# Dissemination of the sustainable wastewater technology of constructed wetlands in Tanzania ZEIN2011Z097

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# Stakeholders Analysis and Engagement Plan

ENVICON AGENDA









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Promoter: Thomas More Kempen University College

Local Partner: University of Dar Es Salaam, WSP and CW Research Group





# Stakeholders Analysis and Engagement Plan For

Dissemination of the Sustainable Wastewater Technology of Constructed Wetlands in Tanzania

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Prepared by:





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### 1. Introduction

### 1.1 Who are Stakeholders?

Stakeholders are those who have interest in the project. Project stakeholders are individuals and organizations that are directly or indirectly involved in the project, or whose interests may be affected as a result of project execution or project completion. They may also exert influence over the project's objectives and outcomes. The project management team must identify the stakeholders, determine their requirements and expectations; and to the extent possible, manage their influence in relation to the requirements to ensure a successful project.

### 1.2 Stakeholders Engagement

Stakeholder engagement and/or participatory practice are increasingly becoming a part of mainstream project practice. It is being used as a means to improve communications, obtain wider community support or buy-in for projects, gather useful data and ideas, enhance public sector or corporate reputation, and provide for more sustainable decision-making.

Stakeholder engagement should be at the heart of any "sustainable development" agenda. Without engaging stakeholders, there can be no common enduring agreement, ownership or support for a particular project. A venture is more likely to succeed, especially in the long-term, if it takes into consideration the environment in which it operates and endeavors to meet the needs of the stakeholders affected by it. Stakeholder engagement could be viewed as a form of risk management. Many projects, but not necessarily all, will need to engage with a wide range of stakeholder groups, each with their own concerns, needs, conflicts of interest and levels of influence. In order for the pieces of the project plan to be effective, planners and project managers need to understand the stakeholder groups e, their stake in the project, , risks if are not engaged and how they will be engaged.

The Stakeholder Engagement Plan outlines the principles and methods that should govern project developer and implementer engagement with all potential stakeholders during all phases of the project implementation. This plan describes how the stakeholder's groups for this project have be identified and analyzed in order to determine the level and modalities of their engagement. The plan has been developed with the aim of explaining how the consortium will communicate with people and institutions that may be affected by or interested in the waste to energy project, at various stages of project implementation and after completion.

### 1.3 About the Project

The "Dissemination of the Sustainable Wastewater Technology of Constructed Wetlands in Tanzania" is the project that is considered as part of a wider project with the overall goal to formulate evidence based holistic sanitation service chains in low income countries that will be easy to understand and use. This project will offer the opportunity to gain experience in a methodology also suited for other sanitation service chains in developing countries like Tanzania.

The project is implemented by the University of Dar-es-Salaam through Waste Stabilization Ponds and Constructed Wetland Research and Development Group (WSP-CW) in partnership with Katholieke Hogeschool Kempen, department Agro- en Biotechnology. Other actors involved in the project are WWS Design and Development Company and two Tanzania NGOs, AGENDA for Environmental and Responsible Development and ENVICON.

### 1.4 Rationale for Stakeholder Analysis and Engagement Plan

Waste water management is a significant challenge especially to low income countries, Tanzania included. Ecological solutions to address it, in particular the use of Constructed Wetlands (CWs) to treat wastewaters, has been rediscovered over the last few years. The systems are designed to utilize the natural process involving wetland vegetation, soil and their associated microbial assemblages to assist in treating wastewater. Their potential applications range from secondary treatment of wastewater from various sources, to polishing tertiary treated wastewater and diffuse pollution. Successful case studies indicate that CWs significantly reduce suspended solids, biological oxygen demand, pathogens, heavy metals and excessive nutrients from wastewater. Practical experience from users of CWs in Tanzania reveals that the systems have lower total lifetime costs, lower capital costs than conventional treatment systems, lower air and water emissions, lower secondary wastes, lower operations and maintenance costs and ability to tolerate high fluctuations in flow (Kayombo, 2003). Besides, the technology is ideal for decentralized wastewater treatment and from health point of view, the systems (mainly the subsurface type of CWs) do discourage mosquito breeding sites and in that way contribute positively in combating malaria. For the large population of dwellers living in informal densely populated urban and poor rural areas in low income countries, who are exposed to wastewater related nuisances daily, CW technology promise significant benefits in terms of public health, economic gains and environmental sustainability. Yet, the technology has not received the deserved attention as an alternative method for wastewater treatment, hence minimal uptake. Intensive formalization of the technology is therefore an appropriate approach to better enhance it wider adoption and usage.

### 2. Goal and Objectives of Stakeholders Analysis and Engagement

### **2.1** Goal

Constructive engagement and continuous consultation with stakeholders is a key to the success of any project. Thus, the goal of this Stakeholder Engagement Plan is to have conscious and well informed stakeholders for effective implementation and facilitation of the uptake (adoption) of the CW technology as sanitation system.

### 2.2 Objectives

- To identify and understand stakeholder needs, desires, limitations and opportunities for engaging in the project;
- To highlight the appropriate communication approaches of informing and educating the stakeholders
- To provide a platform for the project stakeholders to share their point of view on how the technology can be well adopted in various potential areas
- To prepare a workplan for stakeholders engagement in various stages of project implementation

### 3. Methodology

A number of approaches and activities were used for preparing this Stakeholder Engagement Plan. Particularly the following approaches and activities were applied:

### 3.1 Literature Review

The literature review related to communication and stakeholders' analysis and engagement from different sources such as scientific journals, researches, internet sources, etc. relating to the project was done.

### 3.2 Stakeholder Identification Tool

The stakeholder identification tool was developed and used to facilitate the identification of potential stakeholders related to the project.

### 3.3 Stakeholders Needs Analysis

Field visits to meet with selected stakeholders in Mwanza, Shinyanga, Kilimanjaro (Moshi) and Iringa regions were conducted aimed at discovering detailed information about existing Knowledge Attitude and Perception (KAP) of stakeholders related to the CW technology. The findings obtained were used to prepare stakeholders analysis tool, engagement plan and identifying the appropriate communication channels. The list of stakeholders consulted is provided in appendix 1.

### 3.4 Levels of Stakeholders Participation

The project on Dissemination of the Sustainable Wastewater Technology of Constructed Wetlands in Tanzania has a large and diverse stakeholder groups. It was recognized that various stakeholders have different levels of influence on the project and they have varying areas of interest. This engagement plan is expected to operate at different levels where appropriate. Before the stakeholders' engagement process begun, it was important to have a good understanding, and indeed consider what level of participation was actually being sought. Stakeholders participation has been broadly categorized according to each of the five engagement levels (inform, consult, involve, collaborate and empower).

### 4. Stakeholder Identification

Stakeholder identification is a critical component of the initial scoping phase and should occur before the engagement plan is formulated and consultations begin. Stakeholder identification was conducted in order to identify groups and list of stakeholders relevant to the project. Stakeholders were therefore identified and divided into four group categories. This categorization is based on a process of stakeholders' identification of the communication partner' groups.

### 4.1 Categories of Identified Stakeholders

The categories of identified stakeholders with their respective communication partners are listed below:

- i. **First Category:** Government bodies including Central and Local Government (Ministries, Departments and Agencies);
- **ii. Second Category:** Donor Agencies; Organizations promoting water supply, sanitation and hygiene; and Private companies and firms;
- iii. Third category: Prospected technology adopters, Media, Learning and Research Institutions;
- iv. **Fourth Category:** Civil, Society Organization e.g. NGOs (national and International), and general public.

# 4.2 The Description of Identified Communication Partners

The description of each identified communication partner (stakeholders) in the four group categories is demonstrated in the table below:

**Table 1: Description of identified communication partner** 

| <b>Category Group</b> | Description of communication partner   |
|-----------------------|--|
|                       | The Vice President Office (VPO) – Environmental Division   |
| First Category        | VPO is the overall actor accountable for matters relating to environment, water and wastewater inclusive. The body is responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.   |
|                       | Ministry of water and irrigation (MoWI)  MoWlis the main custodian of the national water resources. It is responsible not only for planning, management and monitoring of water resources, but also for promoting improvements in sanitation and wastewater disposal developments.   |
|                       | Ministry of Health and Social Welfare (MOHSW)  MOHSW is responsible for providing overall leadership on sanitation and hygiene by chairing, convening and coordinating the National Sanitation & Hygiene Steering Committee, coordinating the formulation of policy, guidelines and strategies for hygiene and sanitation, coordinating the drafting of legislation and regulations, and for setting standards for sanitation and hygiene as part of protecting public health. Within MOHSW, the Environmental Health, Hygiene and Sanitation Department is responsible for the above-mentioned tasks. |
|                       | Ministry of Education and Vocational Training (MOEVT)  MOEVT is responsible for coordinating policy guidelines development for School WASH in collaboration with MOHSW, setting standards formulation for school water, hygiene and sanitation, coordinating implementation of school water, hygiene and sanitation, supervising, monitoring, and reporting on school WASH.MOEVT's Environmental Unit is the main unit involved in school water supply sanitation and hygiene.   |
|                       | The National Environmental and Management Council (NEMC)  NEMC is a stakeholder basing on its obligation to undertake enforcement, compliance, review and monitoring of environmental impact assessments thereby facilitating public participation, in environmental decision making, exercise general supervision and coordination over all matters related to the environment. The council therefore is obliged to ensure compliance of the national water and wastewater discharge quality standards.   |
|                       | Tanzania Bureau of Standards (TBS):  TBS is established under the ministry of industry, trade and marketing (1975), the bureau is mandated to undertake measures for quality control of products of all descriptions and promote standardization in industry and commerce. Among its major function is the formulation of national standards in the fields of agriculture, food, chemicals, textiles, leather, environment, engineering and service industry.  |

### Prime Minister's Office – Regional Administration and Local Governments (PMO-RALG)

PMO-RALG is responsible for coordinating planning of sanitation and hygiene projects from LGAs and ensuring clarity of responsibilities for operation and maintenance, coordinating the provision of technical assistance to LGAs, coordinating LGA budgets and for coordinating institutional streamlining and capacity building for LGAs.

### **Second Category**

### **Donor Agencies**

It is generally known, that there are not enough resources to address all the needs of society. Therefore to there is a need to find ways of getting additional resources, and one such way is to turn to donors agencies. Donor agencies are organizations that provides funds to support various projects including sanitation services projects. This includes the development partners with a particular interest in improving water, sanitation and hygiene services. Priorities are those who are currently supporting water, sanitation and hygiene projects in Tanzania including the UNDP, World Bank, European Union, Donors can increase participation in promotion of constructed wetlands technology in Tanzania by: Increasing their funding levels; Pooling resources together and promoting joint funding of sanitation activities; attracting other donors to support improved sanitation initiatives; and increased openness on funds available.

### Private companies and firms

Mainly, these are consulting and construction companies and firms that advice, design, execute and supervise the establishment of sanitation facilities. They range from local to international private firms. Moreover, especially at local and grass root levels, they accommodate well known and informally recognized individuals (craftsmen and foremen) who take part in construction of simple civil engineering structures. All these groups under this category have impacts towards the adoption of a technology since they can neither design nor establish something they do not know, or they can do it in an incorrect manner. WWs Design and Development Company Ltd is one example of such companies.

### Organizations promoting water, sanitation and hygiene

This includes local and international organization with interest of promoting safe water supply, improved sanitation and hygiene services in Tanzania. The list of these organizations include WaterAID, UNICEF, Plan, etc

### **Third Category**

### Prospected technology adopters (Users of CWs)

They are stakeholders not only because CW systems are appropriate for them but also due to the fact that their inputs determine the outputs from the CW systems, and therefore can have either positive or negative implications in the course of enhancing the adoption of the technology. Various criteria can be used to categorize users of CW technology. The most obvious ones include the size of population to be served, type of wastewater generated, amount and strength of wastewater produced and organizational nature of the population to be served. All these criteria have implications not only into the size of the CW system to be put in place but also on the pre-treatment as well as downstream requirements. Some of prospected CWs users includes schools, colleges, health centers, prisons, public buildings etc.); UWASAs

### **Learning and research institutions**

These are public and private institutes, technical colleges and universities with a mandate to teach, provide consultancy and research services. Actually, they accommodate natural sciences and engineering subjects to better describe constructed wetlands. They have a vital role to play in promoting the uptake of technology, building capacity and increase the resource base required for planning, design, construction, operation and maintenance of CWs. In other words, they are the only possible and reliable sources of technicians, planners, designers, consultants and contractors on CWs thereby introducing courses, conducting training workshops and providing consultancies on CW technology. Besides, they have a very fundamental task to play in research work with the overall goal to improve the design and hence the performance of CW systems. The list of such institution include the University of Dar es Salaam, Ardhi University, Nerson Mandela Institute of Science and Technology, Muhimbili University of Heath and Allied Science, Open University, and University of Dodoma.

### Media

This includes journalists working for newspapers, televisions and radio Stations in the private (Clouds FM, The Star TV, Mwananchi & IPP Media among others) and public sector (TBC 1; TSN among others). The media are both a means of communicating with other communication partners as well as valuable communication partners in their own right. Priorities include those journalists working within the print and broadcast media preferred by stakeholders in Tanzania.

### **Fourth Category**

### **Civil Society Organizations**

These are non-governmental organizations (NGOs), trade unions, faith based organizations, indigenous peoples movements, foundations and many others. Especially NGOs, they are critical actors in the advancement of universal values about sustainable development, environment inclusive. Their perspectives, expertise and partnership-building capabilities are indispensable and cannot be undermined. For this matter, they can play a very vital role not only in raising community awareness on CW technology but also in building capacity and promoting the perception, appreciation and application of CW systems for wastewater treatment. The AGENDA for Environment and Development Responsible and ENVICON are examples of NGOs with interest in promoting CW.

### **General public**

This includes all women, men and children living in Tanzania.

# . Mapping of Identified Communication Partners (stakeholders)

The identified secondary stakeholders were analyzed as shown in the table below in order to identify their importance and influence in the project.

Table 2: Mapping of Identified Stakeholders

| Or les he less and       | 4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 | 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |                       | 7                      |                                    |
|--------------------------|---|---|-----------------------|------------------------|------------------------------------|
| stakenoider              | Stake In the project                    | Kole (what do we need from              | Perceived             | KISK IT not engaged    | How to engage                      |
| (Communication           |   | them?)                                  | attitudes/risks       |                        |                                    |
| partner)                 |   |   |                       |                        |                                    |
| Ministries,              | Promote and                             | To facilitate the promotion of          | Low interest on       | Poor response of other | Formal consultations; stakeholders |
| Departments and          | addresses the legal                     | new innovative technology for           | formalization and     | stakeholders and hence | training workshops; policy brief;  |
| Agencies (MDA's)         | and regulatory                          | wastewater treatment i.e. CW            | enforcement of new    | rate of CW technology  | disseminating IEC materials;       |
|                          | conditions which may                    | technology using existing               | policy and law that   | adoption will be low.  | reports; and publications          |
|                          | be relevant to the                      | policies                                | will promote the use  |                        |                                    |
|                          | promotion of CW                         |   | of CW technology      |                        |                                    |
|                          | technology.                             |   |                       |                        |                                    |
| Media                    | Informing and                           | To facilitate dissemination of          | Journalists might not | Low coverage of CW     | Media programmes, e.g.             |
|                          | educating                               | the CW technology to the                | be familiar with      | information.           | documentaries, interview           |
|                          |   | wider community.                        | technology and some   |                        | workshops, IEC; reports; and       |
|                          |   |   | of technical terms.   |                        |                                    |
| Prospected technology    | Release biodegradable                   | To adopt the CW technology as           | Some might think the  | Rate of CW technology  | Stakeholders' training workshops   |
| adopters: schools,       | wastes the                              | improved                                | technology is         | adoption will be low.  | and formal consultation, IEC       |
| colleges, health         | environment                             | sanitation/wastewater                   | expensive             |                        | materials; environmental, social   |
| centers, prisons, public |   | management system                       |                       |                        | and cost benefits analysis report  |
| buildings etc.);         |   |   |                       |                        |                                    |
| Private companies and    | Advice, design, execute                 | To sell CW technology for wide          | Low interest with the | Rate of uptake of CW   | Stakeholders' training workshops   |
| firms                    | and supervise the                       | uptake                                  | technology            | technology will be low | and formal consultation, IEC       |
|                          | establishment of                        |   |                       |                        | materials, environmental, social   |
|                          | sanitation facilities.                  |   |                       |                        | and cost benefits analysis report  |
| Academic Institutions    | Training, research and                  | To facilitate development of            | Students might not be | Rate of developing     | Stakeholders workshops; Formal     |
|                          | technical backstopping                  | human resource in innovative            | interested with the   | human resource will be | consultations; sharing IEC         |
|                          |   | sanitation system                       | technology/study      | low                    | materials; manuals; reports; and   |
|                          |   |   |                       |                        | publications                       |
|                          |   |   |                       |                        |                                    |

| Civil, Society Organization e.g.), CBOs, Faith-based organization. | Promote wider public participation and awareness of the technology. | Public sensitization and dissemination the CW technology   | Sharing information is not progressive | Scope of dissemination will be narrowed   | Training workshops; disseminating IEC materials; sharing updates through emails, social networks; reports; and publications                                |
|--|---|--|--|---|--|
| General public   | Information receiving   | To be aware with project activities and outputs to the wider community   | Low interest with the technology       | Awareness of the project activities and outputs will be low                                       | Media programmes (e.g. news<br>articles, TV documentary)   |
| Organizations<br>promoting water<br>supply and sanitation          | Promote access to<br>water supply and<br>improved sanitation        | To facilitate promotion of CW as one of improved sanitation system   | Low interest with the<br>CW technology | Rate of CW technology<br>adoption will be low.  | Training workshop, IEC materials; emails, social networks; manual; reports; and publications   |
| Donors Agencies  | Provide financial supports.   | To provide financial support to Low interest with the the improved sanitation CW technology activities involving constructed wetlands technology | Low interest with the<br>CW technology | Rate of supporting Formal financial resources to the networks; CW project will be low sheets, and | Rate of supporting Formal consultation, social financial resources to the networks; progress reports; fact CW project will be low sheets, and publications |

### 6. Stakeholder Analysis (Stakeholder Matrix)

Stakeholder analysis is an essential part of developing a useful Engagement Plan. A common method of stakeholder analysis is a Stakeholder Matrix. This is where stakeholders are plotted against two variables. These variables might be plotting the level of 'stake' in the outcomes of the project against 'resources' of the stakeholder. Another is the 'importance' of the stakeholder against the 'influence' of the stakeholder. The concept is the same, though the emphasis is slightly different.

| С | Α |
|---|---|
| D | В |

Boxes A, B and C are the key stakeholders of the project. The implication of each box is summarized below:

### Box A

These are stakeholders appearing to have a high degree of influence on the project, who are also of high importance for its success. This implies that the implementing organization will need to construct good working relationships with these stakeholders, to ensure an effective coalition of support for the project.

### Box B

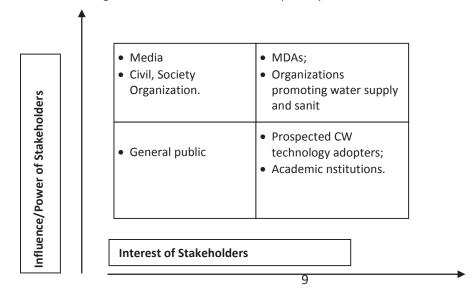
These are stakeholders of high importance to the success of the project, but with low influence. This implies that they will require special initiatives if their interests are to be protected.

## Box C

These are stakeholders with high influence, who can therefore affect the project outcomes, but whose interests are not necessarily aligned with the overall goals of the project. This conclusion implies that these stakeholders may be a source of significant risk, and they will need careful monitoring and management.

### Box D

The stakeholders in this box, with low influence on, or importance to the project objectives, may require limited monitoring or evaluation, but are of low priority.



### 7. Engagement Methods (Communication Channels)

Stakeholder engagement is an ongoing process that extends throughout the lifespan of the project and encompasses a range of activities and approaches, from information sharing and consultation, to participation, negotiation, partnerships and lobbying. Traditional methods for stakeholder communication, consultation and decision-making, considered appropriate for building relationships with project consortium's internal and external stakeholders, are, but are not limited to, the following:

- WSP/CW website/intranet,
- Press conferences/Press releases,
- Fact sheets, flyers and brochures,
- Various reports,
- E-mails,
- Surveys and questionnaires,
- Focus groups discussion (FGD),
- Targeted stakeholder workshop/meeting,
- Field trips,
- Publications,
- Media programs (video documentary, news articles).

### 8. Stakeholder Engagement Matrix (Communication Matrix)

After being identified, all stakeholders were categorized into groups according to their importance, level of influence on the project, extent of the project's potential impact on them, frequency the project will have to deal with them and other factors as appropriate. Thorough analysis and prioritizing were carried out in order to identify the most appropriate ways and strategies to employ since the project is engaging with different groups of stakeholders. Key messages for each group of stakeholders that the plan needs to emphasize were also developed. An agreed set of key messages is critical to ensuring consistent communication about the project.

The communication matrix bellow identifies the main ideas (key messages) that can be addressed to different stakeholders from different groups through different forms of messages and through different engagement methods (communication media and channels) and different languages.

Table 3: Stakeholder Engagement Matrix

| Target<br>Group   | Communication<br>Partners/<br>Stakeholders                | Key Messages  | Communication Media/Channel  | Language             |
|-------------------|---|---|--|----------------------|
| First<br>category | Central Government<br>and Regulatory<br>Authorities       | Innovative sanitation technologies for improved sanitation, welfare and health communities; CW technology saves people and environment for sustainable development  | Workshops, policy briefs, Meetings, Media programs, Fact sheets, Reports, Field trips, Presentation, website/internet, publications        | English<br>Kiswahili |
|                   | LGAs  | Mainstreaming CW technologies in development plans;<br>Successful adoption of the CW technology will improve welfare and health of<br>people  | Workshops, policy briefs, Meetings,<br>Media programs, Fact sheets,<br>Reports   | English<br>Kiswahili |
| Second            | Organizations<br>promoting water<br>supply and sanitation | CW technologies improves welfare, health and livelihood of communities; CW technology is sustainable sanitation facility, environmental friendly and economically viable.   | Workshops, policy briefs, Meetings, Media programs, Fact sheets, Manual, Reports, website/internet, publications                           | English<br>Kiswahili |
|                   | Donor Agencies  | CW technologies improves welfare, health and livelihood of communities;<br>CW technology is sustainable sanitation facility, environmental friendly and<br>economically viable  | Workshops, policy briefs, Meetings, Media programs, Fact sheets, Manual, Reports, website/internet, publications                           | English<br>Kiswahili |
| Third             | Prospected<br>technology adopters                         | Innovative sanitation technology that improve welfare and health of people<br>The sanitation technology that can provide water for aquaculture activities<br>Sustainable, environmental friendly and cost effective sanitation system   | Field visit/trip, FGD, Media,<br>Dissemination of IEC materials, Fact<br>sheets  | Kiswahili<br>English |
|                   | Media, Academic and<br>Research Institutions              | Technological Innovations need more researches for its sustainability and improvement; Researches in innovative sanitation technologies are crucial for national development; Media institutions play an important role in disseminating information on innovative sanitation technologies. | Workshops, policy briefs, Meetings, Media programs, Fact sheets, Reports, Press conferences/Press releases, website/internet, publications | Kiswahili<br>English |
| Fourth            | CSOs and general<br>public                                | There is a need to support innovative sanitation technology projects for improved welfare and health of people.   | Workshops, policy briefs, Meetings,<br>Media programs, Fact sheets,<br>Reports, Dissemination of IEC<br>materials                          | Kiswahili<br>English |

# Appendix

Table 4: Consulted stakeholders in Mwanza and Shinyanga region

| S/N | Name of Stakeholder/Institute                                   | Contact Person/Address               | Sanitation System Used                 |
|-----|---|--------------------------------------|--|
| 1   | Bariadi Prison  | Head of prison Mr. Paschal Francis   | CW                                     |
|     |   | 0764 90 44 62                        |  |
| 2   | Malya Prison  | O/C Malya Prison                     | CW                                     |
|     |   | Maswa Shinyanga                      |  |
| 3   | Maswa Prison  | Head Maswa prison                    | CW                                     |
|     |   | ASP Saidi A. Killo                   |  |
|     |   | 0784 32 44 04                        |  |
|     |   | P.O. Box 44, Maswa, Shy              |  |
| 4   | Shinyanga Prison  | Head of Prison                       | CW                                     |
|     |   | Kaswaka M. Mussa                     |  |
|     |   | P. O. Box 151                        |  |
|     |   | 028 276 32 32                        |  |
| 5   | Butimba Main Prison   | Head of Prison                       | Pit latrines                           |
|     |   | Ahmad Twalib Korwe                   |  |
|     |   | 028 255 00 27                        |  |
| 6   | Maswa Girls Secondary School                                    | Head Mistress                        | Septic tank and Trench                 |
|     |   | P. O. Box 60, Maswa Shy              | Drain                                  |
| _   |   | 028 275 02 04                        | 10                                     |
| 7   | College Of Business Education                                   | Principal                            | Septic Tanks and Soak                  |
|     | (SHYCOM)  | P.O.Box 190, Shinyanga               | away Pit                               |
| 0   | Kalandata Cabaal Of Numina and                                  | 028 276 25 90                        | Contin Tanka and Conk                  |
| 8   | Kolandoto School Of Nursing and<br>Assistant Medical Laboratory | Kolandoto,<br>Shinyanga              | Septic Tanks and Soak away Pit         |
| 9   | Kolandoto Hospital  | Kolandoto,                           | Septic Tanks and Soak                  |
| 9   | Kolalidoto Hospital   | Shinyanga                            | away Pit                               |
| 10  | Butimba Teacher's Training College                              | Principal                            | septic tanks and                       |
| 10  | buttiliba reactier 3 frailing conege                            | Tel 0255 02 78, Mwanza               | wastewater pond                        |
| 11  | St Augustine University of Tanzania                             | Malimbe, Mwanza                      | Septic tanks and soak away             |
|     | (SAUT)  | Wallinge, Wwalled                    | pits                                   |
| 12  | Nsumba Secondary School   | Second Master                        | Septic Tanks and Soak                  |
|     | ,                         | P. O. Box. 4044, Mwanza              | away Pit                               |
| 12  | Chinyanga Municipal Hoolth                                      |                                      | Wastewater stabilization               |
| 13  | Shinyanga Municipal Health                                      | DMO Shinyanga<br>siyawangu@yahoo.com |  |
| 14  | Department Shinyanga Municipal Council                          | Eng. Kassim Thadeo                   | ponds (WSPs)  Wastewater stabilization |
| 14  | (Environment Department)  | 0784 35 92 53                        | ponds                                  |
|     | (Liviloilineilt Department)                                     | kassimtadeo@yahoo.com                | porius                                 |
| 15  | Mwanza City Council (Environment                                | kassiiiitaaeo@yaiioo.coiii           | WSPs, and septic tanks, pit            |
| 10  | Department)   |                                      | latrines                               |
| 16  | Shinyanga Urban Water and                                       | Technical Manager                    | Manage WSPs                            |
|     | Sewerage Authority (SHUWASA)                                    | Shinyanga                            |  |
| 17  | Mwanza Urban Water and  | Technical Manager                    | Manage WSPs                            |
|     | Sewerage Authority (MWAUWASA)                                   | Mwanza                               |  |
| 18  | Mlatie Construction Company                                     | Managing Director                    | Didn't build any CW at the             |
| -   | Limited   | Mr. Emmanuel P. Moshi                | time of visit                          |
|     |   | P. O. Box 201, Shinyanga             |  |

**Table 5: Consulted Stakeholders in Iringa** 

| S/N | Name of Stakeholder/Institute                                  | Contact Person/Address   | Sanitation System Used   |
|-----|--|--|--|
| 1   | Kleruu Teachers College  | Principal Klerruu Teachers<br>College  | CW   |
| 2   | Tumaini University – Iringa Campus                             | College Provost<br>Tel 026 2720900   | Septic tanks and soak away pits                                |
| 3   | Mkwawa University College of Education (MUCE)                  | Head of Dept - Estates<br>Department   | Connected to the Municipal Waste Stabilization Ponds (WSPs)    |
| 4   | Field Force Unit (FFU)   | P.O. Box 280 Iringa  | Septic tanks   |
| 5   | Iringa Girls Secondary School                                  | Mrs MSIGWA -Head Mistress<br>Tel: (0767),(0715)-717418                         | Septic tanks and soak away pits                                |
| 6   | Ruaha Community Development<br>Training Institute (Ruaha CDTI) | Principal Ruaha  | Septic tanks and soak away pits                                |
| 7   | Ruaha Seconday School  | Mwalimu Nkota Hamis (0712<br>161082) and Mwalimu Akyoo<br>Adrian (0755 038155) | CW   |
| 8   | Tagamenda Secondary School                                     | Head Teacher<br>P.O.Box 1632 Iringa  | Pit latrines   |
| 9   | Iringa Regional Hospital                                       | Health Secretary Contact: 026 2701404, 0754 855169                             | Connected to the Municipal Waste<br>Stabilization Ponds (WSPs) |
| 10  | Iringa Urban Water and Sewerage<br>Authority (IRUWASA)         | Managing Director<br>P.O.Box 570 Iringa<br>Fax/tel 026 2700005                 | Manage/operate municipal WSP and currently installed CW        |
| 11  | Iringa Municipal Council                                       | Municipal Health Engineer,<br>Ms. Selina Kapinga<br>Tel 0713477418             | Pit latrines, septic tank and soak away pits, WSPs, CW         |
| 12  | Lugalo Secondary School  | Headmaster<br>0754-641512  | Septic tanks and soak away pits                                |
| 13  | Ebeneza Seminary School  | Gift Makweta- Headmaster<br>Tel: 0654-418962                                   | Pit latrines   |
| 14  | Efatha Secondary School  | Mr. Tabane- Manager<br>Tel:075 5-335556  | Septic tank and soak away pit                                  |
| 15  | Cagliero Girls High School                                     | Hostel Adminstration<br>0784-424074  | Septic tanks and soak away pits                                |
| 16  | Mr. and Mrs. Nuhu Mkwawa                                       | Tel: 0754 897840<br>Mtwivila – Iringa Municipal                                | Septic tanks and soak away pits                                |
| 17  | Iringa Vegetable Oil and Related Industries Limited (IVORI)    | Director<br>P.O.Box 146 Iringa<br>Tel: 026-2725019/2725049                     | Septic tanks and soak away pits                                |
| 18  | Dabaga Vegetables and Fruits Can<br>Co. Ltd                    | Factory Assistant Supervisor<br>P.O.Box 83 Iringa                              | Septic tanks   |

# Stakeholders Consulted in Iringa

# December 2012 and April 2013

| S/N | Name of   | Contact   | Issues Discussed  |
|-----|---|---|---|
|     | Stakeholder/Institute                                       | Person/Address  |   |
| 1   | Klerruu Teachers<br>College                                 | Principal Klerruu<br>Teachers College   | <ul><li>Status of CW</li><li>Challenges on operation of CW</li></ul>  |
| 2   | Tumaini University –<br>Iringa Campus                       | College Provost<br>Tel 026 2720900  | <ul><li>Status of wastewater<br/>management</li><li>Introduction of CW</li></ul>  |
| 3   | Mkwawa University College of Education (MUCE)               | Head of Dept -<br>Estates Department  | <ul><li>Status of wastewater<br/>management</li><li>Introduction of CW</li></ul>  |
| 4   | Police - Field Force Unit (FFU)                             | P.O. Box 280 Iringa   | <ul><li>Status of wastewater<br/>management</li><li>Introduction of CW</li></ul>  |
| 5   | Iringa Girls Secondary<br>School                            | Mrs Msigwa -Head Mistress Tel: (0767),(0715)- 717418  Godfrey Gwido- Civil Technician  Claudia Mbilinyi - | <ul> <li>Status of wastewater management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> <li>Designing, construction and operation of CW</li> </ul> |
| 6   | Ruaha Community Development Training Institute (Ruaha CDTI) | Teacher Principal Ruaha Mr. Gasper Msigala 0718-588901  | <ul> <li>Status of wastewater management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>  |
| 7   | Ruaha Seconday<br>School                                    | Mwalimu Nkota<br>Hamis (0712 161082)<br>and Mwalimu Akyoo<br>Adrian (0755<br>038155)                      | Status of CW     Benefits of CW   |
| 8   | Tagamenda Secondary<br>School                               | Head Teacher<br>P.O.Box 1632 Iringa   | <ul><li>Status of wastewater<br/>management</li><li>Introduction of CW</li></ul>  |
| 9   | Iringa Regional Hospital                                    | Health Secretary<br>Contact: 026<br>2701404, 0754<br>855169   | <ul><li>Status of wastewater<br/>management</li><li>Introduction of CW</li></ul>  |

| 10 | Iringa Urban Water and<br>Sewerage Authority<br>(IRUWASA)         | Eng. Mfugale - Managing Director; Yohana Buganda – Wastewater Technician; Eng. Jane – Wastewater Enginner P.O.Box 570 Iringa Fax/tel 026 2700005 | <ul> <li>Status of wastewater<br/>management</li> <li>Introduction of CW</li> </ul>   |
|----|---|--|---|
| 11 | Iringa Municipal Council  | Municipal Health<br>Engineer, Ms. Selina<br>Kapinga<br>Tel 0713477418  | <ul> <li>Status and challenges of<br/>wastewater management</li> <li>Introduction of CW</li> <li>Identification of potential<br/>CW adopters</li> </ul> |
| 12 | Lugalo Secondary<br>School  | Benjamini Edward<br>Headmaster<br>0754-641512  | <ul> <li>Status of wastewater<br/>management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>                                    |
| 13 | Ebenezer Sec. School  | Gift Makweta-<br>Headmaster<br>Tel: 0654-418962  | <ul> <li>Status of wastewater<br/>management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>                                    |
| 14 | Efatha Secondary<br>School  | Mr. Paul Taban1-<br>Manager<br>Tel:075 5-335556  | <ul> <li>Status of wastewater<br/>management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>                                    |
| 15 | Cagliero Girls High<br>School                                     | Hostel Administrator<br>0784-424074  | <ul> <li>Status of wastewater<br/>management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>                                    |
| 16 | Mr. and Mrs. Nuhu<br>Mkwawa                                       | Tel: 0754 897840<br>Mtwivila – Iringa<br>Municipal   | <ul> <li>Status of wastewater management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>  |
| 17 | Iringa Vegetable Oil and<br>Related Industries<br>Limited (IVORI) | Director P.O.Box 146 Iringa Tel: 026- 2725019/2725049  | <ul> <li>Status of wastewater management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>  |
| 18 | Dabaga Vegetables and Fruits Can Co. Ltd                          | Factory Assistant<br>Supervisor<br>P.O.Box 83 Iringa   | <ul> <li>Status of wastewater management</li> <li>Introduction of CW</li> <li>Willingness to adopt CW</li> </ul>  |



### VLIR-UOS

Mailing address: VLIR-UOS | PO box 103 Elsene Naamsepoort | 1050 Elsene | Belgium

[e] info@vliruos.be

Programme: **South Initiatives** 

Dissemination of the sustainable wastewater technology of constructed wetlands in Tanzania

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### Promoter:

Thomas More University College | Kleinhoefstraat 4 | 2440 Geel | Belgium [e] <a href="mailto:rob.van.deun@thomasmore.be">rob.van.deun@thomasmore.be</a>



# Local Partner:

University of Dar es Salaam, College of Engineering and Technology (CoET)
Waste Stabilization Ponds and Constructed Wetland Research and Development Group (WSP-CW)
University of Dar es Salaam | P.O. Box 35131 | Dar es Salaam | Tanzania
[e] knjau30@yahoo.com