



## Focus of the month

### Arsenic in the South-East Asia region: We cannot make them wait!

The issue of the presence of arsenic in drinking water in many regions of Member countries of the WHO South-East Asia (SEA) Region is one that dates back to the late 1980s. Since then, five countries in this Region have reported instances of arsenic contamination in their drinking water. In India, the problem exists mainly in West Bengal where 8 out of the 17 districts of the state are exposed to arsenic contamination in groundwater. More recently, the state of Bihar also reported the presence of arsenic contamination in the Gangetic and Brahmaputra plains. Overall, about five million people in India are exposed to arsenic contamination and not less than 300 000 people are suffering from various stages of arsenicosis.



Arsenic testing at site

Bangladesh has reported 49 million people being exposed to arsenic levels in drinking water that exceeds the WHO guideline value of 0.01mg/l. At least 30 million people may be considered exposed if the Bangladeshi standard of 0.05mg/l is used as the benchmark for assessing exposure. The number of patients detected with arsenicosis in that country is 38 000.

In Myanmar, arsenic is detected in some tubewells in the region of the delta of the Irrawaddy river. Case detection conducted on a population of 21 000 from 132 villages of five townships in the Ayeyarwady Division, and 24 villages of five townships in the Bago Division, revealed only two probable cases of arsenicosis.

During surveys in the Terai flat lands of Nepal, where half the population of the country lives, and where the huge majority of them use groundwater from over a million tubewells for drinking and irrigation, two thirds of the wells tested were found positive for arsenic. About 7.5 per cent of these wells had arsenic levels of more than the WHO guideline value, and measured on the national standard of 0.05mg/l this proportion reduced to 1.8 per cent. Health surveys conducted in six high-risk districts with a combined number of 20 000 households revealed about 600 cases of arsenicosis symptoms among those drinking water with more than 0.05mg/l arsenic content.

In Thailand, arsenicosis was first reported in 1987 from Ronpibool district, and Nakornsrihammarat in southern Thailand, which by now had more than a 1000 cases of arsenicosis, and 20 of these turning cancerous.

Action by the health sector in most of these countries has for a long time used a medical epidemiology approach, wherein case detection and assessing the levels of arsenic in the tubewells is accorded foremost priority in the control programme. While this may be necessary for assessing the size of the issue, there is grave concern over the plight of those afflicted. In the absence of a known treatment, these cases will just need to be managed and cared for as best as we can. While the task of testing for arsenic in tubewells may be both necessary and colossal, and the fact that several years may be required to complete the

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mapping and prepare subsequent guidelines and advice for the affected communities on means to avoid the consumption of contaminated water, the damage caused by exposure and risks sustained during this long interim period cannot be neglected.



Rainwater harvesting at household level - an alternative source of drinking water!

We need to redouble our efforts to secure safe and arsenic-free drinking water to all, especially the neglected and marginal communities. Long-drawn planning processes and lack of funding—which is repeatedly cited by national implementing agencies—further delays the completion of the steps that need concerted and immediate attention. Policy-makers must think differently and try new approaches to harvest the abundance of surface water resources that most countries of the Region have as part of an alternative agenda. There is also perhaps the need for some demand creation and facilitation for communities that may not be fully aware of the options available to them. This would be worth the effort given the high cost of inaction vis-a-vis the exposed populations. In places like Kolkata, India, novel and comprehensive surface water use mechanisms have already been deployed. We must find practical ways to use the abundant wealth of rainfall that we have by harvesting this precious resource, instead of merely tinkering with the option of digging still deeper tubewells to tap safer drinking water. Such alternatives will provide the much-needed drinking water to parched throats and allay the deadly effects of arsenicosis. This cannot wait ... and cannot be made to wait!

## SDE News

### Water Safety Plans expanding in Nepal

As part of WHO's support to DWSS<sup>1</sup> for the improvement of water quality, and to promote the WHO Water Safety Plan (WSP) approach, 10 project sites in the central and western region of Nepal have begun implementing WSPs during the latter half of 2008.

On December 15 2008, an interactive session was held in Dhading Besi with the water supply users' committee. Dhading Besi is an example of how small-town populations



Tharpu presentation during the session

have grown manifold in recent years, spurred by the migration of many people from surrounding villages in search of economic security and employment. Remittances from relatives settled abroad have enabled local residents to build their own homes in the town. The number of water connections has grown from just over 400 to about 700, leaving the coordinating committee strapped for resources to provide for and manage the same. While the process may be arduous and may need plenty of time and attention, the application of a water safety plan will help guide the improvement process. Dhading Besi will soon need to plan for an expansion that may well be close to adding 100 connections a year, which will, however, put a serious strain on the financial and administrative capacity and quality of service.

The situation in Aambu Khaireni is different, and a lot better! With 600 connections, the scheme is about 15 years old and completely managed by the community. Despite being a rapidly growing town area, the planning seems to be more organized here. Following contacts with DWSS and WHO, WUSC<sup>2</sup> chair Mr Dol Bahadur and his

<sup>1</sup> Department of Water Supply and Sewerage

<sup>2</sup> Water Users and Sanitation Committee

team have enthusiastically started updating the mapping of their scheme. Ambu Khaireni WUSC hosted a consultation and training meeting on 16 December 2008, in which three members from six projects in the area participated. Most of the participating projects have been in place for quite a few years and are well-entrenched. Some have been functioning competently for more than 25 years. For details contact Mr Han Heijnen at [hanheijnen@gmail.com](mailto:hanheijnen@gmail.com)

## Participation by Indonesia in cost analysis of Drinking Water Supply options

Indonesia participated in two rounds of the workshop and field trials on cost analysis of drinking water supply options held in Khon Kaen, Thailand, on 3-6 March 2008 and in Lao People's Democratic Republic, from 28-31



Participants at the Cost Analysis of Water Supply Meeting

October 2008. The meeting studied guidelines for cost analysis of drinking water supply options, and a cost analysis criterion that was the result of tests in Cambodia, Lao PDR, Philippines, Viet Nam, Thailand and Indonesia. Formative work on these guidelines has been ongoing as part of a collaborative activity between WHO and the University of Geneva. Once completed, this guidance would help in economic evaluation and impact analysis of water supply interventions and related project funding estimates.

For details contact Mr Sharad Adhikary at [adhikarys@who.ir.id](mailto:adhikarys@who.ir.id).

## Indonesia begins preparing National Food and Nutrition Workplan

Conducted by the National Development Planning Agency in partnership with several other organizations, Indonesia hosted the 9<sup>th</sup> National Workshop on Food and Nutrition, with the focus being on "Increasing Food and Nutrition Security to Reach the Millennium Development Goals" on 26-27 August 2008 in Jakarta. The main objective of the workshop was to discuss and recommend adequate feedback on food and nutrition issues faced by the country, and the preparation of the 2010-2014 National Medium-Term Plan. WHO Indonesia supported the conduct of a pre-workshop on "Healthy Lifestyle in the future". For details contact Mr Sharad Adhikary at [adhikarys@who.ir.id](mailto:adhikarys@who.ir.id).

## EH News

### Comprehensive global response agreement to climate change made possible through initiatives during 2009:



Conference of Parties (COP14) of the United Nations Framework on Climate Change (UNFCCC) was held in Poznań, Poland, from 1-14 December 2008. According to the UNFCCC website, "the meeting ended with a clear commitment from governments to shift into

full negotiating mode the next year in order to shape an ambitious and effective response to climate change, to be agreed upon in Copenhagen by end-2009. Parties agreed that the first draft of a concrete negotiating text would be available at a UNFCCC gathering in Bonn in June 2009." At the high-level segment of the conference which was held on 11-12 December, the Secretary-General said: "Together, we face two crises: climate change and the global economy. But these crises present us with a great opportunity—an opportunity to address both challenges simultaneously." (For more information see <http://www.iisd.ca/download/pdf/enb12395e.pdf>)

The WHO side-event at the conference, titled "Health Matters – A key impact of climate change", was deemed a success with fruitful discussions having taken place. Despite

the other events on the sidelines that competed for the time of the participants, the WHO event nevertheless mustered a sizable audience of about 60 people who participated proactively and with intense enthusiasm. The panel discussion and interventions were deemed to be of high quality; having both a visionary character and a

thought-provoking intensity. A detailed document will be available on the website along with photographs of the event, thanks to the collaboration of the India Youth Climate Network (IYCN) team with SEARO. For further information check the website: [www.who.int/mediacentre/events/meetings/climatechange/en/index.html](http://www.who.int/mediacentre/events/meetings/climatechange/en/index.html)

## Visits and missions

### Maternal and Child Health Millennium Development Goals

A high-level consultation to accelerate progress towards achieving maternal and child health-related Millennium Development Goals (MDGs 4 and 5) in South-East Asia was held in Ahmedabad, India, from 14–17 October 2008. Ms Payden (WSH<sup>3</sup>/SEARO), who attended this meeting on behalf of SEARO, visited community empowerment programmes, sites which provided MNCH services in rural settings and the emergency medical response institute. She also visited the Navsarjan Vocational Training Institute to study various ecologically sound sanitation technologies installed for the treatment and reuse/recycling of human waste and grey water, along with some rainwater harvesting projects for ground water recharge and domestic consumption. For details contact Ms Payden at [payden@searo.who.int](mailto:payden@searo.who.int).



Visit to SEWA supported village in Gujarat

### Technical support to Bhutan

Ms Payden (WSH/SEARO) visited Bhutan from 19–26 October 2008 to review the water quality management activities supported under the WHO-AusAid Water Quality Partnership Project and to assist in developing a Water Safety Plan Manual for rural water supplies. The visit also included a follow-up on the recommendations of the Regional Workshop on Ecological Sanitation held in September 2008. For details contact Ms Payden at [payden@searo.who.int](mailto:payden@searo.who.int)

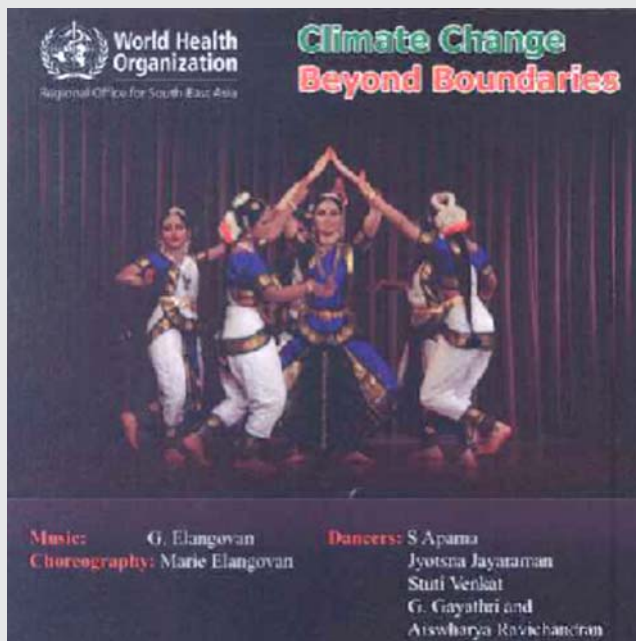


Water safety plan workshop in progress in a village in Bhutan

<sup>3</sup> Water and Sanitation Health

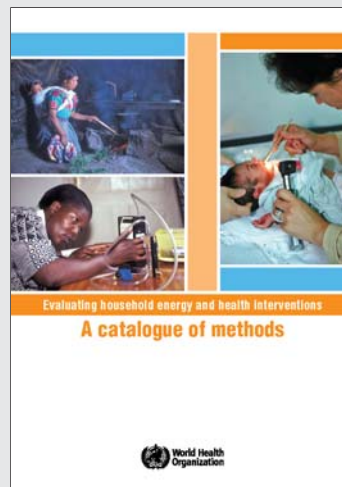
## Publications and Learning Materials

### Communicating climate change and health:



The video CD *Climate Change beyond Boundaries* attempts to convey the health concerns that emerge from climate change using the medium of traditional Indian “Bharatanatyam” dance and music. As a dominant form of communication, dance has captivated the imagination of generations, and its intricate facial and meticulous body movements present myriad meanings and themes beyond what words can convey. Here, a talented troupe of young dancers present a fascinatingly nuanced glimpse of the various health implications of climate change through a rendition of the classical dance form. This provides a refreshing slant to advocacy through movement on a topic usually communicated only through words and pictures. Available in 5-minute and 15-minute formats, this CD can be used as a tool for awareness building. Interested parties may please send their orders to Mr Alexander von Hildebrand, Regional Adviser, Environmental Health and Climate Change (RA-EHC), at [hildebranda@searo.who.int](mailto:hildebranda@searo.who.int).

### Evaluating household energy and health interventions: A catalogue of methods



This catalogue discusses evaluation options in the areas of adoption, market development, performance, pollution levels and personal exposure, health and safety, time, socioeconomic and other impacts and environmental impacts. It provides methods that range from simple questionnaires to complex monitoring techniques, and outlines practical issues related to study design, ethical considerations, data analysis and reporting. Ultimately, this catalogue of methods is intended to help governmental agencies, nongovernmental organizations and universities involved with household energy and health interventions develop an evaluation strategy appropriate to their goals and organizational capacities. *Details are available at the link [www.who.int/indoorair/publications/methods/en/](http://www.who.int/indoorair/publications/methods/en/)*

### New member of SDE team



Dr Salma Burton joined WHO SEARO as the Regional Adviser, Occupational and Environmental Health, on 5 January 2009. She holds a PhD on the role of evaluation in health promotion, and a Masters degree in Health Planning, Policy and Management. She brings with her more than 10 years of experience at the national level with the Ministry of Health, Maldives, and eight years of international experience through her association with IPPF<sup>4</sup>, Save the Children UK, and UNFPA<sup>5</sup>. She will be the new Focal Point for Occupational and Environmental Health in SEARO. The SDE team welcomes Dr Salma and assures full support in fulfilling her responsibilities. She may be contacted at [burtsons@searo.who.int](mailto:burtsons@searo.who.int).

<sup>4</sup> International Planned Parenthood Federation

<sup>5</sup> United Nation Population Fund

Previous issues of Environmental Health Update are available at  
[http://www.searo.who.int/en/Section23\\_12688.htm](http://www.searo.who.int/en/Section23_12688.htm)

## TIPS for Green Behaviour

Ants are industrious critters and are very beneficial to the environment; but at times they clash with human habitation and can be quite troublesome. In such cases, instead of reaching for insecticide there are other better ways to deal with ants, such as:

- Pouring lemon juice on areas ants frequently visit
- Baking soda can deter ants: draw a solid line with it on their areas of movement to deter them
- Ants hate vinegar; so spray it around doorways and other areas to repel them

Ants usually infest a particular spot for a reason-usually food or water. Ensure that food items are kept well secured and don't forget to clean up after you prepare food. Also check plumbing for leaks, particularly under sinks. Dead insects can attract a large numbers of ants, so check window sills and other areas where dead insects tend to lie.

## Significant events of the Quarter

- Active Aging Conference in Asia Pacific, Fukuoka, Japan 29–31 January 2009
- 4<sup>th</sup> High-Level Meeting on Environment and Health in South-East and East Asian Countries, Beijing, China, 24–25 March (for details visit <http://www.environment-health.asia>)
- 3<sup>rd</sup> International Conference on Children's Health and the Environment, Busan, Republic of Korea, 7–10 June 2009

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