ITC MISSION SUNEHRA KAL

Transforming Lives and Landscapes

Water Stewardship Programme Activities

Supply Side - Augmentation

- Watershed Treatment & Water Harvesting
- Aquifer Recharge & Biodiversity Conservation

Demand Side - Management

- Agronomic practices
- Micro Irrigation

Supply Side Augmentation

Catchment treatment

- Arrest top-soil run-off
- Improve surface moisture

Water Harvesting

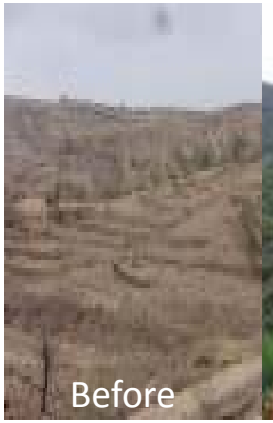
- Irrigation support to small land holders, Improves GW recharge

Managed Aquifer recharge

- Map potential recharge zones
- Climate change causing high rainfall in short period

Biodiversity conservation

- Improve moisture retention
- Acts as sponges, release water post monsoon



Demand Management - Water Use Efficiency in Agriculture

- Water is finite & majority river basins already negative - Only Supply work won't suffice
- Increasing needs, higher pressures on water resources - Demand to be balanced to reduce water stress
- Agri major water user (up to 60%) - Scope to improve on crop per drop & farm incomes


Pune: drip & Seedling plantation

Sugarcane
16,635 acres


Munger: Zero till

Wheat
1,10,525 acres


Chandauli – Direct Seeding of Rice

Rice
10,944 acres


Coimbatore: Banana with Drip

Others
(Onion, Banana, Coconut)
23,581 acres

ITC's Key Tenets - Sustainable Processes

Community Partnership and Empowered Village Institutions

- Participate in planning, Organise into groups
- Groups take ownership of work and maintenance
- Community contribution - Rs. 20.65 crore till date, (Rs. 6 crores in 2018-19)
- 3,000 Water User Groups with Rs. 117 lakhs corpus in 2018-19

Partnerships for execution, scale and knowledge

- Execution by NGOs (34)
- 24 Knowledge partnerships with IWMI, TNAU, WWF etc.
- PPPs for scale: IWMP, MGNREGS, NABARD, MJSA, Water Resource dept., Forest dept.
- 38 PPPs (3 PPPs in 2018-19)
- PPP Target area: 5.45 lakh acres & Rs. 274 crore budget

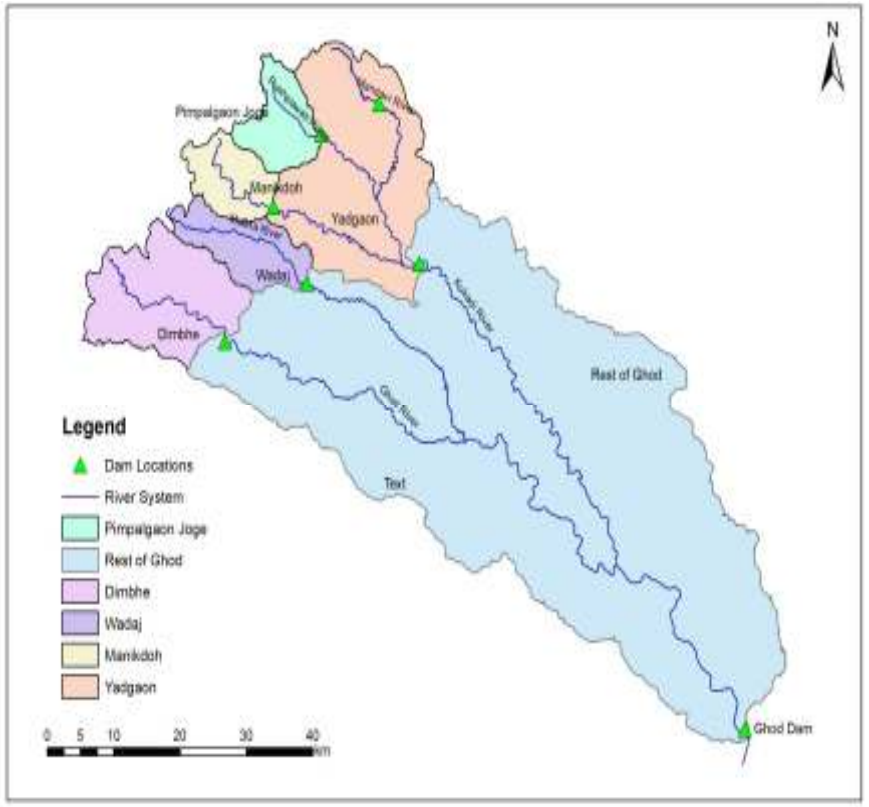
Improving agricultural productivity through reduced water demand

Case study of ITC's work in Maharashtra for

sugarcane and onion crops

Ghod River Basin, Tributary of Bhima, Maharashtra

- In Pune & Ahmednagar dt.s, 3.58 lakh ha area & agri in 1.89 lakh ha
- 5 upstream dams in high rainfall zone to store & release water in post monsoon - longevity very important
- Dams have high avg sedimentation 1.57-1.19 mcm/100 sq.km (standard 0.036)
- Major water use by agri (88%), major crop sugarcane: 51,000 ha
- Basin under stress in post monsoon season due to reduced flows in streams & increased demand



Basin/Dam	Area, Ha	Monsoon Water Balance mm^3	Post-Monsoon Water Balance, mm^3	Total Water Balance, mm^3
Ghod Basin	358471	311.64	-61.91	249.72

Ghod Basin – How can Demand Management can help

Ghod basin is under stress in post monsoon season, when water demand is high from agriculture
Reduction in demand from Sugarcane and onion can save 359 mcm (20% of total basin demand)

Technology for sugarcane

a) Seedling planting in place of cane - saves 2 months of irrigation in main field
b) Paired row with drip irrigation and Trash mulching

Technology for onion

Sugarcane - Seedling with drip

Onion Raised bed planting with drip

Demand side management in Sugarcane


Low cost Nursery of Sugarcane


Trash Mulching in Sugarcane


Exposure training to Sugar cooperative extension officers

Wall Painting with PoP

Estimate of Sustainable Sugar produced in current season

Coverage

- 10,563 sugarcane farmers trained and practices with potential savings of 2725.50 cu.m/acre adopted in 17,278 acres
- 5,357onion farmers trained and practices with potential savings of 162 cu.m/acre adopted in 10,920 acres
- Practices adoption done totally with farmers' contribution and micro irrigation scheme linkage
- ITC partnered with VSI for sugarcane farmer training and KVK Narayangaon & KVK, Dahegaon for onion training
- Partnered with 3 Sugar Factories for replicating training
- ITC partnered with WRD to extend the learnings to in entire 98,515 ha command area

Impacts

- Total water saving 48,850 Million liter in sugarcane and onion taken together
- As per data from sample plots net income is Rs. 1,43,000/acre (control 1,08,000Rs/acre) in sugarcane and in onion it is Rs. 1,17,000/acre (control Rs. 82,000/acre)
- Similarly productivity is 650 -700 q/acre (control is 500- 600 q/acre) in sugarcane and 160-180 q/acre (control is 120-130 q/acre) in Onion

In Conclusion..,

ITC could achieve such significant scale and impacts because of its commitment for sustainability and Green & Inclusive supply chains and its thrust on

- Community Participation
- Partnerships
- Holistic solution
- Continuous learning

THANK YOU