all other states also got the benefit of DPAP scheme. However, all these states got about 3% to 4% of total projects, irrespective of their size and area under rain-fed farming.

Predictably, DDP is operating only in Rajasthan. 16% of total MoRD projects are in this state. About 50% of DDP projects are being implemented in Rajasthan. Rajasthan has highest number of watershed projects when DDP and DPAP are put together (about 19%).

The number of IWDP projects is very small. IWDP forms 3% of total MORd projects and 1% of them fall in the selected seven states. However, in case of IWDP, the average size of watershed projects is very high.

Funds:

Total funds spent by MoRD on watershed schemes are about 5254 Crores, between 1994 and 2005. This is about 525 crores per year. The seven selected states received 45% of total budget in the last 10 years. All schemes almoste equally contributed to the seven states (about 10% to 13% of the total amount). Majority of the funding support was from DPAP scheme (13%). Rajasthan and MP received higher share (17% and 13% respectively) among all other states. Predictably, Rajasthan received majority of its funding support from DDP scheme.

States like Orissa (3%), Jharkhand (1%) and Chattisghad (4%) received fairly low amount of funding support, when compared to Rajasthan and MP. One could argue that the funding share of Nagaland is fairly high, compared to its area. Since the funding details of Jharkhand and Chattisghad were part of its parent states, those details are not separately available.

Investment Analysis and Key Conclusions:

Based on the above data, a simple analysis of "average investments" is conducted to understand the investment profiles in different states. This average analysis revealed interesting insights into the watershed funding by MoRD, GoI. Some of the key observations are mentioned below.

- The average investment per project (Rs/Project) is highest in case of IWDP, which ranged from 51 lakhs in Jharkhand to 248 lakhs in Nagaland.
- The average investment per project (Rs/Project) is lowest in case of DPAP – about 3 lakhs/ project in Jharkhand. The investments in DPAP ranged from 3 lakh per project

to 11 lakh per project.

- The investments in DDP are about 12 lakhs/ project.
- The average area of watershed projects ranged from 500 ha/ project in DPAP and DDP to about 7000 ha/project.
- The average investment (Rs/Ha) differed from project to project and state to state.
- Jharkhand has lowest average investment (547 Rs/ Ha under DPAP), while in Orissa the amount is unusually high in EAS (Rs.24539 per ha). Since the area covered in EAS is very less in Orissa (only 22918 ha was covered against the total budget release of Rs 56.23 Crores).
- In all projects, "per ha" investment in Jharkhand is lowest, among all the states.
- Excluding Orissa EAS watersheds, rest of the watershed projects did not invest reasonable amounts. The average investment in the seven states was 1951 Rs/ Ha, while the average figure for India is 1814 Rs/ha.
- This investment pattern clearly indicates that the funding support to watershed projects is less than the normally stipulated standard unit costs (20 lakh per project and 4000 Rs/ha). The average figures indicate almost half of the standard unit costs, in majority of cases. One could think that the share of local state governments is missing in the data (which is about 25% in case of DPAP and DDP). Even then the investment indicates a further gap of about 25% in these projects.
- The current system of fund flows seems to be inducing gross inequities and inadequacies across the states. The under-funding of watershed projects is conspicuously visible in the average figures. Since the actual area covered is much more in reality, the inadequacy of funds is much more accentuated.

Notwithstanding any data gaps in the above analysis, one could reasonably conclude that the funding arrangements, flows and releases need to be streamlined in a systematic manner to make the fund flows regular and complete.

Table -9

Comparative Statement of Watershed Funding (MoRD Projects)					
			Area (ha)		
State	DPAP	DDP	IWD P	EAS	Total
Madhya Pradesh	5%	0%	2%	9%	15%
Chattisghad	2%	0%	1%	0%	2%
Jharkhand	2%	0%	0.3%	0%	2%
Rajasthan	2%	9%	1%	2%	14%
Uttar Pradesh	2%	0%	2%	0%	4%
Orissa	2%	0%	1%	0.1%	3%
Nagaland	0%	0%	1%	0%	1%
7 States Total	14%	9%	8%	12%	42%
Remaining India	23%	11%	14%	10%	58%
Total India	37%	20%	21%	22%	100%
Total India (Nos)	10676500	5738000	6196536	6356468	28967504
No of Projects					
Madhya Pradesh	8%	0%	0.20%	0%	8%
Chattisghad	3%	0%	0.08%	0%	3%
Jharkhand	4%	0%	0.04%	0%	4%
Rajasthan	3%	16%	0.14%	0%	18%
Uttar Pradesh	4%	0%	0.20%	0%	4%
Orissa	3%	0%	0.14%	0%	3%
Nagaland	0%	0%	0.10%	0%	0.10%
7 States Total	24%	16%	1%	0%	40%
Remaining India	40%	18%	2%	0%	60%
Total India	63%	34%	3%	0%	100%
	21353	11476	885		33714
Funding					
Madhya Pradesh	6%	0%	2%	5%	13%
Chattisghad	1%	0%	1%	2%	4%
Jharkhand	1%	0%	0.1%	0%	1%
Rajasthan	2%	12%	1%	1%	17%
Uttar Pradesh	2%	0%	2%	1%	6%
Orissa	1%	0%	1%	1%	3%
Nagaland	0%	0%	2%	0%	2%
7 States Total	13%	12%	10%	10%	45%
Remaining India	21%	13%	15%	7%	55%
Total India	33%	25%	25%	17%	100%
Rs. lakhs	174240	130101	131043	90068	525452

Source: Computed from Background Notes (As on 31.03.2005, Department of Land Resources, MoRD, GoI and Web Site of Ministry of Rural Development

Table -10

Project wise analysis of fund releases

S.No.	State	DPAP			DDP		
		Rs Lakh/ Project	Area/ Project	Rs/ Hect	Rs. Lakh/ Project	Area/ Project	Rs/ Hect
1	Madhya Pradesh	11	500	2220	-	-	
2	Chattisghad	7	500	1379	-	-	
3	Jharkhand	3	500	547	-	-	
4	Rajasthan	10	500	2049	12	500	2422
5	Uttar Pradesh	9	500	1866	-	-	
6	Orissa	6	500	1194	-	-	
7	Nagaland	-	-		-	-	
8	**7 States Total**	8	500	1664	12	500	2422
9	Remaining India	8	500	1613	11	500	2135
10	Total India	8	500	1632	11	500	2267
	IWDP EAS						
1	Madhya Pradesh	188	6780	2772	0	0	930
2	Chattisghad	148	6524	2265	0	0	
3	Jharkhand	51	5549	913	0	0	
4	Rajasthan	159	6846	2322	0	0	1114
5	Uttar Pradesh	182	8067	2254	0	0	
6	Orissa	146	6445	2270	0	0	24539
7	Nagaland	248	9292	2666	0	0	
8	**7 States Total**	173	7222	2389	0	0	1630
9	Remaining India	135	6886	1964	0	0	1181
10	Total India	148	7002	2115	0	0	1417
	Total (All Schemes)						
1	Madhya Pradesh	25	1650	1505			
2	Chattisghad	24	685	3555			
3	Jharkhand	3	557	589			
4	Rajasthan	14	653	2163			
5	Uttar Pradesh	21	849	2424			
6	Orissa	18	790	2252			
7	Nagaland	248	9292	2666			
8	**7 States Total**	18	897	1951			
9	Remaining India	14	834	1715			
10	Total India	16	859	1814			

Source: Computed from Background Notes (As on 31.03.2005, Department of Land Resources, MoRD, GoI and Web Site of Ministry of Rural Development

Section 2

Processes Related to Financial Aspects and Transparency:

As already mentioned, the funding arrangement is an innovative empowering process as per the Guidelines of Watershed Development Project. Finances and transparency in financial management are critical requirements of any participatory development initiative. In this section, the financial aspects and transparency mechanisms in the watershed development projects are presented.

Processes Related to Financial Aspects:

Key events related to financial management of the project are the following.

- Genuine and voluntary Contribution for
  - Entry Point Activity
  - Works
- Opening of bank account for project works
- Maintenance and Systems of payments and records.

The processes followed in the above clusters of above key events are tracked by the process teams. Based on the quality of these processes, process indices are developed, which enabled the comparison and analysis of the finance related processes.

Genuine and Voluntary Contribution for Entry Point Activity:

Entry Point Activity is an opportunity for the facilitating agency to establish new culture in the village on several aspects such as collective planning, decision making, and responsibility sharing, etc. The new culture or practices are very much necessary even

Table -11

Financial Aspects - Process Index – Contribution for EPA				
State	GoI	GoI GO	Bilaterall NGO	NGO NGO
M	63	13	50	50
C	45	50	-	25
J		25	69	- 25
R	50	50	0	0
U	13	50	-	50
O	45	25	0	75
N	0	-	-	-
Ave	34	43	17	38
Process Index - Works				
M	47	50	24	32
C	43	33	-	18
J		52	46	- 28
R	43	64	51	45
U	18	32	-	56
O	49	53	21	72
N	41	-	-	-
Ave	42	46	32	42
Process Index - Bank Account for Project Funds				
M	100	100	0	33
C	80	100	-	33
J		100	100	- 100
R	100	100	100	67
U	50	100	-	100
O	87	33	33	100
N	75	-	-	
Ave	85	89	44	72
Process Index - Payments and Records				
M	78	68	40	18
C	72	67	-	40
J	33	41	-	18
R	76	67	67	29
U	16	48	-	76
O	54	67	29	29
N	36	-	-	-
Ave	52	59	45	35
Process Index - Totals				
M	72	58	29	33
C	60	62	-	29
J	53	64	-	43
R	67	70	55	35
U	24	58	-	70
O	59	44	21	69
N	38	-	-	-
Ave	53	59	35	47

for financial management of the project. The financial processes should enable the communities to have greater control over the project and its contents. Contribution from the users is considered to be an important instrument in ensuring that genuine and relevant interventions are planned and executed by the concerned user groups/ local communities. The small share of contribution gives enormous power to the local communities to "make and decide choices" related to the project. The entry point activity is an important occasion to establish this culture, practice and belief among the rural communities. It may be difficult to mobilize contribution at the initial stage of the project. But when facilitating agencies make genuine efforts at this point of time, they are sure to empower the communities in the long run.

The value of Process Index for this cluster of events ranged from 0 to 75. The average value of all projects for this cluster is 35. This indicates a clearly low level of participatory process related to contribution towards EPA.

Processes followed in Projects with Process Index Value of 0 to 33 (Red): Low value of Process Index indicates that EPA was not implemented. The local leaders did not get any opportunity to learn the process of financial management including mobilization of contribution from the communities. The EPA was not considered as a requirement for the project.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow): Though EPA was implemented, it wais not in a participatory manner. The communities and local leaders had little say in the process – choice of activity, cost, location and management of the activity. No villager contributed to the activity and were not involved in the process of executing the EPA.

Processes followed in Projects with Process Index Value of 67 to 100 (Green): Entry Point Activity gave an opportunity to the villagers to collectively think, plan and prioritize their activity. They voluntarily contributed to the identified activity and managed the construction/ implementation. They also immensely benefited from the activity. This experience gave them greater level of understanding about the requirements of the project as well as advantages of the same.

Genuine and Voluntary Contribution for Works:

The values of Process Index for this category ranged from 18 to 72. The average value of Process Index is 42. Guidelines believed that a modest, genuine voluntary contribution would go a long way in establishing the stakes of the user community in the decision making processes of the watershed development project. There are several actors and processes involved in mobilizing the contribution from the users. This also has a strong implications on the financial management of the watershed development project (which activity should get more budgets? Who should be given priority? Location of interventions and other aspects are closely linked to the project finances). The contribution is also linked to the formation of watershed development fund, which is meant for maintenance of the

assets created.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):
Contribution was not collected in these projects. Even when contribution was collected, it was not an informed process. The contribution was mobilized mainly by deducting wages of the hapless laborers, when they worked on private and/or public lands. The PIA deducted their wages in the name of contribution; the communities did not even know that their wages were deducted. Since receipts were not issued or the amount of contribution was not properly recorded, there is no question of transparency in financial aspects of the project. Communities do not know about the existence of WDF.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):
In this case, the watershed communities contributed in the form of labor. Both user groups and laborers made contributions. The watershed committee took some responsibility to mobilize contribution and deposited the same in watershed development fund. Since the contribution was mainly in the form of labor, there was no formal system of records and accounts for contribution. This informal nature of contribution did not completely give any opportunity to the communities in decision making processes of the project.

Processes followed in Projects with Process Index Value of 67 to 100 (Green):
Mainly user groups contributed to the works of the project by contributing labor, material and cash. The laborers did not get lower wages. Several systems were evolved to record the actual contribution (contribution cards, minutes of the watershed committee, ledger book,). The user group leaders played key roles in the process of mobilizing the contribution. This process gave considerable opportunity to the user groups to participate in the project planning and execution of the works. Receipts were issued by the watershed secretary towards the contribution. Watershed Development Fund was created with this fund and the entire community was aware of the amount and purpose of this fund.

Opening of Bank Account:

The value of Process Index ranged between 0 and 100. The average value of this cluster is 77. The bank account is a symbol of trust and confidence on institutions of communities on financial aspects of the project. It also reflects the belief of the project authorities on the capacities of the community based organizations. The bank account gives a great opportunity to take responsibility and be accountable.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):
The bank account was not opened in limited number of cases, where the fund transfer is not mandatory. The fund management is largely the responsibility of the facilitating agency. The community remained passive in financial aspects of the project. In limited number of cases, the project account was opened at the end of the project period.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):
The existing institutional space and arrangement were used for launching the watershed project. This included financial arrangements also. The village development committees

took the responsibility of the project.

Processes followed in Projects with Process Index Value of 67 to 100 (Green): The bank account was opened in the name of watershed committee, as per the guidelines. This was the most common practice. It may be noted that even in case of INGO funded projects, funds were transferred to CBOs.

Payments and Records:

Systematic maintenance of records and payments is a clear indicator of financial health of the project. The value of Process Index for this cluster of activities ranges from 16 to 79. The average value of Process Index is 48. The ability of local institutions to maintain records and make payments in a systematic manner is reflected by the value of Process Index.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):
The records and payments were not in the agenda of the watershed institutions. Facilitating agencies took the entire responsibility of maintaining records and payments. The local community did not know the details of financial aspects of the project. Bills were prepared by facilitating agency and payments were made by the same. Communities did not even have an opportunity to question/ enquire about the actual details of project activities, expenditure and payments. In some cases, the payments were not made completely. Facilitating agency was the main custodian of the financial records.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):
The records were maintained by the watershed committee secretary and other members of watershed committee. Facilitating agency supervised and provided support to these functionaries through out the project period. Payments were made by both watershed secretary/functionaries and members of facilitating agency.

Processes followed in Projects with Process Index Value of 67 to 100 (Green):

In this case, the local institutions had adequate capacities to manage the financial aspects of the project such as maintaining records, measurement books, payments, bank transactions, release of funds, etc. The facilitating agencies initially spent considerable time and energies to build the capacities of the local functionaries (during EPA itself) and motivated them to take the responsibility without any external support. Eventually, the institutional capacities were built to such an extent that the secretaries/ committees were able to manage funds without any external support during the project period. Since the responsibility was with the watershed committee, the members became more accountable and knowledgeable on financial issues of the watershed development project. Such institutions also managed watershed development fund and used it for various purposes.

Transparency Mechanisms of Watershed Development Projects:

Transparency is a requirement in all events and processes of the project. However, transparency in financial aspects is an important necessity of the project. Transparency is a function of knowledge on a given theme/ issue. The project processes are designed to ensure that the communities gain adequate knowledge about the project. The knowledge levels of the community on project/ financial aspects is indicated by the following indicators:

Table -12

No of Projects with Different Values of Process Index – Transparency				
Category of Processes and Value of Process Index	Knowledge of Village Resolutions	Knowledge of Mandatory Contribution	Location of Records	Issuing Receipts
Red (0 to 33)	17	19	22	37
Yellow (34 to 66)	8	20	21	12
Green (67 to 100)	30	16	12	6
Total No of Projects	55	55	55	55

Knowledge of community on

- ✦ Contents of village level resolutions
- ✦ Requirement of mandatory contribution
- ✦ Location of watershed records/ books of account
- ✦ Issue of receipts

These indicators are closely related to the financial discipline of the project. The health of each of the above indicator is represented by the value of Process Index. The process analysis of the above indicators is presented here.

Knowledge of Community on Contents of Village Level Resolutions:

The value of Process Index for this indicator ranged from 0 to 81. The average value is 51.

Knowledge of Communities on Mandatory Contribution:

The value of Process Index for this indicator ranged from 8 to 100. The average value is 49.

The village resolution is supposed to be an output of collective thinking and debate at the community level. Similarly, the knowledge of community on the need for making voluntary contributions is also a result of several facilitating events. The village resolution of the village on "non-negotiables" of the project (such as contribution) is an indicator of its commitment to the project requirements. The health of such processes is indicated by the

value of Process Index. Since the nature of processes of these two indicators is similar, a common explanation is presented below.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):

In this category there was no resolution of the village. The project was initiated without much involvement of the community and the community was ignorant of the watershed project and its obligations. In some cases, the community members came to know about the project, only after some works were initiated in the village. The facilitating agencies largely ignored the contribution related aspects in the entire project. The wages of laborers were deducted in the name of contribution and the laborers do not even know it.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):

In this category, the facilitating agency made few attempts to explain the contents of the project to the communities. The basic features of the project were discussed and leadership of the village was aware of the salient features of the project. The village leaders (Sarpanch and other leaders) made a resolution on behalf of the entire village and submitted to the facilitating agency. The village resolution was perceived as an administrative requirement rather than as a mechanism for developing greater transparency among the community on watershed concept. The need for contribution was also discussed as a "passing reference" in the village meetings. The facilitating agency did not make any serious attempts to

Table -13

Process Indicators - Transparency					
State	GoI	GoI GO	Bilaterall NGO	NGO NGO	Total
Knowledge of Contents of Village Resolution					
M	49	62	69	69	62
C	20	8	-	17	15
J	81	73	-	48	67
R	47	40	0	17	26
U	17	75	-	75	56
O	51	69	81	81	71
N	84	-	-	-	84
Ave	50	54	50	51	51
Knowledge of Mandatory Contribution					
M	71	75	25	75	61
C	68	45	-	40	51
J	43	48	-	0	31
R	25	78	22	27	38
U	8	25	-	57	30
O	67	95	50	100	78
N	37	-	-	-	37
Ave	45	61	32	50	47
Location of Records/ Measurement Books					
M	37	28	27	56	37
C	44	77	-	55	59
J	45	52	-	27	41
R	47	24	20	20	28
U	33	37	-	65	45
O	54	80	48	70	63
N	38	-	-	-	38
Ave	43	50	32	49	43
Indicator 4 - Issuing Receipts					
M	9	2	9	0	5
C	27	5	-	0	11
J	36	14	-	0	17
R	34	64	64	9	43
U	0	23	-	50	24
O	20	0	0	18	10
N	55	-	-	-	55
Ave	26	18	24	13	20
All Indicators of Transparency					
M	41	42	32	50	41
C	40	34	-	28	34
J	51	47	-	19	39
R	38	51	26	18	33
U	14	40	-	62	39
O	48	61	45	67	55
N	53	-	-	-	53
Ave	41	46	35	41	40

mobilize contribution from genuine users. In limited number of cases, the users contributed to works on private lands.

Processes followed in Projects with Process Index Value of 67 to 100 (Green): In this category, the village resolution was an output of collective thinking at the village level. The facilitating agency made significant attempts to explain the contents of watershed development project to different sections of the village society. They also facilitated debates and discussions on the non-negotiables of the watershed development project such as "mandatory contribution". The villagers took a considered view of these non-negotiables and finally resolved to take the benefits of the watershed development project. They also resolved that the users will contribute. Even for works in CPRs, the contribution was mobilized from the entire village.

Location of Records of Watershed Project:

The funding arrangements of watershed projects facilitate processes that certainly empower the rural institutions including financial aspects. The funds were released to watershed institutions and they were expected to develop their own capacities to manage these funds. When the relevant documents (including watershed plans, measurement books, etc) were with the local institutions, this indicates their strength. If these records are not with them, it means that the financial systems are controlled by external agencies. The value of Process Index for this indicator ranged from 20 to 80. The average value of this Process Index is 45.

Processes followed in Projects with Process Index Value of 0 to 33 (Red): In this category of processes, the watershed committee was not the custodian of watershed records/ plans and they did not know about the location of these records in several cases. The facilitating agency maintained them and has them. The records were not with the local institutions. Transparency was lacking about the financial aspects and project details at the community/ local level. The details of payments/ quantity of works were in the control of facilitating agency.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow): Some of the records of the watershed projects were with the facilitating agency and remaining records were with watershed institutions. The key documents such as measurement book, cash book were largely with facilitating agency. The leadership of the village is aware of the project details including financial aspects. Others in the village did not know about the details of the project.

Processes followed in Projects with Process Index Value of 67 to 100 (Green): In this case, the watershed records were maintained and retained by watershed committee and its functionaries. The facilitating agency built the capacities of the local institutions/ functionaries systematically to maintain their finances. All records were maintained by the watershed committee/ functionaries. Copies of these records were also available with facilitating agencies and project authorities.

Issuing Receipts:

Issuing receipts to the contribution is an important process indicator of the health of the finance related processes. A receipt could establish entitlement to the genuine contributors and the absence of the receipt could indicate absence of contribution or wage cuts. The value of Process Index for this indicator ranged from 0 to 64. The average value is 20. The processes related to this indicator are explained below.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):
The practice of giving receipt was not there in several projects. The value is zero in all such cases. This indicates poor systems for maintaining records of the watershed projects and low levels of transparency.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):
In this case, the receipts were not issued. However, systems were maintained at watershed committee level for recording the contribution of the users. Minutes of watershed committee meetings also recorded the details of contribution from different users and in different forms.

Processes followed in Projects with Process Index Value of 67 to 100 (Green):
Secretary issued receipts to the users/ contributors. Other systems were also developed such as pass book at user group level; contribution card, etc. These systems were thoroughly discussed and followed for a long period during the project period. The watershed development team facilitated the evolution of this system and also supported the secretary to run the system. Selected members from watershed committee took the responsibility of mobilizing contribution and ensured that appropriate systems were developed and practiced.

Conclusions:

The processes related to finances and transparency could be summarized as below.

- The current systems and practices related to financial management and transparency do not match with the objectives of the participatory watershed development projects in India. This is reflected in the low values of Process Index in finances and transparency related indicators of the project.
- The processes related to mobilization of genuine contribution from users are weak in several watershed projects. This weakness takes away the decision making opportunities of the community in the project affairs.
- The mandatory requirement such as opening of bank account for project funds (works) was followed in most of the watershed projects including INGO NGO projects. However, the actual use of these funds was controlled/ influenced by the facilitating agencies. The watershed institutions did not get adequate support and capacities to manage their finances, even after having a separate project account.
- Simple systems like issuing a receipt were also not followed in several watershed projects, which indicates a greater need for imp[roving the current processes/ practices.

Section 3:

Adequacy Analysis of Watershed Funding:

Funding arrangements of watershed development project are innovative in several ways. Apart from directly releasing funds to the watershed based institutions at village level, the funding support is provided for training, community organization and administration of the project. This was for the first time in India, that a government supported large scale development project conceived a comprehensive funding package for all necessary components of the project. This funding arrangement enabled variety of organizations to function as Project Implementation Agencies (PIA). Several NGOs, academic institutions, line departments could devote a dedicated team as watershed development teams, with the funding support for administrative costs.

In this section, adequacy analysis of the project funding is conducted for all components of the project. The data on actual expenditure by watershed committees and facilitating agencies was obtained from the records at watershed committee and/or facilitating agency. The following are the broad components on which the watershed committees/ facilitating agencies spent the funds.

- Training
- Community Organization
- Administration
- Works (All components at watershed committee level).
    - Water Resource Development
    - Land Resource Development
    - Biomass Development
    - Special Items
        - Livestock
        - Productivity
        - Any Other

The data for this analysis was collected from facilitating agencies and watershed committees. However, relevant and complete data was available for only 25 projects (11 GoI GO projects; 11 GoI NGO projects and 3 INGO NGO projects). Unfortunately, relevant data was not available from bilateral projects. Based on this available data, the adequacy analysis was conducted for these 25 watershed projects. (45% of total of 55 watersheds).

Some Issues and Basic Features of the Data on Funds at Watershed Committee/ PIA level:

It was already mentioned that the funds for works are directly released to the watershed committee (about 80% of total budget). The fund for remaining components is released to the facilitating agency (PIA). The fund releases to these components has a wide variety of

practices. Several facilitating agencies/ district level officers reported the need for systematizing the fund flows to PIAs and to watershed committees.

Since a PIA may be handling more than one watershed (ideally about 10 projects at a time), the entire budget for community organization, training, administration for all these projects is released to the facilitating agency directly. The facilitating agency is expected to keep track of all related expenses for each watershed. However, the releases and directions from the DRDA were not very clear in several cases (purpose for which the funds are released, for which watersheds, etc). In the absence of such system and irregular fund releases, the entire fund is likely to be spent for administration or any other prioritized activity. As a result, the data on expenditure for training, community and administration (for a given watershed) was not clearly available from facilitating agencies, in several cases.

In several cases, the records of watershed project were not available at the time of field survey. There were several gaps in the available data. E.g.: Total expenditure on all components was available, but expenditure on each sub component was not available.

Since the number of watersheds at PIA level fluctuate from time to time, it was not possible to correlate this financial data at PIA level with the actual number of watershed projects at PIA level. Some of the PIAs also were not clear on this issue. PIA keeps all the funds and spends them as per the need. Disaggregated data (for each purpose) for a particular watershed was not readily available from several places. Due to this limitation, the available data at PIA level was considered to be "available fund" for the selected watershed (sample watershed). E.g. if a PIA received Rs 500000/- for training purpose, it is assumed that one lakh rupees are available for the selected sample watershed project.

Factors that influence "Adequacy" of Investments:

It was a difficult task to decide on "what amount of funding is adequate?" for supporting watershed development project, in the absence of micro level technical studies, conducted in different agro climatic zones. Such studies could give deep insights into required package of technical interventions and related costs for different situations. Based on such analysis, one could arrive at a reasonable estimate of required funding for watershed projects. This "requirement" is based on the technical interventions for realizing the full potential of the given watershed resources.

Similarly, the quantum of funding also depends on the over all philosophy and goal of the project. If the main purpose of the project is to "conserve" soil, then the funding of the project will mainly support all activities related to soil conservation. If the project aims at improving the productivity and livelihoods of the poor, the set of activities would be different and accordingly funding also differs. Thus the objectives of the project would decide activities and related funding.

Given the same objectives, the set of activities/interventions could differ from project to project. This is an issue of "completeness" or "comprehensiveness" of the project interventions. A particular project could have invested on all relevant components, while

another project might have ignored several relevant components, even though they are mandatory. A particular activity/ component could receive more priority/ funding support, compared to other components. This prioritization/bias towards a particular component could "induce" some kind of "inadequacy" in case of other components.

Apart from the above, there are other factors such as availability of funds at donor level, need at the village level and priority of the given agenda (in this case watershed development project), that determine the adequacy of funds.

One could always argue that no amount of funding is "adequate" for watershed development funding. Given the relatively high priority to surface irrigation schemes, one could argue that watershed projects are under-financed.

In this section a comparative analysis of expenditure is made to understand the nature of investments on different components and draw conclusions.

Framework for Adequacy Analysis:

The main thrust of this adequacy analysis is on the comparison between different projects for a given component, for a given unit. The key features of the framework are explained below.

- Comparative analysis of expenditures on different components in different types of projects with the support of the following four parameters/ units.
  - Investment per project (Rs/Project)
  - Investment/ Ha (Rs/ Ha)
  - Investment per family (Rs/Family)
  - Investment per person (Rs/Person)
- Completeness/ Comprehensiveness of Funding
- Analysis of Deficit, Normal and High Funding

This analysis is conducted based on the d*Table -14* ata from 25 projects from PIA/ Watershed

Component Wise Total Expenditure of Sample Watersheds For Adequacy Analysis				
Training	881806(4%)	928763(4%)	241155(3%)	2051724(4%)
Comm. Organization	969374(4%)	1035023(4%)	200124(3%)	2204521(4%)
Admini—stration	1549342(7%)	2006658 (9%)	832577(12%)	4388577 (8%)
Woks	19606739 (85%)	19154952 (83%)	5661785 (82%)	44423476 (84%)
Total	23007261 (100%)	23125396 (100%)	6935641(100%)	53068298 (100%)
Water	8031918 (35%)	11388351 (49%)	2216057 (32%)	21636326 (41%)
Land	5056511(22%)	3824640 (17%)	1819398 (26%)	10700549 (20%)
Biomass	5275623(23%)	2902744 (13%)	552506 (8%)	8730872 (16%)
Special Items	1242687 (5%)	1039218 (4%)	1073825 (15%)	3355729 (16%)
Livestock	97470 (0.4%)	1125 (0%)	68944(1%)	167539 (0.3%)
Productivity	281275(1%)	43974 (0%)	103750 (1%)	428999 (1%)
Any Other	863942 (4%)	994119 (4%)	901131(13%)	2759191 (5%)

Table -15

Basic Parameters of the Sample Watershed Projects				
	GoI Go	GoI NGO	INGO NGO	All Projects
No of Projects	11	11	3	25
Area of Watershed (Ha)	6169	6062	994	13226
Families	1460	926	431	2817
Population	7441	4726	2183	14350
Average Values/ Project				
Area (Ha)/ Watershed	561	551	331	529
Families/ Watershed	133	84	144	113
Population/Watershed	676	430	728	574
Ha/ Family	4	7	2	5
Ha/ Person	0.8	1.3	0.5	0.9

Committee. Some basic features of this data base is tabulated (Table No.15). The analysis of variations is expected to help in understanding the relative emphasis given on different components under different types of projects and the deficit and high funding to these components. While doing this analysis, the following aspects need to be kept in mind.

Average Area of Watersheds:

The area under 25 watersheds was calculated. The average area of watershed projects in G Table -16 jects (561 ha) and GoI NGO projects (551) is almost equal to the area of a standard micro watershed (500 ha). The INGO NGO projects have an average area of 331 ha. 67% of the projects have standard size of a micro watershed.

Distribution of Watersheds As per Size of the Watersheds					
Size of WatershedHa	GO GoI		NGO NGO	INGO NGO	Projects All
<300	0%	0%	67%	8%	
400-500	55%	27%	0%	36%	
500-600	18%	27%	0%	20%	
>600	27%	45%	33%	36%	
Total	100%	100%	100%	100%	

Since the area of the watershed is the basis for calculating the budget of the project, this is an important parameter that determines the "adequacy" of funding. One of the common practices is to delineate 500 ha of land within a village/ cluster of villages for watershed treatment. Irrespective of the total area of the village, this selected portion of the village is "projected" as watershed area, for funding purpose. However, the entire area of the village was "considered" while the actual implementation of works begins. The watershed treatments works were implemented in all parts of the village, irrespective of the delineated area. This means "funds were spread thinly" in the entire village. When the area of the village is large, this "spread" is much thinner. Thus the area of the village induces an "artificial inadequacy" in terms of budgets. Area of about 56% of sample watersheds is found to be more than the standard size of the watershed (500 ha). 73% of GoI NGO projects, 45% of GoI GO projects and 33% of INGO NGO projects have larger areas of watersheds than the standard size.

Number of Families per Project:

The total number of families from the selected 25 watershed projects is 2817. The average number of families per project is highest in case of GoI GO projects (133 families/ project)

and lowest in case of GoI NGO (84 families/project). The INGO NGO projects also have relatively high number of families/ project (144). However, the average area per family (ha/family) is highest in case of GoI NGO projects (7 ha/family) and lowest in case of INGO NGO projects (2 ha/family). The average area/family of all projects is 5 ha/ family. The corresponding value in case of GoI GO projects is 4 ha/family. The land scarcity is relatively high in case of INGO NGO projects. It may be noted that the funding is not based on this unit (Rupees invested per family).

Population per Watershed Project:

Total population from the 25 projects is 14350. The population per project is highest in case of INGO NGO projects (728 persons/ project) and the population density in case of GoI GO projects is also relatively high (676 persons/ project). Lowest population density was observed in case of GoI NGO projects (430 persons/ project). The availability of land (watershed area) is lowest in case of INGO NGO projects (0.5 ha/person) and highest in case of GoI NGO projects (1.3 ha/person). The land scarcity is relatively high in case of INGO NGO projects. It may be noted that the funding is not based on this unit (Rupees invested per person). Since the available budget/funds are almost constant, the values of parameters (average area of watershed; number of families; population) influence the adequacy of funds of the watershed projects.

Adequacy Analysis - Comparing Investments:

Four units are taken as basis for explaining the investment pattern. The investments were analyzed for every component including special interventions (for every unit). A frequency distribution analysis of total investments was also carried out, (for every unit). Since the tables contain basic data and are self explanatory, main high lights are explained in this section.

A. Unit 1 - Rs/Project

Expenditure Profiles – Average Values (Rs/Project):

Investments – Project Management:

- As per MoRD, GoI guidelines, the total available budget is 20 Rs Lakh/ Project. Of this 20 lakhs, 16 lakhs is allocated for works at watershed committee level, Remaining 4 lakhs are allocated for training and community organization (5% each) and for administration of the project (10%). This budgeting is based on the unit cost of 4000 Rs/ha. The adequacy analysis took these standard norms as bench mark for conducting the adequacy analysis.
- The total expenditure on works at watershed committee level is not consistent with the available funds as per the norms of the MoRD, GoI Guidelines (16 Lakh Rs/Project). In

all three types of projects, "high" amount was spent on works.

- GoI GO projects spent about 20.9 lakh Rs/ project. Even in case of GoI NGO, more fund was spent on watershed activities (about 1 lakh per project).
- In case of INGO NGO projects, the expenditure is much higher than the GoI funded projects. On an average, about Rs 3 lakh additional expenditure was observed in these projects.

Table -17

Comparative Analysis of Expenditure – Rs/Project				
	GoI Go	GoI NGO	INGO NGO	All Projects
Rs./Projects	11	11	3	25
Total	2091569	2102309	2311880	2122732
Training	80164	84433	80385	82069
Com. Org	88125	94093	66708	88181
Admn	140849	182423	277526	175543
Woks	1782431	1741359	1887262	1776939
Water	730174	1035305	738686	865453
Land	459683	347695	606466	428022
Biomass	479602	263886	184169	349235
Special Items	112972	94474	357942	134229
Livestock	8861	102	22981	6702
Productivity	25570	3998	34583	17160
Any Other	78540	90374	300377	110368

- In all the GoI projects, the funding support for training, community organization and administration is below the standard norms.
- The administration support is much higher than the normal standards in case of INGO NGO projects (about 35% higher). However, the funding support for training and community organization is below the normal standards and also lower than GoI funded projects.

Investments -Works:

- The expenditure on water component is highest in all types of projects. On an average nearly 41% of total budget was spent on water resource development. The share of expenditure on water resource development ranged from 32% to 49%. GoI NGO projects spent lion's share on water resources (49% of total budget). INGO NGO projects and GOI GO projects spent almost equal share of budget on water resources (40% of total budget).
- There are about 15 projects in which the expenditure on water crossed 40% of the total budget. In one project, the entire expenditure was only on water resource development. There was no other intervention, in this watershed. This high share indicates the thrust given to water and irrigation in watershed projects. Such projects also give an impression that the watershed project is synonymous with water resource development projects.
- The investments on land occupied second position. Percentage of investments on land is highest in case of INGO NGO projects (26% of total expenditure). In this case, the share of expenditure on land is almost equal to that of expenditure on water resources

(26% of total expenditure, while the expenditure on water is 32%). This balance between land and water resources is observed only in the case of INGO NGO projects. In rest of the projects, there is a clear tilt towards water resources.

- GoI GO projects also made considerable investments on land resources (about 22% of total budget). Only 2 projects crossed 40% of total expenditure on land resources. Rest of the projects (92%) spent lesser than 40% of total expenditure on land resources.
- Investments on biomass occupied third position in all types of watershed projects. The expenditure on this component ranged from 8% to 23% of the total expenditure. Predictably, high priority on biomass related interventions (plantation, horticulture, nurseries, etc.) was given in watersheds where tribal/ forest lands were more. As in the case of land, 2 projects crossed 40% of total expenditure on biomass. Rest of the projects (92%) spent lesser than 40% of total expenditure on biomass.

Investments on Special Interventions:

- Livestock, productivity enhancement and other activities constitute "special interventions". These interventions were not observed in all watershed projects. The average expenditure on this component is 6.3% of the total expenditure (in all projects). The expenditure ranged from 4.5% to 15.5% of the total expenditure.
- The investment on livestock ranged from 0% in GoI NGO projects to 1% in INGO NGO projects. GoI GO projects made an investment of 0.3% of total expenditure on this component. The highest investment on livestock was about 2% of the total expenditure. GoI NGO projects did not make any investment on this component.
- Number of projects with productivity enhancement related interventions is relatively low. Only 20% of sample watersheds made investments on productivity related interventions. As a result, the total and average investments in this case are misleading. The total investment on this component did not cross 1% of the total expenditure.
- Any Other: This category is a set of miscellaneous interventions that were locally promoted by the facilitating agency. INGO NGO projects made considerable investments on this category (13% of total expenditure). GoI GO and GoI NGO projects made equal share of investments on this category (4% each). Total investments on this category were about 5% of total investments.

B. Unit 2 – Rs/Ha

Expenditure Profiles – Average Values (Rs/Ha):

Investments – Projects Management:

- This unit is commonly used in watershed development context. Based on the actual expenditure on different components of the project and area of watersheds, the average values of expenditure on different components were obtained. These values are presented in the Box No:
- The expenditure on training and community organization were marginally lower than

the standard norms (200 Rs/ha), in case of GoI funded projects. However, the funding support for these two components is just matching with standard norms (200 Rs/Ha), in case of INGO NGO projects. In case of training, the expenditure is about 25% higher than the normal unit cost.

- Similarly, the administrative support to facilitating agencies is lesser than the normal in case of GoI funded projects (less than 400 Rs/ha). The deficit is much higher in case of GoI GO projects (37%) and relatively lower in case of GoI NGO projects (17%). However, in case of INGO NGO projects, the expenditure on administrative support is more than double the standard norm (837 Rs/ha).

Investments - Works:

- The expenditure (Rs/Ha) on different components in different projects indicates that the investment is marginally lesser than the proposed standard Unit Cost: 3200 Rs/ Ha (for works) of MoRD, GoI norms. This marginal under investment is particularly visible in case of GoI GO and GoI NGO projects. The deficit is about 22 and 40 Rs/ha, respectively.
- The expenditure (Rs/ha) in

Table -18

Adequacy Analysis of Investments of Watershed Project Rs/ha				
Component	GOI GO	GOI NGO	INGO NGO	ALL PROJECTS
Total	3729	3815	6976	4012
Training	143	153	243	155
Com. Org	157	171	201	167
Administration	251	331	837	332
Woks	3178	3160	5694	3359
Water	1302	1879	2229	1636
Land	820	631	1830	809
Biomass	855	479	556	660
Special Items	201	171	1080	254
Livestock	16	0	69	13
Productivity	46	7	104	32
Any Other	140	164	906	209
Adequacy Analysis of Investments on Watershed Programs Rs/Family				
Training	604	1003	560	728
Com. Org	664	1118	464	783
Admn	1061	2167	1932	1558
Woks	13429	20686	13136	15770
Total	15758	24973	16092	18839
Water	5501	12298	5142	7681
Land	3463	4130	4221	3799
Biomass	3613	3135	1282	3099
Special Items	851	1122	2491	1191
Livestock	67	1	160	59
Productivity	193	47	241	152
Any Other	592	1074	2091	979
Adequacy Analysis of Investments on Watershed Programs Rs/ Person				
Training	119	197	110	143
Com. Org	130	219	92	154
Admn	208	425	381	306
Woks	2635	4053	2594	3096
Total	3092	4894	3177	3698
Water	1079	2410	1015	1508
Land	680	809	833	746
Biomass	709	614	253	608
Special Items	167	220	492	234
Livestock	13	0	32	12
Productivity	38	9	48	30
Any Other	116	210	413	192

case of INGO NGO projects is much higher than the standard norm of GoI funded projects. INGO NGO projects made an investment of 5694 Rs/ha, which is about 1.8 times the normal unit cost for works.

- There is no bench mark for investments on different components/ physical interventions. However, the average expenditure (Rs/ha) for different components is analyzed here. While comparing different projects, the pattern of investments could give useful hints for funding different components. The important observations from this analysis are mentioned here.
- Investments on water resources got a major share in all types of projects. 35% to 50% of total expenditure (Rs/ha) was made on water resources.
- The share of investments on water and land are almost equal in case of INGO NGO projects. This balanced approach is not found in GoI projects.
- The expenditure on land development in case of INGO NGO projects is two to three times that of the GoI funded projects.
- The GoI NGO projects and GoI GO projects made few investments on special interventions, when compared to GoI GO and INGO NGO projects. The investments by INGO NGO projects is 5 to 6 times that corresponding values of the GoI GO and GoI NGO projects.
- The average investment on livestock is marginally higher in case of GoI GO projects, than that of INGO NGO projects.
- There is a higher level of investment on "other" components in case of INGO NGO projects. GoI GO projects made very small investments on this component.

C. & D. Unit 3 and 4– Rs/Family and Rs/Person

Expenditure Profiles - Rs/Family and Rs/Person

Investments – Project Management:

- These units are not standard units and there is no bench mark for these units. However, these unit might give a new direction and meaning to the watershed funding support. The basic details of the selected watersheds (number of families and population) are used to arrive at the actual expenditure incurred on different components in these watersheds. It does not mean that "X" amount fund was actually spent on each family or a person. The main observations from the analysis are mentioned here. (Refer Box No for details)
- The investment/ expenditure trends of these two units tend to be similar, as the two parameters are strongly co-related. Considering this, a combined analysis of these two units is made here.
- The expenditure in Rs/Family has very high values. However, the expenditure in Rs/person are comparable to that of other unit cost such as Rs/ha.

- As per these two units, investment in case of GoI NGO projects is highest, for training, community organization and administration. Both GoI GO and INGO GO projects have got almost the same values of expenditure in these two units.

Investments - Works:

- The investment per family for works component ranged from 15000 to 20000 Rs/ family.
- However, higher value could also indicate lesser number of families and/or persons benefiting from the project. So the lower values under this unit could also indicate more number of benefiting families/ persons, for the same quantum of investment.
- In case of INGO NGO projects, these units have high values in case of "other" activities. This indicates that the actual expenditure is high on these components and the number of benefiting families could also be higher.

Adequacy Analysis – Completeness/ Comprehensiveness of Project Interventions:

As already indicated earlier, the project interventions are largely guided by the objectives of the project. To achieve the same objectives, different projects could adopt different sets of activities/ interventions. However, the diversity of the activities/ interventions could also project the level of comprehensiveness or completeness of the interventions. For assessing the "Adequacy" or "Comprehensiveness" or "Completeness" of interventions, number of interventions on which investments are made is taken as an indicator. From this analysis, the following observations are made.

- Water Resource Development was the most common activity in almost all watersheds. All watersheds made investment on water resource development.
- Land Resource Development was also most common activity. However, in 8% of total sample watershed projects, the land development related interventions were not taken up. The sample indicates that equal number of projects from GoI GO and GoI NGO projects fall into this category.
- Biomass related interventions were not part of watershed interventions in about 12% of the projects. Majority of them belong to GoI NGO projects.
- Livestock related interventions were not included in majority of the projects (84% of sample projects, 21 out of 25 projects). Almost all GoI NGO

Table -19

% of Projects Which Made "NIL" Investments on the Following Components – Adequacy of Interventions				
	GoI Go	GoI NGO	INGO NGO	All Projects
Water	0%	0%	0%	0%
Land	9%	9%	0%	8%
Biomass	9%	18%	0%	12%
Livestock	82%	91%	67%	84%
Productivity	64%	91%	0%	68%
Any Other	45%	27%	0%	32%

projects of the sample watersheds excluded livestock related interventions (91% of 11 projects). About 82% of GoI GO projects also neglected livestock related interventions in the watershed development projects (9 projects out of 11). 67% of INGO NGO projects also excluded livestock related interventions.

- Productivity enhancement related activities were ignored in 68% of watersheds (out of 32 projects). About 64% of GoI GO projects, 94% of GoI NGO projects were part of this category, which neglected interventions under productivity enhancement components. All INGO NGO projects spent small amounts on productivity enhancement related interventions.

45% of GoI GO and 27% of GoI NGO projects completely neglected "other" activities. While INGO NGO projects spent considerable amounts on these "other" activities.

DNH Test - Deficit, Normal and High Funding of Watershed Projects - Frequency Distribution of Projects as per Investments:

When the sample size is small and from diversified backgrounds, average figures could be misleading. So a frequency distribution of the watershed investments was conducted to understand the "deficit, normal and high" funding of watershed project. For conducting this analysis, funding support from MoRD, GoI was considered as bench mark. The DNH test is conducted for 25 sample watersheds. This analysis is conducted in two parts.

1 – DNH Test for Totals:

2 – DNH Test for Each Broad Component

For first part, total expenditure was considered and analysis was made with the help of above four units. In this case, the component wise analysis is not made. In part 2, component wise analysis is made (Training, Community Organization, Administration and Works). For conducting this analysis "Rs/Project" is used as the basic unit. The following observations are made from this analysis.

1- DNH Test – Rs/Project:

- Gross under-funding of the project is observed in about 16% of projects. The deficit ranged from minimum 4 lakhs to 12 Lakhs rupees per project. All these projects were GoI funded projects. Some of these projects were also discontinued as the successive installments were not released. In one case of such discontinuity of funding by DRDA (GoI project), INGO funded it.

The higher funding was observed in case of 60% of projects. 67% of INGO NGO projects belong to this category. More number of GoI NGO projects got relatively higher level of funding support, when compared to GoI GO projects.

DNH Test - Rs/Ha:

- It is observed that 20% of projects received sub critical funding. The deficit ranged from 1000 to 2000 Rs/ha. Majority of these projects were from GoI GO and GoI NGO category.
- The number of projects with expenditure between 3000 and 4000 Rs/Ha was about 32% of the total sample. These projects were mainly GoI funded projects. Considering the bench mark of the project funding (4000 Rs/Ha), the funding in this case could be considered as "just adequate". There is a marginal deficit in these watershed projects.
- About 67% of INGO NGO projects received higher level of funds. The expenditure per ha in these watersheds is about 1.8 times the standard unit cost. The expenditure of these watersheds ranged from 3065 to 17800 Rs/Ha. There are no other watershed projects from other categories in the range of these investments.

Table -20

Frequency Distribution of Projects as Per Investment Range				
	GoI Go	GoI NGO	INGO NGO	All Projects
<10 Lakh	0	1	0	1
10 to 16 lakh	1	2	0	3
16 to 20 Lakh	5	0	1	6
20 to 25	3	5	1	9
Above 25 Lakh Rs/Ha	2	3	1	6
<2000	0	1	0	1
2000 to 3000	3	1	0	4
3001 to 4000	4	3	1	8
4001 to 6000	4	6	0	10
>6000	0	0	2	2
Rs/Family				
<10000	3	0	0	3
10000-15000	0	2	2	4
15001-20000	1	1	0	2
20001-40000	3	4	1	8
>40000	4	4	0	8
Rs/Person				
<3000	4	2	1	7
3000 -10000	2	7	1	10
10000-15000	4	2	1	7
>15000	1	0	0	1
Total No	11	11	3	25

DNH Test - Rs/Family and Rs/ Person:

- The frequency distribution of projects as per expenditure on families gives almost equal distribution across three ranges, below 20000; between 20000 and 40000 and above 40000 Rs/family.
- It is interesting to see that GoI funded projects invested higher amounts per family, in general.
- The distribution of projects as per investments per person indicates that more projects are at lower levels of investments. About 68% projects invested up to 10000 Rs/person.

2 - Deficit Analysis of Funding:

The total expenditure for each component (training, community organization, administration, works and total) is compared with the standard norms of MoRD, GoI. Depending on the level of expenditure, the frequency distribution of projects is made to understand the availability of funds for different components of the project. The broad

observations from this analysis are mentioned below. Table -21

Deficit, Normal and High Funding For Different Components and Projects				
	GoI Go	GoI NGO	INGO NGO	All Projects
Training				
Deficit	7	3	2	12
Normal	4	7	0	11
High	0	1	1	2
Community Organization				
Deficit	4	2	2	8
Normal	7	7	0	14
High	0	2	1	3
Administration				
Deficit	7	3	0	10
Normal	4	8	0	12
High	0	0	3	3
Works				
Deficit	3	3	1	7
Normal	1	0	0	1
High	7	8	2	17
Total				
Deficit	5	3	1	9
Normal	1	0	0	1
High	5	8	2	15

- 50% of projects are under funded for training component. Majority of them belong to GoI GO projects. More funding is observed on training, in case of limited number of projects (about 8% of projects). In this category, there is only one project from GoI funded projects. About 44% of project received funds as per norms.
- The community organization is under funded in case of INGO NGO projects (67%). Since this is mainly "staff intensive" budget, the related budgets (staff salaries of community organizers, travel, etc) are considered as part of administration/ overhead. So the budget for this purpose is less than the normal standard budgets for community organization. About 32% projects got lesser budgets than the standard allocated budgets for this purpose. Limited number of projects is also funded highly. These projects belong to GoI GO and INGO NGO projects. In this case, about 56% projects got funds as per the standard norms (no deficit and not higher). The funding position for community organization is slightly in a better position, when compared to training.
- In case of administration, the INGO NGO projects received higher amounts than other types of projects. Since these projects combined part of community organization budget into administration, budget for administration appeared to be higher than the normal standard. The under funding for administration is observed largely in case of GoI GO projects (64%). About 40% of the total projects received lesser funds than the normal allocated funds. All of them belong to GoI funded projects.
- In case of works, equal share of projects in three categories got lesser funding support than the normal standard (between 27% and 33% of projects). About 28% of projects got lesser funds than the stipulated funds. This category also includes limited number of discontinued projects also. Only one project reported that it received exact amount of funding, as per norms. This project belongs to GoI GO category. Majority of the

projects (about 68% of total sample) got higher funding support for works, than the stipulated funds. All three categories of projects share almost equal percentage of projects under this category. However, GoI NGO projects top this list with 73% of projects and GoI GO projects with 64% projects at the bottom of the list. However, 67% of INGO NGO projects had higher budgeting. These projects had higher budgets (when compared to standard norms) in all other components also.

- The frequency distribution of total expenditure per project for all components also indicates that 36% of projects received inadequate funding support. About 45% of GoI GO projects and 27% of GoI NGO projects belong to this category. There is only one project in the entire sample watersheds that received funds according to the standard norms. Higher funding is observed in case of 60% of projects. The share of GoI GO projects in under funded and highly funded projects is same (45% each). However, 73% of GoI NGO projects received higher amounts.

Conclusions:

Analysis of funding support to watershed projects gives an interesting dimension of the project. As part of this section, the processes related to fund management and key events that have a bearing on funding arrangements were analyzed. An expenditure profile of selected watershed projects is conducted to understand the "adequacy" of funding support to watershed development projects. Different units were evolved to make a comparative analysis of watershed expenditures across different types of projects. Comprehensiveness/ Completeness of interventions was assessed to understand the relative priorities on different components at watershed level. Deficit, Normal and High Funding Support (DNH Test) is conducted to see the patterns of funding. The key observations and conclusions from the above analysis are presented here.

- The adequacy of funding has several dimensions. Comparing with bench mark standards (unit cost of watershed development projects –Rs/Ha); evolving new parameters for comparisons, comparing investments across different components; analyzing the comprehensiveness of the interventions are part of this adequacy analysis. Frequency distribution of investments also helps to understand the investment patterns and relative priorities.
- This analysis is mainly limited to 25 projects for which complete data is available.
- The average size of the watershed projects seem to be uniform across all types of projects, though the average size of the watershed is smaller in case of INGO NGO projects.
- The funding deficit is observed in about 28% of GoI funded projects (GoI GO and GoI NGO projects).
- The total expenditure on works per project in case of GoI NGO is slightly above the standard allocated fund (16 lakh Rs/project). The investment (Rs/Ha) is also "just

above the normal standard norm".

- In about 63% projects, the funding from INGO NGO projects (Rs/ha) is much higher than the standard norms. The investment ranged from 3065 to 17800 Rs/ha.
- The investment per persons and family (Rs/ Person and/or Rs/Family) seem to have similar trends, as the parameters are correlated to each other. These units indicated much higher level expenditure per unit, when compared to normal unit (Rs/Ha). This unit may be useful for incorporating the components that have strong linkages with human resources of the village (population/ families of the village).
- Water resources development got highest priority and funding support in general. Apart from total budgets allocated, the "per unit expenditure" on water is also very high (in all types of units). Water resource development is also most common activity in all most all except in 3% of watershed projects. In some cases, the lion's share of the budget is allocated to water resource development (ranging from 70% to 80% of total budget), leaving little space for other components. Such lop sided priority created artificial inadequacy of funding support to other components.
- Land resource development occupied second place in terms of investments and priority. Except in 6% of projects, all projects spent considerable amount of funds on developing land resources.

The missing components in watershed development are livestock and productivity enhancement. Nearly, 84% of projects ignored livestock related interventions and 68% of project ignored productivity enhancement related interventions. This omission is observed in all types of projects.

Part 3

Themes of Special Interest

Equity Isuues in Watershed Development Projects

Watershed development is generally concerned about improving the productivity of land and water. The benefits therefore primarily go to those who own or control the land and the water resources in the watershed. Others at best derive indirect benefits, such as wages/ employment opportunities of the project. The institutions of communities for watershed projects also tend to reflect this inherent bias of the project. As a result the questions of equity mar the potential of the project. If the project facilitators of the watershed project are blind to the needs and concerns of the poor, landless and women, obviously more benefits would accrue to the rich and landed families in the village. Though there are some structural issues related to equity in absolute sense (eg: unequal land holdings and limited scope of government sponsored projects to address redistribution of the land), there are several other ways to "create" opportunities for resource poor families even in the context of a predominantly land-based project like watershed development project. Process study had a special focus on equity in watershed projects. The study teams brought together several observations, case studies and investment profiles to analyze the equity dimensions of the project. This section presents these observations, findings and conclusions on equity related issues in watershed development project.

Equity is all about ensuring that "resource poor families" maximize benefits of watershed development projects. Some of the most common options/ opportunities to ensure equity in watershed development projects are - treatment of lands in ridge areas; priority to small and marginal farmers; investments on and entitlements over common property resources (land, water bodies and forest/ pasture lands; livelihoods support systems, etc. Some of the sample watershed projects have attempted more complex issues to address equity concerns. Establishing land rights; working on issues related to violence against women; exclusive institutions of women are some of these interventions that were creatively combined with watershed projects. The observations of the field work broadly indicate that institutional development and action planning processes are critical for enhancing the equity in watershed context.

In the context of watershed development project, there are several ways of interpreting equity, facilitating equity and measuring equity. However, process study particularly looked at following three aspects of equity.

Section 1 - Equity focused Processes (at critical stages/ key events)

Section 2 - Equity in Institutional Space (Covered in Chapter on Institutions)

Section 3 - Equity in Project Investments

Section 4 - Equity in Watershed Projects – Spectrum Between Potential and Possibilities

Section 1:

Equity Focused Processes (At critical stages/ key events):

As already explained, equity in watershed development context is a result of facilitating processes. The processes have to begin with identification of resource poor/ vulnerable families (men and men) and continue till they get adequate benefits from the project in a sustained manner. The processes should be positively biased to the vulnerable and resource poor families. Though the project facilitators need to be sensitive and conscious of equity related issues at every stage/ key event of the project, certain key events are absolutely necessary as part of facilitating equity. In the project management cycle of watershed development projects, the following are identified as "non-negotiable" steps for facilitating equity.

Stage: Identification of Resource Poor Families

Table -22

Process Index - Equity						
State	GOI		Bilateral		INGO	
	GO	NGO	GO	NGO	NGO	Total
Identification						
M	32	63	25	-	68	47
C	28	57	-	-	54	46
J	50	75	-	-	100	75
R	45	46	-	71	46	52
U	25	25	-	-	100	50
O	84	93	-	75	100	88
N	68	-	-	-	-	68
Institutions of Poor						
M	80	90	55	-	100	81
C	18	0	-	-	0	6
J	49	55	-	-	48	51
R	23	10	-	51	51	34
U	0	41	-	-	100	47
O	42	51	-	42	51	46
N	32	-	-	-	-	32
Planning						
M	20	19	27	-	47	28
C	13	42	-	-	27	27
J	36	30	-	-	39	35
R	32	10	-	34	47	31
U	17	13	-	-	46	25
O	35	13	-	70	80	50
N	42	0	-	-	-	42
Execution						
M	67	75	58	-	42	60
C	58	58	-	-	58	58
J	75	58	-	-	25	53
R	77	75	-	75	83	78
U	27	46	-	-	92	55
O	73	75		75	75	75
N	46	-	-	-	-	46
Total						
M	50	62	41	-	64	43
C	29	39	-	-	35	21
J	52	55	-	-	53	32
R	44	35	-	58	57	39
U	17	31	-	-	84	27
O	58	58	-	65	76	52
N	47	-	-	-	-	47

1. Specially targeting women and poor in awareness campaigns
2. Preparation of list of poor

Stage: Creating Institutions of Poor

3. Efforts made by PIA to form SHG of poor and criteria for selecting members of SHG

Stage: Planning

4. Special attention given to problems of women and weaker sections
5. Rates used for preparing estimates

Stage: Execution of Works

6. Actual contributors
7. Use of WDF (Purpose)

Process Index for Equity – Key Stages of Project:

It is obvious that each project would have followed its own set of processes that ensured equity or processes or completely/ partially ignored equity in their villages. The Process Index (developed in Volume 2) is applied here to quantify and compare the processes related to equity. The processes related to the above identified non-negotiable steps are converted into "Process Index of Equity", using the methodology of Process Index. They are given in the Box No XXX.

Understanding Process Index - Equity:

The values of the Process Index explain the health of the equity related processes in each stage of the project, under different categories of the processes. Since the tables in the Box No XXX are self explanatory, the details are not elaborated here. However, processes followed in the broad categories (red, yellow and green) are explained here.

Processes followed in Projects with Process Index Value of 0 to 33 (Red):

During Identification Phase:

There are 19 projects under red category. In this category of projects, the facilitating agencies did not make any efforts to reach out to women and poor families, during awareness campaigns. They also did not prepare any inventory/list of poor families. During grama sabha and other such events, if women and poor participated, it was purely coincidental and not a facilitated exercise.

During Institutional Development of Poor Phase:

There are 24 projects under red category. In this category of processes, the facilitating agencies did not make any attempt to establish institutions of poor persons (women and men). There were no criteria for selecting members for such institutions.

During Planning Phase:

There are 28 projects under red category. Projects under this category did not make any efforts to understand and analyse problems of women and resource poor families. As a

result of this omission, there was no space for their issues/ problems in the action plans of watershed projects. The action plans were decided by the facilitating agencies or district level officers. The villagers remained like spectators of this process of domination by the facilitators. The budgets of the action plans were prepared using local rates, which may not be according to the minimum wages. As a result of this process, the resource poor families not only lost natural resource management related opportunities, but also the minimum wages.

During Execution Phase:

There are 27 projects in red category. In the projects under this category, the wages were deducted from the wage seekers, who are obviously poor in the name of contribution. Since the poor were not organized and did not know about the provisions of the watershed projects (minimum wages), they silently parted their wages towards creating watershed development fund. The WDF was not used for the benefit of the resource poor families in any way.

Processes followed in Projects with Process Index Value of 34 to 66 (Yellow):

During Identification Phase:

In this phase, there are 11 projects under this category. The facilitating agencies did not make any "special" or "additional" efforts to reach out to the women and poor families. But the facilitating agencies organized several awareness campaigns for the general public of the village. Women and poor families "incidentally" participated in these meetings. The facilitating agencies also prepared a list of poor families. The process of preparing this list was guided by previous experiences of facilitating agency and/or by the existing leaders of the village. The role of women or poor families themselves was minimal and passive.

During Institutional Development of Poor Phase:

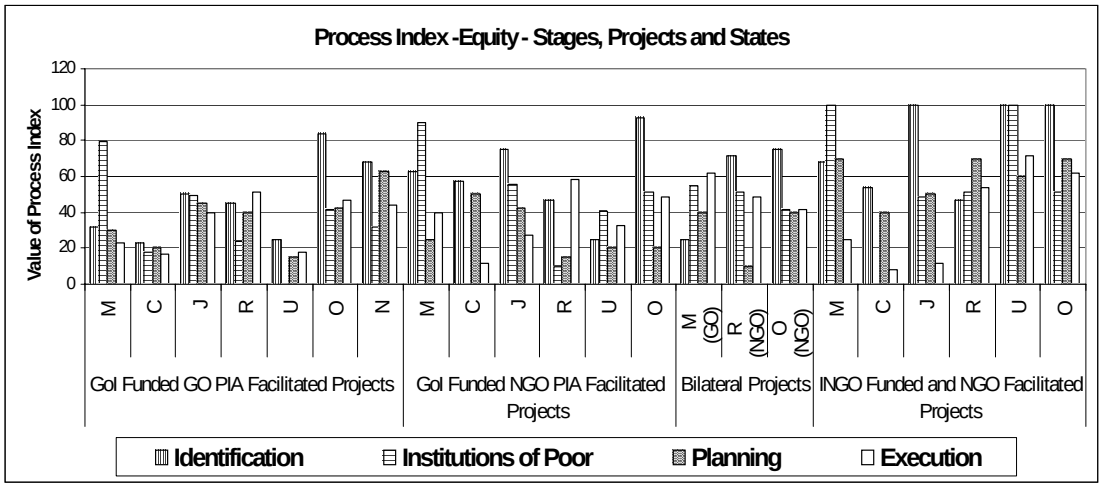
There are 20 projects under this category of processes. The facilitating agencies did not make any proactive efforts to form institutions of poor and women. In fact the facilitating agencies were not very sure on the process of establishing the groups of poor people. Over a period of time, SHGs of men and women were established, which are mainly engaged in thrift and credit activities. The village leadership "allowed" the formation of self help groups. The criteria of membership were also largely decided by the leadership or the facilitating agency.

During Planning Phase:

There are about 16 projects under this phase. In this category of processes, the issues/ problems of the poor were discussed. However, these discussions remained as a formality to be completed or as a superficial process. They did not have any contribution to the planning processes. The action plans were decided jointly by the village leadership and facilitating agency. The budgets of the action plans have a combination of local rates and SSR (minimum wages).

During Execution Phase:

The contribution of user groups was nominal in private lands. There were several occasions in which the laborers had to part their wages along with user group members. The wages were deducted from wage seekers for all works on CPRs. The WDF was formed with the contribution from laborers to a large extent. The use of WDF was observed in this category of watershed projects. However the poor families did not get any specific benefit out of WDF. The WDF was used for repairs of check dams and other related activities.



Processes followed in Projects with Process Index Value of 67 to 100 (Green):

During Identification Phase:

There are 25 projects under this phase. In this category of processes, the facilitating agencies made special efforts to reach out to women and poor families. They organized special meetings/ hamlet wise meetings/ theme specific meetings to develop rapport with poor families and women. They also used several ways of communication to share the objectives and benefits of the watershed project to women and poor families. During these processes, the facilitating agency also developed a deeper understanding on the poverty related issues of the village. They developed the list of poor, along with the poor themselves. The process gave ample opportunity to understand and learn about the project itself.

During Institution Development Phase:

There are 11 projects under this category of processes. The need for institutions of poor was explained through several means (exposure visits/ training programs/ focused group discussions/ others). After this process, facilitating agency motivated the poor families to get organized. The support and commitment from the agency was explained. Homogeneity, affinity and common interest were some of the main criteria for selection of the members of the groups; even from the poor families.

Box - 1

Inventory of Criteria Used For Prioritization During Action Planning – Equitable and Not So Equitable Considerations

- **Equity Related Criteria**
- Poorest of the poor from all sections of the village
- Poor SC/ ST/ Weaker Sections population got priority
- **Preference to Womeno**
- Problems related to women

- **No Criteria**
- No Criteria and prioritization
- Not Clear
- No Clear priority to any particular activity

- **Demand Driven Criteria**
- Based on the application and fund available
- Activities/ Interventions that benefit larger number of families (Eg: CPR)

- **External Influences**
- Landed people
- PIA and Panchayat decided the priority on the basis of the present work of Panchayat
- Department's approval
- Engineer and some government officials decided the priority.
- WDT and some influential person of the community decided the prioritization
- WDT Decided the priority on the basis of Emphasis given by the Higher officials
- Activities/ Interventions that are proposed by dominant community (person) or PIA

- **Project Practicalities**
- In which season what material can reach the site
- Season
- Availability of the laborers
- Fund Availability
- Capacity of people for construction

- **Location Related Criteria**
- Ridge to valley was given priority
- Urgent needs of community
- Benefits should go to each hamlet

Activity/ Interventions

- Severity of problem was given top priority
- Water resource development for drinking
- Water resource development for agriculture (irrigation)was given priority
- Crop production (agriculture) activities are given priority
- Sustainability of intervention (LONG LOSTING)

- Soil Conservation Activities
- Land Development (Terracing, Land leveling)
- Plantation
- Poor Quality land
- CPR Land
- Capacity Building
- Simple, Low cost technology and Local technology
- Fallow land or land available for treatment

During Planning Phase:

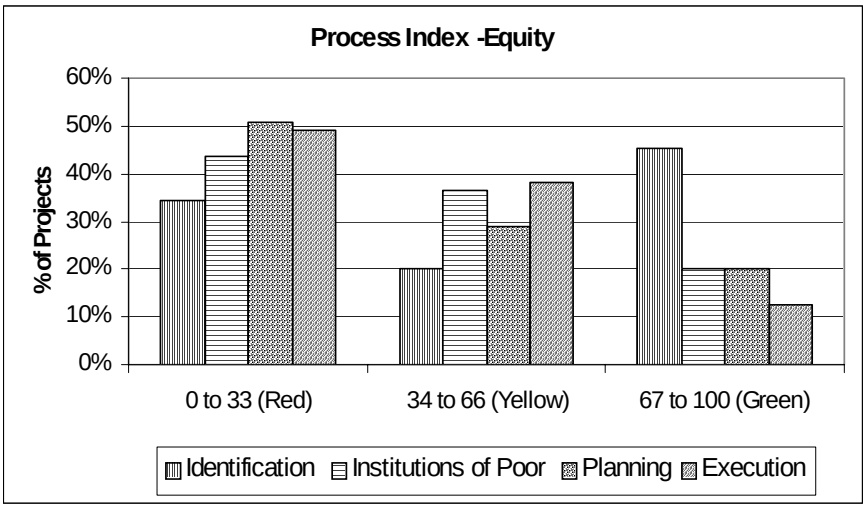
There are 11 projects under this category of processes. The problem analysis of poor and women was a serious affair in this category. Several meetings and participatory exercises were conducted to understand the problems of poor and convert them into action plans. Issues like drinking water, wages, food security, violence against women, health were some of the common topics for discussions and action plans. The planning is a collective process in which poor persons had a say in deciding on the wages and estimates of the works. The local rates and SSR were used, after considering several aspects (such as who is likely to work, when is the work executed and where). Facilitating agencies provided necessary guidance to these discussions. (Refer to Box No 1 for criteria used for prioritization in different projects)

During Execution Phase:

There are 7 projects under this category of processes. The execution of works generated wages for the labor groups/ SHGs. User groups genuinely contributed and the wages of the laborers were not deducted, in the name of contribution. Facilitating agency clearly emphasised on the genuine contribution from users. The exploitation of wage seekers was completely stopped in this category of watersheds. The WDF was used for several purposes including as a revolving fund to the SHGs of poor women. There were several income

Table -23

Category of Projects Under Red, Yellow and Green Processes				
Scores	Identification	Institutions of Poor	Planning	Execution
0 to 33 (Red)	19	24	28	27
34 to 66 (Yellow)	11	20	16	21
67 to 100 (Green)	25	11	11	7
Total	55	55	55	55



generating/ other activities that were promoted with this WDF. The fund was properly utilized by the members of SHGs.

It may be noted here that there were some exemplary examples and experiences in ensuring equity as part of watershed development project. The facilitating agencies (largely NGOs) addressed the structural aspects of the rural areas by establishing/ facilitating the process of getting land pattas to landless families; addressing violence against women; establishing rights over CPRs (land) to landless families, access to forest lands (for agro forest and food crops) and similar activities. These examples demonstrated a strong positive bias to poor and vulnerable communities is a feasible preposition in the context of watershed development project also. Such case studies are described in detail in Volume 4.

Conclusions of the Patterns of Equity Related Processes under Different Categories of Projects:

The conclusions of the above analysis and patterns of Process Index of Equity are mentioned below.

- The initial attempts on awareness generation were not sustained till the last phase of the project (execution) in majority of the GoI funded and GO facilitated projects. The focus on institutions of poor was relatively low in this category of projects.
- Higher levels of efforts were made by the NGO PIAs under GoI funded projects on identification and institution development of poor. Subsequently planning was a weak process. However, the efforts to ensure equity got intensified during the execution phase.
- Similar trend was observed in case of bilateral projects also. Equity focused action planning was relatively weak when compared to the process of institution development and execution level efforts. The over all values of bilateral projects was relatively very low, compared to GoI projects (NGO and GO PIAs).

INGO funded projects have very high levels of efforts in institution development and planning, and relatively low efforts on execution phase. The values of Process Index in this case are much higher than the corresponding values of GoI Funded projects (GO and NGO PIAs).

Section 2:

Equity in Investments:

Watershed development projects have huge budgets (From 4000 Rs/Ha to 6000 Rs/Ha). As a result, the investments for conserving and development of natural resources are also relatively high. In "Equity in Investments" analysis, the study attempted to understand the investment pattern in watershed development projects from equity point of view. The leading questions used to explore equity in investments were "Who got these investments? For what type of activities? How much?" For conducting equity analysis in investments, the following methodology was used.

Methodology for Conducting Equity Analysis in Investments:

The following steps were followed for conducting "Equity in Investments".

Step 1: Identification of villages

Conducting equity analysis requires considerable time at the village level and good rapport between the facilitator team and villagers. It was difficult to conduct this analysis in all watersheds. So each nodal agency identified one or two watersheds for conducting this equity analysis. The main criteria for selection are:

- Assured support from local PIA
- Availability/Adequacy of data on project finances

Table -24

Sample Watersheds For Equity Analysis		
Category of Projects	Number of Projects	States
GOI GO	3	C,R,O
GOI NGO	7	M,C,J,R
INGO NGO	2	U
All Projects	12	

Based on this, about 12 watersheds were selected from the seven states. The equity analysis could not be conducted in Nagaland. The sample distribution is presented in Box. In Orissa and Jharkhand, the selected watersheds have several hamlets and the project was implemented in each of these hamlets. The equity analysis was conducted in one of these hamlets. In remaining cases, the entire village was considered as a unit for conducting equity analysis.

Step 2: Participatory Rural Exercise on Equity:

The facilitator team conducted a PRA on equity analysis on investments of the project. For this, they followed the steps mentioned below.

- Well Being Ranking of the families in the village/ hamlet to categorize them into rich, average, poor and very poor families. During this time, asset base of each family was also listed (mainly family size, land holdings and livestock)
- Inventory of Activities: The interventions of the watershed project in the given village were listed down by the community (Eg: Farm ponds, check dams, earthen bunds, plantation, etc).
- Matching Families with Interventions: It is very natural that all families do not benefit from all interventions. A particular family would have accessed a certain type of interventions, depending on their needs/ asset base. In this step, the exact number and type of interventions accessed by each family were identified. This matching process was conducted through a matrix exercise.
- Investments Accessed by each family: After knowing which family got which type of interventions, the share of investment accrued by a particular family for these

interventions were obtained (from village level records). (E.g.: A particular family "A" benefited from earthen bunds and a farm pond. The investment value of these interventions is estimated/ obtained from the watershed records as 1100 Rs for earthen bund and 4500 Rs for farm pond. Then "A" got total investment of 5600 from watershed project. In this process, investments accessed by all families in all categories (rich, average, poor and very poor) were obtained.

Step 3: Tabulation of the Data:

The above data is tabulated to know how many families under each category got how much investment under different types of interventions. This data was analyzed to understand the equity focus in investments.

Equity in Investments – Investments as an Indicator of Inclusion and Exclusion:

Equity Analysis of Investment of watershed expenditure clearly gives two indicators.

- Component wise investments accessed by different categories of families.
- "Percentage of families (under different categories)" that got benefits of each component (water, land, biomass, etc).

This analysis also gives a clear idea on the extent of "inclusion and exclusion" of poor families (from investments point of view). The analysis was conducted for each major sub component of watershed project, which are mentioned below.

- Water
- Land
- Biomass
- Productivity
- Livestock
- Others
- Total Investment

The analysis is focused on the following aspects.

- How many families are there in the village under which category?
- Of the above families, how may families actually accessed the benefits of a particular component?
- What is the total budget spent on the above component?
- What is the average share of each family that accessed the investments?

This analysis was conducted for all the above components. The data was analysed separately for all categories of projects (GoIGO; GoINGO; INGONGO and all Projects). The main observations of the analysis are presented in subsequent sections.

Equity in Investments – Water:

Water is elixir in drought prone areas. The priority to water resource conservation is understandable. The main observations on the investment pattern on water conservation are mentioned below.

Inclusion:

- There is strong bias towards rich families in terms of coverage.
- 103% of rich families got water related investments. All families under average category also got water related investments.

Table -25

Inclusion and Exclusion in Project Components - Water					
		GOI GO	GOI NGO	INGO NGO	All Projects
Included Families – (As % of Each Category)Water	Rich	94%	121%	78%	103%
	Ave	39%	135%	85%	99%
	Poor	13%	67%	78%	58%
	Very Poor	18%	18%	124%	51%
	Total	**27%**	**84%**	**87%**	**73%**
Excluded Families (As % of Each Category) Water	Rich	6%	0%	22%	0%
	Ave	61%	0%	15%	1%
	Poor	87%	33%	22%	42%
	Very Poor	82%	82%	0%	49%
	Total	**73%**	**16%**	**13%**	**27%**
Investments Rs/ Family Water	Rich	7302	9302	2943	7398
	Ave	4678	3696	3602	3747
	Poor	17203	6396	3929	5910
	Very Poor	30900	40611	2668	11617
	Total	**11025**	**7148**	**3449**	**6020**
Total Investment	672549	3245146	1096783	5014478	
Ave. Rs/ Project	224183	463592	548392	417873	
Total No of Families	229	543	366	1138	
No of Covered Families	61	454	318	833	

- The coverage of poor and very poor families is about 58% and 51% respectively.
- When compared to GO PIAs, NGO facilitated projects could cover higher percentage of families under water investments. GoI GO projects could cover about only 27% of families, while GoI NGO and INGO NGO projects could cover 84% and 87% of the families, under water component.
- Coverage of poor and very poor families is much higher under INGO NGO category projects (78% and 124% respectively). Coverage of rich families is much higher in case of GoI funded projects (both GO and NGO). Families in the villages under GoI NGO projects got water related investments for more than one activity.

Exclusion:

- GoI Go projects excluded 87% of poor families and 82% of poorest of poor families. These projects also ignored 61% of average category families. However, these projects excluded only 6% of rich families.
- Even GoI NGO projects also ignored 82% of poorest of the poor families. But these projects did not exclude any of the rich and average category families.
- INGO NGO projects did not exclude any single poorest family. When compared to other types of projects, INGO NGO projects excluded higher percentage of rich families and lowest percentage of poor families.
- On the whole, no rich family is excluded in water component in case of GoI NGO.

Investment Patterns on Water:

- The average investment/ project is lowest in GoI GO projects and highest in case of INGO NGO projects. The average investments (Rs/Family) under different types of projects give a peculiar picture. Under GoI GO projects, average investment per family is highest in case of poor and poorest. Since the coverage of poor and poorest is lowest in GoI GO case, the average investment is highest. In case of GoI GO projects, the average investments per family (Rs/family) are highest, for all categories of families. However, the average investment per project is lowest.
- Even in case of GoI NGO, poorest families got highest average investments. Here also, the actual coverage of poorest families is very low. The average investments per family ranged from 3696 to 40611 (more than 10 times the lowest average investment).
- The average investments are fairly low in case of INGO NGO projects. They ranged from 2668 to 3929. Since the percentage of excluded families is fairly low (in all categories of families), the average investments per family are also evenly distributed. Since 100% of the poorest of the poor families are covered, the average investments are also not very high. However, it is to be noted that the average investment on water (Rs/Project) is highest in case of INGO NGO projects.

Equity in Investments-Land:

Development of land by arresting soil erosion is the most important and preliminary tasks of watershed treatment. Investments on land development are particularly important for poor farmers, for improving the productivity. The investment patterns on land development reveal differential priorities in different types of projects.

Inclusion:

- It is very surprising to see that the investments on land development are nil in the selected sample watersheds under GoI GO, for all categories of families. This investment pattern may not be representative of the watersheds under this entire category.
- In case of GoI NGO projects, the coverage is relatively higher in case of rich and average families and very less in case of poor and very poor families. This indicates a clear positive bias towards rich families.
- In case of INGO NGO projects, the coverage of poor and poorest families is highest (94% and 89% respectively). A reasonable share of rich and average families is also covered under land development activities.
- On the whole, only 41% of families got the benefit of land development treatment.

Exclusion:

- As already indicated, all families in the field area of GoI GO projects were excluded from developing their lands. This could be a rare phenomenon.
- In case of GoI NGO projects, the coverage of poor and poorest families is lowest. About 85% of poor and 90% of poorest of poor were excluded from this component, in GoI NGO projects.
- However, the exclusion of poor and poorest families under this category was minimal in case of INGO NGO projects (only 6% and 11% families respectively). In fact, rich families were excluded most in this category of projects. This indicates a clear positive bias towards poor families in the project villages.
- In general, the coverage of families is much less and exclusion of families is much higher. This trend is more pronounced in case of poor families in this component. This indicates that the land improvement opportunities for poor farmers were minimal in different types of the projects, except in case of INGO NGO projects.

Investment Pattern:

- Peculiarly, the investment on land development is nil in case of GoI GO projects.
- The average investment per project is much higher in case of INGO NGO project (4.6 lakhs), which compares to that of GoI NGO projects (0.76 lakh).
- Since the coverage of poor families is highest in case of INGO NGO projects, the investments obviously reached these families. This helped the poor families to improve the basic asset i.e. land.

The average investments per family ranged from 1817 to 4654, in all categories. This average investment on land is much lesser than the average investments on water.

Table -26

Inclusion and Exclusion in Project Components - Land					
		GOI GO	GOI NGO	INGO NGO	All Projects
Rich	0%	53%	58%	48%	
Average	0%	58%	77%	52%	
Poor	0%	15%	94%	36%	
Very Poor	0%	10%	89%	32%	
Excluded Families (As % of Respective Category) - Land	Total	0%	30%	84%	41%
	Rich	100%	47%	42%	52%
	Average	100%	42%	23%	48%
	Poor	100%	85%	6%	64%
	Very Poor	100%	90%	11%	68%
	Total	100%	70%	16%	59%
Investments Rs/ Family Land	Rich	0	4222	2432	3470
	Average	0	1817	3368	2587
	Poor	0	4654	3149	3434
	Very Poor	0	4386	2419	2724
	Total	0	3150	3021	3066
Total Investment	0	516579	927537	1444116	
Average Rs/ Project	0	73797	463769	111086	
Total No of Families	229	543	366	1138	
No of Covered Families	0	164	307	471	

Equity in Investments – Biomass:

Improving the biomass is considered to be the best way of arresting soil erosion and increasing the ecological security. However, the biomass regeneration processes were rarely successful. Though the biomass related projects generally require low levels of investments, it is very difficult to ensure that these interventions survive and yield desired results. The investments on this component indicate a low level of priority, in general.

Inclusion:

- About 23% of families were included in this component. There is no clear pattern in terms of coverage of different categories of families in different type's of projects. However, the total coverage of families is much higher in case of GoI GO projects and INGO NGO projects (31% and 32% respectively).
- INGO NGO projects could include highest percentage of poor families (48%), when compared to any other type of projects.

Table -27

Inclusion and Exclusion in Project Components - Biomass					
		GOI GO	GOI NGO	INGO NGO	All Projects
Included Families (As % of Respective Category) - Biomass	Rich	29%	21%	0%	15%
	Average	34%	18%	28%	25%
	Poor	31%	9%	48%	26%
	Very Poor	27%	12%	24%	18%
	Total	31%	13%	32%	23%
Excluded Families (As % of Respective Category) - Biomass	Rich	71%	79%	100%	85%
	Average	66%	82%	72%	75%
	Poor	69%	91%	52%	74%
	Very Poor	73%	88%	76%	82%
	Total	69%	87%	68%	77%
Investments Rs/ Family Biomass	Rich	10365	4522	0	5913
	Average	4430	4396	828	3026
	Poor	7362	3417	840	3012
	Very Poor	7303	5273	484	3940
	Total	6699	4274	797	3365
Total Investment	475625	312017	94099	881741	
Average Rs/ Project	158542	44574	47050	67826	
Total No of Families	229	543	366	1138	
No of Covered Families	71	73	118	262	

Exclusion:

- Majority of the families were excluded from this component in general. The exclusion of families is more visible in case of GoI NGO projects. Highest percentage of poor families was excluded in case of GoI NGO projects.
- Both GoI GO and INGO NGO projects excluded almost equal percentage of families (69% and 68%) respectively.

Investment Pattern:

- The investment pattern indicates considerable variations among different projects. The investment per project is highest in case of GoI GO projects (1, 58, 542 Rs/ project) and ridiculously low in case of GoI NGO projects (44574 Rs/ Project).
- The average investment (Rs/Family) in case of GoI GO is almost 8.5 times that of INGO NGO projects. INGO NGO projects have lowest average investments on this component.

Equity in Investments – Livestock:

Livestock is considered to be the most dependable asset base of the rural poor, in drought prone areas. Particularly small ruminants are considered to be "liquid gold" by poor families. The investments on livestock in watershed context reveal the real equity dimensions of the watershed development projects.

Table -28

Inclusion and Exclusion in Project Components - LIVESTOCK					
		GOI GO	GOI NGO	INGO NGO	All Projects
Included Families (As % of Respective Category) - Livestock	Rich	6%	7%	2%	5%
	Average	21%	1%	1%	5%
	Poor	5%	2%	1%	2%
	Very Poor	0%	4%	24%	9%
	Total	9%	3%	4%	4%
Excluded Families (As % of Respective Category) - Livestock	Rich	94%	93%	98%	95%
	Average	79%	99%	99%	95%
	Poor	95%	98%	99%	98%
	Very Poor	100%	96%	76%	91%
	Total	91%	97%	96%	96%
Investments Rs/ Family Livestock	Rich	1425	3880	1500	3189
	Average	1029	4000	5400	1518
	Poor	1029	3520	2000	2148
	Very Poor	0	4250	4792	4665
	Total	1049	3867	4450	2945
	Total Investment	20972	58000	71200	150172
Average Rs/ Project	6991	8286	35600	12514	
Total No of Families	229	543	366	1138	
No of Covered Families	20	15	16	51	

Inclusion:

- The total percentage of families covered under this component was fairly low (4%). GoI GO projects could cover 21% of average families, which was highest among this category of families. GoI GO projects also covered highest percentage of families under this component.
- The coverage under GoI NGO projects was relatively average.
- The INGO NGO projects could cover highest percentage of poorest families (24%), when compared to any other type of projects. This shows a clear positive bias towards poor families in terms of strengthening their asset base.

Exclusion:

- All most all poor and very poor families were excluded in this component, under GoI GO PIAs. Significant share of rich families were also excluded in this category or projects. Only in case of average category families, the exclusion was relatively low.
- In case of GoI NGO projects, majority of all categories of families were excluded.
- In case of INGO NGO projects, rich, average and poor families were completely excluded. The exclusion was relatively low in case of very poor families.

Investment Patterns:

- The average investment (Rs/Project) was highest in case of INGO NGO projects. The investment on livestock in these projects was five times higher than that of GoI GO projects. The average investment (Rs/family) in INGO NGO projects was much higher than other category of projects.
- Very poor and average category families had higher level of average investments per family. However, the total budget allocated for livestock (Rs/Project) seems to be grossly inadequate, considering the dependency of poor families on livestock.
- The investment on livestock was lowest in case of GoI GO projects, which did not cross even 7000 Rs/Project. The average investments per family ranged from Rs. 1000 to 1400.
- Since the coverage was also low in this case, the livestock related investments were grossly under allocated.
- The GoI NGO projects provide an average picture of GoI GO and INGO NGO projects.

Equity in Investments – Productivity:

Ultimate aim of all the interventions under watershed development projects is to improve the productivity of lands and animals. However, it is realized that farmers (particularly poor farmers) are unable to make adequate investments to improve the productivity, even after land/ soil conservation activities were completed. The poor farmers need additional support systems (credit/ extension/ demonstration/ linkages and so on) to enhance the productivity of their lands/ animals. The equity concerns of watershed development project are reflected in specially targeting such farmers, who need that additional support for enhancing the productivity of their assets. The investment patterns on this theme give the field picture.

Table -29

Inclusion and Exclusion in Project Components - Productivity					
		GOI GO	GOI NGO	INGO NGO	All Projects
Included Families (As % of Respective Category) - Productivity	Rich	0%	9%	16%	10%
	Average	0%	2%	26%	10%
	Poor	0%	10%	14%	9%
	Very Poor	0%	2%	36%	12%
	Total	0%	7%	21%	10%
Excluded Families (As % of Respective Category) - Productivity	Rich	100%	91%	84%	90%
	Average	100%	98%	74%	90%
	Poor	100%	90%	86%	91%
	Very Poor	100%	98%	64%	88%
	Total	100%	93%	79%	90%
Investments Rs/ Family Productivity	Rich	0	1900	840	1335
	Average	0	717	785	778
	Poor	0	500	744	620
	Very Poor	0	250	904	845
	Total	0	776	809	799
Total Investment	0	27950	63112	91062	
Average Rs/ Project	0	3993	31556	7005	
Total No of Families	229	543	366	1138	
No of Covered Families	0	36	78	114	

Inclusion:

- GoI GO projects did not have any support to this component. So the project did not provide benefit to any category of families on this theme.
- The GoI NGO projects made a cursory attempt on this theme and could cover all most equal percentage of rich and poor families (9% and 10%) in their project villages. On the whole, these projects could reach out to 7% of total population.
- INGO NGO projects could cover higher percentage of families under this component, when compared to GoI NGO projects. These projects also could target high percentage of poor families, when compared to other projects.

Exclusion:

- The exclusion of all types of families under this category was significant. About 90% of families were excluded under this component. While GoI GO projects completely ignored this component (as a result of total exclusion); there is high level of exclusion of families under this component, in other types of projects also.
- This high level of exclusion indicates lack of equity related provisions with specific reference to productivity of the lands/ agriculture.

Investment Patterns:

- The average investment for this component ranged between 0 and 31556 Rs/ project. The INGO NGO projects have higher allocation for this component, when compared to GoI NGO and GoI GO projects. The GoI GO projects did not allocate any financial resources to this component.
- The average investment per family in both INGO NGO and GoI NGO projects are almost the same.

Equity in Investments - Others:

The diversity of interventions is a clear indicator of participatory action planning processes. Supporting a variety of activities/ interventions that are not typically "standard" interventions is an important requirement. Though many of such interventions need not have "equity" focus, one could assume that a facilitating agency would identify necessary opportunities for strengthening equity component in watershed projects. This process is reflected in the budget allocations to "others" component of the project. The investment of the projects on "other" is analyzed here to understand the equity dimensions of the project.

Inclusion:

GoI GO projects did not have any support to "others" component. The entire community under these projects did not get any opportunity to explore new ways of enhancing their livelihoods outcomes.

GoI NGO projects attempted to allocate budget to this "others" component and covered about 30% of rich families, which is highest percentage of coverage under any category. Similarly, 25% of poor families was covered in the same category of projects. These projects also covered highest percentage of families, when compared to INGO NGO projects.

INGO NGO projects specially targeted 15% of very poor families. They could cover about 5% of total families.

About 22% of poor and very poor families were covered under this category, in all types of projects. This percentage is almost equal to that of the rich families covered.

Exclusion:

- All families under GoI GO projects did not implement any activities under "Others". Thus they were all excluded.
- 95% of families are excluded in case of INGO NGO projects and 80% were excluded in case of GoI NGO projects.
- The focus on poor families is relatively invisible as the extent of exclusion is very high in all types of projects.

Table -30

Inclusion and Exclusion in Project Components - OTHERS					
		GOI GO	GOI NGO	INGO NGO	All Projects
Included Families (As % of Respective Category) - OTHERS	Rich	0%	30%	8%	19%
	Average	0%	12%	3%	6%
	Poor	0%	25%	1%	12%
	Very Poor	0%	11%	15%	10%
	Total	0%	20%	5%	11%
Excluded Families (As % of Respective Category) - OTHERS	Rich	100%	70%	92%	81%
	Average	100%	88%	97%	94%
	Poor	100%	75%	99%	88%
	Very Poor	100%	89%	85%	90%
	Total	100%	80%	95%	89%
Investments Rs/ Family OTHERS	Rich	0	1739	500	1556
	Average	0	1241	500	1124
	Poor	0	548	500	547
	Very Poor	0	767	563	676
	Total	0	925	529	871
Total Investment	0	99885	9000	108885	
Average Rs/ Project	0	14269	4500	8376	
Total No of Families	229	543	366	1138	
NO of Covered Families	0	108	17	125	

Investments:

The GoI NGO projects made considerable allocations to this component. This amount is almost 11 times the corresponding allocation under INGO NGO projects.

There is a remarkable uniformity in the investments (Rs/Family) across all different types of families in case of INGO NGO projects (About 500 Rs/ family). However, the rich families got higher amounts of investments (Rs/family), when compared to poorer families, in case of GoI NGO projects. This indicates that the budget allocations were not very equitable in this component.

Equity in Investments – At Aggregate Level -

Intensification of Targeting and Inclusion and Exclusion of Target Population:

Analyzing equity issues at aggregate level (total expenditure of all components and total covered population) is a complicated exercise. The aggregation of expenditure could be easily computed and also interpreted. But the aggregation of covered/ targeted population is a misleading exercise. The component wise analysis clearly indicated left-out families under each sub-component of the project. But when the numbers of families under each

category (rich/average/poor/very poor) are added/ aggregated, it is very likely that this aggregated number would be more than the actual number of families under that particular category. This may be interpreted as "non-omission" or "inclusion" of target families. But in reality, this number only indicates the total number of families that could get a particular benefit under that particular component. There may be several duplications in aggregating process. As an illustration, if a particular family benefited from three interventions (say – farm pond, livestock related activities and earthen bund), this family would be counted thrice. In reality, only a single family was targeted/ covered under the project. Given the number of families that benefit in any watershed and the numerous activities they undertake (under each sub component), it was very difficult for the study teams to exactly identify the completely "excluded" families. While recognizing this limitation, the data is used to project the "intensification" of project inputs on a particular target group/ category of families. When the percentage of included families crosses 100%, the level of intensification is indicated (E.g.: If the % of included families is 145%, it indicates that 45% of families got more than one interventions under that particular sub component).

Table -31

Equity Analysis Total Budgets for all activities					
		GOI GO	GOI NGO	INGO NGO	All Projects
No of WS Projects	3	7	2	12	
RICH	Total Families (FM)	17	76	50	143
	No. FM covered	22	183	81	286
	% FM	129%	241%	162%	200%
AVERGE	Total FM	62	139	102	335
	No. FM	58	313	226	645
	% FM	94%	225%	222%	193%
POOR	Total FM	117	236	159	557
	No. FM	57	301	376	783
	% FM	49%	128%	236%	141%
V.POOR	Total FM	33	92	55	180
	No. FM	15	53	171	239
	% FM	45%	58%	311%	133%
TOTAL	Total FM	229	543	366	1224
	No. FM	152	850	854	1971
	% FM	66%	157%	233%	161%

Understanding Investments:

- As already mentioned at the beginning of this chapter, the sample size selected for conducting equity analysis is uneven across the categories of projects (three projects under GoI GO; Seven projects under GoI NGO and Two projects under INGO NGO). For comparing different projects on equity related issues (mainly investments) on the

basis of this non-uniform data base, number of families under each category (rich/average/ poor/very poor) are aggregated under a particular category of projects (GoI GO/ GoI NGO and INGO NGO). Family is used as the basis for comparison, rather than project as a basis. E.g.: as part of this exercise, all "rich" families under all seven GoI NGO projects were added to make one single unit – "No of Rich Families in GoI NGO projects". Similarly, all rich families under two GoI GO projects were added to get a single unit "No of Rich Families in GoI GO Projects".

- In some cases, the actual data (investments and number of families) was obtained for a hamlet, which is a part of the watershed, which does not give the total picture of the entire watershed. As a result, the data generated through PRA and other exercises is related to a particular hamlet and may not be exactly representing the entire watershed project area.
- There are also investments that are not necessarily accessed by individual families (E.g.: plantation on common lands; water bodies for drinking water purpose/ common utility purpose, entry point activities, etc). Such expenditure is not included in the budget/expenditure analysis, as they are meant for everyone in the village.
- Similarly, the wage component of the project is also not included in the equity analysis, though it is an important component/ benefit of the watershed development project. The main reasons for this are the following.
    - The wages were converted into some kind of assets. These assets were "used" by different families. So the real long term benefit of the projects was to create/ access/ use such assets. If vulnerable groups get control over such assets, equity issues get addressed in a long term perspective.
    - Though wages were important consideration, this was a temporary phenomenon. Several persons (local/ non local) could work as laborers. But it was very difficult for any watershed committee to generate exact amount of wage accrued by a particular family, during the entire project period. On the other hand, it is also easy to generate data on the assets created during project period (investments and category of users).

Based on the above reasoning, the total budgets accrued by different categories of families are mentioned in the Table No : 32. The total expenditure considered for equity analysis in case of GoI GO projects is about 3.89 Lakh Rs/Project. In case of GoI NGO projects, the considered amount for equity analysis is about 6 lakh Rs/Project and in case of INGO NGO, this amount is about 10 Lakh Rs/Project. The main observations of the investment pattern are mentioned below.

The higher investment (Rs/family) for poor families reflects the lower level of targeting the poor families. This principle is true with other groups also. "Higher the investment/family; lower the coverage of families under that particular category".

65% of the total budget was accrued by poor (poor and very poor) in GoI GO and INGO NGO projects. In case of GoI NGO projects, the share of poor families is about 50% of the budget.

The share of poorest families ranged between 18% and 21%. There is a remarkable uniformity in all categories of projects. However, the actual budgets and benefited families differed to a great extent in different projects.

The share of budget by average category families ranged from 19% (GoI GO) to 28% (INGO NGO). The average share is about 24%.

The INGO NGO projects could allocate relatively low share of budget to rich families (9%) and while the GoI NGO projects allocated highest share to rich families (27%).

The expenditure per family is remarkably uniform for all categories of families under INGO NGO projects (about 2500 Rs/Family). This ensured that all categories got almost equal share, while higher percentage of poor families got included in the project. This budgeting and allocation reflects strong equity considerations, while executing the project.

In case of GoI funded projects, there is a wide range in investments (Rs/family) in different categories of projects and families. The range is from 3000 Rs/family (average) to 15000 Rs/ family (very poor) in case of GoI NGO projects and 3700 Rs/family (average families) to 16000 Rs/family (very poor) in case of GoI GO projects. The reasons for higher investments (Rs/family) on poor families are already explained.

Section 3:

Equity Issues in Watershed – Spectrum between Potential and Possibilities:

Strong criticism against many of natural resource management projects, particularly watershed based projects is that these projects are inequitable. The main limitation is that the investments in watershed development projects are mainly on/for developing natural resources (like private land, water courses/ bodies, etc). As a result of this nature of investments, many of them could only reach relatively better off (land owning families) in the village. Development of natural resources (under private ownership) is relatively well established process in watershed development and many organizations could contribute to stabilize this process. Even in this process, the technology orientation dominates the planning and implementation. The productivity enhancement and sustainable use of resources is largely neglected.

For resource poor families and land less families, the only options seems to be investments on CPRs and establishing rights over them, within the framework of watershed development projects. One could see that the interventions were mainly limited to “investments” (when ever this happened) and entitlements over CPRs were ignored. Even the investments were not seen in several watershed projects.

Ownership of an asset (like agriculture land, pond/ water bodies, trees, animals) is the only solution in long run to make society equitable. So land reforms and entitlements over other common natural resources (like water bodies/ trees) to relatively poor sections of the rural society is an essential first step in establishing a just and equitable society. Since the process of establishing rights/ entitlements is a very struggle and conflict-ridden path, several watershed development teams/ facilitating agencies tend to ignore these structural aspects of equity. If they are motivated enough, they might try to facilitate the prioritization investment on CPRs and ensure usufruct rights, which is a "project-based-equity".

Spectrum of Equitable Natural Resource Development			
Step 1	Step 2	Step 3	Step 4
Accessing, controlling and Establishing Entitlements over natural resources (land, water bodies, trees, animals and so on)	Develop the resource and institution development	Enhanced Productivity Higher Incomes	Social Change Democratic Functioning Distributed Growth
Establishment and Capacity Building of Democratic Institutions With gender justice for Sustainable use and management of natural resources			
Empowering dalit, women, marginalized and Adivasis			

Establishing equitable society (in terms of ownership of assets) is a complex process and endless struggle with established power structures of the society (political, administrative, village level feudal culture). Not many organizations could engage with such processes. Most common victim is gender considerations in the entire thinking and action.

It is important to understand that the designs of watershed projects could only ensure "project-based-equity" (only after strong facilitation support) and cannot address the "structural-inequities" of the society. There is a high possibility of such "project-based-equity" could fail in the absence of long term support to the resource poor families. One tends to assume that watershed projects are panacea for all equity related issues in the rural society and fail to see these "design limitations" of the projects.

In ideal conditions, the equitable natural resource based development process has to begin with land reforms (accessing/ controlling/ owning/ having entitlement by poor, dalit, disadvantaged members of society) and go on to next steps, namely development of natural resources, making them more productive and establishing democratic institutions for sustainable use and management of the resource. It is important to realize that gender justice should be an integral part of this entire process. This spectrum of equitable natural resource based development process is schematically presented here.

In the sample watersheds, one could see examples in all stages of this spectrum. However, more number of projects would be in the second box, which is development of resources

and institution development. Limited number of sample watersheds aimed at addressing structural issues related to equity and also combined this process with "project-based-equity". The process and achievements in terms of establishing "project-based-equity" are already explained in previous sections. In this section, attempts made by few facilitating agencies (mainly NGOs) in addressing the "structural-inequities" in the context of watershed projects are presented. These examples are mainly from INGO NGO projects in UP and Orissa.

Women Leadership as a non-negotiable:

In these projects, one could see the women in decision-making positions at grass root level. Series of workshops/ reflective processes were organized during the pre-launching and initial stages of the project to ensure that the facilitating agencies are sensitive about the gender issues in development. During this process, the strategies of gender mainstreaming in each stage of projects were also finalized. Though there was initial resistance from partners, eventually they relented to this approach. This approach had a strong influence on the facilitating organizations. Gender balance is observed among the team members (particularly the field level functionaries). As part of this strategy, several institutions were established to create collaborative and separate spaces for women and men. These institutions are meant for addressing different concerns/ functional aspects of the project.

Type of Institution	Main Purpose of Institution
Women SHG	✦ Collective Action of women on social issues ✦ Opportunity for women to come out of stereo types ✦ Thrift and Credit as binding factor
Watershed Committees with all women members/ Women Committee	Empowerment of women in decision making on NRM Issues and Other issues related to drinking water, food security, and wages and so on.
User Groups of Water Users	Sustainable use of water for irrigation; forest manage ment, agriculture production
Grama Chetana Samitis/ Theme Specific Committees and Village Development Committee	For overall development of the village
Apex Bodies of SHGs	Collective Strength at cluster level Accessing government programs; Establishing Samajik Bank

Annexure

Organisations involved in the study

WASSAN, Andhra Pradesh

Watershed Support Services and Activities Network (WASSAN), Hyderabad is an autonomous support organization, which conducted process studies on watershed development projects in Andhra Pradesh with the support of Government of Andhra Pradesh (2000 to 2003). These studies made a significant contribution to the formulation of "Process Guidelines of Watershed Development Projects in Andhra Pradesh (2002 and 2004)". WASSAN recognised the need for taking up similar initiative at the national level and contribute to the formulation of new generation watershed development policies in the country. ICEF supported this study. "Understanding Processes in Watershed Development Projects in India" is an outcome of these initiatives and thinking.

ICEF, New Delhi:

India Canada Environment Facility (ICEF), New Delhi provided funding support to this study. ICEF, New Delhi supported several innovative projects that demonstrated new ways of managing environmental resources by communities, in different parts of the country. Several of these projects provided important leads for new policies and programs related to conservation and management of environmental resources.

State Nodal AGencies:

This study was conducted in seven states of India, namely Madhya Pradesh, Chattisghad, Jharkhand, Rajasthan, Utter Pradesh, Orissa and Nagaland. As a network based organization, WASSAN collaborated with state based resource organizations which were Nodal Agencies for conducting the process study in their respective state.

ARAVALI, Rajasthan:

ARAVALI is a resource organization working for creating better policy framework for development and enhancing the role of voluntary sector in this process. ARAVALI has strong partnerships with several NGOs and Government of Rajasthan.

Arthik Anusanthan Kendra, UP:

AAK is a grass root level voluntary organization engaged in community managed developmental processes in natural resources management, education, entitlements, and sustainable agriculture. AAK also implemented watershed development projects and combined land rights related issues within watershed projects.

AFPRO, Chattisghad:

Action for Food Production (AFPRO) is a national level technical support organization involved with several natural resource management projects across the country as a support organization. They pioneered watershed development projects on technical aspects in different parts of the country.

NCHSE, Madhya Pradesh:

National Center for Human Settlements and Environment, Bhopal is a state level voluntary organization engaged in several developmental initiatives at the state level. They have executed large number of watershed development projects in the state. They are also engaged in action research projects in the state.

PRADAN, Jharkhand:

Professional Assistance for Development Action, Jharkhand is a national level professional organization that has expertise in several rural development themes including natural resource management. They have innovated and established several models and approaches of community based developmental approaches. They work in several parts of the country and have strong collaborative partnerships with state governments and local NGOs.

OWDM, Orissa:

Orissa Watershed Development Mission, Orissa is a specially constituted mission by Government of Orissa, for managing watershed development projects in the state. OWDM manages several types of watershed projects in the state including DFID I supported Western Orissa Rural Livelihoods Project (WORLP) in selected districts of the state.

Directorate of Agriculture, Government of Nagaland:

Directorate of Agriculture is responsible for implementing several agriculture and allied development projects in the state of Nagaland. They are also responsible for implementing the watershed development projects in the state under Ministry of Agriculture.

Understanding Processes of Watershed Development Program in India

Report of the Study anchored by WASSAN and Facilitated by ICEF

Volume 1 : Birds Eye View of Processes: Status across States, Facilitators and Donors
Volume 2 : Process Index
Volume 3 : Indepth View of Critical Themes: Institutions, Finances and Equity
Volume 4 : Policies and Possibilities: Compilation of Good Practices
Volume 5 : Making them Better: Gap Analysis, Enabling &Disabling Factors And Recommendations
Volume 6 : Recommendations at a Glance

Volume 3 : Indepth View of Critical Themes: Institutions, Finances and Equity

There are several themes of special interest in watershed projects. Of these important and interesting themes were analyzed in this volume: Institutions, Financial Aspects and Equity Issues.

Process dimensions of the above three themes and other related data was systematically analyzed from the sample watersheds. Several tools were used to analyze the data on the above issues and draw lessons (Adequacy analysis, frequency distribution, Analysis of PRA data, etc). The main conclusions of the analysis are presented at the end of each section. Limited experiences indicate the feasibility of integrating strong institutional processes; equity based approaches and financial prudence in watershed development projects. However, they could only establish the possibilities. It is important to develop such enabling conditions when the project is implemented on a large scale. The integration of above concerns in watershed projects is also largely a result of concern, commitment and orientation of the project facilitating agencies. Without this basic ingredient, it is difficult to expect watershed development projects to be sensitive to concerns like participation, equity, gender and transparency. The choice of sensitive and capable facilitating agencies and policy framework of watershed projects are equally important in ensuring the integration of important concerns in the watershed projects.

आर्थिक अनुसंधान केन्द्र aak
AFPRO Action For Food Production
ARAVALI
Department of Agriculture NAGALAND
NCHSE
OWDM
Pradan