Specialized Course on Water Safety Plan

Background

Waterborne diseases like diarrhoea, dysentery, cholera etc. still constitute major health burden in Bangladesh. The health injury reports on children in 2005 reveals that 36000 children under 5 years die in every year from diarrhoea. BBS and UNICEF have estimated that children under 5 suffer from 3-5 episodes of diarrhoea each year, each of which lasts for 2-3 days and sometimes more than two weeks.

Many factors lead to high morbidity from diarrhoea, including poor sanitation, poor hygiene and contaminated water. Properly designed and implemented Water Safety Plans (WSPs) are able to address issues of water source protection and water handling hygiene, and also support other initiatives to promote sanitation.

In addition to the microbial risk, the safety of drinking water in Bangladesh is also threatened by chemical contamination. The principal risk is driven from arsenic contamination and about 25 million people are at risk of arsenic in drinking water above the Bangladesh standard of 50µgm/l. This figure would increase significantly if a comparison is made to the WHO guideline value 10 µgm/l.

It has been experienced that the microbial contamination has been raised in alternative options applied in arsenic affected areas. Other chemical contamination like boron and manganese are also locally important including some cyanobacteria affect from some surface water sources used in drinking water supply.

The 3rd edition of the WHO guidelines for drinking water quality advocates for the use of risk based approach to water safety, popularly known as Water Safety Plan or WSP which is based on scientific evidence and which emphasise a catchment to consumer approach. This requires good design construction operation and maintenance of water supplies. The new approach of water safety also requires particular attention to delivery safe water rather than just routine water testing. The WSP approach includes establishing health-based targets, implementation of water safety plans and undertaking independent surveillance.

WSP takes an effective process control rather than end product control in water system as the principal means of ensuring water safety. Control of risks through preventive operation and maintenance with simple and consistent monitoring that allow problems to be detected early and for remedial action to be taken immediately.

Therefore, WSP needs to be implemented in all water systems for ensuring safe water delivery and thus to reduce incidence of water borne diseases. At present a large section of the professionals are not aware of the concept of WSP. To create awareness on WSP International Training Network (ITN) Centre, BUET has included this topic in its training agenda to organize training programme as a routine course for the water sector professionals.

Objectives of the Course

The main objective of this training course is:

To orient and create awareness and to expand knowledge base of the participants on current approach of safety management of water through operational monitoring and process control. More specifically:

- to understand the hazards that cause water unsafe;
- to identify control measures (existing or planned) that prevents hazards to ingress into the system and to control the process through operational monitoring;
- to assess sanitary and microbial risk of the water supply system through carrying out sanitary survey and
- to enhance the knowledge and skills of the professionals for better management of both asset and safety of the water supply system.

Participants

This is a specialized course to impart knowledge and skills to address water quality problems in Bangladesh. The course is designed for water supply professionals engaged in drinking water supply system with point sources (e.g. tubewell, PSF, RWH, Dugwells) in rural areas. The participants are required to be a graduate with some knowledge of microbiology. The professionals with practical work experience in water quality problems can attend the course.

Course Outlines

- Bangladesh WQ standards, 1997 and Health Based Targets
- Introduction to WSP
- Preparation for WSP implementation
- Risk analysis and risk prioritization
- Critical control points and critical limits
- Operational monitoring and control measures
- Corrective action and supporting programmes
- Sanitary survey for risk assessment
- Verification and validation
- WSP management documents (2nd version)
- Risk assessment: Field Visit

Resource Persons

ITN Centre's Resource Pool, and professionals having long experience in the field of water quality management will provide expertise services during the course.

Registration

Persons interested to undertake the course are required to register their names to the ITN Centre. The number of seats is limited and registration shall be on a first-come first-serve basis. The registration fee is Tk. 2,000/- per participant.

Registration fee is inclusive of the following: Course Materials, Notes & Hand-outs, Lunch and refreshments, Certificate from ITN-Bangladesh. For further information please contact the Course Coordinator:

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