Sanitation, Hygiene and Water Quality in Schools and in the Community, Uzbekistan

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Lack of sanitation is a significant factor adversely affecting quality of life in rural areas. The worst sufferers are the most vulnerable in society, especially women and children in poor and marginalised communities. It is demonstrated that increased access to proper sanitation facilities along with the adoption of adequate hygienic practices could significantly reduce the disease burden on the rural economy. These actions could also prevent further water related disease as well as reduce the financial loss incurred by rural families due to direct and indirect expenditures related to disease occurrence.

Lack of access to safe drinking water and improper disposal of human excreta and solid and liquid wastes lead to unfavorable environmental conditions; and these conditions combined with lack of proper hygienic practices have been major causes of life-threatening disease in Uzbekistan.

Introduction of Hygienic Toilets in Schools and in Selected Communities

The average number of students in a school in Uzbekistan in rural areas is approximately 700-800, and both boys and girls use the same pit toilets. At times the condition of these toilets are so unsanitary that students refuse to use them, and opt to use open fields to urinate and defecate in. Girls suffer the worst from these unsanitary conditions.

To address this issue, the UNICEF Uzbekistan Country Office has launched the “Water Sanitation and Hygiene Project” in the three districts of Karakalpakstan (Khodjili, Chimbay and Kanlikul) and two districts of Khorezm (Urgench and Khiva), to be implemented through schools and in communities. The “Total Sanitation Campaign” is a comprehensive project for the worst affected areas of the Aral Sea basin. Because the underground drainage system is costly and water is scarce in most parts of Uzbekistan, the twin pit pour flush water seal toilets were chosen to replace simple pit toilets in schools - fifty in the Republic of Karakalpakstan and thirty in the Khorezm district.

These hygienic toilets have been highly appreciated by the Local Center of State Sanitary Epidemiological Surveillance and by local authorities.

UNICEF is training local masons in the construction of sanitary toilets

Households have also been motivated with the help of a local NGO “Soglom Avlod Uchhun” to replace their simple pit toilets with the low cost pan and trap, along with squatting plate type of toilets. These toilets are now being locally manufactured and UNICEF is encouraging manufacturers to be self-sufficient. To date, the response has been positive, and in the first three months about 500 households were ready to replace their simple pit toilets. A manual has been developed with the help of Soglom Avlod Uchhun about the hygienic toilets, and has been distributed throughout the community.

Hygiene education in Schools and Community

Hygiene education started with training sessions, though a one day training for school directors and a three day training for school teachers in five districts. One director and two teachers from each the of 80 selected schools were trained in hygiene education in the cities of Nukus and Urgench.

Hygiene education, with the development of educational materials was also implemented with the help of the Republican Center of Education:

- Four workbooks for grades one to four were developed on hygiene education and these are being distributed among students in grades one to four.
- Flash cards on seven components (safe disposal of drinking water, safe disposal of waste water, safe disposal of human excreta, garbage disposal including animal excreta, home
sanitation and food hygiene, personal hygiene and community sanitation) along with pictures were developed and distributed among the schools.

- Schools have been provided with hygiene kits.
- Signboards showing all the components have been developed and distributed among the schools.
- Peer groups from among senior students have been trained in hygiene education in all seven components.
- A parent–teacher association in schools has been formed.

Young school children often have a difficult position in the family as elders are not typically receptive to the new ideas brought home by youngsters. Thus, not all the information given to the special groups formed in the schools may be accepted correctly by families, and as a result dissemination projects may not produce the expected results. To address this, community members were also made aware of hygiene education. UNICEF with the help of Soglam Avlod Uchhun, organized orientation of the community on hygiene education and motivated the community to replace their simple pit toilets with hygienic toilets. The impact of the orientation was so positive that the community themselves started looking after their surroundings. Previously, communities had very few pits for garbage disposal and socket pits for disposal of waste water, and after this intervention, every community member in the Khodjili district around school number one had dug the pits for garbage and waste water disposal. Hygiene education messages have had a positive impact on local beliefs and values.

**Introduction of H2S strips for Water Quality Tests**

Water in sufficient quantities and of good quality is essential for life. However, the quality of water from improved supply systems is often compromised by unreliable operation and lack of maintenance. Water is also often exposed to secondary contamination during collection, transport and storage. Inadequate means of access to good quality drinking water leads to a high risk of water-borne diseases such as diarrhoea, cholera, typhoid, hepatitis A, amoebic and bacillary dysentery and other diseases.

Thus, not all the information given to the special groups formed in the schools may be accepted correctly by families, and as a result dissemination projects may not produce the expected results.

The Khorezm region and the Republic of Karakalpakstan are located in declared ecological disaster zones. The health indices of this Aral Sea region differ from the indices of other regions, and the quality of drinking water does not meet the national standards of bacteriological contamination. In the Khodjili area, where UNICEF has sponsored a project on community mobilization for promoting hygiene practices, 31.3 to 36.5% of the water tests completed deviate from national standards, in terms of microbiological indices. Although there has been an improvement in water quality in some areas, a wide fluctuation is seen in different areas. Overall, 37 to 56% of water quality tests fail national standards.

The community which should be the actual beneficiary of the water supply project is not always aware of the extent of contamination at point-of-source in the household, and as such there are numerous examples of bacteriological contamination of water collected from safe water sources being contaminated in homes due to improper collection, storage and handling practices. UNICEF in association with the Centre of State Sanitary Epidemiological Surveillance of the Republic of Uzbekistan through its district level centres has conducted water quality monitoring that includes bacteriological tests.

A cost effective option for bacteriological tests are now available which does not require a laboratory, costing around one-third of the current cost per test. The H2S strips developed for this purpose are being used in other countries in Asia, such as India. These can be used very easily by the community to monitor their own water, both at the source and at home. The water needs to be further examined by a laboratory to find out the magnitude of contamination and the type of pathogen. This is where the role of The Center of State Sanitary Epidemiological Surveillance becomes very crucial as they will be able to carry out further investigation. UNICEF has sponsored a community mobilization project, through Soglam Avlod Uchhun, in the two districts of Khodjili and Khiva, where a hundred volunteers have been trained in improved hygiene practices that include safe handling of drinking water and monitoring the quality of drinking water by doing the H2S test.

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Upgrading of all existing drinking water resources in all the selected schools in the five districts is being undertaken besides water quality monitoring, and new shallow wells are being constructed along with repairs of the existing ones.

The specific objectives of water monitoring and surveillance are:

1. To improve public awareness of the need for water quality monitoring and bacteriological contamination.
2. To build the capacity of the community in monitoring bacteriological quality of water.
3. To enhance the capacity of the Center of State Sanitary Epidemiological Surveillance and its laboratory units for bacteriological water quality monitoring and surveillance involving the community.
4. To provide public access to information and public participation in the decision-making process for drinking water quality.
5. To develop a mechanism for spreading the project into wider areas.

Conclusion

Although these projects are in progress, it is hoped that through increased knowledge and capacity building, can Uzbekistanis benefit from safer water and enhanced hygiene practices. The results achieved to date are encouraging, and it is evident that participatory approaches, including the involvement of children in schools, with messages being reinforced in their communities, is critical in implementing effective hygienic sanitation. Additionally, involving the community in monitoring water quality with local partners, using cost-effective technology is leading to some very positive results. It is hoped that lessons learned from these activities can contribute to further actions in poor and marginalised communities throughout Uzbekistan.

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The new UN appeal will permit the continued construction and repair of water points and sanitation facilities, including child-friendly designs for schools.

Zambia

UNICEF Zambia responded quickly to last year’s drought by extending safe water supply to 65,000 people through 100 new boreholes and rehabilitation of 165 handpumps. Nearly 1,000 waterpoint caretakers were also trained in repair and maintenance. Participatory hygiene promotion and sanitation transformation have proved vital in preventing cholera outbreaks. A school feeding project targeting 10,000 children in 30 schools in three southern districts provided a complete package – nutritious pre-class meals; educational materials on water, sanitation and hygiene; HIV/AIDS prevention activities tied to sports and games; and school garden supplies. The plans for this year are further rehabilitation and construction of water facilities together with training.

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WEDC manuals

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Nearly 70% of the samples from water points were free of bacteria (compared with 52% earlier), and 55% of the household water samples contained fewer than 100 coliforms per 100 ml. All the samples from both sources showed lower densities of bacteria. In a quarter of cases the water quality had remained unchanged during its transfer from source to household and storage in the home – an improvement over the earlier findings which indicates that community knowledge does indeed translate into behaviour change for the better.