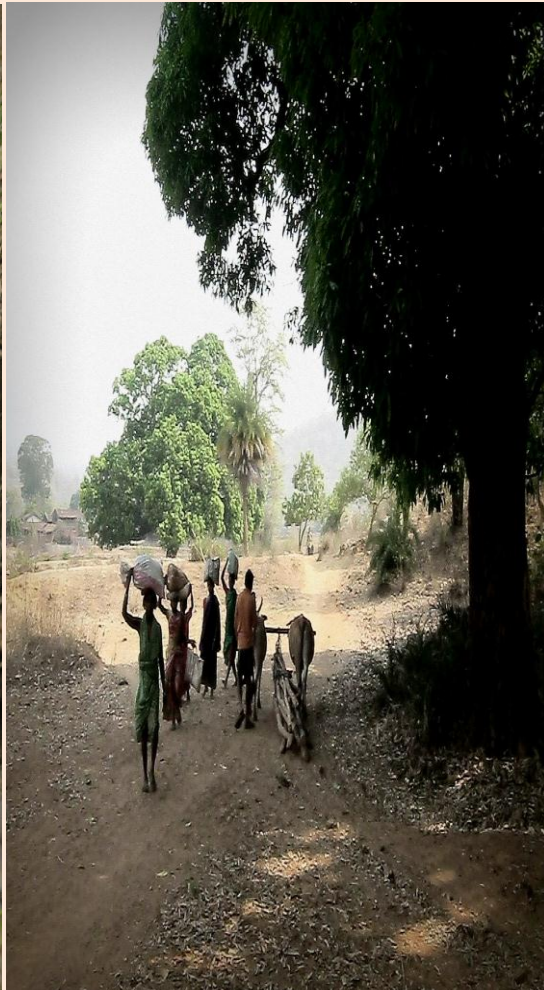


Enhancing Livelihood Through Diversion Based Irrigation In Odisha

(The Case Of Two Remote Indian Villages)



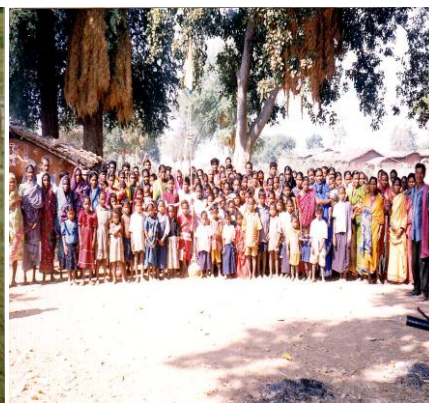
*Combating water Scarcity and socio-economic deprivation
Through the effective use of Water resources
in Dudkarenga and Barbandha villages of M.rampur,Kalahandi*

Implemented By



Supported By

SIR DORABJI TATA TRUST AND THE ALLIED TRUSTS



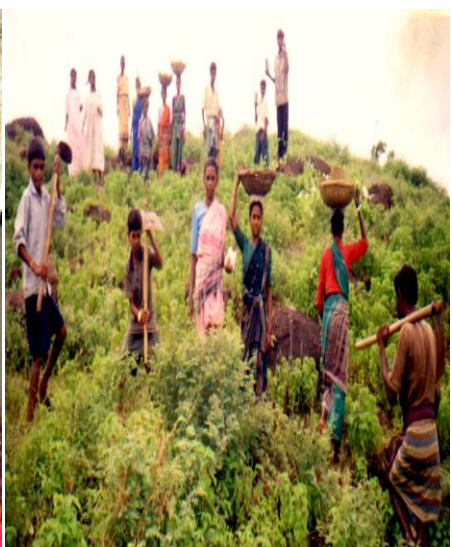
About the Organisation.

AJSA is a root level Community Based organization(CBO) based in bolangir district of odisha in india, Facilitating community development initiatives since 1989,working towards the root cause of Poverty and social injustice and for the down trodden and under privileged section of the Society. It is a non political, non-profit motive social development organization involved in sustainable development initiatives since inception. AJSA was formed by by local poor people of bongomunda block in the bolangir district,to work for the socio-economic development of small and marginal farmers,land less labour,agricultural labour,bonded labour as well as women, children and other weaker deprived section's of the society. The vision of the organization is to draw upon grass root level workers, volunteers, and suppressed people of the society and work with them to create awareness for sustainable development through constructive work and struggles. Its strategy is to empower the vulnerable sections of the society by building their capacities, for the cause of overall development of the communities in backward regions, by focusing on under privileged sections of the society in ground section from the beginning. The sphere of its work are governed by issues related to agriculture,livelihood,health,education,environment and Disater Risk Reduction etc.

Operational Area's Of AJSA



AJSA'S mission is to utilize the natural resources, Human resources and physical resources most judiciously for the Sustainable Socio-economic development of the society and empower the unprivileged sections like SCs, STs, Women, Disabled persons, Small and marginal farmers. Such that they too can become the part of mainstream development activity.



Summary

Odisha is one of the Poorest state in India, And in Odisha KBK(Kalahandi,Bolangir,Koraput)Regions are famous for massive poverty and hunger for last many Years.And from these District's kalahandi is considered as the most backward district in odisha.Till now Many of the villages in kalahandi are non-electrified, people live in un employment,poverty,Water scarcity and communication problem's,And these problems are the main obstacles in the development scenario of kalahandi and their location suggests that in the next 20 years they will remain so.Basically Farmers are dependent on traditional way of agriculture"6 Months Agriculture and 6 months Rest" because of unavailability of water resources and rain,after harvesting their crops in 6 months,basically they are jobless for another 6 Months.That's why hundreds of peoples are migrating every year for to full-fill the needs of their family and Hunger. There is no alternate, either they have to choose migration to metro's with their family and children or they have to face poverty and hunger for the next year. And the incomes generated from NTFP product marketing are just hand to mouth for few families. Many examples exist,Agriculture is the main source of livelihood,for these villagers, Farming in one season impacting their livelihood capacities. "This is the need and way" from which they can able to full fill basic needs of their families. But without proper irrigation it has not been possible. Even if certain facilities provided by Government, they are beyond tribal reach. Drinking water is an issue as water is drawn from contaminated streams. Many of the Tube wells are defunct in this area.

Through a grant from the Jamset Ji Tata Trust a wing of,Sir Dorabji Tata Trust and Allied Trust (SDTT)Mumbai, AJSA launched a Diversion Based Irrigation(DBI) initiative in kalahandi District of Odisha,to bring sustainable livelihood of most vulnerable families by implimenting diversion based irrigation initiative by addressing food security and climate justice in M.Rampur block of Kalahandi.

Now the diversion based irrigation systems are providing irrigation to the un-irrigated area's.And now it has become the main source of livelihood generation for the people having land as well as it's providing wage employment to the landless also. It is expected that each of the farmers taking irrigated agriculture would have at least an additional annual income of **Rs7000** from the scheme in the up-coming year. Now villagers are able to develop kitchen gardens, through the help water provided to them, near their homestead land's and it also helping women's to use water for their daily household works. The scheme is now becomes inclusive by providing benefit to all families in some other way and builds the stake of the community for its operation and maintenance. After adoption of irrigation the tribal's have been able to address their other needs of health and clothing to a large extent their total perspective has changed.

The diversion based irrigation systems are extremely sustainable. Gravity transports the water using zero energy, which makes the project extremely financially viable. The combined benefits make this innovative system the most inexpensive and environmentally sustainable design for water-supply systems.

THE D.B.I PROJECT INITIATIVE

Background

In Odisha, Specially Kalahandi has been brought to the centre of discourse on hunger and poverty by media reports in last few Years. In Kalahandi access to food is denied not because of lack of livelihood opportunities and purchasing power alone, but in a majority of the cases hunger is the consequential effect of the process conditioned by power structures that reflect socio-economic and political contradictions in the community. The high magnitude of poverty and hunger in Kalahandi is a cumulative result of underdevelopment and the iniquitous socio-economic and political structure. Kalahandi, which was popularly known as rice bowl of Odisha, now has become history. Today it conspicuously figures on the map of poverty and hunger and is synonymously used for terminologies like starvation and starvation deaths.

Despite rich natural resources, people live in dire poverty. Lack of communication, education and livelihoods worsens the situation. And water scarcity is the biggest problem of this area, whether it is in the form of drinking water or in the form of agricultural water supply, Tribal's have no access to better irrigation and other modes of water supply to their lands. It is in this context that AJSA (Anchalika Jana Seva Anusthan), a organisation based in this region, came forward with Sir Jamset ji Tata Trust, Mumbai to set up Diversion based irrigation projects in M.rampur block of kalahandi district. The villages selected were Barbandha and Dudkarenja located in Kalahandi District, all tribal dominated villages facing acute livelihood insecurities, poor health and sanitation, low incomes and water scarcity. The project began on 1st June 2011, to enhance living standards and provide sustainable Irrigation.

Under this project two pipe flow earthen channel based diversion based irrigation systems is implemented to provide irrigation both during Kharif and Rabi season. In this type of irrigation system, the farmers would not have any regular operational cost and would only have to contribute for the maintenance of the scheme. This would provide the first generation farmers an incentive to take up improved agriculture. Their capacity is to be gradually enhanced to help them achieve food sufficiency and have surplus cash income to meet their other expenses. The project would be developed as a model in the project area and sensitize government to take up similar projects in the district.

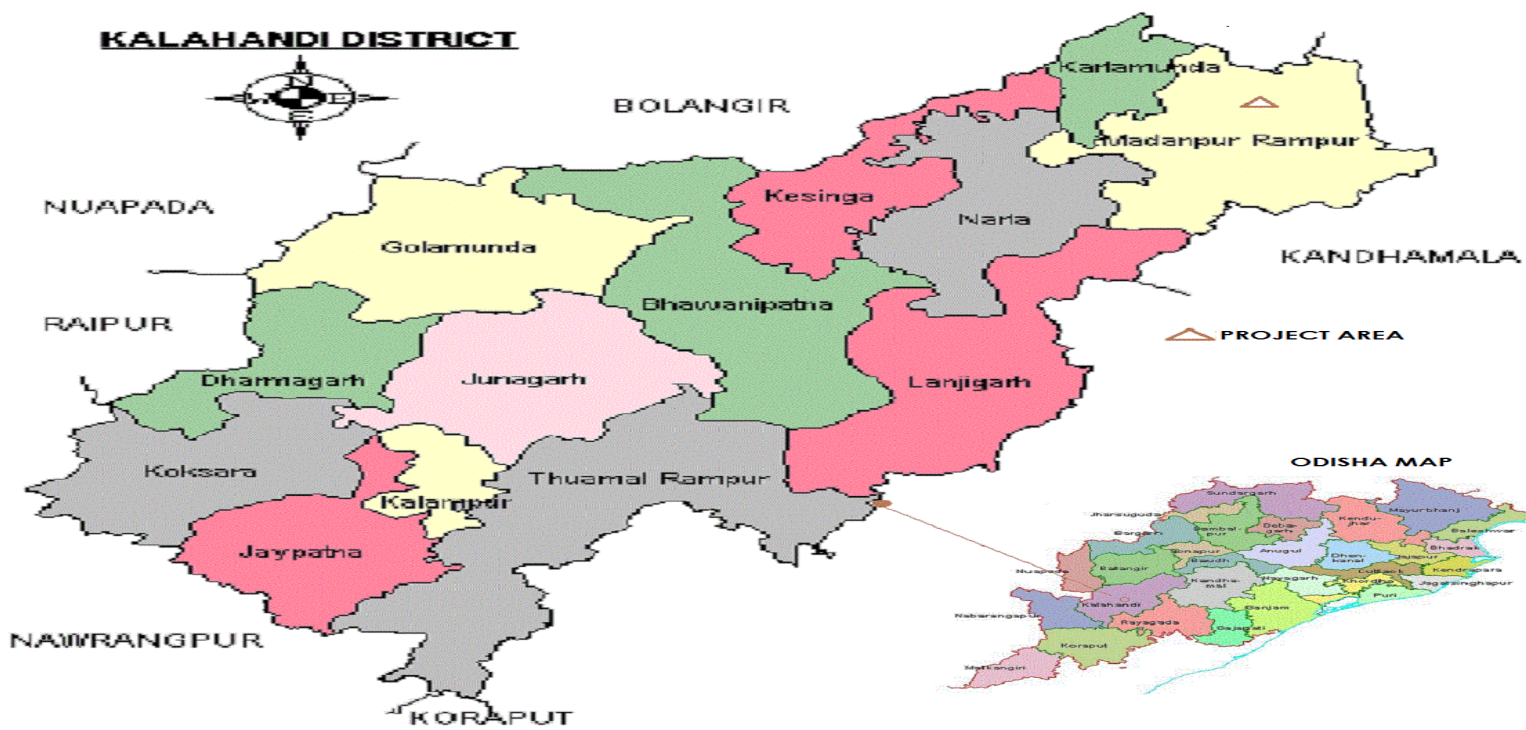
(Water management committee Meeting)



(Bhumi puja before pipe Fixing)



KALAHANDI DISTRICT



PROJECT AREA



SL No	Name of the Block	Name of the Village & G.P	Area in Sq.Km	Total House Hold	POPULATION				BPL Holder
					S C	S T	Others	Total	
1	M.Rampur	Dudkarenja	452	85	144	185	-	329	76
2	M.Rampur	Barabandh	270	152	244	304	54	602	132

OBJECTIVES

Improve the livelihood of the tribal and rural people of Barbandh and Dudkarenga Villages Of M.rampur Block in Kalahandi district through diversion based irrigation initiative addressing food security and climate justice aims to facilitate through involving the people with innovative approaches on community based natural resource management. And to ensure Irrigation for 931 people in 237 tribal families,Including 168 farmers, covering 306 Acres of land in Barbandha and Dudkarenja villages of kalahandi. specifically to:

- Creating employment opportunity during each succeeding year i.e. @ 120 man days at average per acre coming double crops.
- Striking at the very root cause of migration in the locality. As well as improving the socio-economic condition of the people which mainly depends on agriculture
- Boosting food production at least two folds in the same land.
- To develop and conserve natural resources of the nearby developing small irrigation structure and provide irrigation facility to the un-irrigated and waste lands.
- To provide the sustainable irrigation facility with the community management and improve the water management skills of tribal farmers by indigenous way.
- To make action research to develop new intervention strategies for socio cultural and economic development of the downtrodden people of the drought prone area.
- To provide opportunity use the water and streams and improve the irrigation potentiality.

Program Findings-

i. Fulfilment Of Objectives

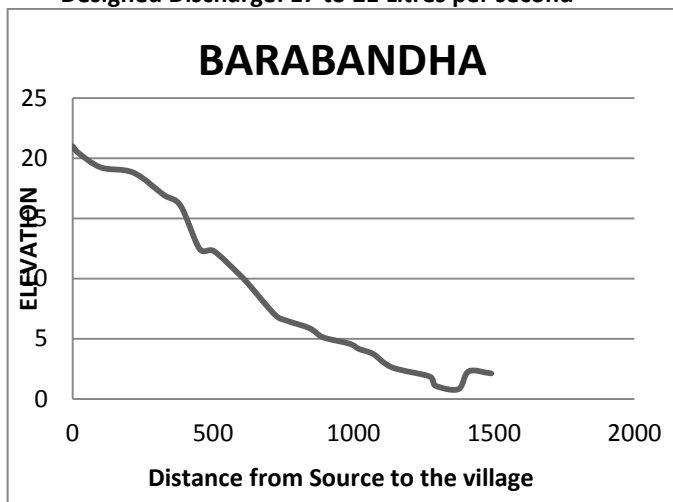
Activities	Rating's		
	Very Satisfactory	Satisfactory	Quiet Satisfactory
Community mobilization	✓		
Implementation strategy preparation		✓	
Project implementation		✓	
Capacity building of beneficiaries on improved agriculture and water management	✓		
Improved agricultural practices	✓		
Documentation & Evaluation		✓	

BENEFICIARY DETAILS

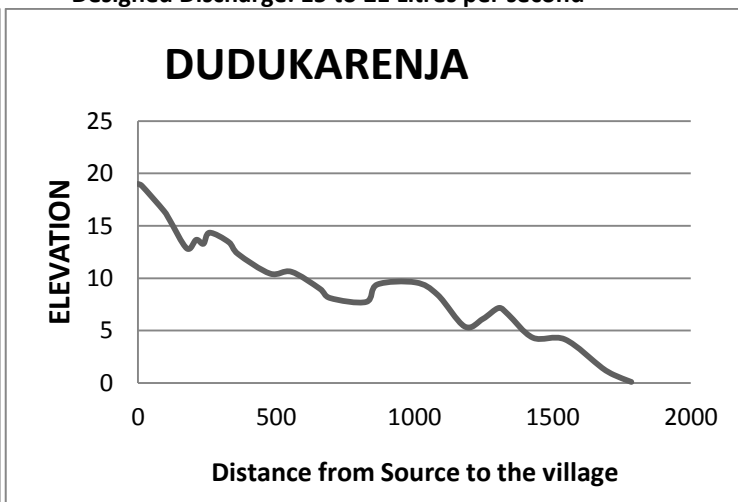
VILLAGE	POPULATION COVERED	TOTAL LAND (In Acres.)	LAND COVERED BY DBI	No. Of Beneficiary's (Farmer's)	Name Of The WUA Formed By Villagers
BARBANDHA	602	358	132	42	Baba Rameswar WUA
DUDKARENJA	329	314	204	39	Singhabahini WUA

ii. Project Design and Implementation

Designed Discharge: 17 to 21 Litres per second



Designed Discharge: 15 to 21 Litres per second



(DBI Technical Map of Project Villages)

The scheme implemented by A.J.S.A directly under the technical guidance of Livolink Foundation, Bhubaneswar. The staff of A.J.S.A have provided support for the implementation of the scheme. GPS's and VDC's have played a crucial role in motivation, community mobilization and leveraging labour contribution from the beneficiaries. The entire irrigation system was managed by the "Water User's Association (WUA)" formed by the the target beneficiaries of Barbandha and Dudkarenja. The Water user association have prepared the frame work for effective and timely sharing of water among the beneficiaries. The capacity building of the target families for improved agricultural practices was also carried out by A.J.S.A in collaboration with agriculture and horticulture departments. The entire task was coordinated by the local dynamic leaders, and community level representative. Everything is done with labour contribution by the villager's.



Participation is the key here..

- The Fully 2 villages are owned and maintained; Community participation is the key here; everything is done with labour contribution by the villagers of the Dudkarenja and Barbandh. A Village "Water Management Committee" monitors progress, ensures participation, sustainability & maintenance and organises meetings. It records connection details, functioning of check points and total supply of water. Selection of committee members is done in their Respective villages.
- 306 Acres of land belonging to 81 Farmers in Dudkarenja and Barbandh was brought under assured irrigation through 2 Diversion Based flow irrigation systems.
- Every month the village people are contributing Rs.50/- to meet the maintenance cost of the the total system in future. The amount raised from contribution, is kept in shape of deposits in village funds (Gaon Panthi) and operated by Village water Users Association. Ghasiram Ghadei from dudkarenja, Khusiram patra from barabandha, Coordinating and maintaining fund collection in their respective villages .
- A village Grain Bank to be opened and run by the 2 villages itself.
- Regularised monthly collection for maintenance fund Raghav panadara and Bhagya patra are the collectors.
- Anti liquor moment will be started in the region as per the demand of the Women leaders.



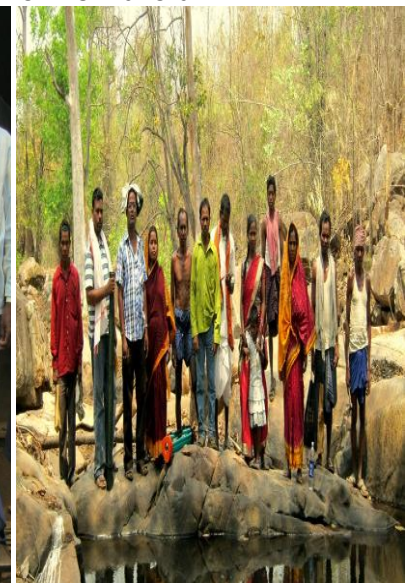
ii. Project Output and dissemination

To improve the technique of cultivation, better utilisation Of water resources and for improved agriculture, AJSA has undertaken 5 Workshop's and 2 GP level training's in the project area's in collaboration with Agriculture and Horticulture Department .Here many farmers were participated,including 65 male & female participants from 2 G.P's.Trainings are provided on Improved agricultural practices like SRI and vegetable cultivation and kitchen gardening.The farmers have urged their view's, problems and they have share their best practices also. Programme executives of AJSA and Mr.Sachidanada Bagarty from Agriclture Dept. have shared the innovative techniques and Methodology's of SRI Cultivation and vegetable farming new procedure of cropping, to the farmers. In a training programme WUA members of 2 villages were trained on operation and maintenance of irrigation systems along with crop planning and water sharing techniques and vegetable seeds were also distributed by SHG leaders to the farmers at free of cost at Barbandha.



In a workshop Mr. Kamakhshi Prasad Padhi (Senior Manger (DBI) from Livolink foundation, Bhubaneswar) joined and briefly mentioned about the need, purpose and outcomes of the project ,and he explained that, how the project would help the community to earn livelihood where hunger & poverty is a common issue, and also he gave many valuable things and suggestions to the farmers of two villages. A group discussion was also held with the SHG members, on the same day.

After the succesful imliplimentation of the project in Dudkarenja and Barbandh, An exposure trip of 14 farmers and SHG members of Bolangir was made to these 2 villages of M.rampur,in view to study the functioning of Diversion based irrigation channel by AJSA and operated by locals.They have seen practically how 4 farmers successfully implemented SRI cultivation in their land the villagers of gave some their traditional farming knowledge to the visitors



iii. Capacity Building

The organization has imparted training on capacity building during our training season's. Almost 45 Youth Participants, SHG leader's, VDC (Village Development Committee) and farmers were took part on this program and strengthened their leadership quality. During the reporting period efforts have been taken to bring the women and adolescents in the fore front of meetings and programs. They have proved themselves skilled to lead the community around them. By the level best effort of AJSA, now some of the women leaders are able to speak their views and suggestion in village meeting's and confident to fight against their rights. Our trainers provide training about Govt. programmes and people's rights and the duty and responsibility of a citizen. They collectively work together on common action.



Project Management Section

At the initial stage the village survey and MLP was conducted by AJSA, 3 staff of AJSA appointed for this project, they have involved from the beginning to end of the implementation of the project. AJSA took all the technical help & guidance from Aaditi services in collaboration with Livolink foundation. Mr. Sanjay ku. Ray (Professional Engineer, water policy analyst and water resource management expert) gave valuable suggestions, monitored installation and technical expertise till the end of the project. The VDC and WUA members are involved in the total management of the project, they have tracked the process from the beginning to end by ensuring participation, maintenance and sustainability of the total system. AJSA will evaluate the complete process for the next upcoming years with the WUA members to check the sustainability of the total process.



LEARNING FROM DUDKARENJA AND BARBANDHA

- People prefer irrigated water from supply pipes to Diesel motor and Pumps that are expensive and often not available.
- Tribal communities can participate in water security and new technology is welcome.
- People can Plan for better livelihood.
- A Self Sustaining management system of water resource can be appropriate and effective.
- Disseminating diversion based irrigation in remote areas like Dudkarenja and Barbandh has multiple impacts.
- The range of initiating a number of Income generation activities is creating a demand in the neighbouring villages.



Impact In The Project Area's..

Before initiation of irrigation almost all the villagers of Dudkarenja and Barbandh were small farmers and bonded labourers with the landlords of the neighbouring village in . Their cultivable lands were lying fallow. They were getting about 10 *manns* or 30 kgs of paddy and 250-350 rupees per month as their wage. Those who were working as daily labourers for the *Mahajans*, were getting 3 *sola* or 2 *adda* (1-1.5 kg) paddy and 40-50 rupees per day. The other thing besides rice, which they used to partake, was the root of some of the plants in the forest. Apart from these powdered tamarind seed and mango kernels also formed part of their diet. After adoption of irrigation the tribal's have been able to address there other needs of health and clothing to a large extent their total perspective has changed.

Now there is a new perspective into livelihoods, the tribals here take pride in getting recognized as farmers. Although they still haven't given up shifting cultivation but the incidence has reduced. It's from here that they primarily get their cash crops. A lot of efforts need to be given to get them into settled cultivation, once they see a positive cycle of surplus crops from



this, will they desist from shifting cultivation. The Diversion Based Irrigation System that has been developed on the gravity flow concept in the village has improved the crop production potential considerably. Now all farmers have assured irrigation for their fields year round. This has lead to 2 crop cycles,i.e. Kharif and Rabi in a given year. While food security has been addressed to by and large, the need to go for intense cultivation for surplus cash crops is still a distant reality.

The project now can be demonstrated as a model in the project area and sensitize government to take up similar projects in the district. After the successful implementation of these irrigation system in these 2 villages, farmers are started working for the second phase of cultivation,in their own fields with irrigation now available to them.



Overall Assessment

We are deeply grateful to Sir Dorabji Tata Trust(SDTT) who supported our work,And provided us the opportunity to focus on our action to the poor tribal's of Kalhandi and help them to enhancing livelihood opportunity .We extend our gratitude to all the members of SDTT and Livo Link foundation who gave their valuable time, support and guidance, without them the initiatives would not have possible.Again we are thankful to SDTT on behalf of the tribal communities of Dudkarenja and Barbandha for giving them a improved livelihood Opportunity and building their capacities.

For More Deatails,Or To Order any Publications Of AJSA

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