Applied Materials presents

The Tech Awards 2012

Using water as an engine for economic growth and global health

Description

Natural contamination of groundwater by arsenic and fluoride is a crisis that poses serious health hazard to nearly 300 million resource-poor people around the world. TSF develops robust water technologies that can be implemented readily by these communities.

Headquarters Pennsylvania, USA

Established 2009

Impact Areas Cambodia, India, Vietnam, South Africa

Type Non-Profit

Sectors Environment & Water

Staff Size 8 Volunteers

Annual Budget $50,000

Major Funders American Chemical Society, Reed Elsevier Company, Lemelson Foundation

Key Awards

2007 Grainger Challenge Award from the National Academy of Engineering

2008 Dhirubhai Ambani Award from the Institution of Chemical Engineers (IChemE) in the United Kingdom for Engineering Innovation to provide potable water to resource-poor arsenic-affected people

2009 Astellas Foundation Award from the American Chemical Society (ACS) for scientific research that improves public health

2012 Fulbright Senior Fellowship Award to India by the US State Department

CONTACT US

+ 1 610 758 3534

ARUP.SENGUPTA@LEHIGH.EDU

WWW.THETSFOUNDATION.ORG

The Tagore-SenGupta Foundation (TSF)

Target Market

Nearly 300 million people, primarily in the continents of Asia and Africa with less than $2 per day income, will benefit from TSF's technology. In addition to providing safe drinking water, these technologies have provided strong evidences of transforming the water crisis into a business enterprise with employment and economic growth.

Value Proposition

Arsenic poisoning caused by drinking contaminated groundwater may cause severe health impairment including skin lesions, respiratory disease and cancer. Hundreds of people have died or have been dysfunctional. In many places, no other source of drinking water is available or it is cost wise prohibitive. Ours is the most cost-effective, easy-to-operate arsenic mitigation technology that can be sustained by resource-poor people on their own. It is a community based system and the acronym is SARSAC (Sustainable Arsenic Removal System in Affected Communities). These are the reasons people in affected areas collect water from our systems.

"More than 1 million people around the world, both in the developed and the developing world, drink arsenic-safe water through our technology."

PROF. ARUP K. SENGUPTA,
PRESIDENT OF THE TAGORE-SENGUPTA FOUNDATION

Tagore SenGupta FOUNDATION

Applied Materials presents

The Tech Awards

Using water as an engine for economic growth and global health

Milestones Achieved

2007 Received $100,000 from the National Academy of Engineering

2009 Received $30,000 from the American Chemical Society

2011 Received $50,000 from Reed-Elsevier Publishing Company

2012 Received $40,000 from National Collegiate Inventors and Innovators Alliance (NCIIA)

Growth Plan

2012 Build and operate new arsenic mitigation systems in Nepal and Bangladesh

2012 Develop sustainable community based fluoride removal technology

2013 Apply fluoride mitigation technology in Ethiopia and Kenya

2014 Apply fluoride and arsenic removal technologies in at least 20 more villages

Impact to Date

- Over 250,000 people in arsenic-affected areas are drinking arsenic-safe water
- Arsenic-affected people are running and financing day to day operations of the TSF arsenic mitigation technology

"Through this arsenic mitigation technology, we have been able to transform the health crisis into a revenue generating business while drinking safe water."

SAKTI SADHANA CLUB,
ASHOKNAGAR, WEST BENGAL, INDIA

Investment Required

TSF is seeking approximately $200,000 to transform the arsenic and fluoride crisis into small-scale local businesses using our technology.

THIS PROFILE WAS DEVELOPED DURING THE TECH AWARDS 2012 BY THE CENTER FOR SCIENCE, TECHNOLOGY, AND SOCIETY WITH SUPPORT FROM APPLIED MATERIALS. THE TECH AWARDS IS THE SIGNATURE PROGRAM OF THE TECH MUSEUM OF INNOVATION.®