WELL
WATER AND ENVIRONMENTAL HEALTH AT LONDON AND LOUGHBOROUGH

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Consultancy Report

Formative Hygiene and Sanitation Research Project: Kyrgyzstan

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Abbreviations

ADB Asian Development Bank

CDSWU Community Drinking Water Supply Union

DFID Department for International Development (UK)

IDA International Development Association

PAP Poverty Alleviation Programme

PHAST Participatory Hygiene and Sanitation Transformation

RWSSP Rural Water Supply and Sanitation

UNDP United Nations Development Programme

UNICEF United Nations Children's Fund

WELL Water and Environmental Health at London and Loughborough. A UK organisation, providing consultants in water and environmental health.

Executive Summary

Overview

Question	Main Findings
What are the water, sanitation and hygiene related symptoms of poor health in villages?	Diarrhoeal disease and skin infections were reported as health problems by villagers and village health workers. Although Routine data suggest a decline in infectious gastro-intestinal disease the quality of these data is unknown and questionable. Epidemics of cholera and hepatitis A have been reported. Poor sanitary conditions and high infant mortality in the absence of malaria make it likely that diarrhoeal disease is a problem.
What are the behavioural causes of these symptoms?	Infrequent hand-washing with soap after contact with faeces and unsafe disposal of children's faeces were observed and are likely to be the main behavioural causes of gastro-intestinal infections. Crowded sleeping conditions and infrequent bathing are probably the main behavioural causes of skin infections.
What is the cultural context of these behaviours?	Material constraints to safer practices include; insufficient availability of soap at home, latrines which are difficult for children to use, lack of bathing facilities and lack of a convenient supply of water for hand-washing. Beliefs and cultural practices that underlie risk practices include; an incomplete understanding of the links between hygiene behaviours and disease and a lack of appreciation of the health risk posed by children's faeces and a cultural norm of washing hands first thing in the morning rather than following potential faecal contamination.
How can we use a hygiene promotion programme to change those behaviours that need changing?	A combination of national level social marketing approaches and village level participatory approaches would provide a balance between wide coverage and attention to local needs. Social marketing approaches could make use

	of mass media and might include collaboration with commercial soap manufacturers. Participatory approaches in villages could include targeting children through the education system and mothers through the health system.
How can we make those behaviour changes sustainable?	The training of teachers, health workers and other interested parties in hygiene promotion would help to ensure that work continues beyond the lifetime of the project. The identity of individuals and organisations whose support may be central to the continued success of the project must be established on a village by village basis.
How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign?	The hygiene promotion component could contribute to the Rural Water Supply Project mobilisation campaign in the following ways: By allowing the realisation of health benefits from improved water supply. By increasing demand for a convenient water supply in order to facilitate hygiene behaviours. By increasing the capacity of communities to address their own health problems and manage their own water resources. By providing services or resources that could form part of a package, including water supply, for which communities may be prepared to pay.

Background

Rehabilitation of water supply in rural areas of 3 *oblasts*[1] (Naryn, Yssyk-Kul and Talas) in northern Kyrgyzstan is to be financed through a World Bank IDA credit (the Rural Water Supply and Sanitation Project). In order to help ensure that the full range of health benefits from rehabilitation of rural water supply is realised, a DFID grant assisted project is planned to develop the sustainable capacity for hygiene promotion in Kyrgyzstan.

Research was carried out to help shape DFID's proposed project on Rural Hygiene and Sanitation in the Kyrgyz Republic. The research was loosely based on the formative research methodology described by Curtis et al (1997). Formative research underlies a social marketing approach to hygiene promotion. This approach is based on the delivery of a small number of positive hygiene messages aimed at specific audiences through appropriate channels of communication. The central aims of formative research are therefore to identify:

Risk practices that can be improved
Target audiences
Motivations for behaviour change
Appropriate channels of communication.

[1] For administrative purposes Kyrgyzstan is divided into 7 regions or *oblasts.*

At the time of the consultancy there was no consensus that a social marketing approach would be the most or only appropriate means for promoting safe hygiene and sanitation practices in Kyrgyzstan. For this reason the scope of the information to be gathered during the formative research was a little different from that suggested by the pure social marketing approach.

Specifically the research was intended to answer the following 6 questions.

What are the water, sanitation and hygiene related symptoms of poor health in villages?
What are the behavioural causes of these symptoms?
What is the cultural context of these behaviours?
How can we use a hygiene promotion programme to change those behaviours that need changing?
How can we make those behaviour changes sustainable?
How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign?

Team

The fieldwork was carried out by the following team: 1 WELL consultant, 1 local consultant and 3 fieldworkers.

Methods

Fieldwork was carried out in 6 villages (2 in each of three *oblasts*) during October and November 2000. The methods used included interviews, focus groups, direct observation in households and a behaviour trial.

Findings

A variety of gastro-intestinal infections and skin complaints were among health problems recognised by health authorities, health workers and the general population in all communities.

The most likely behavioural causes of gastro-intestinal infections are lack of hand-washing with soap after contact with faeces and disposing of the faeces of children and infants in places other than latrines.

Observation in 65 households revealed the following:

- Hand-washing with soap was observed following 18% of observed instances of urination/defecation (42 out of 231 observations).
- Hand-washing was never observed following the 17 observations of cleaning a child after defecation.

Soap was present (seen) in 57% of households (37 households).
Faeces (thought to be human) were seen in the yards or gardens of 43% of households (28 households).
The latrine was used for the disposal of children's faeces on 13% of observed occasions (5 out of 39 observations). On most other occasions faeces were disposed of in the yard or garden surrounding the house.

The most likely behavioural causes of infectious skin complaints are infrequent bathing and crowded sleeping conditions. It was commonly reported that children wash on a 2-week cycle of head one week and body the next. Within households, children generally sleep together in a bed made up on the floor.

A number of constraints discourage safer practices.

Soap is scarce within households. In order to save money soap is used sparingly and priority is given to laundry.
Water is cold in the winter and water sources are often inconveniently situated meaning that water is used sparingly.
Latrines are often dirty, difficult or dangerous for young children to use, cold and far from the house.
Houses tend to be small and cold in the winter and most families own only a minimum of bed linen.
There is a lack of bathing facilities, a lack of money for fuel to heat water and a lack of convenient water sources from which to collect sufficient water for bathing.
Many households lack a washstand[2].

A number of beliefs also underlie risk practices.

Ideas of germ theory co-exist with other explanations of disease.
Understanding of the links between hygiene and disease is incomplete and there is a tendency to blame hygiene-related disease on water quality.
The faeces of small children are generally regarded as mildly unpleasant rather than as a health threat.
The most important time for washing hands is first thing in the morning rather than after latrine use or possible contact with faeces.

However, there seem to be no strong cultural barriers to the adoption of safer practices and the women who volunteered to try out safer practices (during the behaviour trial) viewed them positively.

'Propaganda' including lectures from health workers and distribution of information pamphlets was carried out under the soviet system. People remember these fondly, but have not adopted safe hygiene excreta management practices, particularly regarding the faeces of young children. A hygiene promotion programme will need to adopt different approaches from the former 'propaganda'.

A hygiene promotion programme is most likely to be successful if focussed on a small number of behaviours. The adoption of hand-washing with soap after contact with faeces and disposal of all faeces in latrines are the two most important behaviour changes which a hygiene promotion programme could seek to achieve. Children and the mothers of young children are the most important target audiences for such a programme.

A combination of social marketing and participatory approaches would allow breadth of coverage while encouraging community ownership of the initiative which will aid sustainability and strengthen the capacity of communities to address other health issues. The training of local people in hygiene promotion and participatory approaches would enable this work to continue

[2] A *washstand* is a free standing unit consisting of a small water container with a tap above a bowl which drains into a bucket. These are used as sinks or washbasins in the absence of running water.

beyond the duration of the project. Schoolteachers and village health workers (*felchers)* have good contact with the target audiences and have an interest in hygiene promotion. They may be appropriate audiences for training. However, local communities may have their own preferences for hygiene promoters. Members of water supply management committees may also be interested in hygiene promotion.

The availability of soap within households is a major barrier to safe practices. Effective marketing of soap may improve this situation however, an adequate supply of soap may be beyond the means of many families. Partnership with soap manufacturers might strengthen soap marketing and allow the local production of cheaper soap for hand-washing.

The identity of respected individuals and organisations varies between communities. All villages visited had a village administration and a court of elders. Neither of these is a suitable vehicle for hygiene promotion messages. The agreement of the village administration would be necessary for successful work in a community. The court of elders, meanwhile, is a respected organisation and the support of its members could add authority to hygiene promotion work. In addition there is a widely recognised women's organisation which is largely inactive but which might be resurrected to participate in hygiene promotion.

A hygiene promotion programme could strengthen the Rural Water Supply and Sanitation Programme by promoting ownership of and willingness to pay for water supply systems. It could increase demand for water and so increase the perceived benefits of a more accessible and reliable water supply. It could allow greater opportunities for community participation in identifying needs and the appropriate means to address them thus promoting the sense of ownership of water supply systems. It could provide a package of desired interventions for which communities may be willing to pay and of which the water supply system could form a component.

1 Introduction

Kyrgyzstan is a small republic in central Asia covering 198,500 square kilometres. It has a population of around 4.9 million of which approximately 61% are Kyrgyz, 15% Russian and 14% Uzbeck (CIA 2000). The country was colonised by Russia during the 19th Century and became a Soviet Socialist Republic in 1936. The Kyrgyz were a transhumant pastoralist people. During the collectivisation campaign in the 1930s widespread forcible villigisation took place. The population was settled in villages attached to collective farms. The state provided water supplies, communal bath-houses, electricity and basic health and education services to villages. In 1991 Kyrgyzstan declared its independence and it is now a member of the CIS. Economic growth has faltered and there has been a decline in living standards and services since the collapse of the Soviet Union. Many villages now lack bathing facilities and functioning water supply systems and village health services struggle with minimal resources.

Rehabilitation of water supply in rural areas of 3 oblasts (Naryn, Yssyk-Kul and Talas) in northern Kyrgyzstan is to be financed through a World Bank IDA credit (the Rural Water Supply and Sanitation Project). Work on the inception phase of this project has begun through the consultants Fichtner GmbH. In order to help ensure that the full range of health benefits from rehabilitation of rural water supply is realised, a DFID grant assisted project is planned to develop the sustainable capacity for hygiene promotion in Kyrgyzstan.

Formative research was carried out to help shape DFID's proposed project on Rural Hygiene and Sanitation in the Kyrgyz Republic (The terms of reference for this work are included at annex A). The work was carried out over a period of 12 weeks between 24 September and 28 December 2000. During this period the WELL consultant made 2 trips to Kyrgyzstan. The first was from 24 September to 22 October and the second from 14 to 28 December. The trip reports arising from these visits are included at annexes B and C.

Formative research underlies a social marketing approach to hygiene promotion. This approach is based on the delivery of a small number of positive hygiene messages aimed at specific audiences through appropriate channels of communication. The central aims of formative research are therefore:

To identify a small number of behaviour changes that could bring about a health benefit.
To identify the segment of the population in whom behavioural change is desirable.
To identify acceptable safe practices to replace existing risk practices.
To identify suitable channels of communication.

At the time of the consultancy there was no consensus that a social marketing approach would be the most or only appropriate means for promoting safe hygiene and sanitation practices in Kyrgyzstan. For this reason the scope of the information to be gathered during the formative research was a little different from that suggested by a pure social marketing approach.

Specifically the formative research was intended to answer the following 6 questions.

- What are the water, sanitation and hygiene related symptoms of poor health in villages?
  What are the behavioural causes of these symptoms?
  What is the cultural context of these behaviours?
- How can we use a hygiene promotion programme to change those behaviours that need changing?
  How can we make those behaviour changes sustainable?

How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign?

2 Methods

2.1 Selection of study sites

Fieldwork took place in six villages, two from each of three *oblasts* (Naryn, Yssyk-Kul and Talas). The three *oblasts* in which work took place are mountainous and sparsely populated. They included the two poorest *oblasts* in the country (Talas and Naryn). Average wages in Talas are the second lowest in Kyrgyzstan (UN 1999). The economic problems of Talas are compounded by the fact that the main road connecting the *oblast* with the rest of the country runs through Kazakhstan and a fee must be paid to use it. The third oblast, Yssyk-Kul, has a climate better suited to agriculture and is also able to attract tourists to its lakeside resorts. This is the richest oblast in the country. The population of Naryn and Talas is almost exclusively Kyrgyz while Yssyk-Kul also supports a sizeable Russian minority. According to preliminary figures of the 1999 First National Population Census, the populations of Talas, Naryn and Yssyk-Kul are 199872, 249115 and 413149 respectively. Together the populations of these three *oblasts* constitute 17.9% of the national population.

The six villages were selected after discussion with the social and economic consultants working for the Rural Water Supply and Sanitation Project. The villages were selected from among those that were thought likely to be included in the pilot phase of that project. In order to ensure that the sample was as representative as possible, villages were selected of varying of size, location, degree of isolation and wealth. A profile of the 6 villages is given below.

2.2 Profile of the study villages

Region	Village	Population	House-holds	Comments
Naryn	Shoro	621	104	The village is remote and has poor communications. People travel to a larger, neighbouring village for access to the telephone, hospital, and other services. No pumps or standpipes have been installed. There is a boxed spring and 2 wells of poor quality and a river. People complain that their water is salty. UNDP PAP works in the village.
	Mantysh	1019	300	A water supply system had been installed but no longer works. There is a hospital including a maternity unit, which covers seven neighbouring villages. The high school is in a neighbouring village.
Talas	Chon-Kara-Buura	5,400-5,800	439	There is a partially functioning water supply system. Some said the pumps had not been repaired since 1966. During winter the water in the pumps freezes and people have to travel further for water.
	Nyldy	559	221	The water supply system is not functioning. The main sources of water are a river and a series of irrigation channels. UNDP PAP works in this village. Tobacco is grown here. Local mining activities have been blamed by villagers for a variety of health problems.

Yssyk-Kul	Darkhan	5032	911	The water supply system partially functions. There are two schools. Recognition of tribal identity was particularly strong in this village.
	Temir	6550	1000*	Temir includes three small villages. The water supply system is partially functioning and some houses have a connection in the yard. Temir has good communications, being on the main road to Bishkek and other regional centres. There is an active women's group and two schools.

* Estimate based on means for other villages.

Table 1: Profile of study villages

2.3 Field team

The fieldwork was carried out by the following team:

1 WELL consultant with expertise in hygiene promotion, quantitative behaviour observation and social science methods.

1 local consultant with expertise in Central Asian political and social issues, social science methods and staff management.

3 field workers with expertise in record keeping, data management and data collection using a variety of social science methods.

2.4 Data collection

At the start of the consultancy all local staff were briefed on the aims of hygiene promotion and the purpose of the consultancy. Training was given in behaviour observation and behaviour trials. The data collection tools were designed collaboratively by the team. A pilot study took place in a rural community local to Bishkek. The data collection tools were refined by the team prior to the start of fieldwork. Fieldwork in the first three villages was carried out by the WELL consultant, the local consultant and the three field workers. After this initial round of data collection a week was taken to review the data and refine the data collection tools once more. A second round of data collection in three further villages was then carried out by the 3 field workers.

The methods used included structured observation of hygiene behaviours. This is a method that generates data of the frequency with which risk practices are carried out. It involved direct observation by observers within volunteer households. Households were contacted one or two days before observation. It was explained that a study of child care, water use and domestic work was being carried out in order to write a report on conditions in rural Kyrgyzstan. Householders (men and women) were asked if they would be prepared to take part in the study. They were told that they would be visited by an observer, that they should continue with their routine as normal and that the observer wanted to see what normal daily life was like. All volunteer households were given a packet of tea and some sweets as a token of thanks.

There is little doubt that behaviour is influenced to some extent by the presence of an observer in the household. This effect was minimised by explaining that observers wanted to see ordinary behaviour, by training observers to behave so as to minimise disruption and to be discrete about their recording and by not stating explicitly to householders the precise behaviours of interest.

The tools used and the sample sizes are set out in the table below.

Method	Description	Sample
Structured observation (Curtis 1993)	This method was used to generate quantitative data on the frequency of risk practices. Observation took place within volunteer households. All occurrence recording (Martin and Bateson 1986) was used to record; hand washing and use of soap after potential faecal contact and before food preparation or eating and the methods used for disposal of infant's and children's faeces. Observations were also recorded of the presence and use of a washstand, presence of soap, use of a child's pot or *beshik*[3], and use of covered containers for water storage. Observation in each household took place during the first three hours following rising in the morning. Volunteer households were selected with the help of a local person with a good knowledge of the village community. Usually this was the village *felcher*[4]. As far as possible, all households included a child under three years old. Purposive sampling of households was used in order to cover a variety of sections of the community. Particular care was taken to include households that were thought to be among the poorest. A sample recording sheet is included at annex I	65 households were observed for 3 hours each.
Questionnaire survey	The main purpose of the questionnaire was to gain an indication of the important channels of communication, including mass media, membership of organisations and informal channels. The questionnaire was administered orally in the street in each village to a structured sample of passers by and to mothers in each of the households observed. A copy of the questionnaire is included at annex J.	255 in total. 73 men, 112 women 70 school-age children
Focus group	The precise questions used varied between focus groups. A list of questions used to guide the discussion is included at annex F. Focus group discussions were used to explore a variety of topics. These included; hand washing practices, latrine use, faeces disposal and perceived disease problems. All focus groups consisted of between 6 and 12 participants. Participants were either schoolteachers or were individuals selected and invited with the help of the village *felcher*, the head of the village administration, a UNDP volunteer or some other locally well known individual with a good local knowledge. Participants were intended to represent a cross section of village society. However, a genuine stratified, random sample was not feasible within the time available and it is possible that marginal groups such as young women and	15 in total 6 groups of women 3 groups of men 4 groups of teachers 2 groups of male elders

[3] The *beshik* is a widely used infant's cradle that incorporates a pot for the collection of urine and faeces.

[4] A *felcher* is a village-level health worker.

Method	Description	Sample
	the very poor were under represented.	
Group interview	Group interviews were carried out with classes of school pupils. These explored issues similar to those covered in the focus groups. Single sex and mixed sex groups were used, as were classes of different ages. The precise questions used varied between groups. The list of questions used to guide the discussion is included at annex G.	9 groups in total 3 mixed sex, (2 aged 10-11 and 1 aged 13-14) 3 boys age 11-16 3 girls age 11-16
In-depth interview	In-depth interviews were held using the same guiding questions as for the focus groups. These interviews were used to obtain information from a number of individuals who were thought to be particularly open in expressing their views. Interviews were also held with young mothers as this group was thought to be under-represented in the focus groups.	10 interviews 2 men 2 young mothers 2 healers (female) 1 teacher (female) 2 older women 1 woman age 35
Key informant interview	Interviews were held with a variety of prominent individuals from each village. No standard set of questions was used but informants were asked about problems in the village, health issues in the village and their ideas for and interest in hygiene and sanitation.	25 interviews 7 village administrators, 5 school directors, 8 health workers, 2 traditional healers 2 mullahs, 1 deputy school director
Behaviour trial	A number of women volunteers took part in a 2 week trial of safe practices (hand washing with soap after contact with faeces and disposal of all faeces in the latrine). Throughout the trial they were visited regularly and asked about the difficulties they faced in carrying out the safe practices and also about what advantages they saw in the practices. Instructions for the behaviour trial are included at annex H.	10 women, each with a child aged three years or less.

Table 2: Study methods

3 What are the water, sanitation and hygiene related symptoms - perceived and actual - of poor health in villages?

The purpose of this question was to establish the extent to which hygiene and sanitation-related diseases can be regarded as a problem in rural Kyrgyzstan. These diseases fall into two categories: infectious intestinal diseases (including worms) and skin infections (including scabies). These diseases exist alongside a number of other health problems attributed to a variety of causes. This section describes perceptions of the range of common health problems and their causes. There are two reasons for considering the full range of health issues raised by the village populations. Firstly, local perceptions of the diseases that are related to water, hygiene and sanitation sometimes differ from western medical and public-health perceptions. Secondly, the importance of water, sanitation and hygiene-related symptoms to local people must be considered relative to other health problems.

3.1 Perceived symptoms

During focus groups and interviews, interviewees were asked to identify the important health problems in their communities. A large range of symptoms and diseases were mentioned as health problems. These included: TB, brucellosis, diarrhoea, stomach problems, goiter, anaemia, flu, colds, coughs, high blood-pressure, heart disease, cancer, worms (*chuchok*), arthritis, headaches, sores (*jara*), allergies, skin disease, scabies, lice and hepatitis.

Of the perceived symptoms reported, those that are most likely to be related to water, hygiene and sanitation are diarrhoea, hepatitis, stomach problems, worms, scabies, and sores. Although TB and brucellosis were most frequently identified as the top health problems faced by communities, diarrhoeal disease and hepatitis were identified as problems for adults and as important health problems for children. Skin conditions too, though not the top health priority, were widely reported as a problem. Children themselves identified flu and diarrhoea as their most frequent health problems. AIDS, TB, cancer and flu were the diseases most feared by children.

Hygiene and sanitation are not always regarded as the cause of gastro-intestinal and skin diseases. Poor water quality and infrequent washing are seen as possible causes of diarrhoea and scabies respectively. However, diarrhoea is also attributed to too much sun, too much fruit and the Evil Eye. The latter is especially responsible for children's illness. It is believed that worms can be caused by eating unwashed fruit and sitting in cold places. Scabies and other skin complaints have been attributed to poor water quality, and to using poor quality Chinese soap. Water quality has a particular salience. In addition to diarrhoea, stomach problems worms, scabies and skin complaints, TB, coughs, bronchitis, tonsillitis and flu are attributed by some to poor water quality. TB, bronchitis, flu and colds were also blamed on a lack of water and TB was attributed to poor hygiene and sanitation. Skin sores of an unknown origin on children were a source of considerable concern for mothers in one community.

Lack of access to effective, affordable health-care is an issue. Health workers say they have few resources with which to treat people, their premises are often in poor repair and lacking in cold-storage facilities and their salaries are paid irregularly. Ordinary people often lack the means to pay for medical services and say that medical staff often do not have the resources to provide adequate treatment. The lack of medical services and access to medical check-ups is seen as one cause of health problems. Worsening social and economic conditions and localised environmental contamination from mining and industrial activities are also blamed for a variety of health problems. Perhaps this is not surprising in view of the reported recent contamination of

water sources with cyanide by a Canadian mining company. Local levels of radiation are also seen as a cause of health problems. Goiter in Yssyk-Kul for example has been attributed to local radiation.

Medical help may be sought from the local *felcher* or doctor, from the nearest hospital or from a variety of healers. Healers include fortunetellers (*kozachyk)*, herbalists and retired health professionals. The source from which help is sought depends on the services that are accessible locally and the money available for treatment. Healers are often cheaper and more accessible than hospital treatment and often prepared to accept payment in kind. Healers are also regarded as most appropriate for treatment of conditions arising from the Evil Eye. In the questionnaire survey however, doctors were reported most frequently as the source of advice or treatment in the event of illness. *Felchers* were the second most frequently cited source of advice or treatment and healers third. However, it is possible that not all respondents made the distinction between doctor and *felcher*. Self-medication, using herbs or other remedies, is also used, especially when no money is available to pay for treatment. One man described how he treats diarrhoea in his children with vodka and pepper.

3.2 Actual symptoms

The collection of accurate data on the actual incidence or prevalence of water, sanitation and hygiene related symptoms is difficult. Only a community-based survey inquiring about illness now and during the previous 2 weeks can provide reliable data. The time and resources available for the present consultancy did not allow such a study. The majority of available data is based on reported cases and is therefore likely to vastly underestimate actual disease. The data do not represent the actual incidence or prevalence of these infections since they do not include cases that were not reported to the health workers or doctors. The possibility of misdiagnosis and of under or over reporting of particular diseases by health staff would also affect the accuracy of the data. Previous reports attribute 8% of infant deaths in 1997 to diarrhoea (based on figures from the National Statistical Committee) and state that parasites account for 40% of all reported infectious disease, with diarrhoea and typhoid making up 16% and 1.3% respectively (based on figures from the Sanitary and Epidemiology Service in Kyrgyzstan). The country has a high infant death rate (estimated at 77.08 per 1000 live births in 2000 (CIA 2000)). In the absence of malaria and in view of the sanitary conditions observed it is highly probable that diarrhoeal diseases are a major problem.

Cholera outbreaks were reported in southern Kyrgyzstan in 1998 and in December 2000 the press carried reports of a hepatitis A outbreak in Talas affecting 2,900 people. The social and economic survey carried out in all 3 *oblasts* by Fichtner GmbH asked respondents about illness in their households during the 3 months prior to questioning. Diarrhoea was reported among adults in 8% of households and among children in 13% of households. Hepatitis was reported among adults in 3% of households and among children in 6% of households. Skin complaints were reported among adults in 3% of households and among children in 4% of households. It is also apparent from the qualitative data that, although they may not be universally regarded as the most important health problems, gastro-intestinal infections and skin complaints are health issues for many people.

The following data were taken from the Kyrgyzstan Common Country Assessment (UN 1999). They are based on cases reported to the health services and may not reflect actual incidence rates. Changes and differences in reported rates may reflect changes in access to and use of the health service or changes in the reporting practices of health service staff as well as changes in

the incidence rate of particular infections. This may go a long way towards explaining the apparent decrease in infectious disease incidence that has accompanied a worsening of living conditions for the majority.

Incidence rates per 100,000 of population.

	Yssyk-Kul	Naryn	Talas
Typhoid			
1991	4.7	4.6	6.0
1992	2.3	8.2	5.0
1993	5.4	2.6	5.9
1994	1.1	2.9	1.4
1995	1.6	2.6	3.3
1996	1.6	2.8	2.9
1997	5.7	1.5	6.5
1998	0.0	2.3	0.5
Hepatitis A			
1991	316.8	218.9	362.5
1992	165.6	139.8	266.6
1993	317.8	208.9	462.6
1994	434.4	251.8	399.7
1995	256.9	133.8	406.1
1996	208.3	126.6	217.1
1997	383.9	177.0	477.5
1998	178.1	300.0	261.4
Acute Intestine Infection			
1991	436.7	254.3	639.5
1992	341.6	440.0	575.8
1993	388.3	321.4	499.0
1994	275.5	183.1	354.9
1995	310.5	310.4	423.2
1996	180.4	183.8	281.9
1997	104.5	348.1	517.5
1998	191.1	237.1	336.9

Table 3: Incidence rates of infectious intestinal diseases.

Rural populations do not regard infectious disease as their most important problem. The problems of poverty, lack of employment, and difficulties with agriculture and the breakdown of public services are, not surprisingly, seen as far more pressing. Alcohol abuse by men is regarded as a big problem by many women. One group of men in Yssyk-Kul oblast attributed their own ill-health in the summertime to over-consumption of vodka.

4 What are the behavioural causes of these symptoms?

The purpose of this question was to identify the behaviours most likely to lead to the hygiene and sanitation related diseases (gastro-intestinal and skin infections) recognised in the villages.

This question was addressed using structured observation in village households (see methods section above). An initial day of observation in three households revealed a large number of behaviours that constituted potential transmission routes for gastro-intestinal disease. These included the following:

food-handling
food storage
water quality at source
water handling
water storage
contact with domestic animals, livestock and poultry
lack of hand-washing after using latrines, after cleaning children's faeces, before food preparation and before eating
defecation in sites other than the latrine
disposal of infant's faeces in sites other than the latrine

Hygiene promotion is most likely to succeed if it concentrates on a small number of high-risk behaviours. Of the behaviours observed, the most important in the transmission of gastro-intestinal infections are probably lack of hand-washing with soap after contact with faeces and lack of safe disposal of faeces. If hands are washed with soap after contact with faeces and if all faeces are disposed of in latrines, faecal contamination of the home environment will be minimised. This will reduce the transmission of faecal pathogens by all routes (Curtis et al 2000). It was therefore important to gain an understanding of the frequency with which these high-risk practices occur. This was done using structured observation in sixty-five households. The results are described below.

4.1 Hand-washing after potential faecal contact.

Of 231 instances of urination/defecation observed 49% (113) were followed by hand-washing. Eighteen percent (41) were followed by hand-washing with soap.

There were 17 observations of a child being cleaned after defecation. None of these was followed by hand-washing. Children were cleaned by their mothers or by a sibling on all but one occasion (on this occasion cleaning was done by the father).

Fifteen observations were made of faeces being cleaned from a pot or *beshik* (always by a woman or child). Only 1 of these was followed by hand-washing and soap was not used on this occasion.

Observations were also made of hand-washing before eating or preparing food, although these behaviours are of secondary importance to hand-washing after contact with faeces.

Of 41 occasions on which food preparation was observed, prior hand-washing occurred on 42% (17). Hands were washed with soap on 17% of occasions (7 occasions). Food was always prepared by a woman.

Of 297 observations of individuals eating, hands were washed first on 47% (141). Soap was used on 15% of occasions (45 occasions).

Hand-washing with soap appears to be the exception rather than the rule. Observations took place in the early morning. This is a time of day when many Kyrgyz wash their hands and face and when reported soap use is frequent. It is therefore likely that our observations of hand-washing are more associated with habitual morning ablutions than with hand-washing habits after latrine use and before food preparation and eating. The findings may therefore overestimate of hand-washing and overestimate the extent of soap use. It is also likely that the presence of the observer served to increase the frequency of hand-washing and soap use.

Soap was seen in 57% of households (37 households). Fifty-two percent of households (34 households) had a washstand and 74% of these (25 households) were seen to use it for hand-washing. Having a washstand was associated with a higher rate of hand-washing after urination/defecation (means of 0.6 hand-washes per observation of urination/defecation for households with a washstand and 0.3 for households with no washstand). It may be that having a washstand makes hand washing easier or it may be that having a washstand is associated with some other variable such as wealth or concern for hygiene that makes hand-washing more likely.

4.2 Disposal of faeces

Faeces (thought to be human) were seen in the yards or gardens of 43% of households (28 households). The position of these faeces (by the side of the house and often close to the door) suggests that they were of human origin, however some may have originated from dogs.

On the 17 occasions when cleaning faeces from a child was observed the faeces were disposed of in the following ways:

In the yard or garden	10
In the latrine	1
In the washstand	1
Left in clothes	1
Unknown	4

On the 15 occasions when cleaning children's faeces from a pot or *beshik* was observed the faeces were disposed of in the following ways:

In the yard or garden	8
In the latrine	3
In the washstand	2
In the rubbish heap	1
In the street	1

On the 7 occasions when cleaning children's faeces from soiled clothes was observed the faeces were disposed of in the following ways:

In the yard or garden	4
In the rubbish heap	2
In the latrine	1

Thus, of 39 occasions on which children's faeces were disposed of the latrine was used for disposal on only 13% (5 occasions). All other methods of faeces disposal (87%) increase the risk of faecal contamination of the domestic environment.

A question on the disposal of infant's faeces was included in the questionnaire survey administered to 255 respondents (see methods section above). Questionnaires are thought to be more likely to produce answers close to the perceived ideal then observation (Cousens et al 1996). Nevertheless, 44% of respondents did not cite the latrine as the place where infant's faeces are disposed of.

Quality of drinking water, although of lesser importance in the control of endemic gastro-intestinal disease than water availability and use, may contribute to gastro-intestinal infection in some circumstances. In addition, as noted above, water quality is believed by villagers to have an important influence on health. With these points in mind, a note was made of water storage practices in the observation households and a question on usual water source was included in the questionnaire.

Seventy-six percent of households (46 households) stored their water in covered containers. The means by which water was taken from the storage container varied between households. Some had a dedicated scoop kept on top of the storage container. Others used a variety of pans, some of which were kept on the ground. More than half of respondents in the questionnaire survey reported that their usual source of water was a river, stream or open channel.

The most likely risk-practices for scabies and skin infections that were observed are infrequent bathing, crowded sleeping conditions and infrequent laundry. Scratching of irritated, dirty skin with dirty fingers probably leads to secondary skin infections.

4.3 Bathing frequency

The frequency of bathing reported during interviews and focus groups varies from weekly to once every few months. The most widely reported for schoolchildren is a two-week cycle of washing the head on one week and the body the next. A question about bathing-frequency was included in the questionnaire. Twenty-three percent of children, 41% of men and 40% of women report bathing less frequently then once per week. Children wash in preparation for school and although not all wash every week, bathing is most frequent among school-age children. Teachers expect children to be clean and to have clean hands, heads and faces. It is a source of shame for children and parents if teachers see that a child is dirty.

Cold weather and cold water make bathing difficult. Often there is no access to a working bath-house. Public bath-houses are not functioning. Frequently they have been destroyed, however availability of fuel and water for bath houses is also a problem. A few families have their own bath-house. Eight percent of households observed (5 households) had their own bath-house. From the questionnaire survey 18% of respondents (46 respondents) said they had their own bath-house. Some families have access to the bath-houses of neighbours or relations. A charge is often made for use of a private bath-house and again the availability of fuel and water remains a problem whether the bath-house is private or public. The desire for access to a functioning bathhouse was nearly universally expressed. Bathing frequency is said to increase in the summer when outdoor water sources are warm enough to be used for this purpose.

4.4 Laundry frequency

Laundry, including bed linen, is washed as necessary. Often this equates to every few days for clothes and every couple of weeks for bed linen. However, poor families often have no sheets and report cleaning their bedding by airing it when the weather is fine. Women complain of having no washing machines and having to do laundry by hand. Drying laundry in the winter is difficult. These problems reduce frequency of laundry and may contribute to the spread of scabies.

4.5 Sleeping conditions

It is common for many children to share a single bed made up on the floor. This traditional practice is in part a response to the lack of space and lack of bedding and the problems of keeping warm. These conditions probably facilitate the transmission of scabies and may explain the reported increase in scabies during the winter.

4.6 Summary

In summary, it seems likely that hand-washing and faeces disposal practices are largely responsible for the burden of infectious gastro-intestinal disease, while crowded sleeping conditions, along with infrequent bathing and laundry, especially in the winter, probably facilitate the transmission of skin infections.

5 What is the Cultural Context of These Behaviours?

The purpose of this question was to gain an understanding of the beliefs and attitudes and environmental factors underlying the practices that may influence water, hygiene and sanitation related disease in rural communities. Specifically this section considers hand-washing, soap use, latrines, and faeces disposal. The data presented were derived from focus group discussions and interviews.

5.1 Hand washing

The most important times for hand-washing are believed to be in the morning shortly after getting up and in the evening before bed, before bread making and after dirty work, such as handling coal, dung or wheat, and after using the latrine. Of these, the early morning is widely recognised as the most important time for washing hands. Hand-washing after cleaning faeces from babies and children is not seen as important. However, one woman explained that if water is used to clean a child after defecation there is no need to wash hands as well. Before food preparation and before eating were also mentioned as times when hands are washed.

The reasons given for washing hands were to remove visible dirt and to protect against microbes. Children reported that washing their hands before school was important as the teachers expect them to arrive with clean hands. Hand-washing before bread-making was seen as part of the respect for bread in Kyrgyz culture but was also explained in terms of avoiding microbial contamination.

Provision for hand-washing after latrine use at school varies. Several schools visited had no facilities for hand-washing. This was a source of complaint from the children interviewed. One said '*the school should have a washstand because after latrine our hands are dirty and then we go to lessons and our books get dirty*'. Another school had a functioning standpipe in its grounds. Although this was situated some distance from the latrine children claimed to use it for hand-washing.

5.2 Soap

In the questionnaire survey, 88% of respondents reported having soap at home. Similarly the social and economic survey carried out by the consultants for the Water Supply and Sanitation Project found that 88% of respondents report having soap available at the place where they wash. These results are encouraging but should be treated with caution. During focus groups and interviews a number of respondents said that many people do not have soap but would be unwilling to admit to this. Conversely, in several households visited where soap was seen householders said they had none. More importantly, the presence of soap at the washing place does not necessarily indicate that it is intended to be used for washing. The primary use for soap is laundry.

Many families periodically have no soap because they cannot afford it. Therefore people try to use soap sparingly. The use of soap for washing hands is reported as most important for removing visible dirt after dirty or dusty work. Visible dirt is difficult to remove using water alone. One woman said *'If there is not enough soap I save it for my husband because he works with machinery'*. After latrine use it is not seen as particularly important to use soap and hands may simply be rinsed with water. Water availability may also be a factor affecting soap use. Less water is used to remove visible dirt from hands if soap is used. However, more water is needed to wash hands with soap after using the latrine than if hands are rinsed.

Soap is chosen for its laundry cleaning properties and for its ability to last and its price. Soap is said to be cheaper then laundry powder. Laundry soap is long lasting, multipurpose and least expensive. Russian laundry soap, although not the cheapest, is usually preferred. It is believed to last well, to have good cleaning power and a good smell and to be kindest to skin. Chinese soap is cheapest but is regarded as poor quality and blamed for a variety of skin problems. Men in Yssyk-Kul suggested that bad, cheap Chinese soap is *'deliberately produced by Baptists to punish good Muslims'*. Cheap Turkish soap is available but is also blamed for a variety of skin problems. If no soap is available, raw eggs have been suggested as a substitute, but their use was never observed.

Soap is believed to offer good protection against microbes and skin diseases, sores and dandruff and is suggested to provide some protection from wind and cold. It is also thought to have curative qualities. Bathing children with laundry soap is used by some as a cure for diarrhoea and fever. In addition soap is thought pleasant to use because of its smell and because it *'makes you feel clean'*.

We were told that a soap making plant had existed in Talas attached to a meat processing factory but that this had closed because of a lack of livestock to provide fat. A few respondents remembered domestic soap production using a variety of herbs that were thought to provide good protection against skin problems. Some people make this soap today. Some said home-made soap is good for washing clothes and skin and hair and has a good smell. However, another respondent said that she had bought home-made soap from a market stall, found it to be of poor quality with a bad smell and had doubts about the safety of using it. She said it was better to use government approved Russian soap which was known to be safe and of good quality. Most women said they would be prepared to use a locally produced soap if it were cheaper than Russian soap, provided it were good for laundry, had a pleasant smell and did not cause skin problems.

Usually it is women who are responsible for the purchase of soap. '*There is a woman at home to buy soap'* said one male elder. Money for household goods comes from the sale of animals, crops or produce such as eggs, milk or fruit or from the pension of an older relative, often a woman's mother-in-law, or from the state allowance given to mothers. It is commonly said that money is in the hands of women and that they are the main keepers of family cash. Men and women are said to discuss together what to buy, and it is claimed that women often have a deciding role. The reality of domestic decision making is not known. Men however, purchase alcohol on credit. This must then be paid for from the household budget.

5.2.1 Home made soap.

In Mantysh village in Naryn *oblast* there is a man aged around 75 years who makes soap at home following methods handed down from his mother and grandmother. Around the end of August and beginning of September an herb known as *Ermen* (possibly wormwood) begins to bloom in the fields. He collects this herb, burns it and splashes it with water. He then leaves it to soak for a day in about one and a half times its volume of water. This water is then filtered through a sack and boiled. As the water evaporates a powdery deposit is left. This deposit is mixed with hot fat from a goat or cow. The mixture is divided up, shaped and wrapped in cloth and goat hair. It is then left for about 20 days after which the soap is ready for use.

He reports that people use this soap if they have a skin complaint and that as he is the only one producing such soap in the village people come to him when they have skin problems. He says that the soap can also be used for laundry.

In the village of Darkhan in Yssyk-Kul oblast there is another man who makes soap. The process he described was very similar to that outlined above. It is said to involve boiling a large amount of water for 2 days and so uses a lot of fuel. It also needs large quantities of herbs and animal fat. He said his soap smells similar to laundry soap but with the additional smell of herbs, and that it is white. This year he had not made any because of a shortage of goat fat. He and his family use the soap for washing and for laundry. People buy the soap from him to use to treat skin complaints such as scabies. A block of approximately 4cm x 4cm x 4cm and weighing 20-30 grams is sufficient for one person to wash 2 or 3 times and sells for around 15 som (10 som will buy a block of commercial laundry soap of a size which proved sufficient to last a family for 2 weeks during the behaviour trial). He says his soap is also good for treating skin conditions in sheep and he is experimenting with different medicinal herbs in his soaps.

Producing soap at home is very much a minority occupation. It is more expensive to buy than mass produced soap and is mainly used for medicinal purposes.

5.2.2 Commercial soap production in Kyrgyzstan

An interview was held with the director of a meat processing plant in Bishkek. He reported that at present there is no commercial soap production in Kyrgyzstan. In previous years laundry soap was produced although toilet soap has never been made in the country. The plants owned by his company last produced soap in 1993. His plant produced a small batch of laundry soap a few months ago for use within the plant. It was not of sufficient quality for sale and he says that his plant lacks expertise in soap making. He says that the decline of the domestic soap industry came about because of a massive decrease in livestock numbers that accompanied the move away from collective farming. This led to a shortage of the animal fat needed to manufacture soap. There has also been no investment in the machinery used for any of the processing of animal products. This industry was previously maintained largely by the demands made by the military for its products and no replacement market has been found. He says that his plant is able to extract and store the fat needed for soap making and that he would be interested in commencing soap production if sufficient investment were available. Apparently soap is produced in Kazakhstan under licence for Colgate-Palmolive

5.3 Latrines

Almost all families have a latrine. The quality of construction of latrines varies considerably between households. Most are constructed out of poor quality materials and are not structurally sound. Latrines are constructed by male householders and are relocated when full. Men said that they lacked materials to build better quality latrines and that designs or instructions might also be helpful. However, it was also pointed out that if building materials were available priority would probably be given to improving houses rather than improving latrines.

Latrines are constructed far from the house because of their smell. They are used by adults but are difficult and potentially dangerous for children to use and are difficult to use at night and in the winter. There was one report of a child having drowned in a latrine. For these reasons young children generally defecate somewhere in the grounds of their house and they begin to use the latrine around the age they start school (around 6 years). Some adults (especially the elderly) are also reported to defecate in the grounds of their houses, particularly in the winter or at night. Latrines are universally disliked because of their smell and because they offer little protection from the elements. However, the privacy afforded by the latrines is valued by older children and adults, particularly women.

The condition of latrines varies but many are clearly difficult to clean. Latrines are usually cleaned by women or girls. In soviet times chlorine was provided for this purpose on occasions. Respondents regretted the fact that affordable chlorine was not currently available. Cleaning of school latrines is not always included in the school budget. Children dislike school latrines because they are dirty, smelly and seen as a potential source of disease. For these reasons children prefer to use the latrine at home. Children reported using the school latrine rather than making use of open space around the school; however, fouling of areas close to schools has also been reported.

There is a commercial company, 'Naryn', that sells chemical toilets to businesses and tourist centres. This company also empties and cleans the toilets. The components are manufactured in Germany and the toilets are assembled in Kyrgyzstan. The company is interested in the possibility of manufacturing liquid soap in Kyrgyzstan for use with their toilets. They also expressed an interest in designing and producing latrines for use in rural areas and for schools.

5.4 Anal cleansing

A variety of materials are used for anal cleansing including water, paper, stones, earth and vegetation. A minority of households collect used paper in a bucket beside the latrine. This paper is then burnt in the bucket.

5.5 Faeces

Infants and young children do not use the latrine. Sometimes they defecate in a pot that is then emptied by their mother or an older sibling. In rural areas nappies are not used but many families use a traditional cradle (*beshik)* which incorporates a pot. Young children sometimes defecate beside their house or somewhere in the garden. The disposal of their faeces is therefore an important issue.

It is reported as important to keep the area in front of the house clean from human faeces. The presence of faeces here could be regarded as shameful. However, faeces were seen on the ground directly in front of some houses visited and some respondents explained that it would

only be shameful if the faeces were seen by important guests rather than friends or neighbours. One woman said '*People are used to seeing faeces and it is not uncomfortable for them'*. Faeces are sometimes left in the belief that they will be eaten by dogs or chickens and this was observed on occasions. Faeces are also removed from in front of houses because of the unpleasant smell and to avoid children standing in them and bringing them into the house. '*I don't know if it is dangerous or not but it smells bad and should not go into the house'* said one woman.

The presence of children's faeces in other areas around the house and garden is not regarded as a problem as long as the faeces are out of sight and somewhere that people won't stand in them. For this reason faeces which are cleaned away from the front of a house are often not disposed of in a latrine. Lack of time, laziness and the distance to the latrine were cited as reasons for not using a latrine for the disposal of children's faeces. Latrines are also often not found convenient for emptying faeces from pots or basins. Instead, since children's faeces are not generally regarded as dangerous or as unpleasant as adult faeces, they are often disposed of in the garden or orchard, in the rubbish heap or by the side of the street.

Two groups of men in Talas raised a series of beliefs concerning the disposal of infant's faeces. They said they do not mix it with adult's faeces because this might lead the child to be less successful in adulthood. They said '*Infant's faeces are sacred'* and that they should not be mixed with ash, otherwise the child might be sick, '*if children's faeces are disposed with ash, the child will be as ash, it is very bad. So people say, let the child be like a flower but not as ash. Faeces must not burn'.* It was also said that children's faeces should be disposed in places where people could not step because the child might then suffer from disease as a result of the Evil Eye. It is not clear how widespread these beliefs are. They were not mentioned by women or children, who are more often those involved actively in disposing of faeces. Nor were such beliefs evident from direct observation of faeces disposal. None of the women who took part in the behaviour trial raised these objections to disposing of faeces in the latrine.

Girls reported a variety of medical uses for infant's faeces. These included treatment of warts, ear infections, eye infections, coughs and hepatitis. Again it is not clear how widely held these beliefs are. They were not mentioned by adults and were strongly denied when asked about directly.

Although some respondents said that children's faeces were *'good for the garden*' there was no evidence that human faeces are a widely used fertiliser. In the questionnaire survey only 1 respondent out of 255 reported the use of human faeces as a fertiliser.

5.6 Water

Respondents from all villages voiced concerns over water quality and availability. Most pumps are not functioning and there is a fear that water from other sources is causing disease. Women and children are usually responsible for collecting water for domestic use. Most men said that there is enough water for domestic needs, but people are concerned by the lack of water for irrigation. However, during the winter it is reported that many water sources are frozen and water availability for domestic use becomes a problem.

5.7 Health education and health propaganda.

All adults remembered health education campaigns of the past. Soviet times are remembered with nostalgia as times when services worked and people had a regular income. In this spirit the health propaganda campaigns, which included various aspects of hygiene behaviour are also

remembered as being interesting, effective and worth repeating. This is despite the fact that there is little evidence of the messages of these campaigns being put into practice today. Some commented that attendance of health education lectures was compulsory and that they were not always interesting but that they were helpful nevertheless. None of the respondents was aware of any current hygiene education efforts.

A general impression is that the population are used to a didactic way of teaching and learning and find it reassuring when they see things being done for them regardless of how effective these actions are. This is not to deny that living standards and services have declined in recent years and that a considerable degree of nostalgia is understandable. It may take time for less didactic ways of working to be accepted and to establish conditions for creativity and constructive criticism within rural communities.

5.8 Behaviour Trial

A behaviour trial was carried out in the village of Darkhan in Yssyk-Kul oblast. Ten women who carried out risk practices volunteered to take part in a two-week trial of safe practices. The purpose of this trial was to gain an insight into the difficulties faced by women in adopting the safe behaviours and to find out what benefits they saw in the new practices.

All women liked having clean hands and liked the fact that their children's hands were clean. After several days the women commented that they were starting to wash their hands with soap more frequently and were using soap at times when they had not used soap or sometimes not even washed their hands in the past. Some women said they noticed that the area around their house was now cleaner than previously, which they found pleasant. The women said that their husbands were generally supportive of the trial and thought the behaviours were worthwhile. One also said that her neighbours had become interested after seeing how her children were busy keeping themselves and their yard clean. The women also liked the fact that they had been given a basin and soap to enable them to take part in the trial.

Some women also said that the behaviour of their children was changing and that they were adopting the habit of using soap. One woman told us that she had convinced her children to wash their hands with soap after defecation by explaining that if they did not, when they next ate they would be eating the microbes from their bottoms, this would be like eating faeces and would be disgusting. Another found the behaviours strange at first and said they had to be explained to children very carefully. However, she said her two-year old learned to use the basin for defecation in a few days and her six-year old began to use the latrine. Other women also reported that some of their children who had previously defecated outside were told to use the latrine. The women found this easier than having to clean up faeces and take them to the latrine.

One woman reported that she could not trust her daughter to wash her hands after cleaning faeces from the baby and as a result she had to take over that duty herself and this was an extra burden on her time. Several women asked if they would be able to use the soap for laundry at the end of the trial. One suggested that the behaviours would be easier to adopt in the summer when there would be more water available, the water would be warmer and the trips to the latrine would not be so cold. The women were visited again two weeks after the end of the trial. All claimed to be continuing with the behaviours although some reported having run out of soap and the comments of 2 of the women suggested that their hand-washing was largely restricted to morning, evening and before eating. It is also likely that the women were doing their best to

provide the 'right' answers. The biggest problem that the women foresaw in continuing with the new practices was their ability to afford soap.

Some things the women said:
I like it when my hands are clean
Most of all I like the fact that I was given a basin and soap
I found that it is a pleasure to have clean hands
Now I cannot ask my daughter to clean the youngest child after defecation and I must do it myself and this takes time.
The area around my house is cleaner now.
It is very cold to wash hands, especially in the mornings.
It is very cold to go to the latrine.
I like it because my children are clean.
The biggest problem for me will be buying soap.
Of course, if I had soap I would continue [with these practices].

6 How can we use a hygiene promotion programme to change those behaviours that need changing - is it realistic to expect changes?

The purpose of this question is to establish the broad framework for a realistic hygiene promotion programme to bring about the behaviour changes needed to reduce the transmission of water, hygiene and sanitation related diseases.

In the previous sections we established that infectious gastro-intestinal diseases and skin diseases are a problem in rural communities, although they may not be recognised as the most important problem faced by people at present. We also identified hand-washing and faeces disposal practices as the behaviours most likely to contribute to the spread of gastro-intestinal disease. Infrequent bathing and laundry along with crowded sleeping conditions probably play a large role in the spread of skin infections.

Within the rural population, beliefs about germ theory of disease co-exist with other explanations for ill health. The role of hygiene behaviours in relation to disease is not fully understood and the importance of water use relative to that of water quality is not fully appreciated. In particular the role of faeces in the person-to-person transmission of disease within households is not appreciated. This is true of teachers and health workers as well as the general population, although there are of course, marked differences between individuals. This situation persists despite decades of health education and propaganda. However, with the possible exception of beliefs about infant faeces expressed by a minority of respondents, there appear to be no strong cultural barriers to changing hygiene behaviours. The rural population is neither ignorant nor inherently dirty. Latrine coverage is close to one hundred percent. Soap constitutes one of the most important items of household expenditure and the desire for improved bathing facilities and clean water was near universal.

The transition to a free-market economy in Kyrgyzstan, as elsewhere, is a slow and painful process and has been marked by declining living standards, fragmentation of public services and growing social problems. It is easy to be overwhelmed by the scale of these problems and to forget that there are also important strengths to be found within the country. Despite a chronic lack of resources, schools continue to function and attendance rates appear high. Health workers continue to carry out their duties to the best of their abilities and the traditional legal system based on councils of elders is also functioning. Community based organisations have been established in some communities and ordinary people are not simply passive victims of circumstance but continue to find the means to survive. Thus there is both the need and the potential to change hygiene practices in Kyrgyzstan.

Health education, which seeks to change behaviour by disseminating information on health risks and disease transmission, is an approach commonly used by health professionals throughout the world. This approach does not work. More successful approaches have used positive messages about the benefits of desired behaviours (Curtis et al in press) or have sought to work with communities in identifying health problems and appropriate solutions. It is therefore recommended that the programme concentrate on the latter two approaches. However, education still has an important role to play in enabling people to make informed choices and avoiding the propagation of inaccurate or misleading health messages. The dissemination of current ideas on water, hygiene and sanitation-related disease to schoolteachers, pupils, health workers and other interested parties would be beneficial.

The formative research presented in this document was intended, among other things, to identify important risk practices, motivations, target audiences and channels of communication around which a hygiene promotion programme should be based. These are summarised in the box below and then discussed in more detail.

Risk practices:
The disposal of faeces (especially those of children) in places other than the latrine.
The lack of hand washing with soap after contact with faeces (following latrine use or cleaning a child after defecation).
Replacement practices:
All faeces are disposed of in latrines.
Hands are washed with soap following all potential contact with faeces.

Primary target audiences:
Mothers of young children:
Children.
Secondary target audiences:
Mothers-in-law.
Fathers.
Tertiary target audiences:
Ministers and government officials.
Influential individuals at village-level.

Channels of communication:
Television.
Newspapers.
Radio.
Health workers.
Schoolteachers.
Sanitation supervisors.
Village-level organisations.

Motivations:
Pleasant sensation of clean hands.
Pleasant smell of clean hands.
Pleasant appearance of clean hands.
Protective value of soap against sore and damaged skin.
Social acceptability of clean hands.
Pleasant appearance of clean surroundings.
Improved smell of clean surroundings.
Social acceptability of clean surroundings.
Pleasant appearance of clean children.
Satisfaction of seeing children involved in constructive activities.
Feelings of nurture associated with keeping children clean.
Reduced risk of faeces being trodden in and walked into the house.

Constraints
Lack of soap in the home for hand-washing.
Inconveniently located water sources.
Lack of convenient hand-washing facilities.
Cold water in the winter.
Latrines are difficult and dangerous for children to use.
Latrines are difficult to clean.
Latrines are difficult to use at night and unpleasant to use in the winter.

Risk practices

Hygiene promotion is most likely to succeed if changes are sought in a small number of behaviours. It is recommended that hygiene promotion should concentrate on the problem of infectious intestinal diseases. The two most important behaviours to change with regard to this problem are:

The disposal of faeces (especially those of children) in places other than the latrine.
The lack of hand washing with soap after contact with faeces (following latrine use or cleaning a child after defecation).

The programme should seek to replace these practices with the following:
All faeces are disposed of in latrines.
Hands are washed with soap following all potential contact with faeces.

Target audiences

Hygiene promotion messages are likely to be most successful if they target specific audiences. The primary target audiences recommended for this programme are mothers of small children and children. There are several reasons for this choice. The main caretakers of infants and small children are their mothers and siblings. The extent and nature of care provided by siblings varies between families. However, children of both sexes are involved in childcare sometimes from an early age (certainly by the time they start school). It is these mothers and siblings who are largely responsible for faeces disposal and who come into contact with faeces most frequently through cleaning children after defecation. They are also largely responsible for food preparation. Older children often supervise the latrine use of their siblings. As well as being current caretakers, children are future parents and targeting messages at them will have beneficial effects in the long term. Children often have an enthusiasm for learning, can be reached through the education system and have been shown to play a role in disseminating health messages to other sections of the community. However, they should not be regarded simply as a cheap and easy means to disseminate messages.

Marriage practices in Kyrgyzstan generally lead to women leaving their natal community and joining that of their husband. Thus, a community that has initiated a successful hygiene promotion programme will constantly lose young women who have been exposed to these ideas and gain young women who may be less aware of them. The targeting of new mothers will help to prevent a ‘hygiene drain’ in villages receiving intensive hygiene promotion. (A potential benefit of the dispersal of young women is that they may help the spread of hygiene practices between communities).

Two other groups within communities with the potential to influence the behaviour of mothers are their husbands and their mothers-in-law. It is a commonly practiced tradition for the youngest son to continue to live with his parents after his marriage. In these households the mother-in-law can wield considerable power. This is especially so when her pension forms a vital part of household income. Husbands and mothers-in-law also participate in childcare. For these reasons, men and older women constitute an important secondary audience for hygiene promotion messages.

The support of prominent and respected figures at local, regional and national level is likely to prove important for the success of the programme. These people form a tertiary audience.

Channels of communication

It is necessary to consider potential channels of communication for hygiene promotion messages. Mass media campaigns can reach a wide audience and can also support work at the local level by raising awareness of hygiene issues and increasing the status of hygiene promotion work. The results of the questionnaire survey suggest that television, radio and newspapers all have potential as channels of communication for hygiene messages but that television is likely to reach the widest audience. This finding is supported by observations made by fieldworkers within households. Seventy-five percent of respondents reported having a working television and 25% a working radio. The most popular television channels were ORT (Russian) and KTR (Kyrgyz). Thirty-seven percent of men and 34% of women reported reading a newspaper at least once per week. The three most popular newspapers were reported as *Obo, Asaba* and *Delo No*. These were read by 22%, 19% and 8% of respondents respectively. No major differences were apparent in the preferences of men and women. The results also show that informal channels of communication between friends, neighbours and family, have an important role to play. Friends and family were second to television in the number of respondents who cited them as important sources of information and as the source of information concerning an important national event (the Osh 3000 celebration). For local events, friends and family were cited most frequently as the source of information. While these results provide some guidance, they are based on a small sample. Further research may be desirable before launching a mass communication campaign.

Which television channels do you usually watch? (unrestricted choice)						
	Children (38)	Children %	Men (34)	Men %	Women (47)	Women %
ORT (Russian)	13	34.2	18	52.9	18	38.3
KTR (Kyrgyz)	20	52.6	19	55.9	32	68.1
RTR (Russian)	10	26.3	11	32.4	12	25.5
Other			1	2.9	4	8.5
Which radio channels do you usually listen to? (unrestricted choice)						
	Children (38)	Children %	Men (34)	Men %	Women (47)	Women %
Azattyk (Radio Free Europe)	5	13.2	3	8.8	0	0.0
KGR (Kyrgyz)	3	7.9	1	2.9	3	6.4
Europe plus	9	23.7	1	2.9	2	4.3
Kyrgyzstan obondoru			1	2.9	2	4.3
Other	1	2.6	2	5.9	1	2.1
What newspapers do you read usually? (open ended)						
	Children (38)	Children %	Men (34)	Men %	Women (47)	Women %
Obo	10	14.3	23	31.5	23	20.5
Asaba	7	10	21	28.8	21	18.8
Delo №	7	10	7	9.6	7	6.3
Evening Bishkek	6	8.6	6	8.2	6	5.4
Kyrgyz Karavan	3	4.3	6	8.2	6	5.4
Erkin Too	5	7.1	3	4.1	3	2.7
Kyrgyz Tuusu	2	2.9	2	2.7	2	1.8
Aalam	2	2.9	1	1.4	1	0.9
Kut Bilim	1	1.4	1	1.4	1	0.9
Kylmysh jana Jaza	1	1.4	0	0.0	0	0.0
Ai Danek	0	0.0	1	1.4	1	0.9
Argumenty I Fakty	0	0.0	1	1.4	1	0.9
Other	2	2.9	7	9.6	7	6.3

Table 4: Television, radio and newspaper preferences among men women and school age children.

Health workers, particularly *felchers*, have good contact with the mothers of young children and are a potential channel of communication for this target audience. Schoolteachers have good contact with schoolchildren and are a potential channel of communication for this target audience.

Motivations

The motivations listed are based on statements made by women and children about the things they valued in the safer practices. These positive statements form the basis for hygiene promotion messages and avoid the use of negative messages based on the threat of disease.

Constraints

Changes in the behaviour of individuals are most likely to succeed if appropriate physical resources are available. In this case the availability of soap, convenient and adequate water and latrines that are safe and easy to clean are the main issues. The issue of water availability is being tackled in some places by action at government level through the work with the World Bank and ADB. The provision of soap, convenient hand-washing facilities (such as wash-stands) and improved domestic latrines will require the involvement of private individuals and commercial organisations.

6.1 Possible elements for a hygiene promotion programme

This section considers possible components of a hygiene promotion programme for Kyrgyzstan. It is anticipated that the final form of the programme will reflect the resources (time, money and skills) available, as well as the priorities of stakeholders. Further thought is needed as to the purpose of the programme. In particular the extent to which it is intended to contribute to the building of health promotion capacity in Kyrgyzstan and the level of support which it is intended to provide to the water supply rehabilitation projects currently in progress. A number of principles that should guide the programme design are discussed below.

The impact of a hygiene promotion activity on hygiene behaviour is a product of the effectiveness and reach of the promotion activity. Intensive, community-level activities can be highly effective but are extremely limited in their reach. The resources available may not permit intensive work at the community level in every rural community. In order to achieve an impact at national or regional level, the greater reach of a mass communication campaign is needed. It is recommended that the activities to be pursued include a mix of wide-reaching mass media campaigns at national or regional level and more intensive work at community level. If such a mix is used, the national or regional campaigns will add value to local-level work. It may be possible to scale up some local activities to regional or national level. Consideration of the target audience and the means of communication will allow a strategic approach to planning that is explicit about the anticipated reach of every activity.

Some of the approaches suggested involve the training of local professionals in new ways of working to promote hygiene. This training would help to build capacity within Kyrgyzstan in order that effective hygiene promotion work can continue beyond the duration of the programme. It could also strengthen work to increase the capacity for health promotion in the country. However, the difficulties which individuals face in adopting new working practices should not be underestimated. It is recommended that *training should not be provided without the provision of adequate, ongoing support for those trained*. If this work is to continue beyond the end of the programme, means must be sought by which training and supervision for the new approaches can be integrated into existing professional training schemes.

It is recommended that a separate stakeholder analysis be performed for each activity to be undertaken and that the first step for each activity should be extensive discussion with stakeholders. Through this discussion a detailed plan of work can be established using the logical framework if so desired. The outcomes of the formative research contained in the present document should form the basis for these discussions and should be made available to all

stakeholders. It is recommended that all activities include a pilot phase before moving to scale and that mechanisms for monitoring and subsequent adjustment of work are established.

Previous reports have discussed the possible structure and institutional home for a hygiene promotion project. These arrangements must be made clear and formal if effective hygiene promotion is to be carried out. Close links should be established and maintained with the Rural Water Supply and Sanitation Project (and, if possible the ADB Rural Infrastructure project in Southern Kyrgyzstan). This would make it possible to co-ordinate village level interventions with construction of water supplies and make contact with and provide input to local water management committees.

A high profile workshop could be used to launch the project. If so, thought must be given to the desired outcome of the workshop and adequate briefing provided to participants.

A number of activities will require teaching materials on hygiene promotion and participatory methods, in local language and accompanied by locally appropriate illustrations. Preparation of these materials could begin early in the project and could include expansion of the PHAST toolkit already developed by UNICEF.

It is suggested that the hygiene promotion programme could incorporate the elements listed below. These have been divided into two categories: ‘national’ and ‘local’.

National
Wide and attractive publicity and dissemination of current findings.
Wide and attractive dissemination of positive hygiene messages.
Intensive marketing of soap for hand-washing.
Social marketing of improved domestic latrines.

Local
Participatory work in individual villages on hygiene, sanitation and other environmental health issues.
Hygiene promotion work with young mothers through the existing village-level health services.
Hygiene promotion in schools and with children including the use of active learning and child to child approaches.
Improvements to school latrines and hand-washing facilities.
Work with the Sanitation Supervisors from the community water management committees.
The rehabilitation of bath-houses.

These are discussed in more detail below.

6.1.1 National level activities.

The implementation of the following activities at a national level will help ensure that a wide audience is reached. They will also help strengthen and legitimise local level activities by raising the profile of hygiene and sanitation issues and the perceived status of those involved in hygiene promotion. The benefits of some national level activities might be increased through co-ordination with local level work. For example mass media messages aimed at school children could be tailored and timed to support work carried out at a local level in schools.

6.1.2 Wide and attractive publicity and dissemination of current findings.

The findings of the formative research need to be presented in an accessible form (perhaps as a small book in the local language and incorporating illustrations of the local context). The findings can then be disseminated to stakeholders in order that they form the basis for discussions to plan future work. If the findings are to be used in this way they must not only be presented in an accessible manner but also disseminated in an appropriate manner and at an appropriate time.

The start of the programme could be include a press release using television, radio and newspapers, giving details of the programme's aims and the findings on which it is based. In addition the attention of the press should be actively sought throughout the programme to disseminate ideas and publicise successes and give publicity to individuals and organisations playing important supporting roles. It might be appropriate to nominate an individual within the programme to take on the role of press and publicity officer. Sympathetic journalists should be found, trained and mobilised to help provide media coverage of the work of the programme throughout and to ensure that this begins early (perhaps with a report of the work done to date and the plans for future work). The Health II[5] project has already established contacts with the press and may provide a useful starting point.

6.1.3 Wide and attractive dissemination of positive hygiene messages.

A social marketing campaign using mass media to disseminate attractive, positive and perhaps humorous messages about hygiene is essential if the reach of the programme is to extend to a national or regional level. The formative research has identified a number of motivations for hygiene behaviour that can form a basis for these messages. The messages should not be based on the potential health threats of risk practices or the potential health benefits of safer practices. The messages should be designed in collaboration with local people to ensure that they are tailored to local culture. The focus of these messages should be the two important risk practices identified. The messages must be designed with the specific target audiences in mind. As well as the two primary target audiences identified (mothers and children) this campaign may be important in reaching secondary audiences (fathers and mothers-in-law) who are not reached by other elements of the programme.

Necessary first steps in this process are:

To establish contact with an advertising agency, art students or other creative people who can contribute to design of communication materials. The quality of materials developed is likely to play a key role in determining the success of the work.

To investigate the possibilities for working with the mass media. This will include establishing details of the form in which messages will be delivered, the frequency, the cost and the timing of delivery.

In addition to mass media, free posters or calendars are likely to be popular and to be displayed on the walls of many homes, schools and clinics.

6.1.4 Intensive marketing of soap for hand-washing

The availability in households of soap for hand-washing is clearly crucial to the success of the programme. Effective marketing may hold the key to this. Soap must be available over and above that needed for laundry. This might be achieved by persuading people to buy a dedicated

[5] The World Bank Health II Project is looking at restructuring the Ministry of Health and developing health promotion.

hand washing soap or by ensuring that the quantity of laundry soap purchased is more than sufficient to satisfy the requirements of household laundry. It may be that these approaches are appropriate for different segments of the market.

This aspect of the programme would be greatly strengthened if partnerships were formed with soap manufacturers. Soap manufacturers have a lot to gain from such collaboration and could prove a major source of funding for a national campaign. Elsewhere manufacturers have expressed an interest not only in the sale of soap but in creating conditions for improved soap sales. In the context of Kyrgyzstan this might, for example, equate to working to improve water availability, the availability of washstands or the rehabilitation of bath-houses.

A further consultancy is recommended to identify potential partners in industry and establish a mutually acceptable framework for co-operation. The consultant should have experience of negotiating with industrial partners and be aware of the ethical issues that can arise from such partnerships. Thought should also be given to the extent to which the choice of industrial partners could strengthen or weaken local industrial capacity.

An effective and appropriate national soap marketing campaign making use of existing mass media has the potential to effect widespread change in hygiene practices. However, such a campaign presupposes that sufficient income is available at household level to allow the purchase of greater quantities of soap. Some careful market research may therefore be necessary before embarking on such a campaign. It is likely that such a campaign will not reach the poorest sections of society.

6.1.5 Social marketing for improved domestic latrines.

Almost all households have a latrine. However, the poor design and rough quality of finish on latrines makes them difficult and dangerous for young children to use. They are also difficult to clean, provide little shelter from the elements and are consequently found unpleasant to use by adults and children alike. Latrines which are safe and easy for children to use and which could be cleaned easily could reduce faecal contamination of the environment by allowing children to begin using latrines at an earlier age. They would also make it less likely that older children and adults would defecate elsewhere and may encourage the safe disposal of infant's faeces.

Latrines are constructed by male householders. The training of local artisans in improved methods of latrine construction is a possibility. However, it seems unlikely that most householders would be able or willing to pay someone else to build a latrine. The provision of low cost building materials, upgrading options and a variety of possible plans for improved latrines may be more appropriate. A social marketing campaign and the construction of demonstration latrines may stimulate demand for improved latrines.

6.1.6 Local level activities.

The activities outlined below are suggested as taking place at a local level. In principle however, they could be implemented nationally. In particular a drive to improve domestic sanitation might benefit from a national social marketing campaign.

6.1.7 Participatory approaches to hygiene promotion and environmental health issues in villages.

Teachers and *felchers* have been identified as groups with an interest in hygiene promotion, who have good contact with target audiences and who could contribute on a national or regional scale

to a hygiene promotion campaign. However, they are not the only parties with an interest in hygiene and environmental health issues. Nor are they necessarily the best people to carry out hygiene promotion work in every village. Where resources allow intensive work at the village level, local communities will be able to nominate individuals considered most appropriate to carry out hygiene promotion activities and will also be able to define the activities they consider most appropriate to their needs. Individuals from outside the community with experience in participatory methods and community development would provide a useful catalyst for these activities.

Given financial constraints it is likely that this level of work will be possible in a minority of communities during the lifetime of the project. Some criteria will therefore be necessary for the selection of communities. As a starting point it is suggested that the communities to be targeted should be among those involved in the Rural Water Supply and Sanitation Programme. Preference should be given to the poorest of these communities and to those who express an active interest in working on hygiene and environmental health issues. Some guidance in the selection of communities might be obtained from the social science consultants working on the Rural Water Supply and Sanitation Programme.

Although communities may be encouraged to tackle the hygiene promotion priorities of the project there are other issues on which they may wish to focus their attentions. The collection of solid waste from public areas and the rehabilitation of bath-houses are two examples of other issues raised by many during the formative research. The rehabilitation of bath-houses was seen as particularly desirable by many people. The rehabilitation of bath-houses would be unlikely to result in major health benefits however, local successes in addressing issues of local interest could strengthen the ability of communities to tackle further problems. If a truly participatory, bottom-up approach is used, it will not be possible to specify in advance the problems to be tackled or the means to be employed. However, the careful planning of activities should be encouraged and guidance offered on this process. The advantages of this approach are that ownership of the work is maximised and that the problems tackled and solutions developed are of local relevance. The reach of the work however, is extremely limited.

6.1.8 Hygiene promotion work with mothers of young children through the existing village health services.

Although the status of local health workers or *felchers* has declined as the resources available to them to provide treatment have dwindled, they still have frequent contact with women during pregnancy and in the first year after the birth of a child. They are a source of information on infant care and feeding practices. They also expressed an interest in hygiene promotion work and could provide a useful point of contact with the mothers of young children. Through *felchers* it might be possible to organise work with groups of young mothers. Often these women are in a relatively powerless position and may lack networks of support having moved from their natal villages. Mutual support may help build the confidence necessary to change behaviour.

Not all *felchers* are fully conversant with current thinking on the links between water, sanitation, hygiene and disease, nor are they familiar with the most up-to-date methods of hygiene promotion. If *felchers* are to fulfill a hygiene promotion role they will need support and training in both of these areas. As a pilot phase, training for a limited number of existing *felchers* could be provided through a series of workshops. These would also allow the development of a network for professional support and the exchange of ideas. However, poor communications and lack of money makes regular contact between *felchers* an unlikely prospect. The *felchers* would need

visits from hygiene promotion workers to provide further support, feedback and encouragement. Adequate support is crucial if *felchers* are to attempt new ways of working. Towards the end of the project it may be possible to identify individual *felchers* who may be suitable and willing to contribute to training in future. If this work is to be sustained and expanded to a national level it will have to be integrated into the existing training schemes. Within the lifetime of the project it is anticipated that, at most, a small core of *felchers* could be trained in hygiene promotion and some provision made for the training of *felchers* in future. A number of changes are currently taking place within the organisation of health services. These may create opportunities for establishing new elements of training. However, the disruption and uncertainty accompanying the changes may add to the difficulties of working with the health service.

The potential role of *felchers* is discussed here because they are the most widespread form of health service provision at the village level and because they have frequent contact with the mothers of young children. However, in some villages health services are provided by doctors and midwives as well as *felchers* and the results of the questionnaire survey suggest that villagers visit doctors more frequently than *felchers* and that doctors are more frequently the source of advice in the case of illness. It may be important to involve these other health workers in hygiene promotion activities (although perhaps not as intensively as the *felchers*). The involvement of other health workers would serve two purposes. It would allow them to deliver hygiene promotion messages as appropriate (bearing in mind that patient contact during a consultation is almost certainly not an appropriate opportunity for hygiene promotion). It would also help to ensure that all health professionals support the hygiene promotion activities and that the involvement of *felchers* in hygiene promotion work is done in such a way as to strengthen the existing health services and does not create divisions within teams of health workers.

First steps in this piece of work should include discussions with the ministry of health and with *felchers* to find out:

whether training of *felchers* in hygiene promotion is possible and appropriate
what sort of training *felchers* need and want
how, where and when this training could best be delivered

6.1.9 Hygiene promotion in schools and with children.

Hygiene promotion through schools has the potential to reach a large number of children. In addition, the teachers and directors of all schools visited during the formative research expressed a high degree of interest in hygiene promotion. This work however must be compatible with the demands of the national curriculum and needs to be supported at national level by the Ministry of Education. The support of individual school directors is likely to be crucial in ensuring local success.

In order to participate effectively in this programme teachers will need to acquire knowledge of current understanding of the links between hygiene behaviour and disease and will need to gain experience of the range of modern hygiene promotion techniques, with a particular emphasis on active learning and child to child approaches. It is therefore suggested that training for teachers be delivered through regional and local workshops and in-service training days within individual schools as well as being incorporated into the curriculum of teacher training colleges. One way in which the latter might be achieved is to carry out hygiene promotion in the demonstration schools used by teacher training colleges. Towards the end of the project it may be possible to identify individual teachers with an enthusiasm and aptitude for hygiene promotion who could contribute to the training of new teachers. An ongoing programme of training workshops would allow teachers to establish networks for support and the exchange of ideas between schools.

However, the problems of transport and communication in Kyrgyzstan would necessitate a regular input of resources if such a network were to remain active. Adequate support from experienced professionals is likely to prove crucial if teachers are to make regular use of new teaching methods. By the end of the hygiene and sanitation project it may be possible to have trained a small core of teachers in hygiene promotion and the use of active learning and child to child approaches. Some of the schools involved could then contribute to the training of teachers in future.

A range of materials for participatory work with children on hygiene and other health issues is available but may require translation into the local language. It must be borne in mind that teachers in Kyrgyzstan, as in other countries, face low pay and difficult working conditions and have many demands placed upon them. It will therefore be important to ensure that teachers feel supported and valued in their work on hygiene promotion and that this work is accommodated within their current teaching schedules and is not presented as an additional burden. Active learning approaches are also likely to be new to many teachers and considerable individual variation is to be expected in the confidence needed to apply these approaches. Child to child approaches are not prescriptive. Individual teachers can be exposed to these ideas but should only be expected to attempt those that they feel are appropriate for themselves and their pupils.

First steps for this piece of work should include discussions with ministry of education to establish:
what sort of work in schools would be possible within the national curriculum
what work with trainee teachers would be possible within their curriculum
what provision exists for in-service training of teachers and what possibilities exist for developing training for teachers in hygiene promotion and child-to-child approaches.
Discussion should also take place with teachers to define their needs and wants, and to find out how training could best be delivered and at what times in the school year.

The formal education system provides a network through which hygiene promotion could be directed at children. However, child to child approaches are not intended to be exclusively school based and have been successfully used by a variety of youth groups and community organisations. Local communities may use these approaches in addition to work taking place in schools or as an alternative to school-based activities when schools do not wish to be involved.

6.1.10 Improvements to school latrines and hand-washing facilities.

Many school latrine facilities are in poor condition and lack hand-washing provision. Improvements to school latrines could provide a focal point for work in schools. Continued lack of provision however, could serve to undermine such work. The World Bank has expressed an interest in supporting a programme of building school latrines and hand washing facilities. If such a programme goes ahead, close co-ordination between latrine construction and hygiene promotion activities should be sought. Further discussion with the Rural Water Supply and Sanitation Project is needed to establish whether and how a school latrine building programme would take place. The involvement of staff and pupils in planning for the design and construction of latrine and hand-washing facilities would also be beneficial.

Maintenance and cleaning of latrines is not included in the budget of all schools and this issue needs to be given careful consideration. If school latrines are to serve as a basis for the promotion of hygiene and sanitation it is essential that they remain clean and well maintained.

This will require the provision of labour and cleaning materials as well as organisation. If hand washing with soap is to be promoted at school the provision of soap will have to be addressed.

It may be possible to find support from commercial soap manufacturers for the construction and maintenance of school latrines and the provision of soap. This cannot be assumed but merits serious investigation.

6.1.11 Work with the Sanitation Supervisors from the community water management committees.

The Community Drinking Water Supply Union is in the process of being created. It is intended to be a national organisation of volunteers. These volunteers would comprise local committees, each having responsibility for the management of a local water supply scheme supplying water to one or more villages. Each of these committees is to include a female Sanitation Supervisor with responsibility for education and dissemination of information on health and hygiene. With appropriate training and support the Sanitation Supervisors might be able to take hygiene promotion to their associated village populations and also ensure that the Community Drinking Water Supply Union, is kept aware of the hygiene implications of any decisions or action it takes.

Neither the committees nor the Sanitation Supervisors exist at present. In December 2000 a draft document was being circulated setting out the framework for the creation of the Community Drinking Water Supply Union. Although the organisation is intended to be national the understanding of the WELL consultant is that it will only involve those communities in receipt of a rehabilitated water supply under the World Bank or ADB supported projects.

Some training of Sanitation Supervisors in different aspects of hygiene and the relationships between water availability, water quality and health will be needed if these volunteers are to carry out their duties effectively. In addition, this training might raise the status of the Sanitation Supervisors and add to their confidence in operating in an organisation that is likely to have a male bias. Sanitation Supervisors could also receive training and materials and support to enable them to instigate and co-ordinate hygiene promotion activities within the communities that they represent. This would depend on the interests, enthusiasm and confidence of individual Sanitation Supervisors. Training could be provided on a group or individual basis depending on the level of interest and the rate at which committees are established. Since these committees are intended to be established to manage water supplies in both the north and south of the country work with Sanitation Supervisors would provide one possible means of making links between the DFID and World Bank work and that being supported by ADB.

6.1.12 The rehabilitation of bath-houses

The rehabilitation of bath-houses has received little attention in this report. The main reason for this is that the use of bath-houses seems unlikely to play a role in preventing the transmission of infectious intestinal diseases. Regular bathing is thought to play a role in reducing the transmission of skin infections such as scabies. The provision of bathing facilities may promote regular bathing. However, the precise relationship between bathing frequency and transmission of skin infections is unknown. The provision of communal bathing facilities would almost certainly have to be a commercial undertaking. Given that the population would have to pay to use the facilities there is no guarantee that bathing frequency would rise sufficiently to reduce the transmission of skin infections.

There are other reasons to consider the rehabilitation or construction of bath-houses. Bathing with warm water is a pleasurable activity valued by members of all communities visited, and the provision of affordable, local bathing facilities is likely to be popular. Communal bathing can also serve a valued social function. However, some individuals expressed fears that a communal bath-house could be a source of infection. Bath-houses could play a role in promoting a culture of soap use, which could strengthen other elements of the hygiene promotion programme. There may also be an interest among commercial soap producers in supporting bath-houses. Furthermore, bath-houses require a functioning water supply. The provision of bathing facilities could therefore play a role in generating community support for the rehabilitation of water supply systems.

7 How do we make those behavioural changes sustainable? (Are there any groups or institutions which carry more weight within the communities)

The previous section considered a number of elements that are intended to allow hygiene promotion work to continue beyond the duration of the project. In order for individuals to maintain behaviour change they need not only the physical resources but also the support of the community in which they live. The work outlined in the previous section is intended to address hygiene on a community-wide basis.

This section will consider the identification of individuals or organizations whose influence might be of importance in allowing changes to occur and be maintained. The variety of organizations and their influence will vary between villages and cannot be predicted. Likewise, the identity of influential individuals and their enthusiasm for hygiene promotion will vary between villages. The best that can be done here is to provide the following observations by way of guidance.

The support of the village level administration will be necessary in order for work in villages to take place. Although none of the village administrators in the villages visited was hostile towards hygiene promotion work none showed any particular interest in the work or appreciated its potential importance. The degree to which village heads are respected by the community varies between villages. It cannot be assumed that they are particularly respected or sensitive to needs within their communities.

The court of elders (*Aksakal Sotu*) exists in most villages. This is a respected institution that serves to administer the traditional legal system. It is an entirely male institution and was not considered to be a suitable vehicle for hygiene promotion messages. Its members however are respected individuals within the community and their endorsement of projects would be beneficial. It is also conceivable that this organisation could play a role in administering water tariffs.

The Mullah is a respected figure in most villages and has regular contact with a sizeable proportion of the population. None of those met was particularly interested in hygiene promotion and they were not considered a good channel for hygiene messages. However, Mullahs vary considerably in age and outlook and some may be persuaded to endorse and publicise projects within their community.

The Women's Council, now frequently referred to as the Women's NGO is a Soviet relic. It nominally exists in most villages but was inactive in those visited. However, it is a widely recognised organisation that could be resurrected for hygiene promotion work. It might be dominated by older women, since young mothers may lack the time, status and confidence for active involvement.

Youth Groups exist in some villages and have been instigators of community projects such as the rebuilding of a community center and the organisation of cultural activities.

Carpet masters produce the felt floor coverings that are used in Kyrgyz homes are which can form an important element of a Kyrgyz dowry. These women are often prominent members of the community.

Felchers exist in most villages. All of those visited were female and expressed an interest in hygiene promotion. *Felchers* are not necessarily highly respected individuals. Their status depends to some extent on their age and experience and the ease with which the population can access hospital care. It has also been undermined by the lack of resources provided for their work. Although *felchers* are the usual village-level health workers doctors and midwives also work in some villages and also expressed an interest in hygiene promotion work.

Healers (*koz achyktar*) are often respected figures and have contact with people across the community. They vary in the extent to which they are sympathetic to hygiene promotion as a means of preventing ill health. They include herbalists and fortunetellers and not all support a germ theory of disease causation.

Teachers and school directors have contact with a large proportion of village families although their profession does not of itself lead to high status within the village community. The status of teachers may depend to some extent on the size of the village. In small villages the school often serves as a focal point.

Members of the Community Drinking Water Supply Union may have an important role to play, especially in communities with a newly established or rehabilitated water supply. At present the CDWSU has yet to be formed so it is not possible to make any further assessment of the importance of its members. In other countries, it is often influential people who become members of such committees and their interests may be more for personal rather than for community. Lessons learned from these experiences have generated some ideas on how to encourage equity and fairness from committee members. These include the encouragement of women to become active members, particularly in roles of authority, such as Treasurer.

8 How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign (designed to promote ownership of and demand for the water supply projects)?

This section considers the possibilities for synergy between the proposed hygiene promotion programme and the ways in which the hygiene promotion programme might strengthen the Rural Water Supply and Sanitation Project.

The hygiene promotion project will promote behaviours that require water. The problem of collecting water for washing hands was raised by participants in the behaviour trial. If hygiene messages are accepted, demand for water will increase and concern to establish and maintain water supplies should also increase. This may be particularly true in the event of communities electing to re-establish bath-houses for public use. The hygiene promotion programme in combination with the water supply programme will bring health benefits that neither could produce alone. Perceived water quality appears to have a particular salience and poor quality water is thought to cause a variety of illnesses. It is likely that the health benefits of improved hygiene will be attributed to the water supply and this could provide further motivation for maintaining the rehabilitated water sources.

The use of child to child and active learning in schools will allow the opportunity for children to learn about the importance of using and maintaining clean water sources and about simple methods for effective environmental monitoring of water sources. The provision of hand-washing facilities within schools will also increase the demand for water and raise awareness of the importance of an adequate and convenient water supply. The use of participatory approaches in rural communities will provide experience of identifying and responding to environmental health problems at the community level. The lessons learned and confidence gained in this way will leave communities better placed to manage their own water supplies.

Work with the Sanitation Supervisors in the Community Drinking Water Supply Union would provide a direct link with the Rural Water Supply Project. This could be used as a means of introducing ideas and ways of working which would strengthen the ability of local committees to manage their water supplies. It could also help to ensure that the committees remain aware of the hygiene and health implications of their work.

One problem facing the Rural Water Supply Project is how to increase willingness to pay for water supplies. In the villages visited there were many water sources. Most of these were open streams or drainage channels and not all houses were close to a water source. However, people may be unwilling to pay for water which is already freely available (the situation may change seasonally; in the winter when sources are liable to freeze and in the summer, when they are liable to dry up or be diverted to irrigation). Two possible approaches, not mutually exclusive, are 1) that people will be willing to pay for a water supply if they see it as giving them something that they want and as addressing a need that they have identified 2) that people will be willing to pay for something that they want and that the money thus raised can be used as a water tariff.

Participatory work around environmental health issues within communities, as part of the hygiene promotion project, would allow the possibility for communities to identify their water problems and contribute to the design of appropriate systems (both technical and social) to address these problems (approach 1). It may be that in some villages low-cost improvements to household

wells will meet local needs more effectively than rehabilitation or provision of standpipes. Water supplies could also be presented as part of a package that addresses other needs identified by communities and which they are willing to pay for (approach 2). These might include training of individuals in hygiene promotion, latrine construction, bath-house construction, solid waste management, rewarding school-children or others for their efforts in promoting better hygiene, or some other environmental health issues. With regards to training in hygiene promotion, a community might prove willing to contribute towards the training of an individual of their choosing (perhaps the Sanitation Supervisor). They may be less willing to contribute towards the training of teachers and *felchers* who are part of a state system that is believed to have a duty to provide these services.

These issues need to be addressed urgently in the community selected as a pilot for the water supply project. It seems that this community has been chosen to receive a water supply for which it will be expected to pay. The extent to which this is answering an expressed need in the community is unclear and it is possible that the community was selected for political reasons. The problem of willingness to pay is seen as acute in this community and is made more so by the abundance of surface water including wells attached to individual households.

It was evident during the formative work that villages are not single entities with regards to water supply. One feature of potential importance is the development of ‘new neighbourhoods’ on the periphery of villages. These tend to consist of young families, often among the poorest in the village. They are often situated furthest from the existing water supply system, although they may have reasonably good access to surface water. Rehabilitation of existing water supply systems would often fail to reach these neighbourhoods.

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Annex A: Terms of Reference

Kyrgyz Republic – Rural Hygiene and Sanitation Project "Formative Hygiene and Sanitation Research"

The consultant is to supply the following services to DFID:

Project title and brief description

This consultancy will support DFID's proposed project on Rural Hygiene and Sanitation in the Kyrgyz Republic. The project is linked to the World Bank's forthcoming loans on Rural Water Supply and Sanitation (RWS&S) and Health 2 (H2) Project. The RWS&S loan will enable the Government of the Kyrgyz Republic to rehabilitate water supply to rural areas in the three oblasts of Naryn, Talas, and Yssyk-Kul. The H2 loan is part of a broader sector-wide approach, one component of which encompasses public health.

The DFID project seeks to complement the Bank loans by assisting the Kyrgyz Government to secure the full range of health benefits from the RWS&S project. The DFID grant assisted project will link the two World Bank projects to develop sustainable capacity for hygiene promotion.

Background

The Kyrgyz Government is seeking to rehabilitate water supply in rural areas of the Kyrgyz republic. Two loans are being agreed in order to finance this initiative. One is with the Asian Development Bank (ADB) for US$35m. This general infrastructure improvement loan includes rural water supply in the oblasts of Chui, Jalalabad, Osh and Batken. The second loan is the World Bank loan, worth US$15m, and covering the oblasts of Yssyk-Kul, Naryn and Talas. Consultants (Fichtner GmbH) have been selected and have started the 8-month inception phase of the World Bank loan (due for completion in February 2001). As part of this design phase, a fully detailed implementation manual will have been prepared by December 2000 and the detailed design of the systems including the community mobilisation and community management details for 15 village water supply systems will have been prepared by end-January 2001. After the successful completion of this phase, and the loan agreement process, the project is anticipated to commence from mid 2001

Reasons for the consultancy

This consultancy is necessary in order to shape the hygiene promotion component of the DFID project. It will do this by providing a deeper understanding of hygiene and sanitation practices within the target communities, and how those practices can best be improved. It was originally envisaged that this formative research would take place within the framework of the DFID project. Because of the overlaps with the World Bank loan, it was agreed that this formative research would also assist design of, and mobilisation for, the Bank loan. Given the pace of the World Bank preparation process, and the possible delays before the DFID project can begin, this formative research needs to be done prior to the DFID project in order that this formative research can feed into the WB (and ADB) loan project(s).

Overall objective

To provide quality information with which to plan the hygiene promotion component within the DFID Kyrygz Rural Hygiene and Sanitation Project. This research will also feed into the WB and ADB water projects.

Scope of the work

Co-ordination at the beginning and end of the trip with Aida Tashirova, DFID representative in Bishkek.

Constant co-ordination with the Kyrgyz Ministry of Health and Fichtner GmbH consulting group.

Identification of the one local consultant and two field workers in the Kyrgyz Republic.

Provide a one week methodology workshop for local team (one local consultant plus two filed workers) for orientation to the methodology described in the "Happy, Healthy and Hygienic" formative research manuals and adapting the use of them to the context of Kyrgyz Republic. This would include the development of checklists for use during observations and interviews.

Identify up to nine villages. Selection should consider the World Bank's choice of pilot villages, levels of water service provision, village access to transport, and project oblasts. This will provide comparative information about hygiene practices and community processes in as broad a variety of villages as is practically possible.

Prepare operational plan for the field research.

Undertake research in the selected villages over a period of two months. This will include a series of structured observations over 3 or more days in a few households. Focus group discussions, key informant interviews and behaviour trials are the other main techniques employed. Information will be collected on the frequency of risk practices that will provide a baseline with which to measure behaviour change.

Organise and carry out a specialists learning workshop in order that (1) the local consultant and fieldworkers can share their findings with key stakeholders in the hygiene, sanitation and water sector, and (2) the results of the formative research can be commented on and extra lessons learned. Those invited should consist of a broad range of stakeholders, including those involved with: the WB and ADB water projects, health promotion activities, oblast administrations, other community-managed water projects. There should be a maximum 20 participants.

Prepare trip reports and technical reports.

Expected outcomes and deliverables

At the end of the assignment, the consultant will provide DFID with

A technical report answering the following questions:

What are the water, sanitation, and hygiene related symptoms (actual and perceived) of poor health in villages? (e.g. diarrhoea, worms, scabies)

What are the behavioural causes of those symptoms?

What is the cultural context of those behavioural practices?

How can we use a hygiene promotion programme to change those behaviours that need changing? (Is it realistic to expect such behavioural changes?)

How do we make those behavioural changes sustainable? (Are there any groups or institutions that carry more weight within the communities?)

How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign (designed to promote ownership of, and demand for, the water supply projects)?

1. Two concise trip reports at the end of each of the international consultant's visits to the Kyrgyz Republic.

Competency and expertise requirements

One international consultant in hygiene promotion and anthropology to manage the consultancy, preferably with experience in Former Soviet Central Asia,
One local sociology/anthropology consultant with excellent organisational skills and with an appreciation of the importance of rigorous social research to manage the fieldwork,
Two field workers, numerate and literate with excellent observation skills and an appreciation of the importance of consistent reporting of observations and discussions at village level,
Quality assurance and task management by a UK accredited hygiene institution.

Conduct of the work

The international consultant will travel to the Kyrgyz Republic in September in order to:
Identify and appoint the two field workers,
Facilitate a methodology development workshop
Initiate the formative research process in the villages.
The international consultant will travel to the Kyrgyz Republic a second tome in order to facilitate a learning workshop with the local team and with key stakeholders. This is scheduled to take place in November/December.

Reporting requirements

The international consultant will prepare a concise trip report (no more than two pages) within one week of each of the two trips to Kyrgyz Republic.
The consultant will submit the technical report to DFID within one month of the end of the contract. The reports (in both electronic format and hard copy) will be submitted to the DFID Senior Health Advisor (Michael Borowitz), and the Senior Project Officer for Central Asia (Peter Bonner), the DFID Health Sector Field Manager (Ed Harris) and the DFID representative in Bishkek (Aida Tashirova).

Activity	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12
International consultant in Kyrgyz Republic												
Methodology development with local collaborators												
Fieldwork												
Specialists learning workshop												
Quality assurance, and task management												

Annex B: Trip Report #1

T500 - Trip Report #1

Background

Rehabilitation of water supply in rural areas of 3 *oblasts* (Naryn, Yssyk-Kul and Talas) in northern Kyrgyzstan is to be financed through a World Bank IDA credit (the Rural Water Supply and Sanitation Project). Work on the inception phase of this project has begun through the consultants Fichtner GmbH. In order to help ensure that the full range of health benefits from rehabilitation of rural water supply is realised, a DFID grant assisted project is planned to develop the sustainable capacity for hygiene promotion in Kyrgyzstan.

Reason for trip

The WELL consultant visited Kyrgyzstan for the period 24 September to 22 October 2000. This trip represented the initial stage of a programme of formative research that aims to shape DFID's proposed project on Rural Hygiene and Sanitation in the Kyrgyz Republic. Specifically the formative research is intended to answer the following 6 questions.

What are the water, sanitation and hygiene related symptoms of poor health in villages?
What are the behavioural causes of these symptoms?
What is the cultural context of these behaviours?
How can we use a hygiene promotion programme to change those behaviours that need changing?
How can we make those behaviour changes sustainable?
How can the hygiene promotion component contribute to the Rural Water Supply Project mobilisation campaign?

Detailed answers to these questions are not provided in the present report. The questions will be fully addressed in the final report to be prepared at the end of the study.

Scope of the work

Work was carried out in collaboration with a local consultant having extensive experience of social science research in Central Asia and a team of 2 fieldworkers with experience of social science methods. The WELL consultant provided expertise on hygiene and sanitation and on methods for the study of hygiene behaviour.

During the first week of the trip the local consultant and fieldworkers received basic training in the logic and methods of formative research for hygiene promotion. The WELL consultant, the local consultant and the fieldworkers were then able to work together on the design of appropriate tools and schedules for data collection. These were pilot tested in a rural community close to Bishkek and modified as necessary. Over the following 3 weeks field trips were made to one village in each of the 3 oblasts to be covered by the Rural Water Supply and Sanitation Project. These villages (Shoro, Temir and Nyldy from Naryn, Yssyk-Kul and Talas respectively) were

selected after consultation with Fichtner GmbH on the grounds that they were likely to be included in the project.

In each village data were collected using the techniques described below.

Structured observation of hygiene and sanitation related behaviour was carried in households to assess the range and frequency of risk practices for hygiene and sanitation related disease.
A questionnaire survey was administered to investigate access to the media, access to soap and sources of health care information.
Focus group discussions and in depth interviews with teachers, women and men to allow exploration of soap use, hand washing behaviour, latrine use, faeces disposal and perceived health problems and to get information on active organisations within the village.
Group interviews with school children were used to collect views on hand washing, soap use, latrine use and bathing.
Key informant interviews were held with prominent individuals including health workers (Felchers), traditional healers, school directors, village administrators and Islamic religious leaders (mullahs). These interviews centred on health, water and other problems within the village.

The following work has been completed:

Structured observation for 3 hours in each of 40 households.
Questionnaire administered to 176 respondents (80 women, 55 men and 31 children)
Focus group discussion with 7 groups (4 groups of teachers and 3 groups of women).
Group interview with 3 classes of children.
In-depth interview with 9 interviewees (7 women and 2 men).
Key informant interviews with 14 interviewees (4 village administrators, 4 school directors, 4 health workers, 1 traditional healer and 1 mullah)

Main findings

Diarrhoeal disease, worms and scabies were reported as health problems in the populations studied. These symptoms are likely to be related to water, hygiene and sanitation.
A number of risk practices are common and are likely to contribute to infectious diarrhoeal disease in the population. Most important among these are not washing hands with soap at critical times and not disposing of all faeces in a latrine. Specifically, hand washing with soap occurred after only 11% of defecation/urination observed and human faeces was present in the grounds of 47% of homes at which observation was carried out.
Almost all homes have a latrine. Many latrines are in poor condition and may be considered unsafe or unsuitable for use by young children. Disposal of children's faeces in the plot of land surrounding the house is regarded as both socially acceptable and of no health risk.
Laundry is the primary purpose for which soap is used. In many households soap is in short supply as a result of poverty. What soap there is tends to be reserved for laundry.
Teachers and health workers expressed interest in hygiene promotion. However, they lack materials and knowledge of the full range of methods currently available for hygiene promotion.

Next steps

The tools for data collection are being slightly adjusted to provide further insights into hygiene behaviour and motivation for change. In particular the views of older children, of younger mothers and of fathers will be sought.

A second round of data collection will take place in 3 more villages. These villages will again be selected in collaboration with Fichtner GmbH on the basis of their likely inclusion in the Rural Water Supply Project.

Details of the main findings (above) based on the initial round of data collection will be shared with Fichtner GmbH in order to help inform the social mobilisation work in the villages selected for pilot water intervention.

The WELL consultant will return to Kyrgyzstan in December to draw together the findings of the formative research and to organise and contribute to a workshop at which these findings will be shared with other stakeholders. The provisional date for this workshop is December 18 (afternoon).

Annex C: Trip Report #2

Trip Report No.2

Background

The WELL consultant previously visited Kyrgyzstan for the period 24 September to 22 October 2000 in order to begin a programme of formative research to help shape DFID's proposed project on Rural Hygiene and Sanitation in the Kyrgyz Republic. During this period fieldwork was carried out in three villages. Following the departure of the WELL consultant fieldwork was carried out in a further three villages by a team of local collaborators.

Reason for trip

The WELL consultant returned to Kyrgyzstan for the period 14 to 28 December 2000 in order to work with the local team to analyse and summarise the data collected and draft a report outlining the main findings. The trip also provided the opportunity to meet with a number of potential stakeholders and to keep them informed of progress.

Scope of the work

For the majority of the visit the WELL consultant remained in Bishkek working alongside the local consultant and fieldworkers to summarise and interpret the data collected and to draft a report of the findings. A field trip was undertaken to one village. This village had been the site of a *behaviour trial* in which ten volunteers had carried out safe hygiene practices for a period of two weeks. The field trip allowed the opportunity to interview each of the volunteers about their views of the trial and their experiences with the safe practices.

While in Bishkek the WELL consultant and the local consultant visited and interviewed the director of a meat processing plant with an interest in soap manufacturing. Meetings also took place with representatives of KAS, the Ministry of Health, the Rural Water Supply and Sanitation Project and the ADB water supply and sanitation project. The preliminary conclusions of the formative research were shared with these people.

Main findings

The findings of the second round of fieldwork confirmed initial impressions formed during the first round. The main findings can be summarised as follows:

A variety of gastro-intestinal infections and skin complaints were recognised as health problems by health workers and the general population in all communities.

The most likely behavioural causes of gastro-intestinal infections are lack of hand-washing with soap after contact with faeces and disposing of the faeces of children and infants in places other than latrines.

Observation in 65 households revealed the following:

Hand-washing with soap followed 18% of 231 observed instances of urination/defecation.

Hand-washing was never observed following the 17 observations of cleaning a child after defecation.

Soap was seen in 37 households (57%)

Faeces (thought to be human) were seen in the yards or gardens of 28 households (43%).

Of 39 occasions on which children's faeces were disposed of the latrine was used for disposal on 5 (13%).

The most likely behavioural causes of infectious skin complaints are infrequent bathing and crowded sleeping conditions. It was commonly reported that children wash on a 2-week cycle of head one week and body the next. Within households, children generally sleep together in a bed made up on the floor.

A number of constraints discourage safer practices.

Soap is scarce within households. In order to save money soap is used sparingly and priority is given to laundry.

Water is cold and water sources are often inconveniently situated.

Latrines are often dirty, difficult or dangerous for young children to use, cold and far from the house.

Houses tend to be small and cold and most families own only a minimum of bed linen.

There is a lack of bathing facilities, a lack of money for fuel to heat water and a lack of convenient water sources from which to collect sufficient water for bathing.

A number of beliefs also underlie risk practices.

Ideas of germ theory co-exist with other explanations of disease.

Understanding of the links between hygiene and disease is incomplete and there is a tendency to attribute all hygiene-related disease to water quality.

The faeces of small children are generally regarded as mildly unpleasant rather than as a health threat.

The most important time for washing hands is first thing in the morning rather than after latrine use or possible contact with faeces.

However, there seem to be no strong cultural barriers to the adoption of safer practices and the women who volunteered to try out safer practices viewed them positively.

A hygiene promotion programme is most likely to be successful if focussed on a small number of behaviours. The adoption of hand-washing with soap after contact with faeces and disposal of all faeces in latrines are suggested as the two most important behaviour changes which a hygiene promotion programme could seek to achieve. Children and the mothers of young children are the most important target audiences for such a programme.

Next steps

A completed first draft report setting out the main findings is to be sent to DFID by the end of January.

The executive summary of this report is to be translated into Russian and sent to KAS (an English version has been given to the Deputy Minister of Health.

A copy of the finished report is to be sent to the sociology consultants working with Fichtner GmbH on the Rural Water Supply and Sanitation Project, to the ADB Water Supply and Sanitation Project and to the World Bank Health II project.

Annex D: People Met

Bishkek	Sabyrjan Abdikarimov (SES director)
	G.K. Aaliev (Deputy Minister of Health)
	Chinara Bekbasarova (Consultant, World Bank Health II Project)
	Alistair Blunt (consultant,ADB)
	Anara Choitonbaeva (Sociologist, Fichtner GmbH)
	Anara Choitonbaeva (Sociologist, Fichtner GmbH)
	Wolfgang Hellwig (Technical expert, Fichtner GmbH)
	Maria Lisityna (Youth Human Rights Group)
	Dr Yusiu Liem (Economist / Sociologist, Fichtner GmbH)
	Zura Mendikulova (Sociologist, Fichtner GmbH)
	Rod Mathews (Divisional Engineering Adviser, DFID)
	Zura Mendikulova (Sociologist, Fichtner GmbH)
	Dr Andreas Schimmel (Deputy Project Manager, Fichtner GmbH)
	Walter Stottman (World Bank)
	Marat A Sarymsakov (Head of Project Preparation Unit, KAS)
	Aida Tashirova (DFID representative)
	Taaly Builashev (Deputy head of Institute of Paediatrics and Obstetrics)
	Leila Talipova (consultant, ADB)
	Esenamanov Zamirbek Sadybakasovich(Director of meat processing plant)
Naryn city	Damira Abdykadyrova (Paediatrition in Naryn and previous head of service for Naryn oblast)
Nyldy	Asyran (UNDP volunteer)
	Baktygul (young mother)
	Samuddin Davletaliev (progressive thinking man)
	Gulsaira(Healer)
	Uulkan Nurjanova (elder woman)
	Felcher (Anara Orozalieva)
	Erkin Turdalieva (director of school)
Shoro	Ainora Chuitieva (Russian language teacher)
	(Carpet Masters)
	(Director of School)
	(Felcher)
	Gulbaira (Wife of village head)
	(Head of village)
	(Healer)
	Kymbat (student / volunteer)
	(Mullah)
	Gulmira Rasulova & Kyial Tilebalieva (UNDP)
Temir	
	Alubek Asanbaev (Deputy Director of Temir 1 school)

	Dr Tursun Chalbaeva
	(Director of Temir 2 school)
	Roza Kaikova (Deputy head of Social Issues Yssyk-Kul region)
	Bazerbay Mambetov (inspector of social issues in village administration)
	Salamat Suleimanov (head of village administration)

ANNEX E: Guide For Focus Group Or In-Depth Interview

Two important issues - 1) disposal of children's and babies faeces 2)washing hands with soap after contact with faeces.
Why don't people do this - why do people do this - what do they think is good about doing this - not just for health but other things.

Soap

1.What is soap used for - list the three most important uses
2.Why is soap used at these times and not just water?
3.What do you like about using soap - what is good about using soap - list good things.
4.What kind of soap do people use?
5.Why?
6.What kind of soap is best?
7.Why is this soap better than other soap?
8.Which people in the family use soap and which do not?
9.Is there a problem buying soap?

Hand Washing

10.What are the times during the day when people wash their hands?
11.Which are the most important times?
12.Why do people wash their hands at these times?
(Can we get beyond 'health' - what is meant by health - how does hand washing help - what are the other reasons for washing hands)
13.Which of these times is soap used?
14.Why is it important to use soap at these times?
15.Why do people wash their hands before making bread?
16.Why do people wash their hands in the morning?
17.There is a tradition to wash hands before eating meat - why - what is good about this?

Disposal of faeces

(I want to find out if there are any reasons why people might like to put children's faeces in the latrine - apart from health - perhaps they prefer a clean yard - why - smell?, keep children clean? Is it shameful if visitors come? Does anyone mind having children's faeces in the yard - e.g. husband, mother-in-law)

18.When children are too young to use the latrine where do they defecate?
19What is done with their faeces?
20.What about babies faeces?
21.Why is it put in the latrine? / Why is it not put in the latrine?
22.Is it OK to put children's faeces in the rubbish but not adults faeces? - Why?

23.Is it ever a problem if children's faeces is not put in the latrine?
24.Why is it a problem?
25.Does it matter where children's faeces is disposed of?

Latrine use
26.At what age do children learn to use the latrine?
27.Do children always use the latrine to defecate?
28.Where else do children defecate?
29.Is this a problem?
30.Are there any difficulties for children using the latrine?
31.Is there anything that could make it easier for children to use the latrine?
32.Who built the latrines?
33.Why - who for?
34.Who uses the latrines and who does not?
35.Why do people use the latrine - e.g. privacy, shelter from rain/wind, keep the ground clean.
36.Where else do people go to defecate?
37.Not everybody uses the latrine to defecate all the time - What things do people not like about using the latrine? -
38.What problems are there - e.g. difficult to use a night, too cold in the winter, not safe, too smelly, too far from the house?
39.Is there anything that would make latrines better / easier to use?

Traditions
40.What good traditions relate to hygiene and sanitation?
41.What do people like about these traditions?
42.Are they always followed?
43.Which are followed now and which not?
44.What are the problems with trying to follow these traditions?
45.What traditions relating to hygiene and sanitation are not good?

Disease
46.Which diseases do people get in this village?
47.Which do children get?
48.Which diseases happen most in the Summer / Spring / Autumn / Winter?
49.Which 3 diseases are the biggest problem?
50.Which is the biggest problem for children?
51.What causes theses diseases?
52.What do people do to try to prevent these diseases?
53.What do people do to cure these diseases?
54.Who do people go to for help when they are sick?

Organisations
55.Are there ever village meetings?
56.How often?
57.What things are discussed?
58.Who attends these meetings?
59.Are there any other organisations / groups / societies in this village?
60.What do they do?
61.How often do they meet?

62.Who attends these meetings?
63.Which organisations are active / useful and which are not?
64.Which organisations would be good to work with to promote health messages?
65.Who are the most respected people in the village?
66.Which of these might be good to work with to promote health messages.

Water
1.Is there a problem with water in this village?
2.What are the problems?
3.Is water quality a problem?
4.Why?
5.Is there always enough water for people to use at home?
6.When is there not enough water?
7.Why is this a problem?

8.Where do women wash clothes and bedding (sheets / blankets etc.) - at home or at the water source?
9.How often do they have to wash bedding?
10.Is it possible to do this in the Winter - is there a problem getting things dried?

11.Where do people wash themselves?
12.Is there a public Banya (bath-house)?
13.Does it work?
14.Do people use it?
15.Why? - Why not?
16.Where do children wash?
17.How often are children washed?
18.What about in the winter

Annex F: Guide For Children's Group Interview

GUIDE FOR CHILDREN'S GROUP INTERVIEW
At what times do people wash their hands?
Why do they wash their hands at these times?
What makes people want to wash their hands?
Is it always possible for people to wash their hands when they want to?
If not – why not?
When do people like to use soap and when do people think it is not important to use soap?
Why do people use soap?
What do people like about using soap?
Can people always use soap when they want to?
If not – why not?

What do you think about the latrine in the school?
Is it convenient?
How might it be improved?
Is it possible for children to wash their hands after using the latrine at school?
Do children use the latrine to defecate in at home?
Do they always use it?
If not why not? – Where else do they defecate?
What about at night?
What about in the winter?
What about at school?
Which is better – the latrine at school or the latrine at home? – Why?
What about other people in the family?

Where do children bathe?
How often?
Do they enjoy it?
What is good about it and what is bad?
What about in the winter?
What things do you find most disgusting?

Annex G: Record Sheets For Observation

Name of observer _____

Structured Observation.

1. General Information

Date_____ Hours_____to _____Place:

village_____oblast_____

Is there a baby (3 y.o. and less)? Y_____ N_____

1.1. Number of residents in house –Women_____Men_____ School-age children_____

Pre-school children_____

1.2. Number of rooms in house (excluding kitchen)_____

1.3. Is there a banya in the yard_____

1.4. List the relatives living in this house_____

1.5. Ethnic group_____ 1.6. Age of mother _____

2. Toilet

Time	Sex M/F	Adult / School-age / Pre-school, <3 Baby	Where go?	Wash hands Y/N	Use soap Y/N	Where is faeces disposed of (if latrine is not used)	Comments

Type of latrine_____

_____

Conditions_____location_____

_____

Approximate distance from house (metres)_____

Approximate depth of pit _____

Do they have water or paper inside_____,

What is done with used paper_____,

Do all members of the family use the latrine._____

Comments.

Other observations

_____

_____

3. Cleaning child after defecation

Time	Who cleans	How is faeces disposed of	How is water disposed of	Wash hands Y/N	Use soap Y/N	Comments

4. Cleaning Pot/ Beshik

4.1. Did you see a pot _____ Do they use pot 1. Y_____2. N_____3. Not sure

4.2. Do they use beshik (cradle)? Yes_____ No

Time	Who cleans	How is faeces disposed of	How is water disposed of	Wash hands Y/N	Use soap Y/N	Comments

Comments_____

_____

5. Washing soiled clothes (with faeces)

Time	Who cleans	How is faeces disposed of	How is water disposed of	Wash hands Y/N	Use soap Y/N	Comments

6. Food preparation

Time	Who prepares	Who	Wash	Use	Wash	Use	Comments

	food?	helps	hands before Y/N	soap? Y/N	hands after Y/N	soap Y/N	

Other comments_____

7. Eating

Time	Who serves food	Who eats	Wash hands before Y/N	Use soap? Y/N	Wash hands after Y/N	Use soap Y/N	Comments

8. Water collection

Time	Who brings water	Source	How much	Comments

How far is the water source_____?

9. Water storage
9.1. Where is water stored?
9.2. Is it kept covered?
9.3. Do children play with it?
9.4. Can animals reach it?
Comments

10. Water use
10.1. How is water taken from the storage container?
10.2.What happens to waste water?

11. Washstand
11.1. Do they have a wash stand? 1.Y_____2. N_____
11.2. What kind of washstand? 1. Traditional_____2. Hand-made 3. Not sure
11.3. Do they use it? 1.Y_____2. N_____3. Not sure
Comments_____

12. Soap

12.1. Is soap available in the house for washing hands? 1. Yes 2. No 3. Not sure

12.2. Do they have a towel? 1. Yes 2. No 3. Not sure

12.3. When do they use it and what condition is it in?_____

13. Other work e.g. fields, vegetable plot, animals, garbage

Time	Who?	What work?	Wash hands Y/N?	Use soap Y/N?	Comments

Are there any other times when hands are washed?

_____

Comments_____

14. Communication

14.1. Who visits? _____

14.2. What sort of things do they talk about?

_____

14.3. What television is watched and by who?

_____

14.4. What radio is listened to and by whom?

_____

14.5. What newspapers are read and by who?

_____

14.6. Who is at home looking after children?

_____

15. Other observations

_____

16. What is the condition of the yard outside the house

_____

Is there garbage lying_____

What kind of garbage_____

Faeces of animals_____Faeces of human_____ Waste water_____

Who cleans yard?_____

17. Do they have domestic animals_____ What animals_____

What is done with the guts of animals after slaughtering_____

18. Who cleans the house?_____ Who helps

_____

Who is in charge of cleaning in the house? _____

19. What jobs do girls do at home?

_____
_____
_____
_____
_____

_____

20. What jobs do boys do at home?

_____
_____
_____
_____

_____

21. What is the difference between the domestic duties of boys and girls?

_____
_____
_____

_____

22. Breast Feeding Was the baby: breast fed_____ bottle fed_____ both neither?

Comments_____

_____

23. What were the difficulties for observation?

Was it possible to record everything._____ If not, what was the impediment?_____

24. Any other comments_____
_____
_____
_____
_____
_____
_____
_____
_____

_____

25. What surprised you_____

26. What did you see that you could not understand?_____

_____

27. What was new for you in this observation?_____

_____

Questions to the hostess:

28. What traditions (or innovations) relating to hygiene or sanitation did you like?

_____

Annex H: Instructions For Behaviour Trial

The behaviour trial was carried out by the field team in the absence of the WELL consultant but following discussions about the reasons for the trial and the process to be used. The instructions given to the field team are given below.

Instructions for behaviour trial:

Recruitment of volunteers.
Recruit mothers with babies and young children as volunteers. This could be done at the end of the focus group, or after observation, or through the felcher. Get as many mothers as we can involved – ten if possible.

Explanation of trial
Explain a bit about why we are doing the study. We need people to help us with the study because we think it is important for health all over Kyrgyzstan. (Tell volunteers that we think that washing hands with soap and putting all faeces in the latrine are very important for health, but we know from our study around Kyrgyzstan that it is not always easy for people to do this and that many people are not able to do this all the time. We need to find out more details about how to make it easy for people to do this all the time.)
We will ask volunteers to try out some simple practices at home for 2 weeks.
During this time a researcher will visit them several times to find out how they are getting on. All volunteers will be given a packet of tea at the start of the study to compensate them for their time.

Day 1 – Visit home of volunteer.
1) Ask where people wash their hands – is it a wash stand or a kettle in the yard etc.
2) Ask if there is soap in the house for people to use to wash their hands.
3) If there is no soap arrange to go with the woman to buy soap, (we provide the money to buy the soap but she will choose what soap to buy), explain that the soap is to be used for washing hands for 2 weeks.
4) Arrange for a piece of soap to be kept at the place where hands are washed.
5) Ask the woman and her family to use the soap to wash their hands after defecation, after cleaning faeces from a child and after cleaning faeces from a pot, basin or beshik.
6) Ask if she thinks there will be any problems in doing this. What are the problems and what could we do about them. Record her answers and try to help her find ways around the problems.
7) Ask the woman to explain exactly what the steps are when she cleans her child after defecation. Find out where the faeces are disposed of. Find out if she washes her hands with soap.
8) Explain that we want the faeces to be put in the latrine every time. Find out how she will do this. Does she need a special pot or basin for the faeces? Does she have one? If not, go with her to get one.
9) Explain that we want her to wash her hands with soap after cleaning a child.
10) Ask if she thinks there will be any problems in doing this. What are the problems and what could we do about them. Record her answers and try to help her find ways around the problems.

11) Ask where in the garden the young children go to defecate.
12) Explain that we want their faeces to be collected and put in the latrine.
13) Ask the woman how she could do this. Does she need a special pot or basin for the faeces?
14) Ask if she thinks there will be any problems in doing this. What are the problems and what could we do about them. Record her answers and try to help her find ways around the problems.
15) Ask the woman and her family to wash their hands with soap after cleaning up faeces.

16) Return the following day.
17) Ask which of the behaviours she has managed to do and which she has not managed.
18) Find out what the difficulties were.
19) Ask how she might address those difficulties.
20) Ask what she liked about the new practices.
21) Ask what she doesn't like about the new practices.
Record her answers and try to help her find ways around the problems.

22) Return every day for 5 days asking the same questions.
23) Then return every 2 days for the following week asking the same questions.

The methods used by the field team for the behaviour trial are given below.

Methods for behaviour trial.
Ten women were recruited. They were aged between 21 and 35. Six were recruited from among those who took part in a focus group discussion and four from the households that had been observed on the first day.

The purpose of the trial was explained to all of the women. Each woman received a packet of tea at the start of the trial. It was explained that this was simply for taking part in the trial and that they were not being paid to change their behaviour.

The women were visited in their homes. They were asked to adopt the following behaviours:
Wash hands with soap after defecation
Wash hands with soap after cleaning faeces from a child
Wash hands with soap after cleaning faeces from a pot, basin, or *beshik*
Ensure that children wash hands with soap after defecation or contact with faeces.
Ask husband to wash hands with soap after defecation or contact with faeces.
Ensure that all children's faeces are disposed of in the latrine.

The women were asked to show the interviewer the place where hands were washed, the place where children defecate, the place where children's faeces were disposed of and how faeces was cleaned from a child. Most of the families had no washstand and washed their hands outside by pouring water from a kettle. Children who were too young to use the latrine had a place to defecate outside. Usually this was near to the house. Women explained that children did not use the latrines because they could be dangerous and were difficult to use at night and because the children were liable to get dirty and to bring faeces into the house creating more work for women. Children's faeces from outside were removed by women and put in the domestic rubbish, the

garden or the street. Sometimes faeces were left at the site of defecation and sometimes faeces were eaten by animals.

The women were asked what things they might need to allow them to carry out the new practices. All women asked for soap and expressed a preference for Russian laundry soap of 72-75% fat content. They said this soap was suitable for washing hands and that other soap caused allergies. Each family was given a 200g block of soap. This proved sufficient to last all families throughout the trial period A place near the hand-washing site was chosen to store the soap and it was agreed that the soap was to be used for washing hands during the trial and not to be used for laundry. Each woman was provided with a basin to be used as a pot for small children to defecate in. They agreed to empty this basin into the latrine. The women preferred to be given a basin rather than a pot because they would be able to use it for other purposes when the child grew older. The faeces of children who defecated outside were to be removed to the latrine using a small trowel or spade or shovel which all women had access to.

The women were visited every day for a week and every second day for a further week. During these visits they were asked whether they were managing to use the new behaviours, what difficulties they were facing and what they liked about the new behaviours.

Annex I: Questionnaire

Oblast	Village	Code of interviewer	# of questionnaire

QUESTIONS FOR SHORT SURVEY QUESTIONNAIRE

1. Which sources do you usually get information from? (unrestricted choice)

TV
newspapers
radio
relatives/ friends/ neighbours /
religious leaders
other _____

2. What sources did you hear about the Osh 3000 celebration from? (unrestricted choice)

TV
newspapers
radio
relatives/ friends/ neighbours /
religious leaders
other _____

3. Do you have a working TV? (choose one option)

Yes
No

What do you usually like to watch on TV? (unrestricted choice)

Movie
News
Cartoons
Never watch
Other
Do not know _____

Which TV channels do you usually watch? (unrestricted choice)

ORT
KTR
RTR
Other
99. Do not watch

Do you have a working radio? (choose one option)
Yes
No

When do you usually listen to the radio? _____

To which radio channels do you usually listen? (unrestricted choice)
Kyrgyzstan obondoru
Azattyk
KGR
Piramida
Europe plus
Other
99. Do not listen

9.How often do you read newspapers? (choose one option)
Once a week
Once a month
Once every 3 months
Do not read
Other _____

10. What newspapers you read usually? (unrestricted choice)
Asaba
Erkin-Too
Evening Bishkek
Delo #
Other _____

11. Who usually gives you or your family advice on treatment of you or someone in your family have /has a health problem? (maximum of 3 choices)
Doctor
Felcher/nurse
Relatives
Friends, neighbours
Healer/shaman
Religious
Other _____
Nobody

12. Have you or a member of your family visited in the last week?

	Yes	No
1. Doctor	1	2
2. Felcher/nurse	1	2
3. Relatives	1	2
4. Friends, neighbours	1	2
5. Healer/shaman	1	2
6. Religious	1	2

7. Other _____		
99. Nobody	1	2

13. Have you or a member of your family visited in last month?

	Yes	No
1. Doctor	1	2
2. Felcher/nurse	1	2
3. Relatives	1	2
4. Friends, neighbours	1	2
5. Healer/shaman	1	2
6. Religious	1	2
7. Other _____		
99. Nobody	1	2

14. Do you have a soap at home? (choose one option)
Yes
No
Do not know

15. What kind of soap do you (or family) usually buy? (unrestricted choice)
Russian, Turkish, Chines, local
Laundry soap
I do not use soap
I use ash
Other _____

16. Where do you or your family collect water? (unrestricted choice)

Well,
Aryk
River
Tap
Standpipe
Spring
Other _____

17. Do you have own bathhouse? (choose one option)
Yes
No

18. How often do you take a bath? (chose one option)
Every day,
Every week,
Every month,
Once every 3 months,
Other _____

19. What age do children start to use the pot? _____

20. Where do children defecate before they start to use the latrine?

_____

21. How are children's faeces disposed of before they start to use the latrine?

_____

22. What do you/your family use for fertilizer on the vegetable plot (ogorod), fields and garden? (maximum of three choices)

1. Commercial chemicals
2. Animal dung
3. Ash
4. Compost
5. Human waste
6. Other _____
7. Nothing

23. In the last week have you been to?

	Yes	No
Market	1	2
Bishkek	1	2
Weddings	1	2
Funeral	1	2
Funeral repast	1	2
Social meeting	1	2
Meeting at school	1	2
Other _____		
Did not go anywhere		2

24. In the last month have you been to?

	Yes	No
Market	1	2
Bishkek	1	2
Weddings	1	2
Funeral	1	2
Funeral repast	1	2
Social meeting	1	2
Meeting at school	1	2
Other _____		
Did not go anywhere		2

25. How do you usually hear about local events?

_____

_____

26. Are you a member any organizations? (unrestricted choice)

Women's group
Parents committee
Co-operative
Other _____
I'm not a member of any

27. What you can do to avoid diarrhoea, scabies, and lice?

_____

_____

==========

Ethnicity
Age
Gender (fill by interviewer)
Place
Name of interviewer
Date

Annex J: Results of Questionnaire Survey

Results of questionnaire survey

Which sources do you usually get information from? (unrestricted choice)

	number	%
TV	194	76.1
Relatives, neighbours, friends	84	32.9
Radio	51	20.0
Newspapers	46	18.0
Other	14	5.5

	Children(70)	Children %	Men (73)	Men %	Women (112)	Women %
TV	55	78.5	53	72.6	86	76.1
Newspapers	12	17.1	14	19.2	20	17.7
Radio	24	34.3	14	19.2	13	11.5
Relatives, neighbours, friends	17	24.3	25	34.2	42	37.2
Other	8	11.4	2	2.7	4	3.5

What sources did you hear about the Osh 3000 celebration from? (unrestricted choice)

	number	%
TV	192	75.3
Relatives	37	14.5
Newspapers	17	6.7
Radio	16	6.3
School	1	0.4
I did not hear	15	5.9

	Children(70)	Children %	Men (73)	Men %	Women (112)	Women %
TV	51	72.9	58	79.5	83	74.1
Relatives	10	14.3	11	15.1	16	14.3
Newspapers	3	4.3	6	8.2	8	7.1
Radio	3	4.3	5	6.8	8	7.1
School	1	1.4				
I did not hear	6	8.6	2	2.7	7	6.3

Do you have a working TV at home?

	number	%
yes	186	72.9
no	69	27.1

Do you have a working radio at home?

	number	%
yes	64	25.1
no	191	74.9

What do you usually like to watch on TV? (unrestricted choice)

	number	%
Movies	172	67.5
News	175	68.6
cartoons	48	18.8
I do not watch	6	2.4
Kyrgyz programs	6	2.4
Other	39	15.3

	Children(70)	Children %	Men (73)	Men %	Women (112)	Women %
Movies	38	54,3	32	43,8	51	45,5
News	20	28,6	39	53,4	58	51,8
cartoons	29	41,4	1	1,4	9	8,0
I do not watch	0	0,0	2	2,7	2	1,8
Kyrgyz programs	2	2,9	2	2,7	1	0,9
Other	38	54,3	1	1,4		0

Which TV channels do you usually watch (unrestricted choice)

	Number (119)	%
ORT & RTR (Russian)	82	68.9
KTR (Kyrgyz)	71	59.7
Other	5	4.2

	Children (38)	Children %	Men (34)	Men %	Women (47)	Women %
ORT (Russian)	13	34.2	18	52.9	18	38.3
KTR (Kyrgyz)	20	52.6	19	55.9	32	68.1
RTR (Russian)	10	26.3	11	32.4	12	25.5

Other			1	2.9	4	8.5

When do you listen to the radio (unrestricted choice)?

	number	%
Morning	9	3.5
Day	21	8.2
Evening	15	5.9
When I have time	20	7.8

	Children (70)	Children %	Men (73)	Men %	Women (112)	Women %
Morning	0	0,0	7	9,6	2	1,8
Day	15	21,4	2	2,7	4	3,6
Evening	6	8,6	6	8,2	3	2,7
When I have time	6	8,6	3	4,1	11	9,8

Which radio channels do you usually listen to? (unrestricted choice)

	Children (38)	Children %	Men (34)	Men %	Women (47)	Women %
Azattyk (Radio Free Europe)	5	13.2	3	8.8	0	0.0
KGR (Kyrgyz)	3	7.9	1	2.9	3	6.4
Europe plus	9	23.7	1	2.9	2	4.3
Kyrgyzstan obondoru			1	2.9	2	4.3
Other	1	2.6	2	5.9	1	2.1

How often do you read newspapers?

	amount	%
Every week	99	38.8
Every month	40	15.7
1 time in three month	9	3.5
Several times a week	2	0.8
When I have money or someone gives newspapers	11	4.3
Other	7	2.7
I do not read	87	34.1

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women %
Every week	35	50	27	37.0	37	33
Every month	9	12,9	13	17.8	18	16.1
1 time in three month	2	2,9	2	2.7	5	4.5
Several times a week	1	1,4	0	0	1	0.9
When I have money or someone gives newspapers	2	2,9	2		7	6.3
Other	4	5,7	3	4.1		
I do not read	17	24,3	26	35.6	44	39.3

What newspapers do you read usually?

	number	%
Obo	56	22.0
Asaba	49	19.2
Delo №	21	8.2
Evening Bishkek	18	7.1
Kyrgyz Karavan	15	5.9
Erkin Too	11	4.3
Kyrgyz Tuusu	6	2.4
Aalam	4	1.6
Kut Bilim	3	1.2
Kylmysh jana Jaza	1	0.4
Ai Danek	2	0.8
Argumenty I Fakty	2	0.8
Other	16	6.3

	Children	Children %	Men	Men %	Women	Women %
Obo	10	14.3	23	31.5	23	20.5
Asaba	7	10	21	28.8	21	18.8
Delo №	7	10	7	9.6	7	6.3
Evening Bishkek	6	8.6	6	8.2	6	5.4
Kyrgyz Karavan	3	4.3	6	8.2	6	5.4
Erkin Too	5	7.1	3	4.1	3	2.7
Kyrgyz Tuusu	2	2.9	2	2.7	2	1.8
Aalam	2	2.9	1	1.4	1	0.9
Kut Bilim	1	1.4	1	1.4	1	0.9
Kylmysh jana Jaza	1	1.4	0	0.0	0	0.0
Ai Danek	0	0.0	1	1.4	1	0.9
Argumenty I Fakty	0	0.0	1	1.4	1	0.9
Other	2	2.9	7	9.6	7	6.3

How do you usually find out about local events? (open ended)

	number	%
Neighbours, relatives, friends	131	51.4
People around	111	43.5
TV	16	6.3
Local administration	8	3.1
Poster	4	1.6
Newspapers	6	2.4
School	9	3.5
Work place	4	1.6
Felcher	3	1.2
Other	5	2.0

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women (%)
Neighbours, relatives, friends	38	54,3	41	56,2	52	46,4
People around	27	38,6	35	47,9	49	43,8
TV	7	10,0	2	2,7	7	6,3
Local administration	1	1,4	2	2,7	5	4,5
Poster	0		0		4	3,6
Newspapers	2	2,9	2	2,7	2	1,8
School	7	10,0	0		2	1,8
Work place	1	1,4	0		3	2,7
Felcher	1	1,4	2	2,7	0	
Other			2	2,7	3	2,7

Who usually gives to you or your family advice on treatment of you or someone in your family have /has a health problem? (choose up to 3)

	number	%
Doctor	147	57.6
Felcher	102	40.0
Healers	33	12.9
Relatives/friends/neighbours	30	11.8
Mullah	2	0.8
Nobody	9	3.5

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women %
Doctor	40	57.1	48	65.8	59	52.7

Felcher	22	31.4	26	35.6	54	48.2
Relatives/friends/neighbours	16	22.9	6	8.2	8	7.1
Healers	6	8.6	10	13.7	17	15.2
Mullah	0	0	0	0	2	1.8
Nobody	3	4.3	2	2.7	4	3.6

In the last week have you or a member of your family been to visit…?

	119	%
1. Doctor	26	21.8
2. Felcher/nurse	11	9.2
3. Relatives	17	14.3
4. Friends, neighbours	16	13.4
5. Healer/shaman	2	1.7
6. Religious leader	1	0.8
6. Nobody	68	57.1

In the last month have you or a member of your family been to visit…?

	119	%
1. Doctor	32	26.9
2. Felcher/nurse	14	11.8
3. Relatives	16	13.4
4. Friends, neighbours	13	10.9
5. Healer/shaman	3	2.5
6. Religious leader	1	0.8
6. Nobody	64	53.8

Do you have soap at home?

	210	%
Yes	185	88.1
No	21	10.0
Not sure	4	1.9

What kind of soap do you (or your family) usually buy? (choose one)

	number	%
Laundry soap	150	58.8
Russian, Turkish, any local soap	130	51.0
Chinese soap	28	11.0
Any cheap soap	4	1.6
Other	3	1.2
I do not use any soap	4	1.6

From where do you or your family collect water?

	number	%
River, stream	136	53.3
Pump	77	30.2
Source, spring	27	10.6
Water pipe	14	5.5
Well	2	0.8
Other	7	2.7

Do your family own a bathhouse?

	amount	%
Yes	46	18.0
No	209	82.0

How often are you able to bathe? (choose one option)

	number	%
Every week	157	61.6
1-2 times a month	51	20.0
Every month	22	8.6
2 times a week	6	2.4
1 time in two-three months	5	2.0
Every day	3	1.2
1 time a year	1	0.4
Other	11	4.3

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women %
Every week	51	72.9	39	53.4	67	59.8
1-2 times a month	10	14.3	12	16.4	29	25.9
2 times a week	2	2.9	3	4.1	1	0.9
Every month	2	2.9	14	19.2	6	5.4
Every day	1	1.4	1	1.4	1	0.9
1 time in two-three months	1	1.4	2	2.7	2	1.8
1 time a year	0	0	1	1.4	0	0
Other	3	4.3	1	1.4	7	6.3

What age do children start to use the pot?

	amount	%

Under 6 months	17	6.7
From 6 months to 1.5 years old	173	67.8
From 1.5 years old and older	51	20.0
Other	4	1.6
Not sure	10	3.9

Where do children defecate before they start to use the latrine? (open ended)

	number	%
Around house, street, nearby latrine	150	58.8
Garden	52	20.4
Pot	20	7.8
Other	27	10.6
Not sure	6	2.4

How are children's faeces disposed before they start to use the latrine? (open ended)

	number	%
Latrine	166	65.1
Hollow for rubbish, place for rubbish	46	18.0
Street, court, behind house	27	10.6
Garden	21	8.2
Ash	4	1.6
Dogs eat	2	0.8
River, stream	5	2.0
Field	1	0.4
Other	5	2.0

What do you/your family use for fertilizer on the vegetable plot (ogorod), fields and garden?

	number	%
Animal dung	203	79.6
Ash	49	19.2
Commercial chemicals	9	3.5
Compost	1	0.4
Human waste	1	0.4
Other	13	5.1
Nothing	19	7.5

Where you have been in the last week?

	amount	%
City or village	42	16.5
Wedding	39	15.3

Funeral, commemoration	26	10.2
School meeting	26	10.2
Market	24	9.4
Village meeting	7	2.7
Other	14	5.5
No where	145	56.9

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women %
City or village	10	14,3	17	23,3	15	13,4
Wedding	8	11,4	12	16,4	19	17,0
Funeral, commemoration	2	2,9	9	12,3	15	13,4
School meeting	11	15,7	8	11,0	7	6,3
Market	9	12,9	7	9,6	8	7,1
Village meeting	2	2,9	3	4,1	2	1,8
Other	3	4,3	5	6,8	6	5,4
No where	45	64,3	32	43,8	68	60,7

Where you have been in the last month?

	number	%
City or village	81	31.8
Funeral, commemoration	39	15.3
Wedding	38	14.9
School meetings	20	7.8
Village meeting	8	3.1
Other	17	6.7
No where	123	48.2
Market	44	17.3

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women %
City or village	22	31,4	28	38,4	31	27,7
Market	12	17,1	10	13,7	22	19,6
Wedding	7	10,0	8	11,0	23	20,5
School meetings	7	10,0	4	5,5	9	8,0
Funeral, commemoration	1	1,4	14	19,2	24	21,4
Relatives	0	0,0	0	0,0	1	0,9
Village meeting	2	2,9	4	5,5	2	1,8
Other	2	2,9	8	11,0	6	5,4
No where	41	58,6	30	41,1	52	46,4

Are you a member of any organisations?

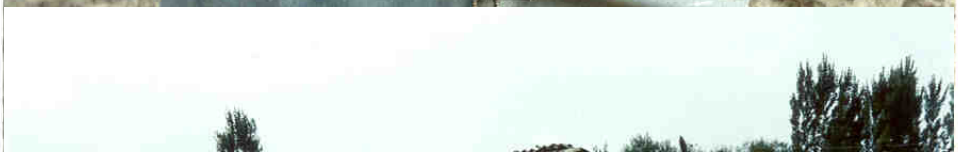
	number	%
Parents committee	11	4.3
NGO (including youth organisation)	10	3.9
Women's group	6	2.4
Co-operative	4	1.6
Other	9	3.5
I'm not a member of any organisation	215	84.3

	Children (70)	Children (%)	Men (73)	Men (%)	Women (112)	Women (%)
Women's group	0	0	0	0	6	5,4
Parents committee	1	1,4	2	2,7	8	7,1
NGO (including youth organisation)	0	0,0	7	9,6	3	2,7
Co-operative	0	0,0	3	4,1	1	0,9
Other	1	1,4	6	8,2	2	1,8
I'm not a member of any organisation	68	97,1	55	75,3	92	82,1

What should you do in your family not to have a diarrhoea, scabies, lice?

	amount	%
To keep cleanness	190	74.5
To take a medicine	60	23.5
To wear warm clothes	13	5.1
To have a good nutrition, vitamins	10	3.9
To use boiled water	8	3.1
To wash fruits and vegetables	6	2.4
To disinfect (to use a chlorine, etc)	5	2.0
To use clean water	4	1.6

To use archa (fur tree)	1	0.4
To apply to fortune-teller	1	0.4
Other	16	6.3
Not sure	17	6.7
Nothing	2	0.8



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Photograph 12: Carpet makers in Talas.