

ENV Higher Education Science Research Support Program (HESRS)

ENV Services Limited underscores the fact that education is mandatory to each and every Tanzania citizen. However, such professions as excelled by the Company need be nurtured, need be supported. Universities in Tanzania and all over the world offer courses which require the students to undertake research as part of partial fulfilment of their degree awards. In achieving this, the students are required to prepare a research titles and write research proposals leading to pursue the proposed research. However, the research in “knowledge demanding” thematic areas are seldom undertaken by students due to limited resources, which are required to accomplish them. This is because the research grants offered to students do not suffice “expensive” costs. As a result, students are forced to undertake their research in limited or common themes, which erodes their innovative thinking capacity that we are striving to build. Besides discouraging students’ enrolment in science subjects, this practice limits application of the knowledge obtained by students during the entire period of their theoretical studies.

We acknowledge that research equipment in such “demanding” areas of energy and environment is inadequate in the Tanzania universities. In participating to bridge this gap and for the purpose of contribution to scientific knowledge, we have designed a program known as Higher Education Science Research Support (HESRS) program. The program is open to all higher institution of learning students in availing equipment and knowledge. The overall outcome of the program is from the fact that an organized way of students’ research undertaking provides Tanzania’s long term benefits in terms of generating knowledge leading to technology development and innovations, which is the main driver to our socio economic development.

As shown in **Table 1**, ENV Services Limited laboratory have been supporting some students in accessing research equipment. In order to provide a meaningful support to students, the ENV Services Limited management decided to come up with the “**Higher Education Science Research Support program (HESRS)**”. The company under HESRS program is aimed to assist the students in:

- i. Acquiring measuring instruments for research work
- ii. Advising on research title formulation
- iii. Research proposal writing
- iv. Advising in data analysis and discussion
- v. Technical research report writing

Table 1: Previously supported student research titles

SNO	RESEARCH TITLE	PARENT UNIVERSITY	ACADEMIC YEAR
1	Parametric investigation of slow pyrolysis process for rice husk	University of Dar es Salaam, College of Engineering and Technology (CoET) University of Dar es Salaam P.O. Box 35131, Dar-es-Salaam	2013 (M.Sc.)
2	Assessment of noise pollution at major hospitals in Dar es Salaam	Ardhi University, P. O. Box 35176 Dar es Salaam	2013 (B.Sc.)
3	Investigating means of reducing grid electricity consumption in the Tanzania iron and steel industries	University of Dar es Salaam, College of Engineering and Technology (CoET) University of Dar es Salaam P.O. Box 35131, Dar-es-Salaam	2013 (M.Sc.)
4	Design and modelling of high temperature incinerator for municipal solid waste for energy recovery	The Nelson Mandela African Institution of Science and Technology, P. O. Box 447 Arusha, Tanzania	2014 (Ph.D.)
5	Assessment of Methane and Gas Emissions from Pugu Damp site in Dar es Salaam	Ardhi University, P. O. Box 35176 Dar es Salaam	2014 (B.Sc.)
6	Assessment of gaseous emissions from cookstoves utilizing briquettes	Ardhi University, P. O. Box 35176 Dar es Salaam	2015 (B.Sc.)
7	Assessment of noise pollution from bus terminals and its effects to neighbourhood residence	Ardhi University, P. O. Box 35176 Dar es Salaam	2015 (B.Sc.)

PROPOSED RESEARCH THEMES

The HESRS will support students to undertake rare science research that are supporting sustainable cities initiatives. By doing so, the students will assist in establishing basic and long-term scientific datasets for air, water and soil quality for supporting sustainable cities programs. With this kind of datasets, the cities will be able to compare each other and see the need for improvements. The proposed research themes are therefore in:

- 1) Air quality
- 2) Water and wastewater quality
- 3) Soil quality and
- 4) Municipal solid waste