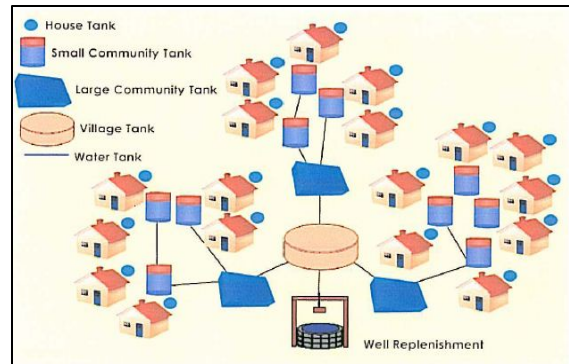


2010 Winner of the \$100,000 Lemelson-MIT Award for Sustainability
Dr. BP Agrawal

Aakash Ganga – River from Sky

Aakash Ganga (AG) is one of the signature innovations that Dr. BP Agrawal developed under Sustainable Innovations (SI), a non-profit organization. SI harvests innovations in systems, technologies and entrepreneurship to build holistically sustainable social enterprises. AG is a rainwater harvesting system utilized to collect safe drinking water in the arid region of Rajasthan, India. The system channels rooftop rainwater from every house in a community through gutters and pipes to a network of multi-tier underground reservoirs with large enough capacity to store a year of drinking water.



AG rainwater harvesting network



AG House Tank, Griha Tank

Part of the harvested rooftop rainwater is stored in the House Tank, or *Griha Tank*, a reservoir attached to a house for the exclusive use of the home owner. Typically, the *Griha Tank* stores enough water to meet the drinking water needs of the family for a year.

The rest of the rainwater flows to the Community Tank, or *Gram Tank*, a shared community reservoir. People who live under thatched roofs or who cannot afford to have their own reservoirs take water from the shared reservoir. The large shared reservoir is 400,000 liters or more in capacity. The actual size depends on several factors including village

population, average roof area and average annual rainfall. The storage construction cost is roughly \$0.05 per liter. The infrastructural investment is \$2 to \$3 per person per year.

The villages are rich in cultural traditions and social norms — the social capital. AG has monetized the social capital to ensure sustainability and to cut the upkeep cost.

Funded through a \$200,000 World Bank Development Marketplace grant in 2006 and matching funds from the Rajasthan Association of North America, this network of reservoirs is designed to provide 10 – 12 liters of water daily per person to an entire village for a year; to-date, it has helped 10,000 villagers gain access to clean water.



AG Community Tank, Gram Tank

Agrawal is building a public-private-community partnership to provide potable water to 250,000 people by 2012. He expects to secure several million dollars in funding from the Ministry of Rural development, Department of Science and Technology, National Rural Drinking Water Program, and social investors.

Arogya Ghar – Clinics for Mass Care



Arogya Ghar kiosk-based clinic system (above and below)



With seed money from the 2007 World Bank grant and help from entrepreneur Atul Jain, founder and CEO, TEOCO, Agrawal developed a second program for SI – a mobile, kiosk-based self-sustainable clinic system called Arogya Ghar. The system provides affordable healthcare for the poor, with a focus on reducing the incidence of common ailments and preventable diseases in rural Rajasthan, India. This door-to-door patient treatment program costs approximately \$.25 per visit and is operated by fully-trained high-school-educated, local girls, the social entrepreneurs.

At registration, every child is assigned a Unique Health Identifier (UHI), a 16-digit number similar to a credit card number, and issued a health card. The health records, such as immunization history, are keyed to the UHI and can be accessed by a physician in a primary health center or hospital. Agrawal created Arogya Ghar in partnership with the Birla Institute of Technology and Science, Pilani, and several India-based physicians.

Sustainable Innovations – Partners

AG and Arogya Ghar are implemented by a cadre of non-governmental organizations that work with SI. These partners include Birla Institute of Technology and Science (BITS), Indian Institute of Health Management Research (IIHMR), Bhoruka Charitable Trust (BCT), Samgra Seva Sansthan (SVS), and Society for Community Organization and People Education (SCOPE). BITS leads the AG engineering team, monitoring of water quality, and technology development. IIHMR oversees AG's implementation in villages, acquisition of materials, resolution of conflicts, progress monitoring, and financial controls; BCT, SVS, and SCOPE coordinate community mobilization, liaise with local governments, and manage the in-field implementation.