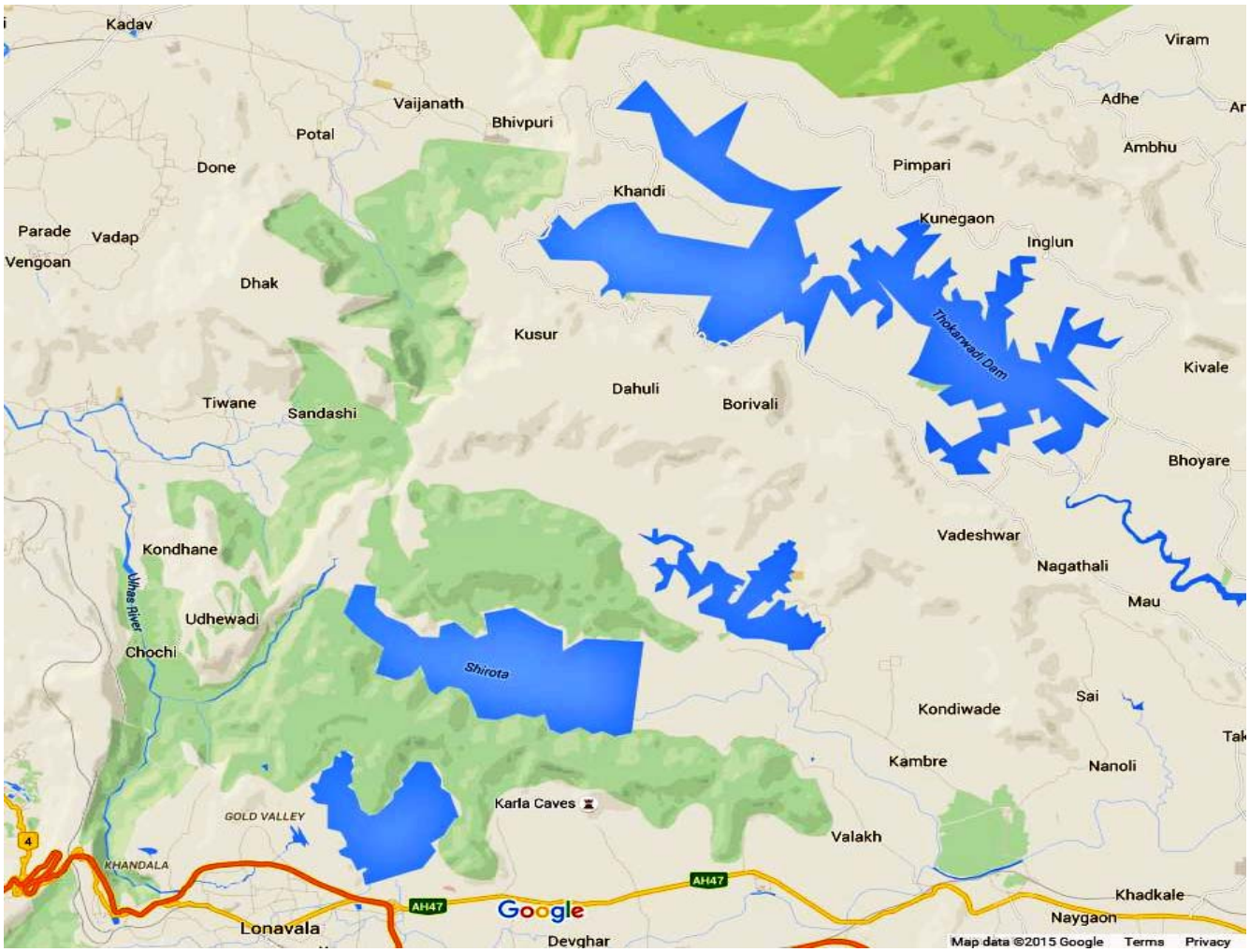
Innovative Technological Development for strengthening water, sustainable agriculture and livelihood interventions by

Tata Power Community Devp Trust | **Tata Power Pvt Ltd** | **Rural Communes**



Project Areas

- Four catchment areas – Bhivpuri Catchment area of Karjat Tribal Block of Raigad District and the three Catchment areas – Thokerwadi, Shirwata and Kundli Catchment areas of Maval Taluka of Pune District.

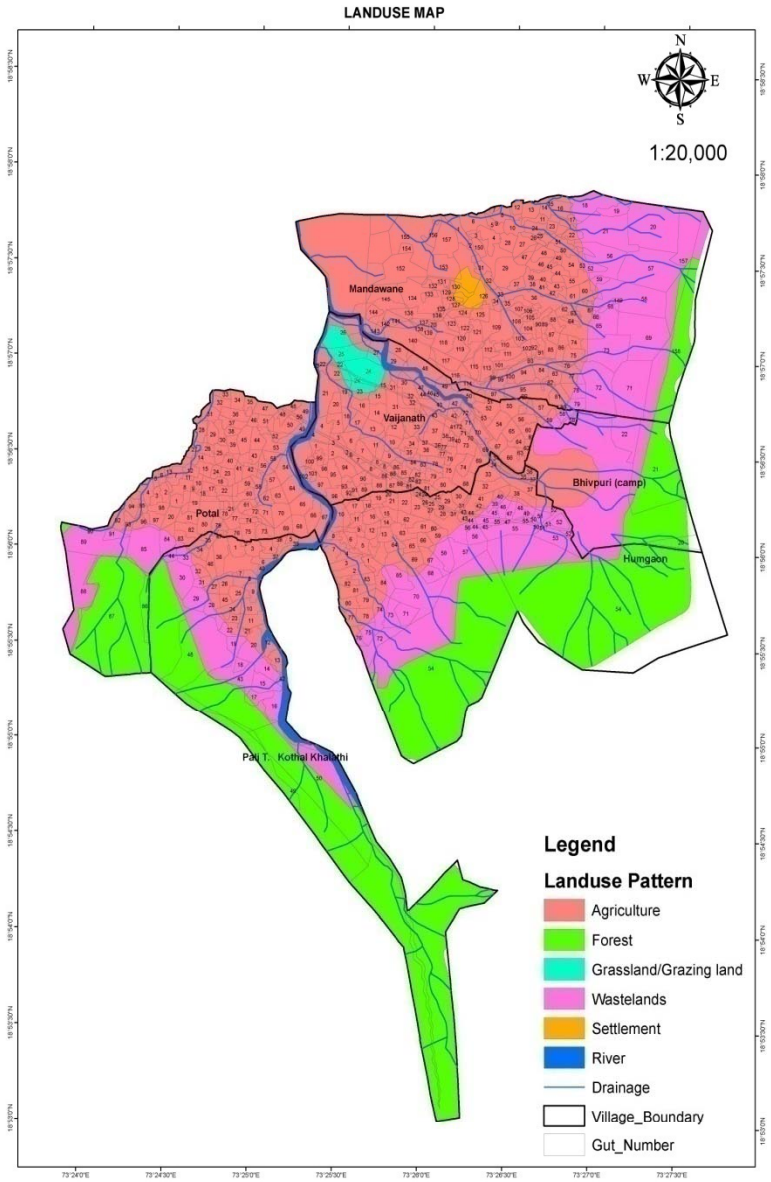
Clusters	Total		First Phase 2015-2018		Second Phase 2018-2021	
	R. Vil	H.H	R. Vil	H.H	R. Vil	H.H
Bhivpuri	9	1949	9	1280	9	1949
Thokerwadi	24	2149	13	1840	24	2149
Shirwata	4	298	4	280	4	298
Kundli	6	252	6	300	6	252
Total	**43**	**4648**	**32**	**3700**	**43**	**4648**

Objective

- To implement innovative technological activities in surrounding Tata Power's Bhivpuri Power House and Catchment Areas of Andhra, Thokerwadi, Shirwata and Kundli Lakes for comprehensive sustainable development to secure water, livelihood and environment security

Target Groups

- Tribals (Kathodi, Koli Mahadeo, Katkari, Thakar, Tokare Koli), Women, Small & Marginal Farmers, Landless and Artisans.



Planned Activities -

- Survey and Participatory Planning
- Rainwater Harvesting & Water & Land Management
- Promotion of Innovative Agricultural Intensification
- Promotion of On Farm / Off Farm allied small scale activities
- Organisations, Capacity Building & Knowledge Management

RC’s Achievement

Survey, Participatory Planning and Village Meetings

Rainwater Harvesting

- Desilting and repair of well - directly benefit to local communities - irrigation for vegetable cultivation in Rabbi

Water & Land Management

- **Farm Land Water Management**

- **Drip Irrigation**
- **Installation of Treadle Pump**
- **Diesel Engine**

Land Management – Land Levelling

Sr. No	Village Name	Total Farmer (Covered)	Per Farmer area (Covered)	Land Leveling under Cultivated Total Area (Acre)
1.	Talpewadi	45	10 Gunthe	11.25
2.	Malegaon Khurd	35	8 Gunthe	7

Landlevelling

Before

After

Promotion of Innovative Agriculture Intensification

Seed Distribution

Paddy Seed Distribution Kharif 2016
Thokerwadi, Shirwata, Kundli & Bhivpuri Clusters

No.of Village	No.of Farmer	Variety	Cast		
			SC	ST	Other
12	775	Komal	23	122	529
	326	Ratna	31	98	311
	48	Small Ratna	11	4	20
30	879	Fulsamarudhi	492	216	527
	936	Indrayani	133	4	799
	40	Kolam	7	8	25
42	3004		697	452	2211

Groundnut Seed - Thokerwadi

Village Name	Total Farmer	Total Bag	Area
Wadeshavar	64	21	10 Acer & 20 Gunthe
Lashakarwadi	25	12	6 Acer
Shindewadi	18	11	5 Acer & 20 Gunthe
Wahangaon	24	12	6 Acer
Malegaon Khurd	18	6	3 Acer
Talpewadi	27	9	4 Acer 20 Gunthe
Mau	14	8	4 Acer
Nagathali	8	4	2 Acer
Davnewadi	2	1	20 Gunthe
Ghatewadi	2	1	20 Gunthe
Dahuli	2	1	20 Gunthe
Ingalun	52	20	10 Acer
Kusur	20	5	2 Acer & 20 Gunthe
Savala	28	9	4 Acer 20 Gunthe
	304	120	60 Acer

Groundnut Seed – Kundli & Shirote

Village Name	Total Farmer	Total Bag	Area
Bhajgaon	2	0.75	20 Gunthe
Kolwadi	4	1.75	1 Acer
Nesave	8	4	2 Acer
Shirde	21	6	3 Acer
Somvadi	4	2.5	1 Acer & 10 Gunthe
Total	39	15	7 Acer , 30 Gunthe

Potato Seed – Thokerwadi

Village Name	Total Farmer	Total Bag	Area
Lashakarwadi	7	15	1 Acer , 10 Gunthe
Shindewadi	4	12	1 Acer
Malegaon Khurd	3	3	10 Gunthe
Wadeshawar	14	19	1 Acer,20 Gunthe
Gabalewadi	6	12	1 Acer
Mau	16	30	2 Acer , 20 Gunthe
Vahangaon	5	11	1 Acer
Kusavali	1	1	2 Gunthe
Savala	1	1	2 Gunthe
Nagathali	7	14	1 Acer , 10 Gunthe
Total	64	118	11 Acer, 34 Gunthe

SRI Cultivation – Kharif 2016

Sr. No	Village Name	Total Farmer	Total Area
Kundali & Shirde Cluster			
1	Shirde	13	7 Acre
2	Jambhuli	9	4 Acre 20 Gunta
3	Nesave	2	30 Gunta
Total		**24**	**12 Acre and 10 Gunta**
Thokerwadi Cluster			
4	Malegaon Khurd	38	18 Acre
5	Talpewadi	44	19 Acre
6	Sawala	33	22 Acre
7	Kusur	11	7 Acre
Total		**126**	**66 Acre**

SRI Cultivation – Kharif 2016

Sr. No	Village Name	Total Farmer	Total Area
Thokerwadi Cluster			
8	Malegaon Bhudrukh	2	2 Acre
9	Wadeshwar	17	11 Acre
10	Nagathali	12	15 Acre
11	Wahangaon	2	1 Acre
12	Kusavali	1	20 Gunta
13	Mau	5	4 Acre & 20 Gunta
Total		165	100 Acre

Climate Resilience Sustainable Agriculture (crops, trees, grasses, nutrition and medicinal plants species)

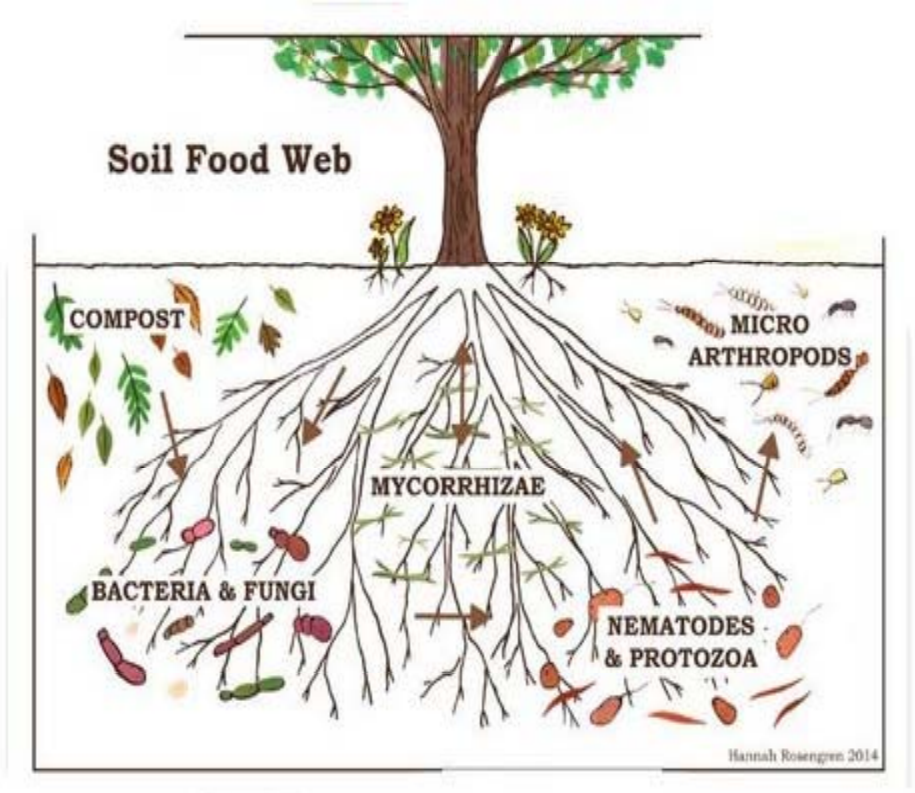
Benefits of Intensification Systems of Crops & Trees –

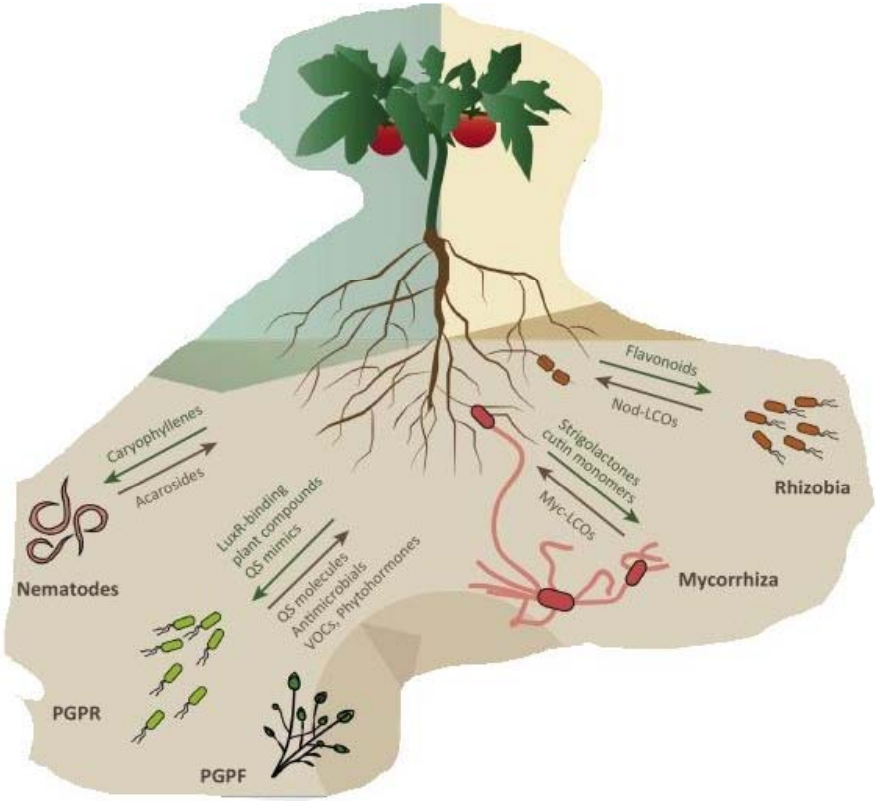
- Drought resistance - Because plants develop larger and healthier root systems, and are established at an early age, the plants are most resistant to drought and periods of water stress.
- Resistance to lodging. With stronger root systems and tillers, in part due to the greater uptake of silicon when soil is not permanently saturated, plants show remarkable resistance to wind, rain and storm damage.
- Reduced time to maturity. When intensification methods are used properly the time for maturation can be shortened by as much as 15 days, even while yield is increased. This reduces farmers' risk of agronomic or economic losses due to extreme weather events, pests or disease and / or frees up the land for other production.
- Resistance to pests and diseases.
- Living fungi & soil bacteria by produce natural glue binding the soil together thus stopping of soil erosion and increase the water holding capacity
- Intensification models to cover sustainable agricultural production, value chains, sustainable diets and ultimately sustainable food systems

SRI v/s Conventional (traditional)
1 Acre of Land

Conventional (Traditional)		SRI	
Seed Required	40 Kg	Seed Requirement	2 Kg
Rice Plant	69840	Rice Plant	23280
Tillers per plant	19 No	Tillers per Plant	40 No
Grain per panicle	71 gm	Grain per panicle	115 gm
Total Quintal	14	Total Quintal	27

Application of Living Organisms, Bio Fertilisers and Bio Pesticides





Application of Living Organisms, Bio Fertilisers and Bio-Pesticides

Agriculture Benefit

Agriculture Benefit

Agriculture Benefits

Group Vegetable Farming Cowpea

Total Farmers – 9

Cultivation Area – 3 Acres

Yield - 15600 Kgs

Total Income – Rs.4,68,000

Each Farmer Benefit – Rs.52,000

Group Farming - Ladyfinger

Total Farmers – 76

Cultivation Area – 43.20 Acres

Yield – 117450

Total Income – Rs.32,88,600

Each Farmer Income – Rs.43,721

Ridge Guard Cultivation
Individual Farmer Bhivpuri

Cultivation Area – 20 Gunta

Yield – 1450 Kgs

Total Income – Rs.36,250

Bitter Guard
Mr. Bhau Bhundere

Cultivation Area – 20 Gunta

Yield – 1325 Kgs

Total Income – Rs.39,750

Group Farming – Cucumber

Total Farmers – 7

Cultivation Areas – 2.10 Acre

Total Yield – 12,250 Kgs

Total Income – 1,83,750

Each Farmers Benefit – Rs.26,250

Group Farming – Onion (demonstration)

Total Farmers – 113

Cultivation Areas – 9.20 Acre

Yield – 28500 Kgs

Total Income – 4,27,500

Each Farmer Benefit – Rs.3,780

Group farming – Paddy (SRI)

Total Farmers – 278

Cultivation areas – 419 Acre

Yield – 796100 Kgs

Total Income – Rs.95,53,200

Each Farmer Benefit – Rs.34,365

Group Farming – Mix Vegetable

Total Farmers – 42

Cultivation Areas – 2.30 Acre

Yield – 3192 Kgs

Total Income – Rs.95,750

Each Farmers Benefit – Rs.2280

Vertical Bag Agriculture

Backyard Poultry

Goat Farming

Inland Fisheries

Inland Fishery

Total Farmer – 40
Fish - 13,160 Kgs
Total Income – Rs.23,68,800
Each Farmer – Rs.59,220

Local Organisations


Thank you