



UNNATI BHARATI ABHIYAN ITH



- Solar power installation for emergency services (water, Medical etc.)

ENERGY

ENVIRONMENT & HEALTH

- Sanitation
- Purified water for drinking
- Growing vegetation
- Solid Waste Management
- Vermi composting



SKILLS

EDUCATION & SKILL DEVELOPMENT

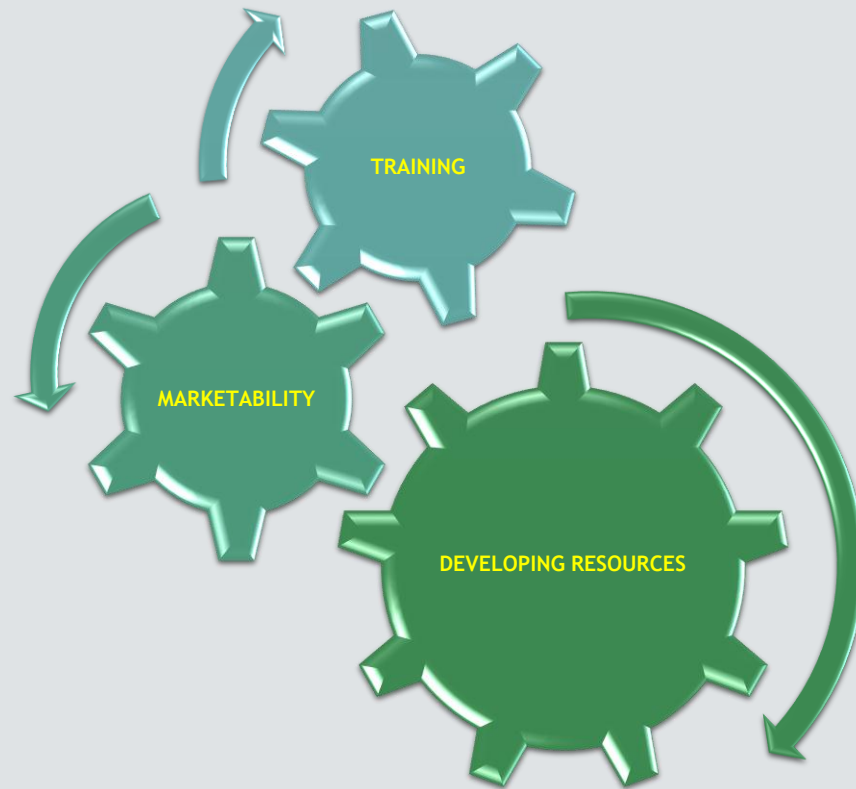
- Teaching (Middle school)
- IT training
- Vocational Training (DTP, Stitching, Handicrafts, Catering, Flower decoration etc)
- Rural business incubation

INTEGRATED WATER MANAGEMENT

- Hydrogeological mapping
- Rainwater Harvesting
- Micro irrigation
- Desilting of tanks & control of soil degradation
- Organic farming
- Village Information System using GIS



SELF SUSTAINABILITY



IMPLEMENTATION STRUCTURE AT IITH

INSTITUTE COORDINATORS (IC): DR.SHASHIDHAR

- THEME COORDINATOR (TC)

EDUCATION:

DR.PREM PAL

WATER RESOURCES:

DR. K.B.V.N.PHANINDRA/SHASHIDHAR

ENERGY:

DR.SIVA KUMAR

SANITATION:

DR.SHASHIDHAR

AGRICULTURAL DEVELOPMENT:

DR.NISHANTH DONGARE

SKILL DEVELOPMENT:

DR.G.V.V. SHARMA/DR.M.V.PANDURANGA RAO

IT EDUCATION:

DR.M.V. PANDURANGA RAO/DR.G.V.V. SHARMA

- NGO's INTERACTION: CENTER FOR WATER SOLIDORITY HYD./CROPS, JANAGAM

WE ARE NOT NEW TO SOCIALLY RELEVANT PROJECTS

DR.SHASHIDHAR

- Project Evaluator, Council for Advancement of People Action in Rural Technologies (CAPART), Ministry of Rural Development, Govt (20 Nos., 1.5 crores)
- Hydrogeologic and water quality analysis -six gram panchayats (Ref:http://www.iith.ac.in/files/pdfs/Final_Report.pdf)
- Humane sewer cleaning system (Ref: <http://srp.iitm.ac.in/?q=node/4>)
- Worked with NGO's: Center for Water Solidarity Hyd./CROPS, Janagam, Warangal.

DR.PREM PAL

- NSS coordinator, Rural education, organized workshop for Technology Awareness among rural children, blood donation camps etc. (Ref: <http://www.iith.ac.in/events/gallery.html>)

DR. K.B.V.N.PHANINDRA

- Green Office, Hydrogeologic and water quality analysis -six gram panchayats (Ref:<http://greenoffice.iith.ac.in/>)

DR.SIVA KUMAR

- **Expertise in installation solar power plant, Power Systems**

DR.NISHANTH DONGARE

- **Desilting of Tanks, Agricultural Development**

DR.G.V.V. SHARMA

- **IT Training, Rural Incubation**

DR.M.V.PANDURANGA RAO

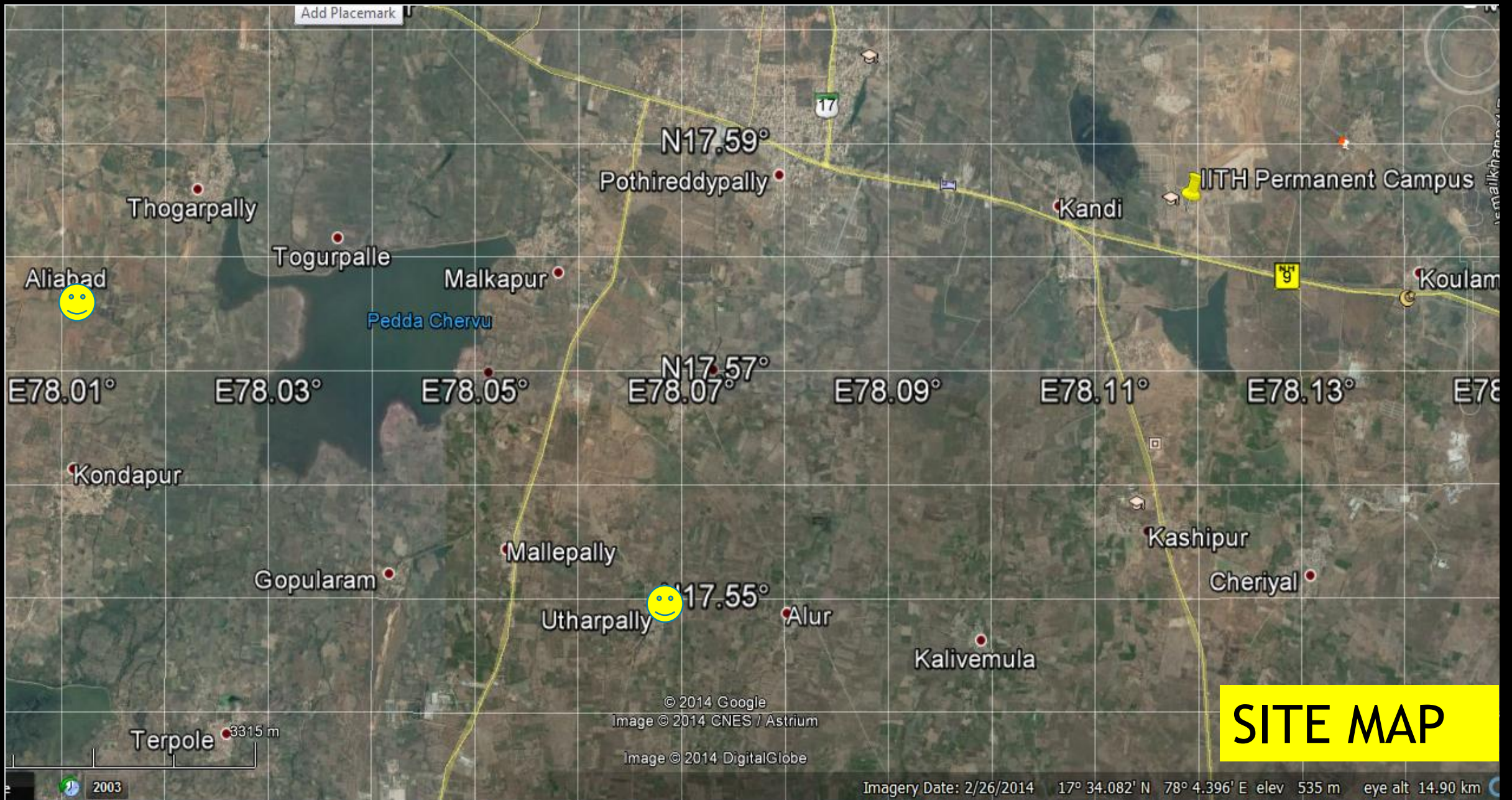
- **IT Education**

WORK PROGRESS

- **VILLAGES DATA:**
 - Collected from Mana Vooru - Mana Pranaalika (about 10 villages)
- **VILLAGES SELECTED (2 Nos.)**
 - UTHARAPALLY: Conducted preliminary survey 21st Nov., 2014
 - ALIABAD : Conducted preliminary survey 24th Nov., 2014
- Developed UBA Website (www.....)

(Details continued..)

Add Placemark





VISIT TO UTHARAPALLY VILLAGE BY IITH TEAM VISITED ON: 1ST NOV, 2014

GVV Sharma
KBVN Phanindra
MVP Rao

KEY OBSERVATIONS

- Detailed discussion was carried out with Sarpanch (Mrs.Aparna & Mr. Prasad) about the village problems and their plans for the developments
- Collected letter about their participation from the Sarpanch
- Visited school, Anganwadi kids care center
- Interacted with public, youth of different cast (BC,SC and others)
- Inspected their water facility (Over Head tank and its source)
- Inspected tank which needs de-silting
- Inspected wastewater disposal, storm water drains

INTERACTION OF IITH TEAM WITH VILLAGE SARPANCH



VILLAGE HOUSES AND MITTI ROADS



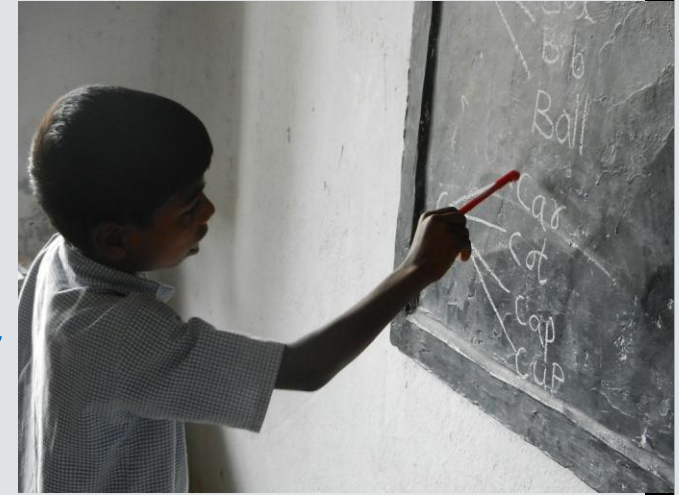
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213	కాకతి వెంకటేశం	021010204 - 02		
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• School

- Presently total strength is 97 Nos. From class I to VII.
- 4 teachers only working which needs support in terms of teaching
- Toilets are under bad shape
- Mid day meals (Not nutritious)



Teaching Activity at Uttarapalli Village under Unnat Bharat Abhiyan



Teaching Activity at Uttarapalli Village under Unnat Bharat Abhiyan



Date: 31st Jan

Teaching Activity



Computer education







CPE deployed at remote rural schools:

1. Utharpalle School- 7.8 Kms away
2. Mallepalle School- 8.6 Kms away
3. Deployment in progress at 4 more schools



TRAI delegates visiting a site – Utharpalle school

PC with Broadband connection handed over to a Utharpalle school



TVWS technology. White Spaces are Unused portions of TV broadcast channels. IITH uses such unused 8 MHz TV Channel for TVWS transmission at 24 dBm.

WATER RESOURCES

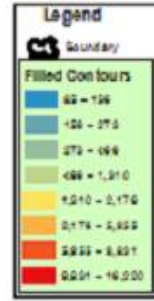
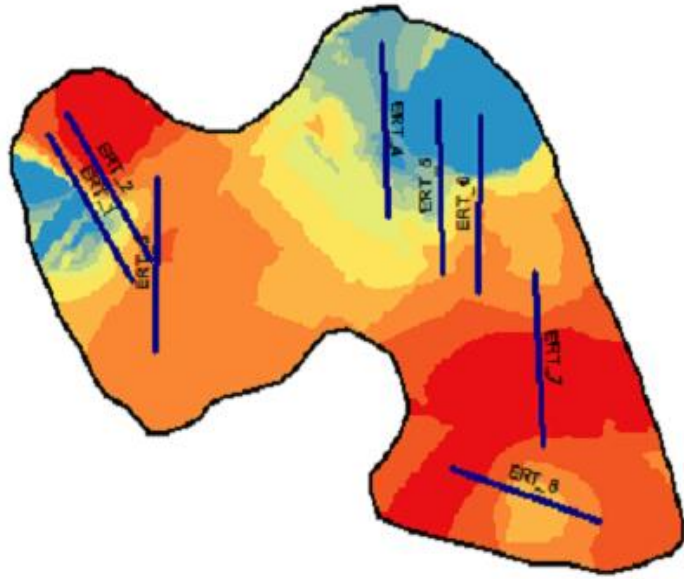


- Water source(Ground water) to tank is located at 2 km from the village.
- Most of the bore wells were dried up and New bore wells were unsuccessful
- Needs identification of groundwater source
- Needs artificial recharge to improve the things
- No RO for drinking, possible water quality issues

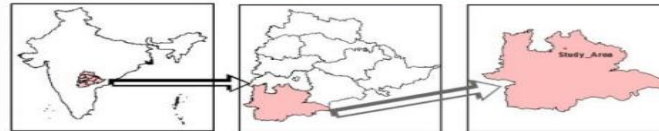
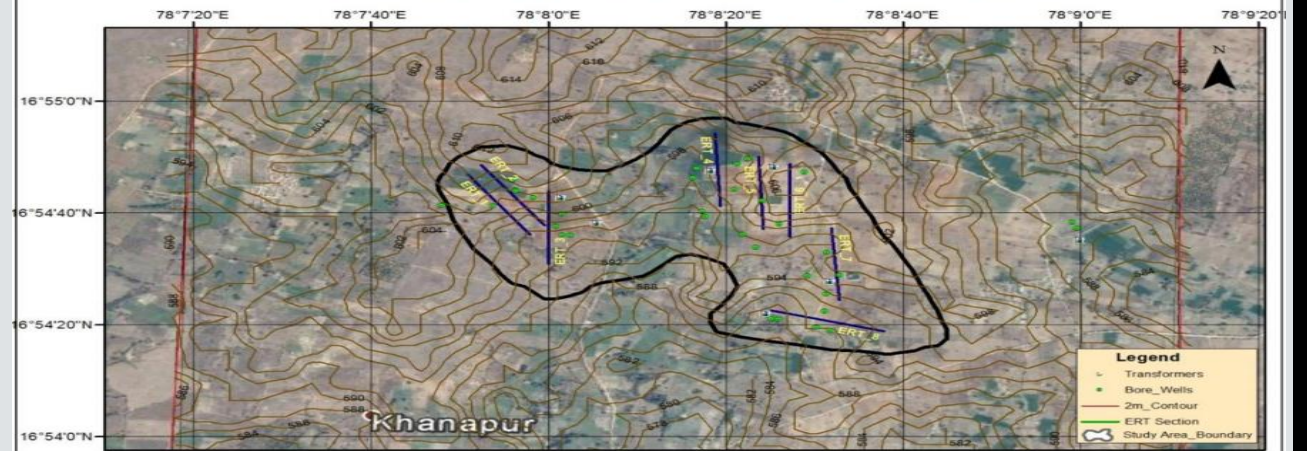
Hydrogeology mapping Rangareddyguda village in Balanagar Mandal of Mahabubnagar District in Telangana

- 2-dimensional Electrical Resistivity Tomography (ERT) survey using Schlumberger electrode configuration (with maximum spread of 400 m) was performed at 8 sections across the study area based on feasibility.
- Inversion of apparent resistivity distribution was performed using Res2DINV to generate true resistivity distribution along the sections.
- Iso-resistivity contours of the study area were prepared at different depths using geo-statistical interpolation methods.
- A geological interpretation of resistivity distribution (both in horizontal and vertical directions) was performed to comment on groundwater potential and recharge zones of the study area.

62 mts BGL



Base Map of Rangareddyguda Village, Mahabubnagar Dt, Telangana



TANK/LAKE NO WATER



U/S portion of Tank and spillway: completely silted with no water storage approximate area need de-silting 20 acres.



D/S portion which can be irrigated (about 1000 acres) if Tank storage improved



Bunds were constructed under Nizam's ruling, No improvement after independence

DRAINAGE/STORMWATER DRAINS



There is no proper drainage facility. Hygienic conditions has to be improved, 50% population are only accessible to toilets
Very few drains are observed which are improperly designed (stagnant condition)



Solar power development:

- B.Tech students visited Uttarapalle village along with IITH faculty and chose project for their IDP, which is a 1 credit independent project course in the EE department.
- They have demonstrated the proof of concept in a very small scale using LEDs driven by a solar panel and rechargeable batteries.
- Currently, we are procuring 24 W CFL lamps for testing purposes and plan to procure a solar panel and rechargeable battery of appropriate rating. All this is being done with an eye on reducing costs. The design of the circuitry is underway and is expected to be ready by the middle of July.
- The solar panel to be fixed to the streetlight posts are being designed to act as mobile chargers as well, since during the daytime, the charging circuits can be driven directly using solar power without using the rechargeable batteries.
- After building a prototype, we are planning to train electricians in nearby villages to build similar circuits, so that nearby towns and villages could adopt this technology.

HOW IITH CAN HELP?

Based on physical observations the following improvements can be thought

- We can improve school facilities and support teaching students
- Drinking water facility(RO Plant)
- Identify groundwater potential sources, rainwater harvesting
- De-silting tank and watershed management
- Improve drainage facilities
- At least we can install solar power for the emergency services like water, medical etc. (Village is ready to contribute 1 lakh rupees)
- Youth needs technical training and rural business incubation.

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VISIT TO ALIABAD VILLAGE BY IITH TEAM
VISITED ON: 24TH NOV., 2014

SOME DETAILS ABOUT THE VILLAGE



- About 26 km from current campus, 15 km from permanent campus
- Population about 1000

MOSTLY AGRARIAN ECONOMY



- Cotton, Sugarcane and Paddy
- In times of scant rainfall (like this year), cotton
- Borewell irrigation. Not enough wells, power shortage
- Fertilizer/Pesticide intensive farming

AREAS WHERE IITH CAN CONTRIBUTE

- Primary and Secondary Education
- Electricity
- Irrigation
- Generation of rural employment for the educated unemployed
- Drainage
- Safe drinking water
- Agriculture

WATER



- Not much scarcity of drinking water
- Manjeera and Borewell water towers available separately.
- Manjeera water not clean, villagers prefer borewell water. Borewell tank water chlorinated



POWER



- Electricity available, but erratic
- 6PM to 6AM power available, single phase
- 10AM to 1230PM two phase.
- Streetlights available, working.

DRAINAGE



- Open drains
- No way to drain out water completely from the village.
- Gets stagnated behind the village

HAS A PRIMARY SCHOOL...



- About 33 students
- Two teachers (including HM)
- Up to class 5.
- About Rs. 10000 aid from state govt pa.
- Teachers fairly tech savvy, motivated
- Meals provided by Akshaya Patra



...AND AN ANGANWADI



- A health worker (nurse) visits the Anganwadi/Primary School twice every month.
- Otherwise, Primary Health Center in Kondapur, about 2 km away.

MISCELLANEOUS



- Peaceful and progressive people. Education given priority unless overridden by economic considerations
- Demography: mostly minorities and scheduled castes
- No major diseases or illnesses.

