

THE LOCAL WATER FACTORY

Local production of healthy drinking water free of Arsenic and all other contaminants but with nutritious minerals.

Summary from Good Life Seminar by Aapo Sääsk

Purpose: To provide clean drinking water to small communities.

Advantage: This local utility will remove all possible contaminants from any type of water. It is easy to run and requires no chemicals except for descaling if the source water is hard. It will require no consumables except waste heat in the form of the coolant from a bio-energy generator.

Background: A technology called Membrane Distillation has been developed for industrial purification of water into Ultra Pure Water. The advantage of the technology is that it removes all possible contaminants from water without any need for chemicals or replacements of consumables. In consumer water treatment it will thus remove both arsenic, fluoride, nitrate and other chemicals and metals as well as pesticides, disinfectants and other organics as well as bacteria, virus, spores and other microbiological contaminants. And it will do so completely and without the need for expert maintenance.

Status: A full scale demonstration equipment has been tested successfully by the Royal Institute of Technology in Sweden in May 2006 at a power plant owned by the Swedish power operator Vattenfall AB

Use: Water for drinking and cooking will be distributed in flasks or containers. A local distribution network will be set up to service approximately 1000 people.

Sustainability: The life of the equipment is approximately 20 years and components can be recycled. The only consumable is energy which will be provided as waste heat from a small power plant / generator. No filters and no chemicals are needed for the purification process.

Commercial: Local entrepreneurs can borrow money in a bank for the purchase of necessary equipment. Marketing will be a minor problem because there will be a ready local market for the high quality, low price, life saving commodity.

International significance: Due to the growing current trend around the world of drinking water from underground sources, in an attempt to replace or diminish heavily polluted surface water supplies, arsenic is causing a global epidemic of poisoning with hundreds of millions of people now being thought at serious risk in many countries. Attempts to find a solution to the problem have thus far failed in Bangladesh, India and the USA. The proposed demonstration project will therefore have great significance also for other afflicted areas in Argentina, Australia, Canada, Chile, China, Greece, Hungary, India, Japan, Mexico, Mongolia, New Zealand, The Philippines, Russia, South Africa, Taiwan, Thailand, as well as in other countries.