



UNIVERSITY OF DAR ES SALAAM



UDSM-SIDA COOPERATION 2015-2020 PROGRAMME

**AGGREGATED SUMMARY OF ALL SUB-PROGRAMMES
ANNUAL PLAN FOR 12 MONTHS EXTENDED PERIOD
JULY 2020 TO JUNE 2021**

**Towards Enhanced Sustainability of Strategic Research and Innovation Systems for Inclusive
Development in Tanzania**

MAY 2020

Table of Contents

Executive Summary	1
AGGREGATED SUMMARY OF ALL SUB-PROGRAMMES AND PROJECTS	1
1. Summary of Achieved Results/Subprogramme Progress.....	1
<i>1.1 Brief Overview of the Programme</i>	<i>1</i>
<i>1.2 Overall Programme Budget (2015-2020)</i>	<i>2</i>
<i>1.3 Overall Execution Rate</i>	<i>2</i>
<i>1.4 Major Accomplishments and Summary of Achieved Results.....</i>	<i>2</i>
<i>1.5 Rationale for the Extension of Programme Duration</i>	<i>5</i>
<i>1.6 Summary of the Extra Fund for the 12 Months Extension Period</i>	<i>6</i>
2. General Objectives and Expected Results	6
3. Target (July 2020 – June 2021).....	7
5. Enclosures	17
Enclosures 1: Programme Overall Aggregated Budget	18
Enclosures 2: Programme Detailed Budget	19
Enclosure 3: Results Based Management (RBM) Matrix (July 2020-June 2021)	20
Enclosure 4: Overall Aggregated Student Plan/Progress	26

Executive Summary

Over four decades, the Swedish government through Sida has been supporting the University of Dar es Salaam (UDSM) in human development, research capacity building, institutional building in terms of systems, policies, guidelines and procedures and Infrastructure mainly support to the library, laboratory and workshop equipment and chemicals. As part of this commitment, Tanzania-Sweden research partnership 2015-2020 was initiated with the aim of facilitating the UDSM aspirations “*Towards Enhanced Sustainability of Strategic Research and Innovation Systems for Inclusive Development in Tanzania*”. According to the agreement, UDSM-Sida Cooperation programme 2015-2020 has to implement its approved programme activities for five years with effect from July 2015 to June 2020. The programme budget for the five year duration was SEK One hundred fifty nine millions, nine hundred thousand (SEK 159,900,000). The programme supported twelve (12) sub-programmes out of which ten (10) focused on research and two (2) on support programmes started in June 2015 and intended to end June 2020. During the implementation of the planned activities, the overall execution rate of the UDSM-Sida Programme, in Tanzania up to 30th June 2020 is expected to be 93%. It should be noted that the accomplished achievements from the current support of Sida include the following:

- (a) Registered 62 PhD and 48 Masters; With regard to accomplishment of studies, 11 PhD candidates have so far graduated and the remaining 51 candidates are at various stages of their studies. As for master’s students, 21 students have graduated, while the remaining 27 students are at final stages of accomplishing their studies.
- (b) 16 Postdoc candidates recruited;
- (c) Over 100 publications;
- (d) Research infrastructure procured and more than 3 state of art laboratories established and;
- (e) Research Management Information System established;
- (f) Additional external funding mobilized by subprogrammes including Marine Science; and
- (g) Over 800 academic staff trained in postgraduate supervision and Intellectual Property Right (IPR) and ‘Fundable Research Proposal’ writing, with 10% of them having won research grants from UDSM Research funds.

In the five years of the implementation of the programme activities, UDSM-Sida Programme has made remarkable achievements in realizing its main objective aimed at generating sufficient analytical capacity and research based knowledge and technological innovations in addressing the problem of poverty and promoting sustainable and inclusive development. Substantial progress has been made towards human resource capacity building at UDSM through having highly skilled workers and qualified researchers, creating enabling research environment, enhancing university visibility as well as establishing research networks and collaborations.

Despite the impressive efforts made in realizing the programme objectives, there are few ‘unfinished’ businesses though very critical ones which need to be implemented to make the programme more successful. These ‘pending’ activities, some will need more time to be realized and others will need extra time and fund to be implemented. Some of the critical activities which have to be implemented beyond 30th June 2020 include training of 51 PhD candidates and 27 MSc students, production of the scholarly papers to be published in peer reviewed journals together with establishment of research networks and collaborations for sustainability of the research results for inclusive development.

It is against this fact that UDSM-Sida programme needs a 12 months extension to accomplish the remaining activities with effect from 1st July 2020 to 30th June 2021 with estimated budget amounting SEK 25,890,000. The total extra fund requested from Sida during the extension period is SEK 15,914,000 intended to finance activities for successful attainment of the programme objectives. With this budget, the University of Dar es Salaam is requesting SEK 8,084,987, while Swedish Research Partner Institutions will have a share of SEK 5,583,000 and the remaining SEK 2,246,000 will be used by ISP to pay student allowances during their stay in Sweden.

AGGREGATED SUMMARY OF ALL SUB-PROGRAMMES AND PROJECTS

TOWARDS ENHANCED SUSTAINABILITY OF STRATEGIC RESEARCH AND INNOVATION SYSTEMS FOR INCLUSIVE DEVELOPMENT IN TANZANIA

Contact information

Dr. Latifa Mbelwa
UDSM Sida Coordinator
University of Dar es Salaam
P. O. Box 35091
Dar es Salaam, Tanzania
Tel: +255-22-2410727 (O),
+255-713-788161 (Cell)
Fax: +255-22-2410743
Email: research@udsm.ac.tz
latifambelwa@yahoo.com
latifambelwa@gmail.com

Website: www.udsm.ac.tz

Prof. Bernadeta Killian
Deputy Vice Chancellor - Research
University of Dar es Salaam
P. O. Box 35091
Dar es Salaam, Tanzania
Tel.: +255 22 2410743 (O)
+255 754486282 (Cell)
Fax: +255-22-2410743 (Cell)
Email: dvc-rke@admin.udsm.ac.tz
bernadetak@yahoo.com

Website: www.udsm.ac.tz

1. Summary of Achieved Results/Subprogramme Progress

1.1 Brief Overview of the Programme

Since 2005, Tanzania has registered a steady and decent economic growth of about 7% per year (Vision 2025, 2015). However, this rate of growth at the macro level is yet to improve the quality of life of the majority of its masses. Poverty levels, though recently have been reported to have decreased, are still arguably high for a significant proportion of its people. With this current reality on poverty situation, devised policies and strategies to improve growth momentum to reach set targets require research based information for effective implementation. The University of Dar es Salaam, guided by its Vision to become “a leading centre of intellectual wealth spearheading the quest for sustainable and inclusive development”, is committed to playing its rightful role in facilitating the achievement of the country’s vision. As part of this commitment, Tanzania-Sweden research partnership 2015-2020 was initiated with the aim of facilitating the UDSM aspirations “*Towards Enhanced Sustainability of Strategic Research and Innovation Systems for Inclusive Development in Tanzania*”. According to the agreement, UDSM-Sida Cooperation programme 2015-2020 has to implement its approved programme activities for five years with effect from July 2015 to June 2020. The programme budget for the five year duration was SEK One hundred fifty nine millions, nine hundred thousand (SEK 159,900,000).

The programme is divided into 12 sub programmes. Of these, 10 focus on research and 2 are support-programmes. UDSM-Sida Cooperation programme 2015-2020 has completed its fifth year of implementation whereby a number of expected milestones were achieved and the intended outcomes realized. The achievements have been identified in all subprogrammes including support programmes which consist of Strengthening the Research Management subprogramme and Strengthening Access to and Utilization of Research Information through Library services subprogramme. The 10 research based subprogrammes are Marine Science, Development of affordable adsorbent systems for fluoride and arsenic removal in the drinking water sources in Tanzania (DAFWAT), ENGendering AGribusiness Entrepreneurship (ENGAGE), the Sustainable Sanitation in Theory and Action (SUSTAIN), Smart GRID, Water Resources, Food Security, Sustainable Tourism, Mathematics and /MBB subprogramme. In addition, the subprogrammes are implementing their planned activities under the partnership of nine Swedish institutions which are Stockholm University, Swedish University of Agricultural Sciences, Chalmers University of Technology, University of Uppsala, University of Skövde, University of

Gothenburg, Royal Institute of Technology, Lund University, Linköping University and Mälardalen University.

1.2 Overall Programme Budget (2015-2020)

The UDSM-Sida Research Programme 2015-2020 was given a total budget amounting to SEK **159,734,245** to implement the planned activities for the period of five years with effect from 1st July 2015 to 30th June 2020. The funds allocated to UDSM amounted to SEK **92,219,245** while Swedish Partner Institutions received SEK **53,554,000** and the ISP was allocated a total of SEK **13,961,000** to cater costs for student allowances. The table below provides details of the funds allocation on yearly basis according to the approved budgets of 2015/2016 to 2019/2020 budgeted years:

Table 1: Overall Programme Budget (2015-2020)

Institution /Year	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	Total (in SEK)
UDSM	19,871,000	15,720,545	25,303,400	17,804,400	13,519,900	92,219,245
SWEDEN and ISP Coordination	9,206,000	13,255,000	11,593,000	12,865,000	6,635,000	53,554,000
ISP Students All	2,113,000	3,001,000	3,007,000	3,145,000	2,695,000	13,961,000
Grand Total	31,190,000	31,976,545	39,903,400	33,814,400	22,849,900	159,734,245

1.3 Overall Execution Rate

During the implementation of the planned activities, the overall execution rate of the UDSM-*SidaProgramme*, in Tanzania up to 30th June 2020 is expected to be 93 %. Subprogrammes' execution rate is displayed in the table below:

Table 2: Execution rate

S/N	Subprogramme	Execution Rate
	Research Management	92%
	Library	100%
	Mathematics	100%
	MBB	100%
	ENGAGE	100%
	Tourism	71%
	Marine Science	94%
	Food Security	90%
	IGRID	84%
	DAFWAT	91%
	SUSTAIN	100%
	Water Resources	94%

1.4 Major Accomplishments and Summary of Achieved Results

In general, the UDSM-Sida Programme has made a remarkable accomplishment on implementing its planned activities towards the realization of the expected outcomes aimed at building research capacity through postgraduate training and curricular development, improving research environment and infrastructure, increasing university visibility and academic reputation as well as establishing research networks and collaborations.

Human Resource Capacity Building

With regard to human resource capacity building, the programme focused in realization of the first specific objective aimed at increasing postgraduate curricula and the extent of research training for development in key strategic and priority areas.

✓ *postgraduate training*

On postgraduate training, the success can be reported with regard to enrolment and accomplishment of studies of both PhD and Masters Students received Sida support in the past five years. Specifically, 62 PhD candidates (37% female) out of a target of 64 were enrolled into various PhD programmes. This is a success rate of 97% achievement. In addition, 48 master students (48% female) were enrolled out of 36 enrolment target. This exceeded the target by 33%. With regard to accomplishment of studies, 11 PhD candidates have so far graduated and the remaining 51 candidates are at various stages of their studies. As for master's students, 21 students have graduated, while the remaining 27 students are at final stages of accomplishing their studies.

✓ *creation of curricula for postgraduate training*

In terms of creation of curricula for postgraduate training, **eight new taught PhD programmes and four master's programmes were developed and subsequently approved by the University Senate.** All eight (8) taught PhD and three (3) master's programmes have already been accredited by Tanzania Commission for Universities (TCU). Two taught PhD and two master's programmes are up and running. This achievement promises a substantial increase of qualified researchers hence improving the percentage of high skilled workers in the areas of agribusiness and entrepreneurship, sustainable tourism, food security, molecular bioscience, safe drinking water, mathematics in higher learning institutions, smart grid, sustainable water resources management, sanitation management, and marine science.

Enhancing Research Environment and Infrastructure

Improving the research environment and infrastructure at the University of Dar es Salaam through Sida support aims at increasing the utilization of equipment and infrastructure, and conformance to regulations, policies and guidelines which is the main thrust of the second specific objective of UDSM-Sida programme. In this aspect, several activities were successfully performed such as undertaking short course training to junior academic staff through mentorship programmes, procurement of research equipment as well as developing various modules geared towards having comprehensive Research Information Management System and increasing use of ICT resources.

✓ *Mentoring Activities through Short Course Training Programmes*

The initiatives comprised of short training workshops on research methods, Intellectual Property Rights (IPR), scientific writing, training on fundable proposals and training on supervision of postgraduate students. Since 2015, several training workshops focusing on the above mentioned areas were undertaken which attracted more than 1350 participants (out of them, 30% of participants were women).

✓ *Procurement of Major Research Equipment and Furniture*

With regard to improving research infrastructure, four subprogrammes procured critically needed research equipment: iGRID, IMS, MBB, Food security and DAFWAT. MBB subprogramme acquired State of the Art Lab Equipment which was immediately put into use aimed at facilitating laboratory analysis of postgraduate student research projects and teaching of undergraduate students. While Food security subprogramme procured a newly HPLC Equipment used for separation and qualification of amino acid in banana and quantifying sugar and acids on juice.

✓ *Developing Research Information Management System and increasing the use of ICT resources*

The Sida also has supported UDSM Library to purchased subscriptions to various scientific electronic-journals for accessing online resources. So far, 441,991 full-text e-journal articles have been downloaded from 2015 to December 2019 which is 88.4% of the five year target of 500,000 download. In addition, the Research Information Management System (RIMS) was developed for the purpose of

registering research projects. The introduction of RIMS has enabled researchers to register their projects online hence facilitating timely retrieval and submission of required reports to relevant authorities.

✓ *Establishment of Multidisciplinary Research Centres*

The programme also established three multidisciplinary basic and applied research centres. The established research centres have impacts of the various capacity building efforts in mathematics, tourism, marine science and to the other multidiscipline. This is out of target of establishing five research centres however the budget cuts due to refigures campaign in Sweden, affected the effort but did not completely frustrate the initiative. The established research centres are as follows:

- The East Africa Centre of Mathematics, which was officially launched in Kigali, Rwanda. The launching was held during the 10th Annual meeting of Inter-University Council for East Africa (IUCEA). The launching was officialised by Prime Minister and also attended by the Minister of education of the Government of Rwanda. The centre is hosted by IUCEA and it is collaborative research efforts between the University of Dar es Salaam-Department of Mathematics, Makerere University and University of Rwanda.
- Pangani Mari-culture Centre was officially launched on 29th March 2019 by the Chancellor, of the University of Dar es Salaam and the former President of United Republic of Tanzania, Dr. Jakaya Mrisho Kikwete. The centre is hosted by IMS in which various aquaculture researches are conducted.
- The Research Centre on Sustainable Tourism was established in 2018. The Centre, in collaboration with the Department of Marketing at UDSM and the Centre for Tourism at UoG, organised the 5th International Conference on Sustainable Tourism in Developing Countries (ICST-DC) in 2018. Moreover, the centre organized a one week training seminar on advanced scientific writing that was held at the APC Conference Centre, Mbweni, Dar es Salaam, from 17th to 23rd January, 2019.

This effort of establishment of the research centres is part of implementation of UDSM Corporate Strategic Plan 2014/15-2024/25 which, among others, intends to create research centres of excellence and technology parks, which can link research to the public and help to solve society problems.

Enhancing university visibility and academic reputation

In terms of enhancing the university visibility and academic reputation, this outcome was realized by making UDSM journals available online, enabling UDSM staff to more easily prepare and present papers at international conferences as well as encouraging UDSM staff to publish their academic papers in international peer reviewed journals.

✓ *Supporting UDSM Journals into International Standards*

The UDSM-Sida Programme since 2015 has been annually supporting the evaluation of UDSM Journals to upgrade them into international standards. So far 24 UDSM journals are accessible online in the UDSM Online Journal System. The 2018 evaluation report, showed that 10 out of the 24 journals subscribed in EBSCO, AJOL and Sabinet hence were considered as international journals as they are now included in some of the international citation databases.

✓ *Supporting UDSM Staff to disseminate their research findings at International fora*

In the course of implementing programme activities, 278 out of 300 papers from UDSM academic staff were accepted and presented in local and international conferences. This makes execution rate of 92%.

✓ *Supporting UDSM Staff and Sida Sponsored Students to publish their Scholarly Papers in Peer Reviewed Journals*

With regard to publication, So far 102/220 papers published in international peer reviewed journals which constitutes up to 46% execution.

Establishing Research Networks and Collaborations

Visibility and academic reputation can also be evidenced by university engagements in various partnerships and collaborations at national, regional and international levels.

✓ *Engagements in National and Regional Partnerships*

According to midterm self-assessment report (September 2018), 21 national and 26 international collaborations were formulated. In addition, 17 new partnerships were established. Out of these, 10 national collaborations were formalized, while 24 international collaborations were formally established. The major outcome of established collaborations and partnership is increasing of research funds apart from Sida. For instance, IMS subprogramme attracted extra research funds apart from Sida worth TZS 17,7 billion (SEK 70mill).

✓ *Linking Research and Industry*

The programme also undertook activities aimed at linking research with industry. The activities undertaken included organization of annual conferences on Research and Inclusive Development held in 2018 and 2019 respectively. During the said conferences 26 policy briefs were prepared and shared to more than 40 Members of Parliament, 50 senior Government Officials and more than 200 other stakeholders. The policy briefs covered different areas including sanitation, smart grid, food security, marine sciences, mathematics, agribusiness and gender, sustainable tourism, molecular bioscience, water resources and safe drinking water.

1.5 Rationale for the Extension of Programme Duration

In the five years of the implementation of the programme activities, UDSM-Sida Programme has made remarkable achievements in realizing its main objective aimed at generating sufficient analytical capacity and research based knowledge and technological innovations in addressing the problem of poverty and promoting sustainable and inclusive development. Substantial progress has been made towards human resource capacity building at UDSM through having highly skilled workers and qualified researchers, creating enabling research environment, enhancing university visibility as well as establishing research networks and collaborations.

Despite the impressive efforts made in realizing the programme objectives, there are few ‘unfinished’ businesses though very critical ones which need to be implemented to make the programme more successful. These ‘pending’ activities, some will need more time to be realized and others will need extra time and fund to be implemented. Some of the critical activities which have to be implemented beyond 30th June 2020 include training of 51 PhD candidates and 27 MSc students, production of the scholarly papers to be published in peer reviewed journals together with establishment of research networks and collaborations for sustainability of the research results for inclusive development.

It is against this fact that UDSM-Sida programme needs a 12 months extension to accomplish the remaining activities with effect from 1st July 2020 to 30th June 2021 with estimated budget amounting SEK 25,890,000 as summarized in the following tables.

Table 3: Total Request Budget

Institution/Year	Carried Forward	Extra Fund From Sida	Total
UDSM	8,604,000	8,084,987	16,689,000
Swedish Institutions	403,000	5,583,000	5,986,000
ISP Student Allowances	969,000	2,246,000	3,215,000
Total	9,976,000	15,914,000	25,890,000

The distribution of the funds to be executed by the 12 subprogramme is mentioned in the table below:

Table 4: Subprogrammes' Budgets

Sub-Programme		Funds expected to be forwarded from previous year	Extra Request from Sida/ Annual Allocation (July 2020-June 2021)	Total funds to be Executed
1	Research Management	2,045,800	2,617,400	4,663,000
2	Library	-	448,000	448,000
3	Mathematics	-	1,839,850	1,840,000
4	MBB	78,000	1,507,600	1,585,600
5	ENGAGE	-	2,282,650	2,283,000
6	Tourism	882,500	525,000	1,407,500
7	Marine Science	1,416,500	1,929,100	3,345,600
8	Food Security	2,573,400	1,079,500	3,652,900
9	IGRID	1,403,000	1,326,500	2,729,500
10	DAFWAT	1,150,000	1,060,000	2,210,000
11	SUSTAIN	252,300	1,237,287	1,490,000
12	Water Resources	174,100	54,700	228,800
13	Swedish coordination		-	
TOTAL (SEK)		9,976,000	15,914,000	25,890,000

1.6 Summary of the Extra Fund for the 12 Months Extension Period

As mentioned above, the total extra fund requested from Sida during the extension period is SEK 15,914,000 intended to finance activities for successful attainment of the programme objectives. With this budget, the University of Dar es Salaam is requesting SEK 8,084,987, while Swedish Research Partner Institutions will have a share of SEK 5,583,000 and the remaining SEK 2,246,000 will be used by ISP to pay student allowances during their stay in Sweden.

2. General Objectives and Expected Results

The overall objective of this programme is to generate sufficient analytical capacity and research based knowledge and technological innovations with appropriate and immediate valuable outcomes to relevant stakeholders (policy makers, industry, civil society etc.) in addressing the problem of poverty and promoting sustainable and inclusive development. In that spirit, the UDSM research and training during 2015-2020 is be guided by its Vision 2061 to be “A leading centre of intellectual wealth spearheading the quest for sustainable and inclusive development”. Taking into consideration the various achievements from earlier support from Sida and other development partners, the proposed research and training has the following specific objectives:

- (i) To increase postgraduate curricula and the extent of research training for development in key strategic and priority areas(i.e. Food Security and Agriculture, Tourism, Agribusiness, Integrated Sanitation Management, Marine Sciences, Molecular Biosciences, Mathematics in high learning

- education and Smart Grid).
- (ii) To improve research environment (that includes equipment and infrastructure, regulations, policies and guidelines).
- (iii) To increase the quality and use of research
- (iv) To Increase partnership with local, regional and international institutions/organizations for knowledge generation, sharing and utilization of research in high priority areas

3. Target (July 2020 – June 2021)

3.1 Programme objective 1: To increase postgraduate curricula and the extent of research training for development applied in key strategic priority areas

3.1.1 Planned and the specific activities to be carried out:

- i. To supervise 51 PhD students; and 27 Master students who are in various stages of their studies.
- ii. To complete development of taught Masters curricular of tourism and hospitality management

3.1.2 Expected Deliverables

- i. 1 Masters Curricula of tourism and hospitality management accredited by TCU.
- ii. 27 Masters Students graduated
- iii. 51 PhD students graduated
- iv. 8 Taught PhD Programmes and 4 Taught Programmes are up and running

3.2 Programme objective 2: To improve research environment by increasing the utilization of equipment and infrastructure, and conformance to regulations, policies and guidelines

3.2.1 Planned and the specific activities to be carried out:

- i. To expand and Integrate RIMS to other UDSM systems
- ii. To conduct sensitization of the use RIMS' modules to UDSM Researchers
- iii. To conducting training on IPR to researchers of Sida programme
- iv. To Support subprogrammes to write fundable research proposals for sustainability research at UDSM
- v. To Supervise 4 Postdocs enrolled at IMS-UDSM

3.2.2 Expected Deliverables

- i. 100% Completion of development of RIMS
- ii. Increase the use of RIMS by 100%
- iii. 19 sensitization workshops of the use RIMS' modules to UDSM Researchers conducted
- iv. 20 Drafts of Intellectual Property developed
- v. 150 Researchers of UDSM Programme equipped skills on IPR
- vi. 12 subprogrammes and 1 Institutional fundable research proposals submitted to Sida for possible funding in the next phase
- vii. 3 research centres supported
- viii. 4 Postdocs graduate
- ix. 5 patent initiated

3.3. Programme objective 3: Increase the quality and use of research relevant to high priority issues of national development

3.3.1 Planned and the specific activities to be carried out:

- i. To write and develop 10 policy briefs
- ii. To produce TV and Radio programmes based on research findings and innovations through SJMC.
- iii. To support 5 units to organize local and international conferences and exhibitions
- iv. To organise the 3rd Conference of Research and Inclusive Development in Zanzibar
- v. To organize the international conference on sustainable tourism in developing countries (ICST-DC)
- vi. To subscribe e-learning resources database
- vii. To dignitaries the print local content research items (Thesis and Dissertation Abstracts)

3.3.2 Expected Deliverables

- i. At least 100 Peer reviewed journal papers published
- ii. At least ten (10) policy briefs published
- iii. 50 TV and Radio programs of UDSM-Sida research findings and innovations disseminated
- iv. At least 59 conference papers presented at various conferences
- v. 5 units supported to organize local and international conferences and exhibitions
- vi. The 3rd Conference of Research and Inclusive Development organised in Zanzibar
- vii. international conference on sustainable tourism in developing countries (ICST-DC) organised
- viii. 4 E-learning resources databasessubscribed
- ix. 1 subject-based online database used to access thesis and dissertation abstracts
- x. Publication of the Book: Tourism and Sustainable Development in Tanzania

3.4 Programme objective 4: Increase partnerships with local, regional and international institutions/organizations for knowledge generation, sharing and utilization of research in high priority areas

3.4.1 Planned and the specific activities to be carried out:

- i. To conduct stakeholders meeting with Strategic research collaboration and networking with key stakeholders, i.e., Government, industry and end-users.
- ii. To conduct outreach activities
- iii. To establish local, regional and international research collaborations and partnerships

3.4.2 Expected Deliverables

- i. 16 stakeholders meetings with Strategic research collaboration and networking with key stakeholders, i.e., Government, industry and end-users conducted.
- ii. 10 outreach activities in terms of seminars conducted for industry and practitioners
- iii. commercialization of research results
- iv. ARUA and EARIMA reginal activities attended
- v. Each Subprogramme established at least one regional collaboration and Partnership

4. Analysis and Justification

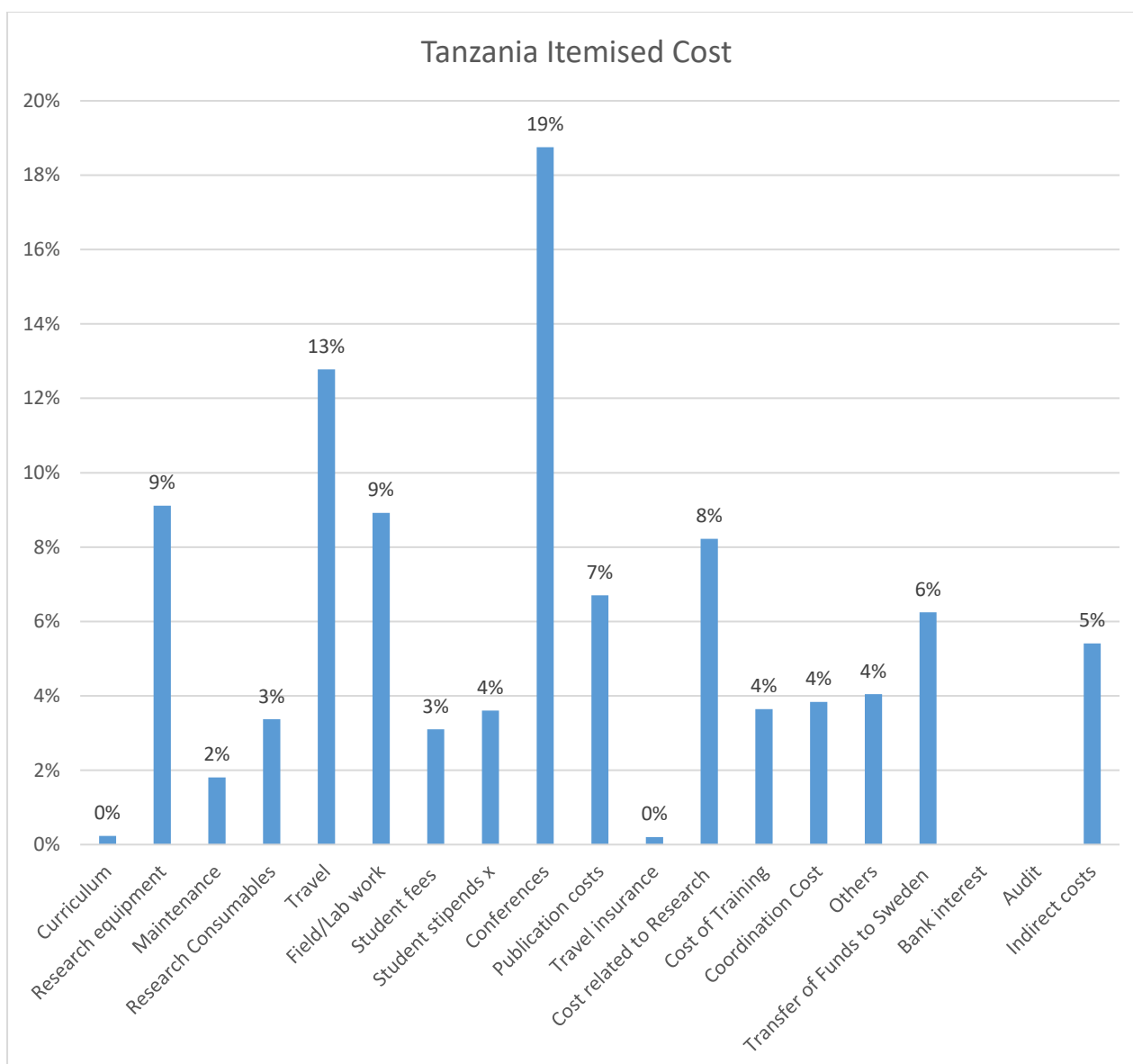
Budget: In the extension period, the programme is planning to spend a total of SEK 25,890,000 (equivalent to Tshs 6,226,278,020), with the fifty one (51) PhD, four (4) Post doc and Twenty seven (27) MSc research activities in Tanzania to spend SEK 16,689,000 (Tshs 3,946,098,500), PhD student stays in Sweden (ISP allocation) SEK 3,215,000 (Tshs 843,540,000), Swedish counterparts (supervision) – SEK 5,986,000 (Tshs 1,436,639,520). **Therefore the Programme is requesting a total of SEK 25,890,000, in which SEK 9,976,000 is carried forward amount from 2015-2020 agreement and SEK 15,914,000 is extra fund from Sida,** to supplement the following major cost as detailed in the below analysis per partner institutions:

A. TANZANIA-University of Dar es Salaam

University of Dar es Salaam is requesting SEK 16,689,000 (Tshs 3,946,098,500) to implement various programme activities during extended period. Out of the requested budget for Tanzania, a total of SEK 8,604,000 (Tshs 2,106,970,100), which is over 52% is expected to come from the original budget while SEK 8,084,987 (Tshs 1,911,218,400) is extra fund requested from Sida. This means the programme is extended for period of one year (12 months) and the cost which is generally regarded as cost-base extension. This is because all 12 subprogrammes are requesting extra cost with minor and major deviations. The analysis as per cost item is as follows:

- (i) **Conference Supports (SEK 3,129,674):** This cost counts 19% of overall cost in which 42% of the cost is from original budget and 58% is from the extra funding from Sida. It is for the fact that, the programme will host two research conferences, which are the ICST-DC 2021 and 3rd Conference of Research and Inclusive Development. Furthermore, through this cost item students will be supported to attend international conferences and furthermore three tourism subprogramme stakeholders will be accommodated in Sweden to write papers for publication. This is because local and international conferences have been cancelled in 2020 because of Covid-19 pandemic and hence the activities have been forwarded to the 2020/2021 implementation year.
- (ii) **Travel Cost (SEK 2,133,147):** This cost counts 13% of overall cost in which 32% of the cost is from original budget and 68% is from the extra funding from Sida. This is fact that, more than 27 PhD students are registered in Sweden Universities and also 45 students are in Sandwich mode therefore, more than 30 students will be supported to travel to Sweden to finalize their studies and other students will be supported to attend conferences in various countries. Some students have to go back to Sweden from July because they have been interrupted by existence of Covid-19 in 2019/2020 implementation year.
- (iii) **Research equipment (SEK 1,520,500):** This cost item counts 9% of overall cost in which 96% of the cost is from original budget and only 4% is from the extra funding from Sida. 95% of procurement are done since inception of the programme however there are few remaining by DAFWAT, IGRID, Food Security and IMS subprogrammes. The delays were contributed with persistence situation of Covid-19 pandemic. However, most of them are at the final stage of procurement.
- (iv) **Research field costs (SEK 1,488,907):** This cost counts 9% of overall cost in which 42% of the cost is from original budget and 58% is from the extra funding from Sida. It is for the fact that, around 21/51 PhD and 3 PostDoc and 10/27 Masters Students will finalize their field work towards completion their studies.

- (v) **Cost related to Research (SEK 1,372,375):** This cost item counts 7% of overall cost in which 58% of the cost is from original budget and only 42% is from the extra funding from Sida. The cost item covers cost to finalize preparation of Research management information systems, organization of 16 stakeholders' workshops and also cost of dissemination findings through soft and hard media.
- (vi) **Students' stipends (SEK 594,596) and student's fees (514,148):** This cost items count 8% of overall cost in which 60% of the cost is from original budget and only 40% is from the extra funding from Sida. This is for fact that more than 25 PhD students' scholarship contracts are ended in 2021. Therefore, there are accrued students stipend and school fees in Tanzania.
- (vii) **Transfer of Funds to Sweden (SEK 1,043,000):** This cost item counts 6% of overall cost in which 100% of the cost is from original budget. The transfer of fund to ISP is to cover students allowance and Supervision cost in Sweden. The transfer is only made by Food Security subprogramme to enable to students to finalize their studies in Sweden Universities. This is because all eight (8) PhD students under food security are registered in in Sweden and so far, one one graduated and the remaining are at various level of their studies.
- (viii) **Coordination Cost (SEK 640,000):** This cost item counts 4% of overall cost in which 74% of the cost is from original budget and only 26% is from the extra funding from Sida. This cost item is significantly covers coordination activities for effective management of the programme. The activities include preparation of the next phase and also closure of the current phase.
- (ix) **Indirect cost (SEK 903,349):** This cost item counts 5% of overall cost in which 100% is from the extra funding from Sida. This is required institutional fee to support the implementation of the programme at the University of Dar es Salaam.
- (x) **Other Cost:** such as cost of training (4%), publication (7%), maintenance (2%), research consumable (3%) and other cost (4%).



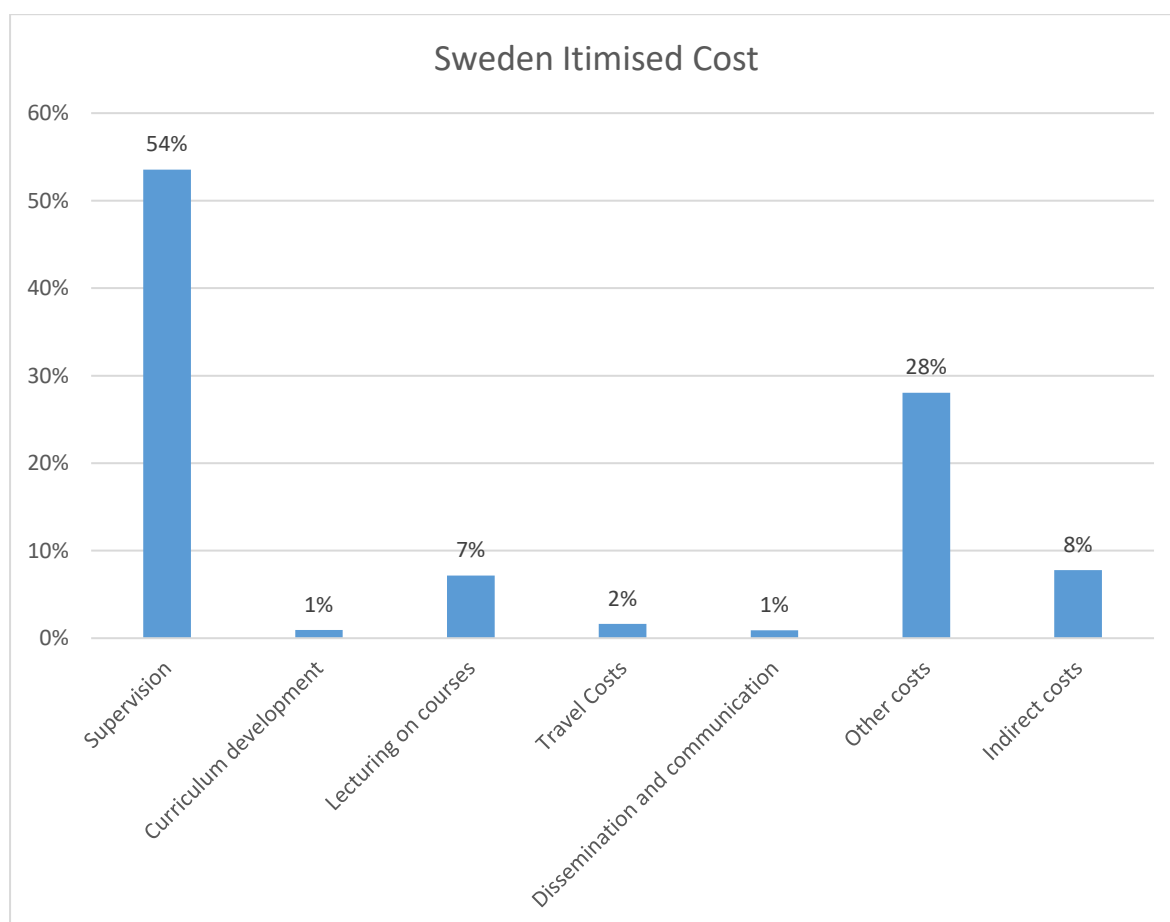
B. SWEDEN-Universities

Swedish High Learning Institutions are requesting SEK 5,986,000 (Tshs 1,436,639,520) to implement various programme activities in Sweden during the extended period. Out of the requested budget for Swedish High Learning Institutions, a total of SEK 5,583,000 (Tshs 1,339,919,520), which is over 80% is extra fund requested from Sida while SEK 403,000 (Tshs 96,720,000) is expected to come from original budget. Four out of eleven subprogrammes, include Tourism, Food security, SUSTAIN and Water resources in Sweden are requesting no-cost extension. The analysis as per cost item is as follows:

- (i) **Supervision (SEK 3,205,000):** This cost item counts 54% of overall cost in which 100% is from the extra funding from Sida. This is for fact that, there are more than 30 students will be supervised in Sweden to finalize their studies. However, the mathematic subprogramme accrued SEK 750,000 supervision cost which was not paid in 2019/2020 implementation year.
- (ii) **Curriculum development (SEK 57,000):** This cost item counts only 1% of overall budget and it is 100% extra funding from Sida. This is requested by ENGAGE subprogramme to kick off the new curricular accredited by TCU. The curricular is expected to be operational

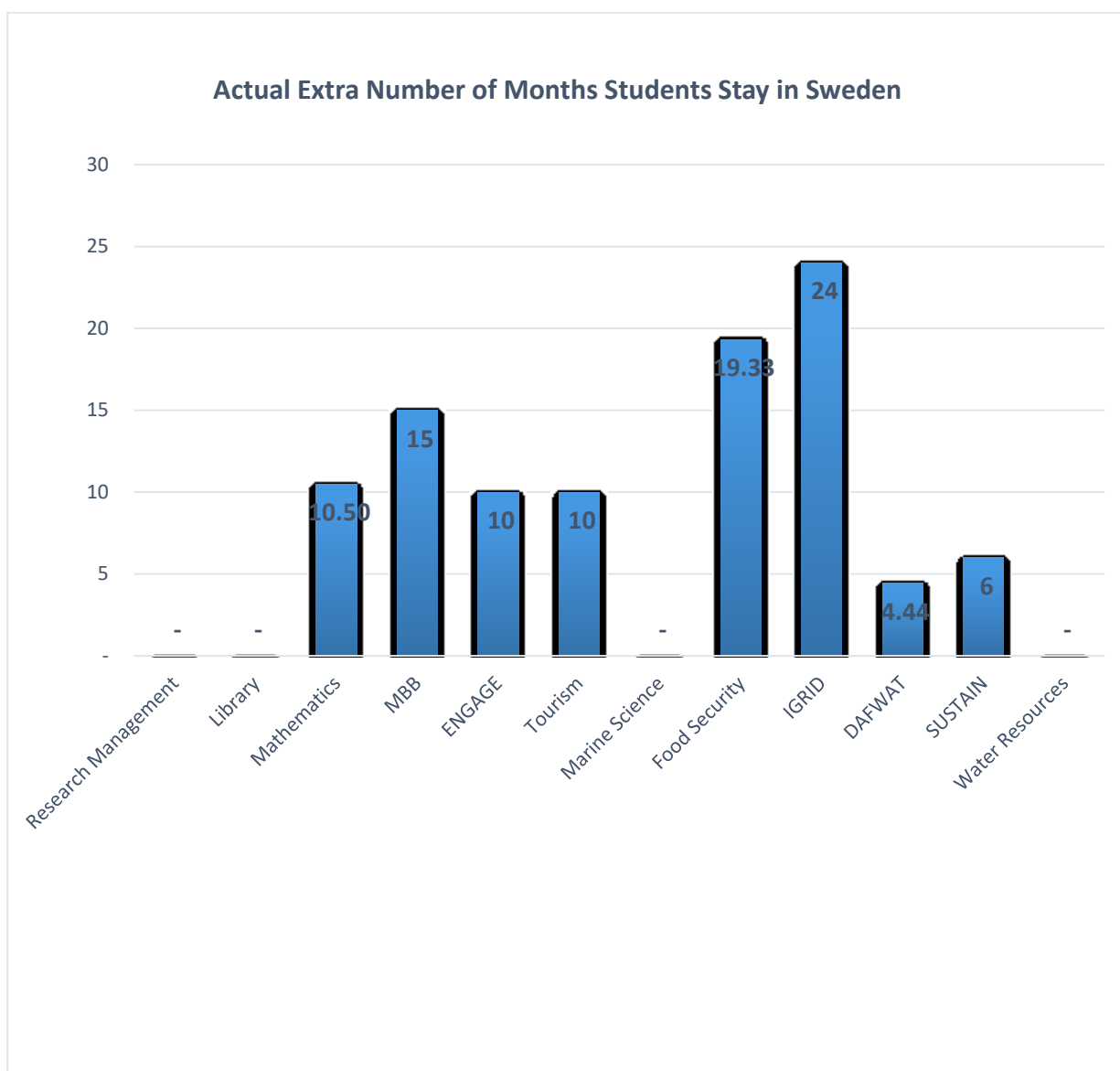
from July 2020.

- (iii) **Lecturing on courses (SEK 429,000):** This cost item counts 7% of overall cost and it is 100% extra funding from Sida.
- (iv) **Travel Costs (SEK 97,000):** This cost item counts 2% of overall cost and it is 100% extra funding from Sida. This is to cover travel cost of visit partners in Sweden to Tanzania to engage supervision and other programme activities for example preparation of the subprogramme new phase proposals.
- (v) **Dissemination and communication (SEK 54,000):** This cost item counts 5% of overall cost and it is 100% extra funding from Sida. This for covering the conference attendance as the programme is approaching to the end and the students and supervisors will have research findings to communicate to wide end users.
- (vi) **Other costs (SEK 1,678,398):** This cost item counts 28% of overall cost in which 24% of the cost is from original budget and only 76% is from the extra funding from Sida.
- (vii) **Indirect cost to high learning Institutions (SEK 465,850):** This cost item counts 8% of overall cost and it is 100% extra funding from Sida. This is required institutional fee to support the implementation of the programme at the partners High Learning Institutions in Sweden.



C. SWEDEN-ISP Students Allowances

The total of SEK 3,215,000 (Tshs 843,540,000) to support to Students to stay in Sweden during the extended period for 178 months. Out of the requested amount, a total of SEK 2,246,000 (Tshs 610,980,000), which is over 70% is extra fund requested from Sida while SEK 969,000 (Tshs 232,560,000) is remaining balance from original budget. However, the mathematic subprogramme accrued SEK 378000 stipends allowance in Sweden because over stay of three students for 21 months (each 7 months, see in the table below) in 2019/2020. Remarkably, three out of ten research based subprogrammes, include Tourism and Water resources; are requesting no-cost extension in term of ISP-Students Allowances. The table below describes extra number of months students of each subprogramme will stay in Sweden:



D. Risk Assessment

Risks	Mitigation and Adaptation measures	Responsible person
Persistence existence of COVID-19 pandemic to affect the implementation of programme activities such conferences and travel	<ul style="list-style-type: none"> ➤ Online participation of the conferences and PhD viva voice ➤ Online Students Supervision ➤ Online attendance of APM and ARM ➤ Online participation of preparation of next phase subprogramme proposals. 	UDSM Sida Coordinator, PIs, Swedish counterparts, students and ISP coordinator
Delays of students to complete their studies	<ul style="list-style-type: none"> ➤ Close monitoring by the university through its machinery ➤ Good governance of Steering Committee and Close monitoring of UDSM Sida coordinator, PIs and Supervisors ➤ Postgraduate Supervision Training will be provided to supervisors ➤ Scientific writing and research methodology trainings will be provided to students ➤ Timely submission of student schedules for visit to Sweden ➤ Each subprogram to have coordination meetings with partner institutions. ➤ ISP to ensure harmonization of activities in Swedish partner institutions 	UDSM Sida Coordinators, PIs, Supervisors, heads of departments, Deans, DPGS, DRP and Swedish counterparts
Tedious and lengthy procurement process enforced by the Public Procurement Act and not all PIs are very conversant with this act.	<ul style="list-style-type: none"> ➤ Preparation of annual procurement plan and timely submission for processing. ➤ Procurement manual prepared ➤ Online government procurement used to simplify electronic tracking of requisitions. ➤ Decentralised tender boards established 	Sida Coordinator and Secretariat has budget set aside for this activity under Sida Research Management sub-program under Cost of training budget line.

5. Enclosures

1. UDSM Programme Overall Aggregated Budget
2. Programme Detailed Budget
3. Results Based Management (RBM) Matrix (July 2020-June 2021)
4. Aggregated Student Progress and Plan (July 2020-June 2021)

Enclosures 1: Programme Overall Aggregated Budget

UDSM-SIDA RESEARCH PROGRAMME 2015-2020													
OVERALL INSTITUTIONAL BUDGET FOR 12 MONTHS EXTENSION PERIOD: JULY 2020 - JUNE 2021													
Date: 30.05.2020													
Overall Programme: ANNUAL PLAN AND BUDGET													
Fiscal Year: 2020/2021 (12 MONTHS EXTENSION)													
Tanzanian Institution: UNIVERSITY OF DAR ES SALAAM													
JULY 2020 - JUNE 2021													
Sub-Programme		Funds expected to be forwarded from previous year				Annual Allocation (July 2020-March 2021)				Total funds to be Executed			
S/N		TZA	SWE	ISP Allowances	Total	TZA	SWE	ISP Allowances	Annual Allocation	TZA	SWE	ISP Allowances	TOTAL
1	Research Management	1,642,800	403,000	0	2,045,800	2,131,400	486,000	-	2,617,400	3,774,200	889,000	-	4,663,000
2	Library	-	0	0	-	448,000	-	-	448,000	448,000	-	-	448,000
3	Mathematics	-	0	0	-	279,400	993,450	567,000	1,839,850	279,400	993,450	567,000	1,840,000
4	MBB	24,000	0	54,000	78,000	1,112,600	125,000	270,000	1,507,600	1,136,600	125,000	324,000	1,585,600
5	ENGAGE	-	0	0	-	699,900	1,402,750	180,000	2,282,650	699,900	1,402,750	180,000	2,283,000
6	Tourism	882,500	0	0	882,500	110,000	415,000	-	525,000	992,500	415,000	-	1,407,000
7	Marine Science	1,140,500	0	276,000	1,416,500	696,100	885,000	348,000	1,929,100	1,836,600	885,000	624,000	3,345,600
8	Food Security	2,573,400	0	0	2,573,400	151,500	496,000	432,000	1,079,500	2,724,900	496,000	432,000	3,652,900
9	IGRID	1,403,000	0	0	1,403,000	816,500	430,000	80,000	1,326,500	2,219,500	430,000	80,000	2,729,500
10	DAFWAT	763,000	0	387,000	1,150,000	449,000	350,000	261,000	1,060,000	1,212,000	350,000	648,000	2,210,000
11	SUSTAIN	36,300	0	216,000	252,300	1,129,287	-	108,000	1,237,287	1,165,587	-	324,000	1,490,000
12	Water Resources	138,100	0	36,000	174,100	61,300	-	-	61,300	199,400	-	36,000	235,400
13	coordination								-		-		
TOTAL (SEK)		8,604,000	403,000	969,000	9,976,000	8,084,987	5,583,000	2,246,000	15,914,000	16,689,000	5,986,000	3,215,000	25,890,000

Enclosures 2: Programme Detailed Budget

UDSM-SIDA RESEARCH PROGRAMME 2015-2021											
OVERALL INSTITUTIONAL BUDGET FOR 12 MONTHS EXTENSION PERIOD: JULY 2020 - JUNE 2021											
Period: 1st July 2020 to 30th June 2021											
Tanzanian Institution/Dept: University of Dar es Salaam											
Date:30th May 2020		exchange rate	240 TZS/SEK								
OBS Student allowances should be under ISP											
	Tanzania	Funds expected to be forwarded from preivous year		Allocated funds July-December 2020		Allocated funds Jan-March 2021		Total allocated funds		Total funds to be executed	
		SEK	TZS	SEK	TZS	SEK	TZS	SEK	TZS	SEK	TZS
1	Curriculum	39,000	9,360,000	-	-	-	-	-	-	39,000	9,360,000
2	Research equipment	1,458,500	380,040,000	25,000	6,000,000	25,000	6,000,000	62,000	12,000,000	1,520,500	362,040,000
3	Maintenance	100,000	24,000,000	100,833	24,200,000	100,833	24,200,000	201,667	48,400,000	301,667	72,400,000
4	Research Consumables	428,038	107,229,231	72,315	17,355,600	62,315	14,955,600	134,630	32,311,200	562,668	135,040,431
5	Travel	678,630	162,871,200	745,008	178,802,000	549,508	131,882,000	1,454,517	307,084,000	2,133,147	469,955,200
6	Field/Lab work	631,574	168,929,778	428,667	102,880,000	428,667	102,880,000	857,333	205,760,000	1,488,907	357,337,778
7	Student fees	289,000	69,360,000	113,894	27,334,444	24,894	27,334,444	227,787	54,668,889	516,787	124,028,889
8	Student stipends x	365,763	92,373,111	114,000	27,360,000	114,000	27,360,000	235,500	54,720,000	601,263	142,503,111
9	Conferences	1,316,520	315,964,800	861,440	206,745,520	951,715	228,411,520	1,813,154	435,157,040	3,129,674	751,121,840
10	Publication costs	690,941	168,825,920	212,517	51,004,000	214,817	51,556,000	427,333	102,560,000	1,118,275	268,385,920
11	Travel insurance	16,200	3,888,000	11,292	2,710,000	6,500	1,560,000	17,792	4,270,000	33,992	8,158,000
12	Cost related to Research	708,500	170,040,000	331,938	79,665,000	331,938	79,665,000	663,875	189,330,000	1,372,375	329,370,000
13	Cost of Training	365,000	87,600,000	121,667	29,200,000	121,667	29,200,000	243,333	58,400,000	608,333	146,000,000
14	Coordination Cost	473,000	113,520,000	83,500	20,040,000	83,500	20,040,000	167,000	40,080,000	640,000	153,600,000
15	Others	-	-	337,780	81,067,200	337,780	81,067,200	675,560	162,134,400	675,560	162,134,400
16	Transfer of Funds to Sweden	1,043,000	250,320,000	-	-	-	-	-	-	1,043,000	250,320,000
17	Bank interest	-	-	-	-	-	-	-	-	-	-
18	Audit	-	-	-	-	-	-	-	-	-	-
19	Indirect costs	-	-	438,557	103,866,552	424,431	100,476,312	903,349	204,342,864	903,349	204,342,864
	SUB TOTAL	8,604,000	2,106,970,100	3,998,200	958,230,400	3,777,400	926,588,200	8,084,987	1,911,218,400	16,689,000	3,946,098,500
	Sweden										
1	Supervision	-	-	1,708,000	409,920,000	1,496,750	359,220,000	3,204,750	769,140,000	3,205,000	769,140,000
2	Curriculum development	-	-	28,500	6,840,000	28,500	6,840,000	57,000	13,680,000	57,000	13,680,000
3	Lecturing on courses	-	-	214,500	51,480,000	214,500	51,480,000	429,000	102,960,000	429,000	102,960,000
4	Travel Costs	-	-	48,500	11,640,000	48,500	11,640,000	97,000	23,280,000	97,000	23,280,000
5	Dissemination and communication	-	-	27,000	6,480,000	27,000	6,480,000	54,000	12,960,000	54,000	12,960,000
6	Other costs	403,000	96,720,000	637,699	153,047,760	637,699	153,047,760	1,275,398	306,095,520	1,678,398	402,815,520
7	Indirect costs	-	-	232,925	55,902,000	232,925	55,902,000	465,850	111,804,000	465,850	111,804,000
	SUB TOTAL	403,000	96,720,000	2,897,124	695,309,760	2,686,000	644,609,760	5,583,000	1,339,919,520	5,986,000	1,436,639,520
	ISP - student allowances	969,000	232,560,000	1,123,000	303,120,000	1,123,000	269,520,000	2,246,000	610,980,000	3,215,000	843,540,000
	SUB-TOTAL ISP	969,000	232,560,000	1,123,000	303,120,000	1,123,000	269,520,000	2,246,000	610,980,000	3,215,000	843,540,000
	GRAND TOTAL	9,976,000	2,436,250,100	8,018,324	1,956,660,160	7,586,400	1,840,717,960	15,914,000	3,862,117,920	25,890,000	6,226,278,020

Enclosure 3: Results Based Management (RBM) Matrix (July 2020-June 2021)

Summary Problem Statement: UDSM has inadequate analytical, research infrastructure and innovation outputs to generate appropriate and valuable outcomes to the society

Overall objective: To generate and utilise sufficient analytical capacity and research based knowledge and technological innovations with appropriate and immediate valuable outcomes to relevant stakeholders (policy makers, industry, civil society etc.) in addressing problem of poverty and promoting sustainable and inclusive development.

Specific Objective # 1: To increase postgraduate curricula and the extent of research training for development applied in key strategic priority areas by 2021

Specific Objective # 2: To improve research environment by increasing the utilization of equipment and infrastructure, and conformance to regulations, policies and guidelines) by 2021

Specific Objective # 3: To increase the quality and use of research relevant to high priority issues of national development by 2021

Specific Objective # 4: To Increase partnerships with local, regional and international institutions/organizations for knowledge generation, sharing and utilization of research in high priority areas by 2021.

OVERALL RESULTS BASED MATRIX LOGFRAME

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
Specific Objective # 1: To increase the postgraduate curricula and the extent of research training for development applied in key strategic priority areas						
Taught PhD programmes in key strategic and priority areas prepared	1.1 At least 8 new PhD programmes accredited, by 2018	Number of PhD programmes accredited	6 existing Taught PhD programmes at UDSM in 2015	8 Taught PhD Programmes operational		
Taught Masters programmes in key strategic and priority areas prepared	1.2 At least 3 new Masters programmes accredited by	Number of Masters programmes accredited	75 existing Taught Masters programmes at UDSM in 2015	4 new Masters' Programmes operational 1 Taught Masters' of tourism accredited by TCU.		
Selected existing PhD programmes reviewed and revised	1.3 Two existing PhD programmes approved, by 2018	Number of PhD programs approved by UDSM Senate	One PhD programme reviewed and approved by Senate in 2015	Operational		
Selected existing Masters programmes reviewed	1.4 Four existing Masters programmes approved, by 2018	Number of Masters programs approved by UDSM Senate	One MSc programme reviewed in 2015	Operational		

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
Trained Masters graduates, half of which are women	1.5 At least 36 Masters graduates graduated by 2020.	Number of Master graduates	232 Masters students trained in previous Sida support phase	27/48(48% female) Masters supervised and graduated		
Trained PhD graduates, half of which are women	1.6 At least 64 PhD graduates enrolled and graduated by 2020.	Number of PhD graduates	80 PhD students trained in previous Sida support phase	51/62 (38% female) PhD students supervised and graduated		
Trained UDSM staff at PhD level	1.7 Academic staff with PhD increased by at least 10% by 2020.	% of academic staff with PhD	UDSM has 515 staff who are PhD holders	28 staff/PhD students supervised		
Assumptions for Specific Objective 1 <ul style="list-style-type: none"> ➤ External stakeholders to the University are involved in the design and development of the new programmes ➤ UDSM Senate and the Council are supportive of the multi-disciplinary curricula in new high priority areas ➤ Additional funding available for the new programmes 						
Specific Objective # 2: To improve research environment by increasing the utilization of equipment and infrastructure, and conformance to regulations, policies and guidelines)						
Research agenda reviewed and revised	2.1 UDSM-wide research agenda approved by 2017	One UDSM Research Agenda document in place	UDSM Research Agenda 2009-2018	In use		
	2.2 Increase of (at least 50%) a research focused on UDSM research agenda, by 2020	Extent to which research focused on UDSM agenda	UDSM Research Agenda 2009-2018	In use		
New laboratory facilities	2.3 High quality research using the new equipment	Extent to which labs are used	50% utilization rate in previous Sida funding period	100% of the major procurement accomplished		
New state of the art lab equipment	2.4 Increased use of research facilities/lab by at least 10 externally funded research projects, by 2020	Extent to which staff and visiting researchers use equipment	6 Research projects conducted using the equipment acquired in the previous phase	Four funded projects (MBB, IMS, Food security, DAFWAT) use the facility procured in the current programme		
Upgraded ICT infrastructure	2.5 Increase of at least 100% use of online database by UDSM researchers	Number of downloads	90% students and 70% academic staff using online ICT materials	20% of UDSM staff using online ICT materials		
Research Information Management System developed and used	1.1 Timely reporting of the progress to the satisfaction of all stakeholders by December 2018.	<ul style="list-style-type: none"> • RIMS available and working • PIs are effectively using the system for planning and reporting 	<ul style="list-style-type: none"> • RIMS Phase-I which is in use since July 2017 • Fragmented research 	100% of the proper research management system in place		

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
		purposes <ul style="list-style-type: none"> Online registrations and downloads of UDSM projects information 	information available			
500 postgraduate students trained in scientific writing skills, research methodology, IPR 40% of which are female	2.6 At least 50% of students produce 1 scientific articles in peer reviewed journals	Number of publications produced, 40% produced by women students	60 students trained in 2014	-150 academic staff equipped with the skills on Intellectual Property Rights (IPR).		
300 Academic staff trained in postgraduate student supervision skills, 40% of which are female	2.7 At least 300 academic staff apply new postgraduate student supervision.	Number of academic staff trained	6 ToT and 117 members of staff trained in research supervision between 2009 – 2014	Done		
Multidisciplinary centres of excellence for public/private partnerships in research and innovation	2.8 At least 6 Innovation clusters formed with appropriate technologies for value additions in place	Number of research centres of excellency established	Two multidisciplinary centres in research, innovation and entrepreneurship	3 Research Centres supported		
Highly analytical capacities enhanced through postdoctoral research	2.9 At least 20 Postdocs enrolled at UDSM by 2020	Number of Postdocs enrolled	No postdocs in previous Sida support	4 postdocs enrolled and supervised.		
Assumptions for specific objective 2 <ul style="list-style-type: none"> Research guidelines and policies are in place at UDSM Research agenda developed and adopted Programme Coordinators are aware of the procurement procedures Research Information Management System developed and used Research groups grow into Research Centres of Excellency 						
Specific Objective # 3: To increase the quality and use of research relevant to high priority issues of national development						
Uploaded institutional research results in electronic database Publications in highly ranked peer reviewed journals increased	3.1 Enhanced visibility and reputation of UDSM by 2018 3.2 At least 220 publications in peer reviewed local and	Higher ranking of UDSM nationally and internationally Number of peer reviewed articles	UDSM Ranked 39 th in 2015 by journal consortium organization	UDSM ranked higher than the previous ranking At least 100 peer reviewed articles		

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
	international journals by 2020		211 journal articles from the previous Sida support			
Patent in local and rational bodies increased	3.3 At least 3 patents granted by 2020	Number of patents approved	2 patents at UDSM	5 patent initiated		
Organization and hosting of dissemination conferences and workshops	3.4 At least four (4) Sida sponsored conferences hosted by 2020	(i) Number of conferences hosted (ii) Number of articles presented (iii) Number of articles published	2 conferences in previous Sida funding	(iv) 5 units to be supported to conduct dissemination conferences (v) The 3 rd Conference of Research and Inclusive Development Organised (vi) The conference Sustainable Tourism organised (vii) 50 TV and Radio programs of UDSM-Sida research findings and innovations disseminated		
	3.5 5 policy briefs from PhD candidates published and disseminated by 2020	(viii) Numer of policy birefs	0	(ix) 20 policy briefs available		
	3.6 Five (5) research findings/results successfully commercialised	(x) Number of Participants (xi) Number of findings	0	(xii) 300 participants/stakeholders from public and private organizations aware of research findings through policy briefs. 10 stakeholder workshop to be conducted. (xiii) At least Five (5) research findings/results successfully commercialised		
	3.7 5 UDSM research week Organised by 2010 to increase visibility	Research week supported annually Number of units participated in the event	1 research week organised in 2015 at UDSM. Number of visitors	One research week organised		

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
Outreach programmes increased	3.8 At least 10 outreach programmes performed in local communities by 2020	Number of outreach programmes	2 Outreach programmes in previous Sida funding	At least 3 outreach programme facilitated		
Assumptions for Specific Objective 3 <ul style="list-style-type: none"> UDSM continues to attract and retain highly qualified and trained staff to undertake quality research UDSM staff pursue high quality research that can be published in quality journals 						
Specific Objective # 4: To Increase partnerships with local, regional and international institutions/organizations for knowledge generation, sharing and utilization of research in high priority areas						
Collaborative research with specific industries formulated	4.1 Threefold increase in collaborative joint efforts between researchers and industries in external settings, by 2020	Number of collaborative research projects involving use of University-based research	5 during previous Sida funding period	Collaborative research formulated (i) Up to five (5) research centres/Multi-disciplinary research groups focused on strategic national priorities established to enhance research networks and collaboration with key stakeholders of the project (ii) Up to five (5) professorial chairs supported in organizing their annual events. (iii) Sida programme based multidisciplinary research centres of excellence established to support the next Sida phase research activities. (iv) At least 10 groups supported to develop competitive proposals. (v) Proposals prepared and submitted for funding in the next phase of Sida support (vi) 5 staff attend ARUA meetings/workshops as a way of increasing UDSM visibility at international arena.		

Outputs	Outcomes	Performance indicator of outcome	Baseline	Annual Outcome Targets for 2020/21	Actual Outcomes Achieved: Results Observed in year (2020/21)	[Key] Outputs produced in year to obtain Outcome in 2020/21
				(viii) At least 5 networking visitations by DRP, DPS and PRO to the private and public organs supported.		
Dissemination workshops conducted	4.2 Double workshops for dissemination of research results, by 2020	Number of Sida funded workshop proceedings/ research papers cited/referenced	20 workshops during previous Sida funding period	At least 16 workshops organised		
Technical assistance/ advice to public offices and private firms provided	4.3 Double public policies developed/reviewed (in part) based on research results, by 2020.	Number of public policies	2 during the previous Sida – funded program	20 policy briefs available		
Researchers advisory roles in public and private institutional boards increased with at least 50% female researchers	4.4 Double public policies supported in part by researchers, by 2020	Number of researchers active in external boards	20 during the previous Sida support	5 researchers involved in advisory roles		
Scientific papers prepared and submitted to conferences	4.5 Double scientific papers in local, regional and international conferences by 2020.	Number of invitations to present scientific papers in local, regional and international conferences	230 presentations in the previous Sida funding phase	More than 59 papers presented in international and national conference		

Enclosure 4: Overall Aggregated Student Plan/Progress

A. Overall Aggregated PhD Student Plan/Progress

S/N	PhD training Name of research student:	(M/F)	Year training <u>started</u>	Training in Sweden (<u>no. months</u>)	<u>Local PhD</u> Expected/ Year of <u>completion</u>	<u>Sandwich</u> <u>PhD</u> Expected/ Year of <u>completion</u>	<u>Progress</u> <u>%</u>	<u>Title of dissertation</u>
MATHEMATICS SUBPROGRAMME								
1.	Edward Ngailo	M	2016	40	NA	June 2020	95%	On the product of inverse covariance matrix and normal vector with applications to Discriminate analysis and Portfolio theory
2.	Pitos Selekka	M	2016	40.5	NA	Dec. 2020	90%	PageRank algorithms, Markov chains and matrix analysis for changing networks and analysis of big data
3.	Uledi Ngulo	M	2016	40	NA	June 2021	70%	An Investigation of decomposition methods for solving large-scale Multi-level Optimization models.
MBB SUBPROGRAMME								
4.	Juma Hussein	M	2016	39	NA	Completed	<u>100%</u>	Investigation of some economically important Mushrooms of Tanzania
5.	Stella Temu	F	2016	42	NA	October 2020	<u>80%</u>	Taxonomy of Tanzania cloud forest lichens
6.	3. Donatha Damian	M	2016	6	March 2021	NA	<u>70%</u>	Viral metagenomics and molecular epidemiology of vector-borne diseases in the wildlife-livestock interface
7.	HeriethRhodes Mero	F	2016	6	June 2021	NA	<u>65%</u>	Genetic diversity and Chloroplast genomics of cassava land cares and selected wild cassava relatives in Tanzania
8.	BernadetherRugumisha	F	2016	6	March 2021	NA	<u>70%</u>	Influence of inter-pregnancy interval after abortion on vaginal microbiome during the first trimester
9.	Jackson Thomas Mollel	M	2016	6	March 2021	NA	<u>70%</u>	Investigation of anti-HIV-1 activity and inhibitory properties of medicinal plants used for treatment and management of HIV/AIDS in Tanzanian
10.	Reuben Silas Maghembe	M	2016	6	March 2020	NA	<u>70%</u>	Molecular mapping of diversity and bioactivity of microalgae from selected marine and fresh water ecosystems in Tanzania
ENGAGE SUBPROGRAMME								
11.	Merezia Wilson Bambaganya.	F	2016	12	September2 020	NA	<u>60%</u>	Rural entrepreneurship in Tanzania: Socio-spatial context and women engagement in agribusiness

S/N	PhD training Name of research student:	(M/F)	Year training started	Training in Sweden (no. months)	Local PhD Expected/ Year of completion	Sandwich PhD Expected/ Year of completion	Progress %	Title of dissertation
12.	Mesia Lomo Research.	M	2016	9	December 2020	NA	70%	Gender and participation of women and men in the rice value chain and rice marketplaces in Tanzania
13.	Mohamed A. Semkunde.	M	2016	9	January 2021	NA	60%	Rural Entrepreneurship in women Producer Groups: The case of Rice Producers in Tanzania
TOURISM SUBPROGRAMME								
14.	Msafiri Njoroge Ngajeni	M	2015		November 2019		100%	Entrepreneurial Orientation and Corporate Sustainability: A Study of Tourist Hotels in Tanzania
15.	Patrokil Kanje	M	2015		January 2020		100%	The Influence of Tourists' Motivation and Customer Engagement on Electronic Word of Mouth Behavior in Social Media
16.	Said Suluo	M	2015		June 2020		100%	Impact of Corporate Sustainability Practices on Financial Performance: The Case of Tourism Enterprises in Tanzania
17.	Theresia Busagara	F	2015		June 2020		100%	Firm Innovativeness through interactions and customer participation Behaviour in Tourism Firms of Tanzania
FOOD SECURITY SUBPROGRAMME								
18.	Maganira Justine Daudi	F	2016		NA	May 2020	100%	Transmission Biology of Taeniid Zoonotic Parasites: Assessment of Environmental Soil and Food Items Contamination By Taenia Solium Eggs
19.	Ibrahim Juma	M	2016	29	NA	Sept 2020	95%	Promotion of horticultural productivity for food nutrition and income generation; A case of avocado in Tanzania
20.	Peter R. Ruvuga	M	2016	26	NA	March 2021	80%	Rangeland management practices for intensification of livestock production in miombo woodlands
21.	Nuria Kudra Majaliwa	F	2016	28	NA	March 2021	85%	Potential role of protein-tannin interaction on banana Juice Extraction
22.	Matilda Stanslaus Ntiyakunze	F	2016	30	NA	March 2021	80%	Forest Dependency in Tanzania: Analysis of household's heterogeneity, household's revealed energy choices, links between forests and food security.

S/N	PhD training Name of research student:	(M/F)	Year training started	Training in Sweden (no. months)	Local PhD Expected/ Year of completion	Sandwich PhD Expected/ Year of completion	Progress %	Title of dissertation
23.	Lufunyo Lulandala	M	2016	29	NA	March 2021	80%	The influence of tree vegetation cover, land use and soil characteristics on underground water recharge
24.	Aneth David Mwakilili	F	2016	32	NA	March 2021	75%	Microbiome analysis of push-pull companion plants in plant growth and protection
25.	Alice Isibika	F	2016	33.5	NA	March 2021	75%	Larvae composing of Food industrial waste with focus on banana wastes for production of animal feed protein
IGRID SUBPROGRAMME								
26.	Mr Daudi Mnyaghwalu	M	2016	2	Nov 2020		75	Optimal Sensor Network and Faults Classifications Algorithms for Automatic Faults Clearance in the Secondary Electrical Power Distribution Network
27.	Ms Rukia Mwifunyi	F	2016	2	May 2020		85	Automation of Fault Localization, Isolation and Service Restoration to Improve Reliability in Electrical Secondary Distribution Network
28.	Mr. Godfrey Chugulu	M	2016	2	Nov 2020		70	A Smart Grid Communication Architecture for Enhancing Automatic Faults Detection and Clearance in Tanzania Electrical Power Secondary Distribution Network
29.	Mr. Yona Andegelile	M	2016	2	Nov 2020		75	Cost Effective Resilient Communication System for Fault detection and Clearance Automation in Secondary Distribution Power Grid
30.	Mr. Shamte Kawambwa	M	2016	2	Nov 2020		75	Coordination of Distributed Energy Resources for Enhancing Fault Clearance and Service Restoration in Electrical Power Distribution Network
31.	Mr. Gilbert Gilbert	M	2016	2	Nov 2020		70	Integrated Computing Framework for Automatic Fault Clearance in Tanzania Electrical Power Grid
32.	Ms. Hadija Mbembati	F	2016	0	Nov 2021		40	Preparing proposal after maternity
33.	Mr. Ally Bitebo	M	2016	2	Nov 2021		50	A framework for Securing Communication Network for Fault Management in Secondary Electrical Power Distribution Network
34.	Mr. Aron Kondoro	M	2016	22		May 2020	95	Enhancing Security in Distributed Internet-of-Things Based Communication System for Agent Driven Smart Micro-grid

S/N	PhD training Name of research student:	(M/F)	Year training started	Training in Sweden (no. months)	Local PhD Expected/ Year of completion	Sandwich PhD Expected/ Year of completion	Progress %	Title of dissertation
35.	Ms. Diana Rwegasira	F	2016	22		May 2020	95	Agent Based System for Improved Control and Monitoring of a solar driven DC micro grid
IMS SUBPROGRAMME								
36.	Leonard, L.	M	2015		2018	2019	100%	Potential for Aquaculture of Nile and Rufiji Tilapia Hybrids (Lead supervisor Dirk-Jan De Koning; CS:, Dr. AvitiMmochi, Christos Palaikostas, Phillip Bwathondi, Mtolera, Matern)
37.	Nyangoko, B.	M	Jan 2017			Dec 2021	60%	Managing Mangrove Ecosystem Services for Livelihoods and Local Adaptations in Tanzania
38.	Mulokozi, D.	M	Oct 2016			December 2020	70%	Integrated aquaculture-agriculture (IAA) systems for diversified food production in Tanzania
39.	Kajungiro, R. A.	F	April 2016			October 2020	75%	Towards a Sustainable Nile Tilapia Breeding Program in Tanzania and the role of local strains
40.	Simon, C.	F	June 2016			October 2020	75%	Sustainable Tilapia Breeding in Tanzania and the Role of Rufiji Tilapia (Oreochromis urolepis urolepis)
41.	Yusuf, Y. S.	M	Jan 2016		Aug 2020		80%	Artificial Seed Production of Tropical Sea Cucumber (Holothuria scabra) in Tanzania.
42.	Mmanda, F. P.	M	April 2016			June 2020	85%	Nutritive value and use of locally available low-cost feed ingredients for Tilapia farming in Tanzania.
43.	Michael, A.	F	Jan 2016		June 2020		95%	The potential of the cyanobacterium (Arthrospira fusiformis) in providing cost effective and high quality feed for tilapia farming in Tanzania
44.	Tarimo, B.	M	April 2017			March 2021	65%	Mangrove-seagrass continuum: Linkages to Larval Fish Production, Dispersal and Growth
45.	Ismail, R. O.	M	Feb 2016			October 2020	85%	Balance between Productivity and Calcification in Tropical seagrass beds and its implication for Net Carbon sequestration
46.	John, O.	F	Jan 2016		August 2020			The impact of calcareous macroalgae and anthropogenic stress on production and carbon storage in tropical seagrass meadows
47.	Rashid, M. A.	F	May 2016		March 2021		60%	Pangani Basin hydrology and coastal environmental changes associated with climate change.
48.	Mbiru, M.	M	Jan 2017		October 2020		75%	Introduced Nile Tilapia Strains and Their Role in the Tanzania Tilapia Breeding Initiative

S/N	PhD training Name of research student:	(M/F)	Year training started	Training in Sweden (no. months)	Local PhD Expected/ Year of completion	Sandwich PhD Expected/ Year of completion	Progress %	Title of dissertation
49.	Mapunda John	M	Nov 2017		March 2021		65%:	Brood-stock maturation, seed production and larviculture of Silver Pompano, Trachinotus Blochii (Lucepede, 1801) for mariculture in Tanzania
50.	Yahya, B.M.	F	Nov 2016		August 2020		80%:	Fish Assemblage Structure in Relation to Habitat Complexity in Seaweed farms and adjacent Seagrass Beds, and Coral Reefs
51.	Mtaki, K	F	Nov 2017		March 2021		60%	Artificial culture of rotifers as live feeds for optimal growth of tilapia larvae in Tanzania
DAFWAT SUBPROGRAMME								
52.	Vivian Kimambo	F	2016	30		June 2021	50%	Fluoride Removal with Improved Sorption Process for Groundwater Sources
53.	Regina Irunde	F	2017	30		June 2021	60%	Adsorptive removal of arsenic from drinking water sources in Geita and Mara, Tanzania using local available materials.
54.	Ijumlane Julien Magezi	M	2016	30		March 2021	75%	Hydrogeological controls on spatial variability of geogenic contaminants in drinking water resources
55.	Fanuel Ligate	M	2016	30		March 2021	65%	Arsenic and Fluoride Contamination in the Groundwater Resources of Tanzanian Rift Valley: Source, Mobilization and Impacts on Drinking Water Quality
SUSTAIN SUBPROGRAMME								
56.	Seleman Amour	M	Oct 2016	6months	March, 2021		60%	Framework for desludging and transport of Faecal Sludge
57.	Isabela Thomas Mkude	F	Oct 2016	6months	March, 2021		60%	Framework for Resource Recovery and Reuse from Faecal Sludge
58.	Mary Kayombo	F	Oct 2017	4months	March, 2021		40%	Potential uses of high rate Algal ponds for Biological treatment of wastewater and resource recovery, Case study of Dar es Salaam
59.	Doglas Benjamin	F	Oct 2017	4months	March, 2021		40%	Local conditioners performance in treatment of faecal sludge from on-site sanitation from Agricultural use in the

S/N	PhD training Name of research student:	(M/F)	Year training <u>started</u>	Training in Sweden <u>(no. months)</u>	<u>Local PhD</u> Expected/ Year of <u>completion</u>	<u>Sandwich</u> <u>PhD</u> Expected/ Year of <u>completion</u>	<u>Progress</u> %	<u>Title of dissertation</u>
								Dar es Salaam
WATER RESOURCES SUBPROGRAMME								
60.	William Senkondo	M	2016	<u>6</u>		May, 2020	100%	Assessment of Water Resources in Tanzania's Kilombero Valley
61.	Edmond Alavaisha	M	2016	<u>6</u>		June, 2020	98%	Assessment of trade-offs between ecosystem services under gradients of land and water use
62.	Victor Mbande	M	2016	<u>6</u>		September ,2020	95%	Development of Policy and management strategy framework for public-private partnership and optimized water allocation in the Kilombero river basin

B. Overall Aggregated Masters of Science Students Plan/Progress

S/N	MSc training Name of student:	(M/F)	College/ Subprogramme	Year training started	Expected/ Year of completion	Name of Supervisors	Sandwich Program (Trip to Sweden)	Progress %	Title of dissertation
1.	Mathayo Gervas	M	CoET/ Food Security	2016	2018			100	
2.	Martha Chuya	F	CoET/ Food Security	2016	2020			75	
3.	Grace Michael	F	CoET/ Food Security	2016	2018			100	
4.	Jerard Mang'ena	M	CoET/ Food Security	2018	2020			60	
5.	Kilenga, Noela Gregory	M	CoET/ Food Security	2018	2020			60	
6.	Mustafa Aulath L.	F	CoET/ Food Security	2018	2020			50	

7.	Finias Fidelis	M	CoET/ Food Security	2018	2020			50	
8.	AyoubEliah	M	CoET/ Food Security	2018	2020			50	
9.	Tonola Beatrice	F	CoET/ Food Security	2018	2020			60	
10.	Mercy Kobelo	F	CoET/ Food Security	2018	2020			40	
11.	Merina Marcelino	F	CoICT/ iGRID	2016	2019			Graduated	A cost effective IoT based smart metering system using open source middleware
12.	Ms. Mwajua Shiraz	F	CoICT/ iGRID	2017	May 2020			50	Working on CDE challenge.
13.	Mr. Ramadhani Maulid	M	CoICT/ iGRID	2017	May 2020			50	Working on CDE challenge.
14.	Mr. Stephan Mgya	M	CoICT/ iGRID	2017	Nov 2020			40	Working on CDE challenge.
15.	Mr. Mkupete Mkupete	M	CoICT/ iGRID	2017	Nov 2020			40	Working on CDE challenge.
16.	Mr. Salim Yahya	M	CoICT/ iGRID	2016	May 2020			95	Wireless Sensor Network for enhancing power consumption visibility in secondary electrical distribution network
17.	Ms. Lucina Lawi	F	CoICT/ iGRID	2016	May 2020			95	Big Data visualizer for consumption data within the secondary distribution network of the electrical grid.

18.	Mr. Bernard Sengo	M	CoICT/ iGRID	2016	Nov 2020			40	Big data analytics for power consumption visibility in electrical power secondary distribution network
19.	EDSON NZAGANYA NZAGANYA	M	MATH	OCT. 2017	May. 2020	Prof.Sa ntoch Kumar		90%	Topology of projective hypersurface
20.	EVELINA WILSON	F	CONAS/ Mathamatics	OCT. 2017	May 2020	Dr. Grayso n Kakiko		90%	Investigation on some more Properties of Ordered Sets
21.	FATMA ALI RASHID	F	CONAS/ Mathamatics	OCT. 2017	Nov. 2020	Prof.Sa ntoch Kumar		80%	Maximal Topology
22.	RICHARD OSWARD	M	CONAS/ Mathamatics	OCT. 2017	Nov. 2019	Dr.Mak unguM wanzali ma		100%	Further Investigation on Fixed Points, Variational Inequality and Equilibrium Problem
23.	SHOLASTICA LUAMBANO	F	CONAS/ Mathamatics	OCT. 2016	Nov. 2018	Dr. Grayso n Kakiko (UDSM)		100%	Some fixed point theorems for F-contraction mappings in partial metric spaces.
24.	JESLINE ELIEZA GOWELE	F	CONAS/ Mathamatics	OCT. 2016	Nov. 2018	Prof. Santoch Kumar (UDSM)		100%	The structure of Lipchitz – free Banach space (Approximation properties)
25.	FAUSTINE NZIKU	M	CONAS/ Mathamatics	OCT. 2016	Nov. 2018	Dr.Mak unguM wanzali ma		100%	Some Boyd And Wong Type Fixed Point Theorems In Partial Metric Spaces

						(UDSM) Dr. Jared Ongaro (UoN)			
26.	DAMAS KAMEL MGANI	M	CONAS/ Mathamatics	OCT. 2016	Nov. 2018	Dr. Marco Mpimb o (UDSM) &Prof. Dube (South Africa)		100%	On Hilbert Functions and h- vectors of Graded Modules for Finite Sets of Points in Projective Space.
27.	GhanimaChanzi	F	IRA/Water Resources	2015	2017	Joel Nobert Noah Pauline		100	Assessment of Water Availability and Uses in The Kilombero Basin Using SWAT and WEAP Models
28.	BatengaMaryRose	F	IRA/Water Resources	2015	2017	Madaka Tumbo		100	Vulnerability of Rural Livelihoods to Multiple Stressors in Kilombero Valley, Tanzania
29.	SamwelDaudiNyasan i	M	IRA/ Water Resources	2015	2017			100	Drivers and Land use/cover change: Implication on sustainable natural resources management: The case of Kilombero Valley, Tanzania.
30.	Mhepela, Bertha	F	COET/ SUSTAIN	2017	2018	Prof.Al oyce Mayo		100	The Suitability of Menstrual Cups as an Alternative to Disposable Pads and Other

						Dr. Sara Gabrielson			Traditional Menstrual Care Technologies in Tanzania
31.	Hezron Magambo	M	COET/SUSTAIN	2017	2018	Prof. T.S.A. Mbwette Dr. Richard Kimwaga		100	The Potential of Simplified Sewerage System in increasing community access to affordable and acceptable sanitation in informal settlements in Dar es Salaam
32.	Abbas, Hidaya Abdullah	F	COET/SUSTAIN	2017	2018	Prof. Al oyce Mayo Dr. Sara Gabrielson		100	Investigation on the potential causes of diarrheal persistence in Zanzibar
33.	Marcel, Juma Kakulu	M	COET/SUSTAIN	2017	2018	Prof. T.S.A. Mbwette Dr. Richard		100	Evaluation of the extent of the household's participation in Solid Waste Characterization and quantification for decentralized management Practice at Tambukareli Ward, Itigi District Council

						Kimwa ga			
34.	Mwamlima Petro	M	COET/ SUSTAIN	2018	2019	Prof. Al oyce Mayo, Dr. Richard Kimwa ga, Dr. Sara Gabriel ssonN. A		100	Potential use of faecal sludge char briquettes as a source of cooking energy in Dar es salaam Tanzania
35.	TenendeNuntwale	F	COET/ SUSTAIN	2018	2019	Prof. Aloyce Mayo, Dr. Richard Kimwa ga, Dr. Sara Gabriel ssonN. A		100	An exploratory study on social cultural norms and religious beliefs around menstrual hygiene management in Tanzania. A case study of Moshi district Potential use of faecal sludge char briquettes as a source of cooking energy in Dar es salaam Tanzania
36.	SwaiJackline Lucas	F	COET/ SUSTAIN	2018	2019	Prof. Aloyce Mayo, Dr. Richard Kimwa ga, Dr. Sara Gabriel		90	Assessment of menstrual waste manangement in secondary school of Ilala district of Dar es Salaam

						ssonN. A			
37.	Marco Suzan	F	COET/ SUSTAIN	2018	2019	Prof. Aloyce Mayo, Dr. Richard Kimwa ga, Dr. Sara Gabriel ssonN. A		90	Assessment of biodegradation of human placenta in an anaerobic digester at Mwananyamala Hospital Dar es salaam
38.	Brenda Anthony Mndolwa	F	COET/DAF WAT	2016	2018	Prof. Felix Mtalo		100%	Optimal composite composition of natural adsorbents for removal of fluoride and arsenic
39.	Dennis Dismas	M	COET/DAF WAT	2016	2018	Prof. Felix Mtalo		90%	Adsorptive removal of arsenic and fluoride using locally adsorbents from drinking water sources
40.	Bernard Lugayi	M	COET/DAF WAT	2016	2018	Prof. Felix Mtalo		100	Fluoride removal using bauxite and Magnesite
41.	Mohamed Abdallah	M	COET/DAF WAT	2018	2019	Prof. Felix Mtalo		98	

42.	OkokoKossam	M	COET/DAF WAT	2018	2019	Prof. Felix Mtalo		98	
43.	Agness Fataki	F	COET/DAF WAT	2018	2019	Prof. Felix Mtalo		98	
44.	Andrew Peter	M	COET/DAF WAT	2018	2019	Prof. Felix Mtalo		98	
45.	Malesa, F.M.	M	IMS	Oct. 2018	2020			80%: To complete by September 2020	
46.	Mtonga, K.J.	M	IMS	Oct 2018	2020			75%: To complete by September 2020	
47.	Joseph, V.	M	IMS	Oct 2018	2020			80%: To complete by September 2020	
48.	Iraba, N. T.	F	IMS	Oct 2018	2020			75%: To complete by September 2020	
	Total 45 (only 43 are Sida Funded)								
C. Overall Aggregated Postdoctoral Research Fellows Plan/Progress									

	Postdoctoral research fellows	(M/F)	College/ Subprogramme	Year research started	Expected/ Year of completion	Trip to Sweden	No of expected publications	Progress %	Title of manuscripts
	Name of researcher:								
1.	Libe Massawe	F	COICT-iGRID	2015	0		2016	Withdrew on Social grounds	N/A
2.	Richard Mgaya	M	COICT-iGRID	2015	0	N/A	-	Passed away	N/A
3.	Shililiandumi Naiman	M	COICT-iGRID	2016	2 months	N/A	2017	100	Completed
4.	Ellen Kalinga	F	COICT-iGRID	Jan 2017	2 months	N/A	Jan 2018	100	Completed
5.	Kwame Ibwe	M	COICT-iGRID	Jan 2017	2 months	N/A	Jan 2018	100	Completed
6.	Hellen Mazika	F	COICT-iGRID	June 2018	0	N/A	June 2019	50	On Research
7.	Leonard, L.	M	IMS	2020	2021				
8.	Soud, S.	M	IMS	2020	2021				
9.	Rushingisha, G.	M	IMS	2020	2021				
10.	Dr. David Koloseni	M	MATH	January 2018 - June 2018		6 Month		100%	Numerical Integration for multidimensional Choquetintegra
11.	Dr.ThadeiSagamiko	M	MATH	October 2018-June 2019	6 Months	Sweden	Linköping University	100%	Optimal control of a threatened wildebeest-lion prey-predator system with prey species pool in the Serengeti ecosystem

12.	MadakaTumbo	M	Water Resources					Quitted	
13.	Dr.SubiraMunishi	M	Water Resources					Quitted	
14.	Dr. Noah Pauline	M	Water Resources					100%	
15.	Martic Chegele		IRA; Food security					100%	
16.	Liberata Mwita		CONAS; Food security					100%	
17.	Victor Vicent		COET, Food security					100%	
18.	Rita Morondo		COET; Food security					Withdrew on Social grounds	
	Total 18: Actual 13 Postdocu								