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## A wonder filter that gives arsenic-free water

Handy and simple Sono Filter made with easily available materials approved by WHO, government

Amanur Aman, Kushtia

A simple and cheap filter made with easily available materials has worked wonder in supplying arsenic-free water to rural people.

Its use has stopped spread of arsenicosis in about 100 villages in Kushtia Sadar, Khoska, Daulatpur and Bheramara upazilas. No arsenicosis patient was detected in the villages in last two years after the people began its use, according to the innovators who are producing and marketing the filter.

Sono Filter, as it is called, is perhaps the first recognised successful indigenous technology to remove arsenic from water. It costs between Tk 1600 and Tk 2100 and a buyer do not have to use any ingredient or chemical to purify water.

This correspondent talked to several users in villages in Kushtia Sadar upazila, who said it is very simple and does not involve any recurring expenditure for purifying water.

It has been approved by the World Health Organisation (WHO), the Bangladesh government and the local bureau of Isotope Hydrology Section of the Inter-national Atomic Energy Agency (IAEA).

The government approved it after different scientific tests including ETV-AM (Environmental Testing and Verification Programme for Arsenic Mitigation), the innovators said.

Three Bangladeshis brothers innovated the system after seven years' experiment. They are Dr. Munir, a physician in Kushtia, Bangladesh born US citizen Prof Abul Hussam of the department of Chemistry and Bio-Chemistry at George Mason University, USA and Prof Abul Barkat of Economics department at Dhaka University.

They did the experiments at a laboratory at Sono Diagnostic Center (CDC) in Kushtia town, owned by Dr. Munir. Prof Abul Hussam frequents Bangladesh several times a year.

A model of the filter was first made in 2000, basing on the principle of Composite Iron Matrix (CIM). Three pitchers were used then.

Later it was developed and remodeled. It is now made with two



Hasina Begum of Bhadalia village, affected by arsenic, is gradually recovering from the disease after using filtered water and treatment by MSUK. PHOTO:

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buckets by using iron dust, saw dust, coal and some other components, which the innovators declined to elaborate. But no chemical is used either in making the filter or using it to purify water, they said. It is easy to handle and use.

The innovators are producing and distributing the Sono filter with financial help from Die Lichit Brucke and the Ministry of Economic Cooperation and Development of German government.

Manab Sakti Unnayan Kendro (MSUK), a sister organisation of Sono Diagnostic Center (CDC), is supervising the production.

They said around 27000 Sono filters have been sold among people across the country so far. Different NGO's across the country are also marketing it. People in areas affected by ground water arsenic contamination disease are the main buyers.

The filter has been supplied for free to at least 825 schools in six uapzilas in Kushtia under a Primary School Health Care Project (PSHP).

MSUK also provides free treatment to arsenic affected people. Dr. Munir, chairman of MSUK, treats them at a six-bed hospital in Kushtia.

Talking to this correspondent, Dr. Munir said it is not possible to remove arsenic from ground water but use of treated water can be ensured in badly affected areas.