Institutionalising community-based watershed management in India: elements of institutional sustainability

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Abstract Community-based watershed management (CBWM) has gained prominence in developing world towards integrated resource management for livelihood enhancement of the poor, due to failure of large-scale river valley projects. This paradigm shift has enabled to narrow the divide between the state and community, and marks a beginning for the State towards a "learning organisation" that is adaptive to the changing social and environmental condition. The paper examines the role of State in institutionalising CBWM in three Indian states. It calls for the State to create an enabling institutional environment for coordination among institutions to emerge by devolving adequate responsibilities. This would offer opportunities for institutions to negotiate their concerns and build credibility for a long lasting institutional solution towards integrating resource management.

Keywords India; institutions; policy; resource management; watershed

Introduction

At the end of twentieth century the increasing role and relevance of social and institutional structures in connection with the whole field of contemporary environmental management is gaining prominence. Institutions[1], concerned with natural resource management, have particularly come under scrutiny in India, as they form an important production apparatus and life support systems for the country's rural poor (Jodha, 1986). The need of the hour is to address all aspects of managing the natural resources on an integrated basis. The State, once recognised as the only "vehicle" for development, has in recent years is recognised to institutionalise community-based management by sharing power with multiple set of other institutions. This requires each institution involved at all levels of public and private policy-making to collectively take responsibility for managing world affairs. This involves the State assigning group rights to a specific territory, providing technical guidance on resource management practices and help in creating a positive environment for cooperation (Lawry, 1990:420) towards a long lasting institutional solution. Although co-management has been recognised by the State in India (like in joint forest management, participatory irrigation management, and so on) its operational specificities that supports and respects the claims of various institutions, and to bridge the gap between global and local needs remains obscure. The paper proposes to identify the specificities for the State to build on the potentials and overcome constraints in the process of institutionalising community-based watershed management (CBWM) in India.

The paper examines the role of State in institutionalising CBWM in three Indian states: Uttranchal, Himachal Pradesh and Madhya Pradesh. It explores: (i) the process of institutionalisation in integrating different uses of natural resources at village level, (ii)

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[1] Institutions understood as underlying and persistent rules, customs, arrangements and patterns of behaviour. In the paper, institution refers to both formal and informal ones.

integration of different departments at project level, (iii) scaling CBWM spatially, and (iv) towards addressing rural development. The following section provides an overview of effort made to integrate resource management (IRM) in India. The third section provides a brief on the research outline. Some of the major concerns emerging from the institutionalisation efforts is identified in the fourth section. The final section identifies some of the key institutional element for the State to create an enabling environment for long lasting institutional solution.

Integrated resource management: an overview

Integrated resource management (IRM) has been part of the livelihood strategies of prehistoric Indian civilization. These systems were locally managed and the benefits distributed over a large scale. However, the proponents in colonial and post-colonial India misconceived IRM as to control, conserve and utilise the river through large-scale projects. The era of mechanised lift irrigation system followed during the "green revolution" in 1960s. This has further worsened the environmental scenario and the deprivation of the poor. Though IRM was emphasised in the Five-Year Plans of the Government of India, it was more synonymous with soil and water conservation. The failure of three large scale programmes (land reforms, Integrated Rural Development Programme (IRDP) and wage-employment programmes) in the 1970s and 80s, and increasing concern for environment and development has led to a shift in watershed programmes from essentially a resource-based approach towards livelihood enhancement. Though the watershed was recognised in various government programmes, it was only in 1993 that the Hanumantha Rao committee constituted to evaluate watershed programmes recommended CBWM (GoI, 1994). The success stories of various local level initiatives on watershed management by NGOs and research institutions to balance the needs of the poor and environmental management served as a role model for evolving the common guidelines. This marks a significant step towards integrated resource management with a participatory approach and an attempt to broaden the ambit to link integrated development of natural resources with poverty alleviation strategies.

Research outline

The paper examines the initiative of CBWM in three states of the Indian Union: Uttranchal (formerly part of Uttar Pradesh), Himachal Pradesh and Madhya Pradesh. The programme in the former two states is supported by the multilateral donor agency (European Commission and the German funding agency GTZ), while the third is a State-funded programme. Of the three case studies, two are located in the Himalayan region and one in the dry region of Central India. These projects differ from one another in terms of size, location and the institutions involved in the implementing them towards integrated resource management (Table 1). Though these projects have an element of NGOs participation in the programme, the paper examines the approach by the State government in promoting a CBWM.

Both secondary and primary sources of information have been used to understand the process of institutionalising CBWM. The institutionalisation process at village level was obtained through field visits for 2–4 days to selected one to two villages in each project between September to November 1999 to understand the formation of community institution and its relevance in addressing the community and environmental needs towards sustainability.

The villages were purposefully selected based on success rating by the respective implementing agency. These ratings, as the paper illustrate, is based on the superficial notion that homogeneous community are cohesive for collective action. Key informants

Table 1 Background of case study

Project Details		Doon Valley Integrated Watershed Management Project (DVP)	Indo-German Changer Eco-Development Project (IGCEDP)	Rajiv Gandhi Mission for Watershed Management (RGMWM)
Agencies Involved	Implementing Agency	Watershed Management Directorate, Dehradun, Government of Uttranchal (formerly part of Government of Uttar Pradesh)	IGCEDP	Rajiv Gandhi Watershed Management Mission, Government of Madhya Pradesh
	Donor Agency	European Council and World Bank	GTZ and KfW	– Do –
Location				
Agro-climatic Zone		*Western Himalayas*	*Himalayan Foothills*	*Semi-arid Region*
Characteristics of Resources		Multiple uses that combines environmental protection with livelihood strategies.	Multiple uses that combines environmental protection with livelihood strategies.	Multiple uses that combines livelihood strategies with drought relief measures.
Date of Commencement		June 1993	1993	96–97
Districts Covered		2 (Dehradun and Tehri-Garhwal)	1 Kangra District	8318 villages in the State.
Case Study Watershed		Chandrabagha Nadi Micro Watershed Rishikesh Division		Amargad, Chayani and Naungaonkala micro watershed in Ratlam District.
Case Study VWDC		Talai and Bhawani VWDC	Nanwar VWDC	Bhavadi Kheda VWDC and Chayani VWDC

(community leaders, *Panchayat* presidents (*Panchayat* is the lower administration unit in the country; ideally, it consists of a number of hamlets with an elected leader for village administration), the watershed committee members, women's groups and village level motivators (VLM)) were interviewed for information on the processes involved in the formation of the watershed institutions, membership pattern, measures to programme planning and the implementation process using semi-structured questionnaires. Care was also taken to elicit information from the disadvantage section: the women and the SC/ST community, landless or near landless on their involvement in the process of watershed management. The analysis employs both tabular and descriptive statistics, supplemented by qualitative information. This enabled in understanding the background of the project, administrative structure for planning, implementation process and project outputs in terms of addressing the livelihood needs of the poor.

The VWDC more or less were formed between 1995–97 in the case study area (Table 2). In all the villages under study, VWDC were formed within 6 months and work executed within a year. The economy of the case study villages, though was agricultural; it was more forest-based in the Himalayan region. In the plains (Rajiv Gandhi Mission Watershed Management (RGMWM) case studies) agriculture was seasonal. During the dry periods people migrate to urban centres of Bhopal, Ahmedabad and Mumbai for employment. In Nanwar VWDC agriculture occupation was supplemented with salaried class in government sector. Forest-based activities provided an additional income, minor timber products, fuel wood, fodder and sometimes herbal products, for the people. These villages depict a homogeneous groups in terms of caste structure, however, difference do arise in terms of claim-making capacity of different households. These case studies more or less illustrate a homogenous community, except Nanwar VWDC. Homogeneity in terms of caste structure may prove a positive factor, but many a times a "face to face" relation may not really be so. All the villages studied, except Bhawani VWDC, there were problems in terms of social cooperation.

Table 2 Socio-economic background of case study villages

Items	Doon Valley Project		IGCEDP	RGMWM	
	Talai VWDC	**Bhawani VWDC**	**Nanwar VWDC**	**Amargad VWDC**	**Chayani VWDC**
Registration date	1996–97	1995	1996	1997	1997
Population (households)	261 (48)	110	879 (128)	930 (383)	126
Dominant land area	90% under forest	75% under forest	80% under forest	50% under Agriculture	60% under Agriculture
Main economic activity	60% Agriculturist	50% agriculturist	Government employed households, followed by agriculturist	Seasonal agriculturist	Seasonal agriculturist
Caste	Homogenous community	Homogenous Bhandari community	Multi caste (Rajputs, Joggi, and Choudary)	Bhil community (Scheduled Tribes)	Bhil community (Scheduled Tribes)
Landholding pattern	Marginal farmers	Marginal farmers	Marginal farmers	Marginal farmers	Marginal farmers

Institutionalising CBWM: major concerns

CBWM is one of the most significant and bold attempts by the State to move away from compartmentalised and centralised approach to that of integrated community-based one. This shift has made the State to restructure their institutions towards coordinated approach, enforce participation of the primary stakeholders and scale CBWM towards addressing the concern of environmental management and development. Now government officials visit villages on occasional intervals, interact with people, understand their concerns and observe the changing lifestyle, like the non-government organisations. This marks a beginning to narrow the divide between the State and the community, and a beginning towards multi-stakeholder partnership.

Multiple departments–multiple programmes

The significance of institutional restructuring has been establishment of a Project Implementing Agency (PIA) that acts as a co-ordinating unit at the project level. The existing lead department in the region was assigned for implementing watershed management. The choice is more practical, as it would expect other departments to fall in-line. Further, by being a unified line of command, under the Chief Project Director or Project Director of the PIA, the project envisages a multidisciplinary field staff. These staff are often deputed on an informal basis or assigned watershed work in addition to their own work in their parent department, namely from social forestry, horticulture, livestock, minor irrigation, agriculture, soil conservation and energy conservation for an inter-disciplinary approach. In Madhya Pradesh the watershed is approached by the DRDA as a programme in respective districts; implementation in the field is carried out by the line department officer, who is deputed to the Watershed Implementing Agency (PIA), assisted by multi-disciplinary field staff. Many a times these restructurings are project-oriented (the Indo-German Changer Eco-Development Project (IGCEDP)), attempts to break-off from the existing government set-up (The Himachal Pradesh Eco-Development Society (HPEDS)) and attempts to integrated various departments under one umbrella (RGMWM – recently, the RGMWM has become as a separate entity in the GoMP).

Institutional restructuring with a multi-disciplinary staff is expected to share experience and provide a inter-disciplinary perspective towards integrated management. However,

taking these multi-disciplinary perceptions towards inter-disciplinary applications require commitments and understanding the problem in context. Most of the staffs are deputed from their respective departments to gain experience on community-based programmes that might be of future relevance to them. These officials, though forced, often are enthused for community-based work due to increasing interest from the Government, the opportunity to interact with higher officials from various institutions, and an opportunity towards seeking a higher position in due course. In the process, officials may romanticise the participatory models, owing to ignorance in the understanding of the participatory models or even if they are aware that the work and programme design is not so. Working day and night with communities, travelling on foot for long distances to reach the villages and interacting with impatient and ignorant villagers requires commitment from the field staff, who needs to be sufficiently provided with incentives, in terms of their position. However, incentives for these officials are rare; it remains more in terms of "name and fame." This many times creates disinterest among the officials towards community-based works, and leads to rapid formation of community institutions. Institutional restructuring has not in any way changed the state department functions, which are still organised along conventional and sectoral lines. The guidelines for CBWM are largely oriented towards carrying out soil and water conservation measures, forming community institutions, training for PRA, and with a negligible percentage allocated for entry point activities. The activities other than those related to watershed development, like health components, water supply and sanitation, are directed by the project officers to the respective sectoral departments for implementation. Rarely do the sectoral department's coordinate with the PIA in promoting holistic development. Only in the case where the deputed field officer is from the concerned sectoral department, does implementation become smooth.

Inter-sectoral coordination is further complicated with each department having its own programmes and funds, very similar to the PIA (Table 3). This only leads to duplication of activities. The State should explore options for complimentary activities, like the extension services provided to farmers and agriculture training. Further, there is a clear-cut difference in the perception between the departments and the PIA. The former considers the latter's activities as purely temporary arrangement and would largely depend on availability of foreign funds.

In addition, the components of watershed programme and fund allocation are predetermined, leaving less space for local maneuvering or changes to suit local needs. The

Table 3 Complexities in sectoral coordination duplication of objectives – case of Madhya Pradesh

RGMWM	Department of Agriculture Total plan and non-plan programmes 63	Department of Water Resources
• **Augment and conserve soil and water resources.** • **Maximise people's participation through user group formation.**	• Provide extension services for transformation of research experiments to farmers. • **Distribute agricultural inputs.** • **Subsidise sprinklers, drip irrigation and tubewells for improved irrigation.** • Provide training to farmers on various farm activities. • **Promote construction and utilisation of minor irrigation resources.** • **Take measures to conserve soil and water resources.**	• **Rehabilitation of minor irrigation projects.** • **Formation of water users association for participatory irrigation management.**

Note: Programmes that causes duplication are highlighted. The non-bold ones indicate supplementary activities

RGMWM has certain norms for allocation of funds (Table 4), though it allows flexibility while implementing the programme. However these allocations becomes a benchmark for project officers while preparing the estimates, leaving any chance of flexibility. The Village Watershed Development Committee (VWDC) is informed about the dimensions of the physical structure, number of labourers required and the cost. In accordance, the VWDC carries out the work and maintain them. Rarely is there any effort to understand: why the particular structure is needed, and what significance do these have on their livelihood?

Multiple committees–multiple functions

The community-based approach has been an important component of watershed development activity. To ensure peoples' participation, watershed development committees (Village Watershed Development Committee (VWDC) in Madhya Pradesh, *Gaon* Resource Management Association (GAREMA) in DVP and Village Development Committee (NVC) in IGCEDP) have been created to identify problems, prepare plan, implement and maintain the created assets. The VWDCs are empowered to execute the watershed management programme, resolve problems within the community to fulfil their basic needs and enable government to play a contemporary role. They consist of the multiple users' committee, such as water users committee (if any storage structures), forest protection committees, fodder development committees, seed distribution committees, self-help groups (women and men) and social-cultural committees. This is often justified for identifying sectoral interest groups and for efficient management of the resources. The project authorities assume that entrusting the management rights and responsibilities exclusively to the easily identifiable users can enhance management of resources. For people, multiple committees are just another committee to receive government funds and an opportunity for more labour works, rather on a genuine basis of community-based interest. However, natural resources have multiple use and users. Formation of user groups with easily identifiable members only restricts the uses and users. The poor of Talai VWDC who used to access fodder and fuel from the nearby forest, now after VWDC formation have to get permission from the Fodder Protection Committee and Forest Protection Committee (fortunately the leader is more generous towards the poor in granting permission). The village leader, who is President of the VWDC, is also a nominated leader for the Fodder Protection Committee in the village. In the process of forming village institutions, the project authorities authorise existing power structures and deprive the poor.

Institutionalising participation – participatory assessment

One of the significant realisations of the CBWM has been to train project staff and village leaders on the relevance of participatory approach towards the watershed management, in contrast to delivery-based functioning of government programmes. Participatory Rural

Table 4 Standards for allocation of funds – case of Madhya Pradesh

Activities	Allocation of fund (in %)
Land conservation and protection	30
Surface water management	20
Groundwater management	20
Afforestation	10
Fodder development	10
Other activities	5
Self-help groups	5
Total	100

Appraisal (PRA) has gained prominence as being an important tool for generating location-specific information, prioritising problems and identifying opportunities for watershed development. Significant proportions of the programme funds have been allocated for PRA training and preparing extensive manuals for the project and local village motivators.

PRA is mainly carried out in the early stages of the project to identify and prioritise the problems in the villages under the watershed. All villages in the watershed become relevant candidates for the PRA exercises. After a preliminary visit to the village and getting acceptance from the village *Panchayat* leaders, the stage is set for the PRA. A group of officials along with support staff and enthusiastic villagers collect information using a range of techniques: history of village (time line mapping), transacts and village area mapping, distribution of land use and land holding, institutional linkage mapping (*chappati* diagram), crop calendar and so on. This occasion is sometimes accompanied with a feast. In addition to these techniques, the problems faced by the villagers are identified and prioritised in the meeting for an action plan. The output of this exercise is a document containing socio-economic information and a village level action plan for watershed development. The action plan acts as a valuable asset for outsiders to get an overview of the village. Many times, the views are expressions of the dominant communities' view that is mistaken to represent community interest, leading to misconception of the real problem.

Preparation of PRA has encouraged the villagers to identify their resources, capabilities and priorities. However, many times the problems identified have formed a "wish list". Rarely is the problem explored in detail, or their inter-linkages and possible solutions from the various alternatives. Further, rarely has there been any assessment: on the existing institutions in the village, potential conditions required for the formation of new institutions and measures for a systematic process of building new peoples institution that is important for CBWM. In most of the VWDC (Talai, Naungaonkala, Amargad and Chayani) one of the main problems was non-cohesive nature of the community. Understanding and addressing this can sustain the VWDC, but this requires long-term interaction and sustained action. It cannot be assumed that only through PRA and by forming a new institution, participation can be ensured. Such capacity building requires commitment to a participatory approach and an ability to understand the people change in the attitude by the field officers and more importantly for higher officials in the project.

The interesting component of the PRA related methods is its ability to generate information about the village and identify the poor at the micro level, in spite of the various socio-political drawbacks. The wealth ranking and social mapping exercises, a prominent PRA method, yield a composite picture of poor households and the ways in which they differ from the better-off population. Evidence from case study villages in Doon Valley Project of UP hills illustrates diversity of poverty, which are normally understated by conventional poverty assessment technique. In the Bhawani VWDC case study village poor households were identified based on: (i) households where none of the members were employed in government sector, (ii) households who were landless and (iii) households without any asset. However, they do consider other criterion that affects the livelihood of the households, such as deprivation and shocks in the family. These are highly qualitative in nature and may be over or under-reported by the people and require further examination or triangulation to understand the multidimensional factors affecting poverty.

Sustainability of local institutions

The sustainability of local institutions depends on the ability to address community needs, capacity to take decisions regarding the programme planning and implementation through joint efforts, maintaining accountability and transparency, and availability of sufficient funds. The projects in study are more concerned with arresting and reversing

Table 5 Percentage of funds allocated for different activities (1996–99) – Case of DVP (Indian Rupees in Lakhs (10^5); at the current (as of April 2002) exchange rate: 1 US Dollar = 48.87 Indian Rupees)

S.No.	Activities	Talai VWDC	Bhavani VWDC
Forest-based activities			
1	Afforestation	5,245	5,943.100
2	Land conservation	7,180	4,255.4
Total		**12,425 (55%)**	**10,198.5 (77%)**
Community-based activities			
3	Irrigation	5,531	2,264.4
4	Horticulture	357	107.67
Total		**5,888 (25%)**	**2,372.07 (18%)**
Delivery-based activities			
4	Agri-based implements	1,258	80.00
5	Energy conservation-based.		1,378 173.250
6	Cattle development	–	187.38
Total		**2,636 (12%)**	**440.63 (3%)**
Experimentation based activities			
7	Field trials of HYV crops	1,764	127.50
Total		**1,764 (8%)**	**127.50 (2%)**
Grand total		**22,712 (100%)**	**13,138.70 (100%)**

Source: VWDC Talai and Bhavani, 1999

on-going environmental degradation. This is not to say that these objectives do not benefit the people, the poor in particular. But improving the living conditions of the people and the poor in particular, is only of secondary or even the last order of the objectives. Hence, to assess the ability of the programme in targeting the community needs and the poor in particular, the programmes' reach in addressing community-based activities and the disadvantaged section of society is taken to reflect the poverty focus of the programme. In the study area, activities were concentrated on government lands that provide immediate benefit through employment for the poor. The second set of activities targets the needs of individual households through delivery-based activities. However, these delivery-based activities may not sustain people's interest and provide incentive for the poor to move away from the poverty.

Community-based activities that involve mobilising the community for management (for instance irrigation) provide direct immediate benefit to all the landowners, indirectly through employment for the landless, and towards IRM. Many of the water storage structures, the tanks in Naungaonkala and Chayani VWDC and *ghuls*[2] in Talai VWDC, benefit a larger community in the village. Further, rehabilitation of these structures will not only enhance community participation, but also act towards IRM, reducing siltation in the hill slopes, harvesting water in the foothills and agriculture practice in the plains. This will enhance water use efficiency in the basins (Seckler, 1996). However, efforts to address these are limited, as they involve convincing people to resolve their differences, share their land, and mobilise people for increased contribution. Ignoring community-based activities is also advantageous for the people, as they receive employment and generate funds for the village through watershed works, without any conflicts within the community.

Accountability and transparency – formal vs informal

Meetings act as a forum for maintaining accountability and transparency of the institutions. They remain important forums for sharing information, for decision-making and towards effective implementation of the programme. The number of meetings is generally high

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[2] *Ghuls* is kind of irrigation system in the Himalayan foothills. The stream water from the hills are diverted to the respective agriculture fields for irrigation.

during the phase of physical implementation and it gradually decreases after completion of the works. The date and agenda for the meetings are finalised by the project staff, and then communicated to the VWDC through the Village Level Motivator (VLM). However, people are not clear about the agenda of the meeting. "*Saab, akker hamko batheyange*" (the project staff will come and explain about the agenda) is the response from the Secretary, Ms. Sheela Devi of Talai VWDC. The Project staffs regularly attend the meetings of the GAREMA and the minutes sent to higher authorities at district level. The Village Level Motivator (who is paid an honorarium by DVP) ensures the attendance at the meeting. Though it is important for all members to attend the meetings, there are few cases of violations. Formal rules are in place to impose fines on violations. However, the VWDC has a flexible informal rule that forgives members absent for genuine reasons, such as absence due to illness in the family, members attending marriage functions or members who inform the reasons for their absence. The Executive Committee (EC), the main organ of the VWDC, is still at rudimentary stage. Since its formation it has neither met, nor are the members aware of their role.

Record maintenance is another indicator for accountability and transparency. The decisions of the meetings are recorded in the minutes book of the VWDC, though not adequately maintained and updated. Many times minute books contain a list of decisions taken, which are maintained by the Village Motivator. In addition to minute books there are other essential records, like work estimates and financial records (accounts and cash register), which are maintained by the PIA. The VWDCs are rarely aware or have been given training and opportunity to maintain records to ensure accountability and responsibility. Though the PIA feel that such training will be provided later, it is important that such process goes in hand with the implementation. Though standard bylaws are in place for all the VWDC rarely is there any attempt to evolve bylaws in the village by the PIA.

Guidelines of the watershed provide space for women and for backward classes in the EC through reservations. However, the posts held by women are rarely active. In Talai VWDC of DVP, the secretary who is also the village motivator and heads the Women Self Help Group (SHG), rarely performs her secretarial role of taking minutes of the meetings and other documentary works. When asked about the activities of the GAREMA, her blunt answer would be "talk to the President" or she would look to the project staff to help answer her question. While in Bhavani VWDC of the DVP, the secretary's husband plays an important role, as he is a schoolteacher in the village. He says, "as project staff wanted few places for women in the office bearer, his wife's name was suggested." In Nanwar VWDC, the secretary position is more for a formality than empowering the weaker section. The former president, who is also the village leader and large landholder, performs the important function of dealing with PIA. What is important to note that these VWDCs at present function as per the direction of the Project Staff. Though the VWDC formulates informal rules, intermittently, there have been no systematic efforts to prepare comprehensive bylaws, nor have efforts made to train people to formulate them, which is an important element for the formation of an institution.

The PIA ensures financial sustainability of the VWDC through contribution, as it reduces government exchequer and creates stake among the people for future management. Contribution from the people are at the rate of 25 per cent in case of activities that indirectly benefit people and 50 per cent for activities that directly benefit people. In many regions of the VWDC contribution is largely mobilised in the form of physical labour that involves earthwork. The cost of earthwork as per government rate is more than Rs. 10 higher than the prevailing market rate in the village. Thus, the earthwork not only provides employment for the people with higher wages, but is also able to create funds and new assets in the village. Does this contribution build stake among the community? How many in the village are

aware of these funds and their utilisation? These are some of the intriguing questions, which cautions creating village funds.

In recent years, PIA have been rapidly involved in scaling-up community institutions, through federation and cluster groups to promote IRM over a large scale. Such scaled-up institutions are assumed to promote the interest of communities by identifying new areas for intervention, monitor the existing works in progress and act as a catalyst for continuing development activities. Scaling up institutions has only been attempted in DVP, where the VWDC jointly form Cluster of Resource Management Associations (COREMA). Local level institutions do have an integrated view of problems and sufficiently fine-tune their strategies. Though scaling these institutions can provide a united forum for sharing information, specifying needs and become a united front to make development agencies accountable, rapid scaling without capacity building of the VWDCs may prove a disaster.

Institutional elements for sustainability

The effort to institutionalise CBWM in India is often a replication of the so-called success stories of NGOs and research institutions by direct involvement with the community and their behavioural pattern. This in many ways is different from the way government runs the programmes. The models of NGOs or research institutions are small-in-scale, fragmented, externally supported (financially) and temporary in nature, whereas the state requires large-scale, stable, largely internally supported (financially) and sustainable programmes. This requires the State to reinvent their role, where funds are appropriately mobilised with mix of internal and external funding, has a rights-oriented approach over access to resources and management systems to blend institutions at various levels. Where the institutions, mainly the State, is best able to adapt to the resource management problems towards becoming a "learning organisation" that institutionalises participation at all levels for a long lasting institutional set-up (IDS Workshop, 1998:146; Dover, 2000). This requires the State to create enabling institutional environment for coordination to emerge, devolve responsibilities and mediate the differences in foresight among institutions for a credible and long lasting institutional set-up.

One of the significant initiatives of the CBWM in India is institutional restructuring for a coordinated approach towards IRM. However, restructuring alone will not address the integration in the management of resources. At the project level, it needs to be supplemented with a policy framework that enables the PIA to become a nodal planning and monitoring unit for a watershed and the funds channeled through them to various departments. The RGMWM has made a significant development in this direction, by pooling different departments for planning. However, it just remains there. Planning combined with involvement of experts (like in IGCEDP), centralised coordination of funds and programmes can enhance the programme to a large extent. While at a micro level coordination involves pooling the knowledge (technical and managerial) base of the communities in designing and enforcing rules and sanction mechanisms to make estimates of the future events and take consensual decision. The decision generates adequate benefits (benefits on social, economic and political) in due course. It is more complex and dynamic for the State to understand and intervene. Diverse institutional arrangements, social, moral and economic norms, are involved at micro level in co-ordinating individual claims over access to resources. Given the changing social structure and physical environment, there is constant flux in the social position of coordinator at the community level. The State is not in a position to promote coordination through the users committee directly. Its role in facilitating coordination has to be by indirect measures of incentives and disincentives that enable users to mobilize themselves for collective action towards IRM (Saravanan, 1998).

Providing autonomy for the local institutions (preferably to *Panchayat* Institutions) to

mobilise user groups having major claims over resource use, formulating rules and regulations that suits the local conditions and situations, and promoting IRM through complementary activities in place could be some of the measures. Meso level institutions like NGOs can be better placed to enhance the functioning of the *Panchayat* institutions to strengthen, monitor and evaluate towards a desired change. This allows community institutions to emerge with users having major claims over access to resources, at the same time provide adequate space for development agencies to raise larger concerns over conservation and equity in resource management. This calls for a crucial role of the state to be vigilant to ensure equity and sustainability. For this, it is important to understand the linkages between institutions in addressing the highly flexible community institution to that of the static institutions. In effect, co-ordination between institutions builds trust, enables transfer of specialised knowledge systems and promotes a "learning organisation" (IDS Workshop, 1998).

The State has to play a crucial role in devolving responsibilities to various institutions, in a way their functions complement each other to jointly manage resources. Responsibilities can be assigned to institutions at macro level or at project level as there exists a clear rules and regulations for their functioning. However, responsibilities to community institutions largely remain tacit and emerge spontaneously based on consensus of opinion of those around the assumed leader. Assigning responsibilities to easily identifiable users only authorizes certain groups having primary stake over the resources. In the process the poor who largely have secondary and tertiary rights are excluded or at the mercy of the leaders, like in Talai and Naungaonkala VWDC. In these conditions, incentive-based mechanisms will enable the users to assume responsibilities for IRM. Though political dominance is part of the social organisation, there is increasing optimism that these dominance will lead to political struggle to achieve a balance between the rich and the poor. Responsibilities at micro level can only be promoted through indirect measure incentives and disincentives that would encourage participation, increased representation and gain in leadership skills of the weaker section of the society. Devolving adequate responsibility and promoting coordination can enable to bring compatibility in the foresight among different institutions. Participatory approach marks a significant beginning towards institutionalising CBWM. However, the effectiveness of the approach depends on supplementing with conventional and process research methods to triangulate information, to understand the changes in the lifecycle of individual, and communities access to the resource dynamics (Shariff, *et al.*, 2001). This not only requires methods for participatory assessments, but changes in the attitude of the institutions, different skills among project officials mainly the State, towards a participatory approach with enough flexibility for field officers through a framework.

Institutionalising CBWM should structure institutions in such a way to seek acceptable outcomes, through negotiation, debate or through "aggressive participation" to reduce conflicts and expand complementarity among institutions. Such complementarity can only emerge when each institution trusts the other, through various means and credibility measures. Vigorous, regular and well attended meetings, share accounting and reporting practices are standard procedures for accountability in community institutions. Often the PIA imposes (or carries out these works on their behalf) these formal systems on the community institutions. These forms remain superficial. In power politics dominated Indian societies means of accountability rest on the power and reliability of leaders and not just the above measures. Further, community institutions exhibit diverse forms of accountability and transparencies, which has considerable acceptance among the community. In a multiple institutional set-up the State has to evolve various mechanisms for promoting accountability and transparency and there are no "best ways." In fact, credibility through accountability and transparency has to be crafted to many different institutional settings (Blair, 2000:27).

The contemporary policies for institutionalising CBWM rests on the assumption that a "bottom-up" approach, in contrast to "top-down," would offer insight for macro level policies to become relevant to micro level dynamics and complexities. However, such policies become practically naïve, like CWBM in India, due to dynamic, diverse and complex existence of micro phenomenon. Moreover, contemporary environmental (such as degradation of rivers, increasing soil erosion, scarce availability of water resources) and socio-political problems (depriving the disadvantage section of the society, widening gap between the rich and poor) requires "top-down" approach for local action, *even if* they may not have contributed to the global problems. This requires individuals, community institutions, private agencies, state and global regimes at all levels of public and private policy making to collectively take responsibility for managing world affairs. For this, State has to create an enabling environment for coordination among institutions to emerge by devolving responsibilities. This would offer opportunities for institutions to negotiate their concerns and build credibility for a long lasting institutional solution towards integrating resource management.

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