



Wastewater Agriculture and Sanitation for Poverty Alleviation

Wilgoda Line Community Survey Summary Report



Rashika Nishshanka, Shyamalie de Silva and Alexandra Clemett 2006













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Acronyms, Abbreviations and Sinhala Terms

FGD Focus Group Discussion
GPS Global Positioning Systems

LA Learning Alliance MC Municipal Council

NGO Non-governmental organization

NWSDB National Water Supply and Drainage Board

SEPA Social Services Participatory Development Foundation

WASPA Wastewater Agriculture and Sanitation for Poverty Alleviation

WHO World Health Organization

Ela Canal

Wewa Irrigation tank

Anicut Weir

1 Introduction

The WASPA Asia Project

The Wastewater Agriculture and Sanitation for Poverty Alleviation in Asia (WASPA Asia) project aims to identify and test solutions for sanitation and decentralized wastewater management, for its use in agriculture. The theory behind the project is that sustainable wastewater management, and beneficial use in agriculture, can only take place if wastewater is holistically managed and interventions take place throughout the whole chain of the process from the production to disposal or use of the wastewater. This includes improved sanitation, contaminant reduction, waste treatment, disposal, use in agriculture and promotion of hygiene behavior.

It is also part of the premise of the project that the means of achieving these aims lies with the involvement of local stakeholders. The project will therefore establish "Learning Alliances" (LAs), in sites in Sri Lanka and Bangladesh that bring together the main stakeholders: communities; local authorities; community organizations; government departments; non-governmental organizations (NGOs); and experts, to work on this issue. In each site the project team will conduct participatory assessments of the current situation with the LAs, and facilitate the development and implementation of participatory action plans to test technologies for safe waste management and application in agriculture. Experiences will be shared through LAs at different levels (local, intermediate and national) and learning events.

This report, and the work that went into the data collection, are part of that process of LA formation. The objectives of this component of the work were:

- To introduce the project background to every household in one of the project pilot communities.
- To determine how many households there were in the community (as official records were deemed inadequate) and to number each house for easy future reference.
- To collect basic household information including number of household members, primary income generating activities, age and education. Some simple questions about access to sanitation, housing infrastructure and water facilities were also asked as a prelude to a more detailed health and sanitation survey that will be conducted in the coming months.
- To develop a site map using global positioning systems (GPS) points.

Project Location

In Sri Lanka, Kurunegala has been selected as the city in which project activities will take place. A full description of the project site is given in another report produced by this project. The report includes: water resources; population and demographic information; sanitation infrastructure and waste management facilities; and agricultural data (see Nishshanka et al. 2006).

The population of Kurunegala Municipal Council (MC) area was estimated to be 28337 at the time of the 2001 Census (Department of Census and Statistics 2001). In 2004 the number of houses in the municipality was calculated to be 7500 of which 7442 were on the sanitation register, 6930 had sanitary latrines, 442 had unsanitary latrines and 70 had no latrines (Chief Public Health Inspector, *personal comment* 2006).

Two drains flow though the city: the Wan Ela and the Beu Ela. The Bue Ela is the traditional irrigation channel that was constructed to provide water to the paddy area from Wennaru wewa (the tank marked on the map as "upper catchment") but which now flows through the city collecting stormwater runoff and other wastewater. Though the Wan Ela appears to originate from the Kurunegala tank in the middle of the map, it is actually a drain for agricultural run-off from land to the north-east. As with the Beu Ela this now receives city wastewater (National Water Supply and Drainage Board (NWSDB) 2005; Jayakody, 2006). These canals join at Wilgoda Anicut where the water may be stored or flow directly to agricultural lands, depending on the irrigation needs of the farmers who control the water flow from this point onwards (Figure 1.1).

Five key stakeholder groups are identified within the project intervention area. These are: the farming community that uses the wastewater; a low income community residing in Wilgoda Line, close to Wan Ela, where there is open dumping of waste and open defecation; local government agencies; NGOs; and those owning commercial or manufacturing premises.

Farmers are the intended direct beneficiaries of the project and although the Wilgoda residents are seen as waste producers it is also intended that they will benefit from improved waste management and sanitation, which should directly impact on health.

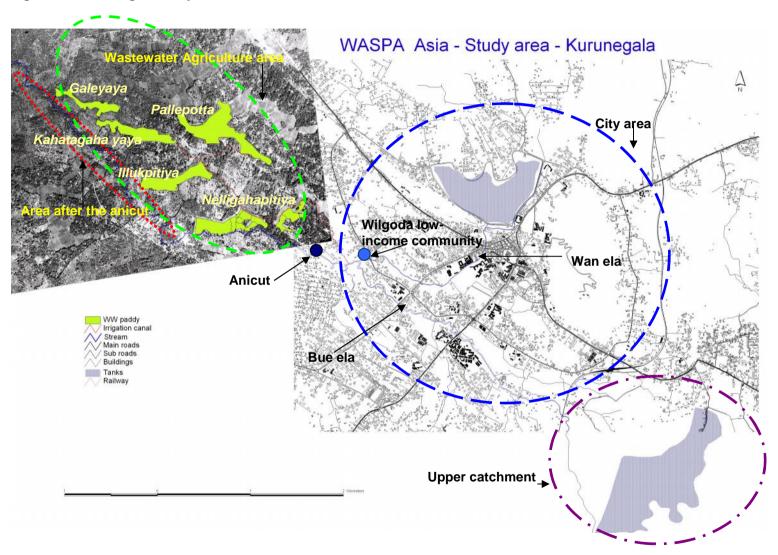
Wilgoda Community

This report focuses on one of the key stakeholder groups: the Wilgoda low income community, which is officially called Wilgoda Line. The term "line" was originally used to define the accommodation developed for the workers on the tea estates in Sri Lanka. They were not individual houses but were essentially a row of rooms with limited infrastructure such as common taps and latrines. In Wilgoda the accommodation was originally constructed for the municipality laborers using a similar design and was thus also called "line". The area has however been developed by the community members and the term "line" is now used more to describe a shanty or slum area.

It must also be noted that this is not a homogeneous community (see Nishshanka et al. 2006) however, for the purposes of this report and for simplicity this report will refer to the Wilgoda community or Wilgoda Line, as the project intends to address the needs of all the people living in Wilgoda Line.

The area is located within Iluppugedara Grama Niladari Division under Kurunegala Divisional Secretariat, and is bordered on one side by the Kurunegala-Wilgoda main road and on another by the Wan Ela. It was originally built for municipal

Figure 1.1: Kurunegala study area



labours and is therefore still crown land belonging to the Kurunegala Municipal Council. However, over the years several informal dwellings have been established in and around the line houses and the population of the settlement has increased. As a consequence, government data on this community, though available, was not considered accurate by the project team. Therefore, a baseline survey was conducted to obtain some basic household data, including: population and demographics; and physical, environmental and sanitary conditions.

The survey found that there were 114 households in Wilgoda Line, where household is defined as a group of people eating from the same cooking pot. In this instance it was found that the household is almost synonymous with the housing unit, in which a number of families may reside but living as one household. The community was found to be a mixture of mainly Sinhala and Tamil people, with many marriages between the two groups. There are some basic facilities in the area including a few tea shops, a pre-school and some latrines, but generally the infrastructure is poor.

Methodology and Data Analyses

The survey was based on a simple two-page



questionnaire designed to be answered in a very short time. This was necessary as previous visits to Wilgoda Line and informal discussions with some community members had highlighted a distrust of NGOs, charities and especially foreign aid workers. Therefore the majority of the time spent with each household was intended to be: to describe the project; to provide a simple introductory leaflet to the project, written in Sinhala and Tamil; and to elicit their initial opinions about the project. Only a small percentage of the time was intended to be used to collect basic household data and make observations. All households in the community were interviewed, with any adult family member answering the questionnaire. The questionnaire is provided in Annex I.

Each house in Wilgoda Line was numbered, using stickers, for later identification. According to the survey all the houses have house numbers given by the municipality except three. The houses which do not have a house number have been newly constructed by people who have no legal rights to have a house within the premises.

The data was coded and summarized into tables which include: family details; income source; condition of the house; and education level.

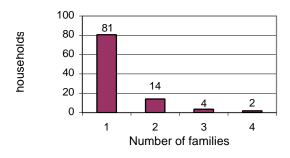


2 Population and Demographics of Wilgoda Line

In total 587 individuals live in Wilgoda Line, of which 407 are considered adults (over the age of 14) and 180 are considered to be children. Of the total population 302 (51%) are male and 282 (49%) are female.

The number of housing units identified and numbered in Wigoda Line was 114. This was considered, after analysis, to be equivalent to the number of households even though there were some 144 families living in those housing units. This is because households were considered to be people who shared a cooking pot, whilst families were married couples and their children and consequently one household often consisted of extended families. The number of families living under one roof is between one and four, with the vast majority (80%) being single family households and 14% being two family households (Error! Reference source not found.).

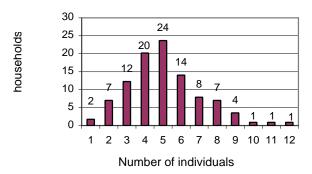
Figure 2.1: Families per household



The number of individuals living in a single household ranged from one to 16. Five member households were most common with 24% of households having five members and with the mean average being five members. Four, six and three member households were also

common but 22% of households had seven members or more (Error! Reference source not found.). These fairly large household sizes are a particular issue because of the small size of the housing units and the absence of sanitation facilities within most homes.

Figure 2.2: Individuals per household

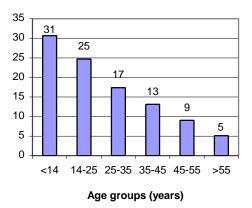


In addition, discussions with community members and the high percentage of the population that are children, suggests that the population is growing rapidly, often as a result of early marriages and high fertility. This is putting a great deal of pressure on the facilities and means that there is very little privacy.

Age

Ages were grouped into those below the age of 14, who were considered to be children, and then in ranges of 10 years. The results show that the average age of the community is young, with 31% counted as children and 25% in the range 14-25 years. The number of older people was very low with just 5% over 55 years of age and 9% between 45 and 55 (Error! Reference source not found.).

Figure 2.3: Age distribution of the population

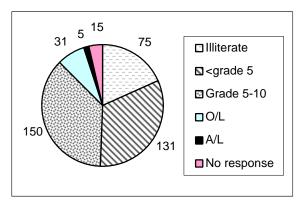


The World Health Organization (WHO) report that of the 1.8 million people that die every year form diarrhoeal diseases (including cholera); 90% are children under 5, mostly in developing countries (WHO, 2004). Therefore, this group was also divided out and was found to account for 8% of the population (48 individuals). In addition, though the official age of adulthood is 14 in Sri Lanka, the age at which a person is eligible to vote is 18, and the number of people over the age of 18 was recorded as being 353 (60%).

Education

Out of the total adult population (over the age of 14), 392 (96%) responded to the question regarding educational background. It was found that around 91% of these people had not taken Ordinary Level examinations but only 75 (19%) were illiterate (Error! Reference source not found.). A positive finding was that only four of the children under the age of 14 were reported to not be attending school at the time of the survey, though obviously this is difficult to verify and it appeared to the interviewers that children are not attending school continuously since there is no motivation from the parents.

Figure 2.4: Education levels of the population of Wilgoda over 14 years of age



Income Generating Activities

The main income generating activity in Wilgoda Line is employment as municipality laborers (26% of all individuals over 14 years of age), because the settlement was originally established for municipality employees. A further 12% of adults are involved in various kinds of unskilled labor and 16% are employed as mechanics, hotel or shop staff, tailors, teachers and clerks to name a few of the many activities. However, by far the highest percentage of adults (45%) is unemployed.

Although income diversification is usually common in low income households 68% said that they only have one source of income; 27% have two sources; and 4% have three. Those with more than one income generating activity were usually those households that included more than one family. It is likely that many of these households also engage in small scale informal activities for which they receive nonmonetary payments or which are not regular sources of income. As this was not a full livelihoods survey, this level of detailed questioning was not undertaken.

3 Legal Status and Physical Infrastructure

Tennancy

It was found that of the 114 houses in Wilgoda Line some were constructed by the municipality and some were constructed by community members. All the houses constructed by the municipality have legal permission and in addition a few of the houses constructed by the community also have legal status granted by the MC. According to the community 84 of the 114 houses (74%) are legally constructed. However families are essentially MC tenants and are entitled to continue living in the houses provided that a member of the household is a MC employee. This lack of security is a major issue for community members as exemplified by the situation of one lady who explained that: "the main problem is not having a house; because of this we are vulnerable. My mother recently retired from the MC and we were at risk from losing our house so we forced my younger brother to get a job in the MC even though he did not want it, because he understands that the whole family needs a shelter."

Those people who do not live in MC houses are in a more uncertain position because they have no legal status even as tenants.

Discussions with the MC in September 2006 revealed that they have plans to construct new homes for the residents of Wilgoda Line and that tenders have gone out for the construction of 125 homes near the slaughter house, which is close to the current settlement. However, exactly how this process will proceed and what facilities will be available is not yet known. The MC did however feel that the process may take several years and that in the mean time it would be necessary to improve facilities in Wilgoda

Line, particularly sanitation.

Housing Size and Materials

There are two types of houses constructed by the MC; both are approximately 250 ft² but one type consists of a kitchen, two rooms and a portico, while the other type has a kitchen, a portico and a wide hall without partition. The people have found that the available space is insufficient for the large families and have therefore added to the original buildings. By contrast the houses constructed by community members have a wide variation in size. Most of the houses are approximately 100 ft² or more, and have one room for every purpose and no partition.

The structures themselves differ quite considerably in terms of the roofing, floor and wall materials but it is not simple to determine the material used to construct the roofs of many of these houses as they are in a state of disrepair and are patched with polythene or pieces of metal.

In general the houses constructed by the municipality have tiled or asbestos roofing, but many of the "illegal" dwellings use metal sheets (Figure 3.1). The majority (92%) of both illegal and legal structures has cement floors (25 and 80 housing units respectively); with just 5 illegal and 4 legal structures having mud floors. Walls were more difficult to categorize as they were often constructed from a number of materials including wood, metal sheets and meshes, especially the internal walls. However if the dominant building material is considered then 77% were constructed from brick (Figure 3.2).

Figure 3.1: Roof material of legal and illegal housing units

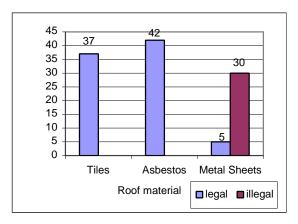
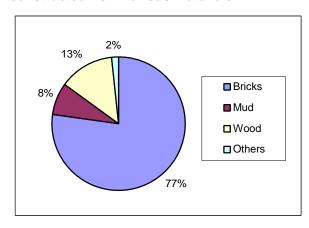


Figure 3.2: Percentage of house walls constructed from various materials



Infrastructure and Facilities

An electricity supply is received by 46% of households of whom 7% use their neighbor's connection. Those who have their own connection paid for it themselves.

There are four common taps used by 89 households for all purposes including bathing, drinking and washing. A further 24 households have individual water supplies for which they paid the National Water Supply and Drainage Board (NWSDB) and one person uses their neighbor's supply.

Thirty one households have private latrines that were constructed by the municipality but some latrines are not in a good condition because of their age. In addition there are eight common latrines in Wilgoda Line that were constructed by an NGO. These are used by around 78 households or 414 individuals, which accounts for 71% of the population of the area (Table 3.1).

Table 3.1: Latrine facilities in Wilgoda Line

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

Amenities

There are not many amenities in Wilgoda Line but there are two small shops and a video center that are owned by individuals living in the community. There is also a pre-school, as well and a children's park.

The communal infrastructure is reasonable as there are street lights and storm water drains but according to the community members these drains are not well maintained and flooding is a common problem because people drop litter into them. This was frequently raised in focus group discussions (FGDs) as one of the main issues that they would like to address to improve the environment in the area, especially as they feel that it increases the number of mosquitoes which can cause Dengue, Malaria and Filariasis.

The paths between the houses are also narrow and muddy, which is worsened during the rainy season and by the overflowing drains.

4 Community Perceptions of the Project

The final questions in the questionnaire were designed to get the respondents to start thinking about the project and providing the project team with their ideas about what was needed in Wilgoda Line in relation to the project. The reason for asking these questions was that initial meetings in the community had revealed that they were disillusioned with NGOs, particularly foreign NGOs, and various projects that had promised them things but had not met their expectations. The team therefore felt that it was appropriate to thoroughly describe the project in every household and to elicit their opinions on the possible interventions and the methodologies for implementing them. This was seen as the very first step in initiating the participatory action plan process. The two questions that were asked were:

- 1. What kind of project activities would you like to see the project carrying out, within the scope of the project that we have outlined to you?
- 2. Can you give us advice on how you think we should implement this with the help of the community?

The reason for the second question was that some people in the village had said that there were or had been a number of societies but that they had failed due to lack of commitment on the part of the members; and others said that the youth of the area in particular were keen to improve the conditions. Hence this question was designed to see if other people reiterated those sentiments or provided other ideas.

The team did not have much expectation of responses to these questions because they are obviously difficult to respond to especially in an interview context, and such issues were

therefore intended to be covered in FGDs, this was just seen as an opportunity for those with strong opinions and also for others to start thinking about it prior to FGDs.

Responses from the Community

It was felt that good discussions took place when the interviewers initially introduced the project and that this was very important in gaining the confidence of the respondents. It also seemed that they had a good idea about wastewater and solid waste generation from the city.

As expected the interviewers found that most people found it difficult to respond to these questions but they did express their appreciation of any positive interventions arising from the project. This also provides a lesson in itself which is that a substantial effort will need to be made to introduce the project concepts to the community and to gain their trust.

What they did say was that they too suffer as a result of the pollution of the canal due to the bad smell, mosquito nuisance and over flowing of the canal during the monsoons, which they believe creates health and sanitation problems for everyone living in the community. The main issues of that the community members expressed in the interviews were: the fact that they have no legal rights to their houses or land as they are MC tenants; the problem of drug and alcohol addiction; and the difficulty of taking care of children, especially adolescents.

The requests that were made in relation to possible project interventions were:

 Clean the canal that flows through the area and construct drains within the residential area;

- Provide a place to collect solid waste in bulk within Wilgoda Line;
- Provide a water supply for the newly constructed latrines; and
- Improve the overall water supply system as the current facilities are inadequate.

The second question appeared yet more difficult to answer and the respondents did not really

offer any solutions for implementation mechanisms. However, several key informants, such as one man who had voluntarily cleaned the shared latrines; a young man who was interested in supporting and improving his community; and a handful of other seemingly motivated people, did give the impression that community mobilization would be possible if it were to address their needs.

5 Discussion

This survey was only designed to provide some basic information about the people and conditions in Wilgoda Line and to act as a means of introducing the project, but it has actually yielded some very important information that will be a sound basis for the remaining steps in the development of Learning Alliances and participatory action plans. It has also provided the team with an opportunity to get to know some of the community members personally and for residents to know more about the project. The use of local language Sinhala and Tamil flyers was considered extremely important in this process as they allowed the residents to read a little more about the project once the team had left, and to share them with other family members.

During the interviews the team observed several things, most notably the concern people had with lack of ownership of houses, which they continuously mentioned. They all expect legal documents from the municipality granting them the rights to the land on which their houses are constructed; however it is the intention of the MC to move these people within the next five years to a newly built apartment block. The reason for this is that they are municipality employees and the MC feels that the accommodation is substandard. They do however acknowledge that

this proposal is awaiting funding and that it may not happen within the planned five year period: and also that even if the move takes place, the conditions in Wilgoda Line need to be improved in the interim period (MC Engineer, personal communication, September 2006).

It was also clear that the community members expected quick physical outputs, even if this may not be realistic. This appears to have happened in the past with different organizations constructing latrines and distributing compost bins, but the sanitary awareness programmes have either not taken place or have not been sufficient to influence the community. Consequently people do not maintain and use the latrines or compost bins at present, although there is on-going work to improve the use of the compost bins. People appear not to be aware about the sanitary usage of latrines, and men and women are using the toilets without consideration of gender (it was intended that four of the latrines would be used by women and four by men). The children do not even use the latrines but defecate beside Wan Ela or the subcannels that run thought the premises. The lack of water supply to the latrines is also a major issue for both personal hygiene and keeping the latrines clean. As a result a few families close to the latrines have got-together and locked them,

only unlocking them for their personal use. Many of the community members that the project team spoke to, felt that certain activities were the responsibility of the MC, not the community. For example, the drainage system in Wilgoda Line is not in a good condition and the community is unwilling to take responsibility for cleaning it. Generally the relationship between the MC and the community appears to be poor because the facilities supplied by them are not adequate.

The Community and the Project

It was clear that maintaining a long-term relationship between members of the community and project team would be a big task since most of them are expecting fast physical outputs through the project. According to the WASPA project work plan it was intended that a participatory process to develop a holistic community action plan would be initiated before any interventions were undertaken: and certainly it is still felt that all interventions should be properly planned to avoid problems such as those being experienced with the latrines,

however it is also now felt that there should be a parallel process to initiate some simple interventions or positive activities that engage the community and increase their support for the project in the longer-term. It is therefore the intention of the project team to propose some small, low-cost activities and to initiate them with the support of the community. Such activities could take several forms such as removing solid waste from canals, holding a health day or engaging the children in relevant activities. These ideas will be collated into a short document to be discussed with the community.

Discussions with the community and further research also revealed that a similar project to the WASPA project is being undertaken in Wilgoda Line. The project, conducted by Practical Action and Social Services Participatory Development Foundation (SEPA), focuses on community governance and solid waste management. It has subsequently been agreed that further activities in Wilgoda Line will be collaborative efforts by the two projects. It is hoped that this will address some of the community's concerns about NGOs, and will enhance community cooperation and effectiveness of interventions.





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Annex I: WASPA Asia: Wilgoda Line Community (UC employed community) Households Survey 2006, Kurunegala

Household number	er given by Project		Household number given by the Municipality				
Date			Interviewer				
Name of househo Address:	about the household had head: months after residency:						
2. Information a	about the family						
Name of family mo	ember	Male/ Female	Age	Education level (grade)		erating activity (be specific e.g v, unemployed, shop worker)	
	he house (observe and rary construction			·			
	ruction						
-				the correct one		Specify other	
Type of roof	tiles	asbestos	metal sh	eets Cadjans	other		
Type of floor	cement	mud	other				
Types of walls	bricks	mud	wood	other			

Size of the house (Area/number of rooms)
Electricity
Connection via municipality/not
4. Water sources: What water source does your family use for each of the following activities? (you can write more than one source if they use different sources at different times).
Drinking
Cooking
Toilet
Bathing
5. Sanitation Facilities
5.1 Do you and your family have access to any sanitation facilities? Yes / No
5.2 If yes, what facilities?
5.3 If no, what do you do?
6. Project and the community
(Explain that we have been informed by the community that they are unhappy with projects coming here, promising things and not delivering them. Explain that we can not promise any changes or major interventions but that we would like to try to work with them to help them solve some of their sanitation related problems (note this can only come after you have carefully introduced the project).
6.1 What kind of project activities would you like to see the project carrying out, within the scope of the project that we have outlined to you?
6.2 Can you give us advice on how you think we should implement this with the help of the community?