



Summary Assessment

Sanitation Assessment, Kurunegala, Sri Lanka

Report by Indika Gunawardana, Keerthi Wijesinghe, Priyanie Amerasinghe and Alexandra Clemett

Summary by Chamila Dias and Alexandra Clemett

Introduction

This summary is one in a series written by the Wastewater Agriculture and Sanitation for Poverty Alleviation in Asia (WASPA Asia) project. The project aims to develop and test solutions for sanitation and wastewater management, to reduce the risks from wastewater use in agriculture. The approach involves the development of stakeholder coalitions at town and national level, called Learning Alliances, which will bring together the main stakeholders into a participatory process through which actions will be planned and implemented.

The WASPA Asia project is funded primarily under the EU Asia Pro Eco II Programme of the European Commission. It is being undertaken in Sri Lanka and Bangladesh by the International Water Management Institute (IWMI) and COSI in Sri Lanka; the International Water and Sanitation Centre in the Netherlands; NGO Forum for Drinking Water Supply and Sanitation in Bangladesh; and the Stockholm Environment Institute (SEI) in Sweden.

Conclusions and Recommendations

The sanitation assessment was undertaken to capture the extent of the sanitation problem, identify knowledge gaps, and help define activities that minimize the impacts of wastewater. The objectives were to assess the sanitation and hygiene behavior of:

- Farmers that use wastewater for irrigation; and

- The low-income communities that live along the canals who may dispose of waste to the canal as they lack access to facilities to effectively contain or treat waste.

Overall it appears that the hygienic and sanitary condition of the farmer community is good. They had some knowledge of hygiene practices but many were not clear on the consequences of not washing their hands properly before meals and after going to the toilet. Sanitary practices of latrine usage, personal hygiene such as dental care, protection of drinking water wells, solid waste management, and awareness of personal hygiene in the field could all be improved to varying degrees.

The existing health and hygiene situation of the Wilgoda community is not acceptable. This is partly due to inadequate infrastructure and provision of basic facilities, but also has an element of community willingness. Discussions and observations suggest that the community as a whole is not active in working together to improve their environment or facilities, except within their homes. There are fortunately a few influential and committed people who have already expressed a strong desire to work with the WASPA team to address some of the issues that have been highlighted by the study.



Methods Used

A basic household survey was used to collect general information on demographics and infrastructure in Wilgoda (Nishanka, de Silva and Clemett 2006) and focus group discussions (FGDs) were undertaken to understand the situation in the agriculture area. These were followed by transect walks, including an observations check list, in both areas, which

covered public places, common toilets, bathing place, and areas along the canal. A limited household survey was conducted with 10 households in Wilgoda and 15 farming households. Secondary health data were obtained from the epidemiology unit of the Provincial Health Department (PHD), the malaria control unit and the Filariasis control unit in Kurunegala. The major areas of assessment were:

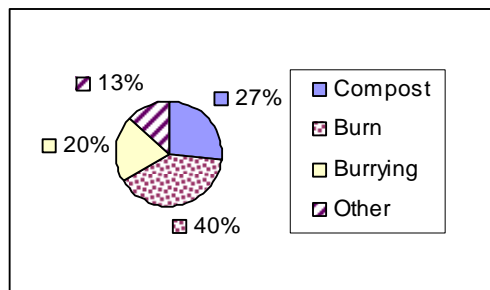
- The sanitation facilities in the area and waste disposal;
- Access to these facilities for different groups in the community;
- The use patterns by different groups in the community over time;
- The hygiene practices of groups in the community and the enabling factors for hygiene; and
- The health status of community members, particularly for water-related health risks.

Results and Discussion

Environment

In the area inhabited by the farming community the houses are well spread out with some garden. Most houses are constructed from bricks with tiled or asbestos roofs. Observations of the area showed that around 80% of the households have clean surroundings with no dirt or solid waste near the house or latrine and no visible stagnant kitchen water. Solid waste is disposed of in pits or burned on a daily basis. In general, they are not in the habit of composting household solid waste although they do have the space.

Household waste disposal methods



In the Wilgoda area houses are smaller and congested. They are made from a variety of

materials but are mostly brick with tiled or asbestos roofs. Most of the structures were built by the Municipal Council (MC) for their labourers but some are illegal.

The external environment was not very clean, as houses are closely clustered and there is no ownership of the immediate surroundings. Common places were not kept clean and there was debris such as shampoo and soap packets all over the area, as well faeces. In contrast, the inside of the houses were observed to be clean.

Facilities

The agricultural community is not served by a piped water supply but most households have access to shallow wells for drinking, cooking, washing and bathing. Some households in the Wilgoda area have piped water (20%) but most use three common taps (75%) paid for by the MC. Some also use a shallow well and tube-well but they are not in good condition.

Sanitation

In the farmers' village the dominant latrine type was the pit latrine, made of a ceramic squatting pan on a concrete base. They are always built away from the house and approximately 15% have septic tanks, with the remainder having simple pits.

All men and women have access to a latrine at home and in general they do not share them with other households. During working hours and at night some farmers (7%) urinate in the open. More common is open defecation by young children (13%), which is cleaned up by older family members but most (82%) use private latrines.

There is no direct water supply to latrines but the majority of households (67%) had a bucket for water inside the latrine. The use of soap was difficult to assess, as although the piece of soap was visible close to the toilet, it was often dry.

The baseline survey conducted in Wilgoda with all 114 households in 2006 documented 31 latrines that were privately owned and built by the municipality. A further eight shared facilities were built by an NGO for the line houses. According to the respondents the public facilities were used by 78 households (414 people). However, during the social mapping of the area 23 public and 36

private latrines were noted. Of these, 14 are very old.

The latrines have either septic tanks or uncovered pits. Pits from the public latrines appear to be located too close to the canal (<10 m distance). When the latrines are full they are emptied using the MC gully-suckers, but there are complaints that they are not emptied properly, leading to overflowing, which is unpleasant and attracts flies.

Latrine facilities in Wilgoda Line

Latrine	People		Households	
	Number	%	Number	%
Individual	155	26	31	27
Shared	414	71	78	68
Neighbor's	18	3	5	4
TOTAL	587		114	

Source: Nishanka et al. 2006

All wastewater from the houses is drained to the Wan Ela through the drainage lines but after the rains the water tends to collect in the uneven spaces on the ground. The already polluted environment becomes worse at this time, and foul smells pervade in the area; this is very unhygienic for the community members.

The public latrine maintenance and cleaning is shared by community members, with an understanding that three households are responsible for one latrine. It was noted that the 10 new latrines are kept locked by the households responsible for maintenance and only used by specific households. These latrines were observed to be clean and washed. The old latrines are not locked and in some cases the doors were broken. They were badly maintained with urine and fecal on the squatting pans and on the concrete surrounding the latrine. The older latrines are in a much worse condition than the new ones. No water or containers were seen in the public latrines: water is carried there by those going to use the latrines. Soap was also absent.

Privacy is an issue, especially for women as the latrines are not gender segregated. Usually, there is a rush in the mornings, and shared facilities have long queues. At night, some people use polythene bags to defecate in; these bags are thrown into the canal during the day earning

themselves the name "flying toilets". The detailed interviews showed that some people who use the public latrines use other places for defecation and urination at night. Children often use the canal banks to defecate and the compounds around the homesteads to urinate.

Hygiene Practices

It was clear from the discussions with the farmers' families that the habit of hand washing after defecation is common. They say that they wash their hands immediately after coming from the field, before food preparation and after touching something dirty. Surprisingly however, 40% do not consider hand washing to be an important practice prior to eating.

In Wilgoda, everyone who was interviewed said that they wash their hands before taking a meal but only a small percentage wash their hands after a meal. Most also wash their hands after using the toilet and over half do so before they prepare food. Most of these people use soap, and explained that they wash their hands to reduce the spread of disease.

Most adults and children in the households interviewed use slippers when they go to the latrine. Many people share towels within the family but as with the farming households children usually have their own towel.

Agricultural Water Quality

Farmers were not very aware of the quality of the canal water that they use for their paddy fields and they did not consider it to be an important health and hygiene issue until they engaged with WASPA project team. They were much more concerned with water quality as it related to crop productivity (Jayakody 2007).

Health Issues and Risks

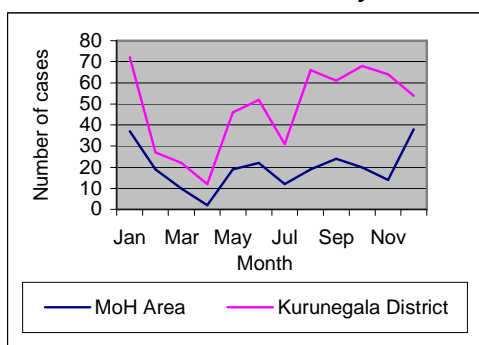
The discussions and interviews did not reveal clear relationships between the use of this canal water and health risks, but there were some perceptions of health problems. The farmers felt that the use of canal water caused skin problems, such as rashes, especially during the period in which they prepare the land and are therefore in contact with the water for long periods of time. Farmers also said that they may wipe their faces with their hands when they have been working with

wastewater, which could pose a health risk; as could the fact that most work barefoot, especially as they complained of physical injuries resulting from the solid waste entering their fields, particularly glass and sharp items.

In both areas mosquitoes were a concern as they spread filariasis and dengue. In particular they feel that the presence of wastewater from the city leads to an increase in the incidents of filariasis as the mosquito that spreads the parasite breeds in foul water. Of the respondents involved in the study, three were currently affected with filariasis and community members feel that there could be others who might be carrying the disease.

Kurunegala District is considered to be a high risk area for dengue fever (DF) and dengue hemorrhagic fever (DHF). In 2004, DF cases rose to epidemic proportions and a national action plan for prevention and control of the disease was outlined (www.epid.gov.lk). In Kurunegala, there is a campaign for the control of the mosquito vector. In 2006, case numbers increased to close to the numbers reported in 2004. Nearly half the cases reported in the District came from the Kurunegala Medical Officer of Health (MoH) area. Given the high density of population in the MoH area, this is understandable.

Distribution of DF cases in study area



Source: Municipal Council Epidemiology Unit 2006

Filariasis is endemic in this region, and prevention and control have been built into the health system.

Recently, there was a mass drug administration campaign with the aim of reducing the loads of the circulating parasite spread by a mosquito that loves foul water.

Implications for WASPA

- Facilities in Wilgodawatta need to be improved including access to water and latrines. Gender issues must be considered in any such plans.
- Cleanliness of latrines could be improved - this could form part of an education campaign.
- Hygiene education appears to be important in order to reinforce how essential good practices are.
- Solid waste management is also an issue in the area and upstream of the agricultural land. This needs to be tackled in the city but some community activities such as composting could also be beneficial for the immediate area. These observations should be discussed with the community members and joint solutions agreed.
- In terms of health, mosquito vectors are a problem and need to be controlled by removing vessels that can collect water, and by improving the flow in the canals.

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For more information please contact: Palitha Jayaweera, COSI, Sri Lanka (palitha.jayaweera@cosi.org.lk); Alexandra Clemett, IWMI, Sri Lanka (a.clemett@cgiar.org); Joep Verhagen, IRC, The Netherlands (verhagen@irc.nl)