

# **INNOVATIVE WATER MANAGEMENT INITIATIVES**

A Presentation by  
Dr. Sundaresan Subramanian  
at the Water and Sanitation Forum Meeting of  
India Development Coalition of America (IDCA),  
Hinsdale Public Library, Hinsdale, IL 60521  
July 24, 2010

# BACKGROUND

## CRITICAL WATER-RELATED ISSUES

- Severe Contamination of Ground Water
- Pollution of Water Sources by Industrial Effluents
- Impacts on Human Health & Agriculture
- Lack of Finances in Urban Local Bodies
- Indifferent Attitudes to Water Issues



# STRATEGIES & INITIATIVES

- Focus Areas:
  - Ground Water Contamination
  - Pollution by Industrial Effluents
  - Urban Community Water Management
- Identified and Utilized U.S. Expertise
- Built U.S.-India Partnerships
- Leveraged Financing for Projects

# Ground Water Contamination

## Problem

High Fluoride;  
Skeletal Fluorosis

## Project

Fluoride  
Removal System

## Place

Yerraram,  
Medak Dist. A.P.

## Partners

WSI-Panchayatraj





# PROJECT RESULTS

- Community Participation
- Skills Development
- Improved Quality of Life
- Projects Replicated  
in North India at:
  - Gharrot Village,  
Palwal, Dist. Haryana
  - Banipur in Rewari.



# Arsenic Remediation

## Problem

High Levels of Arsenic in West Bengal's Ground Waters implicated to cause several types of cancer.

## Project

Arsenic Removal Systems Project (Ex-situ and In-situ)

## Place

Barasat Village, Midnapur Dist. & Others, West Bengal

## Partners

WSI-Public Health Department, West Bengal  
SUNY/EnviroAssociates, NY- PHED, West Bengal



# PROJECT RESULTS

- Successful Demo. of Arsenic Removal at Barasat Village, WB.  
*(See Pictures alongside)*
- Project replicated at 25 villages in WB.
- Demonstrated In-situ treatment of Arsenic.
- Thousands of people benefited by the projects.



# **Pollution by Industrial Effluents**

## **Problem**

Severe Water Pollution caused by release of wastewater into water bodies by Textile Industries in Tamil Nadu. Water-borne diseases and adverse impact on Agriculture.

## **Project**

Use Innovative U.S. VSEP technology to treat and recycle textile wastewater.

**Place:** Several Industries in Tamil Nadu's Textile Belt.

## **Partners**

California State, New Logic - GEA Energy Systems, Chennai



# PROJECT RESULTS

- New Logic VSEP Technology demonstrated in 12 locations.
- At A.D. Textiles, Karur 85% water recovered from 144,000-liters/per day of Wastewater release.
- \$3 Million contract from Tirupur Manickapuram CEFT.
- Pictures illustrate results.



# Community Water Management

## Problem

Need to buy truckloads of water at expensive prices to meet daily needs of a large educational institution.

## Project

Decentralized Wastewater Treatment System & Recycling.

## Place

Loyola College, Chennai, Tamil Nadu

## Partners

Georgia, Environmental Systems LLC.-Ramky Infrastructure



# PROJECT RESULTS

- 50,000 litres of wastewater treated per day using U.S. TVA technology.
- Recycled water used for gardening and sanitary purposes.
- Cut cost of buying water by almost half.
- Truckloads of water diverted to other needy users.

*Picture shows U.S Consul-General Richard Haynes breaking ground for the project at Loyola College.*



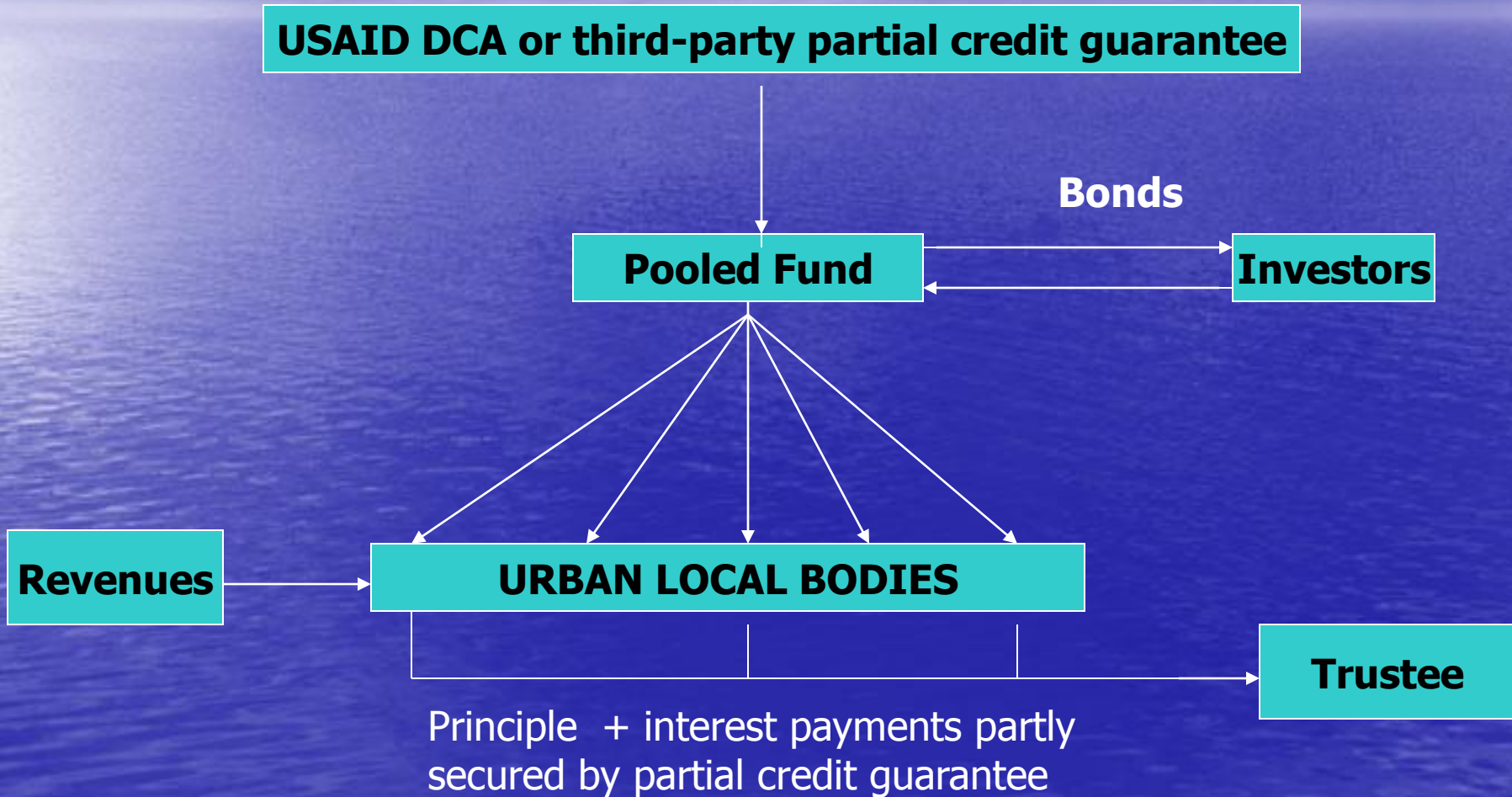
# ENERGY-SAVING OPTIONS

- Solar Pedalflo System  
Uses solar energy for pumping ground water.
- Project implemented at Mahawella Estate, Ratnapuri District, Sri Lanka.
- Replicable in India. Saves Energy!





# INNOVATIVE FINANCING



# SUMMING UP...

- Many water sources are contaminated.
- Small innovative water projects provide great benefits to communities.
- Access to potable water has improved.
- But, project coverage needs to broaden.
- Innovative financing is possible.
- Attitudes to water – a major barrier.



# INDIA'S WATER CHALLENGE

## How to Effectively Meet It?

- Decentralize Water Treatment
- Recycle Where Possible
- Train People to Develop Skills
- Improve Attitudes to Water
- Share Experiences; Replicate
- Innovate! Relentlessly  
Innovate for a Real Change!!



# MORE INFORMATION...

Contact me at:

847-557-2375

[tellsubi@gmail.com](mailto:tellsubi@gmail.com)

# **THANK YOU!**