Biodiversity Management

ITC -The organization “for all our tomorrows”

Vision

- **Sustain** ITC’s position as one of India’s most valuable corporations through world class performance, **creating growing value for the Indian Economy and the company’s stakeholders**

Mission

- To enhance the wealth generating capability of the enterprise in a globalising environment, delivering superior and **sustainable stakeholder value**

Core Values

- Trusteeship
- Customer Focus
- Respect For People
- Excellence
- Innovation
- Nation Orientation

ITC: An Exemplar In Triple Bottom Line Performance

Environment

- **Water Positive :** 17 years in a row
- **Carbon Positive :** 14 consecutive years
- **Solid waste recycling positive :** 12 consecutive years
- Soil & moisture conservation to 8,75,000 acres
- 48% renewable energy
- Social & farm forestry initiative has greened over 6,80,000 acres

Economic

- Market Capitalization Over Rs. 3.43 lakh Cr
- Turnover: Over Rs. 67000 cr
- Powered by the vitality of world-class brands

Social

- Creating around 6 million sustainable livelihoods
- Educating 3,00,000 children
- Benefitting 4 million farmers
- 124 million person-days of employment generated

Enduring Value

ITD – Manufacturing Locations

1907	• Munger
1913	• Bengaluru
1926	• Saharanpur
1935	• Kidderpore
2009	• Pune

Bangalore is ITD's flag ship manufacturing facility.

In addition to the own manufacturing units, ITD has Contract Manufacturing tie-ups at Hosur, Bangalore, Bhopal, Hyderabad and Mumbai

Approach Towards Biodiversity Management

Background	Assessment & Impact study	Action Plan
ITC's Triple Bottom Line approach	Carried out by Kalpataru, UAHS Shimoga, Eco Spatial Solution, Bengaluru & Geovale Services, Kolkata	Leverage project opportunity in areas of Terrestrial, Aquatic, Soil & Afforestation arising out of assessment
Bio diversity impacts socio-economy & Environment	Augment existing catchment area's Biodiversity Index of 2.45 & Biomass cover of 19%	Target Biodiversity Index >2.5 with Biomass cover >33%
Site selection based on factory catchment & beyond across South pennar river basin	Quantify project benefits Y-O-Y with baseline comparison	Create self sustainable model through 4-way partnership

Major Activities Towards Biodiversity Management

Enduring Value

Terrestrial

- Land restoration
- Conservation plots
- Conservation Institutions

Soil

- Silt application to cultivable lands
- Soil health & moisture conservation
- Soil bio-diversity improvement

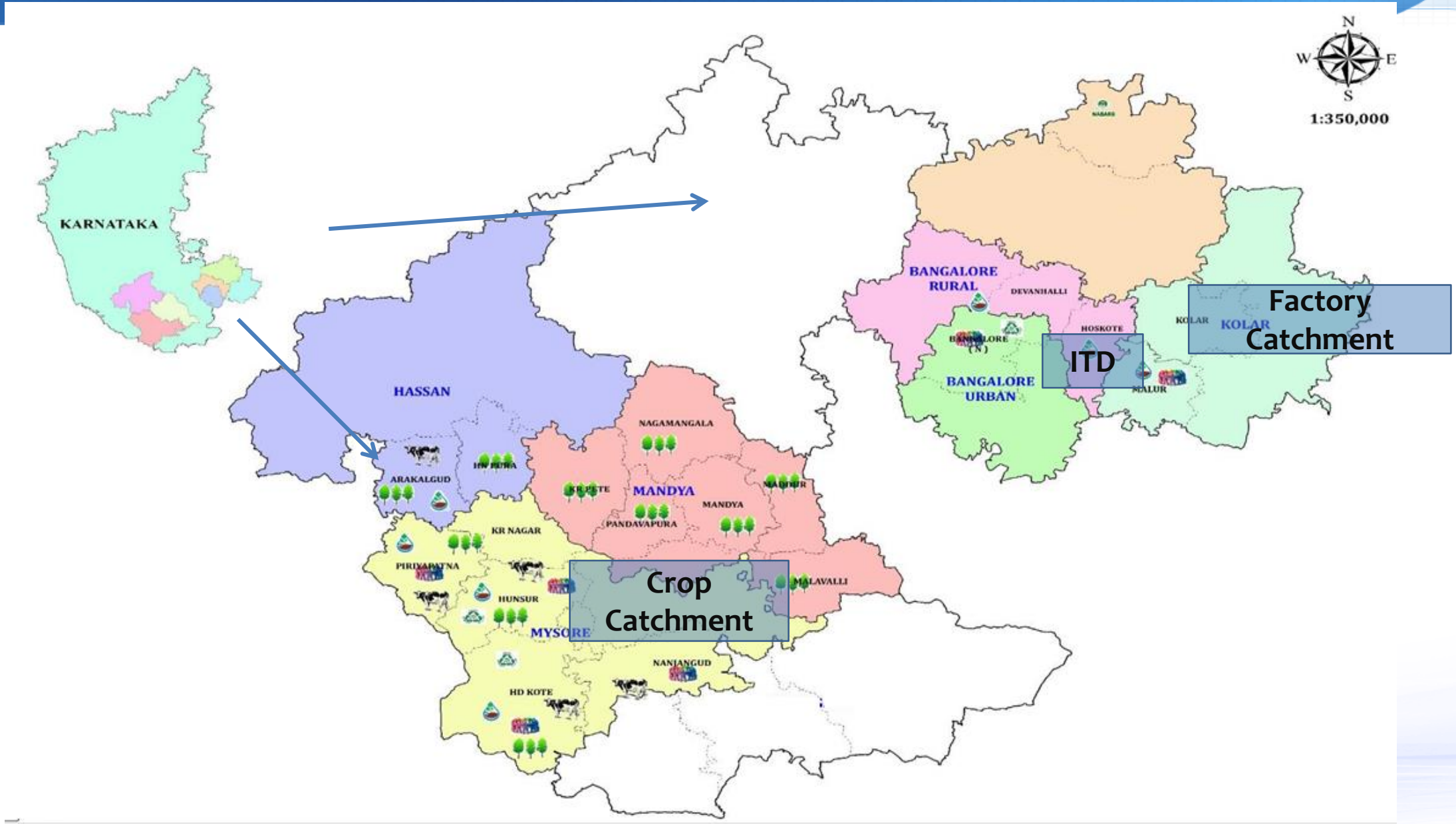
Aquatic

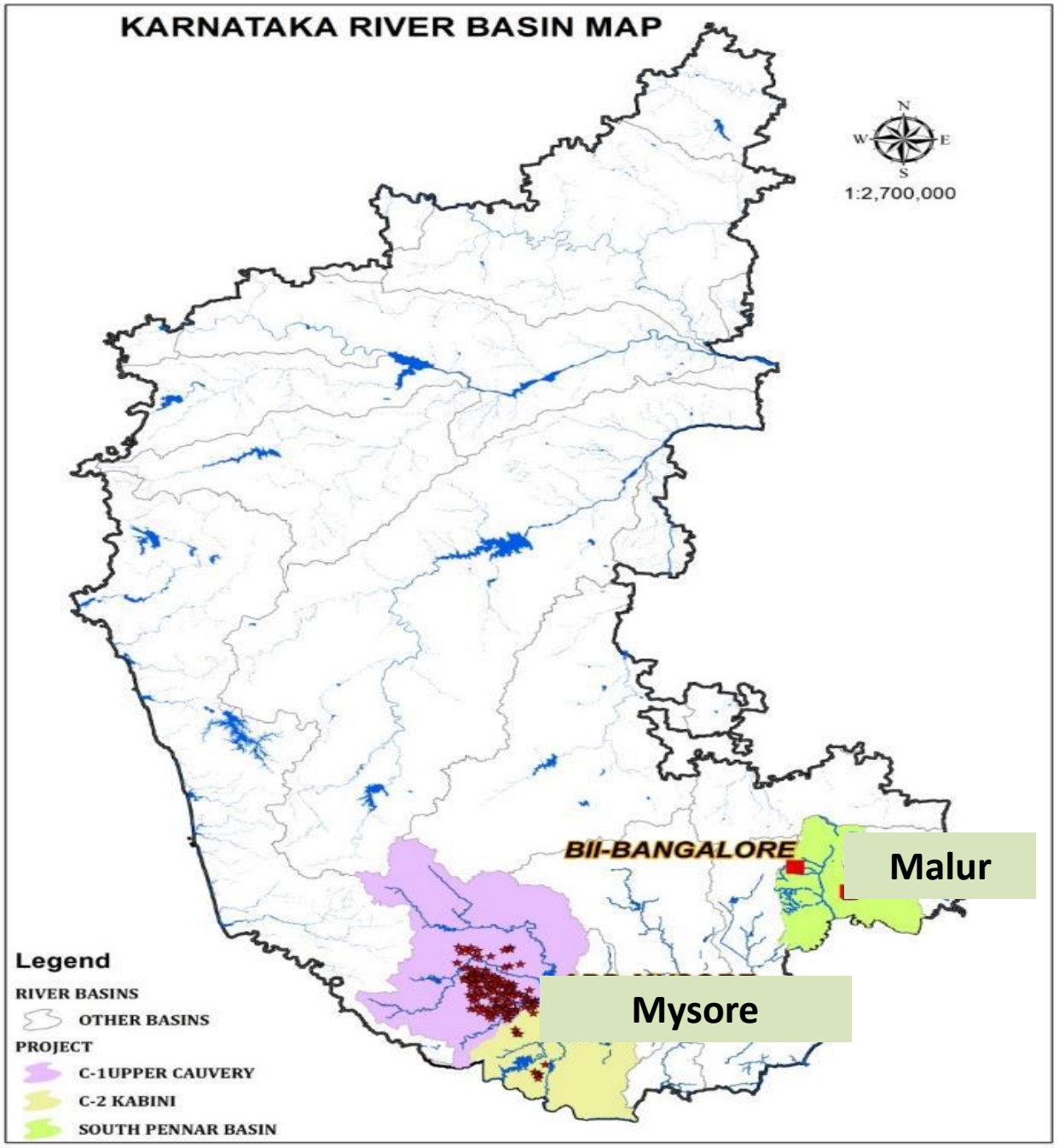
- Water harvesting structures
- Watershed development

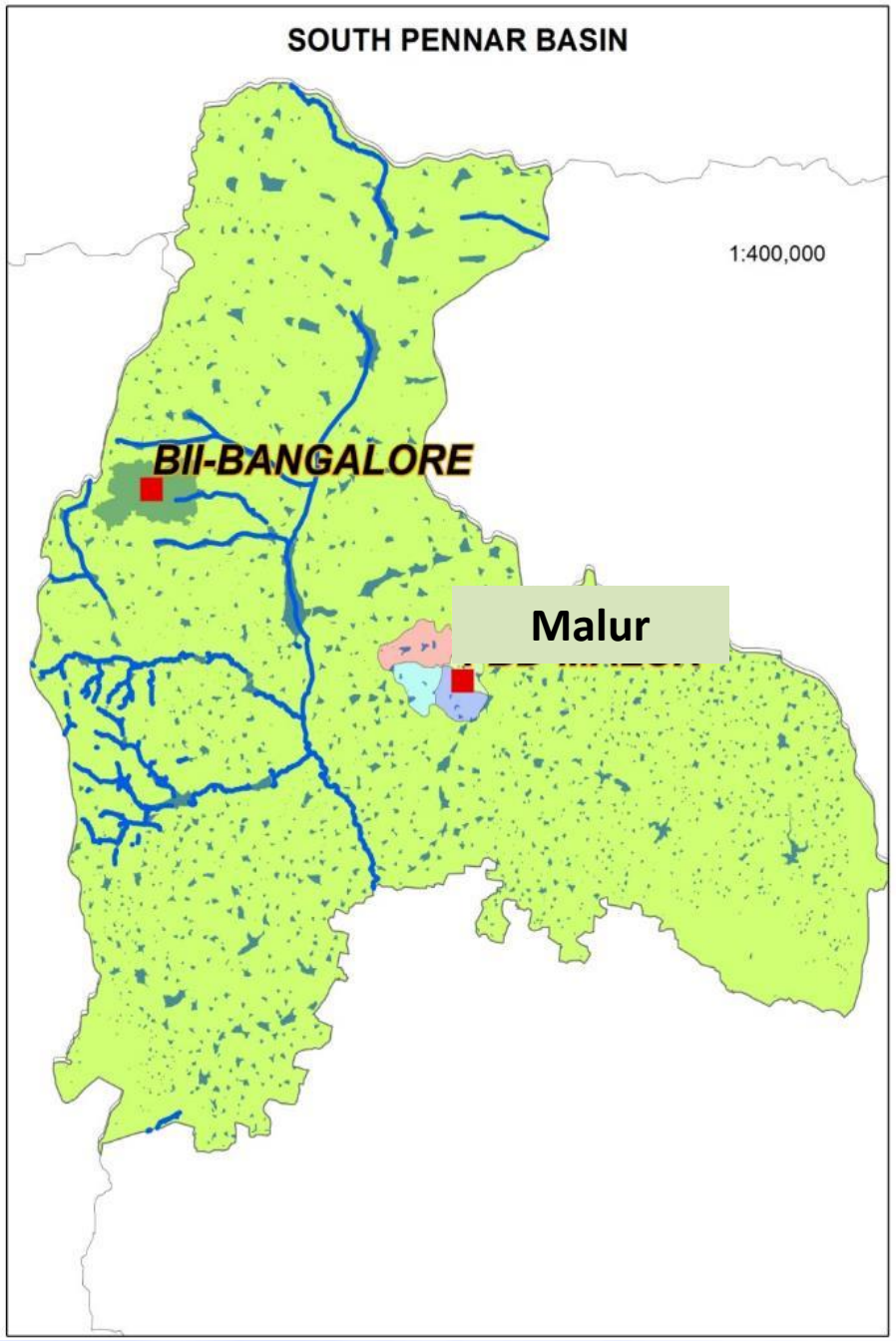
Afforestation

- Tree based farming
- Agro-forestry model

PROJECT AREA MAP





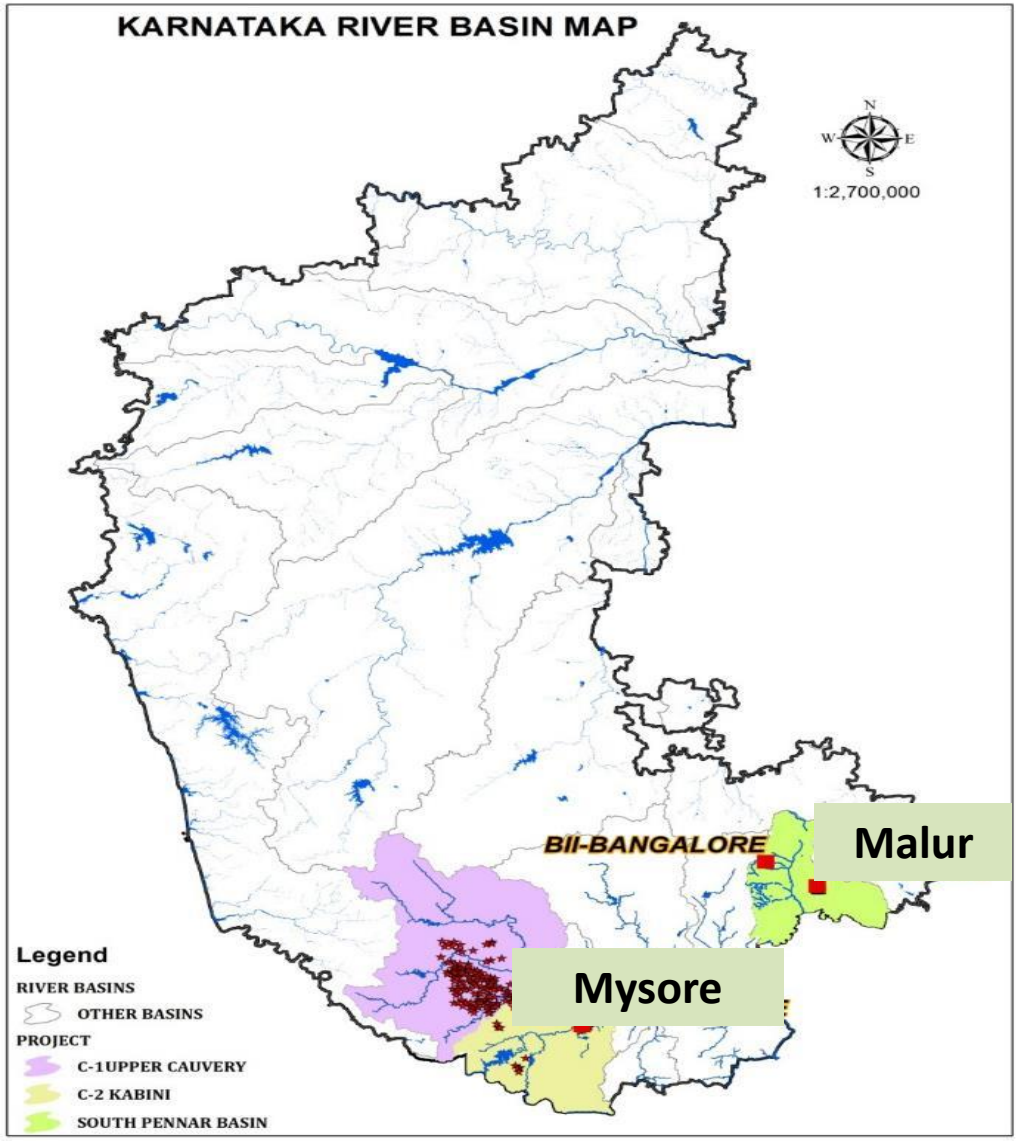


Enduring Value

- 4
- 71
- 214
- 1184 (14502.10 Acers)
- 218186 Hectares

Uniqueness of the project area

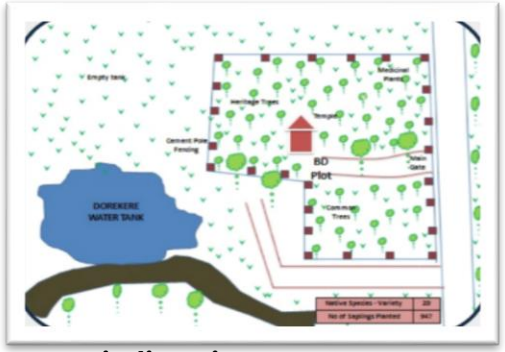
- River Basin Approach adopted for planning of interventions
- South Pennar Basin – Covering Bangalore Rural, Urban & Kolar cascades
- High replicability potential of "River basin approach" across various river basin stretches in India
- Catchment around ITC & source origin of ITC's raw materials
- Upper Cauvery and Kabini Basin for Crop Catchment – Mysore & Hassan District



Activities : Bio Diversity Conservation

Enduring Value

TERRESTRIAL BIODIVERSITY



Biodiversity & commons Restoration - 840 Ha

Biodiversity Conservation Plots - 39

Biodiversity Conservation Institutions - 45

SOIL BIODIVERSITY

Silt Application Area - 13000 Ha

Soil health & Moisture Conservation - 17500 Ha

Soil Biodiversity Improvement - 1200 Ha

AQUATIC BIODIVERSITY & PLANTATION

Water Storage - 3899 M Lts

Agro-forestry of 12500 Ha.

Watershed Development Institutions - 372

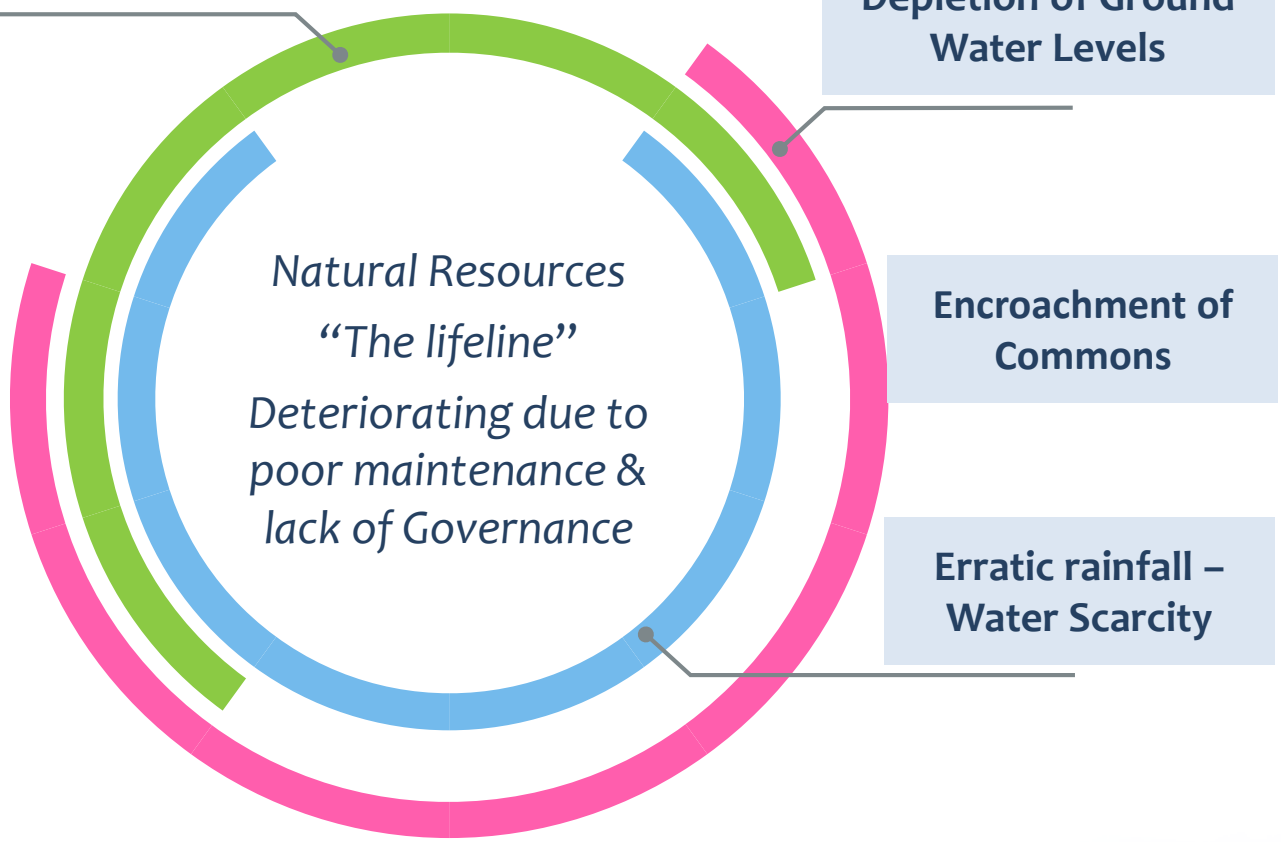
Uniqueness of Project

Multi-stakeholder Partnership Model

ITC's delivery model of social development:

- Mobilises a four-way partnership between communities, specialist NGOs, the government and Corporate
- Bringing to every initiative the best relevant management and technical expertise
- Targeted largely at the Poor and marginalized in the factory / agri-catchment – Key focus on **asset creation for community** rather than individual
- Focus on **sustainability** – In operations, maintenance, from environment perspective
- All interventions in **Project mode** - Long term, committed and not once-off
- Baselines and **Impact Assessment** for all Projects through independent organizations

Challenges in the Project Area



Above model exhibiting the challenges faced in in the Area

Ground Water Characterization - Factory Locations

SI NO	Taluk	Categorization Based on State of Ground Water Development %			
		Safe	Semi Critical	Critical	Over Exploited
1	Bangalore	-	-	-	100
2	Malur	-	-	-	100
3	Mysore	40	40	-	20

Ground Water levels

Sl No	Area	Deep Aquifers		Shallow Aquifers	
		Avg. Water Table (m bgl)		Avg. Water Table (m bgl)	
		Pre Mon	Post - Mon	Pre Mon	Post - Mon
1	Mysore	22	39.8	3 - 12.0	2.6 - 10.5
2	Bangalore	30.0	40.0	12 - 5.0	8.5- 11.0
3	Malur	141.6	97.0	13.8 - 14.2	10 - 13.52

Challenges in the Project Area

Degradation of Biodiversity

Depletion of Ground Water Levels

Erratic rainfall – Water Scarcity

Above model exhibiting the challenges faced in in the Area

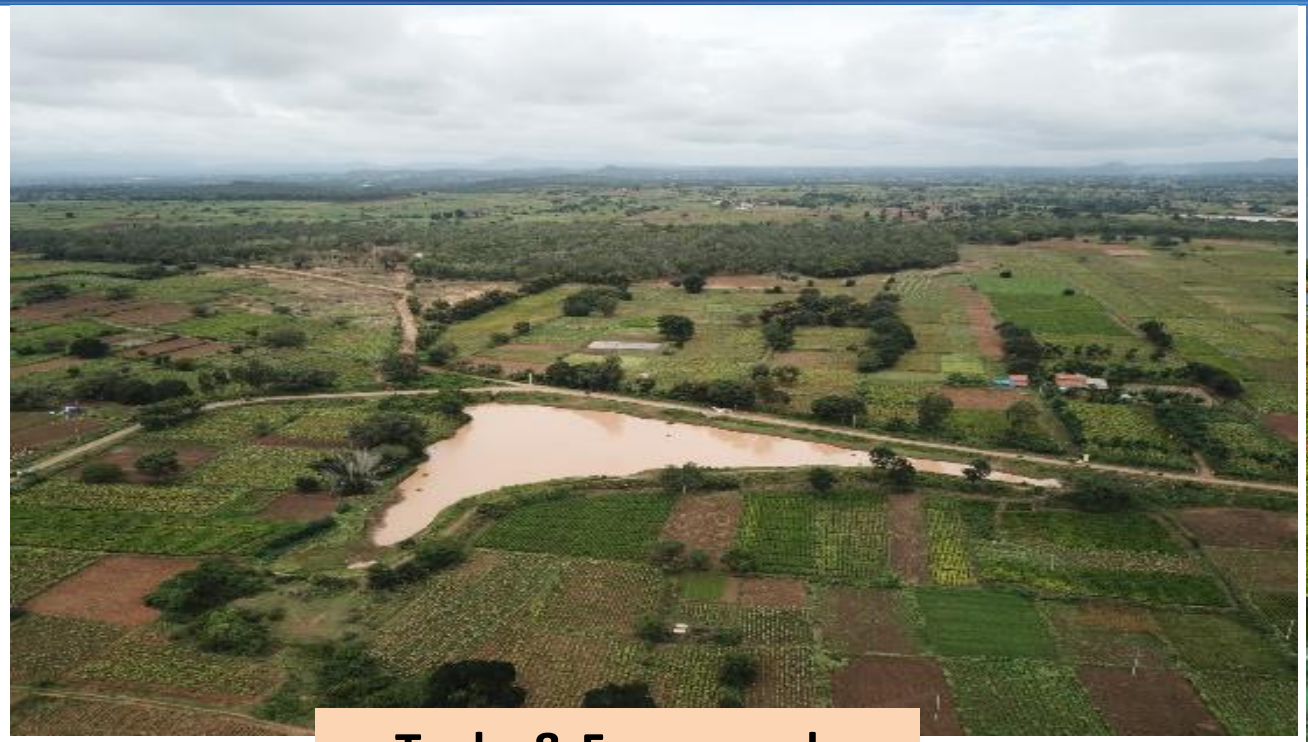
Is there a solution…?

Yes. The solution is…
Integrated Watershed Management

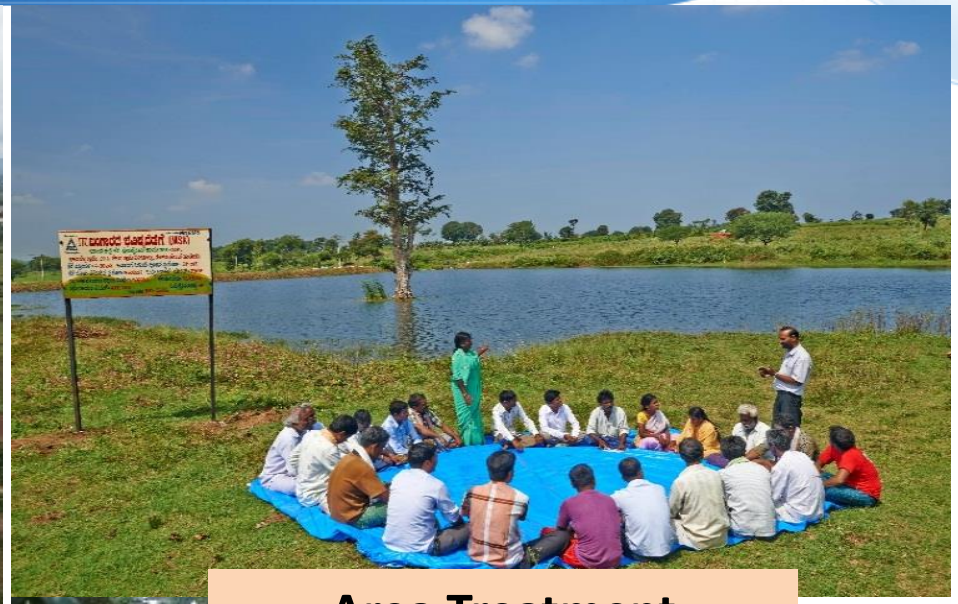
How ITC intervened??

- ✓ Promoting **Participatory** Village level institutions
- ✓ Building **Awareness** on Watershed management
- ✓ Cascade based **Rehabilitation** to treat soil, ground water recharge and improve biodiversity.

Soil and Water Conservation



Tanks & Farm ponds



Area Treatment

Overall Coverage

67 Nos. Cascades developed

17500Ha Area Treated

18 Nos. Taluks covered

441 Nos. Tanks Rehabilitated

3899 Mn. Ltrs Additional Water Storage

370 Nos. Water Groups promoted

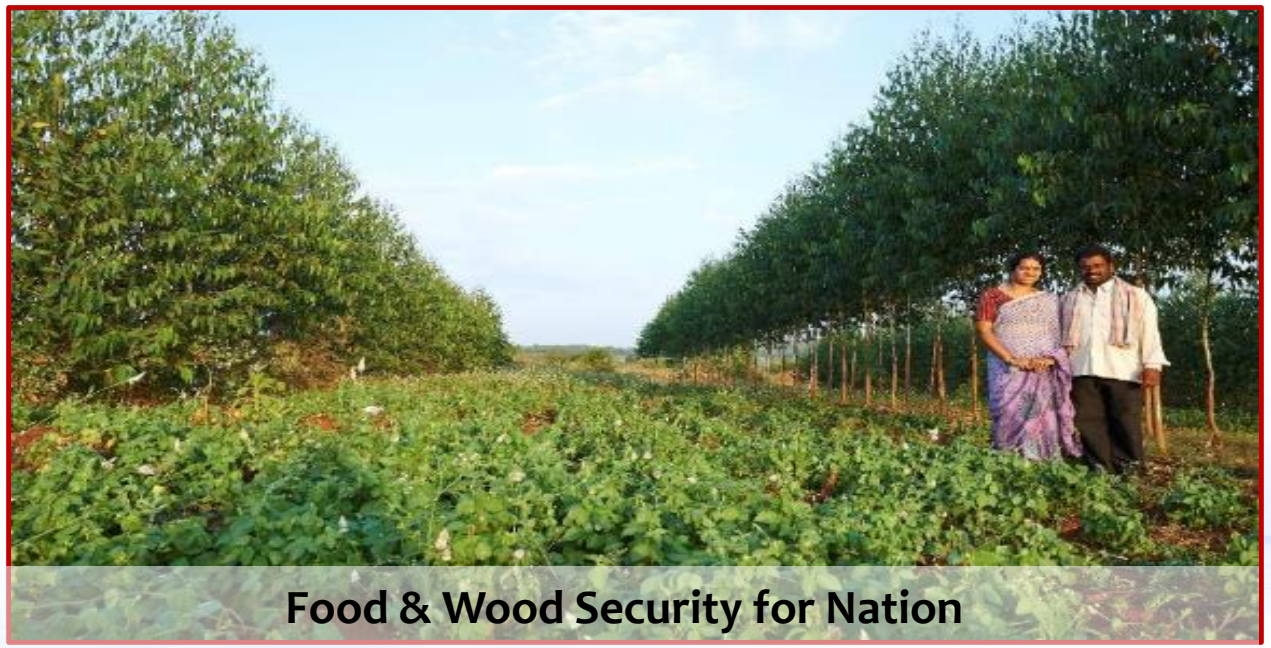
Rs.25.80 Lakh Maintenance Fund

13019 Ha Silt Applied Area

Over 18000 Farmers Benefited

Sl No.	Project Activity	UoM	Coverage
I	**Water Storage Creation**		
1	Tanks	Nos	441
2	Farm ponds	Nos	710
3	Other Structures	Nos	48
II	**Soil Conservation**		
1	Area Treatment	Ha	17500
2	Compost Units	Nos	2828
III	**Plantation Promotion**		
1	Social Forestry	Ha	12500
2	Bio Diversity Plots	Nos	39
3	Common Land Restoration	Ha	150
4	Bio-diversity promotion & conservation	Ha	840
IV	**Institutions**		
1	Water User Groups	Nos	370

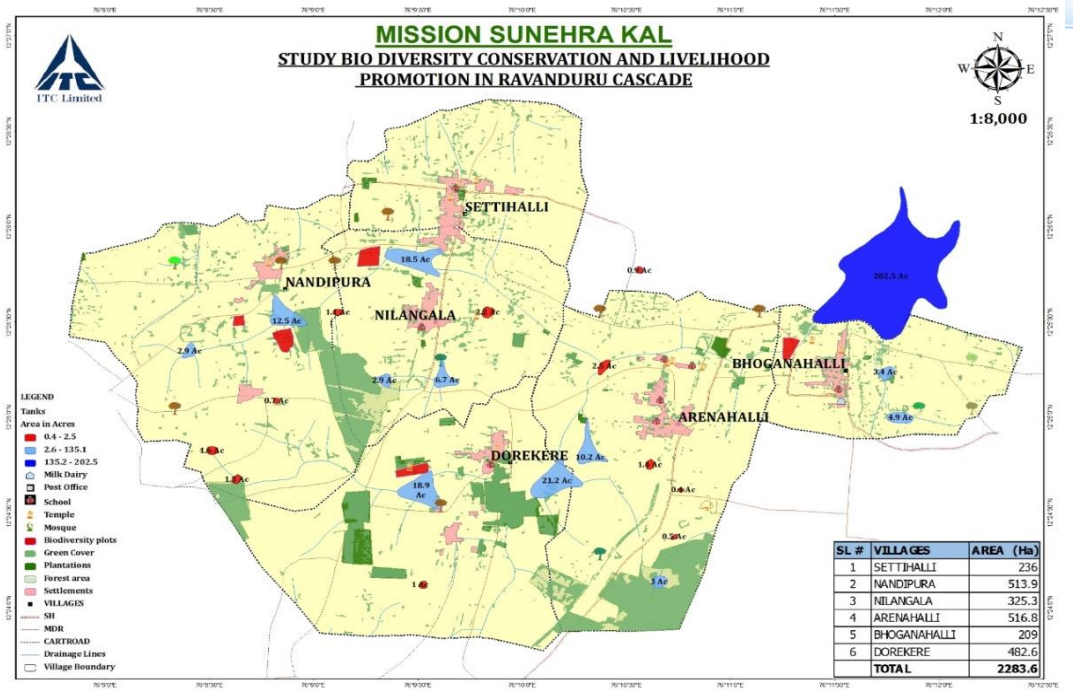
Afforestation : Tree based Farming – Agro-Forestry Model



Food & Wood Security for Nation

Project Objective & Results

Sl No.	Parameters	Baselines	Achieved	Endlines
1	No of Villages	6		6
2	Ravandoor Cascade Area (Ha)	2214	1380	834
3	Treatable Area (Ha)	1948	560	1388
4	Common Areas (Ha)	220	180	40
5	Major Structures (Tanks)	13	13	0
6	Silt Applied Area	1103	1103	
7	Ground Water Status	Semi Critical	Semi Critical	Safe
8	Soil Health - O.C	0.4	0.51	0.75-1.0
9	BD Parks (Nos)		6	
10	BD Conservation & Promotion Area (Ha)	1948	640	
11	Native Speices Planted (Nos)		25600	75000
12	Bio Divesity Index	2.45	2.48	>2.5

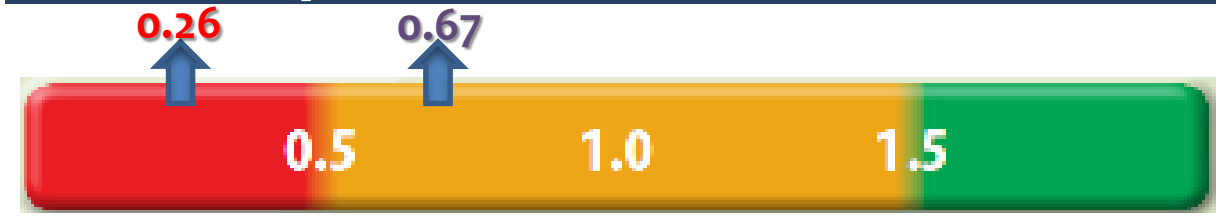






Key Tangible Benefits

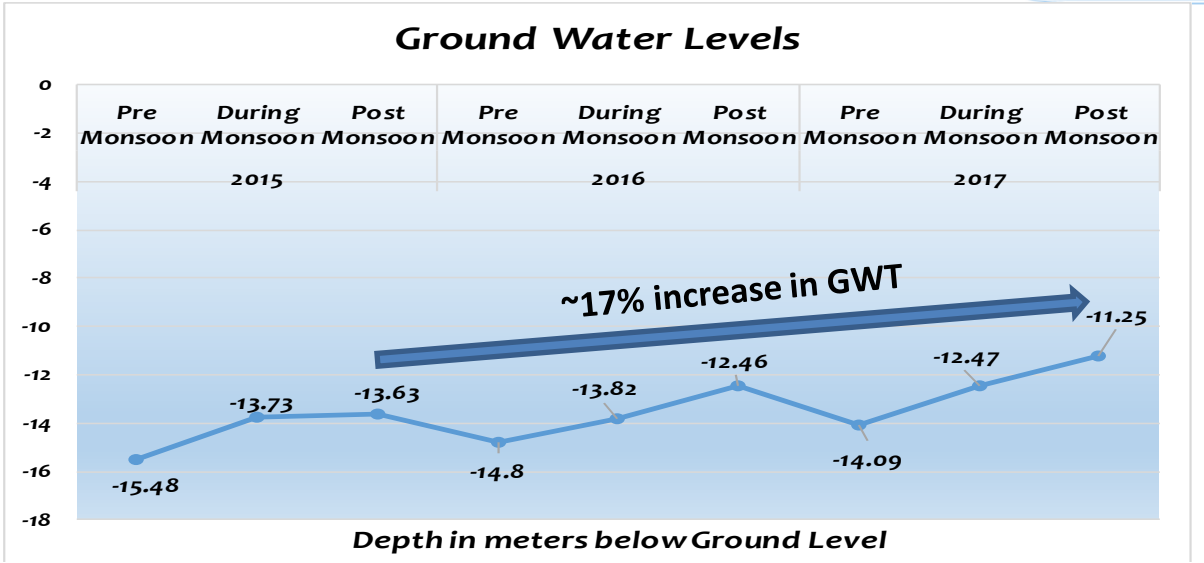
Impact on Soil health -OC



Impact of silt on Soil Nutrient and Soil Organic Carbon

Nutrient	N (Kg/ha)	P (Kg/ha)	K (Kg/ha)	Organic Carbon %
Before	167.8	12.4	145.7	0.26
After	311	23.6	256.7	0.67

Impact on Ground Water



Impact on Bio Diversity

Parameters	Baselines	Achieved
Cascades	2	2
Area	3900	1192
Tanks	19	19
Biomass Cover	19%	22%
Bio Diversity Index	2.45	2.48

Greater species diversity
Eco system services
Increased green cover

Impact on GHG

Summary of emission reduction results -2016-17

Intervention	Units	Total
Water harvesting	t CO_2e	2.92
Watershed treatment	t CO_2e	2021.26
Tank silt application	t CO_2e	725.86
Compost production	t CO_2e	622.17
Total		**3372.21**

Total GHG Reduction – 3372.21 t CO_2 e

Creating A Global Benchmark

Plantation Area in Karnataka -12500 Ha

35183 Ha. Benefited in Karnataka and 441 structures developed

"The only corporate of such magnitude to sustain CARBON +ve status for 14th YEAR IN A ROW & WATER +ve status for 17 CONSECUTIVE YEARS…"

Continuity plan for +1 & +2 year

Target

- Soil & Land diversity for >8000 Ha. per year
- Watershed development (30-40 structures) with 4 lakh Cum capacity per year
- Agro-forestry coverage of >3000 Ha. Per year
- Bio-diversity index >2.5 with Bio-mass cover >33%

Sustainable Approach

- Promotion of bio diversity groups
- Contribution mobilization for sustainable Operation & Management:
  - Collaboration with Local Panchayats
  - Revenue generation for Institutions
  - Leverage Govt. Program linkages

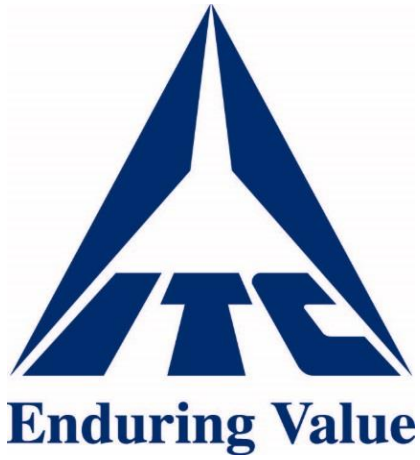
Replication Potential

- Scalability augmentation through project replication in phases across the river basin stretch. High replication potential across three major river basins in India – Ganges/Indus/Brahmaputra
- Potential in augmenting catchment area across river basins (Central Water Commission 2017 data mentions catchment area reduction across Indus/Ganges/Brahmaputra by 1% / 2.7% / 0.6% respectively)

Meeting standards

- Objective towards up-scaling Bio diversity index to >2.5 with 33% green cover across the catchment (in synergy with National Biodiversity Action Plan 2008)

THANK YOU



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