

State of Pani Panchayat in Orissa



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SEGMENT-A

BACKGROUND OF PANI PANCHAYAT

History of Pani Panchayat in India

The concept of Pani Panchayat in India had started on the background of the severe drought of 1972 that affected nearly four lakh people in the state of Maharashtra. Realizing the gravity of the situation, Vilasrao Salunkhe, popularly known as Pani Baba, made a valiant attempt to transform the rural landscape into better ecological and social sustainability. After having an extensive travel across the state, he realized that the solution to environmental regeneration and watershed development lies with the total participation of the community to overcome the hazardous situation.

He initially tried his ideas of watershed development on a plot of 16 hectare in hillside of Naigaon village in Purandhar block. A series of contour bounds were raised to trap water and check soil erosion. At the base of the hill slope, a percolation tank to store rainwater was constructed while a well was dug below it to pump water from there to the hill slope for irrigation.

The result of the effort paid off as there was a gradual increase in the crop productivity and employment generation. The Naigaon experiment was ready for duplication in other parts of the state. Water had to be treated as common property resource with all villages having equal rights and access to it.

This apart, a forum of industrial technologist was organized under the leadership of Salunkhe in western Maharashtra to deal with the drought situation.

The group, during its tour around the drought-prone areas, found that only collective action could help alleviate the effect of drought. Since Maharashtra being a hard rock aquifer region, ground water was not plenty in supply to enable the farmers to have irrigated well. The water impounded in the percolation tanks was to be utilized and the natural feasibility was to get a group organized to share ground water. As the first step in the process, a trust under the name Grama Gaurav Pratisthan (GGP) was initiated steps for the work. The objectives of the GGP gave rise to certain principles in water sharing. Keeping this in view, Salunkhe started a farmer's cooperative lift irrigation scheme.

According to Salunkhe, five basic principles that guide water rights and access to Pani Panchayat schemes are as follows:

Irrigation schemes are undertaken for groups of farmers, rather than for individuals. Water is allocated on the basis of number of members in a family, rather than in proportion to the land holding. A family unit of five is given water

rights for irrigation of one hectare of land. Cropping is restricted to seasonal crops with low water requirement. Crops that require perennial irrigation and large amounts of water like sugarcane, bananas and turmeric cannot be cultivated in Pani Panchayat areas.

Apart from this, Pani Panchayat has specific rules that are hereunder:

- Water rights are not attached to land rights. If land is sold, the water rights revert back to the farmers' collective.
- All members of community, including the landless have right to water.
- The beneficiaries of the panchayat have to bear 20 percent of the cost of the scheme. They have to plan, administer and manage the scheme and distribute water in an equitable manner.

The central philosophy of the Pani Panchayat is to share water on certain commonly agreed principles.

(REF: Pani Panchayat and Vilasrao Salunkhe)

Evolution of the present concept of participatory irrigation management (PIM)

Irrigated agriculture has increased its importance as a source of food security, higher farm incomes, and increase in welfare of both rural and urban population. The development of irrigation played an important role in generating food surpluses that have led to economic development. However, going by the trend all over the country, it was found that the irrigation potential, created of late, is not being fully utilized and so also the level of productivity that is well below the viable levels due to several problems in the management of the irrigation system. Some of the key problems are; unreliable and inadequate water supply to the farmers, collective tail-end deprivation, inadequate maintenance resulting in loss of carrying capacity, lack of information on water supplies to users and increased cognitive distance in the hierarchy resulting in poor communication and operation.

Taking into consideration the above shortcomings, the need for a paradigm-shift in the management of irrigation systems through participatory irrigation management (PIM), involving farmers, is being intensely felt. The National Water Policy of 1987 has strongly recommended the adoption of PIM as an essential strategy for improvement in the performance of all irrigation projects in the country and involvement of farmers in various aspects of management of the irrigation system; especially in water distribution and collection of water charges.

It is now being felt that unless farmers are involved in an organized way in the operation, management and maintenance of irrigation system, the objective of increased utilization and production from irrigation commands cannot be realized and even if realized, it cannot be sustained in the long run. Hence, to

create a structure for participation, a water user association is usually set up with all the beneficiary farmers as members and it offers considerable scope to improve the present situation.

The objectives of the PIM are, to improve service deliveries through better operation and maintenance, to ensure physical sustainability of irrigation infrastructure, and to promote a sense of partnership between the farmers and the irrigation agency.

This operational objective of PIM is to transfer the irrigation management at appropriate levels from government to users association which is defined as the Irrigation Management Transfer (IMT) that goes side by side with PIM. IMT does not include transfer of ownership, which otherwise is termed as privatization.

The ownership of the irrigation scheme and infrastructure etc still remain with the government. IMT in managerial sense may include turning over partially management responsibilities viz. water delivery, operation and maintenance etc and may not include collection of water cess from farmers. There are two basic institutional arrangements in the devolution of irrigation management. They are (1) rights, responsibility and powers to be included in the devolution of irrigation management through creation of supporting legal framework and (2) organising WUA, train future managers, make essential repairs and formalise agreements between water users and the government. PIM is the single most important step that the government can take to improve the productivity and sustainability of irrigation systems. Not only it improves the productivity of irrigation, but also it requires minimum investment. Hence PIM needs to be seen as a genuine partnership or joint management between the farmers and government and not merely as an instrument for facilitating the implementation of government schemes and programmes. For this programme, appropriate institutional arrangements and mechanism to bring about efficient utilization, equitable distribution and sustainable irrigation service are framed by different states of India. In Orissa, PIM was introduced in 1996 in 1.50 lakh hectares. However, the state has created irrigation potential in 12 lakh hectares.

(Ref-participatory irrigation management by Mr. Pradip ku. Dash and irrigation management transfer by Deepak Dash and PIM BOOK)

Background of Pani Panchayat in Orissa

Sector Reform and World Bank

The 'Irrigation Sector', a World Bank publication in 1999 deals with irrigation sector reforms in India. In this publication, the concept of irrigation management transfer has been emphasized. The publication maintained that the farmers can better manage and maintain systems than the government and have the direct incentive to do so. They have a direct stake in the quality of service, have a better

understanding of local needs and can better resolve water management issues amongst themselves than can a remote government service.

For successful irrigation management transfer and consequent changes in irrigation system, it suggested following measures viz., (a) formation of water user's associations (WUAs) through grass root and democratic processes, (b) WUA must contribute upfront a part of the investment costs and should immediately shoulder O&M (operation and management) responsibility, (c) WUA need to be financially self-sufficient, at least for O&M right from the outset. (d) Empowerment of WUA within the existing or new legislation effected by the state government, (e) Entrusting WUAs with the key role in the process of improving the productivity of irrigation system and ensuring their sustainability, (f) Defining urgent priority of the WUAs to increase water charges to cover O&M cost to enable them to have their own financial autonomy as well as the irrigation department. Once water rates are raised to cover O&M, they should be annually reviewed with the help of an automatic commonly available price index. (g) Increased water rates should be accompanied by client-driven improvement in the irrigation service, (h) There should be a strong affiliation between the government WUAs and civil societies.

The water service agencies (WSAs) in the irrigation department facilitate contact with NGOs and private firms while introducing less politicized environment to set and collect water charges. It shall also enable the option of mobilizing private sector funds. The objective behind setting up of WUAs in the World Bank-backed water resource management policy is to reduce the role of government/public sector in managing irrigation system and create an environment so that private sector can find it profitable to invest in the management of irrigation system. Besides, the Bank, in its earlier publication titled 'Initiating and sustaining water sector reforms' in 1998, had suggested one of the measures to strengthen the inter-sectoral incentive framework for which it prescribed establishment of meaningful water prices for irrigation, urban and water supply for reflecting the cost of service provision and without any subsidies being explicit and well targeted as a prerequisite to encourage private participation in the sector. It also suggested that tariff levels should further reflect efficient levels of service, and in particular cost of excess agency staff should not be included in tariff rates. It also emphasized on the commercialization of operation at all levels for improvement to make the service agency more efficient and effective. To protect the poor within such policies, the measures suggested include community based credit systems so that poor can avail this facility and spread capital cost payment over time.

Why reform in irrigation sector?

There are three major problems in irrigation sector-physical constraints due to poor maintenance and inadequate water control structure, institutional

constraints due to public sector monopoly, weaknesses in government agencies and minimal farmer participation, and financial and economic constraints due to inadequate cost recovery and provision for operation and maintenance, and poor incentive structure.

All these factors have been perceived as the primary concern for initiating reform in the irrigation sector. These problems are interrelated and form a vicious circle with poor quality of irrigation services assumed as the starting point. Such service along with poor quality agricultural extension work is responsible for low yield and low income which cause farmers dissatisfaction with the irrigation system, bureaucracy and state government. As such condition is prevalent, the farmers resist water rate revisions; delay the payment of water charges leading to low cost recovery. Due to such poor service, political pressure mounts on the farmers not to pay water charges.

Besides, low cost recovery is linked to under-funding of the operation and maintenance of the conveyance system. In order to break this vicious circle, the World Bank publication 'Irrigation Sector ' emphasizes on the necessity for changes at the levels of the service provider i.e., the present government monopoly of irrigation and the clients i.e. farmers. The change envisaged at the level of the government monopoly of irrigation primarily concerns with reforming the irrigation department which require (a) creation of a farmer-driven environment to make the irrigation department becomes accountable to farmers, (b) irrigation department to be fully funded for operation and management by users, (c) Irrigation department to be an autonomous user funded and directed commercial entity, (d) Involvement of the private sector like civil society, academic and NGOs. The change envisaged at the farmers' level requires formation of WUAs to which the management of minor and tertiary irrigation system can be handed over so that fully autonomous farmer managed irrigation commands can eventually be created.

Why sector reform in irrigation system of Orissa:

The government-managed irrigation system in Orissa is poor due to improper water management. The deficiencies and problems generally met with in such systems are, (a) Head and tail inequity as the supply of water in tail reaches is inadequate, unreliable and unpredictable resulting in low crop productivity. On the other hand, the head reach farmers by virtue of location lavishly use water as and when required. (b) Non-maintenance of drains- Farmers usually consider maintenance of canals, minors and sub-minors as the responsibility of government. (c) Deterioration of infrastructure - Since farmers in the present management system are devoid of a sense of belongingness and ownership of the system, they hesitate to take up even small repair works nature such as de-silting, closing of breaches and leakages etc., (d) Wastage of water - when water is conceived as government property and in the absence of any incentive to

conserve water, farmers do not come forward to stop wastage of water. (e) Gap between the irrigation potential created and potential utilized-In spite of massive investment in irrigation sector in the post-independence period from the country's limited financial resources, the gap between the irrigation potential created and utilized has widened due to improper water management by the government agency, (f) Limitation on cropping pattern and other irrigation activities - In the present set-up of irrigation management, the user-farmer has no freedom to select the crop which otherwise is a major economic constraint. The fundamental principle of irrigation is to benefit the user farmer by providing assured, reliable and predictable water supply as per crop needs. But in government managed irrigation schemes the user is not a decision maker. On the other hand the government agency decides the above aspect on its own behalf. This dismal state of affairs in the present day irrigation management not only dampens his initiative and zeal, but also grossly affects the productivity of irrigated crops' (g) Unauthorized use of water - Farmers outside the ayacut area utilize irrigation water by extending field drains and water courses without payment of any water tax. Similarly, some farmers manage to avail unauthorized water through pumps and siphons to their non-commandable high lands, (h) Poor cess recovery due to poor quality of irrigation water service.

The need for irrigation management reforms has to be viewed in the context of the facts that the government agencies alone cannot manage the irrigation system effectively and efficiently without the user farmer's participation. Farmers are viewed as potential management partners in all areas of irrigation activities and at all levels of the system.

Against the background of this policy, the formation of Pani Panchayats/Water users association in Orissa appears to be based on the following premises as articulated in various resolutions- (a) the irrigation system in Orissa is not properly maintained in the existing setup. (b) Due to different reasons, the government shall not be able to manage every bit of irrigation system. Hence the responsibility of management of canal needs to be handed over to the WUA/Pani Panchayats. (c) World Bank and other financial institutions emphasize on the formation of WUA. (d) WUA/Pani Panchayats can immediately attend to the problems i.e. distribution and maintenance of canals (minor/sub-minors). (e) The collection of water charges will be more effectively done by the water user's association/Pani Panchayats. (f) WUA /Pani Panchayats looking after the operation and maintenance of the irrigation system, the farmers shall be spared of harassment by the officials. Considering the above, the World Bank advised the government to introduce a reform approach in 1996 i.e. management partnership between government agency and the farmers which is known as WUA or participatory irrigation management in irrigation sector of Orissa.

(REF-Public hearing on water and irrigation management reform by Mr R K Pattnaik)

Poor percentage of water tax collection, problem of operation and maintenance and cost involved:

There is no uniform basis for water rates in our country since they vary from state to state. As per the principles laid down under the National Water Policy, water rates should be such as to convey the scarcity value of the resource to the users and to foster the motivation for economic on water use. They should be adequate to cover the annual maintenance and operation charges and a part of the fixed cost of irrigation works.

The water rates of surface water and ground should be rationalized with due regard to the interests of small and marginal farmers. Statistics reveal that in medium and major irrigation projects in Orissa, water rate is assessed on the basis of area irrigated and type of crops grown. The present practice is to levy a water rate on a per-hectare basis for the Kharif crop and Rabi crops. Kharif crops is levied with a compulsory basic water rate on the basis of class of allocation (the depth of water) that each project is designed to supply. **(Table 1)**

The water rate has to be paid on the basis of usage of water. The Rabi rate is not compulsory and it is paid only if a crop is irrigated. For the staple cereal crop Kharif paddy, the water charges has been enhanced substantially in the year 1998-99 from Rs.39.54 per ha. to Rs.100 per ha. For Class-1 irrigation **(Table-1)**, the water charges for different crops as revised from time to time are shown in the **Table-2**. The water rates are fixed according to the water requirement of crops. Water rate is very high for water intensive crops like **ganja, betel leaf and saru (Table-2)** which are not the staple cereal crops. Hence, the collection of water charges from farmers was not sufficient to manage the operational cost. The water charges of Orissa had not been revised since 1981 though the Irrigation Commission (1972) has recommended for reviewing and adjusting water rates every 5 years. After a period of about 17 years, water rates have been substantially increased in 1998 in every type of irrigation class and crops in the **(Table-1&2)**.

No state in India except Orissa has followed the practice of revising water rates every five years. An inter-state comparison of water rates reveals that the water rates in Orissa are one of the lowest in comparison to other states like Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra in Rabi and Kharif **(Table-3)**.

So the low price of water does not reflect its scarcity value and the heavy expenditure amount in O&M of irrigation system. In Orissa it was estimated that the total annual cost of irrigation projects, including interest was Rs.686 million (in 1993), but the income from irrigation projects came to a meagre sum of around Rs 50 million which was not sufficient to maintain the O&M of the vast irrigation system in our state. Moreover, there is a wide gap between demand

raised and the actual amount collected from 1986-92, i.e. more than 50% of assessments issued as arrears as shown in the **Table-4**.

The poor percentage of collection of water charges due to several reasons like (a) problems in water supply with regard to timelines, adequacy, reliability and predictability resulting in gross discrepancy between the standards of service provided, (b) Little benefit by farmers in tail-end, (c) Poor maintenance of irrigation system by the department staffs and poor quality of work done on irrigation project, (d) Irrigation causing adverse effects like water logging, salinity and crop loss, (e) Absence of any direct link between the charges, the quantity of water received and the entitlement to receive water, (f) The person collecting water charges hails from different department and is not certain whether an area was supplied with water or not.

In **Table -5**, the amount of water charges collected hardly covers the O&M expenses of irrigation. And the cost of collection exceeds the amount of water charges collected. If we examine the cost recovery aspect of irrigation in Orissa, the picture is alarming. In Orissa, the funds to be made available for O&M of irrigation assets was around Rs. 263 million in 1993-94. In 1991-92 revenue collection from all water rates stood at Rs.49 million as against Rs.96 million. Thus, only 20 per cent of present O&M cost is borne by the beneficiaries of the irrigation projects. A subsidy of around Rs.214 million is therefore, provided for O&M expenditure from general state revenue. Also, the revenue expenditure for major and medium irrigation projects in Orissa exceeds the revenue receipts (**Table-6**).

Thus the state-managed irrigation systems have become financially unsustainable. In view of this, the Orissa government has undertaken profound reform measures to restructure the irrigation sector to improve both physical and financial performance.

Table-1

Compulsory Base Water Rate in Orissa

Sl. No.	Class of irrigation	Depth of supply (in inches)	Irrigation Rate for Flow Irrigation in Rs. Per Hectare.				
			1961-62	68-69	75-76	81-82	98-99 onwards.
1.	Class-1	28"	19.77	9.88	19.77	39.54	100.00
2.	Class-2	23"	14.83	7.41	14.83	29.65	75.00
3	Class-3	18"	9.88	4.94	9.88	19.77	50.00
4	Class-4	9"	4.94	2.47	4.94	9.88	25.00

Source- Department of Water Resource, Govt. of Orissa.

Table-2

Rabi Water Rates in Orissa

(In Rs. per Hectare)

Sl. No.	Crop	1968-69	73-74	74-75	81-82	98-99 on wards
1	Paddy	19.77	39.54	59.30	88.96	225.00
2	Tobacco	37.07	37.07	55.60	83.40	210.00
3	Potato	24.71	24.71	37.07	55.60	140.00
4	Vegetable	19.77	19.77	29.65	44.48	115.00
5	Onion	24.71	24.71	37.07	54.36	140.00
6	Wheat	4.94	14.83	22.24	32.12	85.00
7	Maize	12.36	12.36	18.53	27.80	70.00
8	Mung	2.47	2.47	3.71	5.56	14.00
9	Ground nut	12.36	12.36	18.53	27.80	85.00
10	Orchards	29.65	29.65	44.48	66.72	167.00
11	Sugarcane	34.59	44.48	66.72	100.08	250.00
12	Jute	7.41	7.41	11.12	16.68	42.00
13	Fodder	12.36	12.36	18.53	27.80	85.00
14	Pulses	4.94	4.94	7.41	11.12	30.00
15	Cotton	24.71	24.71	37.07	55.60	140.00
16	Til(oil seeds)	4.94	4.94	7.41	11.12	30.00
17	Betel leaf	74.13	74.13	111.20	166.79	420.00
18	Arhar	12.36	12.36	18.53	27.80	85.00
19	Sunhemp	17.30	17.30	25.95	38.91	100.00
20	Chilly	12.36	12.36	18.53	27.80	85.00
21	Saru	74.13	74.13	111.20	166.79	420.00
22	Ragi	6.18	6.18	9.27	13.99	35.00
23	Mustard	2.47	4.94	7.41	11.12	30.00
24	Ganja	-	123.55	123.55	185.33	465.00

Source- Department of Water Resources, Govt. of Orissa.

Table-3

Paddy Water Charges in Major Indian states (flow Irrigation)

State	Kharif(Rs/ha)	Rabi (Rs/ha)	Hot Weather (Rs/ha)
Andhra Pradesh	148.27	222.40	224.40
Bihar	89.45	51.15	157.65
Gujarat	110.00	150.00	250.00
Karnataka	86.49	98.84	98.84
Madhya Pradesh	59.30	-	220

Maharashtra	80.00	240.00	240.00
Orissa	39.54	88.96	88.96
Tamil Nadu	37.07	37.07	37.07
West Bengal	37.06	49.42	123.55

Source- Department of Water Resources Govt. of Orissa. (Water resources consolidation project- water charges report-1992)

Table-4

Demand Raised and Actual Collection of Water charges in Orissa.

(1986-87 to 1991-92)

Year	Demand Raised (Lakh)	Actual Collection (Lakh)	Collection as% of demand raised.
1986-87	925	383	41.4
1987-88	952	415	43.6
1988-89	960	467	48.6
1989-90	920	367	39.9
1990-91	921	417	45.3
1991-92	956	492	51.5

Source- Water Resource Department Govt. of Orissa. (Vaidyanathan Committee Report-1992)

Table-5

Demand Raised, Actual Collection, Accumulated Arrears of Irrigation Charges and O&M

Cost of Major and Medium Projects in some Indian States.

(Area in Lakh Hectare)

(Amount in Lakh Rupee)

States	Area Irrigated	Demand Raised	Actual Collection	Annual Arrears	Cumulative Arrears	Operation and Maintenance Cost.
Bihar	21.49	475.	217	371	3482	4156
Gujarat	6.98	1110	765	346	3264	2400
Haryana	20.23	1179	1298	-118	1150	3067
Madhya Pradesh	15.97	2792	1264	1528	8065	1451
Maharashtra	N.A	1953	1228	735	7910	6060

Orissa	13.59	920	367	553	N.A	N.A
Punjab	28.59	1077	1121	Nil	Nil	3986
Uttar Pradesh	56.63	6429	6041	388	582	10158
West Bengal	15.58	234	80	154	N.A	2246

Source: Vaidyanath Committee Report

Table-6

Capital Outlay, Revenue Expenditure and Revenue Receipts in Major and Medium Irrigation Projects in Orissa. (Rs in Lakh)

Year	Capital Outlay at the end of the year	Revenue Expenditure during the year	Revenue Receipts during the year	Depreciation	Excess of Expenditure (Excluding Depreciation) over Receipts.	Excess of Expenditure (including depreciation) over Receipts.
1987-88	131159	1441	660	1312	781	2093
1988-89	145491	1345	557	1383	788	2171
1989-90	159524	1611	456	1525	1155	2680

Source- Water Resource Department (Vaidyanathan Committee Report)

Last but not the least, there was no systematic relation between income and size of holdings, which was also, affected the poor collection of water cess. After formation of the Pani Panchayat or WUA, the government has already hiked the water cess in flow irrigation from Rs 100 to 250 per hectare for kharif crops and Rs 215 to 430 per hectare for Rabi crops. Similarly, the lift irrigation point's cess has been hiked from Rs 871 to 1122 per hectare for Rabi crops.

(Ref- Data from Water Resources Department and Water pricing by Mrs. Mamata Swain)

Water Resources Consolidation Project

The water resources consolidation project (WRCP) is the new generation irrigation project assisted by the World Bank. The project deals with the irrigation sector in its entirety and the state as a whole to realize the basic objectives. Under the project, the World Bank has agreed to extend credit assistance for a period of six years individually to three states namely, Haryana, Orissa, and Tamil Nadu. The main objectives of the WRCP are (a) improving the

planning, management and development system of the state's water resources, (b) increase agricultural productivity through investments to improve existing schemes and complete viable incomplete schemes, (c) enhance the institutional capacity of the water resources department. The project would contribute to these objectives by helping the Orissa government to establish multi-sectoral water planning to provide more efficient and effective irrigation services, enhance the efficiency of public expenditures and upgrade the capabilities of the water resources department in all its functional areas.

The components of the project are (a) scheme completions (b) systems improvement and farmers' participation/turnover (c) basic planning and environmental action plan (d) water resources research and agricultural intensification, (e) institutional reorganization and strengthening (f) resettlement and rehabilitation, (g) indigenous people's development plan. In WRCP, the major thrust is on improving the productivity of irrigation systems through renovation and modernization of existing irrigation and drainage schemes and associated system improvements linked with farmer's participation. Since the concept of PIM through irrigation management transfer to farmers' organization is used as an effective tool for sustainable irrigated agriculture, PIM was introduced in Orissa in 1996 under WRCP in major and medium irrigation projects.

According to WRCP parlance, the PIM programme was called as Farmer's Organization and Turnover (FOT) which became the key component of WRCP and an integral part of rehabilitation and modernization strategy of WRCP. It may be mentioned that WRCP had begun with the specific task of rehabilitation and modernisation of 17 existing irrigation projects covering 155600 ha and balance works of 8 other schemes, where system improvement was taken up under National Water Management Project covering 109700 ha. This project was also reflected by the need for WUA at least three to four years of support, to be capable to operate, manage and maintain minor and sub-minor canals. In addition, irrigation improvement needs strong agricultural support services and promotes sustainability. The project focuses on system improvement and local agricultural needs. WRCP assistance includes developing and implementing long-term planning and monitoring techniques of viable and sustainable water users associations, training of staffs, and development of state water plan. To meet the basic cost of the project, an investment of Rs.1409.98 crore was estimated for a period of seven years. The scheme included completion of three major and five incomplete medium irrigation projects besides improvement works of 26 existing projects.

Additional irrigation potential of 65,506 ha has been created against the target of 66,740 ha while stabilization of irrigation in 246273 ha has been achieved against the target of 266893 ha. Further this scheme has benefited the state with other components like basin planning and environmental action plan, rehabilitation

and resettlement of project affected people, indigenous people's development plan, agricultural intensification programme and institutional strengthening. In WRCP projects an amount of Rs.1391 crore has been spent out of the estimated cost of Rs1409.98 crore. The World Bank funding for the project has been closed since September, 2004.

(Ref-Orissa Water Resources Consolidation Project and Annual report of Water resources Department)

Initiation of Pani Panchayat and WUAs in Orissa

The first step made in this process of reform was to hand over a part of the network of the canal/ irrigation system for its O&M to the farmers or the beneficiaries through water user's association (WUA) or Pani Panchayat. Four pilot projects in the first phase namely, Ghodahad project, Rushikulya Distributary No.11 of Ganjam district and Aunli and Derjang projects in Angul districts were identified for this work during 1996 and related activities of WUA started simultaneously under the projects.

The WUAs are registered as legal bodies to provide the required identity. These associations have been successful in overcoming the poor O&M of their irrigation systems and have improved their agricultural productivity. The formal handover of the systems has taken place in 50 WUAs by the end of 1997.

During 2000, another 10 projects had been selected to form 113 WUAs that were also renamed as Pani Panchayat under phase-II, spell-I. Having witnessed the remarkable achievement, the Pani Panchayat or the WUA programme was extended to all CCA under OWRC. During September 2000, with a strong political willpower and bureaucratic commitment, the farmers' participation was accelerated by renaming the programme as Pani Panchayat. Further a decision was taken to extend the Pani Panchayat programme to all the command area created under major, medium and minor irrigation projects.

Launching of Pani Panchayat on a statewide scale

The Orissa Government, with a view to providing equitable, timely and assured irrigation has introduced the concept of Pani Panchayat for PIM. The concepts would finally lead to transfer of tertiary irrigation networks (minor/sub-minors) to registered Pani Panchayats. 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. rest with the department of water resources, whereas the responsibility of O&M of the tertiary systems i.e. below minor and sub-minor would remain with the Pani Panchayat. The geographical extent of the programme covers the entire state comprising of about 16 lakh hectares of major, medium and minor irrigation command areas in all 30 districts of Orissa.

(Ref-Department of Water Resources, Govt of Orissa-2001)

SEGMENT-B

Pani Panchayats: Legal and operational framework

Aim of Pani Panchayat

The aim of the Pani Panchayat is to promote and secure distribution of water among its users, adequate maintenance of irrigation system, efficient and reasonable utilization of water to optimize agricultural production to protect the environment and ensure ecological balance by involving the farmers inculcating a sense of ownership of the irrigation system, collection and assist the department for water rate collection, and also will resolve disputes between the water users.

Objective of Pani Panchayat

The objective of Pani Panchayat is to create awareness among farmers in the irrigated commands towards the benefits of formation of Pani Panchayat; to create a sense of unity and brotherhood among fellow farmers; to build up confidence among the farmers regarding better returns once equitable, timely irrigation supplies are assured; to arrange training and workshops at state, district, block and panchayat level with the help of experienced resource person on PIM; to convince farmers to go for cash crops under crop diversification programme to get better returns on their investment; to create a feeling among the farmers to visualize the created irrigation potentials as their own rather than that of government.

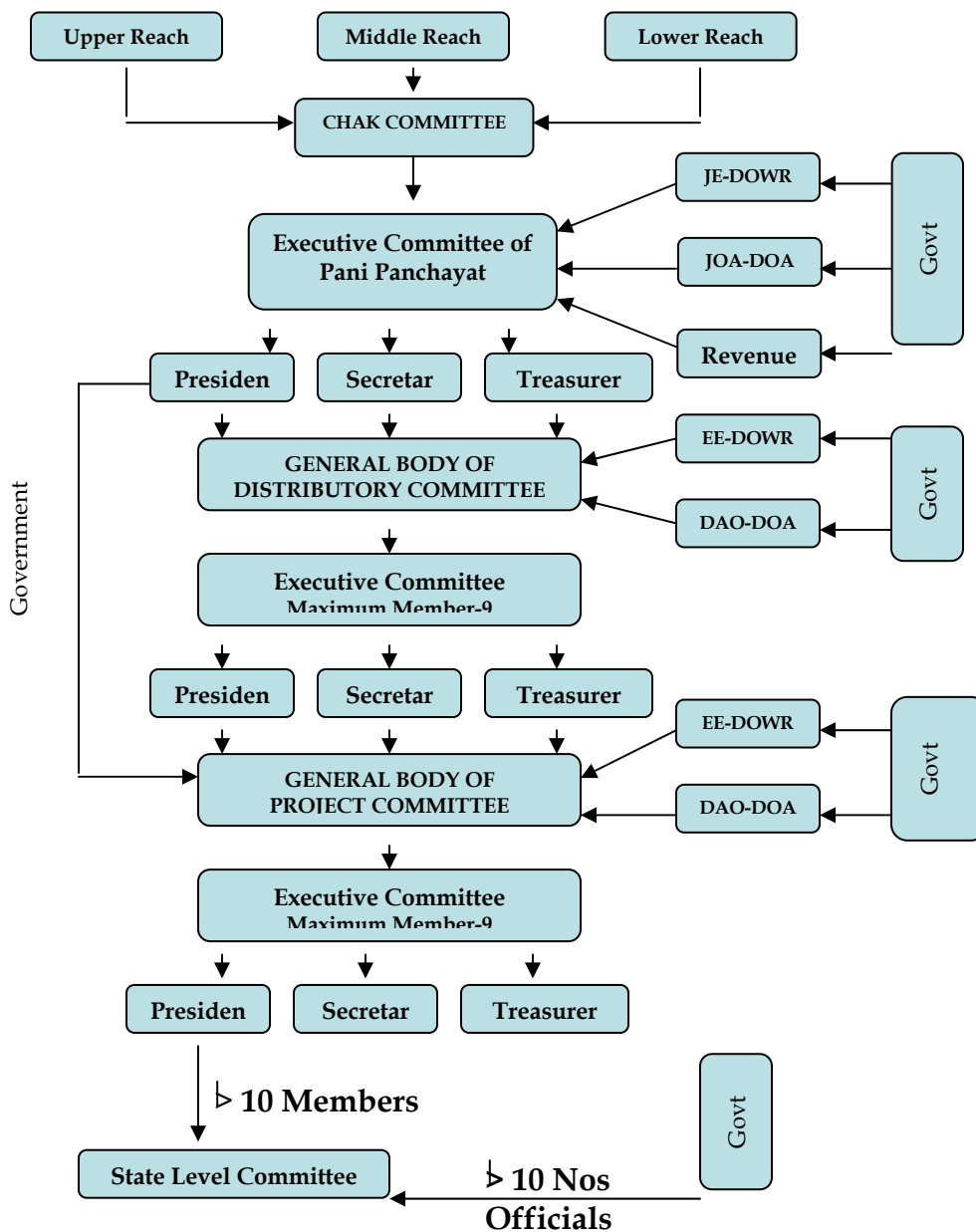
Advantages of Pani Panchayat

The advantages of the Pani Panchayat are- (a) Guarantee of getting full share of water through 'quota of water, (b) Participation in operation, maintenance and management of the system, (c) Freedom of deciding own cropping pattern within the allocated water, (d) Through and timely maintenance for guarantee of drawing full allocated water, (e) Better service and amicable settlement of disputes in the use of water, (f) right for suggesting (apex committee) improvements in the main system management, water delivery schedule etc. at the project level, (g) Better assistance from department of agriculture in all aspects of crop husbandry, (h) Own bank account for carrying out need-based maintenance.

The Orissa government has taken up massive awareness campaign to make this programme broad-based among the farmers of the state. To begin with, the state government has already launched campaign through electronic media such as GramSat, TV and Radio, the print media, conducting workshops and training programmes.

Modus operandi of Pani Panchayat (administrative set-up and procedure)

ORGANIZATION CHART OF FARMERS ORGANIZATION



The superintending engineer of an irrigation project may, by notification or by the Act of Pani Panchayat, delineate every commanded area under each of the irrigation systems on a hydraulic basis ordinarily between 300 to 600 ha that may be considered administratively viable and declared as the area of a Pani Panchayat.

However, in case of lift irrigation system, the entire commanded area may as far as possible, form a single area of Pani Panchayat. Every Pani Panchayat area shall be comprised of several chaks that shall, as far as possible, cover the area irrigated by one outlet. The number of chaks shall not be less than four or as may be specified by the concerned superintending engineer. (There is no necessity of formation of any chak for constituting a Pani Panchayat in case of lift irrigation points having less than 40 hectares command area.) The name of the Pani Panchayat will be called by its local name and its office shall be fixed in that local area. Every Pani Panchayat shall consist of all the water users who are the landholders in the area of a Pani Panchayat (but a landholder may nominate any adult member of his/her family to be the member of a Pani Panchayat and a minor holder shall be represented by his/her legal guardian).

The state government will also nominate at least one officer each from the water resources department, agriculture department and revenue department as members of the Pani Panchayat without having the right to vote. All the landholders in a chack will elect three members to form the chack committee from upper reach, middle reach and tail reach and the chack members will elect one among them to represent the chack in the executive committee of the Pani Panchayat (in case of lift irrigation (LI) points, the members of the executive committee of a Pani Panchayat shall be elected by the members of the general body of the Pani Panchayat).

There shall be an **executive committee** for each Pani Panchayat consisting of the representatives of the chaks elected by the landholder. (A person eligible to become a member of more than one chack committee of a Pani Panchayat shall be entitled to be a member of all the respective chack committees, but he can be an executive committee members of only one Pani Panchayat.) The superintending engineer shall make arrangements for the election of the president of the executive committee by the method of secret ballot. The executive committee shall exercise the powers and perform the functions of the Pani Panchayat.

The committee shall elect one secretary and one treasurer prescribed by the members of the executive committee to assist its president. The secretary and the treasurer shall function at the pleasure of the majority members of the executive committee.

Later the state government, by notification, would nominate the officers not below the rank of junior engineer of the water resources, and junior agriculture officer, without having the right to vote to be the permanent invitees to the meeting of the executive committee of the Pani Panchayat. The executive committee of the Pani Panchayat shall be in office for a period of three years from the date of its first meeting.

There shall be a **distributary committee** for every distributary area that shall consist of all the presidents, secretaries and treasurers of the Pani Panchayat in the distributary areas as the general body of the distributary committee. The state government also nominates at least one officer each from water resources agriculture and revenue as the member of the distributary committee without having the right to vote.

The executive committee shall elect its president, secretary and treasurer from among themselves while the chief engineer shall make the arrangement for such election and form the executive committee for the distributary. The secretary and the treasurer shall function at the pleasure of the majority members of the executive committee. Similarly, the state government also will nominate one officer not below the rank of executive engineer of the water resources department and another officer not below the rank of district agriculture officer of the agriculture department without having the right to vote, to be the permanent invitees to the meetings of the executive committee of the distributary committee.

The term of the executive committee of the distributary committee will be same as the term of the executive committee of the Pani Panchayat. Besides, there shall be a **project committee** in every project area declared by the chief engineer of major or medium irrigation projects. Every project committee shall consist of all the presidents, secretaries and treasurers of the distributary committee in the project areas and they are the general body of the project committee. The state government nominates one officer from water, agriculture and revenue departments as members of the project committee without having the right to vote.

All the presidents of the Pani Panchayat of medium and minor (flow) irrigation area within the project shall constitute the general body for the project committee. There shall be an executive committee for every project committee which shall consist of the members elected by the general body of the project committee. The members of the executive committee shall elect its president from themselves by the arrangement of chief engineer. One secretary and one treasurer shall be elected from among the members of the executive committee to assist the president of the project committee and the secretary and the treasurer shall work with the pleasure of the majority members of the executive committee of the project committee.

The term of the committee shall be three years from the date of its first meeting. The government may by notification, constitute a **state-level committee** with such number of presidents of the project committee as may be considered necessary, but not exceeding 10.

It will also nominate government officials and professionals as the member of the state-level committee not exceeding ten. The committee will lay down the

policies for implementation of the provisions of the Act and give directions to any farmer's organization as may be considered necessary, in exercising their powers and performing their functions in accordance with the provisions of the Act. The term of the state-level committee shall be three years from the date of its constitution that may be extended by the government for further period till another committee is constituted.

Support mechanisms- WALMI

The Water and Land Management Institute (WALMI), set up in 1984 under the Water Resources department, is a premier professional training and research organization of the state. The objective of the institute is to train people of all levels from the grass root to the top rung level for making effective technology transfer in water resources management for optimizing agricultural productivity as well as to provide consultancy services and educating the mass through publication of literatures, seminars, symposiums, workshops, and other interactive programmes in the utilization of water and land resources and other inputs.

The institute is actively involved in conducting a wide range of training programmes for creating mass awareness amongst officers and farmers in the concept of Pani Panchayat in the entire state of Orissa. The institute is also actively associated with state-wise awareness campaign and capacity building for Pani Panchayat. It has largely contributed to the formation of 296 Pani Panchayats covering an ayacut of 141556 ha in different projects of the state. WALMI has under taken evaluation study of Salki Irrigation project. During the year 2005-06 WALMI will take up formation of Pani Panchayat in Upper Indravati Irrigation project and Upper Kolab Irrigation project covering an area of 50525 ha besides conducting training programme. This institute has also extended the training facilities to the office bearers of Pani Panchayats and also involved as a facilitator in formation of Pani Panchayat and its turnover. There is Budget provision of 30 lakhs towards grant-in-aid for WALMI for the year 2005-06.

Command Area Development Programme

Command Area Development (CAD) Programme is being implemented as a Centrally-sponsored plan scheme in the state since 1976-77 with an objective to use irrigation water judiciously and equitably to enhance agricultural productivity.

The main activities under CAD are topographical survey, investigation and planning, construction of field channels, field drains, reclamation of waterlogged and saline lands, training, crop demonstration, formation of Pani Panchayat etc. The programme is now implemented in 17 irrigation projects under six Command Area Development Authorities (CADA) spread over 91 blocks in 20 districts with a cultivable command area of 843.25 thousand hectare. Under the

CAD, 10,814 ha of field channel, 2979 ha of field drain and 15,047 ha of topographical survey have been achieved in the 2003-04. There were 7200 farmers' training centers by the end of 2003-04 with a budgetary allocation of Rs 12.20 crore. During 2004-05, the programme had a total budgetary allocation of Rs 800 lakh with the State and the Centre having an equal share of Rs 400 lakh each. For the year 2005-06, the proposed budget provision is Rs 8.67 crore. The target and achievement for the year 2004-05 and physical target for 2005-06 are as follows.

Sl No	Name of the Scheme	Physical target 2004-05	Achievement up to 1/05	Physical target 2005-06
1.	Topographical Investigation planning & survey.	30,000	840	30,000
2	Field channel (ha)	11,100	150	11,000
3	Field drain (ha)	9500	357	10,000
4	Reclamation of water logged area (ha)	152	---	1000
5	Demonstration (ha)	500	70	500
6	Farmers training (nos)	17600	2300	14000
7	Warabandi (ha)	-----	----	Discontinued.

Department of Agriculture: The Agricultural Intensification Programme (AIP) was launched in the state in four pilot projects during 1996-97 and extended to another 10 projects during 1998-99 by the department of agriculture. The scheme, extended in 33 project areas during 1999-2004, was closed on 30th September, 2004. The main objectives of the project were, crop diversification in irrigated commands, change in the existing cropping pattern and crop management practices, economic use of water for sustainable agriculture, dissemination of scientific and technical know how of crop production through training, workshop and on-farm demonstrations including farm mechanization, and increase the cropping intensity in irrigated commands by raising multiple crops.

The major activities of the project were,

- (a) farmers' training,
- (b) training of extension functionaries,
- (c) training of monitoring/supervising officers,
- (d) crop demonstrations by field officers,
- (e) adaptive trials by the Orissa University of Agriculture Technology (OUAT),
- (f) supply of agricultural machinery to apex committees,
- (g) supply of furniture set to apex committee.

Farmers training: 15510 farmers (WUA members) were trained during the project period from 1996 to 30th September 2004 through 1144 farmers training camps covering 33 AIP project commands on soil health management, PIM, scheduling of irrigation, integrated nutrient management, irrigation potential management, crop diversification for irrigation agriculture, water management for different crops with special emphasis to the critical period of requirements and farm mechanization etc.

Training of extension functionaries: 1635 extension (field) functionaries, AAO, JAO, VLW, LVAW, working at block level were trained through 70 training camps during the project period to develop their knowledge, skill and attitude on Pani Panchayat, PIM, irrigation policy and issues, rotational irrigation management and cropping planning and method to increase water use efficiency in command areas. These field functionaries were technically guided by the farmers for crop diversification, optimal water use and increase the productivity of major crops in the project commands.

Training of monitoring/ supervising officers: 540 officers of both DAO and DOWR were trained during the project period to increase their managerial ability, knowledge on irrigation policy and issues, communication skills and monitoring and supervision of project activities etc.

Crop demonstration: 9631ha of crop demonstrations have been conducted in different AIP project commands during the project period and demonstrated on integrated nutrient management, water management, integrated pest management and land preparation with wet tillage.

Adaptive trial: Adaptive trial is one of the important activities of the AIP where refinement of the technology of crop production and water management suitable for the project are exhibited to the farmers in their field through OUAT. A total of 541.20 ha of adaptive trials have been conducted against the target of 550 ha.

(Ref- agriculture dept)

Supply of agricultural machinery/ equipments to distributary or apex committees: 37 apex/ distributary committees have been supplied a set of agricultural machinery/equipments each costing Rs 6 lakh to take up different agricultural operations in the command areas.

Supply of furniture sets to apex committees: 13 furniture set, each amounting to Rs.1 lakh, has been supplied to 13 apex committees for official use of the apex committee members.

The budget provision of this programme tenure was Rs 809.84 lakh.

Laws, Rules/ Acts and Policies

Orissa is one of the pioneering states to legislate the Orissa Pani Panchayat Act-2002 and Orissa Pani Panchayat Rules-2003. In India, the first National Water Policy was adopted in 1987 to stress on the importance of PIM as a strategy to improve irrigation service. The National Water Policy, 2002 is more explicit in emphasizing the need for farmer's participation in operation, maintenance and management in irrigation system. The first water policy, adopted by Orissa in 1994, follows the principles enunciated in the National Water Policy-1987, and aims at promoting citizens' participation in all aspects of water planning management and handing over of operation and maintenance of irrigation system to the users.

Subsequent to the declaration of the National Water Policy in 2002, a draft Orissa state water policy has been formulated where the same thrust has been given. According to the policy guidelines, the purpose of implementation of PIM or Pani Panchayat programme in Orissa is to transfer irrigation management to farmers with a view to improving irrigation system performance. Impressed by the significant achievements made by the Pani Panchayats, the state government in the year 2000 took up a policy decision to extend the programme to the entire irrigation areas of the state up to 2003. In 2002-03 the state government accorded statutory recognition to Pani Panchayat by enforcing the Pani Panchayat Act-2002 and Pani Panchayat Rules 2003. As per the Pani Panchayat Act-2002, Pani Panchayat is a three-tier organization for medium irrigation projects and four-tier for major irrigation projects.

The Pani Panchayat Act-2000 defines Pani Panchayat/WUA as an association of all persons having their own land within a hydrologically delineated portion of the command area ranging in size approximately from 300-600 ha in case of minor/medium/major irrigation project. In respect of major and medium irrigation projects, it may be minor or sub-minor or direct outlet from the main or the branch distributary of the project. In case of minor flow or lift irrigation, the area is limited to project command area when the project command area is less than 300 ha. At the lowest level, the outlet (chak) committee is formed electing three farmers, one each from head reach, middle reach and the tail reach of the ayacut of an outlet. An elected representative from the chak committee, known as chak leader, will be a member of the executive body of the Pani Panchayat. The president, secretary and treasurer of the Pani Panchayat are elected out of the executive body of the concerned Pani Panchayat. It may be mentioned that all the water users are members of the general body of the Pani Panchayat.

Functions

The major functions of the Pani Panchayat as envisaged under the Act are:

Preparation of cropping programme considering the soil and agro-climatic condition and diversification; plan for the maintenance of irrigation system in the area of its operation and carrying out maintenance works with Pani Panchayat funds; regulation of the use of water among the various pipe outlets under its area of operation according to the warabandi schedule; ensuring economy in the use of water allocated; assisting revenue department in preparation of demand and collection of water rates, resolve disputes between the water users; raise resources, offences and penalties, accounts, records and documents to be kept by the farmers organization as per the Act .

Under the provision of the Act, if the president misuses his power and position and is not responsive to farmers' needs, he can be recalled by the general body after one year of holding the position. The executive committee of a farmers' organization may constitute sub-committees from among its members to carry out all or any of the functions vested in each organization under this Act. Every farmer's organization shall be a body corporate with a distinct name having perpetual succession and common seal subject to the provisions of this Act.

No person shall be qualified for being elected as a president or a member of an executive committee if he/she has been convicted by a criminal or a unsound mind declared by a competent court. A president or a member of the executive committee shall also be disqualified by Act if he/she absents himself from attending three consecutive meetings without reasonable. According to the Act, a farmer's organization may collect water tax for the project from time to time but in case of Lift Irrigation points, the farmer's organization shall fix a water rate which may cover the cost of the energy charges and maintenance charges of the project. No water tax will be collected by the Orissa Lift Irrigation Corporation (OLIC) from the members of the farmer's organization.

The Pani Panchayat Rules, 2003

The Pani Panchayat Rules, 2003 came into force in April 2003 to carry out the principles of the Pani Panchayat Act-2002.

According to the Rules, the **rights and responsibilities of the government is** (a) to operate the head works, the main system and the head regulator of minor/sub-minor, (b) It may suggest improvements if any, for operation and maintenance below the minor or sub-minor which is turned over the water user's association, (c) It will inspect the position of water supplies, irrigation works in the command, distributary/minor or sub-minor and field level structures under the jurisdiction of the WUA to verify whether or not the agreement is implemented satisfactorily, (d) The state government also reserves the right to sanction or reject extra demand for water by the WUA.

The allocation of water supplied to the WUA is to be utilized for irrigation purpose only and the same shall not be utilized for any other purpose. If the water is required for any other purpose, the WUA may submit separate

application to the concerned executive engineer for the same and obtain sanction for this demand, (e) the rate of water supply on volumetric basis or on any other basis as would be decided by the government for irrigation (kharif, rabi and hot weather) and for other purposes and fees/cess etc chargeable for time to time. The WUA will abide by the specifications laid down by the government which have also the right to review the rates, cess etc at such intervals as it deems proper, (f) a monthly statement of water account will be made available to the WUA for transparency in water availability, and (g) the rights of ownership of the distribution system including all structures so handed over for O&M, land acquired by government and all other works executed in WUA area will remain with the government.

Rights and responsibilities of the WUA

According to the Rules, the rights and responsibilities of the WUA are:

- a. To assume total responsibility for operation and maintenance of the minor/sub-minor and all structures. It will also ensure construction/maintenance and repair of all the water courses, field channels, field drainage in the said area as covered under the agreement of WUA. The WUA will establish its own O&M fund to meet the operation and maintenance expenditure and the work mainly include removal of silt from minor/sub-minor/ware course/field channels and field drains and proper upkeep of the same, repair of maintenance of inspection path and service road to keep them in good condition ,removal of grass, shrubs and bushes from the canal embankments and canal beds, repair of and maintenance of all structures in the distribution system, earth work to restore banks to proper shape and profile and repair of lining, painting, plastering, replacing damage portion, repairs to masonry and other structures
- b. The WUA will undertake/suggest measures for improved water management at the level of minor/sub-minor,
- c. It will receive water from the govt. and distribute it amongst the water users, whether members or non-members, according to the requirement of their area under crop,
- d. It will have the right to decide its own cropping pattern within the allocated water,
- e. It shall facilitate collection of water rates from the members/non members of the association as per the rate prescribed by the government in accordance with the Orissa Irrigation Rules,
- f. It shall promptly notify the project authorities if there is any damage due to unforeseen natural calamities like earthquake heavy rains etc.

Roles and the responsibilities of the members of the Pani Panchayat

According to the Rules, the roles and the responsibilities of the members of the Pani Panchayat have the right to participate in the affairs of the Pani Panchayat and take benefit of its services, right to get and use the irrigation water as per decided by Pani Panchayat, right to speak and to vote in Pani Panchayat general assembly, openly give suggestions to improvement of irrigation water supply, O&M of small drains, sub-minors etc, respect and obey the order of Pani Panchayat, respect and accomplish contracts and agreements set by the Pani Panchayat with external parties, pay the fees and levies by the different authorities of the Pani Panchayat towards the operation, maintenance and other official works and deliver all relevant information to the Pani Panchayat which the latter may require for its proper functioning.

Besides, the day-to-day affairs of the Pani Panchayat are to be managed by the executive body of the Pani Panchayat. The president shall preside over the meeting of Pani Panchayat and the secretary shall keep and safeguard all legal documents of the Pani Panchayat and help the treasurer in collecting the fees and water rater etc. The treasures will collect fees and water rates, keep the account books and registers and prepare the annual report etc., prepare seasonal crop plan on the basis of the expressed proposal of members and the maximum capacity of irrigation system and prepare a subsequent water distribution plan to be proposed to the general assembly for approval twice in a year before Kharif and Rabi.

This apart, other major functions included in the Rules are, recall of the WUA president by the general body of farmers, constitution of sub-committees in farmer's organization, changes in farmer's organization, disqualification of candidates or members and filling up of vacancies, annual audit, management of records which are related to Pani Panchayat etc. According to the law, the Pani Panchayat has power to punish or slap penalties on any person if he/she damages, alters, enlarges or obstructs any irrigation system or interferes with, increases or diminishes the water supply in or the flow of water from over or under any irrigation system, corrupts or fouls water of any irrigation system, obstructs or removes any level marks or water gauge or any other marks or sign fixed by the authority and opens, shuts or obstructs or attempts to open any sluice or outlet or any other similar contrivance in any irrigation system shall be punished with imprisonment which may extended to one month or with fine which may extend to Rs 200 or both.

According to the law, any conflict or disputes between the members of the WUA shall be settled by the executive committee of the concerned farmer's organization. Similarly, if the dispute or difference arises between a member and the executive committee of Pani Panchayat or between two or more Pani Panchayats, these shall be settled by the executive committee of the distributary

committee. Dispute between the members and executive committee of a distributary committee or between two or more distributary committees shall be settled by the executive committee of the project committee, any dispute or difference between a member and the executive committee of a project committee or between two or more project committees shall be settled by the state level committee whose decision shall be final. Every dispute or difference specified under this law shall be disposed of within thirty days from the date of reference of the dispute or difference. But in the case of lift irrigation points, any dispute between a member and the Pani Panchayat or between the members of the Pani Panchayat that cannot be resolved by the Pani Panchayat, shall be placed before any competent authority as may be prescribed, and whose decision shall be final and binding. Any appeal by the above person or organization shall be preferred within 15 days of communication of the decision or the order to the person aggrieved.

According to the Rules, the farmer's organization shall get funds from state and Central government for development of the area of operation, finance from any financing agency for undertaking any economic development activities in its area of operation, income from the properties and assets managed by farmer's organization, and amounts received from any other sources including MLA local area development (MLALAD) funds and MP local area development (MPLAD) funds etc. Except these, the Pani Panchayat shall keep the accounts, records and documents like records of meetings, up-to-date copy of Act and Rules of the government, map of the area of operation of the farmer's organization along with map of the structures and distributary network, minutes of book, copies of audit report and enquiry reports. The meetings of the Pani Panchayat shall be held once in a month and the general meetings of the farmer's shall be held twice in a year before Kharif and Rabi. The accounts of the Pani Panchayat shall be audited by a registered firm while an account shall be opened in a nationalized bank in the name of the president and secretary of the Pani Panchayat.

A critique of legal framework of Pani Panchayat:

However, there are certain limitations in the legal framework of Pani Panchayat. To begin with, the Pani Panchayat Act 2002 of Orissa does not have the space for the landless and women to become members of PPs. Only landholders are recognized as members of the Pani Panchayat. Hence women, who mostly do not hold title to the land, and the landless tenant, are deprived of any right over water.

In the lift irrigation project, it is worth mentioning that a policy redefining the jobs of the agency staff in the new situation is neither clearly available and nor clear to the employees. As a result, there are several misunderstandings and misinterpretations that are creating problems in the co-ordination between the PP and the OLIC staffs. There is no provision in the said Act for the lift irrigation

sector for formation of higher level farmers' organization above Pani Panchayat to solve their issues with Pani Panchayat. It is noticed that the arrangement for legal aid to the farmers in the process of appeal is not adequate in setting irrigation-related disputes, energy supply disputes etc. There is no rule or policy for organizational link of the Pani Panchayat to the water sub-basin/ basin management. Moreover, there are no rules for exploitation of groundwater in Pani Panchayat Act.

Hence, a detailed ground water regulation Act for exploitation of ground water by individuals or other types of users is necessary. There is no hard and fast rule for improper handover of the irrigation system to the Pani Panchayat and as a result, the latter is facing many problems at the time of implementation. In Orissa Pani Panchayat Act, in case of medium and major irrigation system, the Pani Panchayat will assist the revenue department in the preparation and demand of collection of water rates. But they have not been given the power to fix and collect water rate. In case of minor irrigation and lift irrigation projects, the farmers' organization or the Pani Panchayat is empowered to fix and collect water rate and retain it for O&M expenses. However, it has come to the notice that empowering the Pani Panchayat with the above has become a problem for the farmers at times and in places where the office-bearers of the Pani Panchayats tend to become corrupt by misutilising the power for their own benefit. In Orissa electricity rule, there is an electricity regulatory commission who is the sole authority of providing guidelines, norms, criteria to fix electricity rate. But in Orissa Pani Panchayat Act, there is no provision for establishment of water rate regulation commission to provide norms, criteria to fix or revise the water rate of Pani Panchayat.

In Orissa Pani Panchayat Act-2000, a defaulter of water charges ceases to be a member of Pani Panchayat whereas a landless has no right to be a member of the Pani Panchayat. There is no proper equitable water distribution pattern incorporated in the rules of Orissa Pani Panchayat Act during the water scarcity period. Though schemes are designed for kharif supplementary irrigation, there implementation have become haphazard. For example, during 2004-05 less than 20 percent of the total minor irrigation schemes in Orissa had Rabi crops. The ownership of the irrigation scheme and infrastructure etc. still rests with the government, but in IMT in managerial sense may include turning over partially management responsibilities viz. water delivery, operation and maintenance etc. and may not include collection of water fees from farmers as in Orissa Pani Panchayat Act-2002.

Nothing contained in this Act shall affect the rights or properties vested in a Grama Panchayat, Zilla Parishad, Panchayat Samiti, Municipality or Municipal Corporation under for the time being in force. Nothing contained in this Act shall apply to the projects which irrigated less than forty hectares of land if any, in the scheduled areas in the state of Orissa. Though the Rules say that the Pani

Panchayat shall be eligible to get funds from the state government, Central government or other agencies, the fact remains that these Rules are not properly put into practice. Besides, there are instances of gross apathy by the government machinery in overseeing the records maintained by the Pani Panchayats. The government staffs who are in charge of reviewing the performances of Pani Panchayats and attend meetings at regular intervals, are found to be irregular.

(Ref- Rules and Act of Pani Panchayat)

SEGMENT- C

Grounding Pani Panchayat

The farmer's organization and turnover (FOT), the key component of WRCP and integral part of rehabilitation and modernization of WRCP, was introduced experimentally in 1996 in four projects namely, Ghodahada, Rushikulya Distributary-II, Auali, and Derjang covering 0.21 lakh ha on pilot basis. Two NGOs and WALMI Orissa were engaged for motivating the farmers to form WUAs by registering these associations under the Societies Registration Act, 1860.

From motivation to turnover of the system, the entire work was divided in five phases viz., Preparation phase, Assessment phase, Organizing phase, Joint management phase and Turnover phase.

At the outset, it was in fact, an arduous job as the people were reluctant to accept the concept of PIM. However, after a lot of efforts through a series of meetings and trainings, 50 WUAs could be formed by the end of 1997. Again it was a difficult job to hand over the management of the system to the WUAs. But with much effort, the process started and finished during 2000. The state government, in the department of water resources resolution no. irr-i-WB (FOT) 38/2000,38711,dt-26.9.2000, had monitored the programme and the success results emanating from this pilot projects were mentioned hereunder:

- (a) Minimization of tail end problems.
- (b) Crop diversification.
- (c) Increase in productivity and production and hence increase in financial condition of the rural farmers.
- (d) Minimization of canal cuts, disputes among the farmers.
- (e) Involvement of women farmers as in Maa Hingula.

Buoyed by the success of the pilot project, the Orissa government had claimed that the outcome of PIM introduction under the World Bank-funded OWRCP was very encouraging. The Aunli project in the district of Angul had the distinction of becoming the first all-women WUA in the country. By this time, another 10 projects had been selected to form 113 WUA which were also renamed as Pani Panchayat under Phase-II, Spell-I. Having witnessed the remarkable achievement, the Pani Panchayat programme was extended to all 3.20 lakh ha CCA under OWRCP. During September 2000, with strong political will and bureaucratic commitment to farmers participation, the state government accelerated its effort by renaming the Pani Panchayat as 'Programme Pani Panchayat' and deciding to extend the Pani Panchayat programme to all the command area created under major, medium and minor irrigation projects.

(Ref- public hearing on water)

Implementation (organization structure and function)

The organizational setup of the Pani Panchayat is a one-tier system in case of lift irrigation project whereas it is a three-tier system in case minor and medium irrigation project..

In case of lift irrigation project, the one-tier system is Pani Panchayat and in case of Minor and Medium irrigation project the three-tier system comprises of Chak committee, Pani Panchayat and Project committee.

However, in major irrigation project, the Pani Panchayat is a four tier system i.e. Chak committee (40 ha), Pani Panchayat. (300-600 ha), Distributary committee and Project committee/apex committee. Above all, there will be a state level committee to lay down policies for implementation of Pani Panchayat programme as per the provision of the Orissa Pani Panchayat Act-2002.

Function of Pani Panchayat

The major function of the Pani Panchayat is –

- To prepare a suitable cropping programme.
- To prepare a plan for the maintenance of irrigation system in the area of its operation at the end of each crop season and carry out the maintenance work of both distributary system and minor, sub-minor and field drains in its operation area with the funds of Pani Panchayat from time to time.

(The following items of work are included in repair and maintenance work namely:

- Removal of silt from minor/sub-minor/water courses/field channels and drains and proper upkeep of the same.
- Removal of grass, shrubs and bushes from the canal embankments and canal beds.
- Repairs and maintenance of all structures in the distribution system so handed over for O&M to keep them in good working condition).
- To manage the lift irrigation points as may be handed over to the farmer's organization through a mutual agreement between two parties, as may be prescribed.
- To promote economy in the use of water allocated.
- To regulate the use of water among the various pipe outlets under its area of operation according to the warabandi schedule of the system.
- To assist the revenue department in the preparation of demand and collection of water rates. (In case of European Community-aided minor irrigation (flow) projects, the farmer's organization will be exempted from payment of water tax to the revenue department as laid down in

resolution no. 48049, dated the 4th December 1999 of the department of water resources)

- To collect fees from the water users of the lift irrigation points for payment of energy charges, for repair, maintenance of machineries and distribution system and replacement of machines etc.
- To assist in the conduct of elections to the executive committee, maintain accounts, annual audit of its accounts, conduct regular water budgeting, and abide by the decision of the distributary and project committees and encourage avenue plantation on canal bunds and tank bunds by leasing such bunds.

Functions of Distributary Committee

- To prepare an operational plan based on its entitlement area, soil, cropping pattern at the beginning of each irrigation season, consistent with the operational plan prepared by the project committee.
- To prepare a plan for the maintenance of both distributaries and field drains within its area of operation at the end of each cropping season and execute the maintenance work with the funds of the committee from time to time.
- To regulate the use of water among various Pani Panchayats under its area of operation, and solve disputes, if any, between the Pani Panchayat in its area of operation.
- To monitor the flow of water for irrigation, abide by the decisions of the project committee, maintain accounts and other records and encourage avenue plantations in its area of operation.

Functions of the Project Committee

- Approve an operational plan based on its entitlement, area, soil, cropping pattern as prepared by the competent authority in respect of the entire project area at the beginning of each irrigation season.
- Approve plan for the maintenance of irrigation system including the major drains within its area of operation at the end of each crop season and execute the maintenance works with the funds of the committee from time to time.
- Maintain a list of distributary committees and Pani Panchayats in its area of operation.
- Resolve disputes if any between the distributary committee and promote economy in the use of water, maintain other records, regular water budgeting and general body meetings.

In addition to the above functions, a farmer's organization may perform the following functions mainly:

- Supply of seeds, fertilizer and other inputs and at rates to be approved by the General Body.
- Market the agricultural products of the members as may be decided by the General Body.
- Undertake enterprise for value addition to the products of the members as may be decided by the General Body.
- Establish agro service centre for providing services to the farmers in their agricultural operation and formation of self-help group for providing credit to the members as may be approved by the General Body.

Progress of Pani Panchayat in Orissa

The irrigation development in Orissa is mainly looked after by major, medium and minor irrigation sector. However, in small irrigation structures like water harvesting structure, small tanks having ayacut less than 40 ha, are executed under soil conservation department and panchayat raj department. It has been estimated that out of 65.59 lakh ha of cultivable land, 59 lakh ha is irrigable and by June, 2004 an area of 26.51 lakh has been brought under irrigation. Pani Panchayat programme is implemented in the following area to hand over the canal system by forming Pani Panchayats.

Major and medium irrigation projects -----	12.34 lakh ha.
Minor irrigation project (Lift) -----	2.25 lakh ha.
Minor irrigation projects (flow) -----	3.64 lakh ha.

Total 18.23 lakh ha.

The chronological progress of formation and handing over the Pani Panchayat in major and medium sectors is stated in table below:

Year	Year-wise formation of Pani Panchayat		Year-wise Handing Over of Pani Panchayat.	
	Nos.	Area in Lakh ha	Nos.	Area in lakh ha
1996	-	-	-	-
1997	50	.21	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	113	.52	112	.54

2001	54	.23	69	.28
2002	313	1.48	85	.41
2003	432	1.91	263	1.26
2004	198	.85	214	.96

The status of the Pani Panchayat by end of May-2005

Types of irrigation project.	Irrigation potential created in 000ha	No.of Pani Panchayat Formed.	Area in 000ha	Irrigation management transferred	
				No. of PPs	Area in 000ha.
Major and Medium	1234	1253	558	845	382
Minor (surface)	364	1349	203	770	120
Minor (surface EC projects)		56	9	20	4
Minor Lift	227	10030	225	9129	205
Total	1825	12688	995	10764	711

By the end of May-2005, a total of 1253 Pani Panchayat have been formed in major and medium irrigation projects covering an area of 5.58lakh ha out of which 845 PPs of 3.82 lakh ha have been transferred to farmers for operation and maintenance. In minor flow irrigation system, 1349 Pani Panchayat have been formed covering an area of 2.03 lakh ha out of which 770 PPs of 1.20 lakh ha have been transferred for farmers for O&M.

In minor surface EC-aided project, 56 Pani Panchayats have been formed covering an area of .9 lakh ha, out of which 20 PPs of .4 ha have been transferred to farmers for O&M. In minor lift irrigation projects, 10030 Pani Panchayat have been formed covering an area of 2.25 lakh ha, out of which 9129 PPs of 2.05 lakhs have been transferred to farmers for O&M. Thus out of the proposed 18.25 lakh ha, Pani Panchayat have been formed in about 9.95 lakh ha and the canal system have been handed over about 7.11 lakh ha. Attempts are being taken up to cover all the command area by 2005-06.

The state government had initially provided financial assistance of Rs 20/- per ha with a minimum of Rs 5000/- and maximum of Rs10, 000/to each Pani Panchayat of the pilot projects. When the Pani Panchayat was started, it was

conceived to collect Rs250/per ha from the farmers as share capital to take up the O&M works by the farmers on the interest accrued out of it. But it did not work well.

Hence it was decided to provide a financial assistance of Rs 35/ per ha during 2002 as Grant-in-Aid to the Pani Panchayat having minimum 75percent of membership for their expenditure towards operation and maintenance of canal system.

Out of these Rs 35/- per ha, Rs.5/- per ha is provided to the project committee or the apex committee which is a federated unit of Pani Panchayats. Subsequently, during 2003-04 fiscal, this amount was enhanced to Rs.100/- per ha for the Pani Panchayat receiving grant-in-aid for the first term and subsequently it is proportional to their percentage of membership.

Grant-in-Aid- Details for major and medium projects:

Year	Number of Pani Panchayats	Area in ha	Amount in Rupees
2002-03	58	23922	8,27,200.00
2003-04	110	48442	43,79,428.00
2004-05	338	167600	1,59.08,635.00

The above grant-in-aid is spent by the Pani Panchayats for taking up of following maintenance works.

- Desilting
- Weed removal
- Repairs and painting to shutters
- Repairs to masonry and linage
- Emergent breach closing works and maintenance of inspection path.

(Ref- The detail procedure for taking up such works has been mentioned in the Orissa Pani Panchayat Rule, 2003)

In OWRCPC, an apex building is being constructed at the project level in medium irrigation projects and 3 to 4 apex buildings are constructed for the following objectives -

- To provide a center of meetings of apex committee,
- To provide space for equipments and multi-purpose farmers' trainings,
- To provide means for regular communication between farmers and government officials,
- To act as a center for agronomic research programmes.

A total of 37 sets of agricultural equipments costing 222 lakh @ Rs.6.00 lakhs had been provided to apex committee and distributary committee for mechanized agriculture. These agricultural equipments are given on hire by the apex committee and distributary committee for their financial development.

It has been decided to give a building constructed with an amount of Rs 50,000/- to the Pani Panchayats where the percentage of membership has increased to a minimum of 80percent and the collection of water rate for the previous 3 years is at least 75percent of the demand.

Biju Krushak Yojan (BKVY)

The Orissa government has launched a new dimension for irrigation potential development in Orissa from 2001 under the programme of “Biju Krushak Vikash Yojana” for revival as well as construction of new minor irrigation projects and lift irrigation projects through Pani Panchayat. The beneficiary farmers of the existing proposed irrigation projects have to form and register WUA/Pani Panchayats in order to get a maximum of 80 percent government assistances. The assistance to Pani Panchayat in backward KBK districts of the state is proposed to be 90 percent of the project cost. The Pani Panchayats may contribute their share in terms of labour, land or cash. Under this programme Orissa lift Irrigation Corporation (OLIC) has taken up for installation and revival of 1582 LIPs in KBK and non-KBK districts to create irrigation potential of 32903 hectares.

Sl.	Project Area	No. of L. I.P sanctioned			Ayacut area in ha.		
		New	Revival	Total	New creation	Stabilization	Total
1	K.B.K.districts.	783	121	904	17128	2420	19548
2	Non-K.B.K.districts.	658	20	678	13115	240	13355
	Total	1443	141	1582	30243	2660	32903

(Ref- Water Resources Dept.)

How the PP is to be formed (as per the guidelines)

As per the guidelines, Pani Panchayats are formed on a three-tier system with two informal associations and one formal association on minor/ sub minor basis comprising an ayacut ranging between 300-600ha. The Chak committee is formed taking farmers one each from high land, middle land and low land areas of an outlet. A representative from the chak committee will be a member of the executive body of the Pani Panchayat.

Each beneficiary within the concerned minor/sub-minor qualifies to be member of the concerned Pani Panchayat. For registration of Pani Panchayat, a minimum of 51 percent of the beneficiaries or beneficiaries possessing 60 percent of command are required to be members. To be eligible as a member in Pani Panchayat, a token money of Rs10 or as is decided by the committee is collected as membership fee. Registration of the Pani Panchayat can be done along with necessary documents like bye-law, general body resolution etc. by depositing those with the registering authorities.

A fund may be created in the form of share capital from the members of Pani Panchayat in order to take up maintenance work of canals or to attend any work of emergent nature with of course, the permission of the panchayat. This will be spent by the authorized office-bearers of the Pani Panchayat.

How the Pani Panchayats are formed in practice?

In a practical sense, the Pani Panchayats are not being formed properly. At the time of formation of Pani Panchayats, the members of the Pani Panchayats are not following the government rules and regulations. In the outlet level, chaks are formed by the settlement department, but in the flood-hit area, there is no formation of chaks. Places where chaks are formed, the chak members have formed the chak committee. However, in case of lift irrigation points that are



below 40 ha of command area, there is no formation of chak committee. In case of the canal irrigation system there are several chaks. All the landholders of all the chaks used to sit together and select among themselves three chak leaders one for head reach, one for middle reach

and one from tail reach to the chak committee. However, the farmers, at the time of selecting the chak leaders, do not follow any criteria. In some cases, the sharecroppers are not elected as the leader of the chak committee whereas the defaulter of water charge is the member of the chak and chak committee. Similarly, the women are also deprived of being elected as the members of the chak committee. There are several instances where a majority of farmers have alleged that they are not being properly informed about the formation of chak committee.

The department and some NGOs, with the help of some farmers constitute the chak committee or they have formed the chak committee in their own. Besides, after the formation of the chak committee, the chak leaders select one of the chak leaders as the main chak leader for representing the executive committee of the Pani Panchayat or Pani Panchayat committee. After the selection of the chak leaders, all the chak leaders sit together and one among them proposes some other's name as president, secretary and treasurer of the Pani Panchayat and others second it. As per the Act, the superintending engineer should arrange the election of the members of the executive committee by method of secret ballot and also arrange the election of president by the same method.

But in practice, the procedure is not followed. In many cases, it is seen that all the committees starting from chak committee to Pani Panchayats are constituted in one day. In case of lift irrigation points, the farmers used to sit together and select among themselves as the



president, secretary and treasure. After selection of the president, secretary, treasurer and other members of the Pani Panchayat, the Pani Panchayat is registered under the Society Registration Act-1860 in the office of the registrar of cooperatives or the district sub-collector's office along with collection of membership fee Rs 10 per head from the farmers. In case of medium or minor (flow) irrigation system, all the presidents of the Pani Panchayat sit together to select the president, secretary and treasurer of the project committee or the apex committee by the same method in the election of chak leaders as office-bearers of the Pani Panchayat. But as per the provision of the Act, the chief engineer should arrange the election of the members of the Project Committee by secret ballot and the state government should nominate two officers not below the rank of Class-I from water resources department and the district agriculture department without having the power to vote. In case of major irrigation project, there is another committee called as distributary committee.

As per the Act, all the president, secretary and treasurers of all Pani Panchayats in a distributary area would form a general body committee and the chief engineer should arrange the election of the executive committee of the

distributary committee by method of secret ballot. But in practice, the rules are not properly followed as it has been found in most cases where all the presidents and secretaries of all the Pani Panchayats of a distributary have sat together and selected among themselves as the president, secretary and treasurer by the same 'propose and second' method. In many cases it has been observed that at the time of election of leaders of chak committee, executive committee of Pani Panchayat and of project committee, many problems have arisen. Water users having different political affiliations expose their differences in interest and opinion. This results in the formation of separate groups within a particular Pani Panchayat or among Pani Panchayats.

Problems in operation of Pani Panchayats

Environment of distrust

According to the PIM's objective, to transfer the responsibility and authority for management of irrigation services from the government agency to the users association is defined as irrigation management transfer. But the ownership of the irrigation scheme and infrastructure etc still rest with the government. Only tertiary or secondary canals, minors, sub-minors and water sources are handed over to the users groups where the irrigation agency is managing the head works such as dam, weir head regulator and main canals etc. Hence, in this case the department is of the impression that the farmers cannot maintain the head irrigation system properly and so also the farmers who think that they can manage the head system better than departmental staffs. Under the Pani Panchayat Act, the farmers will assist the revenue department for collection of water charges but they have no right to collect the water charges from the farmers.

In this case, the government has no faith upon the farmers because if the latter would collect the water charges they would most likely misuse the fund. Hence a breach of trust prevails between the government and the farmers. This apart, there is a growing confusion and misunderstanding over the powers of jurisdiction exercised by the irrigation department and the revenue department. The revenue department, that is empowered to supply the water and maintain the canal system, does not feel accountable to the farmers as it does not receive the payment for its service as compared to the revenue department that collects the water charges from the farmers. Also there is no proper assignment of the water charges for O&M of the concerned project. In grass root level, the farmers are under the impression that the funds, administrative power, financial power, and the equipments supplied to them by the government are grossly misused, and no transparency is maintained by the executive members of the Pani Panchayat or the project committee. In some other cases, the farmers feel that the O&M of irrigation structures is the duty and responsibility of the irrigation staff. On the contrary, the government exerts extra pressure on farmers for the

purpose without any additional benefits. Hence all the above-mentioned problems stand on the way for smooth formation and operation of the Pani Panchayat.

Unwilling villagers

As the boundaries of Pani Panchayats are determined on hydraulic basis, most Pani Panchayats will cover multiple villages. However, villages coming within the boundary of a Pani Panchayat have unfriendly relationships among the farmers. Since different villages having different political affiliations, this has triggered serious hindrances in the operation and functioning of the Pani Panchayat. In other case, farmers are also not aware of the PIM and their capacity and skills. As a result, many cases farmers/villagers themselves underestimate their ability to manage irrigation system and show their unwillingness to assume the power of operating even the system below the tertiary level which causes the major problems of O&M.

Village politics

Numerous problems crop up at the time of election of chak leaders, president and secretary of Pani Panchayat, president and secretary of distributary committee and president and secretary of the project committee. Water users having different political affiliations disclose their difference in interest and opinion. Political differences result in formation of separate groups within a particular Pani Panchayat or among Pani Panchayats or distributary/project committees. Any community movement has inborn elements of politicization. Such instances have also come to the notice at the time of implementation of PIM. In the election procedure under Pani Panchayat programme, there is no provision for role of any political party but the unwarranted political interference during the implementation process has spoiled the purpose of the programme. The political interference of the village has also created a wedge among the water users of the Pani Panchayat. It is also observed that many presidents, secretaries and treasurers of the Pani Panchayats or distributary committees or project committees are managed by the village leaders thus creating differences of opinion among the WUAs for smooth functioning and maintenance.

Lack of soft skills of the departmental staffs

It is also observed that the functionaries or the departmental staffs of the concerned department very often develop negative attitude towards PPs because they presume that by handing over the system and training in different cropping patterns, efficiency of water use, supply of seeds, pesticides, fertilizers to the PPs their responsibility is over. As a matter of fact, the PPs seek their guidance and technical advice off and on. Therefore, a helping attitude will solve many of the problems that the PPs are facing in the management of the system by themselves. A fear of losing their job has also loomed large in the minds of several irrigation staffs. As a result, a majority of them have lost interest in their work and do not

cooperate with the reform process. Irrigation executives are also afraid of losing their power and control which stands thus posing a major obstacle to the smooth operation and management of irrigation system.

Subleasing of work to external agencies

According to the Act, the Pani Panchayat is wholly responsible for operation, management and repair of minors, sub- minors, field channels and field drains, and removal of grass, shrubs and bushes from the canal embankments and canal beds.

However, it is observed that the functionaries of the irrigation department and agricultural department with the help of president, secretary, are subleasing the repair work and maintenance work to the contractors. At the local level, the Pani Panchayat or distributary or project office-bearers have resorted to corrupt practices by subleasing the agricultural equipments outside the Pani Panchayats and capturing unearned income. As a result, there are numerous misunderstandings among the farmers, Pani Panchayats or distributary or project committees creating enormous problems in the co-ordination and operation of the WUA.

Electricity problems

It is observed that a maximum number of Pani Panchayats which are running in lift irrigation points, are lying defunct due to inconsistent and unreliable power supply due to frequent burning or failure of transformer as well as theft of power cables. A large number of LIPs are not functioning either due to transformer problem or theft of wire despite availability of water. On many occasions, due to theft of conductors and wires and subsequent undue delay in its replacements for supply of power to LIPs, the Pani Panchayat is not able to operate the LIP and supply water to the interested farmers of PPs. The renovation of power supply by the electricity company is taking years together due to its ineptness. Sometimes, these points remain without power supply for a long time thus making the Pani Panchayat members hopeless and apathetic.

No system improvement to support Pani Panchayat

Due to resource control, most of the irrigation projects suffer from several physical system deficiencies. It is observed that unless the faulty structures of canals, minors, sub-minors, drains, LIPs etc. are renovated, rehabilitated and become fully operational, the farmers hesitate to take up the responsibility of O&M of an inefficient system. The project authority is also not conducting a proper hydraulic testing of irrigation system in presence of the Pani Panchayat executives and farmers to deliver reliable, equitable and satisfactory irrigation service before turning over the system to the Pani Panchayats for O&M.

Less capacity building of farmers

The water users have no proper knowledge on various aspects of PIM programme such as the process of forming Pani Panchayat, its structure, short-term and long-term benefits, functions, rights, duties and responsibilities of water resource department and WUA. Hence they feel that the operation and maintenance of the irrigation system is an extra pressure of them and without any additional benefits. This is one of the main reasons of disinterest of the farmers in forming the WUA.

Transparency and corruption

The farmer's organization has been made with one of the objectives to check corruption and to maintain transparency. However, it is observed that the element of corruption is also present in the activities of several office-bearers of the Pani Panchayats because in some cases the rich farmers or the political persons have been elected as the president, secretary and treasurers. Instead of promoting social well being, these powerful oligarchs are more engaged in rent-seeking activities and capturing unearned income. Some of them are either contractors or have become virtual contractors by grabbing the work order by manipulation and foul means. Thus the local level corruption by the Pani Panchayat office-bearers in such places is nothing but the old wine in a new bottle.

High water rate and low crop income

Many farmers are not evincing any interest in Pani Panchayat activities under the impression that water rates to be fixed by the PP will be higher and cultivating crops by paying such increased water rates will not be profitable to them. Moreover, as power supply is not reliable, crop cultivation depending on lift irrigation is quite risky. It is being observed that in many cases where the water rate has increased, a majority of farmers are not coming forward to use water from the handed-over lift irrigation points. As a result, the number of water users and area irrigated from a lift project has remained well below its capacity.

Thus, during Rabi season, a large proportion of command area remains fallow. Moreover, it is observed that in small rain-fed streams, water availability becomes very low or inadequate to grow summer rice. Farmers interested to grow rice as second crop, are forced to keep their land fallow due to non-availability of adequate water. Hence low crop income and high water rates has adversely affected in the smooth functioning of operation and maintenance of lift irrigation points.

Policy and legal framework

The Pani Panchayat Act-2002 does not have space for the landless or the share croppers and women to become members of PPs. Only landholders are recognized as members of the Pani Panchayat. Hence women mostly do not hold

title to the land and so also the landless having no right over water. In case of lift irrigation cases, there is no provision for formation of higher level farmer's organization above Pani Panchayat or any federation to resolve the issues related to Pani Panchayat either for resolving issues with the government agency or issues related to input supply, selling of product and processing. Considering the aforesaid lacunae, it can be said that since the policy is not clear to the landless, women, share croppers and farmers of the lift irrigation points, there are numerous misunderstanding, thus creating the problems in O&M of the Pani Panchayat.

SEGMENT-D

Pani Panchayats: From Field Experience

Need for the study

The status study of Pani Panchayat in Orissa is very important in a way that it would lead us to know the effect of decentralization. Pani Panchayat is a reform process in the irrigation sector. At the outset, irrigation was executed and controlled by the water resources department. But after the reform, it is now handed over to the farmers' committee at the chak level. This is done with a view to bringing better O&M, improvement in economic conditions of the farmers, enhancement of people's participation etc. The study would reveal the effect of all the reformation. Water policy brings with it a scope for privatization. Water is seen as a source of revenue. The revenue collection is done by the revenue department. But due to a sizeable number of defaulters, there is difficulty in the collection procedure. Considering the above, the state government is contemplating on collecting water revenue through the Pani Panchayat. In case it fails, the government might go for privatization by allowing the private companies to provide service and collect revenue. The state government might play the role of a policy formulator.



Though PIM is expected to be sustainable, the following study would provide an overview on its success and sustainability.

Objective of the study or logic of the study

The objectives of the study are as follows -

- To develop a status report on Pani Panchayat in Orissa with regard to its formation, registration, function and the system of handing over of irrigation management to the PP,
- To examine the strength and weakness in the existing system i.e. at the institutional level, and at operation/management level.

Methodology

The methodology is to understand the evolution of process of grassroot level Pani Panchayats in certain selected Gram Panchayats in the district of Nayagarh, Puri, Khurda, Cuttack, Kendrapada, Jagatsingpur, and Boudh. Kandhamal, Bhadrak and Kalahandi.

A total of 20 Pani Panchayats were selected out of 10,764 handed over PPs to the WUA. Out of 20, 10 Pani Panchayats were selected from major, medium, and minor irrigation projects (flow and lift) which are functioning properly and 10 were selected from major, medium and minor which are not functioning properly. The Pani Panchayats were selected on the basis of information given by district level water resources officers in the above districts, Pani Panchayat samachars, and daily news papers.

The formation, registration, function, handover, institutional problems and O&M



issues were studied on the basis of discussions with farmers, Pani Panchayat members, apex committee members and dept. officials.

A checklist of case study was developed and collected the data. The check list covers the broad areas of process of formation, institutional problems, handed over system,

operation and management system, economic condition, and effectiveness of the PP.

Table-1

(Description of General Information of PP)

Name of the PP with detail address	Reg.no & Year of formation	Type of source	Total nos. of farmers	Total command area (ha)	Total nos. of villages
(1) Maa Bramhuni Devi. At-Badaput. GP- Hariharpur.	2075-325/2001. Formation -2000.	Budha Budhiyani medium irrigation Project.	588	383.55	5 villages

Dist- Nayagarh.					
(2) Shree Singeswar. At- Jadupur. GP- Laxmiprasad. Dist- Nayagarh.	Miss of Reg. no. Formation -2003.	Lift irrigation.	25	3	1 village
(3) Maa Rameswari. At- Kusupur. GP- Gop. Dist- Puri.	5867- 80/2002- 03. Formation - 2002.	Gop Branch Canal.	315	612.490	5 villages & 4 hamlet s
(4) Shree Barahanath. At- Sihampur. GP- Balabhadrapur. Dist- Puri.	5946- 158/2002- 03. Formation -2000.	Lift irrigation project.	60	20	1 village & 2 hamlet s
(5) Shree Swapenswar. At- Saheba Nagar. GP- Prataparudrapur. Dist- Khurda.	770- 42/2002- 03. Formation -2002.	Gopa Branch Canal.	40 (but total nos. of farmer s 380)	485.831	4 villages & 2 hamlet s
(6) Lakheswar At- Nakhara. GP- Cuttack Mahanager Nigama. Dist- Cuttack.	BBS- 21/2003- 05. Formation -200 2.	Phulanakhara Distributary.	70 (but total nos. of farmer s 485).	394.730	8 villages
(7) Maa Baraldevi. At- Gumagarh. GP- Gumagarh. Dist- Kandhamala.	PBN- 2594/2002 -03. Formation -2002.	Gumagarh Minor Irrigation Project.(EC ADD.)	180	110	3 villages & 4 hamlet s
(8) Shree Balukeswar. At- Dutipada. GP- Dutipada. Dist- Kandhamal.	2524- 50/99- 2000. Formation - 2000.	Pilasalaki Medium Irrigation Project.	330	375.99	9 villages

Status of Pani Panchayat

(9) Mahamdiya. At- Mirjapatana. GP-Guyalsing. Dist- Kendrapada.	1327- 189/2002- 03. Formation -2000.	Lift Irrigation Point. (Bank of river Gobari)	30	8	2 villages & some parts of 1 hamlet
(10) Maa Budhi Mangal. At- Sandhapali. GP- Patamundai (NAC). Dist- Kendrapada.	05/2004- 05. Formation - 2004.	Lift Irrigation project. (Bank of river Bramhani)	60	55	3 villages
(11) Shree Gateiswar. At-Birabara patna. -Rambhadeipur. Dist- Jagatsingpur	Not received Reg. no. Formation -2004	Michigan Branch Canal	80 (But total nos. of farmer s 510)	503.178	5 villages
(12) Shree Kapileswar. At-Nuadhana. GP-Budhapada. Dist- Jagatsingpur.	Not received the Reg. no. Formation -2003.	Machagaon Branch Canal.	70 (But total nos. of farmer s 480)	543.12	8 villages
(13) Chhatrapati Sivaji. At- Bamanda. GP- Bamanda. Dist- Boudh.	BDH 727- 268/2002. Formation -2002.	Salunki Irrigation Project.	460	490.83	6 villages
(14) Patabali. At- Balipur. GP- Mathura. Dist.-Boudh.	BDH 501- 43/2002- 03. Formation - 2002.	Lift Irrigation Point. (Bank of river Mahandi)	30	20	1 village
(15) Shree Trinath Thakur. At- Bankel. GP- Sargiguda. Dist- Kalahandi.	KLD 22/2002- 03. Formation - 2002.	Lift Irrigation point. (Bank of river Sandula)	27	20	1 village
(16) Kusarla PP.	KLD 2951-	Kusarla minor	75	81	3

At- Kusarla GP- Jordabara. Dist- Kalahandi.	150/2001- 2002. Formation -2001.	irrigation project.			villages
(17) Pansakhal WUA. At- Bandhabhuyi GP- Bouriyabari Dist- Nayagarh.	1015- 165/1999- 2000. Formation -1999.	Pansakhal Minor Irrigation Project. (EC ADD)	350	220	5 villages
(18) Sukru Behera Memorial WUA. At- Darpanarayanpu r GP- Darpanarayanpu r Dist- Nayagarh.	1082- 232/99- 2000. Formation -1999.	Darpanarayanpu r Minor Irrigation project. (EC ADD)	430	284.64	3. villages
(19) Jay Jaganath PP. At- Endira. GP- Sindola Dist-Bhadrak.	1403- 103/2001. Formation -2001.	Lift Irrigation point. (Lifting of ground water.)	32	25	2 villages
(20) Shree Shree Girigobardhan PP. At- Aarua. GP- Sindola. Dist-Bhadrak.	29/2003. Formation -2003.	Salandi Canal (10 no. Canal).	210	409.92	5 villages

Table: 2

(Process of formation, handed-over system, condition of the system & institutional framework)

Name of Pani Panchayat.	Formation by whom.	Process of formation.	Handed over system & Condition of the system at time of handed over.	Institutional framework and operation of PP.
(1)Maa Bramhani	WALMI	Formation	Jan -2002. Ex-Eng.	Collective decision

<p>Devi.</p>		<p>of chak committee. Head of the chak committee members select the chief functionaries of PP by verbal declaration. Not followed the rules and regulations of Govt.</p>	<p>handed over the system to the PP in a verbal form in a common meeting. Not handed over any written document. At the time of handover of the system to the PP, the system was not functioning properly due to broken creeks and the small canals. No training of the PP members about the O&M of the system before the handover.</p>	<p>by PP members in PP meeting. Farmers come together to discuss common issues in general meeting of PP. A majority of farmers belong to the General cast group. No involvement of backward community. No involvement of women in PP decision. President presides over the PP meeting. PP meetings are not held regularly.(as and when necessary) An equal right to all is given. For checking corruption and maintain transparency, social audit of all financial matters is done by the PP and it is represented in farmers' meetings. More than 90% members of the PP participate in the meeting. Farmer's are clear about the objective of PP.</p> <p>The PP is functioning.</p>
<p>(2) Shree</p>	<p>DEPT J.E.</p>	<p>All farmers</p>	<p>2003 June.</p>	<p>Equal right is given</p>

<p>Singeswar WUA.</p>		<p>have selected the chief functionaries of PP by verbal declaration .</p>	<p>J.E. Handed over the system to the village and the village handed over the system to the PP. At time of handover, J.E. handed over the system in written form. No common meeting. At the time of handover, the system was not functioning properly. No training to the PP members about the O&M of the system. All the pipes and water tanks were damaged.</p>	<p>to all. Collective decision by all farmers and PP members in the meeting. No involvement of women. All are general cast farmers. President or secretary presides over the meeting. No social audit. Meetings are not held regularly. Participation of members at the meeting is very low. Some farmers are very clear about the objective of PP. To some extent the PP is functioning.</p>
<p>(3) Maa Rameswari.</p>	<p>WALMI.</p>	<p>Formation of chak committee. Head of the chak committee members have selected the chief functionaries of the PP by verbal declaration in presence of WALMI.</p>	<p>22.3.03. Ex-Eng. handed over the scheme to the PP in written form in a general meeting at Nimapada Irrigation Division. (Gop Branch Canal and Sorda small canal of total length 6.250 km of all structures handed over to the WUA for irrigation management, O&M.)</p>	<p>Farmers from different casts are involved in the PP. Decisions are always taken by the president and not by the farmers. There are 8 women farmers but no involvement of women farmers in PP decision. Meetings of PP are held regularly. No social audit of financial matters. Hence transparency is not maintained by</p>

			At the time of handover of the system, the irrigation very poor due to broken creeks, small canals, shutters etc. No training of PP members about the O&M of the irrigation system.	the PP members. Participation of members in meeting is more than 50%. President's decision is final. Farmers are gradually learning about the objective of PP. To some extent the PP is functioning.
(4) Shree Barahanath.	DEPT. J.E.	Farmers have selected the chief functionaries in verbal declaration	2003. Asst. Eng. of lift irrigation handed over the system in Puri Irrigation Division by verbal form. Not handed over any written document to the PP. At the time of hand over the system, the irrigation system was very poor due to damaged pump house, pipes and <i>kunds</i> . Besides, there was no electricity facility.	No meeting of PP members. No involvement of women farmers. Farmers are not clear about the objective of PP. The PP is not functioning due to power problems.
(5) Shree Swapenswar.	WALMI	Farmers have selected the chief functionaries in verbal declaration (not all	2002. Asst. Eng. of irrigation sub-division of Baliyanta handed over the system to the PP in a verbal form. Not handed over any written	No collective decision by PP members. All the farmers belong to a particular cast. President's decision is final. No involvement of

		farmers, but some farmers are involved in the selection of the PP functionaries.) No formation of chak committee and chak members.	document to the PP. At the time of hand over, the irrigation system was very poor due to heavy siltation, broken shutters and creeks etc.	women farmers. Meetings are not held regularly. Participation of members in PP is very poor. Transparency is not maintained in financial matters. Leadership quality is very poor. The farmers are not clear about the objective of PP and have no interest towards PP. The PP is defunct
(6) Lakheswar	WALMI.	Formation of chak committee. Head of the chak committee members have elected the members in a verbal declaration	5.11.2003. The Ex-Eng. handed over the scheme to the PP in written form in a general meeting. (R .D 3.19km to 7.060km of Phulnakhara canal, R.D. .000 to last end of the Janmejyapur canal, R.D. .000 to last end of the Nakhara Canal, R.D. . 00 to 2.70 km of ATALA Canal, RD .00 to last end of the Bhimpur canal, RD .00 to last end of the Rudrapur canal, RD .00 to last end of Jaypur	Collective decision by PP members in PP meeting. Farmers irrespective of all casts are discussing common issues in general meeting of PP. Women farmers are getting priority. PP meetings are held regularly. Maintaining transparency. Quality leadership. Farmers are clear about the objective of PP.

			<p>canal, all structures handed over to the WUA for irrigation management, O&M.)</p> <p>At the time of handover of the system to the PP, the irrigation system was poor due to damaged shutters, heavy siltation, broken of creeks and minor & sub-minor etc.</p> <p>No training was given to the farmers before hand over the scheme about O&M.</p>	<p>The PP is functioning well.</p>
<p>(7) Maa Baraldevi.</p>	<p>DEPT. & EC.</p>	<p>Formation of chak committee. Chief of all the chak committees selected the chief functionaries of the PP. Management committee is formed by the PP members and farmers. Village</p>	<p>18.3.2005.</p> <p>The ex-Eng. of Minor Irrigation, ex-Eng. of EC-aided project handed over the project in a written form to the PP in a general meeting at Gumagarh High School. (2.24 km of canal and all the structures handed over to the WUA for irrigation management, O&M.)</p> <p>At the time of</p>	<p>Right to speech for all in the PP meeting. Collective decision by PP members. Meeting of PP are held regularly. Major topic is discussed in the meeting. Representation of all PP members from all cast categories has been accepted. Involvement of women in PP. For checking corruption and maintaining transparency, social audit of all the</p>

		<p>committee is formed by the PP members and villagers. All the committees are formed by the verbal declaration of the villagers, chak leaders farmers and members of PP.</p>	<p>hand over of the scheme to the PP, the irrigation system was in good condition. The EC with the help of all farmers and PP members completed all the work of the irrigation system before handover of the scheme to PP. Training was given to the farmers and PP members on cropping pattern, O&M , water use efficiency etc.</p>	<p>financial matters are audited every year. The village committee and management committee are monitoring all the matters. More than 90% members participate in the PP meeting. Leadership quality is found. Farmers are very clear about the objective of PP.</p> <p>The PP is functioning.</p>
<p>(8) Shree Balukeswar.</p>	<p>WALMI</p>	<p>Formation of chak committee. Chief of the chak committee have selected the chief functionaries of PP by verbal declaration in presence of WALMI.</p>	<p>May-2002. The Ex-Eng of Boudh div. verbally handed over the scheme to the PP in presence of Asst. Eng. of WALMI, Asst. Eng. Of Pilasalki irrigation project in a common meeting. No written document handed over to the PP. (verbal form was- all the structures of minor and sub-minor from Burapadar head reach to 28 no</p>	<p>No collective decision by PP members. Major topics are not discussed in the PP meetings. Equal right to all is denied. No involvement of women in PP decision. Meetings are not held regularly. No transparency is maintained. Lack of participation in PP. Leadership quality is not found. Farmers are not clear about the objective of PP.</p>

			<p>outlet(Belpadar) handed over to the WUA for irrigation management, O&M.)</p> <p>Before handover of the scheme to the PP, the irrigation system was poor due to broken creeks, shutters, and heavy siltation etc.</p> <p>Now the same system is going on after PP.</p> <p>Training was not given to the PP members for O&M before handover of the scheme.</p>	<p>The PP is not functioning.</p>
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<p>(9) Mahamadiya.</p>	<p>DEPT. and NGO.</p>	<p>All farmers selected the chief functionaries of the PP in verbal declaration</p>	<p>13.8.2002. The Asst. Eng. of Lift irrigation handed over the scheme to the PP in written form in presence of Jr. Eng. of Lift Irrigation and NGO staffs. Before handover of the scheme to the PP, the Lift Irrigation dept. completed all the damaged and defunct systems.</p>	<p>Collective decision by PP members. Farmers are from Hindu and Muslim community. Involvement of women in PP. General meeting for farmers is held on regularly. Social audit of all the financial matters are audited and it is presented in PP meeting. More than 50% members participate in PP meeting. Leadership quality is found. Farmers are clear about the objective of PP.</p> <p>The PP is functioning.</p>
<p>(10) Maa Budhi Mangal.</p>	<p>DEPT.</p>	<p>Initially 60 farmers selected 22 farmers as chief functionaries of the PP.</p>	<p>Jan. 2005. The Asst. Eng. of Lift irrigation handed over the scheme in verbal form without handing over any written document to the PP. Before handing over the scheme to the PP, the irrigation system was in a shambles. There is no electricity connection to the</p>	<p>The PP is not functioning due to electricity problem.</p>

			PP till date.	
(11) Shree Gateiswar.	DEPT.	Farmers have elected the president, secretary and treasurer of the PP.	2005. The Asst. Eng. of the irrigation division of Jagatsingpur handed over the system in written form. (The written form was from distributary no. 19(A1) Atamala minor to Rasulpur minor distributary no. 4, 4a, 4b of all structures handed over to WUA for irrigation management.) Before handover of the project to the PP, the condition of the project was not in good condition.	Farmers are not clear about the objective of PP. Political interference. The PP is not functioning.
(12) Kapileswar	DEPT.	Formation of chak committee. The chak committee members have selected the chief functionaries of PP.	30.8.2005. Asst. Eng. handed over the scheme to the PP in written form at irrigation division. (The written form was- 5.300km of distributary no. 4, 2.303 km of distributary no 4 (a) and .640 km of distributary no 4(b) of all structures handed over to the WUA	Political interference. The PP is not working.

			for irrigation management.) The faulty system was handed over to the PP.	
(13) Chhatrapati Sibaji.	NGO & DEPT.	Formation of chak committee. Chak members have selected the chief functionaries of PP.	2003. The Ex-Eng. of Boudh irrigation division handed over the scheme to the PP in a general meeting at Boudh in written form. (The written form was- distributary from Nayakpada to the last end of the minor of 17 nos. of outlet and 7 nos. of outlets of Bitheibarani minor of all the structures handed over to the WUA for irrigation management.) Before handing over the system, the irrigation system was not in good condition due to broken creeks, sub-minor, minors and shutters etc.	Equal right to all is denied. No collective decision by PP members. Meetings are not held regularly. Transparency is not maintained by the PP members. Leadership equality is not found. The farmers are not clear about the objective of PP. The PP is not working.
14. Pitabali	DEPT.	All the farmers have selected the chief	2002. The Asst. Eng handed over the scheme to the PP in verbal form.	Equal right to all is given. Major topics are discussed in the PP meetings.

		functionaries of PP.	Before handing over the system to the PP, the condition of the system was not in good condition.	Collective decisions by PP members. Meetings are held regularly. Financial matters are audited by PP members for maintaining the transparency. All members participate in PP meeting. Farmers are cleared about the objective of PP. The PP is functioning.
(15) Shree Trinath Thakur.	DEPT.	Farmers have selected the chief functionaries of PP in a verbal declaration	2003. The J.E. handed over the scheme to the PP in written form. Before handing over the scheme to the PP, the dept. completed all the structures. But due to electricity problems the PP is not working.	Electricity is the major problem of PP. Hence, the PP is not functioning.
(16) Kusarla.	DEPT.	All farmers have selected the chief functionaries of PP in verbal form.	2003. The JE handed over the scheme to the PP. in verbal form. Before handing over the scheme, the dept. completed the work in the upper portion of the	All farmers are not getting water. Meetings are not held regularly. No collective decision by PP members. Participation of members in PP is very less. Farmers are not clear

			dam. Not completed other works of the dam.	about the objective of PP. The PP is not functioning.
(17) Panaskhal.	E.C.	Formation of village committee. Formation of chak committee. The head of the chak committees have selected the functionaries of PP in verbal declaration .	20.6.2004. The Ex-Eng. of irrigation division handed over the scheme to the PP in the written form in presence of Asst. Eng, Director of EC in a general meeting at Bahadajohal M.E school. (The written form was- Equal and proper distribution of water. Water charge collection and handover of the O&M of 4.11 km of canal.) Before handing over the scheme to the PP, the EC-aided project with the help of all farmers and PP members completed all the damage works of the system. Before handover of the scheme, training was imparted to the farmers about- *Management of cash book. *Management of	Equal right to all is given. Collective decision by PP members. Farmers of all castes are involved in PP. All farmers and PP members participate in PP meeting. Meetings are held regularly. For checking corruption and maintaining transparency, the village committee audits all the financial matters and presents them at the general meeting of farmers. Major topics are discussed in the PP meeting. Leadership quality is found. Farmers are very clear about the objective of PP. The PP is working.

			<p>PP. * Operation and management of canal minor and sub-minor etc. *Water use efficiency. * Cropping pattern.</p>	
(18) Sukru Behera WUA.	E.C.	<p>Formation of chak committee. The chak committee members, all farmers of the village, and chief persons of the village selected the chief functionaries of PP and social audit committee in a verbal declaration .</p>	<p>23.7.2004. The Ex-Eng. of the irrigation division handed over the project to the PP in written form in presence of Asst. Eng., J.E. of irrigation dept, and director and Ex-Eng of EC-aided project at Darpanaryanapur High school in a general meeting. Before handing over the project to the PP, the EC with the help of farmers completed all the works of the system. Training was imparted to the farmers on the management of financial matters, management of PP, O&M of canal, minor and sub-minor etc. cropping pattern and water use</p>	<p>All farmers participate in meeting. Equal right to all is given. Collective decision-making by PP members. Involvement of women in PP. Farmers of all castes are members of the PP. The social audit group audits all the financial matters and present it in the PP meeting. Leadership quality is found in PP.</p> <p>The PP is functioning.</p>

			efficiency.	
(19) Jaya Jagannath	DEPT.	Farmers have selected the chief functionaries of the PP.	24.12.2002. The Asst.Eng. of the dept. handed over the scheme to the PP in written form. (This was- All structures handed over to the WUA for irrigation management, O&M.) At the time of handover of the project, the condition of the pump, motor, pump house, pipes, and kundas were not in good condition.	All farmers get facilities. Equal right is given to all farmers. Major topics are discussed in the PP members. Involvement of women farmers in PP meeting. Leadership quality is found in PP. Meetings are held but not regularly. Farmers are clear about the objective of PP. The PP is functioning.
(20) Shree Girigobardhan.	DEPT.	Farmers have selected the chief functionaries of the PP in verbal declaration	8.10.2004. The Ex-Eng. of irrigation division handed over the project to the PP in written form in a general meeting at office of the Ex-Eng. (The written form was- equitable water distribution to 409.92 ha of land and 1.85 km of canal from Mahisiya to last end of the Aruya Nullah. All structures handed over to the WUA	Big farmers are members of the PP. Political interference in PP. Equal right to all is denied. Maximum farmers belong to the general cast. No involvement of women in PP. Meetings are not held regularly. Low participation of farmers in PP meeting. Leadership quality is not found. Farmers are not clear about the objective of

			for irrigation management, O&M.) Before handing over the system to the PP, the faulty system was handed over the PP.	the PP. The PP is not functioning.
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Table-3

(Detail process of operating, operational costs, maintenance expenses, water charge collection, economics of PPs, and institutional issues, problems in O&M.)

Name of PP.	Operating process.	Operational cost received from Govt. and other sources. (Rs.)	Maintenance expenses in different work.	Economics of PPs.	Institutional issues and problems in O&Ms.
(1) Maa Brahmani Devi.	Preparation of cropping pattern and water use efficiency. Repairing the damaged system before Rabi and Kharif. Preparation of general meeting for farmers every year. The PP has developed a rule under	13,424 (2003) 38,355 (2005) 30,000 from canal work.(2004)	De-siltation, Weeding, Repair of shutters, minor, sub-minor and creeks etc. 5% grant-in-aid to apex committee. Rs 6000/ per annum to the watchman. Balance of 27,000 is deposited in bank account.	The economics of PP is gradually increasing. Farmers are cultivating non-paddy crops after PP and getting profits and depositing money in bank. For sustainability of PP,	No co-ordination between PP and apex committee and dept. officials. No timely sanction of Govt funds. Environment of distrust. Sometimes, the farmers are unwilling to take part in PP activities. The PP has no own official house.

	<p>which if anybody damages the irrigation system he/she is bound to give the fine amount. Financial matters are discussed in PP meetings. Now the command areas are managed by the supervision of chak committee members.</p>			<p>the PP is taking up other financial activities.</p>	
<p>(2) Shree Singaswar.</p>	<p>Collection of water cess from the farmers. Distribution of water to the land is decided by PP members. Repairing the damage system by the PP members. Pump driver is operating the pump. Financial matters are discussed in</p>	<p>4322 (2002-03)</p>	<p>Electricity bill payment. Rs. 500/year paid to pump driver. Repairing of kundas and pipes. Balance money is deposited in village committee fund.</p>	<p>After PP, the farmers are cultivating non-paddy crops. The socio-economic conditions of farmers are gradually increasing. For sustainability of the PP, the PP members are collecting the water</p>	<p>No co-ordination between the PP and dept. Damaged pipes are not changed. The PP has no official house.</p>

	the village committee. The PP has developed a rule in which if any farmers cannot pay the water cess in time his/her membership will be terminated.			cess.	
(3) Maa Rameswari PP.	PP is managing all the irrigation systems with the help of farmers. Sometimes, the farmers are doing volunteer work. Now the command areas are managed by the PP members. Cropping patterns are decided by farmers and distribution of water is decided by PP members. All the	28,844 (2002-03) 61,249 (2003-04) 70,000 from irrigation dept. for contracting work.	Weeding, repair of shutters, sub-minors, minors, cement work of the main canal. 10% to distributary committee and 5% to apex committee. Balance amount is deposited in bank.	For sustainability and improvement in the economic condition of PP, the PP is taking up other financial activity. Farmers are also gradually cultivating cash crops to improve their economic condition.	No co-ordination between PP and distributary committee. The farmers do not believe the members of PP. No coordination between PP and dept. Not timely sanction of Govt. fund. Now the non-members create breaches in the canal embankment, minor and also sub-minor of the canal. The distributary committee members are not presenting the detail of accounts in meeting.

	<p>damaged systems are repaired in time before Kharif and Rabi.</p> <p>General meetings are arranged by PP members.</p> <p>Financial matters are not audited or not presented in PP meeting.</p>				
(4) Shree Barahanah .	<p>The PP is not working due to electricity problem.</p>	<p>20,000 (2003-04)</p>	<p>Repairing of pump house, kunds, and pipes.</p>	<p>No steps are taken by the PP or by the farmers for sustainability of PP.</p>	<p>No co-ordination between PP and dept and electric dept.</p> <p>Farmers are also not interested towards the PP.</p>
(5) Shree Shree Swapenswar.	<p>No preparation of cropping pattern.</p> <p>Damaged systems are not properly maintained in time.</p> <p>Financial matters are not audited by the members.</p> <p>PP has not developed any rules or regulations for smooth</p>	<p>12,00 (20003-04) from irrigation dept.</p>	<p>Repairing of sub-minor and canal embankment.</p>	<p>No steps are taken by PP for improvement in the economic condition of PP. No commercial activities are not taken by PP.</p>	<p>Political interference in PP.</p> <p>No coordination between PP members and dept./ Govt. officials,</p> <p>Farmers do not believe the PP members.</p> <p>PP has no fund of its own or govt has also not sanction the fund in time.</p> <p>People have no idea about PP.</p> <p>PP has no office</p>

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	running of PP.				space. Farmers are not satisfied the work of distributary committee.
(6) Shree Lakheswar	Preparation of cropping pattern, water use by PP. Irrigation systems are managed by PP members and farmers. Farmers are voluntarily working and repairing the irrigation system. Good co-ordination among PP, farmers and distributary committee.	No fund.	Voluntary repair of canal, minor, sub-minor and creeks, shutters etc.	Gradually the economic condition of the farmers is developing. Labour class people are getting work after PP. Farmers are cultivating cash crops for improving their economic condition.	More non-members in PP. Still no help from Govt. in financial matter.
(7) Maa Barladevi.	The PP members have developed a rule; if anybody damages the irrigation system she/he will pay the fine amount of RS 500 to	19,138 (2003-04) 4200 water cess collection in Rabi. 1800 membersh ip fee. 21, 000, 00 (2003-2004). 700	Mud work. V.R.C. work. Repairing of broken bounds. Repairing of shutters, surplus, Pika player, outlet, creeks, pipes, canal and official expenditure.	Farmers are cultivating cash crops and the profit is deposited in banks. For sustainability and improvement of	No institutional issues. Problems arise in O&M- *No shutters in every outlet. *Water is not available in Rabi. *Low height of canal in some places. *There is no extension of

	<p>1000. The PP decides on the water distribution, cropping pattern, water use efficiency etc. The chak members and the farmers manage the command area. They follow the rules and regulations of the PP. The PP repairs the irrigation system in time before Rabi and Kharif. All the financial matters are controlled by the village committee and social audit and it is represented in the general meeting of</p>	<p>membersh ip fee.</p>	<p>Balance money is deposited in bank.</p>	<p>financial conditions of PP, the PP members are collecting water cess and taking other technical activities.</p>	<p>creek in three chaks up to last end.</p>
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	farmers.				
(8) Shree Balu-keswar PP.	No rules developed by the PP members for illegal work. No preparation of cropping pattern by the PP. Command areas are managed by the farmers not by the PP. Farmers are cultivating only one crops after PP. For distribution of water, there is no rule and regulations. Irrigation systems are not repaired before time. Financial matters are not audited.	31,808 (2002-03) 2100 membersh ip fee.	Rs.4771 to apex committee. Repairing of outlet, minor and sub-minor. Balance amount is deposited in bank.	Economic condition is not developed. Commercial activities are not taken by the PP for improvement in their financial condition.	No co-ordination between the PP and apex committee. No co-ordination between the PP and farmers. Dept. staffs are not monitoring the PP activities. Funds are not sanctioned in time. Political interference.
(9) Mahamada PP	The PP members have framed a rule in which if anybody damages the PP or kunda,	7259 water cess collection from both Rabi and Kharif (2001-02) 10,756 water cess	Machanics for fitting and repair of water pumps and pipe. Expenditure in electricity. Labour charge.	For improvement in the economic condition of the PP, the PP collects water cess	No institutional problems. But the problem in O&M is- that there is no permanent house for PP and pump house, Besides there is more

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	<p>he/she will be deprived of getting water. Now, the farmers mainly depend on the PP. The PP is planning the cropping pattern, water distribution and water use efficiency, cess collection in rabi and kharif All the financial matters are controlled by the PP and it is represented in general meeting of farmers.</p>	<p>collection from both Rabi and Kharif.(20 02-03) 8605 water cess collection both Rabi and Kharif.(20 03-04)</p> <p>5766 water cess collection only in Rabi.</p>	<p>Washing of Kundas. Mud work, concrete work and other official work. Balance money is deposited in bank.</p>	<p>from the farmers. Farmers are cultivating the cash crops.</p>	<p>requirement of kunds and pipes.</p>
<p>(10) Maa Budhiman gal PP</p>	<p>No rules developed by the PP members. The PP is not working due to electricity problems.</p>	<p>-----</p>	<p>-----</p>	<p>-----</p>	<p>Electricity problems. No coordination between PP and dept.</p>
<p>(11) Shree Gateiswar</p>	<p>No rules developed</p>	<p>No sanction of</p>	<p>-----</p>	<p>-----</p>	<p>Political interference.</p>

<p>PP.</p>	<p>by the PP. Command areas are not managed by the PP. The PP is not planning the cropping pattern. Irrigation systems are not repaired in time. The PP is not functioning.</p>	<p>Govt. fund.</p>			<p>No coordination between PP and dept.</p>
<p>(12) Shree Kapileswar PP</p>	<p>No system improvement after PP. The PP is not working.</p>	<p>No sanction of Govt. fund.</p>	<p>-----</p>	<p>-----</p>	<p>Political interference. No coordination between PP and dept.</p>
<p>(13) Chatrapati - Sibaji PP.</p>	<p>No planning of cropping pattern and water use efficiency by the PP. Irrigation systems are not repaired before the crops. Command areas are not maintained by the PP in time. Water is not reached at the last end of the command area.</p>	<p>47,000 (2004-05)</p>	<p>Repairing of outlet. Construction of three new outlets, and Surplus</p>	<p>The economic condition of the PP has not improved. Farmers are cultivating paddy only. Farmers are not interested towards the PP. No commercial activities taken by the PP members.</p>	<p>No coordination between farmers and PP members. Govt. is not sanctioned the fund in time. No coordination between PP and dept. Water is not available in Rabi crop. All the creeks are broken. No shutters in outlet.</p>

	Financial matters are not maintained properly by the PP members. The PP is not working.				
(14) Pitabali PP.	The PP members have framed a rule for better operation of PP. The PP is planning the cropping plan and water use efficiency and water cess. Before Rabi and Kharif, the PP repairs all the irrigation system. All the financial matters are controlled by the village committee. A farmer has taken the charge of pump.	5000 (2002) collection of water cess from the farmers in kharif. 5000 (2003) collection of water cess from the farmers in kharif. 5000 (2004) collection of water cess from the farmers in kharif. 1500 collection from the farmers as fine.	Payment of electricity bill. Repair of motor, pipes and other repair work. Balance money is deposited at village fund.	For improvement in financial condition of PP, the PP is collecting the water cess. For improvement of economic condition of farmers, the farmers are cultivating the cash crops.	Water is not available in Rabi. Kunds and pipes are not working.

<p>(15) Shree Trinath Thakur PP.</p>	<p>The PP is not working due to electricity problem.</p>	<p>-----</p>	<p>-----</p>	<p>-----</p>	<p>No coordination between PP members and dept. The motor and the transformer are out of order. No coordination between PP and electricity dept.</p>
<p>(16) Kusarla PP.</p>	<p>No rules framed by the PP for its operation. The PP is not planning the cropping pattern and water use efficiency etc. Command areas are not maintained by the PP. The PP is not working.</p>	<p>----</p>	<p>-----</p>	<p>-----</p>	<p>There is no minor system to the command area. There are no creeks to the land. Water is not available in Rabi. Works are implemented by contractors and not by the PP.</p>
<p>(17) Panasakha 1 PP.</p>	<p>The PP is planning the cropping pattern, water use efficiency, water cess and command area management. The PP is following the rules and</p>	<p>65000 (2000 to 2005) collection of water cess from the farmers in Rabi and kharif. 25000 (2000 to 2005) from pisciculture. 500</p>	<p>25,000 as fixed deposit. 6,500 paid to collection agent. 16,000 paid towards the new construction of creeks. 20,000 for construction of PP house. Balance money is deposited in</p>	<p>The economic condition of PP has developed. The PP is taking the commercial activities like pisciculture and collecting the water cess. Farmers</p>	<p>Now there is coordination between the PP and dept.</p>

	<p>regulations laid down in the bye-law. The PP is distributing the water as per the crops. Irrigation systems are repaired before Rabi and Kharif. One khalasi is appointed to supervise the operating system. All the financial matters are control by the social audit committee and it is presented in general meeting of farmers.</p>	<p>collected from farmers as fine money.</p>	<p>bank.</p>	<p>are cultivating cash crops for improvement of their economic condition.</p>	
<p>(18) Sukru Behera PP.</p>	<p>The PP has developed a rule for smooth operation of PP. Now the command areas are increased after the PP and are</p>	<p>77,000 (2000 to 2005) collection of water cess from farmers in Rabi and kharif. 40,000 (2000 to 2005) from</p>	<p>50,000 as fixed deposit. Repairing of creeks, canals, etc. Expenses in general meeting of farmers. Payment of salary to the khalasi.</p>	<p>The economic condition of PP has improved and so also the farmers.</p>	<p>Constriction of more creeks in command area.</p>

	<p>managed by the PP. The PP is planning the cropping pattern, water use efficiency, type of crops and water cess. Irrigation systems are repaired before Rabi and kharif. PP is distributing the water as per the crops. One khali is appointed to supervise the water operation system. Financial matters are controlled by the social audit committee and it is presented in the general meeting of farmers.</p>	<p>pisciculture. 20,000 (2000 to 2005) from fodder cultivation . 3000 (2000-2005) from farmers as fine money.</p>	<p>Expenses in Plaster of the PP house and official work. Balance money is deposited at bank.</p>		
<p>(19) Jaya Jaganath PP</p>	<p>The PP is planning the cropping pattern and water</p>	<p>16000 (2003 to 2004) collection of water</p>	<p>Payment of electricity. Repairing of motor, pipes and kunds.</p>	<p>For sustenance of the PP, the PP is collecting</p>	<p>Water cess is not collected in time. Political interference. No coordination</p>

	<p>distribution and deciding the water cess. The PP is repairing the irrigation system before the crops. All the financial matters are controlled by the PP.</p>	<p>cess from the farmers.</p>	<p>Expenses in official work.</p>	<p>the water cess and the farmers are cultivating the cash crops.</p>	<p>between the PP, the concerned department and the electricity dept.</p>
<p>(20) Shree Gori-gobardhan PP</p>	<p>The PP is not planning the cropping pattern and water distribution etc. The irrigation system is not repaired before the Rabi and kharif. Water is not available in canal. The PP is not working.</p>	<p>No sanction of Govt. fund.</p>	<p>-----</p>	<p>No improvement in the economic condition of PP and farmers.</p>	<p>Political interference. No coordination between the PP and dept.</p>



Table-4

(Change in collection of cess, water use efficiency, change in cropping pattern, cost effectiveness, and enhanced participation and ownership).

Name of PP.	Change in cropping pattern.	Increase in water use efficiency.	Cost reduction in O&M.	Better O&M.	Cost effectiveness & ownership.	Change in collection of cess.
(1) Maa Brahmani Devi PP.	Rabi- mung, groundnut, sugarcane, vegetable.	Change in command area 5-10%. The PP distributes the water that reaches last end of the command area.	The cost of O&M charges has reduced after PP because the PP is taking the charge of irrigation system. The govt has sanctioned financial aid for O&M.	Taking the responsibility and supervision of O&M of the system. Keen interest to develop their skill to wards proper O&M.	5-10% extra income after the PP. Cost of O&M has gone down by 20-25%. Farmers taking important decisions in PP meeting. They think the canal system as their own. Hence the system of PP is cost-effective.	They are helping the revenue dept. for collection of water cess. After PP the Govt. has increased the water cess in kharif i.e. RS.250/hect, and 450/hect.in Rabi. So the collection of water cess has increased.
(2) Shree Singeswar PP.	Sugar cane and paddy.	Command area has increased only by 5 %. All the farmers are getting the water.	The cost of O&M has reduced after PP as it has taken up the O&M charges.	Better O&M than Govt as the system is owned by the farmers who have taken all the responsibilities.	10% extra income after the PP. The PP is collecting the water cess for O&M and the cost also has reduced.	The Govt. has given the power to collect the water cess from the farmers. They think that the water cess has increased after PP.

					Hence the PP is cost effective.	
(3) Maa Rameswari PP.	Vegetable, oil seeds and paddy in Rabi.	Command area has increased to more than 10% after PP. Water use efficiency has also increased. Water is also reaches at lower reach of the command area.	The Govt is giving funds for O&M. Farmers thinki that after being handed over the scheme, the cost of O&M has reduced because they are giving proper interest in cost efficiency of the irrigation.	Farmers are taking more responsibility and supervision of the system.	Extra income. Cost of O&M has gone down. Collective decisions by the PP members and farmers. Farmers' participation has improved and they think that the canal is their own.	Water cess collection has increased after the PP. The Govt. has increased the water cess in kharif i.e.250/hect and 450/hect in Rabi.
(4) Shree Barahanath PP.	No change in cropping pattern.	No increase in water use efficiency because the PP is not working.	No changes in cost of O&M because the farmers are not giving proper interest in cost efficiency of the irrigation due to electricity problems.	The farmers are not keen to develop their skill towards proper O&M.	No extra income. Cost of O&M has not been changed. Farmers' participation has not improved. They do not think the canal as their own.	Changes in water cess collection because farmers are bound to pay the water cess.

					No cooperation from the electricity dept.	
(5) Shree Swapenswar PP.	No changes in cropping pattern.	No increase of command area and water use efficiency.	The O&M has reduced to some extent.	Farmers have no interest towards O&M.	No extra income. Cost of O&M has not been changed. Farmers' participation has improved. No cooperation from dept.	Farmers are paying the water cess.
(6) Shree Lakheswar PP.	Vegetable, oilseeds, paddy, etc.	Increase in command areas. Water use efficiency has increased. Water reaches the tail end of the command areas.	The O&M cost has reduced because the farmers are giving proper interest in the cost efficiency of the irrigation system. Sometimes the farmers are repairing the irrigation system at their own cost. Maintenance cost has been	The farmers think that, they can manage the O&M system of irrigation better than the Govt. because the system is their own and they have more responsible than the Govt. after PP.	Extra income more than 5-20% from the command area and the cost of O&M has gone down more than 20%. So the system of PP is cost effective. Farmers' participation has been improved. Cooperation	After the PP, the Govt. has increased the water cess in Rabi and Kharif and the farmers are helping the Govt. in the collection of cess.

			reduced 20-25% after PP.		among the farmers. Labour class people are getting labour work after PP.	
(7)Maa Baraldevi PP.	Vegetable, oilseeds, pulses.	Command area has increased by 30% in Rabi. Water use efficiency and the cropping intensity have also increased. More farmers are benefited after PP.	The PP is collecting the water cess for repair and maintenance. Farmers are giving proper interest in the cost efficiency of the irrigation. The maintenance cost has been reduced more than 50% after PP.	Taking all the charges of canal system for better O&M. They have greater responsibility and supervision of the system than the Govt. They have keen interest in developing their skill towards proper O&M.	Revenue has been increased by 25%. Cost of O&M has gone down. Farmers' participation has improved and the farmers think the canal system as their own. Cooperation among the chak committee, PP committee and the village committee.	The Govt.has given the power to the PP for collection of water cess from the farmers. So the farmers are under the control of PP. So the collection of water cess has increased after the PP.
(8) Shree Balunkeswar PP.	No change in cropping pattern.	Water use efficiency has not increased. Command	Govt. fund is not sanctioned in time for repair and maintenance.	Farmers have no interest towards the O&M, because they think that the	Extra income has increased from 2-5% after PP. O&M cost has not been	Not known about the change of collection of water cess.

		area has also not changed.	Farmers have no interest towards the O&M. Maintenance cost has been not reduced after PP.	O&M of the canal system is the tax of irrigation dept.	changed. So the system of PP is not cost effective after PP. Farmers' participation has not been improved. They think that the canal is not their own. No cooperation among the PP members, farmers, apex committee members and dept. staffs.	
(10) Maa Budhimangal PP	No change in cropping pattern.	No change in command area and water use efficiency because the PP is not functioning due to electricity problems.	No collection of water cess. Farmers have no interest towards PP due to electricity problems.	Farmers have not taken the O&M charges because the faulty system is not working. So they have no interest in developing their skill towards proper O&M.	No extra income. Members are not getting water after PP. The system is still in broken condition. Farmers' participation has no improved. No	No collection of water cess from the farmers due to defunct PP.

					cooperation from the electricity dept.	
(11) Shree Gatieswar PP.	No change in cropping pattern	No change in command area and water use efficiency.	No sanction of Govt. fund for O&M. Farmers are not interested in the functioning of PP. There is no change in O&M cost after PP.	Farmers are not taken the O&M charges because the PP is not working. Political interference.	Farmers are not being benefited by the PP. They think that the O&M of canal system is the work of the irrigation dept. Farmers' participation has not improved due to non-cooperation among farmers, PP members and dept.staffs.	Govt has changed the water cess in kharif i.e. 250/hect and Rabi i.e. 450/ha. Govt. has forcefully collected the water cess from the farmers.
(12) Shree Kapileswar PP.	No change in cropping pattern. The PP is not functioning.	No change in command area and water use efficiency.	No sanction of Govt. fund for O&M. Farmers are not giving proper interest in O&M.	No responsibility in O&M.	No extra in come. Farmers are not benefited by the PP. Cost of O&M is same before and after PP. farmers'	Changes in collection of water cess because Govt. has increased the water cess after the PP.

					participation has not improved. No cooperation between PP and dept.	
(13) Chhatrapati Sivaji PP.	No change in cropping pattern.	No change in command area and water use efficiency. Farmers are not getting water properly.	No timely sanction of Govt fund for O&M. Farmers have no interest in O&M. The cost of O&M has not changed after PP.	Farmers think the that O&M charges are the work of the Govt.	No profit or extra in-come from agriculture. The farmers' participation has not been improved because there is cooperation between the PP members and farmers.	No changes in collection of water cess.
(14) Pitabali PP.	Vegetable and oil seeds.	Command area has increased and the water use efficiency has also increased. Production of agricultural product has	Collection of water cess for repair and maintenance. Farmers are taking all the charges of the PP and very carefully to the cost efficiency of the irrigation system. O&M	They feel that they have more responsibility in O&M of the irrigation system than the Govt. They are more interested in developing their skills towards proper O&M.	Revenue has been increased by 10-15% after PP and they are getting profit form vegetable and oil seeds after PP. Cost of O&M has gone down after PP. So the	Collection of water charges has increased because the farmers are collecting cess.

		also increased.	cost has been reduced.		system of PP is cost effective.	
(15) TrinathThakur PP.	No change in cropping pattern	Command area has increased but water use efficiency has not increased.	Collection of water cess for O&M, but due to electricity problems the PP is not working. Maintenance cost has not been reduced.	Electricity is the main problem for better O&M of PP.	No extra income. Cost of O&M has not changed after PP. So the farmers are feeling that the system of PP is not cost effective. Farmers' participation has not improved and there is no cooperation between the PP and electricity dept.	Collection of water charges from the farmers.
(16) Kusarla PP.	No change in cropping pattern.	No change in command area and water use efficiency.	No collection of water cess for O&M.	Farmers have no interest towards the O&M because farmers of the lower reach of the command areas are not getting water.	A majority of farmers have no extra income. The cost of O&M is same after PP. Farmers feel that the system is not cost effective.	Farmers are not collecting the water cess for O&M.

<p>(17) Panasakhal PP.</p>	<p>Vegetable, pulses, cash crops (sugar cane), oil seeds.</p>	<p>Command area has increased to more than 20% after PP. Besides, the production and water use efficiency have also increased.</p>	<p>Farmers are collecting the water cess for repair and maintenance of the system. PP is giving the proper interest in the cost efficiency of the irrigation system. Maintenance cost has been reduced more than 20% after PP because farmers have taken over all the charge of PP.</p>	<p>The farmers are taking more responsibility in O&M than govt. because they are keen to develop their skill to wards proper O&M.</p>	<p>Revenue has been increased. Farmers are getting extra income from agriculture. Cost of O&M has gone down after PP. s Hence the PP is cost effective. Farmers' participation has been improved because the farmers think that the canal system is their own.</p>	<p>Govt. has given the power for collection of water cess from farmers and they are collecting the water cess. So there is a change in collection of water cess.</p>
<p>(18) Sukru Behera PP.</p>	<p>Change in cropping pattern. Vegetable, sugar cane.</p>	<p>Command area has increased after PP and water use efficiency has increased.</p>	<p>Collection of water cess for repair and maintenance. Farmers are giving proper interest in the cost efficiency of the irrigation understandably</p>	<p>They are taking better O&M than Govt. Farmers are participatory managing the irrigation system and more responsibility. They have keen interest in</p>	<p>They are getting more profit in their agriculture after PP. Revenue has been increased more than 15%. Cost of O&M has gone</p>	<p>There is an increase in water cess, because they are collecting the water cess from all the farmers in time.</p>

			in value of their money. Operation and maintenance cost has been reduced 20-25% after PP.	developing their skill to wards proper O&M.	down. So the system of PP is cost effective. Farmers' participation has been improved. They think the canal system as their lookout.	
(19)Jaya Jaganath PP.	Paddy in Rabi season.	Command area has changed.	Collection of water cess for repair and maintenance. Cost of O&M has been reduced after PP.	All the O&M works are done by the farmers who have taken more responsibility than the Govt.	Getting more production from their field. Cost of O&M has gone down. Farmers' participation has improved.	They are collecting the water cess from all the farmers in Rabi and kharif after PP.
(20) Shree Shree Girigobardhan PP.	No change in cropping pattern because the PP is not working.	Command area has not changed.	No sanction of Govt. funds for O&M.	Farmers have no interest for O&M because the irrigation systems are not working.	The cost of the system is not cost-effective because farmers are not getting any benefits from the PP, and participation of farmers has not improved.	Farmers are not getting the water in Rabi. So, there is no increase of water cess collection.

