

## **Building Stronger Universities Phase III (BSU III) – SUZA**

**Version August 2 , 2017**

### **Partnership Proposal**

Both sides of the partnership find the “mentorship approach” to research and capacity building applied during BSU II a rewarding and feasible model. This approach includes a continuous process where thematic teams of SUZA staff have been involved in the identification of research areas and research objectives related to environmental public health and environmental science. Defining research areas under BSU II involved close communication with external stakeholders in Zanzibar. During BSU II, collaborators from Denmark acted as discussion partners on technical aspects, research design and contributed with international experiences, which helped develop the research focus of the projects. An initial consultation phase resulted in the formulation of pilot research projects followed by the development of research protocols, formats for data collection, fieldwork, data analysis and the drafting of manuscripts and reports. Throughout the process, one or more researchers from Denmark were closely associated with the particular project teams working at SUZA. In addition to the core research project teams, a larger group of SUZA staff participated in training events thus allowing a large number of SUZA staff to benefit from the BSU II activities.

The launch of BSU II included a valuable consultation with key external stakeholders on identification and prioritisation of pilot research questions. Subsequently several stakeholder workshops, media reports etc. have communicated the results of the initial research findings. Also, the completed pilot research projects and the established baseline information have formed the basis for funding applications. There are still many unexplored opportunities in terms of creating new cultures and space for on-going mutual learning and collaborative solutions-seeking and follow-up, engaging public and private sector partners even more actively throughout the research process.

The starting point for BSU I continued in BSU II was to build upon existing strategies, infrastructure and resources at SUZA. An example of this has been the establishment of basic laboratory infrastructure based upon already purchased, but never mounted, laboratory equipment, provided by previous international donations. The equipment installed under BSU II and necessary shelves, benches, water supply, storage etc. were fitted to create the foundation for a functioning laboratory. Furthermore, for the installed equipment, maintenance practices, standard operating procedures and good Laboratory practice have been introduced and future laboratory staff trained. By the end of BSU II, relatively advanced laboratory services are in place ready to service the future research projects and offer basic external services to government or private stakeholders. Another example of development of existing infrastructure has been the support to the library and document management system where teaching and research documents have

been organized and registered into a searchable database resulting in increased access to research publications, learning materials at the library, complemented by BSU investments in hard copies of textbooks and increased access to online resources.

The curricular development and TCU accreditation of the first environmental health degree program on Zanzibar is one of the remarkable successes of BSU I and II. This is the result of a coordinated effort to train MSc and PhD candidates, as well as a close involvement of a large number of stakeholders in defining the required competencies of the students. This has helped focus the education of future graduates in areas with a great demand for employment. Important to the success of the new environmental health degree was the capacity building, including the development of e-learning modules, establishing e-resources, basic laboratory facilities, the introduction of new pedagogic approaches and the close collaboration between a large number of SUZA teachers and their partners in Denmark to develop 11 new tailored modules. The first students have graduated and are finding relevant job opportunities on the mainland and in Zanzibar. The environmental health program has become one of the most popular programs at SUZA. With the BSc program well established, a pool of graduates to select among and an increasing research activity in the field of environmental health, the way is paved for SUZA to proceed with the establishment of a Master level curriculum in environmental health.

The development of e-learning capacity and strategies at SUZA during BSU I and II have furthermore been successful and greatly appreciated among staff responsible for a large number of courses. The integration of SUZA produced material and not least, the quality assurance and integration of e-learning material produced from outside SUZA (Open Educational Resources) have developed beyond expectations with three times as many courses on a blended format and many more course instructors trained than expected. There is still room for further training to produce documentaries on local research findings for dissemination and to be used as open educational resources aimed at relevant students and other interested parties within and outside SUZA. In addition, challenges remain for students to fully access online material given poor internet and a lack of access to devices among students.

The BSU II facilitation of project management training followed an approach where different administrative units from within SUZA discussed organisation and management of new specific external projects. This approach was greatly appreciated and highlighted the need for improved communication across the different branches of the SUZA administration. During the process, lack of human capacity, insufficient financial management systems and significant challenges in procurement, were identified. Likewise, the potential for improved coordination and communication across externally funded projects was identified as a means to increase the outputs and outcomes of the investments.

During BSU II a number of policies and guidelines, on research and publication, post graduate studies and on external consultancy services, have been drafted with the strong support from the top management at SUZA. The policies will be finally approved during 2017. Such policies setting standards across the institution will be very useful in the development of an expanded SUZA and will save significant administrative resources once fully implemented.

The BSU II partnership has shown its strengths as individuals involved from the very inception have found it useful to remain engaged. The involved researchers have invested a significant amount of unpaid time to the partnership and the partnership has been sufficiently flexible adjusting implementation plans as required.

### 1. Strategic direction of a continued partnership

The State University of Zanzibar has a mandate to provide educational and research services to public and private partners. In its strategic planning at SUZA environmental health and marine sciences are given high priority, these areas also playing an important role towards supporting the Archipelagos' socio-economic development activities within the framework of Zanzibar national economic growth strategy (MKUZA II).

In accordance, the two themes have been given much attention in the BSU partnership and the capacity at SUZA in terms of teaching and undertaking research within related subjects has expanded significantly because of the investments undertaken so far. It is the aim in BSU III to maintain this focus, engaging in new activities addressing pertinent research questions identified in even closer partnership with external stakeholders. BSU III will actively seek to create relevant synergies between the two research areas i) environmental public health and ii) marine ecosystem health and services. In this way the focus during BSU I and II on environmental sciences will for BSU III be even further focused upon the marine ecosystem health and services.

The greatest potential for economic growth, employment and use of research and innovation on Zanzibar may well rest with the coastal communities, the relevant government authorities and the management of the tourist resorts located along the coastline. At the same time, some of the most significant risks to sustainable development and potential conflicts also rest with the same connections. Challenges and solutions linked to the tourism sector will be a joint and overarching concern for both themes pursued during BSU III.

Regarding gender integration, BSU III partnership will ensure gender balance and equity is given high priority on all levels and in all interventions, within the SUZA community and outside.

### Marine and Coastal Ecosystem Health and Services (MaCES)

Sustainable management of marine and coastal resources is essential for the growth and employment in fisheries, tourism and the emerging businesses building upon aquaculture and the use of marine resources. These sectors are the pillars of the Zanzibar economy and the main foreign earners to Zanzibar. Over the past years, SUZA and partners have identified a clear need for continuous monitoring and exchange of data on e.g. marine water quality to support fisheries and especially aquaculture development and building a more sustainable tourism. Likewise, research is required to support the planning and monitoring of marine and coastal conservation initiatives. SUZA has a number of evolving partnerships with national and international donors,

e.g. FAO and COSTECH, who are interested in using marine production systems for livelihood improvements. SUZA can become an important knowledge and research hub in this respect.

### Environmental Public Health (EPH)

Zanzibar faces several significant environmental health challenges including poor solid waste management, poor sanitation, pressure on the water resources, insufficient food hygiene, and an increasing risk of urban and waste related mosquito borne diseases and frequent outbreaks of cholera. Based upon previous BSU activities, a review of past and ongoing research on Zanzibar and needs articulated by stakeholders, it has been proposed for BSU III to focus on the above mentioned environmental health problems in the context of coastal communities. This will involve the close collaboration with government agencies and private sector partners particularly linked with the management of tourist resorts. Specifically, BSU III will focus its research on improving waste management, mosquito control and food safety.

A common geographical and institutional focus on particular coastal communities will facilitate data sharing, logistical and collaborative activities across the two BSU III focus areas (MaCES and EPH) addressing important research and developmental questions such as e.g. how the quality of seafood and other marine products may be influenced by hygiene management from the hotel. When SUZA engages in new researcher partnerships in the coming years to the co-location of activities in the same geographical areas will be explored to improve sharing of resources across projects.

The research and research capacity building within the areas of MaCES and EPH will be directly linked with the development of a Master curricular and supervisory capacity in the field of EPH and specific course development and supervisory capacity in the areas of MaCES.

During BSU III the outreach efforts will be focused upon the stakeholders related to the two thematic areas MaCES and EPH. Partners will be engaged throughout the research process rather than as an end of project communication strategy. Also, engaging the coastal communities and private sectors within the areas of research will be emphasized. This is needed to better assess the real life challenges and opportunities related to the introduction of new technologies or models e.g. as it relates to waste management.

BSU II supported SUZA the installation of already purchased equipment from others sources and purchase of furniture for the laboratory. Thus, currently SUZA labs have in place the capital equipment for lab operations. However, what is lacking are robust skills for of the lab staff on proper use, sustaining and maintaining these new equipment installed to fully support teaching and research activities at SUZA. Therefore, BSU III will improve capacity of SUZA laboratory scientists on instrumental operating skills and maintenance of working laboratory environments. BSU III will further provide a framework to assess the risks, opportunities and business case for SUZA to achieve its target of providing basic income generating services to private and government stakeholders.

## Cross Cutting Issues (CCI)

During BSU II the development of e-learning capacity and strategies at SUZA enabled staff responsible for a large number of courses to effectively distribute teaching materials on the online course platform. Apart from the integration of e-learning material developed, students do not make good use of online material given poor internet and a lack of access to devices among students. BSU III will strategically work to improve the student access to increase the usability of the BSU II online materials developed. Likewise, the online course platform will be used to manage student assignments and BSU III will specifically support the integration, installation and training of academic staff on the use of plagiarism software to quality assure student assignments. In addition, ICT will strengthen its capacity to produce documentaries and educational resources based upon the studies related to the MaCES and EPH areas of research.

The support to the SUZA administrative framework and systems under BSU III will build on investments made under BSU II. During previous BSU phases, an emphasis was placed on the support to the formulation of SUZA policies. However, during BSU III the focus will be on support to the implementation and consolidation of the policies approved and no new policy formulation processes are expected.

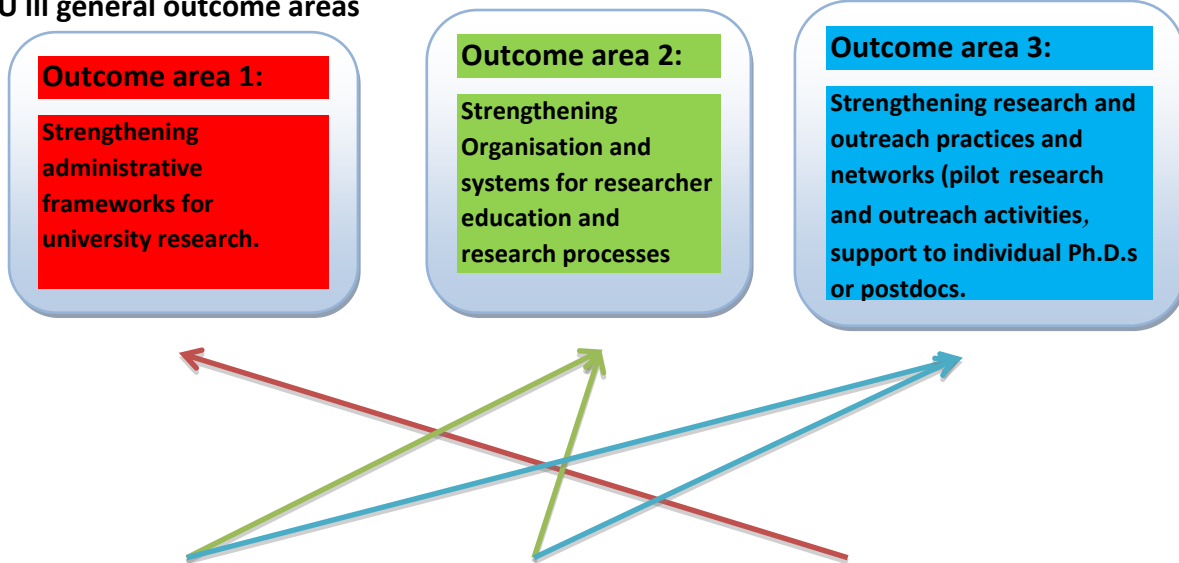
During BSU II situational analysis of financial system to support research grants was undertaken and the results highlighted the type of system to be installed for improving financial practices. The recommended system will be installed within the BSU II while BSU III will focus on the capacity to coordinate activities and share information across external partnerships.

As three additional colleges and institutes were merged into SUZA January 2017, the library services and infrastructures need to expand to accommodate increased teaching and research demands. As previous phases of BSU have supported the SUZA library information management systems i.e. repository, BSU III focuses on critical element of IT support to ensure students remote access to online material and to support the infrastructure required to manage the increasing volume of e-books. Inter campus connectivity systems needed for the management of learning and research materials will, given BSU support, be in place end of 2021.

## Linkages between Outcomes and Work Packages

BSU III SUZA will use a somewhat similar work package organisation as in BSU II maintaining the elements proving to be practical and helpful in terms of managing and reporting on the project. Two separate work packages (WPs) will again serve as the framework for the activities within the two thematic research areas namely 1) EPH and 2) MaCES. In addition WP1 will serve as common host for lab and outreach outputs while follow-up outputs to the former separate ICT WP will be integrated respectively in WP1 and in a crosscutting WP3 including ICT equipment, library, financial management and strategy and outputs Linkages between the three BSU III SUZA work packages and the three outcome areas outlined in the BSU III Concept Note are illustrated in Figure 1 below.

**BSU III general outcome areas**



**BSU II SUZA work packages**

WP 1	WP 2	WP 3
<b>Environmental Public Health</b> 3.1.1 PhD in EPH 2.1.2. Master curriculum development 2.1.3 Pilot research projects and stakeholder engagement incl. staff exchange 2.1.4 Insectarium 2.1.5. EPH and MaCES Educational documentaries 2.1.6.Laboratory services	<b>Marine and Coastal Ecosystem Health and Services (MaCES )</b> 3.2.1 PhD in MaCES 2.2.2 Systems and protocols 2.2.3 Pilot research projects, staff exchange and stakeholder engagement	<b>Cross – Cutting Issues (CCI)</b> 1.3.1. Improved access to Moodle 1.3.2. Plagiarism control 1.3.3. Library system 1.3.4. Financial management system 1.3.5. Strategies and synergies

Re. the numbering: The first number in the rows indicates the BSU III outcome area (1-3...); the second the work package (1-3), the third the specific output (1-...). A fourth number may be added e.g. in the Gantt to distinguish between single activities (1-...)

### 3.1 Overall Objective and Process of Change

The overall objective of the BSU III partnership between the State University of Zanzibar (SUZA) and the Danish partners led by the University of Copenhagen (UCPH) is to contribute to the enhancement of the capacity at SUZA to effectively conduct and manage research, deliver relevant and high quality education, as well as engage in active public and private partnerships to maximize knowledge sharing and a culture of collaborative solutions-seeking for the myriads of problems facing key economic sectors. Activities involve tourism and marine and coastal sectors, where to we will provide relevant data to inform policy formulation and management practices in Zanzibar. By doing this we aim to improve public health and enhance the sustainable growth of the tourism sector. These are both part of the overall developmental targets outlined by Zanzibar development strategic action.

To achieve such impact, BSU III has given outreach and partnerships special attention. Through active engagement with stakeholders in defining problems and generating and sharing of new knowledge, we aim to support the community, government and the private sector. To strengthen impact we will concentrate on two main thematic areas i.e. Environmental Public Health (EPH), Marine, Coastal Ecosystem Health, and Services (MaCES). To support these thematic areas strategic investments will be made at SUZA to raise capability document management and sharing through the library, laboratory, ICT environment and the effective financial management practices for research grants.

The following section describes the major outcome areas and outputs of the project as prescribed under the DFC guidelines.

#### Work Package 1: Environmental Public Health (and common host for lab and outreach outputs)

##### Work package 1 outcome:

By 2021, the uptake of research by relevant stakeholders will result in improvement in solid waste management, vector control and food safety practices, EPH research teams are actively involved in conducting research and disseminating findings in collaboration with relevant external stakeholders; full functioning lab for teaching and research in place, and a Masters curriculum on EPH is ready for submission to Tanzania Commission for Universities (TCU).

##### Output 3.1.1 One SUZA staff upgraded to PhD in EPH

During previous phases of BSU program, significant improvements have achieved within the ability of SUZA staff to conduct field and laboratory studies within environmental public health. BSU III intends to strengthen research competence at SUZA by upgrading one staff to PhD level thus increasing the number of research staff within the area of EPH. In addition, after the PhD training, the staff will have improved teaching capacity in terms of application of relevant research methodologies and teaching approaches hence ability to teach at postgraduate level and supervise

graduate students thus contribute to the production of competent graduates. Research teams will be established and carry out research of direct relevance to societal needs in collaboration with relevant stakeholders. Likewise, in line with TCU's requirement, having PhD holders will pave the way for SUZA to establish Masters Program in EPH in future, which is considered a priority in Zanzibar.

#### Output 2.1.2: Curriculum for a Masters Program in EPH is developed, approved by the University authorities

BSU phase I supported the establishment of a highly successful Bachelor program in Environmental Health with courses tailored to the situation on Zanzibar and the East African region and with significant pedagogic innovations. The program is one of the two SUZA programs that attract the largest number of candidates each year. This trend coupled with the very high demand for environmental/public health professionals in Zanzibar and the region create a high demand for a Master's Program in this discipline. During BSU III, a full Master program will be developed and following approval by the SUZA (School Board, Academic Committee and Senate) as well as the TCU the first intake of 20 students is expected to take place 2022.

#### Output 2.1.3: Three pilot research projects successfully implemented with active stakeholders involvement in the areas of solid waste, vector control and food safety.

During BSU II, pilot research projects were completed on solid waste management, vector control and food safety. BSU III will develop and expand the existing research areas with special emphasis on improving solid waste management through reduction strategies, mosquitoes control and food safety, with full involvement of stakeholders from local communities, hotels, private as well as government enterprises. The implementation of pilot projects will strengthen SUZA capacity in designing and conducting EPH research that will expand and persist even beyond the BSU partnership. The research competence will enable SUZA staff to be able to successfully win for external grants and improve the basis for research based teaching.

The implementation of pilot projects will involve staff exchange between partner institutions throughout the research processes including proposal development, data analysis, write-up/publication and conference attendance and other means of research dissemination and communication. Staff exchange is considered a useful means for creating synergy and strengthening the partnership.

Relevant stakeholders have been identified in the previous phase and effective partnerships have been initiated. BSU III aims to consolidate the partnerships and engage new partners specific to the research areas. For example, in the area of solid waste management, a business model based on recycling waste generated from hotels will be established in partnership with local private recycling agents. Likewise, a model of environmental management for pest control approaches on resorts and surrounding coastal communities will be analyzed as part of sustainable tourist



certification processes. Successful implementation of these activities will not only strengthen SUZA partnership with tourism industry but also will benefit the community at large through improving environmental sanitation, seafood quality and reduction of mosquito breeding.

Apart from engagement of stakeholders as part of research activities, they will be a case completion where students will be asked to address a particular problem (real life problem) put forward by external stakeholders in pedagogical way. Then students will be given number of days to work on it intensely to propose the solution and present it. Students will get the opportunity to interact and seek solutions with partners from various sectors practicing a combination of approaches and disciplines that matches the given challenges best.

#### [Output 2.1.4: An insectarium established and in use for conducting entomological research](#)

The findings from vector study in BSU II highlighted the need for further research on the ecology of vectors and nuisance mosquitoes in Zanzibar. This kind of research requires a well-functioning insectarium for rearing and identification of insects. At present, none exists at SUZA, which necessitates the establishment of one, even of small scale, which will facilitate entomological studies expected to be conducted in BSU III and through the involvement of additional partners and donors. Such small facility will also attract entomological researchers from outside SUZA hence creating networks of researchers in this field. An insectarium will be formed by renovating an existing building to fit the required structure and function. This task will be done in collaboration with partner institution, notably KCMC, which has the expertise in this area.

#### [Output 2.1.5: Four SUZA research projects and its key findings related to EPH and MaCES communicated as open educational resources aimed at university students at SUZA and students and interested individuals from outside the university](#)

Only limited educational material in use at SUZA, and in the region in general, take a starting point in the problems faced locally. Also, the research activities, research findings and the local researchers get very limited publicity. To support the awareness of research undertaken by SUZA researcher and its partners addressing problems in the specific context of EPH and MaCES, the SUZA ICT unit will produce four documentaries profiling the research topics, the research process, methods applied and the research results achieved. The documentaries will be applicable for sharing on educational platforms such as MOODLE and online educational portal developed with an Africa focus and will be freely available as an open educational resource.

#### [Output 2.1.6: Enhanced SUZA laboratory research, teaching and consultancy services in function](#)

SUZA acquired a number of analytical instruments from various donors such as World Bank and Arab Bank for Economic Development in Africa (BADEA). BSU II enabled installation of the equipment and procurements and installment of much needed basic infrastructure. BSU III will strengthen the institutional capacity in lab management.. This support will have impact on support sound scientific research and teaching for postgraduate level at SUZA. Furthermore, it will support research undertaken by academic staff in the area of EPH and MaCES lastly BSU III project will

provide a framework to assess the risks, opportunities and business case for SUZA to achieve its target of providing basic income generating services to private and government stakeholders.

## Work Package 2: Marine and Coastal Ecosystem Health and Services (MaCES)

### Work package 2 outcome:

By 2021, SUZA will support marine related decision-making, policies and coastal economic activities (i.e. environmental authority, fisheries and tourism sector). To strengthen this support, continued pilot research projects, including monitoring and assessment of marine and coastal ecosystem health data will be gathered and made available to the relevant external stakeholders. The activities under this work package will contribute significantly to the already existing education and practical teaching in Masters Program in environmental sciences.

#### Output 3.2.1 One SUZA staff upgraded to PhD related to the MaCES.

During BSU II, SUZA managed to establish baseline and research and generated baseline information in areas in marine and coastal ecosystems. The team successfully conducted field and laboratory studies in close collaboration with Danish counterparts. BSU III aims at enhancing more expertise to SUZA staff on the area by upgrading one staff to a PhD level. This output will strengthen academic capacity for effective teaching, research and mentoring postgraduate students and young researchers in the areas related to MaCES. Furthermore, a PhD graduate will contribute in designing new research studies, supporting data analysis, organizing fieldwork and laboratory studies. The graduate will also lead facilitation processes of communication, networking between SUZA and external stakeholders, public and NGOs in particular. This will enhance SUZA capability on interaction and demonstration of research findings to research users and practitioners in the context MaCES promoting spillover affect within SUZA departments and to the stakeholder outside the University.

#### Output 2.2.2 By 2021, SUZA will perform consistent collection and analysis of key Marine and Coastal data that are regularly shared with relevant external stakeholders.

The ecosystems on Zanzibar is under pressure due to population increase, pressure on natural resources, rapid tourist developments, poor waste management and global climate change. Baseline studies in BSU II provided snapshots of the state of the marine and coastal environment providing important initial information but making it difficult to evaluate longer-term changes in support of policy formulation and decision-making. The BSU III approach will focus upon the establishment of continuous environmental assessment and monitoring system for a few critical variables in the marine environment and undertake focused analysis of the impact on the marine environment from hotels. The data will also contribute to the coastal economic production sectors such as fisheries and aquaculture. The datasets will be presented and mainstreamed to the Environmental Authority, Fisheries department, community and Zanzibar Tourism investors.

### Output 2.2.3 Three pilot research projects successfully implemented with active external stakeholder engagement in the areas of behavior and dynamics of pollutants and nutrients in coral reef waters.

BSU II supported the conduct and publishing of scientific articles on the environmental status of coral reefs and nutrients and pollutants levels in the marine environment. BSU III will expand the existing research areas with special emphasis on behavior of nutrients by using mathematical models to further investigate trends and effects of pollutants in marine ecosystems. These studies will strengthen SUZA capacity on analyzing the dynamics of coastal and marine ecosystems and their responses to different pressures. To optimize investments and ensure the theoretical basis and the practical implementation of the studies, longer exchange visits (~2 months) will be part of BSU III. The exchange will add special value in terms of knowledge and technology exchange between North and Southern partners.

Apart from engagement of stakeholders as part of research activities, there will be a case competition where students will be asked to address a particular real life problem put forward by external stakeholders. Then students will be given number of days to work on it intensely to propose the solution and present it. Students will get the opportunity to interact and seek solutions with partners from various sectors practicing a combination of approaches and disciplines that matches the given challenges best.

### Work Package 3: Cross Cutting Issues (CCI)

#### Work package 3 outcome:

By 2021 SUZA has well established and functioning frameworks, systems and facilities in place in the areas of e-module access; assessment of research assignment plagiarism; library access to research and learning materials; external research grant management; research strategies and coordination to support delivery of high quality services mainly in the areas of EPH and MaCES.

#### ICT

#### Output 1.3.1 Improved access among the students and staff to the established e-modules in SUZA MOODLE platform

BSU III will focus on improving student and staff access to the e-modules established during BSU II on the MOODLE platform. The results from baseline study conducted in BSU II revealed that over 50% of SUZA students own smart phones. This provides an opportunity to introduce these modules through mobile platforms and the aim is to introduce MOODLE mobile so that the developed e-module can be accessed to the student via smart phones. For those students who cannot access via smart phones, tablets will be purchased during BSU III so as to improve equity in accessing this service across students.

**Output 1.3.2 By 2021 SUZA academic departments have functional plagiarism software in use to quality assess all research assignments by undergraduate and postgraduate students.**

Currently, assessments of plagiarism of assignments submitted by undergraduate and master level students are done by the SUZA academic staff by reading the report and spot checking text that may seem suspicious. This takes a significant amount of time and is insufficient to detect all cases of plagiarism and quantify the level of plagiarism. Such lack of software and automated systems undermine the credibility of SUZA, influence the learning achieved by the students and likely influence employability of future candidates. BSU III will invest in a software license that will test for plagiarism assessment. The project will also train all academic staff and dedicated support staff in the center of graduate studies and research in the use of the software to assess all large student assignments and sustain it beyond the project period.

### Library

**Output 1.3.3 Functional SUZA Library system capable of sharing material across SUZA campuses and knowledge management system established**

SUZA has recently expanded with campuses across Zanzibar and has doubled the number of students. BSU III will improve student's access to library materials across the campuses. In addition, BSU III will support the establishment of a system of storing e-research and educational materials. Each campus will have its own server and Virtual Private Network to facilitate storage and remote access to this system. The library will also establish a mechanism of sharing knowledge (scientific publications, technical reports and thesis) in the areas of EPH and MaCES to specific institutions in Zanzibar including i.e. COSTECH<sup>1</sup> and the office of the 2<sup>nd</sup> Vice President office. Such agencies have currently very limited access to research reports making it difficult to support policy formulation and evidence based decision making within Zanzibar Government.

### Financial management

**Output 1.3.4 By 2021, external research grants are managed effectively and to the overall satisfaction of researchers and grant source.**

The University research administrative and grants management staff have been involved in research management training, and skills training in the previous BSU phases and initial investments have been made in terms of installing software. It has been decided to focus the activities during BSU III on the SUZA capacity to manage and report on external grants. The three members of financial department will be participating in knowledge exchange through different professional visits within the south region.

### Strategy and synergy

**Output 1.3.5 Coherent EPH and MaCES research and education strategies in place and use**

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<sup>1</sup> Tanzania Commission for Science and Technology

In addition to strengthening of skills and capacities within EPH and MaCES research groups (outcomes 1 and 2), which includes improving coordination of activities on campus and in the field, BSU III will invest in the strengthening and alignment of SUZA's overall research, education and outreach strategies. Specifically these BSU III activities will include. (i) engaging in mutual learning process with other internal project stakeholders through review meetings; (ii) support synergies across different existing projects funded by different donors at SUZA through donors coordination meetings; (iii) initiate platform for feedback and experience sharing between various entities at SUZA and external stakeholders. Since the overall aim is to strengthen SUZA's general capacity to share and coordinate experiences and interventions among internal and external partners at some point various heads of all departments and management are assumed to become involved.

#### 4. Risk and Mitigation Measures

The timing of the BSU III activity plan might be affected by the teaching sessions at SUZA and DK partner institutions since work package leaders and resource persons are regular university instructors. Thus, careful planning is required to avoid overlapping of tasks. Another challenge could be changes in the management at SUZA and/or at the Danish partner institutions that might entail the risk of losing key people who took part in the conceptualization and fully understands the project. Thorough briefing and other adequate support must be provided in case newcomers replace resource persons.

Bureaucratic procedures delaying procurement processes are also assumed as a potential risk. To reduce these constraints arrangements will be prepared to start the procurement timely. Also together with KCUMCo current procurement practices and requirements will be analyzed with special emphasis on procurement for research projects including laboratory reagents and equipment and possibilities of upgrading and/or introducing new practices while still abiding to national and institutional guidelines, will be considered.

To mitigate the risk that PhDs supported under BSU III could leave SUZA it should be noted the SUZA Training Policy requires that any staff who undergoes long term training (i.e. Master and PhD) has to remain for five years working in SUZA. This each staff needs to sign contract bond before attending the training for PhD. This contract assures that he/she will come back and serve the University.

In case there occurs a lack of match between SUZA's needs for assistance in capacity building and available local expertise mainly in the areas of laboratory and library likeminded institutions in the region will be consulted for advice.

## Section 5: Coordination, Learning, Partnership and Management of BSU III-support

### Coordination with other partners and exchange of lessons learnt

Contact and consultation with stakeholders throughout BSU III will be a cornerstone and built into the work plans of the separate work packages and across the partnership. As explained throughout the proposal, sharing lessons learnt will not merely be a question of sharing findings as activities are being completed, but will be an ongoing activity that will support a mutual learning process on various levels: Internally among relevant staff at SUZA, AU, and UCPH; with other partner universities; within the communities involved in pilot research activities; and with private and public sector partners and likeminded donors.

It will be a key priority to SUZA under BSU III to keep track of and cultivate linkages between activities related to capacity development and relevant research areas. This will include facilitating accessibility and exchange of relevant information among relevant partners including donors. Based on a mapping of national and international SUZA partners, as a part of BSU III SUZA will host meeting(s) for external stakeholders in Zanzibar supporting research and research capacity strengthening in particular within the focus areas of EPH and MaCEH.

Strengthening and alignment of grant management procedures and practices will be a separate area of priority.

### Governance and Management

BSU III accomplishments are foreseen to constitute an overarching contribution to the achievement of strategic goals of SUZA as a catalyst of social change as it endeavors to support a more productive engagement with outside SUZA private and public institutions.

BSU III directly involves Department of Natural Sciences, Department of Social Sciences, Department of Environmental Health, Center for Tropical Research Center for Oceanography, Environment and Natural Resources, the Department of Computer Science and IT , the Directorate of Library Services, the Center for Digital Learning as well as the Library and the Finance and the Planning Departments. E.g. the library component is specifically going to benefit all campuses that have recently been merged with SUZA. Eventually experiences are shared with other parties in other departments' at various levels, incl. Heads of Departments and Management.

The BSU III SUZA partnership itself is headed by overall Anchors at SUZA and UCPH each assisted by a coordinator responsible for day-to-day communication and crosscutting project management.

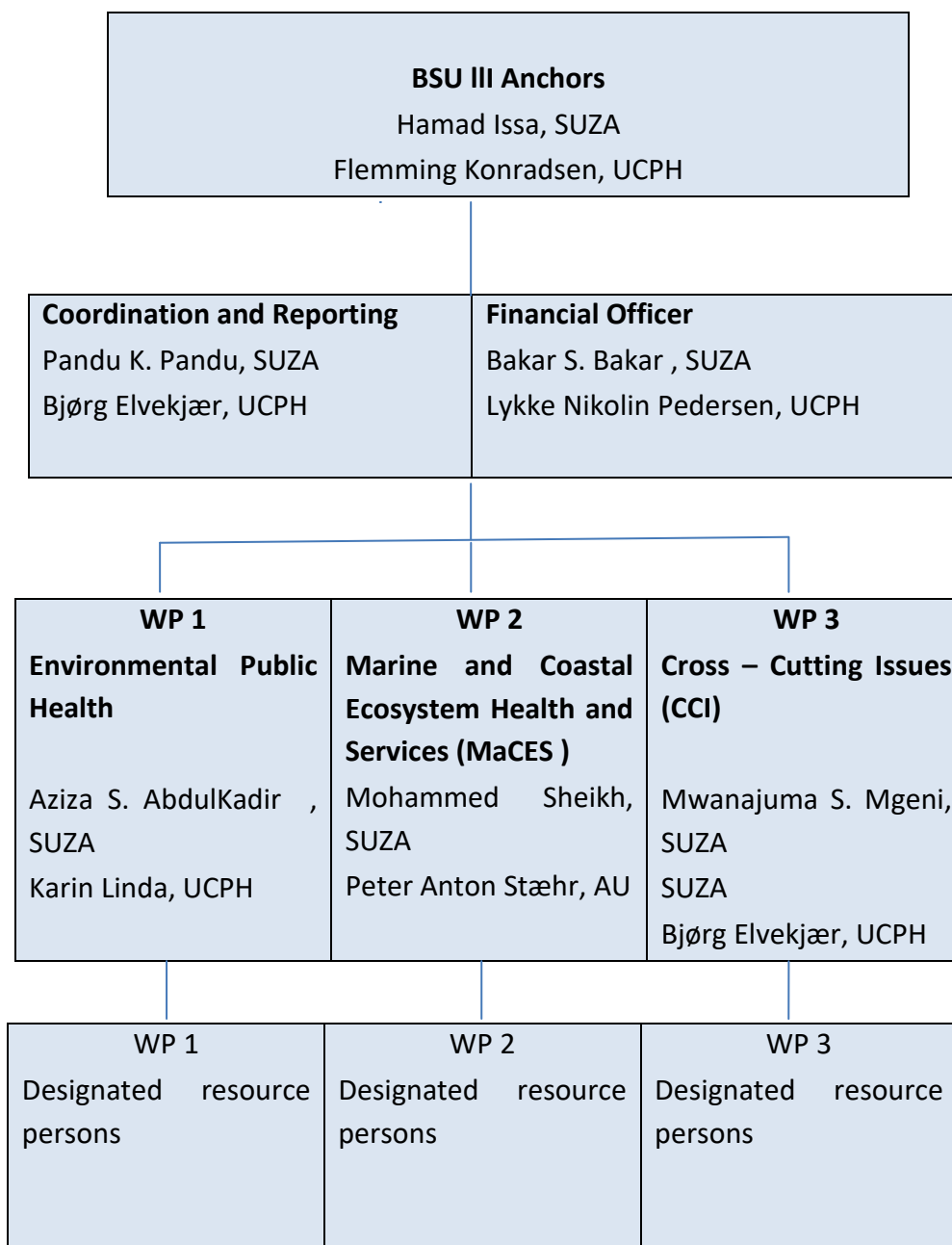
The BSU III SUZA partnership covers three work packages. A SUZA and DA leader who share the overall responsibility for carrying out, monitoring and reporting on the specific WP activities for ensuring that specified outcomes and outputs are achieved head them each. Their tasks also include, through consultation with the coordinators, drafting of terms of reference, and recruitment, briefing and debriefing of resource persons. Furthermore, it is assumed that the WP

leaders support the establishment and maintenance of synergies across the work packages. E.g. to the extent possible planning workshops, courses and other activities under each WP back-to-back allowing for sharing of resources, skills, and ideas across the WPs to strengthen synergies and coherence.

A mix of longer-term visits and regular shorter stays in Zanzibar and in Denmark respectively by DA staff with SUZA colleagues and SUZA staff at DAs institutions will be pursued to keep the momentum of the project.

To secure timely delivery of agreed inputs and services the partnership relies on committed team work between DA and SUZA key resource persons, while in accordance with DFC's general conditions for BSU III it is SUZA as the South partner who holds the overall and final responsibility for prioritizing, coordinating, reporting on and managing the partnership. It is the SUZA coordinator who acts as the primary entry point for communication with DFC. And it is the SUZA Coordinator who is responsible for compiling and sharing key reports, documents and documentation. The details of the organisation structure of BSU III project is found in diagram below:

**BSU II SUZA ORGANISATION DIAGRAMME**





Consolidation of names and roles will take place during finalization of Implementation Plans.

## 6. Sustainability Consideration

The SUZA-Danish partnership under BSU has been in place for more than five years and four more years to come so far. The motive behind such a partnership was to enhance the capacity of SUZA to be strong enough in teaching, conducting research and engaging with other stakeholders in the process of bringing wider developmental impact to the society.

BSU project has laid down the basic foundations to achieve such goals by supporting development of university wide framework for example for supporting curriculum development, research processes, graduate studies, library services, grant finance management, laboratory facilities, etc. SUZA has institutionalized these outputs and thus mainstreamed to regular ever ongoing functionalities of the University. The following are key areas for addressing sustainability of the project:-

- Integration of the research products from BSU projects baselines studies in teaching as case studies for undergraduate as well as graduate students.
- The research capacity enhanced as a result of baseline studies conducted will be used in newly established University research groups in other faculties.
- Policies have been mainstreamed within the University system and will be implemented base on the existing University's framework.
- The consultancy policy has laid down a platform for enhancing post BSU project collaboration between SUZA and other stakeholder.
- The availability of functional laboratory will provide basic lab services, which will open more opportunities to stakeholder collaboration.
- Baselines outputs will be used to apply for other external grants to support more flow of the resources to various faculties of the Universities. The SUZA environment promotes this culture as part of promotion criteria.
- The three PhDs to be are going to be part of the department staff, contributing to administration, teaching and consultancy at university.

## 1. Work Package Budget

	South	North	Total cost
			<b>Total cost</b>
<b>Work Package: 1 EPH + Outreach + Lab</b>			
<b>Outputs</b>	<b>DKK</b>	<b>DKK</b>	<b>DKK</b>
3.1.1 PhD in EPH	690.000	190.000	880.000
2.1.2. Master curriculum development	105.000	140.000	245.000
2.1.3 Pilot research projects and stakeholder engagement incl. staff exchange	1.070.210	1.589.500	2.659.710
2.1.4 Insectarium	170.700	50.000	220.700
2.1.5. EPH and MaCES Educational documentaries	135.000	380.000	515.000
2.1.6. Laboratory services	340.500	380.000	720.500
<b>Sub Total</b>	<b>2.511.410</b>	<b>2.729.500</b>	<b>5.240.910</b>
<b>Work Package 2: MaCES</b>			
<b>Outputs</b>			
3.2.1 PhD in MaCES	690.000	190.000	880.000
2.2.2 Systems and protocols	300.500	407.859	708.359
2.2.3 Pilot research projects, staff exchange and stakeholder engagement	1.070.250	1.371.650	2.441.900
<b>Sub Total</b>	<b>2.060.750</b>	<b>1.969.509</b>	<b>4.030.259</b>
<b>Work Package 3: Cross-cutting</b>			
<b>Outputs</b>			
1.3.1. Improved access to Moodle	340.000	140.000	480.000
1.3.2. Plagiarism control	69.500	50.000	119.500
1.3.3. Library system	240.300	45.000	285.300
1.3.4. Financial management system	27.800	140.000	167.800
1.3.5. Strategies and synergies	139.000	190.000	329.000
<b>Sub Total</b>	<b>816.600</b>	<b>565.000</b>	<b>1.381.600</b>
<b>Total</b>	<b>5.388.760</b>	<b>5.264.009</b>	<b>10.652.769</b>
Coordination	431.101		431.101
Overhead	646.651	1.052.802	1.699.453
External Audit	120.000	50.000	170.000
<b>Total</b>	<b>6.586.512</b>	<b>6.366.809</b>	<b>12.953.323</b>

## 2. Outcome Budget

	South	North	Total cost
<b>Outcome 1: Administrative capacity</b>			
<b>Outputs</b>	<b>DKK</b>	<b>DKK</b>	<b>DKK</b>
1.3.1. Improved access to Moodle	340.000	140.000	480.000
1.3.2. Plagiarism control	69.500	50.000	119.500
1.3.3. Library system	240.300	45.000	285.300
1.3.4. Financial management system	27.800	140.000	167.800
1.3.5. Strategies and synergies	139.000	190.000	329.000
<b>Sub Total</b>	<b>816.600</b>	<b>565.000</b>	<b>1.381.600</b>
<b>Outcome 2: Research and outreach capacity at system/organizational level</b>			
<b>Outputs</b>			
2.1.2. EPH Master curriculum development	105.000	140.000	245.000
2.2.2. MaCES Systems and protocols	300.500	407.859	708.359
2.2.3. MaCES Pilot research projects, staff exchange and outreach	1.070.250	1.371.650	2.441.900
2.1.3. EPH Pilot research projects and stakeholder engagement incl. staff exchange	1.070.210	1.589.500	2.659.710
2.1.4. Insectarium	170.700	50.000	220.700
2.1.5. EPH and MaCES Educational documentaries	135.000	380.000	515.000
2.1.6. Laboratory services	340.500	380.000	720.500
<b>Sub Total</b>	<b>3.192.160</b>	<b>4.319.009</b>	<b>7.511.169</b>
<b>Outcome 3: Research and outreach capacity at individual level</b>			
<b>Outputs</b>			
3.1.1. EPH PhD	690.000	190.000	880.000
3.2.1. MaCES PhD	690.000	190.000	880.000
<b>Sub Total</b>	<b>1.380.000</b>	<b>380.000</b>	<b>1.760.000</b>
<b>Total</b>	<b>5.388.760</b>	<b>5.264.009</b>	<b>10.652.769</b>
Coordination, 8%	431.101		431.101
Overhead, (South 12% & North 20%)	646.651	1.052.802	1.699.453
External Audit	120.000	50.000	170.000
<b>Total</b>	<b>6.586.512</b>	<b>6.366.811</b>	<b>12.953.323</b>

## Appendix I

The State University of Zanzibar (SUZA) is the only public University in Zanzibar. The University was established by Act No. 8 of 1999 of the House of Representatives of Zanzibar and became operational on 26th September 2001. The headquarters is located at Tunguu about 14 km from Zanzibar Town, others are Vuga campus at Vuga Road, Mnazimmoja in the heart of the Stone Town in Unguja Island and the Nkrumah Campus is at Beit-el Ras, Maruhubi Campus, Mbweni Campus, Chwaka Campus and Mchangamdogo Campus at Pemba Island.

Currently, SUZA has five (6) operational schools and one (1) institute in different locations across Unguja and Pemba islands. SUZA is expected to have more schools as described in the strategic plan of the university. The existing schools and Institutes are as follows:- School of Education (SoE), School of Natural and Social Sciences (SNSS), School of Kiswahili and Foreign Languages (SKFL), School of Continuing and Professional Education (SCOPE), School of Health and Medical Sciences (SHMS), School of Business (SoB) and Institute of Tourism Development (ITD). In addition of Schools, there are four centres namely: Centre for Graduate Studies and Research (CGSR), Global Centre for Kiswahili Studies and Advancement (GCKSA), Tropical Research Directorate for Oceanography, Environment and Natural Resources (TROCEN) and Centre for Digital Learning (CDL)

SUZA in total has about 5,000 students and 500 staff including 290 teaching staff. The sharp rise of the students and staff (from 280 staff and 2700 students) is the result of the recent merging of SoB, SHMS and ITD. The total university annual budget is about US \$ 6,000,00. The figure is expected to increase for 80% in the coming financial year. The Government of Zanzibar contributes a total of 40% of SUZA budget share and 45% comes from the internal source of revenue such as fees collections, consultancy and other university revenue, while the remaining percentage is contributed by development partners (DP) in contributing a specific projects or programs. The keys development partners are World Bank (WB), DANIDA, NORAD, UNICEF, Millele Foundation, Huawei Company, JICA and Government of China which plan to build two buildings for SoE at Tunguu Campus and SKFL at Nkrumah Campus.

## Contacts

The State University of Zanzibar

P.O.BOX 146

Tunguu, Zanzibar South

Telephone: +2(55) 123-4567

Email: [vc@suza.ac.tz](mailto:vc@suza.ac.tz)

Website: [www.suza.ac.tz](http://www.suza.ac.tz)

## Annex II

The State University of Zanzibar (SUZA) is actively and strategically engaged with international universities to collaboratively broaden and deepen its impact throughout the world through collaborative research and professional learning. For example,

- **TRANSLED (Transformation, Language, Education and Development) Project** ; The project is implemented by SUZA, University of Dar es Salaam – Tanzania and University of Oslo (UiO). The project started 2014- 2018 under the sponsorship of NORAD through the NORHED projects. The value of project is 18 million Norwegian Kroner , SUZA is a lead partner. Project website is: <http://www.suza.ac.tz/transled-web/> .
- **SUZA OTAGO Project**; SUZA through the School of Education (SoE) at SUZA has been collaborating with the Higher Education Development Centre (HEDC) at the University of Otago, New Zealand. The research interest of this area are; Technological trends in higher education, Flipped classroom and blended learning technologies and modalities, Social network analytics . Ongoing research activities is available at <http://hedc.otago.ac.nz/forms/form/rctCADl9MH>
- Woods Hole Oceanographic Institution (WHOI) and SUZA signed agreement of construction of Hatchery costing USD 60,000. The hatchery aimed to supply fish breeding to local farmers. The agreement also involves conducting of joints research on production of fish bleedings.
- Vulnerability, Resilience , Rights and Responsibilities Project (V3 Pwani Project). The project is implemented by SUZA, University of Dar es Salaam and Norwegian University of Life Science (UMB) from Norway under NORHED Projects sponsored by NORAD. The project aiming building capacity on climatic changes in relation tom coastal resources , gender governance in coastal Tanzania and Zanzibar .
- SUZA and Leibniz – Institute – Bip GMPH from Germany are jointly conduct research project on Analysis of Diet and non-communicable diseases in Zanzibar. The two institutions are also looking more research collaboration.
- Other institution with academic collaboration with SUZA are, International Law and Policy ( ILIP) from Olso – Norway, ONDOKUZ MAYIS University from Turkey and Mianyang University from China.