



TRIF INITIATIVE

Irrigation Infrastructure Creation
Through Collaboration with
JSLPS, Govt. of Jharkhand

Transforming Irrigation for **8000+ Farmers** in Rural Jharkhand, India

The recent SECC data shows that

- Jharkhand as one of the states with the highest percentage (17% above national average) of families owning land.
- 76% of the households have highest earning members earning less than Rs. 5,000 pm.
- The State produces barely half of its food grains requirement (the country is surplus by 9%) and the state has been classified as "extremely food insecure State".
- Only 10.6% of the state's net sown area is under irrigation

With agriculture as the major source for rural employment, low water conservation and irrigation development leads to lower and vulnerable agricultural productivity; make food security and subsistence the primary concern of the rural population of Jharkhand. The key bottleneck in enhancing farm-based livelihoods is lack of irrigation facilities

The Government of Jharkhand seeing the need for reducing monsoon dependency of agriculture production and to give impetus to farm prosperity has sanctioned an ambitious pilot grant of Rs. 100 Cr. to SRLM (JSLPS). The focus of the block-grant is to demonstrate at scale the potential of micro irrigation schemes in securing livelihoods for small-holder families and in developing robust "Agriculture Production Clusters" (APC).

About State Irrigation execution cell

State Irrigation execution cell (SIEC) is part of TransformRural India Foundation (TRIF), conceptualised in response to the challenges of irrigation in stranded India, characterised by hilly and mountainous geography, rain dependent farming, stagnant crop productivity, acute nutrition and food insecurity by forging collaboration with the community institutions, government and market actors driven by technology, professionalism, restricted or zero use of conventional energy, timely execution to meet aspiration of smallholder farmers in highly changing irrigation led farming eco system.

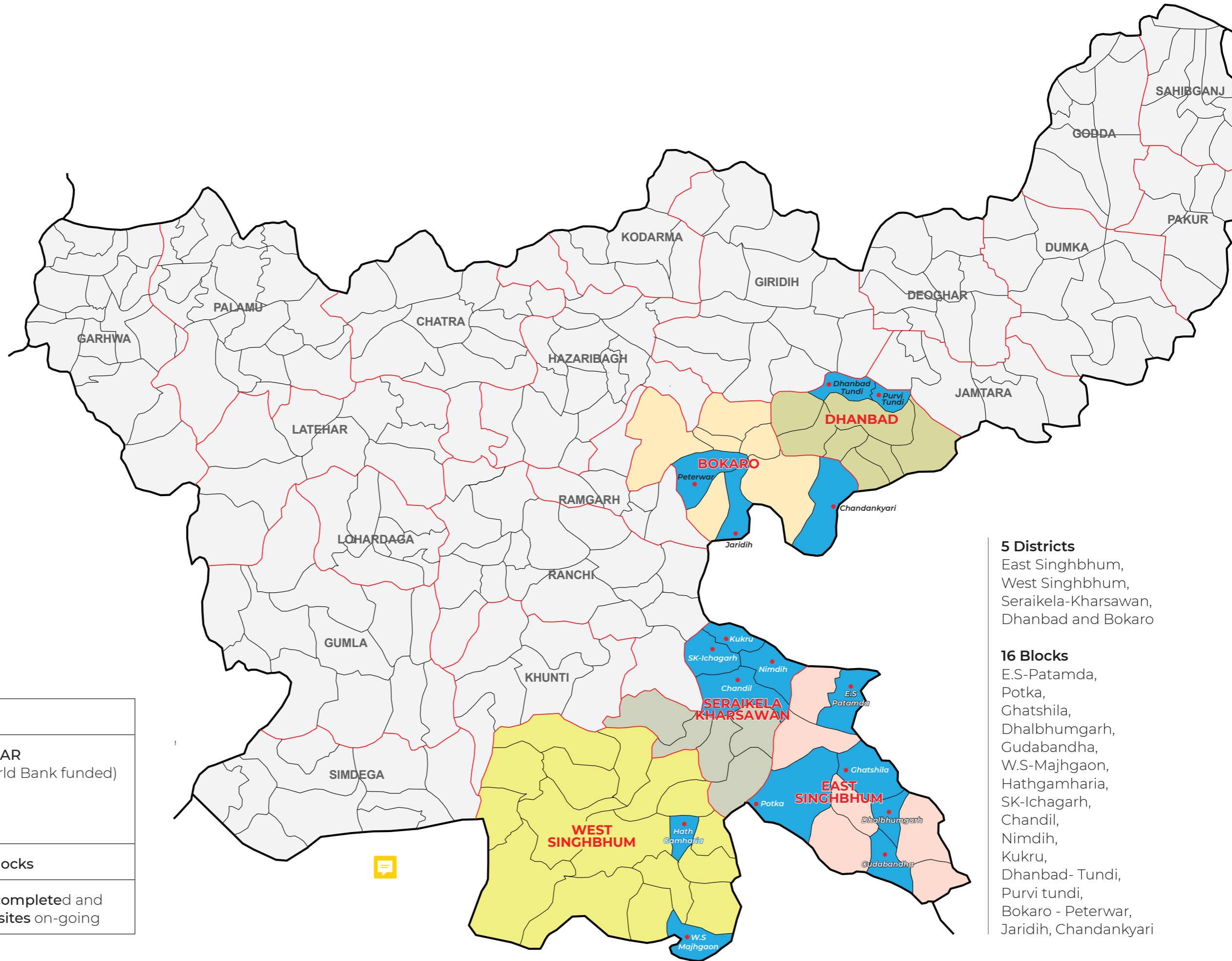
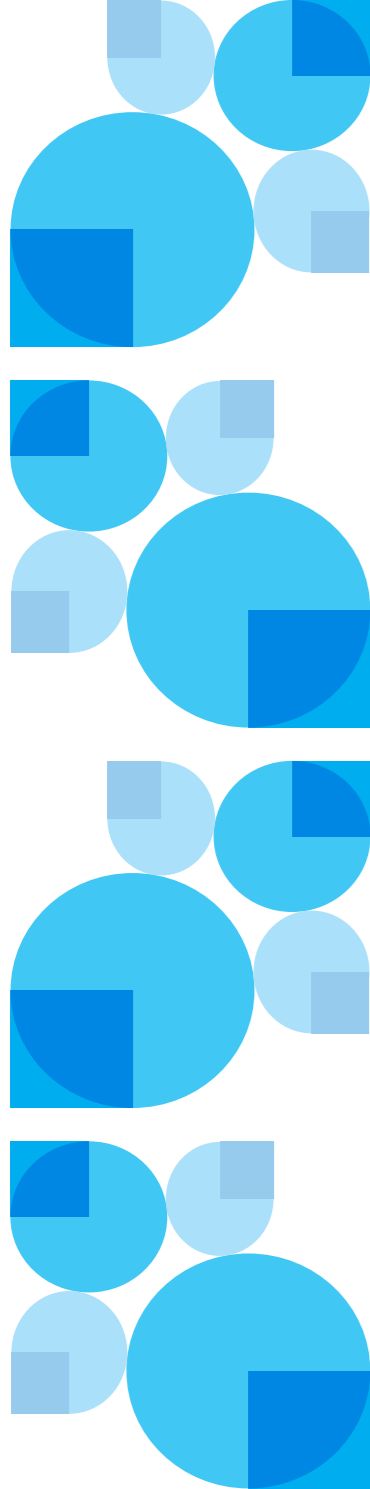


3. Objectives of SIEC

- Utilisation of surface runoff water for irrigation. This CMMIS program emphasized the use of renewable energy (Solar, Gravity) for irrigation.
- Provide additional irrigation to Producer Group members and other villagers to increase cropping intensity of 200%.
- Promote low cost modern irrigation system aligned to national irrigation programme and schemes (PMKSY)
- Targeted to provide direct benefit of 17000HH through irrigation
- Bring barren and unproductive land under cultivation & increase cropping intensity (above 250%) through infusion of modern technology
- Reduce migration and renew interest in farming amongst youth
- Crop diversification in favour of cash crop and connect farmers to expanding market
- Promote and capacitate water user groups to effectively manage irrigation assets and create interest and contribute in holistic village development
- Enhance disposable income, nutrition and food security of participating families

8000 +
Farmers





5 Districts
 East Singhbhum,
 West Singhbhum,
 Seraikela-Kharsawan,
 Dhanbad and Bokaro

16 Blocks
 E.S-Patamda,
 Potka,
 Ghatshila,
 Dhalbhumgarh,
 Gudabandha,
 W.S-Majhgaon,
 Hathgamharia,
 SK-Ichagarh,
 Chandil,
 Nimdih,
 Kukru,
 Dhanbad- Tundi,
 Purvi tundi,
 Bokaro - Peterwar,
 Jaridih, Chandankyari

SIEC	
CMMIS (Direct funding from Rural Development Dept. & Welfare Dept., Govt. of Jharkhand)	JOHAR (World Bank funded)
7 blocks	16 blocks
500 Irrigation system implemented	118 completed and 227 sites on-going

4. SIEC Process

COMMUNITY MOBILISATION

Identification and appraisal of irrigation sites

Water source and patch selection

Technical survey, data collection and interpretation into software

Coordinate with vendors in scheme implementation

Facilitate WUG for scheme implementation

Water User Group (WUG) Promotion and training

DPR preparation

Completion scheme and testing

Utilization certificate preparation form VO/WUG

Scheme closer formalities (Technical/finance) and handed over to WUG

5. Community Engagement with SIEC

Awareness events are conducted to inform farmers about the irrigation project, site selection criteria, project financing, implementation process and role of farmers. These events are referred to as Campaign, are held in project villages, block office and local weekly market of village hatia. Campaign is expected to create interest and demand for irrigation. Interested farmers formally apply for the scheme in a prescribed Application form.



Irrigation schemes entail execution of a series of activities

- (a) civil structures and
- (b) irrigation equipments (pipe, pumps and accessories).

Within these two broad categories there are several sub activities, some of which (pump house) could be taken up as a stand alone activity and some activities as dependent on others (pipe placement and fittings to be preceded by trenching). These activities are implemented by three different agencies (WUG/VO and Vendor).

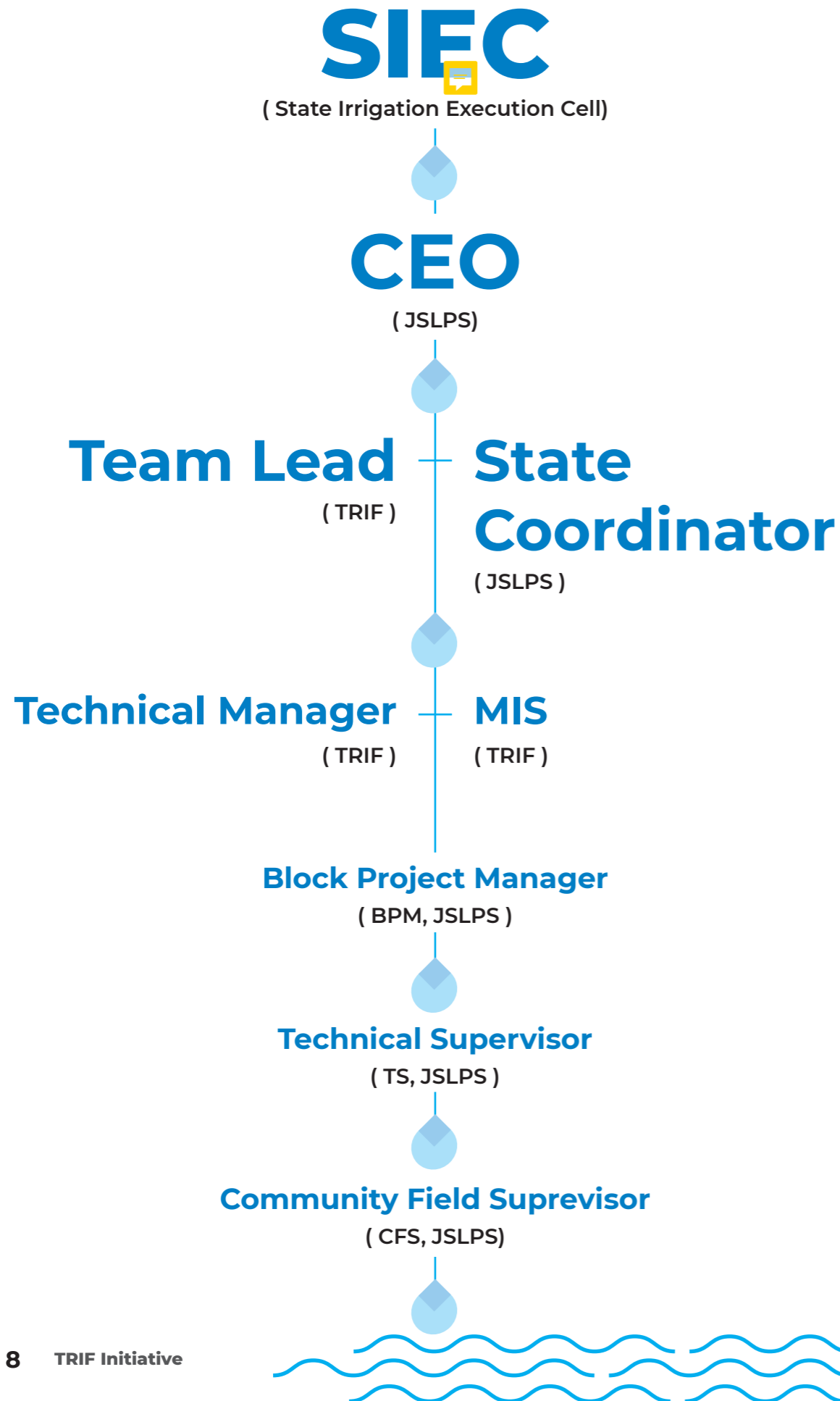
Civil works executed by WUG/VO -

1. Pipe trench- digging and refilling
2. Water collection structure (Intake well /sedimentation tank)
3. Pump house

The WUG have huge responsibility to guide implementation and also execute certain activities themselves. One day training is organised to discuss various technical, material purchase and financial aspects.



6. Our Professionals-



SIEC is responsible for overseeing scoping and overall technical feasibility of schemes, finalisation of appropriate models and estimation, management of irrigation software, procurement and tendering, project scrutiny, and capacity building of the staff as well as community through i-PFT. TRIF is also providing support in form of developing GIS enabled MIS system which is also helpful in developing DPRs.

1. Grooming and monitoring of block level LI teams
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13. Training of WUG on improve agriculture practices.

7. Facilities for farmers



A Irrigation Manual



B Solar technology based micro-lift irrigation system at zero cost to farmers (100% subsidy from Jharkhand government)



C Handholding support

- Site selection
- Formation of Water User Group
- Technical Support in installation and maintenance of irrigation system
- Agriculture know-how for agriculture production cluster
- Agri-entrepreneur cadre creation for organic input supply

Present Outreach:

- Total **888 sites** surveyed
- **786 DPR** prepared (worth ~ **Rs. 48 crore**)
- **617 DPR** approved (worth ~ **Rs. 36 crores**)
- Funds disbursed in **345 schemes** (worth ~ **Rs 22 crores**)
- **118 schemes** completed till date (worth ~ **Rs 8.6 crores**)
- **227 schemes** (Pump House erected/started)

8. Success of SIEC

Total Schemes	546
Fund released to Village Organisations	546
Irrigation schemes commissioned	476 (average 17 acres, 17 farmers per site)
Final commissioning pending for old schemes	24
New sanctioned schemes to start in March	41
Kharif Intervention	10,074 farmers
Total irrigated area created (Acres)	6694
Barren/unproductive land reclaimed for cultivation (Acres)	1250
Cropping Intensity (% , Base 112)	250
Area under cash crop (%)	70

State funded programme

- Lakhpati kisans in 15 schemes (documentation pending)
- Migration reduced/stopped amongst farmers in the region
- Special drive to grade WUG on eight parameters, to attain A grade for 50% of groups
- **Scheme commissioning started in Raidih block**
- Allowing land conversion to agricultural land and its utilisation
- Irrigation asset utilisation, timely field operation leading to improved agriculture (to be quantified)
- Crop diversification (cash crops/Vegetables), and work on Agriculture

Solar Scheme Types:

- 3hp Model:** Source Existing well by GOVT/Private
- 5hp Model:** Source Natural stream/river or creation of new seepage well & intake well
- 7.5hp Model:** Source Natural Stream/River

Organogram for Johar Project:

Producer Group	JOHAR Team	TSA Team
<ul style="list-style-type: none"> • Primary selection of patch • After approval fund will be parked to PG account • PG excavate new well if mentioned in DPR • PG will install fabricated pump house through vendor • Overall responsibility owned by PG • WUG will be promoted for maintenance of scheme 	<ul style="list-style-type: none"> • BMMU/DMMU/SMMU will be overall incharge of administrative and commissioning of the scheme • BMMU with TSA select para irrigation engineer as a cadre for irrigation • BMMU team will closely support PG for proper implementation • BMMU/DIC support PG for vendor finalization and UC preparation 	<ul style="list-style-type: none"> • As per list of patches provided by PG TSA personnel conduct technical surveys of sites. • Prepare DPR as per technical and social data • Provide training to Cadre and PG for understanding DPR and process of scheme commissioning • Support PG for proper implementation of schemes as per DPR

Social Responsiveness Covid-19

- a) Distribution of dry ration to **1577** vulnerable families identified jointly by our field staff and representatives from **64 villages** across **5 blocks** (Angara, Bengabad, Jama, Khunti, Satbarwa),
- b) Covid awareness and demonstration of set of precautionary measures related to personal and community hygiene in **165 villages**,
- c) Awareness creation on wage creation programmes viz. MGNREGA with special focus on Plantation programme

9. How it will sustain further

Some idea about its sustainability, showing that even if we change our geography the ongoing work is ensured to continue transforming the lives there

- a. Since the irrigation structure is 100% government funded, to ensure maintenance and optimal utilization of infrastructure and resources, Water User Groups for each site have been created. They collect water usage charges and maintain it in a common bank account so as to take care of any future maintenance requirements.
- b. **SIEC Funders and Supporters**

TATA TRUST

JOHAR (World Bank funded project

TRIF in partnership with TSRD is providing technical support as Technical Support Agency (TSA)

10. About TRIF



TRIF is a civil society initiative to bring about a paradigm change in the key indicators of rural life. TRIF supports NGOs working at the grassroots, to move towards achieving the common goals.

The initiative has been developed by the Tata Trusts as a strategic step to enhance the impact of its ongoing interventions. The initiative is based on joint explorations of the aspirations of rural communities with its long-standing partner PRADAN, and a joint commitment to work towards it. The Trusts has further provided support for engagement with state governments, including bringing in technology solutions for improving delivery efficacy, as also setting up expert teams.



SUCCESS STORIES

1 Sani Urav farms in his family land of 9.5 acres in Sahitoli of Nawagarh village." Earlier I could manage rain fed agriculture in half of the land and leaving remaining land barren". Through Mahila Vikas Mandal Raidih and JSLPS Sani learned about the Lift Irrigation program. With the Lift irrigation system, Sani is now able to irrigate the remaining farmland which went unused earlier. With grit he says " I have increased income of INR 60,000 with vegetable farming and it has shouldered the family income."



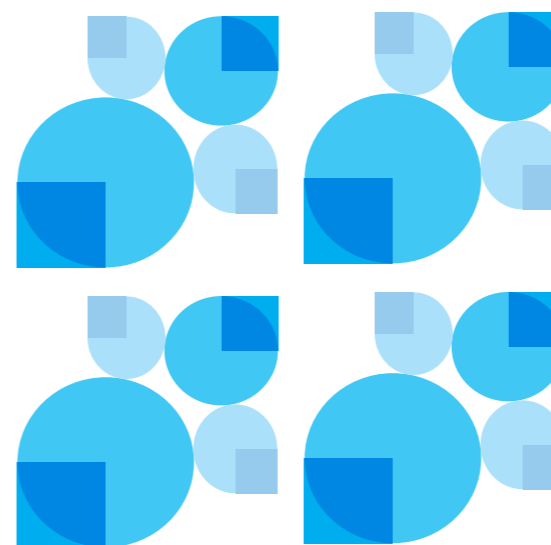
2 Family of Edward Lohra from village- Nawagarh (Shahi toli) block- Raidih, district Gumla is dependent on Agriculture income. To sustain the livelihood of 7 family members, Edward shares "I could only harvest on Kharif crop mainly Paddy, Maize and pulses in 4 acres, only 0.2 acres of land could be used for vegetable cultivation.due to unavailability of water irrigation system." Earlier in 2006, Edward did use Lift irrigation but it required Diesel and he could not bear that additional cost. "With support of Lift Irrigation Samiti by JSLPS, has made possible to irrigate the land with vegetables, incur additional income", -Edward



3 From Kuchu Village, Agar, Kashi Tola Prano devi shares that her livelihood is dependent on Agriculture. She and her husband Kalicharan Mahto learned about the Irrigation program by JSLPS, to share it with more people, they held a Group meeting in the village. A group of 18 farmers have come together in Kashitola Jal Upbhokta Samuh , Mahto is Group Secretary and has ensured Water pump. With the scheme, Mahto family can "utilise the entire 1 Acre of Agricultural land which was earlier limited to 20/30 Di in summer months". Family income of Mahto has increased from 1,25,000 to 2,10,000.



4 The community managed lift irrigation scheme on the Deeda Dah in Pochi Panchayat of Satbarwa Block is proving to be very effective for the farmers. During interaction with Baldev Mehta, the farmer of Dainaha Dah, he told that, "a total of 5 in his family Members, depended on the total annual income was around 120000 through farming." Regarding the scheme, Didi said that the information about this CMMIS was received by the members of the IPFT appointed for the scheme, in which they were informed to form a group of 10 farmers. "In a farmer meeting, it was decided that a group of farmers whose land would be eligible for pattan or whose land would be irrigated under this scheme, would be formed. The Kisan group was prepared to put a plan on the debtor dah and a copy of an application was prepared by the farmer group and given to the State Office jspls. When the sanctioned amount for the scheme was released in the village organization, the members of the village organization and the farmers group, who showed preparedness completed the work related to the construction of the scheme.

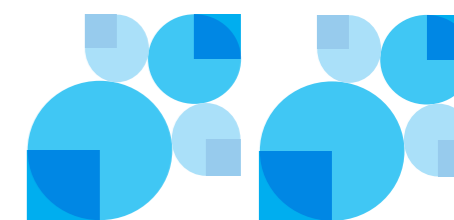


"On total land is of acre, we have cultivated Nenua, Gourd, Cucumber, Mircha, Bodi, Tomato this year. This year, Didi has made a total income of 50000 in Kharif season, 20000 in Rabi and 30000 in summer.

5 During the conversation with Sarita Devi and Pradeep Mahato, he said that after the community managed lift irrigation scheme, all kinds of crops could sustain with water supply. Earlier, "we had to depend on motor or diesel run pumps, due to the high price of diesel, it became difficult to irrigate for a long time and the power-based motor also had to depend on electricity to run. Power was often lost during irrigation." At that time, they had to wait for a long time to get electricity. Sometimes worked at night time as the day time power supplies were irregular.



Farmers have now installed solar energy pumps for irrigation and have secured hasslefree day time farming. Unlike last year, "where only paddy or wheat was left behind, this year farmers could grow, Nenua] Okra [Lady gourd] Tomato] Chillij Watermelon] Bodi] bitter gourd etc. vegetable cultivation is being done on a large scale."





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