

CTARA-Vision, Activities and the Future

Convocation-Alumni Day

Milind Sohoni

Centre for Technology Alternatives for Rural Areas

www.ctara.iitb.ac.in



Welcome



Our Guest- Shri Praveen Pardeshi, IAS

- Principal Secretary, Chief Minister's Office, GoM
- *Economics, natural history*. Illustrious career across many positions

Today's talk

- **Nuts and Bolts.** Core values, courses, programs, faculty.
- **Our work.** This year and earlier years. Whats been achieved.
- **The big picture.** The how and why.
- **Finally...**

The Broad Vision in Development Action

Core values :

- The bottom 80%-households, hamlets, gram-panchayats, villages, towns and cities
- Basic areas-soil, water, energy, livelihoods, public health
 - ▶ end-user defined or demand-driven
- Concrete stake-holder and concrete deliverable-as close to implementation as possible
 - ▶ solutions and knowledge-technology, policy, study, capacity

Methods:

- Case Study: An important theoretical/practical/development tool.
- Field-work, inter-disciplinarity, applied social science and engineering
- State programs, markets and their functioning, innovation.
- increasingly: other engineering colleges, local partners.

Core Faculty

- Anand Rao-Energy and Environment, Climate Change
- N. C. Narayanan-Water and Governance, Development
- N. Shah-Food, Agriculture and Agro-Industry
- Priya Jadhav-Electricity, Energy
- Amit Arora-Agriculture, bio-mass systems.
- Bakul Rao-Environment Analysis and Assessment
- Milind Sohoni
- Satish Agnihotri-Policy and Governance
- Santosh Jagtap : Design
- Om Damani, Puru Kulkarni, U. Bhandarkar, S. Kedare, Ganesh R., Rangan Banerjee and others
- A. W. Date , Appropriate Tech.
- Vishal Sardeshpande -Small enterprises, energy.
- Prasad Modak-Environment

The Programs

Objectives of the M.Tech. program

To produce the developmentalist/development professionals

- Analyse "development" situations and design solutions
- Work with implementation agencies and see them to completion
- Rising demand for such professionals -NGOs, Govt., think tanks, CSR, consultancies

Objectives of the Ph.D. program

- Explore and innovate and push the boundary in a development sector
- Contribute to the practices, higher education and research
- Produce the next generation of leaders for national programs

The current M.Tech. in T&D

Coursework

- **Perspective-philosophical underpinnings**
Development Theory, Appropriate Technology, Policy and Governance
- **Sectors-the knowledge base**
Water, Soil and Agriculture, Energy, Environment
- **Skills-to bring rigour to field work**
Field Research Methods, Quantitative Methods, Project Mgt. and Analysis
- **Field work**- 9 week structured rural stay, field visits.
- **Two-Stage Project**-Ideally
 - ▶ Ist Stage-**Situation and alternatives**-Appreciation
 - ▶ IInd Stage-**Technology or Policy**-Generation

Locations



The Mechanisms

TDSL for UGs

First-ever in the country.

- Institute-wide platform for development projects.
 - *A new pedagogy*-design and analysis in live situations
 - *A slew of interesting topics.*
-
- **MoRD** and **HAL** fellowships
 - **TDSC** Solutions and consultancy cell. To select and train MTD/TDSL students for private enterprise.
 - **UBA** and **UMA** : MHRD and GoM programs based on CTARA experience. **RuTAG**: Development support to NGOs.



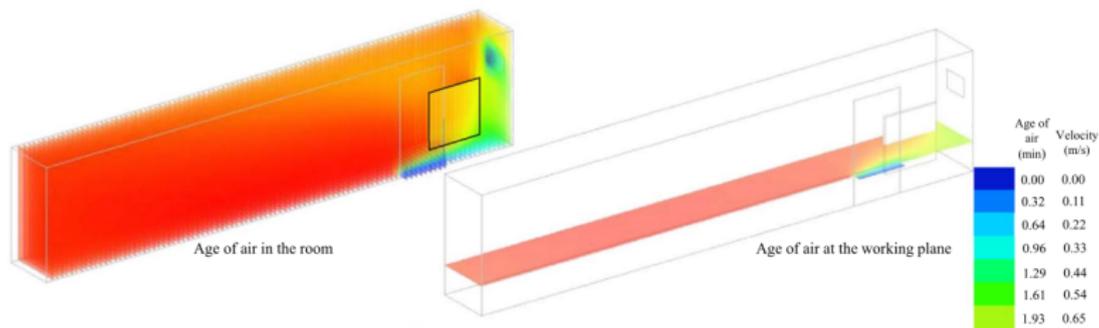
Research Areas

- Energy policy, implementation of various energy systems, micro-grids, energy uses in lighting and irrigation. Rural electrification.
- Biomass processing. Agri-processing, food processing and food supplements.
- Rural planning. Solar panchayats. Water supply, sewage and waste management. Environmental analysis.
- Policy in environmental services and water. Regional studies and the planning process in PRI.
- Drinking water solutions. Groundwater and surface water. Schemes. Irrigation and Agriculture.
- Small enterprises. Energy and factor efficiency. Livelihoods.

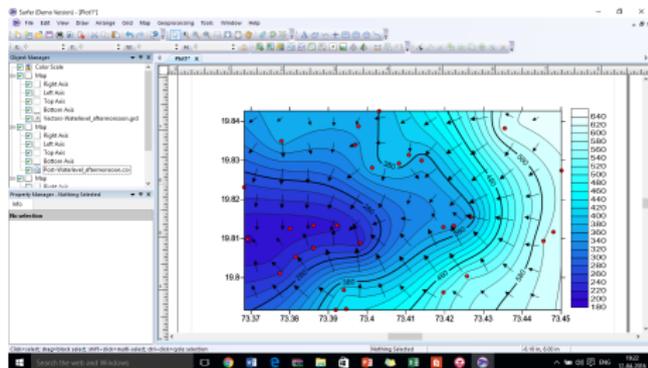
Rural industry



Chulhas and Indoor Air



Watersheds and Simulations



Sample works-Supply Chain



Fishcages and Solar lamps



Sample works-Gadgets and Engineerings



What happened last year...

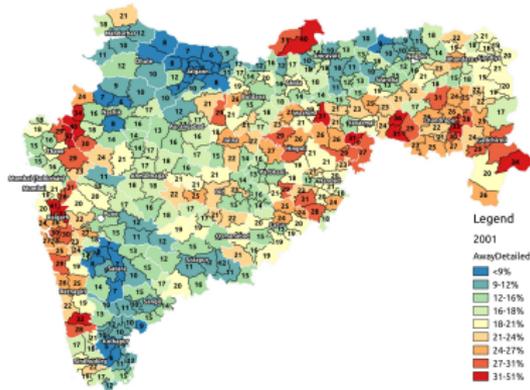
- **Academic ties.** Berkeley. Nanded, COEP, IIT Rourkee in TDSL.
- **Strategic.** : TEQIP workshop with 17 Maharashtra colleges. Gondwana University.
- **Extension.** Swirlers, treadle pumps in Koraput, Jawhar. Priya at MERC. Lekshmi at GoM. Milind at GoM. SOUL.

Center for Policy Studies

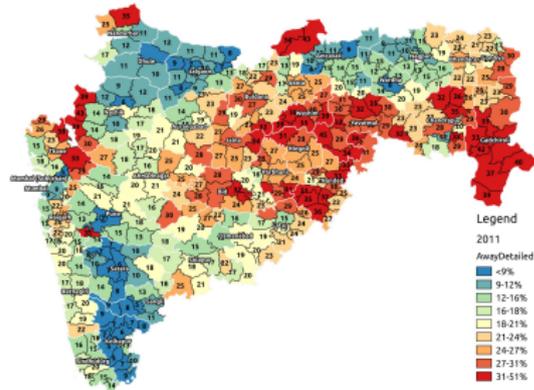
- Headed by Prof. Satish Agnihotri

Rural Maharashtra: 2001 and 2011

Percentage of Rural Households with Primary Source more than 500m away (2001)



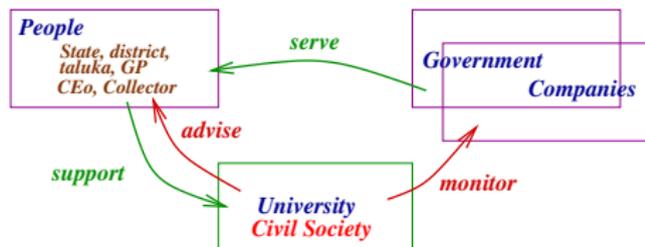
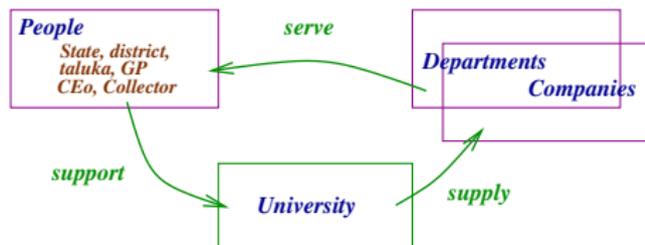
Percentage of Rural Households with Primary Source more than 500m away (2011)



- Serious, widespread and endemic. Needs more than technical solutions.
- The question of knowledge. Exhausted job definitions.
- New sites for knowledge. New roles. New mechanisms of delivery.

The role of the University

- The old model is inadequate—gross mis-allocation, poor practices, increasing inequality and instability.
- a new model of university as a nurturer of *civil society*.
- new professions—entrepreneur, innovator, advisor, consultant, evaluator, coordinator
- need for value-positive loops for society to migrate
- New knowledge, new mechanisms.



Our mechanisms

- **TDSC** Solutions and consultancy cell.
 - ▶ Launching future development consultants. Payment model.
 - ▶ Parbhani, Tembha, Mokhada, [Palghar](#), [Thane](#)
 - ▶ **TDSC is hiring.**
- **MoRD Fellowships**
 - ▶ **Professional development research.** Strategic engagement for CTARA and Gol.
 - ▶ NRLM, PMGSY, NREGA and others such as *chulhas*.
- **UBA:** MHRD program based on CTARA experience.
 - ▶ The *Technology PUSH model*.
- **RuTAG:** Development support to NGOs.
 - ▶ The technology delivery model through NGOS.
 - ▶ Fisheries, Food processing, livelihoods.

GoM

UMA

- Align research and training with development needs
- Mechanisms for colleges to perform regional role
- BATU Lonere, COEP, VJTI, Aurangabad, Nanded, SPCE
- various programs-JSA, RWS, Irrigation

MSNA

- 4 cities, poor outcomes, re-design

MSEDCL

- Agricultural feeders, 15 colleges, over 100 locations.

and many more...

In the medium term

Closer Interactions with various partners.

- Govt. of Maharashtra-Key GRs in water and engineering education.
 - ▶ Key development role in Maharashtra State.
 - ▶ Role model for other universities in India.
- UC Berkeley-long collaboration in water and policy.
- Closer collaboration with other departments.

Upcoming areas of research/courses :

- Small/Micro enterprises, rural livelihoods. Food and nutrition.
- Rural electricity. Planning for small towns. Agricultural supply chains.
- Technology and Society. Development Theory.

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Finally....Its been two years...

Natural History



Finally...

- Life is longhonesty, hardwork and humility pay.

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- Life is longhonesty, hardwork and humility pay. **And sense of humour.**

What do we expect?

- You will **comprehend** what others cannot.
- **You will be the message and the messenger.**
- That you will be in the **in the public sphere**, and not merely an employee or a consultant.

Finally...

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What do we expect?

- You will **comprehend** what others cannot.
- **You will be the message and the messenger.**
- That you will be in the **in the public sphere**, and not merely an employee or a consultant.

- And yet **you will be successful in the usual measures as well!**

Development is indeed about comprehension, delivery, outcomes and role-models.

So lets keep trekking!

