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Rural Management Systems Series
Paper - 4

P I D O W

(Participative Integrated Development of Watersheds)

G U L B A R G A

TOWARDS A PIDOW MODEL OF WATERSHED MANAGEMENT

(The contents of this paper emerged from a series of seminars with the PIDOW staff)

May 1986

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1. A rapid survey of the area around Gulbarga answers the question why the project focused on Watersheds. Undulating lands, well-defined water catchment areas with individual water outlets merging together as the water rushes towards larger streams define the topography. We also find that in most of the mini-watersheds (especially those far away from main roads) not only is water a scarce and mismanaged resource but over-all degradation is a common feature. The watershed is degraded not only in terms of land and soils **but as much in terms of people** and their skills and institutions (social, political, credit, health and energy) - which together should form the basis of a self-reliant community.

2. **THE 'PARTICIPATION' IN PIDOW :**

When it was decided to call the project PIDOW, priority was given to **Participation of the people**. Initially the staff interpreted this as motivation and consequently organised village gatherings and melas which were addressed by prominent local speakers and staff who made efforts to raise the levels of interest and establish a rapport with the villagers. The next step was to organise small but concrete actions which provided opportunities for people to plan and work together (shramdaan to repair roads, desilt wells, etc.). But participation is much more. **It calls for assisting the people to design and build up local institutions (functional, etc.) with appropriate systems** to manage the resources of a Watershed. We have models for some of these functional institutions (sericulture societies, milk societies). Some of them can be integrated (when viable) with Apex institutions that cover large areas like Milk Societies into Milk Unions and Cooperatives into Apex Banks. A management model and an infrastructure exists for these functional institutions which other types of institutions do not enjoy. **We surely do not have a model for an Apex organisation to manage a watershed nor even a model for appropriate functional institutions which are required to achieve the objective of over-all development of the community in a watershed**.

It is not enough, therefore, to motivate and organise the community to express feelings of enthusiasm for the proposed programmes : viable institutions managed by the people need to be developed. This immediately "imposes" certain restrictions on the size of the watershed where the programme is undertaken.

The Watershed cannot be too large. Its size must depend on the "capacity" of the people and their institutions to manage the operations required (though this "capacity" in terms of skills, knowledge, and resources will, hopefully, increase as a result of PIDOW's intervention). The existing "area definitions" of a watershed as guiding norms are of little help. For example the PWD (Irrigation Department) describes the watershed in terms of river basins. The area extends over thousands of hectares which comprises the entire catchment area of a major river. Such an area concept cannot serve as the basis of PIDOW's choice of a watershed. It is too large to achieve the major objective of participation. The practice of the Maharajas and local rulers provides a useful example. They concentrated on minor basins and tanks which were administered by the village or panchayat. This is one reason why during exposure trips the PIDOW staff should visit areas where the people have developed their own institutions to manage a programme or absorbed management patterns which are appropriate (like that of a milk society). They should not visit only large Government managed programmes which are high in technology and expertise but have a management pattern too costly and elaborate to be adopted and managed by the people.

The Watershed cannot be too small either. If it is, then the programme will be largely symbolic in nature. The functional institutions will be too small to achieve economic viability and too weak to exert pressure, the area perhaps, too inadequate to plan for the major needs of energy, pasture and forestry. How large, therefore, should the watershed be? One can be allowed to hazard a guess at this stage at the cost of inviting criticism of being arbitrary. **A watershed covering 600 to 800 acres with 80 to 100 farming families would be a possible start for PIDOW**. (This estimate is also conditioned by the present strength and skills of the PIDOW staff and its involvement over the entire project area apart from its programme in the mini- watershed.)

From participation flows another essential feature of watershed management : DECENTRALISATION [1] . The watershed programmes must be planned and managed by local groups and coordinated at the watershed level. Unless these institutional demands of "decentralisation" are properly understood and fulfilled from the start, the project will take on features of the Government's IRDP and other Departmental programmes which are some of the basic causes of its failures. For example, a genuinely decentralised programme will **be based** on village groups,

1 Decentralisation stresses the devolution of power to people's institutions far more than participation does.

especially groups of people below the poverty line who are to benefit from the IRD programme. By "being based" we mean -

- efforts will be made to establish a **functional** group so that it runs according to certain rules and regulations.

- the choice of "beneficiaries" will be made by the group.

- the disbursement and utilisation of funds will be monitored by or through the group.

- the programmes will be undertaken not under the Department's pressure to achieve **targets** but according to the group's capacity to absorb and manage such programmes.

3. THE INTEGRATION IN PIDOW :

One of the major bottlenecks in IRD programmes has been the lack of integration both at management levels and in the content of various programmes. For example agro-forestry or agro-horticulture programmes under IRDP are planned without analysing the relation of trees to a particular watershed need for soil stabilisation, for fuel, for fodder, for fertiliser, or for that matter for flowers - the last could form the basis of a very profitable apiculture programme especially if the trees flower between February and June when there is hardly any other honey source. Astra Oles (smokeless, fuel-efficient ovens) are installed to meet targets under area programmes (Block), without the staff and people understanding that they are required because the watershed's fuel resources are scarce and what is scarce has to be effectively used. Often cows are distributed along the milk route with little attention paid to the capacity of the watershed to support them with fodder, water, or the skills required to manage them. If these cows happen to be distributed along the milk route, it is a bonus, if not, official pressure on the Union to extend its route will be met by arguments of "non-viability".

Links, therefore, are required to make each programme successful and sustaining; but these links must be established at the watershed level. Integration therefore requires decentralisation. Links will not emerge if programmes are sanctioned and implemented at District and Block levels which are subject to various outside pressures like politics, finance and financial year ends over which the local group has no control. Without links at the local level these programmes will need to be implemented and sustained by action or pressures from outside. For how long, for example, will we continue to motivate veterinary camps and organise the Government Departments to run them? When will the local groups realise the essential features and links involved to run a dairy programme and establish these features and these links in a management model which they understand and can maintain? **Integration at the watershed level, through appropriate institutions**

of the people is an essential feature of PIDOW's Watershed Management Model.

The Department of Soil and Water Conservation concentrates on gully plugs, bunds, terraces and contours mainly along the upper reaches; they call this watershed management. **In PIDOW this programme could be described as "a plan to manage soil and water in a shed**" and not "**Watershed Management**" which is more comprehensive.

4. THE VARIOUS SHEDS :

The watershed concept that emerges from various models is that of another "administrative area" like a Taluk or Block. It would be useful to compare a watershed with other "Sheds". We have milk sheds, credit sheds and for that matter cattle sheds. What is common is the word which denotes an area. What differs are the factors which give the shed an identity namely - water, milk, credit, cattle.

But there is a significant difference between how the **watershed** is identified and the other sheds. In the latter case the "shed" is created by an administrative decision governed by economics, politics or just convenience. In the case of water it is defined by "topography". This gives the watershed a specific character which cannot be changed by a decision; it imposes several constraints but also provides a clear and stable infrastructure for a programme.

There is a feature common to the water, credit and milk sheds : a dynamic element - whether water, credit or milk - flows out of the shed. This outward direction is in itself not to the shed's disadvantage provided it is managed properly.

Credit in the sheds can flow outwards as with the case of Banks in rural areas which transfer resources towards the city. Unless this flow is checked by creating investment opportunities in the shed it will be an exploiting flow. There is another danger - possible flow within the shed towards pockets of power resulting in a bias towards the rich. Again this requires management by the people of the Credit source.

We have models to manage this credit. The Cooperatives have rules and regulations, the Banks are socialised or nationalised and have to give priority to the weaker sections - but - but - but - the people especially the poor cannot understand these models because they are too large and complex hence, they cannot influence or control them. Consequently, even if the rules provide for representation of the weaker sections, it makes little difference. This is why MYRADA is today planning to set up a parallel rural credit system organised and managed by our target groups. Let us however not elaborate further but make just this point. The credit shed has a management pattern but it is not controlled by the people especially the

poor and therefore does not achieve its objective unless an outside motivator like an enlightened Government or Bank official takes special interest to ensure that it does, and even in this situation the impact may be temporary.

The milk shed also has a management pattern - the AMUL Model - but in this case it works far better than the credit system. Why it does so would take a long essay but it could be summarised as follows :-

- daily collections, therefore, daily contact.

- interests of rich and poor coincide; they are therefore, supportive of one another

- established marketing system with clear rules governing quality and price.

- larger participation of women.

- equal value to a unit; price does not depend on quantity nor on power(i.e. who the milk producer is)

Of course, inspite of all this, the flow of resources could be outwards - if the people sell all their milk and decide to purchase "Glucose Biscuits" to nourish their children.

The Watershed, however does not have a management pattern - we have tried to delineate the size of the area and the features of integration, participation and decentralisation which must be the guiding principles of this model but we still have a long way to go.

Let us however, take the plunge and try to describe the basic features of PIDOW's model. **This model is the conclusion of a two day workshop with the staff of PIDOW**.

"WATERSHED MANAGEMENT IS A FRAMEWORK FOR AN INTEGRATED VIABLE AND DECENTRALISED PATTERN OF DEVELOPMENT OF PEOPLE LIVING IN A DEGRADED AREA WHERE WATER IS A SCARCE AND MIS-MANAGED RESOURCE AND WHERE EXPLOITATION OF RESOURCES AND PEOPLE HAVE RESULTED IN OVERALL DEGRADATION LEADING TO GROWING POVERTY, INEQUALITY AND INABILITY TO COPE WITH STRESS."

5. MANAGING WATER IN A SHED :

We have already made a distinction between programmes geared to managing water in a shed and watershed management. Once the staff appreciated this distinction

they set about to draw up a strategy of action to manage water in a mini-shed which had been identified. This strategy turned out to be one that could begin to be implemented with the resources available in the organisation without searching for outside experts. This strategy was broken down into various steps/components; it was not only understood by the staff but they were able to explain them to the people. The components of this strategy are the following :-

Programme Strategy To Manage Water In A Watershed

OBJECTIVES in order of Sequence		FACILITATORS / Staff		ACTION / Plans, Programmes	
1.	Make water walk off, not run off.	1.	Technical Staff (Agri Engineers surveyors)	Technical	Delineate land features, ownership patterns, current land use patterns, problem areas, etc. Plan & execute works that can control & regulate the flow of water to minimise run off and erosion (with people)
		2.	Community development workers (watershed managers & staff)	Community	People should be able to see the watershed & understand how actions impact on one another. Entry point activities, shramdaan, etc., can set the ball rolling for people to organise them-selves in functional ways to take on greater watershed management responsibilities.
2.	Hold water in site or as close as possible	1.	Technical : (Agri. graduates with dry land experience)	Technical	Appropriate technology to conserve water *in situ*. Crop selection, package of practices, & land use planning suitably adapted to local needs.
		2.	Community development workers	Community	Education & exposure to other experiments, demonstration on local farmers' fields; training arrangements for finance to translate technical advice to field level action.
3.	Use water efficiently	1.	Community development workers: Priority to local	Community	Establish viable groups with appropriate systems to manage the watershed and its resources (functional groups and if

OBJECTIVES in order of Sequence		FACILITATORS / Staff		ACTION / Plans, Programmes	
			leaders who have been trained in basic skills and are from target group with bias towards poor.		required an apex group).
		2.	Technical Staff	Technical	Crop selection & cropping patterns to utilise water efficiently; adoption of appropriate irrigation technologies (drip, pot, use of farm ponds, etc.)
4.	Distribute water equitably	1.	Priority to local leadership with base in watershed institutions	Community	Well run institutions of target groups invested with adequate authority & status to control & manage resources to the best advantage of the community.

The PIDOW staff have identified a mini-watershed in Dongergaon. After breaking down the strategy into component parts, the staff realised that they had (or could call upon from MYRADA) adequate expertise to start "making water walk" - instead of waiting for a "comprehensive plan" of the whole watershed project to develop before making a start. Mr.Somaiah and Mr.Prabhu left for Gulbarga to join Mr.Kumar on May 6, 1986. The second objective "hold water in site" required the recruitment of an agricultural graduate and expertise in dryland farming techniques. Dr.Sanghi of CRIDA will be in Dongergaon on May 17 and 18. Mr.Raghavendra Rao (Agri) joined on May 8, 1987; he will be directed by Dr.Sanghi. The second objective will not be totally achieved but a good beginning will be made this year. The community organisers are confident of organising the people as several entry point actions have been taken.

6. WATERSHED MANAGEMENT :

We have already described what PIDOW implies when it reflects on its focus - "Watershed Management". There was insufficient time to analyse in further detail the strategy to implement the objectives of a Watershed Management programme, or go beyond water and look at other aspects (e.g. soils, biomass, etc.) This will be done in the next session.

What emerged, however, was a far more integrated concept. An effort was made by the staff to depict the essential components of a system for watershed

management; this figure will be filled out as our concepts deepen and acquire further substance.

<table>
<tr>
<td rowspan="3"><u>Traditional</u>
<u>Sub-systems</u>
- Health
- Energy
- Education
- Animal Husbandry
- Religions
- Marketting
- Social
- Political
- Economic
- Stress Management

<u>N.B.</u> To be analysed in order that strengths are utilised and weakness or blocks removed.</td>
<td>New Sub-systems
- Industries
- Trades & services</td>
<td rowspan="3">- land use and ownership
- Institutional and social measures for changes

Appropriate and viable micro & apex systems, management functions of community</td>
</tr>
<tr>
<td>Community Management of Watershed</td>
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<tr>
<td><u>Resources</u>

- land
- soil
- water
- plant life
- livestock
- people
- skills</td>
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