

Improved access to water, sanitation and hygiene knowledge for poor people in Murewa

Annual report April 2015 to March 2016



Sewer pipeline installed in Magamba residential area

CAFOD
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 **Caritas**
Zimbabwe - Archdiocese of Harare



**Isle of Man
Government**

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List of Acronyms

CAFOD	Catholic Agency for Overseas Development
EHTs	Environmental Health Technicians
EMA	Environmental Management Authority
HHCs	Health and Hygiene Clubs
IEC	Information Education and Communication
IOM	Isle of Man
KABP	Knowledge Attitudes Beliefs and Practices
LSSF	Livelihood, Sanitation Savings Fund
PHHE	Participatory Health and Hygiene Education
ToT	Training of Trainers
RDC	Rural District Council

Charity: Catholic Agency for Overseas Development

Project name: Improved access to water, sanitation and hygiene knowledge for poor people in Murewa

Reference: SG 015.14

1. Aims and Objectives

The project sought to sustainably improve living conditions, health and the environment in Murewa, Zimbabwe, through an integrated approach to water and sanitation. The goal was achieved through the construction of WASH facilities, hygiene promotion and establishment of biogas digesters using waste for energy generation. Specifically, the project was seeking to (i) improve access to safe water supply for individuals at schools and households, (ii) increase access to improved sanitation facilities for individuals at schools and households and (iii) improve hygiene behaviour for individuals.

The following activities were conducted during the implementation period towards achieving the programme objectives:

1. Increase access to improved WASH facilities for Murewa people through constructing 80 toilets in poor households, 30 toilet units in 2 schools, 1 clinic, 3 public toilet blocks and installing water tanks at these places to ensure toilet functionality and hand washing. Biogas digesters will be constructed to process waste into energy.

The project successfully improved access to water and sanitation facilities at key public places and institutions in Murewa. The construction of all planned water and sanitation infrastructure was completed. Project beneficiaries are using completed WASH facilities, including teachers at Hurungwe primary school and vendors and travellers at Murewa bus station. As noted, in the budget re-design, following consultations with the local council, the project was adjusted to pursue a strategy of providing a sewer mainline as pit latrines are un-suited to high density areas. The suburb selected was Magamba – a low income, high density area which had no sewerage provision, posing a significant risk to health of residents and the wider community. The pipeline has been laid with reach to 200 households (1100 people) and individual household connections are now taking place along the newly established sewer pipeline in Magamba. Construction of the biogas digester has been completed. Feeding the biogas with cow dung was undertaken to stimulate gas production.

2. Improve hygiene behaviour through training school and community health clubs and distributing promotional material.

School and Community Health Clubs were formed and trained as trainers on Participatory Health and Hygiene Education (PHHE) in order for them to act as agents of behaviour change within their institutions and communities. Innovative interactive methodologies were also introduced into the curriculum to rejuvenate interest through 'learning while having fun'. The trained "hygiene ambassadors" played a key role in intensive hygiene awareness raising after a Typhoid outbreak took place between December 2015 and February 2016. To stimulate dialogue and learning in the wider community, promotional material was further produced and distributed. To raise the visibility of the project and its funders, including the generous support provided by the Isle of Man, roller banners were furthermore produced. Within CAFOD's broader WASH and livelihood framework and to ensure long-term sustainability, self-financing mechanisms such as internal savings and lendings schemes have been introduced in Community and School Health Clubs to enable financing of sanitation and livelihoods related projects in the future.

2. Project Activities

1. Improved sanitation

- 1.1. *Procuring material for toilets (institutions & public):* During the second quarter of project implementation, materials for public toilet blocks and institutional toilet units were procured to construct sanitation facilities at Murewa bus station, the District Administrator's office, Hurungwe Primary and Secondary School, Murewa Primary School and Murewa Mission and Murewa hospital. Target institutions and communities furthermore provided locally available material, including bricks and sand.¹ A procurement committee comprising programme partner staff and stakeholders was responsible for selection of suppliers. Pre-delivery inspection of some material such as plumbing and roofing materials was done. The government Department of Public Works responsible for construction and maintenance of government building took the lead on development of specifications and quality checks.
- 1.2. *Procuring material for sewer mainline:* Magamba residential area, like most mushrooming slum settlements, did not have a sewer system design. The project facilitated the production of designs and bill of quantities. A transparent and competitive open tender method was used for procurement of the materials. A meticulous verification process was undertaken before contracting suppliers. The process involved verification of registration, tax clearance certificates, references as well as physical checks on company premises. Materials were paid for after delivery and quality approval by stakeholders.
- 1.3. *Constructing sewer main line:* Sewer mainlines covering 140 Magamba high density stands were installed as per procured material bill of quantities. The process involved setting out, pegging, excavation, bedding and pipe laying. Murewa Rural District Council provided supervision of works and the residents provided labour for excavation, trenching, pipe laying and back filling. Murewa Rural District Council paid a small token of appreciation to the residents to motivate them to participate effectively during sewer lines installation. The money paid by the council was used to beef up the Community Health Club's Livelihoods and Sanitation Savings Fund (LSSF), from which members would borrow money to pay for water and sewer connection fees among other uses. Participation of residents was key for this activity because some structures such as houses, toilets and durawalls had to be demolished for the pipeline to be established. Residents were also involved throughout in monitoring of project progress through regular consultation and feedback meetings. Households are mobilising themselves to start connecting to the mainline using the savings schemes introduced by the project.
- 1.4. *Constructing schools and clinics toilets:* The project supported the construction of toilets in schools and clinics. A flush toilet block (4 toilet units) for teachers and a squat toilet block (11 toilet units) for pupils at Hurungwe primary school were constructed. At Murewa hospital, a squat toilet block (5 toilet units) was also installed. The construction of schools and institutional toilets followed the partnership approach embedded in the council strategy documents, taking into account the

¹ Preliminary consultations were carried out with the local Town Council. Project sites were selected according to needs arising in the target communities. Initially it was proposed to construct sanitation facilities at three institutions and three schools/clinics, however, informed by the findings it was decided to focus on two public places namely Murewa bus station, the District Administrator's office and five schools/clinics namely Hurungwe Primary and Secondary School, Murewa Primary School and Murewa Mission and Murewa hospital.

relative strengths, skills and capacities of the councils and communities. At Hurungwe primary school, parents supported the school with bricks and sand.

1.5. *Constructing public toilets:* A public flush toilet was rehabilitated at Murewa bus station while a new toilet block was constructed at the District Administrator's (DA) office. The public toilet is serving vendors and travellers to ensure access to sanitation facilities and improve hygiene at the market place. The Murewa bus terminus toilet is catering for 1,200 people per day while the DA's office, which also contains many local amenities such as the district court, agricultural extension office etc. (8 flush unit toilet block), caters for more than 500 clients and 20 staff members per day. Murewa council constructed a new toilet near the highway to enable vendors and travellers to access sanitation facilities in response to a project Community Health Club request. Communities and government stakeholders participated in the monitoring of rehabilitation and construction works.

1.6. *Supplying & fixing Water Tanks:* Water shortages and the unavailability of handwashing facilities has resulted in poor handwashing practices in schools and public toilets. One water tank was established at Murewa bus station. The tank provides safe drinking water to vendors and travellers. The other two tanks were installed at the District Administrator's office and at Hurungwe primary school, primarily focusing on the provision of water for handwashing and ablution facilities. Hurungwe Primary school had 1 bush (water) pump and 1 tap which children used for handwashing especially after toilet use. However these water sources were more than 10 metres away from the toilets, discouraging children from washing their hands at one of the 5 critical times for handwashing i.e. after toilet use. The erection of a water tank near the toilet facilities will ensure that children wash their hands after toilet use at all the times. The school is providing soap at handwashing facilities. It is envisaged that if the children get used to this practice at school, they will also cascade this practice at home. The school provided the labour, bricks and the aggregates towards construction of a hand-washing basin.

2. Improved Hygiene behaviour

2.1. *Hygiene behaviour assessment:* The project adopted the Participatory Health and Hygiene Education (PHHE) strategy to facilitate health education and promote good hygiene practices in schools and communities. A KAP survey was conducted, analysing the knowledge, attitude and existing practices regarding WASH in the target communities. Quantitative and qualitative data collection methods were used and Caritas Harare engaged Community Health Club members in the collection and verification of data in order to promote community ownership. The survey helped to identify and highlight the areas and gaps to be focused on when conducting PHHE sessions. The survey highlighted that, in Murehwa, only 9% of respondents have flush systems at their homes, 54% use Blair (improved pit latrines) toilets and 34% pit latrines. Three (3)% still use the 'bush' system close to their homes (e.g. open defecation). Most of the households with children under 5 years do not practice safe disposal of diapers with 83% reporting throwing diapers in an open field or open pits or by the road side. Five (5)% disposed the diapers near the house and only 12% threw them into the Blair toilet. Though many households were aware of the benefits of handwashing with soap at critical times such as after toilet use and before preparing food, only 12% of interviewed respondents indicated that they use soap, 3% use ash and 85% use water only; lastly, while 47.2% had some type of hand washing facilities, 29.3% of the households were not equipped at all for hand washing. The unsafe disposal of diapers and sanitary pads was identified as one of the main causes of sewer line blockages.

The project responded to the needs highlighted by the survey through a comprehensive strategy. nI schools, hygiene ambassadors conducted demonstration lessons during school assemblies on the effects of unsafe disposal of diapers and pads, animators within community health clubs raised awareness on proper disposal of diapers and pads, and Hurungwe primary school in Murehwa

embarked on a school campaign against unsafe disposal of diapers and built a community diaper bin using recycled waste. The bin was placed within the community and is emptied by the council and community practices are reported to be changing.

2.2. PHHE sessions targeting vendors and transport operators have also yielded positive outcomes, for example, vendors at the Murehwa bus terminus have increasingly taken responsibility for keeping the market place litter free and practising good solid waste disposal behaviour. Cleanliness levels in schools have improved, particularly with regards to school toilets. During the final project review, school health coordinators indicated that schools have increased the number of staff that use toilets and these are now cleaned more than once a day. *Developing Hygiene promotion material:* 36 nutrition and hygiene message charts were produced and distributed to all community health clubs and participating schools - namely Hurungwe Primary and Secondary School, Murewa Primary School and Murewa Mission for the Community & School Health Clubs sessions. The charts were promoting dialogue and learning on sanitation and hygiene behaviour including handwashing with soap, Four Star Diet, personal and dental hygiene. In addition, 200 Typhoid awareness raising posters, 4 banners and 6,000 fact sheets were developed and distributed in response to an outbreak experienced in Murewa. The project played a key role in hygiene promotion in partnership with the Ministry of Health, the public and private partners and significantly improved hygiene behaviours and practices through intensive awareness campaigns, road shows, trainings and inspections. A total of about 10 000 people were reached through road shows that made use of theatre, drama, songs and IEC materials to spread hygiene messages. 4,307 (2,750 female & 1,657 male) people were reached through door to door typhoid campaigns spearheaded by trained community health animators and school health ambassadors. The IEC material distribution and Typhoid Awareness Campaigns impacted the district positively as no new cases were recorded at the hospital (from a previous peak of 73 suspected cases) within less than three weeks of the intensive awareness campaigns. Furthermore, the campaigns contributed to reduction in diarrheal cases from a peak of 154 cases in February to 124 cases in March 2016. *Establishing Community & School Health Clubs:* A total of 4 School Health Clubs were set up in the four participating schools - Hurungwe Primary and Secondary School, Murewa Primary School and Murewa Mission with a total membership of 140 students (100 girls, 40 boys). Nine (9) Community Health Clubs were formed during the project period, consisting of 110 members (95 women, 15 men). The Community Health Clubs meet once a week to discuss health and hygiene matters and conduct sessions guided by the PHHE toolkit. From the discussions facilitators identify issues that may not be part of the curriculum but which members feel are of importance within their context. The health club members have since influenced other non-members to participate in their community initiatives, for instance in the monthly market clean up sessions², and the changes have been noticeable with regards to littering especially at public market places. Health club ambassadors led on hygiene promotion in schools and the club sessions were conducted weekly and co-facilitated by health coordinators and students. A number of innovations were introduced by the programme as part of the health clubs curriculum such as hygiene laboratories and the photo and art contests.

2.3. *Training of health clubs on Livelihood and Sanitation Savings Fund:* The Livelihood and Sanitation Savings Fund (LSSF) is a savings club model that enables Community & School Health Clubs to finance sanitation and livelihoods related projects. It furthermore promotes a savings and lending culture and increases economic security and access to financial services. Joining the saving and lending group offers a unique opportunity for target households to invest in and improve water,

² During clean-up sessions, School and Community Health Clubs actively engage key stakeholders including vendors, commuter bus operators and other community members and government and private sector representatives to take responsibility for water and sanitation related matters. Joint activities include picking up litter at market places and the bus station and raising awareness through speeches and poems to promote paying council rates and practicing responsible waste management.

sanitation and hygiene services and the group can further decide to focus on income generating activities to increase their savings. 20 members (16 women, 4 men) in Murewa participated in a training (see 2.5 Training of Community & Health Club trainers) and they became field agents and educated Community & School Health Club members on LSSF. The training was done in partnership with the Ministry of Ministry of Small to Medium Enterprises (SMEs), Ministry of Youth and Ministry of Women Affairs for sustainability. Eight (8) out of 9 clubs adopted the strategy with positive returns.³

Club Name	LSSF Members	Amount per person	Total savings
Kuguta Kushanda	14	\$135	\$1,890
Pioneers	15	\$100.63	\$1,509.45
Caves	4	\$142.01	\$568.04
Tashinga	17	\$85	\$1,445
Budiriro	6	\$204	\$1,016
Kuwirirana	11	\$65	\$715
Kubatana	9	\$35	\$315
Kushinga	18	\$117	\$2,106
Total contributions			\$9,564.49

2.4. *Training of Community & School Health Trainers:* CAFOD and partners developed an interactive health and hygiene guidebook in schools and communities to promote a participatory way of teaching and learning by using music, art, drama and games.⁴ In August 2015, a consultant was engaged to conduct a 5-day Training of Trainers (ToT) on the interactive guidebook. Eight Health Coordinators (4 women, 4 men) and two Headmasters (2 men) from the target schools participated in the training. The Health Coordinators became responsible for training and mentoring School Health Clubs and accompanying them in conducting hygiene promotion. School heads were included in the training for long-term sustainability as they will continuously ensure that health and hygiene issues are identified and addressed in their schools. In addition to the representatives from target schools, one member from the Environmental Management Authority (EMA) participated in the training. EMA is a governmental agency and responsible for the training and mentoring of Community Health Clubs. The objectives of the workshop were to train participants on the guidebook and the different participatory tools, including the ones for monitoring that will be used in communities and schools to measure impact.

3. Biogas Digesters

3.1. *Design & construct school biogas digesters:* A rapid assessment was carried out in Murewa at the 4 targeted schools. The possibility of biogas generation from latrine waste and pigsties was identified as a suitable possibility at Murewa mission and in consultation with the respective authorities it was decided to use Murewa mission as a pilot. This site was selected in order to improve the management of kitchen and pigsty waste as well as curb excessive use of firewood for cooking food for the boarding students due to a lack of alternative energy sources. The institution has been using 400 codes of firewood (worth US\$5,600) and coal (worth US\$2,000) per term (US\$25,800 per year). The chosen approach was cost effective, environmentally friendly and sustainable as waste is re-used and the biogas digester produces renewable energy, hence decreasing deforestation for firewood due to electricity shortages. Construction of a 20m³ bio digester at the school was completed; the Ministry of Mechanization, Council Engineer and the

³ Seven club members have since connected to water lines using funds borrowed from the group savings.

⁴ The guidebook was informed by the Participatory Health and Hygiene Education (PHHE) approach which has been developed and used by the Ministry of Health and Child Welfare.

project staff were monitoring and inspecting the various stages of the construction process, which is an innovation in the district and hence provided an ongoing learning platform. The biogas produced from this digester is used on a 3-plate stove. The performance and impact of the biogas digester will be determined during the next term when schools open in May 2016.

3. Sustainability

During the reporting period, an institutional assessment was conducted to identify capacity building gaps of local authorities to manage the sanitation infrastructure. Informed by the assessment, the project successfully lobbied and facilitated ring-fencing of tariffs related to water and sanitation and plough back to maintenance of the facilities. This was incorporated during the development of 2016 council budget. Private-public partnerships were explored by project partners and communities, in particular during the clean-up sessions, to identify investment opportunities in the solid waste management sector on a social responsibility or commercial basis. For example, private companies such as Schweppes and local business people donated a total of 208 refuse bins and various materials such as brooms and gloves in support of clean-up campaigns. Linkages were established with a company called Paladin particularly interested in waste recycling. The company was offered land for establishing a waste recycling plant after signing agreements with Murewa council. EMA trained CHCs on waste recycling. A number of products such as door mats, candle stands and seats made from old tyres were produced.

To ensure that project outputs and outcomes are sustainable the payment of user fees for public toilets was incorporated in rates paid by vendors. This arrangement was discussed and agreed upon with all stakeholders to ensure that all people including travellers have access to the public facilities. The monitoring of facilities was decentralised within the district and school authorities at various levels and the usage of public toilets has been monitored by both community members and council staff. Health club members at public places are responsible for ensuring that the toilets are properly maintained and used and any issue related to the maintenance is reported to the responsible authorities. The council committed to ensuring that council personnel responsible for the maintenance of the toilets will be effectively carrying out their monitoring duties. Within schools, the hygiene ambassadors took a lead role and raised awareness on the use of toilets, conducting spot checks on a weekly basis and providing a report to the school administration every month on the state of facilities.

4. Timeframe

All activities generally proceeded according to plan except for slight delays experienced on procurement of waste water pipeline materials for Magamba sewer system; this was due to the fact that the existing designs at Murewa Rural district council were not detailed enough to derive a comprehensive bill of quantities; hence further studies had to be carried out first. However, the overall progress of the project was not affected and outputs were delivered according to the original schedule.

5. Replication

The lessons learned and impact stories generated will serve as "pilots" for similar communities countrywide. These will be shared at a national level through presentations during the WASH Cluster meetings and publication in CAFOD newsletters to encourage uptake and shape similar projects elsewhere. CAFOD globally has a web based platform as well as regular community of practice skype meetings for sharing lessons learned. Each CAFOD country office works with a network of partners with how we share lessons learned. Our future programming is based on this

learning. CAFOD has sourced funds for scaling up biogas production in 2 other districts- Nyanga and Hwange.

6. Development education

Information from this project were disseminated to and through the Churches Alive in Man World Development Committee for development education and fundraising purposes. First of all, the Muhrewa project details (objectives, activities, budget, evaluation and benefits, as per the grant application) were reviewed and discussed by members before submission. Secondly, CAFOD Zimbabwe together with project beneficiaries developed a case study (see Annex 2), making the direct link between the generous donation from the International Development Committee and the beneficiaries lives. The case study was again circulated amongst the Churches Alive in Man World Development Committee during a membership meeting and then passed on through church structures on the island more widely

7. Beneficiaries

The project managed to reach the targeted 5,082 direct and about 35,000 indirect beneficiaries through a combination of hardware and software activities. The public water sanitation facilities are catering for people within the whole district and passers-by who visit Murewa centre as marketing hub for the district and town connecting to other places such as Juru, Muwatawa, Macheke, Mutoko, Kotwa and Nyamapanda growth points. The intervention was able to reach both male and females, children and people living with disabilities.

8. Community involvement

Communities were actively involved throughout the project timeline. The following are examples of activities undertaken by communities;

- Formation of school and community hygiene clubs responsible for community education and awareness raising on health and hygiene. These clubs played a very key role in the fight against Typhoid through intensive public and door-to-door campaigns.
- Monitoring functionality and use of WASH facilities, reporting faults to council and following up with council to demand services and ensure appropriate responsiveness.
- Communities also provided locally available materials and labour during construction of facilities such as bricks at schools as well as trenching and backfilling labour on sewer pipelines.
- To ensure sustainable service provision, the community has responded positive on payment of connection fees and tariffs.

9. Liaison with relevant authorities

The project was developed and implemented using a multi-stakeholder approach. Its implementation involved a series of activity based review and feedback meetings involving council government departments and business communities and residents. There was a multi-stakeholder project steering committee responsible for day-to-day activities including contracting, procurement of materials and monitoring. The district administrator for Murewa said, 'we appreciate this project because it has managed to bring together council and residents'. The project created a conducive environment for multi-stakeholder participation in council budget for 2016

5. Financial Report

A full financial report is attached in excel. The project realised a small underspend of £6,798 on IoM funds primarily due to cost-savings on sanitation infrastructure. It is proposed that these funds are used for the furtherance of project objectives as CAFOD is continuing to work with poor households and communities in Murewa on sustainable water and sanitation.

Annex 1 – Project pictures



Part of heaps of firewood at Murewa mission kitchen, evidence of deforestation before installation of biogas digester funded by project.



Picture showing Bio-digester construction in progress



Testing biogas digester plant at Murewa mission



Project feedback and planning meeting with district stakeholders



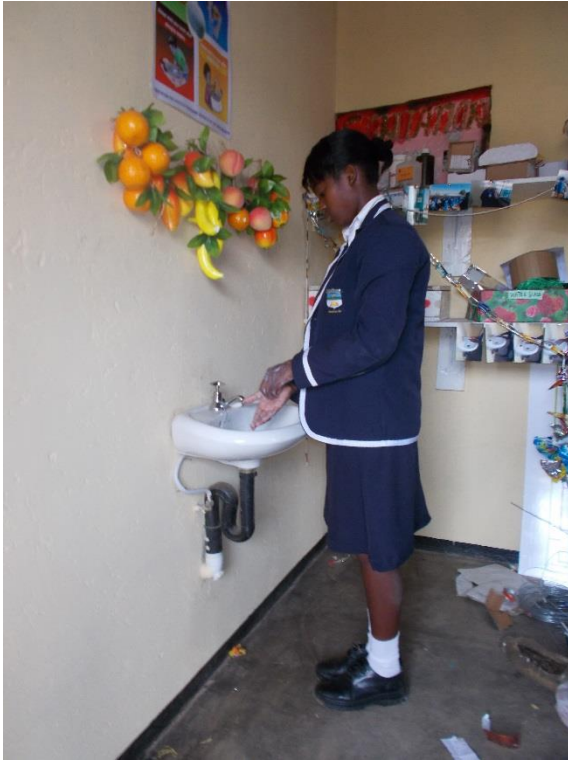
Toilet at District Administrator's offices



Toilet constructed with recycled beer PET bottles at Hurungwe primary school



Water well and pit latrine close together in Magamba residential area before sewer installation



School handwashing demonstration