

CII Water Management Award -2008

Beyond the Fence

Hindustan Coca-Cola Beverages Pvt Limited
Atmakuru, Guntur, Andhra Pradesh

Company Profile

- Coca-Cola has the highest brand value with an estimated \$66 billion in 2008 (Source: Business Week)
- Invested more than US\$1 Billion in India
- Employs over 6,500 people directly in India
- Provides indirect employment to more than 1,50,000 people indirectly
- Labor Intensive distribution network which has multiplier effect on employment & earning opportunities
- Impact Agriculture by procuring Sugar, Coffee, Mango and Orange.
- Positive impact on industries like Glass, Plastics, Resin, Sugar Processing, Automobiles etc.

- Thums Up is the #1 Cola
- Fanta is the # 1 Orange
- Sprite is the #1 Clear Lime
- Limca is the #1 Cloudy Lemon
- Maaza is the #1 Juice Drink
- Kinley is the #1 Retail Water



Coca-Cola Atmakuru Operations

Located in Guntur District, 20 Km from Vijayawada city and 25 Km from Guntur City

The Plant is spread in a 40 acre area surrounded by lush green paddy fields.

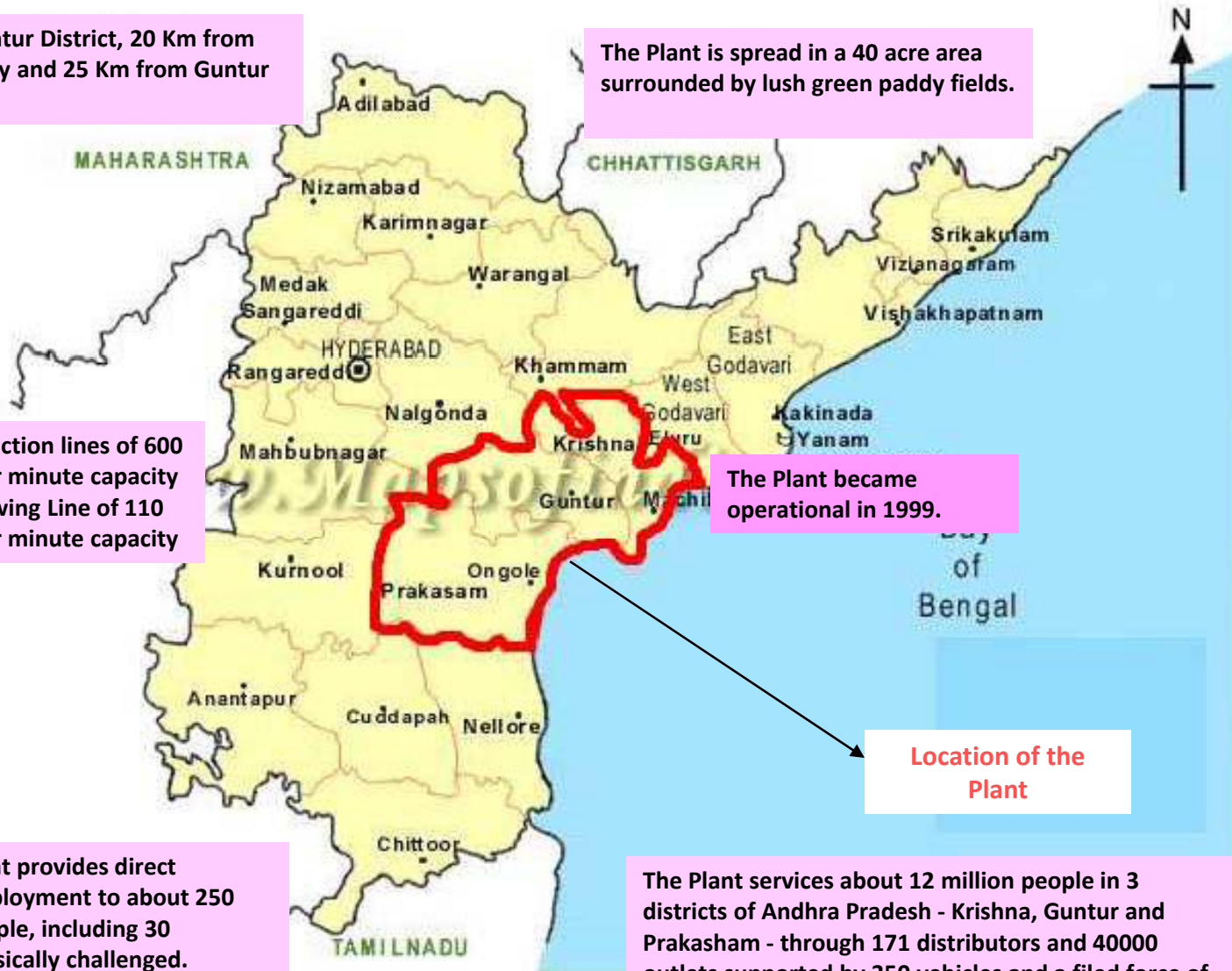
Two production lines of 600 bottles per minute capacity and one Swing Line of 110 bottles per minute capacity

The Plant became operational in 1999.

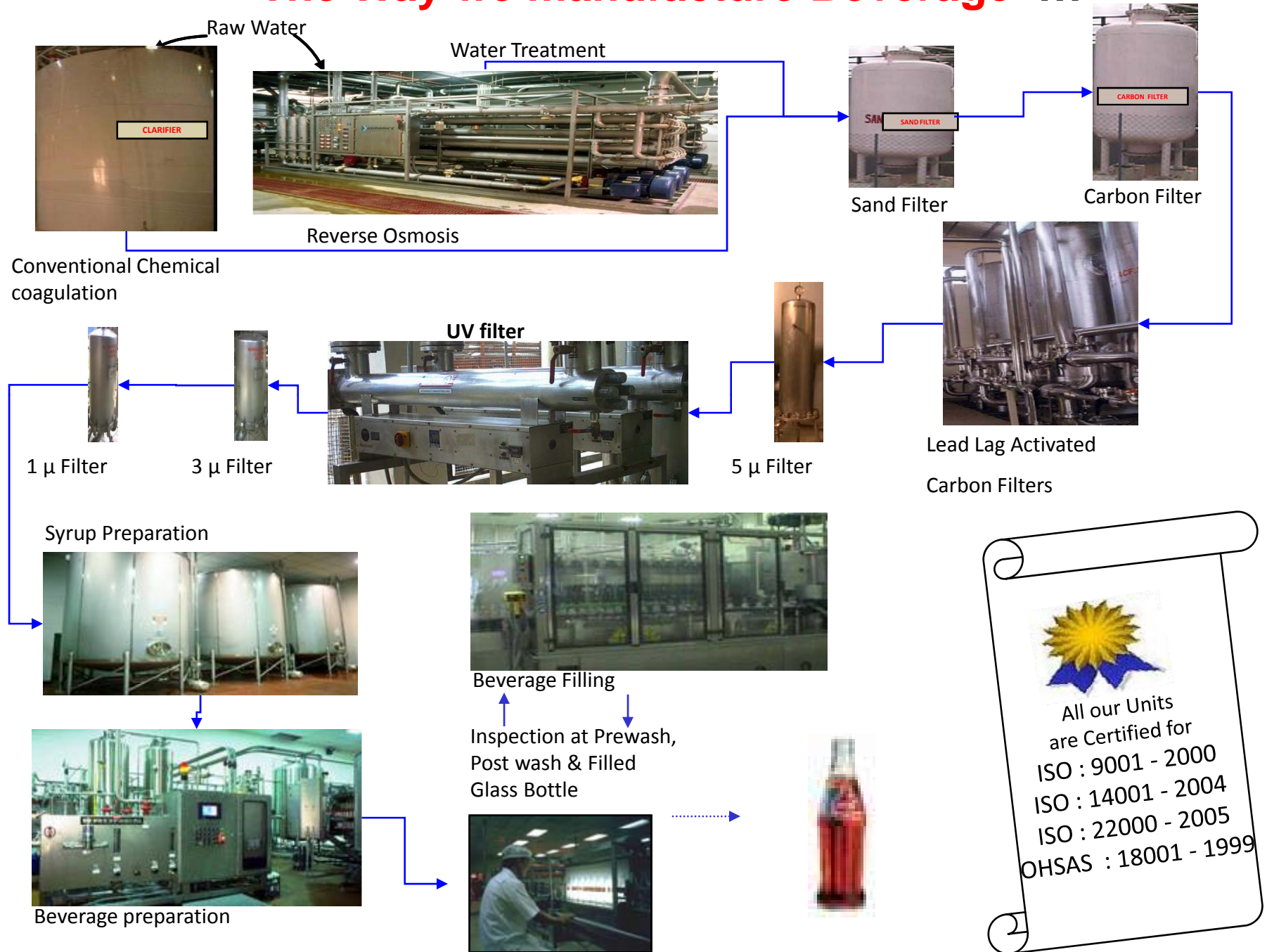
Plant provides direct employment to about 250 people, including 30 physically challenged.

Location of the Plant

The Plant services about 12 million people in 3 districts of Andhra Pradesh - Krishna, Guntur and Prakasham - through 171 distributors and 40000 outlets supported by 350 vehicles and a field force of 500 people.



The Way we manufacture Beverage ...



All our Units are Certified for
ISO : 9001 - 2000
ISO : 14001 - 2004
ISO : 22000 - 2005
OHSAS : 18001 - 1999

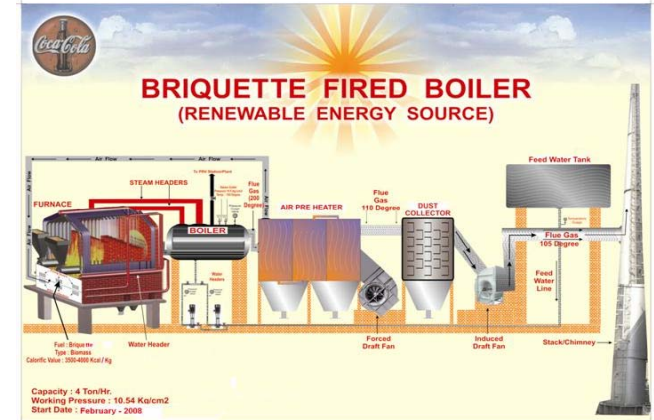
Planet: Three Destinations



PET is recyclable.
Do not litter.



Rain Water Harvesting for
Future Generation



Environment Focus

1. Water Stewardship

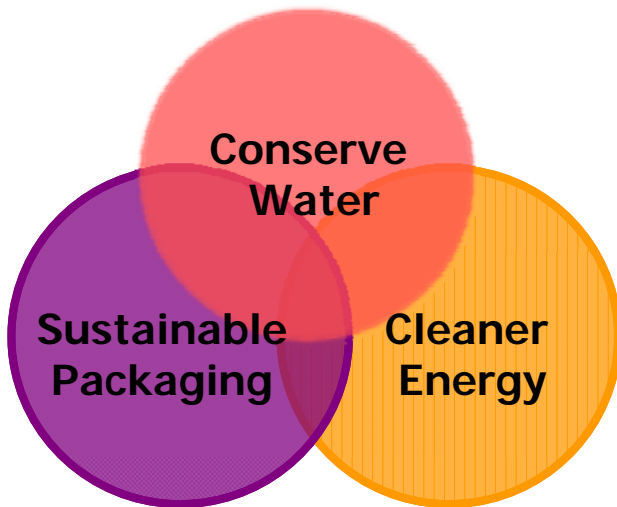
- Sustainable water resources management
- Protect watersheds
- Increase access to clean drinking water

2. Sustainable Packaging

- Lead recycling programs
- Implement new packaging practices

3. Energy Saving Initiatives

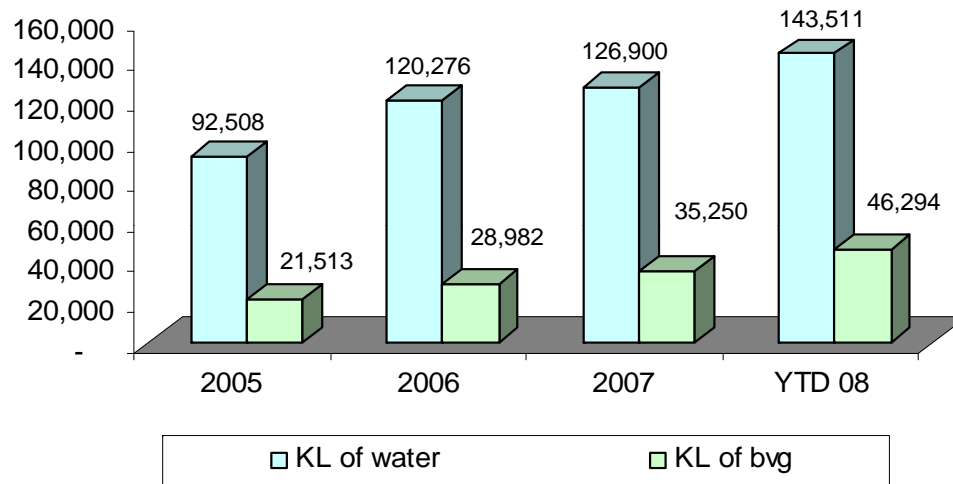
- New model to save energy in every operations we undertake



Integrated Water Resources Management

Execution through 4R strategy: **Reduce**

Water vs Beverage - KL

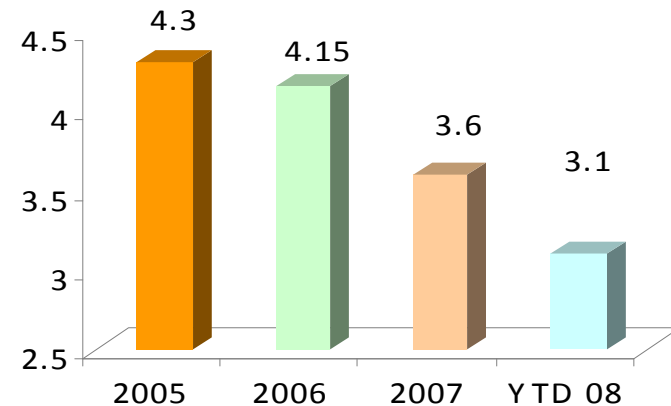


Beverage production has more than doubled from 21.5K KL to 46.3 KL in the last 4 years

But water consumption during the same period has only gone up by a little over 50 per cent

Due to various best manufacturing practices to reduce water consumption for beverage production, average water consumption for producing of one litre of beverage has come down from 4.3 litre in 2005 to 3.1 litre in 2008

Water Use Ratio L tr/L tr of Bvg

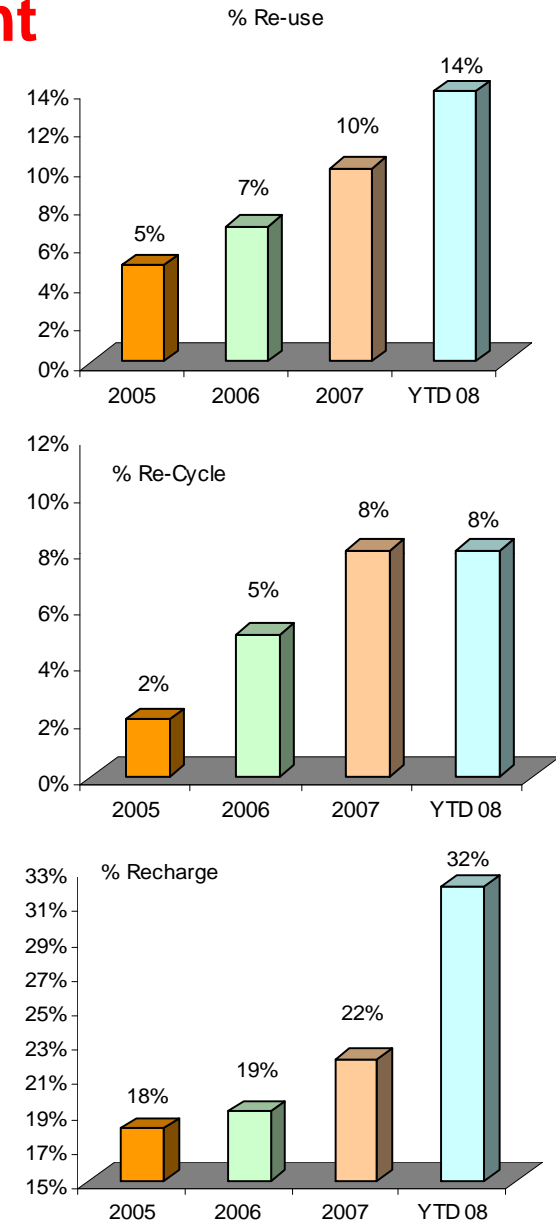


4R (Reduce, Reuse, Recycle, Recharge) for Efficient Water Management. 3Rs contribute to reduction of Water Usage Ratio, 4th R (recharge) is to replenish the resource

Integrated Water Resources Management

Execution through 4R strategy:

- **Reuse:** Treated water used in utilities/ production & developing green belt **(3-fold increase in 3 years)**
- **Recycle:** Treat the wastewater stream and utilize the same. Example – treatment of bottle washer effluent and then recycle the same **(quadrupled in 3 years)**
- **Recharge:** Rain Water Harvesting (both in the plant and the community) for recharging the groundwater **(Almost doubled in 3 years)**



3R (Reduce, Reuse, Recycle) contributes to reduction of Water Usage Ratio, 4th R (recharge) is to replenish the resource

Water Conservation Project - I

Mangalgi Court Complex Rain Water Harvesting Project



The Court Complex is 25 km from Guntur city

Located 6 km from the Coca-Cola Plant

Mangalgi Court Complex is with a huge RCC roof area of over one acre.

Though Mangalgi is a water surplus location, the area around the court complex has been facing water shortage during summer months.

Rain Water from the roof and from the ground has been going waste

Local ground water table has been going down year after year and borewell yields drastically dropped in the last few years before the project

Water Conservation Project - I

Mangalgi Court Complex Rain Water Harvesting Project

Water collection/recharge system

One acre roof top area of the Court Complex
Recharge pits for 2000 KL/yr recharge

Planning & Execution

Roof top collection & recharge system
Ground water augmentation – recharging just near the bore well
Proper draining systems from rooftop
Gradient channels and piping for complete run-off of water to recharge pits

Community Involvement & partnership

Court Office and Magistrate's office
Lawyers Association
Local Gram Panchayat
Residents Association around the Court
A few local NGOs around the area

Sustainability & Community Empowerment

System to maintain the structure annually
Ownership is transferred to the court administration



Water Conservation Project - I

Mangalgiri Court Complex Rain Water Harvesting Project



Project implementation

1. Need Assessment and Planning: Jan-Mar 2004
2. Execution of civil work: April, May 2004
2. Project inauguration: 5th June 2004
3. Project hand-over: December 2004

Impact

1. Complete roof top run-off harvesting
2. Recharging the ground water aquifer, from which withdrawal was happening
3. Steady increase in ground water level around the court complex

Water Conservation Project - II

Restoration of Water Bodies, Nidumukkala

Project: De-silting of ponds called Erra Cheruvulu & Obra Cheruvu near Nidumukkala Village of Tadikonda Mandal in Guntur

Business Case

- ❖ Despite having a few good water sources, the village has been suffering from acute water shortages due to improper development and maintenance of age-old water bodies .
- ❖ Since the village is located at the tail end of the Nagarjuna Sagar Canal, from where the village is supposed to have been receiving water, the area hardly receives sufficient water.

Water Conservation Project - II

Restoration of Water Bodies, Nidumukkala

Community Involvement

1. Need Assessment meeting organised by the Company with village community
2. Community strongly felt the need for revival of the water bodies
3. Community agreed to share the cost and pool in man and machinery
4. Gram panchayat agrees to get all necessary clearances for the project implementation

Partnerships

1. Nidukummala Village Committee (People)
2. Nidumukkala Gram Panchayat (People)
3. Thadikonda Mandal Praja Parishad (People)
4. Andhra Pradesh Ground Water Dept (Govt)
5. Andhra Pradesh Irrigation Department (Govt)
6. Nilagiri Foundation (NGO)

Water Conservation Project - II

Restoration of Water Bodies, Nidumukkala

Environmental Impact

- Quality and quantity of the water for drinking and domestic purposes is improved.
- Increased the storage capacity of ponds due to desilting activity and strengthening of tank bunds.
- Availability of water for agricultural purposes is increased
- Erosion of fertile soil from the area is prevented

Social Impact

- Nearly 200 bore wells including 50 panchayat wells and also 1000 village families are benefited.
- Quality time is available to families since water availability in their wells are better
- Agriculture income is expected to increase due to better water availability
- Livestock income is expected to go up due to better water availability.

Water Conservation Project - II

Restoration of Water Bodies, Nidumukkala

Project Sustainability

The local community has contributed One-third of the cost by way of man and machinery and has vowed to maintain the project in the long term

The Company is committed to maintain the project free of cost for three years

The Gram Panchayat and Mandal Panchayat have agreed to undertake periodic repairs

Community Empowerment

Village Committee has been empowered to execute the project with the local NGO Nilagiri Foundation

From planning to execution, the village committee was at the helm of activities

The project led to increased agricultural and livestock income, besides better water availability

Gender Sensitivity

Womenfolk are relieved because their time spent for fetching water can now be used more productively.

Better agriculture income led to better household income for the families.

Water Conservation Project - III

Connecting restored water bodies to NS Canal

Case for the Project:

The village is located at the tail end of the Nagarjuna Sagar Canal

The village receives little water as water will be drained out by villages ahead of it in the Canal stretch

If a pipe-line can fetch water to the village ponds, water can be used when needed, besides helping to recharge the ground water in the area

The Project:

Construction of P1 class 400 mm RCC pipe line from Nagarjuna Sagar Canal to the Village pond Erra Cheruvu located at a distance of 600 Metre

Dig channels on the 600 Metres and conceal the pipes that would carry water from the canal

Three Sumps to connect the pipe lines (6X4 feet) at 112 mts, 224 mts and 340 mts which will help farmers for easy usage of water to their fields

Water Conservation Project - III

Connecting restored water bodies to NS Canal

Community Involvement

1. Need Assessment done by the Company with village community and Gram Panchayat
2. Project idea was mooted by the community
3. Community shared the cost and pooled in with men and machinery
4. Gram panchayat ensured necessary clearances

Partnerships

1. Nidukummala Village Committee
2. Nidumukkala Gram Panchayat
3. Thadikonda Mandal Praja Parishad
4. Andhra Pradesh Ground Water Dept
5. Andhra Pradesh Irrigation Department
6. Nilagiri Foundation (NGO)

Water Conservation Project - III

Connecting restored water bodies to NS Canal



Social Impact

- Farming lands are receiving more water during non-rainy seasons
- Income from agriculture is expected to go up from the current season
- Water collected at the restored ponds is helping to have water availability in bore wells around
- Livestock income is expected to go up due to better water availability.

Environmental Impact

- Better water availability is improving the quality of water around the area
- Increased water availability is increasing the greenery in the village, besides the farming
- Better water availability and greenery is providing a cleaner and cooler climate in the village

Water Conservation Project - III

Connecting restored water bodies to NS Canal

Sustainability

The community has contributed One-third of the cost by way of men and machinery and has vowed to maintain the project in the long term

The Company is committed to maintain the project free of cost for three years

The Gram Panchayat and Mandal Panchayat have agreed to undertake periodic repairs

Empowerment

Village Committee has been empowered to execute the project along with the local NGO Nilagiri Foundation

From planning to execution, the village committee was at the helm of activities and is currently monitoring the project

Gender Sensitivity

Womenfolk are relieved because their time spent for fetching water can now be used more productively.

Better agriculture income led to better household income for the families.

Thank You