

SUKHA MUKTI ABHIYAN

Abstract

Meaningful participatory processes of natural resource management lead to enhanced productivity, equity, sustainability and self-reliance. This is evident from the experiments at Sukhomajri, Ralegan-Siddhi and the Chipko Andolan among others. This paper describes the conceptualization and implementation of Sukha Mukti Abhiyan (SMA), a pilot participatory programme to evolve a long-term approach for drought-proofing Palamau district in Bihar. It was a three-way partnership in which the district administration as the sanctioning authority had the overall responsibility for the programme, village-level organizations—Pani Panchayats—were the projects' managers, and the PSI-led Pani Chetna Manch acted as a facilitating organization. The programme's accomplishments and shortcomings are analyzed in this paper.

SUKHA MUKTI ABHIYAN

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I. ABOUT PALAMAU

Palamau district of Bihar lies in the northeastern corner of the once-fabled forest land of Central India. Here, the Chotanagpur plateau in the south, with hills rising to heights of 1000m, slopes rapidly to join the Indo-Gangetic plain in the northern part of the district. The basic statistics of the district are given in Table 1.

Table 1: Basic Statistics of Palamau*

Geographical Area	7879 sq km
Population (1991)⁽¹⁾	2.45 million
% Rural Population	93.3
% SC Population	25.6
% ST Population	18.9
Population Density	192 persons/sq km
Total Literacy	24.3 %
Male	35.3 %
Female	12.5 %
Forest Area % of geog. area	⁽²⁾ 65.3 % (1926), 37.6% (1997)
Cultivable Area	43.3 % of total geog. area
Average Annual Fallows ⁽³⁾	64.6 % of cultivable area
Average Annual Rainfall	128 cm
Marginal Farmers⁽³⁾	62 % of total cultivators
Average Holdings	0.38 ha
Small Farmers⁽³⁾	14% of total cultivators
Average Holdings	1.4 ha
Land holding of small and marginal farmers⁽³⁾	26 % of the total cultivable area

***Note:** The population data is for 1991. Since then Palamau has been split into Palamau and Garhwa districts. Superscripts refer to reference numbers.

Relevant facts highlighting Palamau's socio-economic-political scenario are outlined below:

- Palamau's population is primarily rural. Scheduled Castes (SCs) and Scheduled Tribes (STs) account for a total of 44.5 per cent of the population. Literacy levels are low.

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- **The officially designated forest area has declined from 65.3% of the total in 1926 to 37.6% in 1997 . Much of the latter are degraded dry deciduous forests.**
- **Though the cultivable area is about 43.3% of the total area, barely one-third is sown annually. Three-quarters of the cultivators own only one quarter of the farmlands.**
- The average annual rainfall is good (128cm), but the coefficient of variability is high. Droughts are a common feature. There were six years of severe droughts in the twentieth century -- 1900, 1919, 1932, 1967, 1968 and 1992.⁽³⁾
- Palamau's undulating terrain is criss-crossed by many streams and rivers, most of which run dry by the summer months--February to June. With much of the ground's vegetative cover stripped away, most of the rain water runs off into the major rivers and out of the district.
- **There has been a steady decline in the net irrigated area after 1960, largely due to the neglect of "ahars", the traditional irrigation system. According to the 1926 District Gazetteer, ahars irrigated 81,000 acres out of the total irrigated area of 90,000 acres.**⁽⁴⁾ In 1961, ahars, wells and other traditional sources irrigated 70, 650 hectares in Palamau, but by 1989 the figure had come down to just 14,730 ha.⁽⁵⁾
- The local economy is based on subsistence agriculture and collection of minor forest products. There is heavy seasonal migration annually between Diwali and Holi.
- Land-based conflicts have led to the emergence and dominance of Marxist-Leninist organizations in Palamau and a counter-reaction by the landed population. In an attempt to counter this trend, the government pours tens of crores of rupees annually into rural development programmes. But well-entrenched cabals of contractors, government officials and local politicians siphon away most of these funds. Thus the intended benefits of development spending are rarely realized.

II. SUKHA MUKTI ABHIYAN

In 1992-93, Palamau faced its worst-recorded rainfall failure. The district administration decided to build small earthen dams to store rain water for irrigation and for recharging the groundwater. The construction being labour-intensive would generate employment on the scale required during the drought and ensure a measure of food security in the future. Villages with an overwhelming majority of tribals and harijans were targetted. Driven by a desire to curb the leakage of government funds from development projects, the district administration sought to empower village-based organizations called Pani Panchayats to execute the projects, thus by-passing the corrupt construction lobbies. The check dams' construction being labour-intensive would also generate employment on the scale required during the drought.

The programme was hurriedly conceived and the concept of peoples' participation was unclear. At many sites, contractors hijacked the projects from the Pani Panchayats. A midway intervention -- an information campaign, conducted by Peoples' Science Institute, to inform the villagers about the nature and operation of the Pani Panchayats, with a focus on fair wages for the labourers, did make a limited dent. Finally, 368 check dams were built, while the information campaign covered 56 villages.

In 1993-94, a more comprehensive programme of participatory micro-watershed development, in predominantly SC and ST villages, was prepared by PSI and the district administration. This programme, the Sukha Mukti Abhiyan, was spread across 125 villages. **The basic aim of the SMA was to demonstrate an approach to drought-proofing and enhance the self-reliance of the people. Its main guiding principles and operational elements were:**

1. Establishment of village-based peoples' organizations, Pani Panchyats (PP), to plan and execute the projects and maintain the assets created.
2. The beneficiaries establish their stake in the project through Shramdan, i.e., voluntary contribution of labour.
3. Build on traditional knowledge and local skills.
4. Introduction of equity in the sharing of the resources generated.
5. Enhancement of self-reliance of the village by contributions from Shramdan and equity agreements to a Gramkosh (Village Development Fund).

Process Details

The first phase of the Abhiyan involved the formation of peoples' organizations, construction of rainwater harvesting structures and the water delivery systems and, some land development in the irrigated areas. The programme's structure and process are shown in Fig. 1. The specific steps in the process are outlined below:

- A village with a majority of Scheduled Castes and/or Scheduled Tribes population is selected. It is then located on a Survey of India topographical map (1:25,000 or 1:50,000, scale). Probable sites for check dams/ ahars are marked.
- A visit is made to the village and demographic information is collected. The probable sites are checked along with the villagers. Any other irrigation scheme suggested by them is also checked. If a scheme seems feasible, a date for a village meeting is set. At the meeting, the villagers are asked about the prevailing contract labour system. Then the importance of a strong peoples' organisation, Shramdan and Gramkosh are discussed with the help of posters. A more careful analysis of the catchment, beneficiary area and the dam site is done. A tentative structure is planned with the villagers identifying possible locations for the outlet, the spillway, etc.
- The proposed dam or ahars site is marked on the SOI map and its catchment area is calculated. Hydrological data are prepared, e.g., runoff, peak discharge, irrigation potential, spillway, crest length, etc. and forwarded along with a recommendation to the DRDA (District Rural Development Agency).

- The DRDA forwards the proposal to the respective Block Office. A Block-level Junior Engineer (J.E.) visits the site to measure the profile. The input data are then routed back to the PCM.
- A pair of engineers from the Pani Chetna Manch (PCM) visits the proposed site and according to the design, they mark the formation level, the axis, the outlet level and the spillway level on the ground.
- The design and estimate for the proposed structure is prepared with the help of a computer program developed by PSI. It is then sent to the DRDA for approval.
- Once the technical sanction is accorded, the village is informed and a meeting is arranged. At this meeting, the relevance of the Sukha Mukti Abhiyan, the structure & functioning of the Pani Panchayat, the project estimates and Gramkosh are explained with the help of posters. The functionaries of the Pani Panchayat are formally elected in the presence of the Pani Chetna Manch volunteers. The Gramkosh functionaries are elected simultaneously. A PCM engineering team lays out the design of the dam, pegging its base width. The PP is then asked to start the Shramdan. Shramdan usually involved digging a key trench or cleaning the submergence area.
- In the meantime, administrative sanction is accorded and funds are transferred to the respective Block Office. On completion of the Shramdan the PP informs the Block Office and a joint account is opened between the BDO and the PP. The Gramkosh bank account is also opened simultaneously with the help of the membership fees paid by the villagers.
- The measurement of the Shramdan work is booked by the Block J.E. The Shramdan money and an advance of upto Rs 15,000 is withdrawn from the joint account. The Shramdan money is transferred into the Gramkosh account.
- Then the construction work begins formally. The PP committee members are provided training in the engineering and managerial tasks.
- To facilitate transparent functioning, a billboard is displayed at each site. The billboard shows the basic data for the dam -- height, length, base width, crest width, construction costs, labour rate (including lead and lift charges) -- along with information about the expenses incurred to date, employment generated and the amount accumulated in the Gramkosh.
- **PCM members regularly monitor the progress of the construction and check the' accounts. One day in a week is set aside by the Block-level administration to attend to the villagers' problems. PCM presents monthly status reports to the DRDA. The DM and/or the DDC hold monthly review meetings with the administrative officers.**

Physical Achievements

The SMA began in October 1993 with a plan for constructing water harvesting structures in a participatory manner. The physical achievements of the first 3 years are shown in Table 2.

Table 2: Achievements-At-A-Glance (October'93-October'96)

1.	Number of villages visited	over 500
2.	Number of sites selected	202 in 135 villages
3.	Number of structures sanctioned	193 in 126 villages
4.	Number of Pani Panchayats formed	125 in 125 villages
5.	Number of works started	176
6.	Construction costs sanctioned (176 structures)	Rs 3,70,10,283
7.	Revisions sanctioned (1994-95)	Rs 27,48,920
8.	Planned irrigation potential	~4,500 acres
9.	Average cost/structure	~ Rs 2,26,000
10.	Average height of check dams	20 ft (~6.1m)
11.	Average length of check dams	~ 400 ft (~130m)
12.	Estimated employment generated	~ 10,00,000 person-days
13.	Deposits accumulated in Gramkoshs(Oct'95)	Rs 7,68,884
14.	Number of structures completed	143
15.	Gully Plugging	15,11,158 cft
16.	Mahila Vikas Sangathans (MVS) in	24 villages
17.	Nurseries raised by MVS	40
18.	Saplings raised in nurseries	~ 6,50,000
19.	Plantations/afforestation area	181 acres
20.	Fish farming projects	21 villages
21.	Fish farming ponds constructed	16
22.	Food processing cottage industry	1 village
23.	Technical training	680 persons
24.	Nurseries training	349 women
25.	Aquaculture training	42 persons
26.	Vermiculture training	36 persons
	Investment sanctioned for (WHS)	Rs 3,97,59,203
	Actual expenditure (WHS)	Rs 2,69,99,311
	Investment in nurseries and plantations	Rs 7,53,800
	PSI/Pani Chetna Manch Mobilization expenses	~Rs 50,00,000

Decline

The programme dealt a severe blow to the local contractor lobby. In 1996-97 the latter set about the task of sabotaging the SMA programme after the successful first phase. In the second stage, specific projects related to micro-watershed development and a geographical diffusion of the programme were to be attempted. But the vested interests mobilized local political leaders and junior officials to put pressure on the district administration. Under their pressure the latter stopped funding new development activities. Most of these activities, initiated by the Pani Panchayats, had to be suspended. The Pani Panchayats did try to work together and put counter-pressure on the district administration. Lacking adequate political strength they did not achieve much success.

Recognizing that all long-term movements and struggles undergo lean periods, PSI has chosen to continue with the programme but on a much smaller scale. The programme is now functional in about 20 villages, mainly in Chattarpur and Latehar blocks. The current phase is being utilized to (i) Strengthen women's organizations and build their capacities to undertake development work; (ii) Undertake experiments

on land treatment and cropping patterns to enhance farm productivities. When the programme receives administrative support in the future it can be expanded again.

III. ANALYSES

There are several lessons to be learnt from the Sukha Mukti Abhiyan. This is best done by analysing the causes of its successes and shortcomings.

Successes and their Factors

1. **Drought-proofing model:** The SMA was meant to be a pilot demonstration of a useful approach to drought-proofing. The water harvesting structures were meant to (i) recharge underground reservoirs, so that ground water would be available in drought years, and to (ii) provide surface water for irrigation in normal rainfall years, thereby increasing food production and food security.

As evident from Table 2, 143 water harvesting structures (WHS) were constructed in 125 villages. Thus, there is at least one water body in each of the selected villages. In 1999 PSI surveyed 73 WHS and found that the irrigated area had increased progressively over the years as shown below. **The irrigation costs are far below those required for big dams.**

YEAR	1996-97	1997-98	1998-99
Area Irrigated (Ha)	431	555	592
Cost of Dams (Rs)	16172592	16172592	16172592
Irrigation Cost (Rs/Ha)	37523	29150	27304

The harvested water apart from providing irrigation, also helped recharge the ground water. In a random survey of 27 wells downstream from 20 newly constructed WHS, the water levels rose considerably. In both pre-and post-monsoon periods, all wells except one recorded increases in water levels. For the first year, 22% (6/27) and in the second year 30% (8/27) recorded more than 100 percent increase in water level in the pre-monsoon period. In the post monsoon periods, 11% (3/27) in first year and 3% (1/27) in the second year recorded more than 100 % increase in water levels.

2. **Scale and Speed of Implementation:** The scale and speed with which the programme had been implemented was truly impressive. Almost 80 per cent of the structures that had been started were completed during this period. The main factors for this were:

- Conceptualization of the entire process using a systems approach; clear guidelines, feedback and correction features, acceptable to all.
- Capacity enhancement at all levels, villagers, PPs, PCM and the district administration.
- Support from the district administration; no significant funding problems in the first two years.
- Dedicated team -Pani Chetna Manch and the enthusiastic villagers.

3. Participation in a true sense: The biggest gain made by the Sukha Mukti Abhiyan was that the peoples' trust was won and their confidence built-up. This is reflected in Table 2 which shows that a variety of downstream activities began at a number of places even as the water harvesting structures were being completed at others. The chief causes were :

- Guidelines emphasized representation of women and weaker sections, PCM members ensured implementation.
- Money was released directly into a bank account operated by the villagers. More than any other factor, this helped establish a sense of ownership. This sense of ownership was visible in June 1994 when at many sites villagers worked round the clock to save dams threatened by unexpected flood waters.
- Transparency in all the transactions, facilitated by the display boards at all the sites.

4. Cost savings: For the completed structures, out of the total sanctioned budget of Rs 3,21,61,245 only Rs 2,54,25,881 were spent, a saving of over 20 per cent. This is one of the biggest achievements of the programme, because never in the past has this type of saving been done. This money would normally have been siphoned off by the engineer-bureaucrat-politician combine. (This saving was apart from the money SMA was able to save in estimate preparation.)

5. Build a desire for self-reliant development: The confidence gained from capacity enhancement exercises and the successful implementation of the first phase built a desire for more development among many villagers. This showed itself in many ways:

- Establishment of several downstream activities, including schools for girls' education by two Mahila Vikas Sangathans.
- The Gramkoshs were used to provide loans for irrigation, land treatment, fish farming, off season marketing of mahua and purchase of pumps and a tractor.

6. Womens' Mobilization: Mahila Vikas Sangathans are now functioning in about 20 villages. This has been made possible by a committed effort to involve them and then building their confidence to do the work. These sangathans have begun savings and credit programmes, nurseries, cottage industries and schools for girls.

7. Elimination of Corrupt Practices: The prevalent contractor system was by passed and about 20 per cent of the estimated costs were saved. Transparent procedures, such as, display of progress, expenditure and rates at every site, regular village meetings and on the spot trouble-shooting facilitated by the PCM were mainly responsible for eliminating corrupt practices. In a few cases, attempts by unscrupulous villagers to misuse the money were quickly detected and set right.

8. Creation of a Local Talent Pool: Dozens of barefoot engineers and project managers now exist in many of the villages. About two dozen experienced young men and women are now working with several voluntary organizations in the area especially in engineering and community mobilization activities.

9. Model Programme For Participatory Rural Resource Management: Several administrative innovations were evolved like the release of funds directly to the PPs

and the monthly review meetings between the district administration, PCM and representatives from the villages. Ideas from SMA have influenced the preparation of guidelines for other programmes of participatory natural resource management, e.g., the guidelines of the watershed programmes of the Ministry of Rural Development, GOI.

Shortcomings and Their Factors

1. Twenty-six projects were abandoned: In 1994-95, 26 projects were abandoned due to non-cooperation of the district administration. Later 7 more projects remained incomplete due to lack of support from the subsequent administration. As a result, two dams were ultimately washed away since the spillways had not been completed.

2. Equity issues got sidelined in many villages: This was one of the major shortcomings of the programme. The main factor was that the commitment of the PSI staff and the PCM team itself was inadequate. Written agreements were not prepared until late in the programme. Where they were done, they made a significant difference.

3. Only modest utilisation of the irrigation potential: Not unlike big dams, the irrigation potential created was not fully utilized. As shown earlier, however, over the last three years the irrigated area has been increasing gradually. Not all tribals have a culture of agriculture. This was not understood in the beginning when many villages were selected because they had a majority tribal population. At that stage, the understanding was that a homogenous population would have less conflicts among themselves.

4. Afforestation was not sustained properly: Survival rates of the plantations were poor. The attempts to ensure social fencing did not succeed. Men were in general more enthusiastic about irrigation and construction projects.

5. Political Failure: The biggest shortcoming was that the programme could not be politically sustained. The process design did not foresee and plan for political opposition. When such opposition blocked all funds in 1996-97, the district-level and block-level federations of PPs were not adequately prepared to face the political onslaught. As scientists and engineers, working in a distant zone, PSI was under-prepared too, to provide any leadership.

IV. CONCLUSION

The Sukha Mukti Abhiyan successfully demonstrated a participatory approach to drought-proofing Palamau. It showed that constructing a large number of small water harvesting structures could provide supplemental irrigation to tide over the vagaries of the late monsoon (*Hathia*) rains and in conserving water *in situ* within the watersheds, minimizing peak runoff in the rivers and thus, increasing the ground water levels.

Like any evolving programme, the SMA had its share of troubles. But it showed that the peoples' trust could be won and their confidence built up. In several

villages, people began demanding more development programmes on the lines of the SMA. The beneficiaries in Palamu viewed the Abhiyan as their own programme rather than a government one.

The task of drought-proofing a district has to be a mission in itself in which the community plays a larger role. The three-way partnership of the SMA is a very effective model for implementing such a programme. It is also clear that village level institutions are capable of taking the responsibility for such programmes with a little technical and managerial support. These VLIs, however, need to be strengthened to face the adversarial forces. Political management has to be a part of the process design of egalitarian development programmes.

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