

**Water Users Associations (WUA) or Pani Panchayat in Orissa:  
Principle, Procedure, Performance and Prospects**

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# **OUTLINE OF THE PRESENTATION**

- I. Objectives
- II. Context of the Study
- III. Justification of the Study
- IV. Pani Panchayat in Orissa: Initiatives and Challenges
- V. An Assessment of Orissa Pani Panchayat Act 2002
- VI. Functioning of Pani Panchayat/WUA in HCA
- VII. Methods
- III. Major Findings of the Study
- IX. Concluding Observations

# I. Objectives

## **Main Objective**

➤ Broad objective of this paper is to examine the functioning and otherwise of Water User Association (WUA) or Pani Panchayat promoted by the State and the local traditional irrigation institutions in the HCA, Orissa and to evaluate their functioning & characteristics in the context of local water management.

## **Secondary Objectives**

1. To analytically review the Orissa Farmers Management of Irrigation Systems Act and study the functioning of the Pani Panchayat
2. To examine about the peoples participation and their liveliness
3. The apparatus of water management and control, and its impact of such management on productivity among the members and
4. To recommend policy interventions to make the formal institutions more successful.

## II. Context of the Study (Contd.)

- PIM has been conceived as the thrust area in the effective irrigation management by involving and associating the farmers in planning, operation and maintenance of the irrigation system.
- Similar to many other countries, many states in India are looking for, to involve farmers in operation and maintenance at higher levels through a variety of PIM and Irrigation Management Transfers (IMT) Programs (Gulati et al. 2005).
- The National Water Policy 1987 emphasized the participation of farmers in different aspects of the management of the irrigation system, principally in water distribution and collection of water rates.
- The Vaidyanathan Committee on Pricing of Irrigation Water (Planning Commission 1992) suggested farmer's participation in the management of irrigation systems.
- The irrigated area transferred to WUA in India is only about 7 percent as against 45 percent in Indonesia, 66 percent in Philippines, and 22 percent in Thailand (Government of India, Planning Commission 2000).
- Though there is much talk about people's participation in canal irrigation system, it shows that there is only transfer of a little more rights and responsibility to farmers at tertiary level. The rights to prepare all the basic designs have remained State Departmental prerogatives as ever (Sengupta, 2002).

## II. Context of the Study

- Latterly, the voluntary sector and Non- Governmental Organization (NGOs) have made their presence felt in the area of Common Property Resources (CPRs) focussing on the participatory forms of development (see in this context Chopra et al. 1990; Katar Singh 1991a, 1991b and 1994; Sengupta 1991; Singh and Ballabh 1996).
- Except a few study by some Indian Institute of Management like IRMA, Anand, IIM Ahmedabad, ASCI, Hyderabad and others such as the Anna University in Chennai and Mahatma Phule University in Maharashtra, there is hardly any study of PIM by the academic and research institutions in India.
- A few funding agencies like USAID, Ford Foundation and some other agencies have supported action research Programmes in different parts of the country which make available the foundation for operationalisation of the notion of PIM.
- Some NGOs have done pioneering job, but they have been not many and far between.
- But PIM mostly limited to Western India, and it has been incapable to carry forward to many other states like Orissa.
- Recently there has been a paradigm shift in the water resources planning from that mere harness of water resources to that of ensuring sustainable water resource management with active participation of local people.

### **III Justification of the Study (Contd.)**

- Orissa stands out as an under-developed State within the Indian dominion even though it has been endowed with rich natural and mineral resources.
- The estimated Water Resource of the State is one of the highest in the country being of the order of 11 per cent with 4 per cent geographical area.
- The state has large mass of small and marginal farmers, thus the strategy in planning and managing water resources assume greater importance.
- It is generally perceived that the capacity to cater to optimum Operation and Maintenance of Systems needs involvement of farmers especially at the lowest level of the distribution system.
- This requires organized farmers group activity to manage the system at these levels.
- It has been articulated that in Orissa's 'model' of Pani Panchayat a scheme of the World Bank, powerful landlords and contractors are in control of what was once a public resources.
- It's privatization of water through the backdoor with the use of a term that gives a democratic veneer to what is a truly arbitrary process, and one that is consciously depriving small farmers of access of water.

### III Justification of the Study

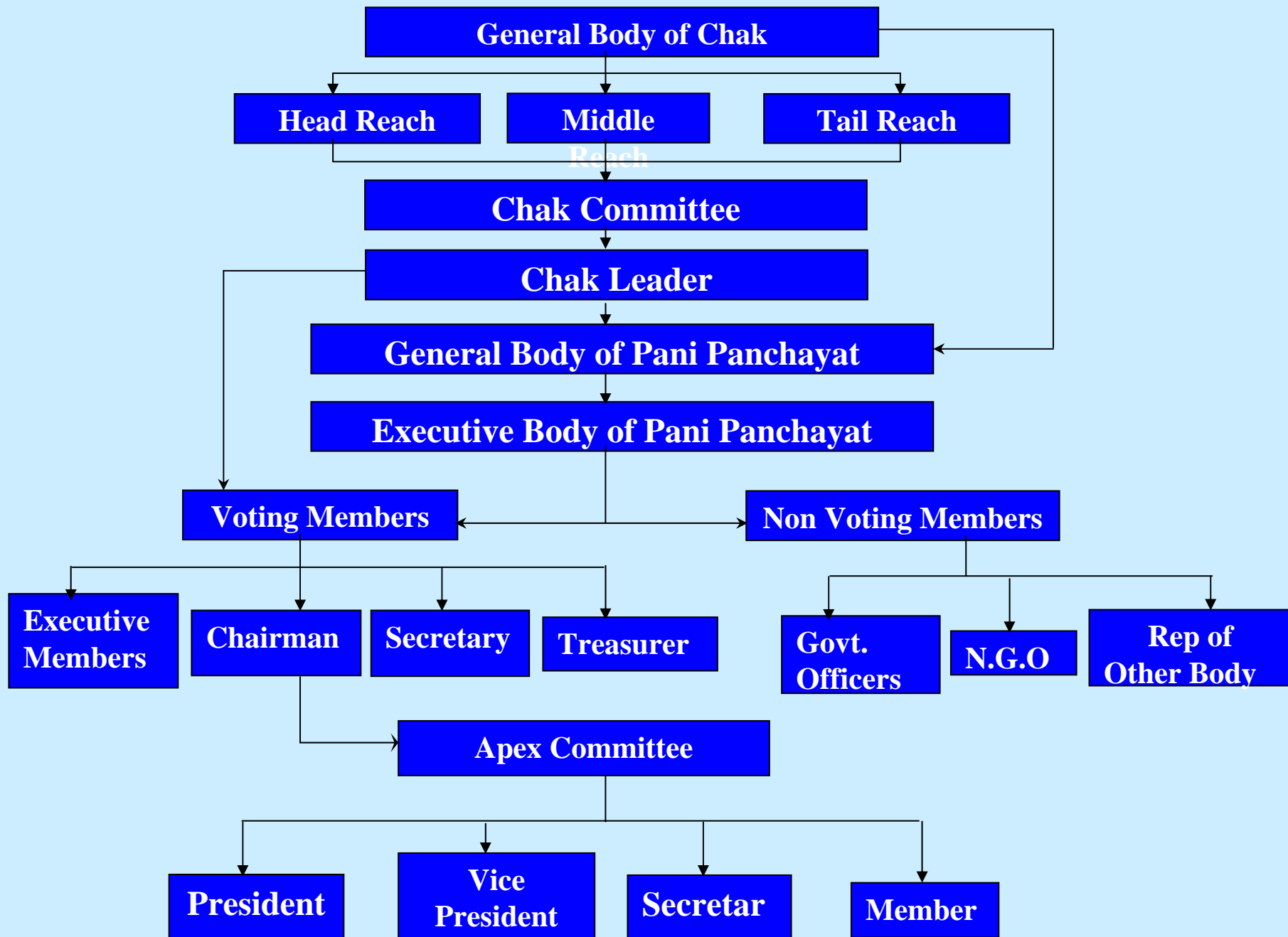
- In Orissa ‘model’ of Pani Panchayat which have never had an election of any kind the control over water resources is moving quickly into the hands of powerful landlords and contractors.
- It is privatization of water through the backdoor and the jargon used is ‘Community ownership’ and farmers ‘control’. In these schemes of things influenced by the World Bank, this was the intended result and it is the small farmer who faces bankruptcy and ruin [P.Sainath (2002)].
- There is a growing concern amongst the people’s organizations, farmers and activists that such a Programme is a part of the structural reform & globalisation agenda of the World Bank and is in fact the first step to commodification, marketisation and privatisation of water.
- Although PP has been introduced and promoted in the State for more than a couple of years, the acceptance of the concept has been lethargic and scattered.
- A full census is not available and we don’t know the size & nature of the PP and whether they are indeed functioning or not.
- There are no reliable figures and also lack of data available regarding number of WUAs in existence.
- In this new institution (Pani Panchayat), informal societies and others serve political purposes; retain caste power replacing indigenous practices.
- Therefore an endeavor has been taken to find out how far the new institutions will sustainable in the long run.

## **IV.Pani Panchayat in Orissa: Initiatives and Challenges**

- Government of India adopted National Water Policy in 1987. The same was reviewed and updated in 2002.
- Based on the policy; Guidelines were issued to all the States of PIM, attaching utmost importance to the farmers' involvement in various aspects of management of irrigation system, particularly in water distribution and collection of water rate.
- Government of Orissa adopted a similar policy of PIM in State Water Policy of 1994 which emphasizes on transfer of irrigation management to farmers.
- Ever since the late 1990s, the Orissa Government has been demonstrating a massive interest in farmers' participation in water management.
- The necessity for farmer participation arose from the Government's assurance to the World Bank funded Orissa Water Resources Consolidation Project (OWRCP).
- As a component of this project, the Farmers Organisation and Turnover (FOT) programme has been given much significance.
- The main purpose of FOT programme is to entrust some responsibility to farmers through formation of PPs or WUAs which include the collection of water rates, distribution of canal water among water users, operation and maintenance of canal at lower level such as minor, sub-minor, distributary.



**Fig.1 Organisational Structure of the Pani Panchayat in Orissa**



## Emergence of the Act

- Orissa has taken up the PIM, covering all the irrigation projects in the state. The Orissa Farmers Management of Irrigation Systems Act, 2002, called *The Orissa Pani Panchayat Act, 2002*, is facilitating tool for the farmer participation.
- “*Orissa Act 10 of 2002 The Orissa Pani Panchayat Act, 2002 an Act to provide for farmers’ participation in the management of irrigation systems and for matters connected therewith or incidental thereto*”.

## **State-wide Initiation of PP Programme as on Mid-2005**

- The responsibility of operation and maintenance (O & M) of the reservoir/diversion weir (as the case may be) Dam, Spillways, sluices, primary and secondary distribution networks etc, rests with the Department of Water Resources (DOWR), where as the responsibility of 'O & M' of the tertiary systems i.e. (Below minor/sub-minor) will be with PPs.
- The geographical extent of the programme covers the entire State comprising of about 18.25 lakh hectares of Major, Medium & Minor irrigation command areas in all the 30 districts of Orissa.
- 12688 PPs have been constituted in the State by Mid-2005, covering an area of 9.95 lakh ha.
- Irrigation management has been transferred to 10764 PPs covering 7.11 lakh ha.out of total command area of 18.25 lakh ha.

## **An Assessment of Orissa Pani Panchayat Act 2002 (Contd)**

### **Supportive Sides**

- The Act no doubt endowed with the legal framework for a better participation by farmers in water management for the first time in the history of irrigation legislation in Orissa.
- The Act enables farmers' participation, not only at a lower level but also in a restricted manner at the main system level.
- The Act also provides for the autonomous management of the irrigation system by the Farmers Organisations in their respective areas for both the maintenance of the system and for the distribution of water supply.
- The annual grants allocated by the Government for various purposes, such as for operation and maintenance can now be better utilized by PP.
- The PPs have legal powers to levy and collect additional water charges, which would enhance their financial positions.
- With regard to the settlement of disputes, since the decisions taken by the concerned committees or their higher level committees are final, the Courts are forbidden to entertain any further appeal.
- A major breakthrough as regards the management of Farmers Organisations is that the members of the association are vested with powers to recall the committee members. This provision would contribute for the accountability of the elected leaders and restrain them from mismanagement.

## **V. An Assessment of Orissa Pani Panchayat Act 2002 (Contd)**

### **Harmful Sides**

- It is significant to take a critical view of the provisions of the PP Act and as such a view may help to correct the inadequacies in the Act.
- As per the Orissa PP Act 2002 ‘every Pani Panchayat shall consist of all the water users in such PPs area as member [Chapter-II, Section 3 (4) (i)].
- The way farmers are defined in the Act is somewhat narrow. If one concludes from the above section that a PP includes only those cultivators who own or cultivate land, then the Act is affecting a great injustice to a village society, in which water has been considered as the property of all sections of the community.
- The Government would to constitute an Apex Committee, which will have an overall control over PPs. But the constituent members of this Committee have not been spell out.
- The ambiguity lies, in particular, whether the members of Apex Committee are primarily from PP or from the Department of Water Resources or from any other section. This is important because, most of the final decisions are taken by the Apex Committee, and if this Committee is dominated by the WRO, then the strength and autonomy of PPs will get diluted.
- If the members of the Apex Committee are nominated from political parties, there is every possibility for the misutilisation of this provision in favouring the ruling parties.

# **An Assessment of Orissa Pani Panchayat Act 2002**

## **Harmful Sides**

- Despite the fact that the State water Policy statement mentions farmers participation in irrigation management, their rights over water are not clearly defined
- The extent of users participation is limited to the operation and maintenance at local levels only.
- The involvement of the community in the system level designs and construction are neglected.
- As the water policy is an important document, which spells out the development strategy of a state, such neglect is a serious flaw and deserves a thorough revision.
- The State resorts to turning over irrigation systems to people, which are beset by problems such as an absolute deviation from the original operational rules-
- There is a gross disparity between the availability of water supply and the demand for it, low recovery rates
- The availability of very little resources for operation and maintenance, corruption at all levels, fragmented community action.

## **Functioning of Pani Panchayat/WUA in HCA**

- \* The current paper dealt with an evaluation of water management through community participation and emergence of Pani Panchayat in a case study of Vir Bajrang Bali Pani Panchayat under Lift Irrigation Project of the Hirakud Command Area (HCA), Orissa state in Eastern India

## VII. Methods

### (I) Meso-level Survey (2003-04)

- 1. Selection of *Burla Power* Main canal
- 2. Selection of *Chipilima* Branch canal
- 3. Selection of *Kardola* Distributary
- 4. Selection of Blocks: *Dhankauda*
- 5. Selection of PP: Vir Bajrang Bali

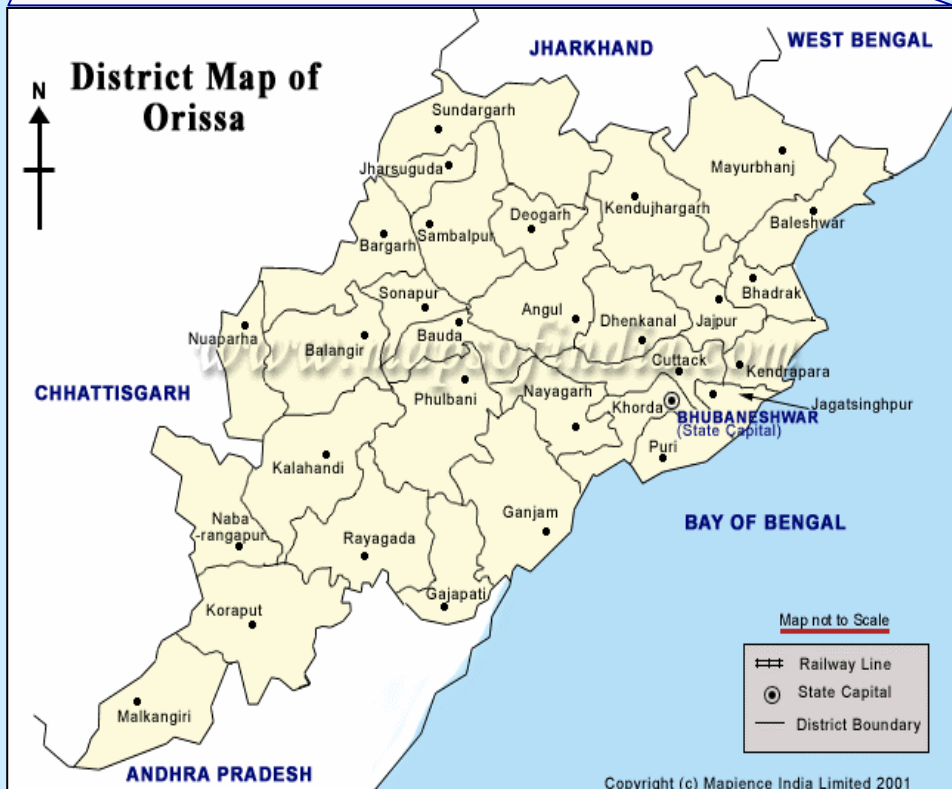
### (II) Main Survey (2004-05)

- i. Survey on selected distributary
- ii. Village level survey- *Bandhapali* village
- iii. detail survey of 70 households
- iv. Questionnaire: a) one related to WUAs and b) related to households
- v. Study area
- vi. Purposive Sampling Unit (PSU)  
Landlord, Tenant, Landless Agricultural Labourers
- vii. Nature of data

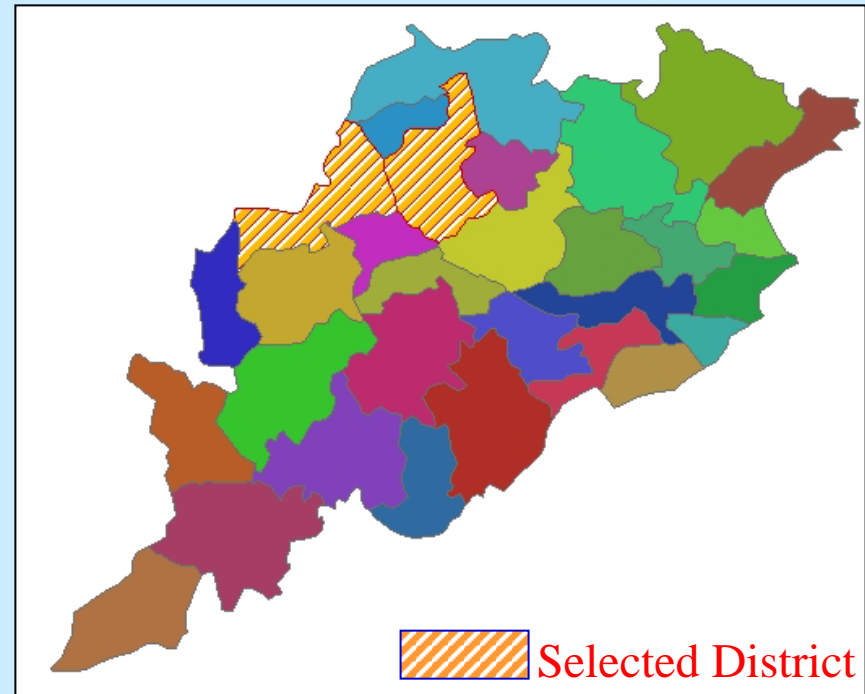
### (III) Focus group discussion- Participatory Rural Appraisal (PRA)

### (IV) Case studies, Group Interviews

# MAP-I-STUDY AREA



Map.2.1 Location Map of Orissa in India





# Profiles of the Selected Pani Panchayat (PP)

**Name of the PP:** Vir Bajrang Bali Pani Panchayat (Lift- I & II)

**Location:**

**Village:** Bandhapali

**Gram Panchayat:** Kardola,

**Post office:** Chiplima    **Block:** Dhankauda

**District:** Sambalpur,

**State-** Orissa

**Age of the system:** Old registration 1996-97 as WUA, Newly formatted in 2001-02 as PP

**Type of the system:** Lift Irrigation (LI)

**Total No of LI Points:** Lift I and II

**Name of the Source:** Mahanadi River

**Area in acre (ayacut):** 123.66 Acre

**Horse Power Used:** 15 HP (Horse Power)

**Office Bearers:** Total No. of PP members: 63

**No. of Committee members:** Four

**President Election:** Nomination

## VIII. Major Findings of the Study (Contd.)

**Table-1 Caste wise and Land Size class wise Classification of Households of Vir Bajrang Bali Pani Panchayat**

Land Size class	SC	ST	OC	TOTAL
0.00-0.00	5	-	2	<b>7 (10.0)</b>
0.01-2.50	13	4	7	<b>24 (34.3)</b>
2.51-5.00	6	3	11	<b>20 (28.6)</b>
5.01-10.00	-	-	10	<b>10 (14.3)</b>
10.01 & above	-	1	8	<b>9 (12.9)</b>
<b>Overall</b>	<b>24 (34.30)</b>	<b>8 (11.40)</b>	<b>38 (54.30)</b>	<b>70 (100.0)</b>

*Source: Field Survey (2004-05)*

*Note:* i) Figures in the parentheses indicate the percentages of the respective categories.

ii) Blank entries in the Table denote nil.

Table-1 depicts that, The small and marginal farmers together formed around 63 per cent of the farmers.

The medium farmers constituted 14 per cent of the farm households. By contrast the large farm households constituted 13 per cent of farm households.

Thus, majority of the PP members belong to the marginal and small farmers.

SC and ST population together constituted 46 per cent of the total house holds and rest 54 per cent belongs to other castes population.

Thus there is biased towards upper classes in terms of membership.

**Table- 2 Characteristics of Ownership of land holding among different size groups of Pani Panchayat members**

Size class of Land holdings (in Acres)	No of HHs	per cent of HH	Total area of ownership holding (in acre)	Average amount of land owned per HH (in acre)	Total area of operational holdings (in acre)	Average area operated land per HH (in acre)	Total PP area owned (in acre)	Average PP land to owned land	Total Non PP area owned	Average non PP land to owned land	Total PP land to operated land	Average PP land to operated land	Total Non- PP area operated	Average Non- PP land to operated land
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
00.00	7	10.0	0.00	0.00	8.00	1.14	0.00	0.00	0.00	0.00	5.25	0.75	2.94	0.42
0.01-2.50	24	34.3	33.36	1.39	125.97	5.24	21.56	.89	10.75	0.44	40.56	1.69	27.36	1.14
2.51-5.00	20	28.6	77.2	3.86	68.91	3.44	46.10	2.30	31.23	1.56	62.4	3.12	57.8	2.89
5.01-10.00	10	14.3	74.00	7.40	84.3	8.43	24.92	2.49	49.04	4.90	37.5	3.75	24.5	2.45
10.01 & above	9	12.9	134.01	14.89	51.24	5.69	31.08	3.45	102.89	11.43	47.25	5.25	41.85	4.65
Overall	70	100.0	318.5	4.55	338.42	4.83	123.66	1.77	193.91	2.77	180.6	2.58	154.45	2.20

Source: Field Survey (2004-05)

Note: Black entries in the Table denote nil.

## **VIII. Major Findings of the Study (Contd.)**

### **Distribution of Ownership of Land Patterns among different categories of Water Users**

- The analyses of distribution of ownership of land from the Table-2 revealed that there is high inequality of land among different group.
- It is seen that landless farmers have increased their operated area by leased in land and the medium farmer who could not cultivate their land themselves have given leased out.
- Thus given the inequality in the land ownership, it is expected that many land-poor households would try to lease in land to expand their size of plot. In such a case the distribution of operated area would be different from that of owned area.
- It is seen from the Table-2 column 6 and 7, that there is slight variation in the distribution of operated area in comparison with that of owned area. Landless households cultivate about 1.14 per cent of the operated area.
- The average size of PP land to operated land is 2.58 acres whereas to own land is 1.77. This is because many farmers have leased in land under PP.
- The marginal farmer has 1.69 whereas the small farmers have 3.12 lands under PP. The landless farmers have also leased in land under PP and are 0.75 whereas the medium farmer has 3.75 and the large farmer has 5.25.
- Likewise the average Non-Pani Panchayat land has shown in the Table-2 column 14 and 15.

## VIII. Major Findings of the Study (Contd.)

**Table-3: Cropping Pattern & Cropping intensity by different size groups under Pani Panchayat**

Size class of Land holdings (in Acres)	No. of HH	Average Gross Cropped area under PP (in acres)	Of the total Gross Cropped of Kharif, per centage of area devoted to Paddy	Of the total Gross Cropped of Rabi, per centage of area devoted to Paddy	Cropping Intensity (CI) <sup>☞</sup>
1	2	3	4	5	6
0.00-0.00	7	1.05	100	100	200
0.01-2.50	24	3.11	100	100	200
2.51-5.00	20	5.56	100	100	200
5.01-10.00	10	6.66	100	100	200
10.01 & above	9	7.86	100	100	200
Overall	70	4.82	100	100	200

Source: Field Survey (2004-05)

☞ Cropping intensity = [Gross Cropped Area (GCA)/Net Sown Area (NSA)] \* 100

To show the average gross cropped area and cropping intensity of the PP member two Tables (3&4) were given because those members have land both under PP and also under Non-Pani Panchayat.

A peculiar situation is noticed from the Table-3 that, under PP the overall cropping intensity among the member is 200.

The cropping intensity for all types of farmers is equal. In this type of land, only one crop is produced that is paddy.

**Table- 4: Cropping Pattern & Cropping intensity by different size groups under Non- Pani Panchayat**

Size class of Land holdings (in Acres)	N	Average Gross Cropped area under Non-PP(in acres)	Of the total Gross Cropped of Kharif, per cent of area Devoted to						Of the total Gross Cropped of Rabi, per cent of area devoted to					CI	
			Pad dy (in per cent )	Puls es (in per cent )	Veg etab les (in per cent )	Oil see ds (in per cent )	Oth ers (in per cent )	Tot al	Padd y (in per cent)	Puls es (in per cent )	Veg etab les (in per cent )	Oils eed s (in per cent )	Oth ers (in per cent )		Tota l
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0.00-0.00	7	0.15	3.47	-	-	-	-	3.47	3.47	-	-	-	-	3.47	201
0.01-2.50	24	1.45	15.52	1.57	1.00	1.26	-	19.35	15.52	1.37	0.87	1.18	-	18.94	210
2.51-5.00	20	2.53	18.69	-	-	1.00	-	19.69	18.69	-	-	-	-	18.69	247.44
5.01-10.00	10	3.45	21.26	2.02	0.97	-	-	24.25	21.26	2.23	-	1.13	1.00	25.62	236.55
10.01 & above	9	5.36	32.18	-	-	-	1.06	33.25	32.18	-	1.10	-	-	33.28	205.55
Overall	70	2.41 (168.5)	91.12 (153.52)	3.59 (6.06)	1.97 (3.32)	2.26 (3.81)	1.06 (1.79)	100 (168.5)	91.12 (153.52)	3.60 (6.06)	1.97 (3.32)	2.31 (3.90)	1.00 (1.68)	100 (168.5)	222.66

Source: Field Survey (2004-05)

Note: i) Figures in the parentheses indicate the absolute figures in acres.

ii) Blank entries in the Table denote nil.

**Table-5: Average amount of crop income earned by different size group of members under Pani Panchayat and Non Pani Panchayat Land**

Size class of Land holdings (in Acres)	No. of HH	Average crop income per HH under PP land (in Rs.)	Paddy Contribution (in per cent)	Average crop income per HH under Non PP land (in Rs.)	Paddy Contribution (in per cent)	Pulses Contribution (in per cent)	Oilseeds Contribution (in per cent)	Vegetables Contribution (in per cent)	Others
1	2	3	4	5	6	7	8	9	10
0.00-0.00	7	12510	1.08	1820.08	1.20	-	-	-	-
0.01-2.50	24	22620	15.20	9810.59	10.25	1.43	0.56	1.14	-
2.51-5.00	20	48990	25.18	14711.81	18.89	-	1.54	2.18	-
5.01-10.00	10	69090	33.50	35440.6	24.66	2.15	-	-	0.82
10.01 & above	9	93450	25.24	45890	35.18	-	-	-	-
Overall	70	44888.57	100	18712.09	90.18	3.58	2.10	3.32	0.82

Source: Field Survey (2004-05)

Note: Blank entries in the Table denote nil.

## **VIII. Major Findings of the Study (Contd.)**

- Table-4 shows that though the PP members have land outside the PP, their overall cropping intensity is 222.77.
- Paddy is the major crop in both the Kharif and Rabi season. There is small crop diversification.
- Thus in both the Table 3&4, it is observed that paddy is the dominating crop. When both the Tables are compared, it is seen that the cropping intensity of area under PP scheme is lower than the Non-Pani Panchayat land.
- It may be due to the reasons for mismanagement or some other reasons like quality of land location. It appears that despite irrigation facilities available, the cropping intensity is generally low among all categories of household.

### **Crop Income per Household**

The analyses of pattern of income generated from crop production revealed that, the average per household income derived from crop by different categories of households having land in the Non-Pani Panchayat is very low.

From this we infer that the marginal and small farmers having land under Non-Pani Panchayat should try to bring their rest of land under PP scheme. By doing this they will increase their average per household income.



## VIII. Major Findings of the Study (Contd.)

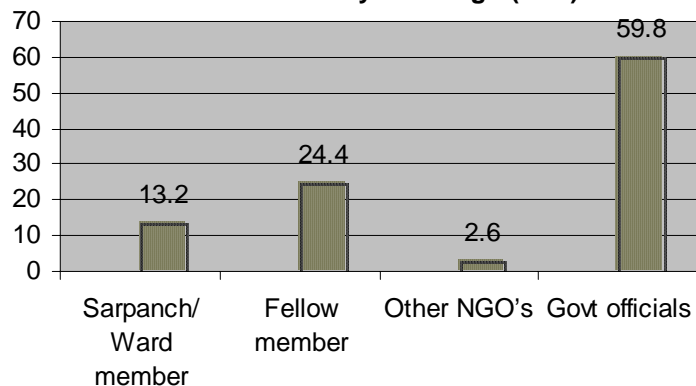
- **Table-6 Aspects of Pani Panchayat on Community mobilisation and knowledge Building**

Size class	No of HH in the group	Who informed you about PP			
		Sarpanch/ Ward member	Fellow member	Other NGO's	Govt officials
1	2	3	4	5	6
0.00-0.00	7	-	52	-	48
0.01-2.50	24	8	32	5	55
2.51-5.00	20	28	25	6	41
5.01-10.00	10	12	13	2	73
10.01 & above	9	18	-	-	82
<b>Overall</b>	<b>70</b>	<b>13.2</b>	<b>24.4</b>	<b>2.6</b>	<b>59.8</b>

Source: Field Survey (2004-05)

Note: All Figures in the table indicate the responses in terms of percentages of the respective categories except in Col.2.

**Fig.1 Information received about Pani Panchayat through (in %)**



With regard to the question of Community mobilization and knowledge building of PP, Field work shows that, out of the whole Pani Panchayat members majority that is 59.8% could know it from Government officials, 24.4% from fellow farmers, 13.2% from Sarpanch/ward member and the rest 2.6% from Sarpanch (See Table-6 and Fig.2).

## VIII. Major Findings of the Study (Contd.)

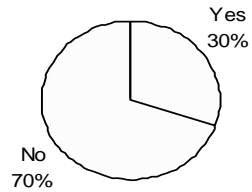
**Table-7 Farmers Responses in the Pani Panchayat field study areas**

Sl No.	Question Asked	Options	Response as %
1	Election/Selection were	Fair Unfair	35 65
2	Maintenance after PP was	Same Worse Distinct improvement	72 --- 28
3	Changes in Area irrigated after PP	Yes No	22 78
4	Change in Per acre yield rice due to PP	Yes No	14 86
5	Have you been paying water dues as per	Revised rates Old rates Not paying	28 34 38
6	Suggestions for controlling water distribution	Installation of Shutters Disciplinary action Miscellaneous*	24 66 ---
7	Whether woman should involve in PP activities	Yes No	18 82
8	You prefer dealing with	PP Irrigation Dept. Personnel Traditional Irri. Institution Indifferent	45 18 23 14
9	Do you know the name of your PP president	Yes No	42 58
10	How many General Body (GB) meetings have been held in your PP	Two- Four More than four None Do not know	18 8 34 40
11	Were you informed about the GB meetings and did you attend	Informed & attended Informed but did not attend Not informed	8 22 70
12	Are you aware of formal PP functioning in the village	Yes No	30 70
13	Water availability	Adequate Inadequate	35 65

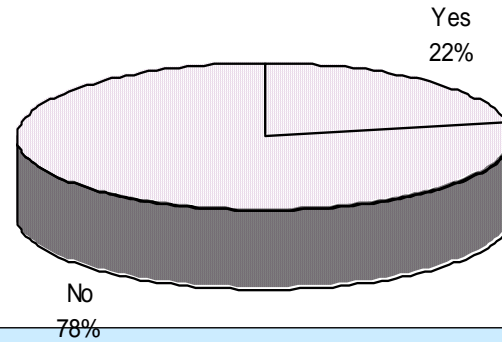
Source: Field Survey (2003-04)

\* Controls necessitate not only for letting the water in but also for preventing the flow.

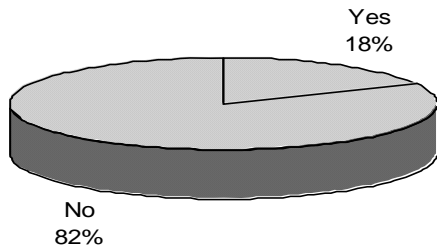
**Fig.8 Awareness of formal Pani Panchayat functioning in the village**



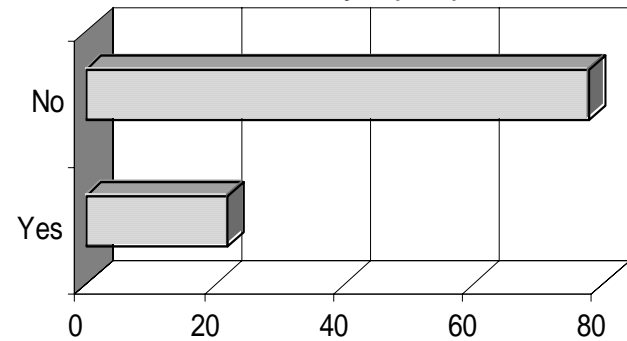
**Fig.9 Changes in Area irrigated after Pani Panchayat formation**



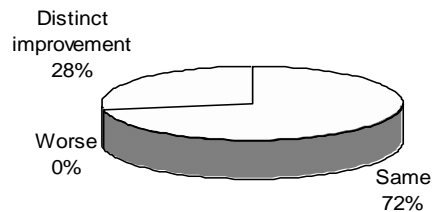
**Fig.10 Whether woman should involve in Pani Panchayat activities**



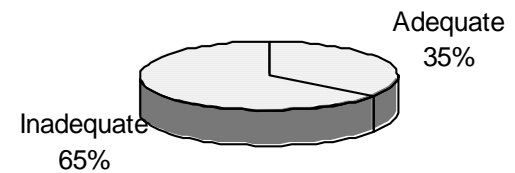
**Fig.11 Change in Per acre yield rice due to Pani Panchayat (in %)**



**Fig.12 Maintenance after Pani Panchayat formed**



**Fig.13 Water availability**



## VIII. Major Findings of the Study

### Water rights, Land rights and Pani Panchayat

- The beneficiaries of PPs are only those who have lands [section 4 (i) Pani Panchayat Act 2002]. That means it based on ownership of land/rights in land.
- It technically demonstrated that the poor/the landless could not be given an access to water, which is a common property resource. It is unbelievable to expect a landless labourer to invest in PP in the hope of future benefit that someone might grant him sharecropping rights.
- For the landless, still 25 per cent of the project cost is too high to be invested in a PP. This demonstrates the impracticability of the provision to grant water rights to the landless.
- But rainfall belongs to the entire village community and all must have equal access to this water.
- The rights in land are rigid and inflexible and there is a basis inequity in the means of production and social structure.
- After PPs came into picture, the members who have rights on land, have only rights on water, is likely to give rise to a '*Panidar*' (water lords) class.
- Hence, natural rights for irrigation water become insecure and ineffective.

## IX. Concluding Observations (Contd.)

- The awareness about the formation of formal PP in the village was less (30 per cent). Many farmers had no idea about the PP Programme.
- After PPs came into picture, the members who have rights on land, have only rights on water, is likely to give rise to a '*Panidar*' (water lords) class. Hence, natural rights for irrigation water become insecure and unsuccessful.
- From the forgoing discussion we can conclude that the PP as regulatory institutions in charge of water distribution on equitable basis, their performance has been reasonably weak and unsuccessful.
- Despite the fact that the irrigation agency in Orissa has taken policy decision to encourage farmer's participation and attempts are underway to motivate farmers to form WUAs, the farmer's response in this regard is not up to the level of satisfaction (Swain; 2000: 128).
- As most of our farmers are not educated and lack vision to comprehend to the future benefits due to participation, special care should be taken while motivating the farmers.
- They have to convince that the benefit due to participation will be substantial, tangible, quick yielding and sustainable.
- Even though PP has been initiated and endorsed in the State for more than a couple of years, the acceptance of the model have been lethargic and scattered.

## **IX. Concluding Observations (Contd.)**

- There is no promptly accessible data to evaluate this performance. As a whole PP is an unexecutable and unacceptable.
- There are so many constraints like selfishness, illiteracy, no interest due to big landowners, which hinder for the improvement of PP.
- Therefore the Government should review its decision of making the availability of irrigation water conditions to the formation of PP.
- Many registration actions of PP are complex and long, raising the costs of participation for the farmers.
- A detailed action plan should be prepared in consultation with the water users through Participatory Rural Appraisal method.
- A feasibility study should be under taken by examining the caste class conflict, groupism, political differences and history of confrontation and conflict if any.
- It is necessary to apply bottom-up approach instead of top-down for sustainability. There must also be mechanisms to ensure that the benefits of the project are equally distributed to all concerned stakeholders.

**THANK YOU**

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