1.0 Introduction

A study, funded under the UNICEF/Government of Swaziland (GoS) Water Supply, Sanitation and Environment Programme, was undertaken between 1999 and 2000. The broad collaboration between UNICEF and the Government was to promote a clean environment, safe water supply and good hygiene practices. Specifically, however, the purpose of the study was to collect, analyse and assess data on water supply, sanitation and hygiene education in primary schools in the drought and poverty stricken rural regions of the country, with the view to providing baseline data on the schools situation and drawing lessons from programme implementation.

At the time the Ministry of Health and Social Welfare Management Information System (MIS) revealed that 52% of schools had access to safe water supply; and 80% had some form of sanitation countrywide. Information on the condition of water and sanitation facility such as state of working order, quantity and quality of water available, proper use of sanitation facilities, etc., was not available.

This paper presents the findings of the Baseline Study on Water Supply, Sanitation and Hygiene Education in all Primary Schools of the Lubombo and Shiselweni Regions of Swaziland, with the aim of drawing lessons from the UNICEF and GoS funded project.

1.1 Statement of the problem

The Water, Environment and Sanitation Programme under the auspices of UNICEF and GoS through the project Secretariat and its specific sub-committees, carried out an exercise aimed towards the provision of safe water, latrine construction and hygiene education in schools, in drought stricken areas. In both Lubombo and Shiselweni regions, it was reported that these activities were being carried out pretty well especially with respect to latrine construction and hygiene education.

However, optimum project success and its replication and implementation in other parts of the country were hampered by certain factors which made it difficult to pursue the proper planning of activities.
Some of such factors in the case of the schools in the Lubombo and Shiselweni regions are as follows:

- Lack of baseline information on existing sanitary facilities in schools;
- Lack of baseline data on existing water facilities;
- Lack of baseline information on hygiene education provision;
- Lack of standards in place for sanitation facilities; and
- Lack of co-ordination among the stakeholders involved in water supply, sanitation and hygiene provision.

It was against this background that a study was proposed to collect, analyze and assess baseline data on water, sanitation and hygiene education in all primary schools in the Lubombo and Shiselweni regions.

2.0 Background

The kingdom of Swaziland covers land area of 17,364 km², lies between 600 and 4,800 m above sea level, and is situated about 30º south of the Equator. It is a landlocked country in south-eastern Africa, surrounded to the north, west and south by the Republic of South Africa to the east by the Republic of Mozambique. The country can be divided into five physiographic regions, which take account of geology, climate, landforms and vegetation. These are the Highveld; the Upper Middleveld; the Lower Middleveld: the Lowveld and the Lubombo Range. There are two modes of land ownership: 44 percent of the total land area is classified as Title Deed Land (TDL) and is transferable, whilst the remaining 56 percent is Swazi Nation Land (SNL), communal land held in trust for the nation by the King and administered by chiefs.

The majority of Swazi population lives on subsistence agriculture. The most commonly grown crop is maize, which is also the stable food for the Swazis. The Lubombo region is under large-scale sugar cane plantations. Sugar is a major earner of foreign currency because it is mainly for export. Cotton is also grown as a cash crop. Timber plantations largely cover the highveld. The country has a good road infrastructure. Most of the roads joining major towns are tarred.

2.1. Health services

As a vehicle for implementing its primary health care strategy, the Ministry of Health and Social Welfare (MOHSW) initiated mechanisms for service decentralization since 1986. The building of a network of clinics and public health units was consequently accelerated, side-by-side with promotion of the work of community-based Rural Health Motivators (RHMs). In each region there is a Regional Health Management Team (RHMT). The role of the RHMT is that of co-ordinating all health activities in the regions. The country is reported (UNFPA, 1997) to comprise 172 outreach posts and sites, and 166 health care facilities, made up of seven hospitals, eight public health units, 10 health centres and 141 clinic. Spring (1995) estimates that 81% of the population live within one hour’s travel time from a health facility.

2.1.1 Burden of disease

The national health profile (WHO, 1996) identified communicable diseases related to the environment as the main cause of illness and death in the country. Such diseases were found to account for over half of all outpatient visits and more than 20% of all admissions to inpatient health care facilities. In terms of overall mortality, accidents and injuries are the leading cause of deaths. Next in ranking, as killer diseases, were those due to drinking water
of poor quality and/or inadequate environmental sanitation in households and around human settlements.

Between 1984 and 1994, country totals for outpatient visits show leading causes of visits in each year as including acute respiratory infection (ARI), diarrhoeal disease and skin disorders; in the 1996 their combination caused 50% of all outpatient visits, (National Health Statistics Report 1996). In particular, the frequency of diarrhoeal diseases increased from an average of 10% of all outpatient visits between 1984 and 1991, to a mean of 15% for the period 1992-94. It is worth noting that high proportions of these diseases were reported in the age group less than 15 years.

Two other water-related diseases, malaria and bilharzia, had been of concern in recent years, with over 25% of children estimated in 1994 to be suffering from the latter (UNICEF/GOS, 1998). The prevalence of many of the foregoing diseases is related to poor hygiene practices and the low water supply and sanitation coverage noted below. To a significant extent, therefore, the nation’s morbidity-mortality burden could be reduced by concerted efforts targeting improvements in water supply, sanitation and personal hygiene. In a participatory poverty assessment (GOS,1997), the poor themselves considered easy access to potable water as the first step in alleviation of poverty.

### 2.2 Major indicators

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Mortality Rate</td>
<td>72/1000 live births</td>
<td>106/1000</td>
</tr>
<tr>
<td>Maternal Mortality Rate</td>
<td>229/100,000</td>
<td>230/10000</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>61 years</td>
<td>36 years*</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>2.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Per Capita Expenditure on health</td>
<td>US$ 70.00</td>
<td>US$56</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Access to potable water supply:</td>
<td>Rural 50%</td>
<td>Rural 52.5%</td>
</tr>
<tr>
<td></td>
<td>Urban 80%</td>
<td></td>
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<tr>
<td></td>
<td>Peri-Urban 58%</td>
<td></td>
</tr>
<tr>
<td>Access to sanitation</td>
<td>Rural 59%</td>
<td>Rural 39.6%</td>
</tr>
<tr>
<td></td>
<td>Urban 80%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peri-Urban 43%</td>
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</tbody>
</table>

* Note reduced life expectancy due to HIV/AIDS epidemic

Water and sanitation coverage figures, especially in the rural areas of Swaziland are not reliable nor are they regularly and systematically collected/updated and analysed for strategic decision making and planning. Although the sanitation figures appear to be high the standard of the facilities is questionable.

### Education indicators

<table>
<thead>
<tr>
<th>Primary Enrolment Ratio (%)</th>
<th>Total</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>77</td>
<td>80</td>
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</tbody>
</table>

*
<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Enrolment Ratio (%)</td>
<td>94</td>
<td>43</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Primary Drop-out Rate (%)</td>
<td></td>
<td></td>
<td>17.6</td>
<td>12.7</td>
</tr>
<tr>
<td>Secondary Repetition Rates (%)</td>
<td></td>
<td></td>
<td>10.0</td>
<td>10.6</td>
</tr>
</tbody>
</table>

(Source, Education Statistics, CSO, 1997)

### 2.3 Water supply and sanitation intervention at schools

In 1995 the UNICEF programme of co-operation with the Government of Swaziland funded some activities in the water and sanitation sector. Then in 1996 the UNICEF and Government of Swaziland funded the Water, Environment and Sanitation project as part of the five year Program of Co-operation (1996 – 2000). The project was an integrated package of hygiene and environmental education, sanitation and water supply for schools in the rural areas (mainly in the Shiselweni and Lubombo regions) of Swaziland.

The Ministry of Education (MOE) was also funding water supplies and sanitation projects for schools. A number of Non-Governmental Organisations were involved in the schools water supplies and sanitation project, e.g., World Vision, Lutheran Development Service etc.

### 3.0 Study findings

The study identified a set of critical concerns such as:
- Absence of water points and latrines in schools,
- Lack of personnel qualified in hygiene education,
- Lack of national policies on health education and
- Inadequate resources at schools e.g. training equipment.

Among the reasons identified for this state of affairs is the lack of importance placed on school sanitation facilities by national institutions and lack of harmony between what is taught at school and the realities of life in the home and community. When sanitation structures are available at schools, they are often far removed from anything families can afford to build. It was noted that increasingly, communities are taking responsibility for improvement and maintenance of the school environment. This could be attributed to the fact that communities are becoming aware of the importance of education and of a healthy learning environment.

One of the major constraints that emerges as severely affecting the quality of hygiene education is the fact that teachers almost never receive adequate training in hygiene education. Secondly, hygiene education has no specific slot in the curriculum and is not adequately addressed through other subjects. The third problem which hampers effective hygiene education is lack of appropriate teaching methodologies and materials at teachers’ disposal. Lastly, teachers encounter difficulties teaching hygiene behaviours which cannot be applied within the school, because of a lack of sanitary facilities. A hand-washing lesson has little impact when no hand washing facilities are available.

### 3.1 Recommendations

The first step towards improving the situation would be the adoption of a coherent national policy on school environmental sanitation and hygiene education. Such policy should clearly
demand that all new schools constructed should provide adequate numbers of safe water points, latrines and hand washing installations. It should also make a commitment to the improvement of water supply and environmental sanitation in existing schools and map out how these improvements are to take place. The policy would include an acceptance of the need to define minimum acceptable standards. Flexible guidelines should be prepared and distributed, providing simple guidance on the following:

(i) Approximately how many latrines, water points and hand washing installations should be available for any given number of boys or girls;
(ii) The standard design for an acceptable latrine or flush toilet for pupils.

Several possibilities for action that would improve sanitation and hygiene education in schools were identified as follows:

• It is apparent that there is a great need for the hygiene education programme, and it should therefore be strengthened and extended to all schools in the country.
• Hygiene education should not be treated as an extra curricular activity but should be included in the schools curriculum as a subject. It should be given a period per week on the school timetable;
• Schools Inspectors, school health nurses and environmental health officers should play a more visible role in evaluating the achievements of teachers and in monitoring cleanliness. They can also foster effective collaboration between Government and communities disseminating information and supporting community action; and
• The most effective role of Government and concerned Non-Governmental Organisations and inter-governmental agencies is to support schools and communities in their efforts to improve the school environment and the teaching of hygiene.

While it may be over-simplistic to suggest that a healthier school environment will directly and immediately improve the health of school-aged children, there is hardly any doubt that an improved school environment, combined with health education and efforts to teach the wider community, can have a long term effect on the population. Childhood is the best time to learn hygiene behaviours. But an effective school environment health programme does not simply offer children an opportunity to learn personal behaviours, it can also help children to see themselves as important members of the community. Pupils’ involvement in school health promotion work and their pride in a healthy school environment can lead to lasting behavioural changes and infrastructural improvements.

4.0 Reference


