Detail information about JALANIDHI-I

What is Jalanidhi?

The aim of Jalanidhi project is to increase in irrigation potential through individually owned Lift Irrigation Projects i.e. Shallow tube wells and Bore wells in Odisha.

NEED THE PROJECT:

The need of the project is to augment the existing irrigation facility of the State and cover as much area as possible under privately owned lift irrigation points for assured irrigation and tide over drought situation in these affected districts. The dug well- cum- recharge well will improve the ground water level of the area.

PROJECT OBJECTIVES:

The State of Odisha is endowed with rich land and water resources. The prosperity of the State depends upon effective and optimal utilization of these resources. Although Agriculture is the main stay of the people of Odisha, its productivity level has remained low compared to most other parts of the country. The main obstacle in the increase of productivity is the lack of irrigation facilities and near total dependence on rain-fed Agriculture.

Out of net cultivable area of 63.00 lakhs ha. only 23.93 lakhs ha. and 11.37 lakhs ha in Kharif and Rabi respectively are covered under flow irrigation from major, medium, and minor irrigation projects. Odisha has vast ground water potential which is available for exploration. So far, about 21% of ground water resources have been tapped for irrigation purpose. Thus, there is scope for further exploration of ground water resources up to 70% of the total recharge per year, which will go a long way in expanding area under irrigated agriculture.

As per the survey conducted by Central Ground Water Board, Ministry of Water Resources, Government of India, it has been found that 15.42 lakhs ha.mt of net ground water resources are available for utilization in the State which is inclusive of the 21% ground water resources already explored. Annexure-II gives details of district-wise utilisable ground water (col-13) excluding the explored resources, we have still 11.94 lakhs ha.mt of ground water resources which can be utilised for irrigation purpose. Lot of area can be covered under these untapped resources of irrigation by installing Shallow Tube wells, Deep Bore wells.

Dug wells are suitable options wherever installation of Bore well or any other type of irrigation structure is not feasible. These dug wells if designed specifically can be beneficial to recharge the ground water while providing irrigation to 0.75 ha. of land.

The objective of the project is to help the farmers creating their own irrigation projects for assured irrigation and also to sell water to nearby farmers while increasing cropping intensity to 300%. Such a project is highly beneficial not only to the farmers but also to the state in expanding area under irrigated agriculture leading to increase in production and productivity. These projects would reduce farming risk due to drought at any time of the year, by providing assured irrigation.

It would also increase food security and farm income particularly for small / marginal (General) and SC, ST farmers.

IMPLEMENTATION PROCEDURE:

The execution of the project will be done following the operational guideline recommended for promotion of private lift irrigation points under State Agriculture Policy-2008 & 2013 and the addition/alteration made there in from time to time. The procedure adopted under Agriculture Policy for the same is elaborated below:

Lift Irrigation Structures permissible under the scheme:

(i) **STW-** Shallow Tube well will be executed in alluvial areas including inland river basin. 3" or 4" dia ASTM 40 PVC pipe is to be used for casing pipe and filter purpose. The entire drilling portion will be fitted with casing as well as slotted pipes for STW. The surface pump of 1.5 to 5 HP capacity is to be used for lifting water from the STW.
No submersible pump is allowed in STW and the STW having more than 4" dia will not be consider for subsidy purpose.
Minimum distance between two adjacent shallow tube wells should be 200 meter having discharge more than 3 liters/Second.

(ii) **Bore well -** Bore well will be executed in fractured and fissured hard rock zones. The confined aquifer zone can also be tapped by the execution of bore well. 150mm dia ASTM 40 PVC casing pipe, HDPE column pipe(PN-6.0 of IS 4984/1995) and three core cupper submersible cable of required length is to be used in Bore wells.
Slotting in casing pipe is not allowed for bore wells.
Submersible pump of 1.5 HP to 5 HP capacity will be used depending upon the water yielding capacity of the BW, requirement of the farmer, availability of electricity etc.
Minimum distance between two adjacent Bore wells should be 200 meter having discharge more than 1.75 liters/Second.

The farmer is free to select type of pump set, i.e. electrical or oil engine according to the financial ability and feasibility of power source available within the reach. The farmer can avail the benefit under Biju Gramya Jyoti Yojana(70% subsidy) for energisation of pump set in PLIPs. The farmer select the pump set of adequate HP consulting the AAE at the time of well development considering the head and discharge of the well.

No Shallow tube well will be installed in saline affected GPs as execution of STWs in saline affected areas is bound to create more draft which may disturb the existing fragile balance between saline and fresh water zone and will cause irreversible damage affecting the drinking water sources.

Eligibility

I. All farmers irrespective of size of land holding(s) will be entitled for assistance under the scheme. The persons entitled to avail subsidy under the scheme include an individual, a body of individuals, registered NGOs or companies encouraging contract farming in the farmers land.

II. This facility will be available only to lift irrigation points utilized for agriculture purposes.

III. The farmer who is interested to execute the PLIPs with or without bank finance can be considered.

Application

Every farmer irrespective of their land holding who intends to set up a lift irrigation point shall apply through online.

On receipt of the application the AAO would visit the spot to make sure interalia that there is no L.I. point already existing as per the notified distance norms and that the land selected is suitable for the purpose. He will give a go ahead letter to the applicant or object to his application within 7 days of receipt thereof. The DAO, AAE & AAO would be responsible for certifying that the application does not relate to a lift irrigation point already existing.

Feasibility Test of Bore wells

As Bore wells are not feasible everywhere, it is necessary to scientifically go for a feasibility test. The Directorate of Ground Water Survey and Investigation of Odisha as well as the private empanelled VES consultants will take up sounding test/VES Test through their field formations to assess the feasible sites in the farmers' field for installation of Bore wells. The Bore Well can be constructed without sounding /VES test at the risk of the farmers. Only the successful bore wells having the minimum discharge of 1.75 liters/second will be eligible for subsidy purpose.

Execution

The farmer is free to get the L.I. point installed by OAIC, OLIC, the private agency out of the panel approved by DA&FP, Odisha for the purpose or by self execution. The project after execution will have to be inspected by the AAE of the concerned area designated for the purpose. In case of bore-wells/ shallow tube wells / direct lift projects, the insertion/laying of the pipes should be carried out by the farmer or his executants under the supervision of the inspector who would certify the type, quality and quantity of materials used. The execution will be done as per the guidelines formulated under this scheme.

Selection of materials and pump sets

ASTM Sch-40/ ISI marked PVC Pipes and Pump-sets of BIS / ISI mark will be used for installation of PLIPs. The materials/items and pump-sets should be purchased from a registered dealer having valid TIN / SRIN number, mentioning the make, model and serial number.

Assessment of the Cost of the Project

After the completion of the project the AAE evaluate the project cost by considering the actual data as per the measurement and as per the purchase invoice(having valid TIN / SRIN number) submitted by the beneficiary/executants and the permissible limit for the purpose of the subsidy. The permissible limit of different items of measurement is notified by the department of Agriculture from time to time.
Then the AAE submit the subsidy proposal to APICOL for release of subsidy.

7.8 Subsidy admissible

1. **STW –** 50% of the project cost subject to a limit of ` 20000/. In addition, in case of cluster of 10 nos. or more STWs the cost of electrification will be borne by the Government subject to a ceiling of ` 4/ lakh per cluster.
2. **Bore well** - 75% of the project cost subject to limit of ` 50,000/-( excluding cost of electrification) in addition 75% of electrification cost subject to a limit of ` 50000/.

Release of Subsidy

The funds relating to the subsidy will be placed with APICOL. All eligible claims will be paid by APICOL directly to the beneficiaries through DBT to their bank A/C under intimation to the Krishi Sahayak Kendra (KSK) and the A.A.O. concerned. In case of a loan linked scheme, disbursement would be made to the financing institution directly on account of the borrower through DBT under intimation to the Krishi Sahayak Kendra and the borrower.

Recovery of Subsidy

If an asset created under this scheme is transferred by the beneficiary within 5 years of release of the subsidy, the entire subsidy will be recovered from him as an arrear of land revenue. Before disbursement of subsidy, the beneficiary has to execute an agreement with Krishi Sahayak in the prescribed format.

PROJECT BENEFITS AND YEAR OF FLOW:

- The project would benefit an area of 0.16 lakh hectares with assured irrigation.
- Raise cropping intensity to 300%
- Will result in improving food security and increased farm incomes.
- Will generate employment and improve income earning opportunity for providing livelihood support.

Since the project consists of several Micro irrigation projects, whose construction hardly take between 5 days to 15 days time, the benefit would start flowing immediately after completion of the first cropping season (i.e. 6 to 8 months time).

Borewell with submersible pumpset (6" dia 60 m deep)

Annexure - IV-B

Sl.No.	Item	Rate	Quantity	Unit	Amount		Remarks
		Rs./Unit					
	Part - A Driling and lowering of casing pipe						
1	Site Survey , Selection &sounding test	1500.00	1	Survey	1500.00		Also eligible for subsidy after successful drilling without sounding test
2	Drilling charges (150mmX125mm)	550.00	60	Meter	33000.00		Includes the cost of lowering of 150mm Dia casing pipe
3	PVC ASTM Sch.-40 Casing Pipe of 6" dia	650.00	30	Meter	19500.00		
4	Pipe fittings and accessories	1200.00	1	Well	1200.00		Includes all pipe fittings
5	Washing and development	1500.00	1	Well	1500.00		10 hours development is carried out using diesel pump
6	Transportation and installation	1500.00	1	Well	1500.00		Includes all activities for completion of borewell
7	Taxes (VAT) item 3 & 4 only @5%				1035		VAT and surcharge as applicable
					59235.00		
					59200.00		
	Part - B for 2 hp Submersible Pump set energisation						
1	Basic unit of 2 hp submersible pumpset (Including Tax)	19500	1	Set	19500		VAT and surcharge as applicable
2	63 mm OD HDPE column pipe (PN-6.0 of IS 4984 - 1995)	125	30	Meter	3750		
3	3 Core cupper submersible cable	65	35	Meter	2275		
4	Electrical fittings & pannel board	3500	1	Set	3500		
5	Accessories	1000	1	Set	1000		
6	Transportation & Installation	1500	1	Set	1500		
7	Taxes (VAT) item 2 to 5 @5%				526.25		
8	Pump House	9000	1	No.	9000		
	Total :				**41051.25**		
	Say :				**41100.00**		
	Part - C for Electrification						
	Electrification	70000	1	No.	**70000.00**		(As per actual)
	Grand Total				**170286.25**		
	Say				**170000.00**		

N.B.

I) For additional depth beyond 60mt depth Rs. 550/- per meter may be provided

II) The price of PVC pipe refered above is based on ASTM (Sech. 40) / IS PVC thread pipe

III) The pump Number, Engine number, Make, Model, and HP of the pumpset has to be written clearly on SRC

IV) The Plot number on which the Well has been drilled and distance from other nearest irrigation well in m. to be certified by AAO

V) The VAT (TIN/ SRIN) number of the Pumpset / fittings supply farm must be examined / ensured by KSK. Bills without VAT nos must be rejected by KSKs

VI) Uniformity of the price of the pumpset & accessories has to be maintained at KSK level

Annexure - IV-A_2

Unit Cost calculation of 4" diameter PVC Shallow tubewell

Sl. No.	Item	Unit Cost	Unit	Amount in Rs.	Remarks
1	VES Test	1000	1	1000.00	
2	Drilling Charges	250.00	45	11250.00	Maximum diameter of drilling is tubewell dia plus 6".
3	Blank G.I. Pipe(4" Dia)	550.00	1.5	825.00	Maximum length allowed is 1.5 m with VAT
4	Blind G.I. Pipe(4" Dia)	550.00	1.5	825.00	Maximum length allowed is 1.5 m with VAT
5	PVC Sch.- 40 Casing Pipe	350.00	33	11550.00	Entire length of the well - (Length of Blank Pipe+ Blind Pipe+Filter)
6	PVC Slotted Pipe (4" Dia)	450.00	9	4050.00	Maximum length of filter allowable is 9 mtrs.
7	Pipe Fittings & Accessories	2000.00	1	2000.00	Includes all pipe fittings and hand pump
8	Well Development	500.00	1	500.00	Development using diesel pump
9	Transport & Installation	750.00	1	750.00	Includes all related activities for completion of tubewell
10	Gravel Packing (Cum)	950	2	1900.00	
11	Pumpset (3.0 hp elect.)			12500	
12	Pump Accessories			500	
13	Taxes (VAT)- Item 3 to 7 and Item 12			988.00	VAT as appilicable @ 5%
14	Pump House			9000	
	Grand Total			**57638**	
	or Say			**57600**	

N.B. I) The price of PVC pipe refered above is based on ASTM (Sech. 40) / IS PVC thread pipe

II) Filter length exceeding 9mtrs will be priced as blind pipe for subsidy calculation purpose.

III) The pump Number, Engine number, Make, Model, and HP of the pumpset has to be written clearly on SRC

IV) The Plot number on which the Well has been drilled and distance from other nearest irrigation well in m. to be certified by AAO

V) The VAT (TIN/ SRIN) number of the Pumpset / fittings supply farm must be examined / ensured by KSK. Bills without VAT nos must be rejected by KSKs

VI) Uniformity of the price of the pumpset & accessories has to be maintained at KSK level

Annexure - IV-A_1

Unit Cost calculation of 3" diameter PVC Shallow tubewell

Sl. No.	Item	Unit Cost	Unit	Amount in Rs.	Remarks
1	VES Test	1000.00	1	1000.00	
2	Drilling Charges	200.00	45	9000.00	Maximum diameter of drilling is tubewell dia plus 6".
3	Blank G.I. Pipe(3" Dia)	450.00	1.5	675.00	Maximum length allowed is 1.5 m with VAT
4	Blind G.I. Pipe(3" Dia)	450.00	1.5	675.00	Maximum length allowed is 1.5 m with VAT
5	PVC Sch.- 40 Casing Pipe	250.00	33	8250.00	Entire length of the well - (Length of Blank Pipe+ Blind Pipe+Filter)
6	PVC Slotted Pipe (3" Dia)	300.00	9	2700.00	Maximum length of filter allowable is 9 mtrs.
7	Pipe Fittings & Accessories	2000.00	1	2000.00	Includes all pipe fittings and hand pump
8	Well Development	500.00	1	500.00	Development using diesel pump
9	Transport & Installation	750.00	1	750.00	Includes all related activities for completion of tubewell
10	Gravel Packing (Cum)	950	2	1900.00	
11	Pumpset (3.0 hp elect.)			12500	
12	Pump Accessories			500	
13	Taxes (VAT)- Item 3 to 7 and Item 12			740.00	VAT as appilicable @ 5%
14	Pump House			9000	
	Grand Total			**50190**	
	or Say			**50200**	

N.B. I) The price of PVC pipe refered above is based on ASTM (Sech. 40) / IS PVC thread pipe

II) Filter length exceeding 9mtrs will be priced as blind pipe for subsidy calculation purpose.

III) The pump Number, Engine number, Make, Model, and HP of the pumpset has to be written clearly on SRC

IV) The Plot number on which the Well has been drilled and distance from other nearest irrigation well in m. to be certified by AAO

V) The VAT (TIN/ SRIN) number of the Pumpset / fittings supply farm must be examined / ensured by KSK. Bills without VAT nos must be rejected by KSKs

VI) Uniformity of the price of the pumpset & accessories has to be maintained at KSK level