Environmental and Social Management Framework (ESMF)

Zanzibar Improving Students’ Prospects Project (ZISP)

Ministry of Education and Vocational Training
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LIST OF ACRONYMS AND ABBREVIATIONS

BoQ  Bill of Quantities
CBO  Community Based Organization
CEDAW  Convention on the Elimination of Discrimination against Women
CITES  Convention on International Trade in Endangered Species
CRC  Convention on the Rights of the Child
CWSA  Community Water and Sanitation Agency
DA  District Assembly
DALAE  Department of Alternative Learning and Adult Education
DCCFF  Department of Commercial Crops, Fruits and Forestry
DEMCC  District Environmental Management Committees
DLI  Disbursement Linked Indicator
DOE  Department of Environment
EA  Environmental Assessment
EFA  Education for All
EIA  Environmental Impact Assessment
EIS  Environmental Impact Statement
EMIS  Education Management Information Systems
EMP  Environment Management Plan
EMS  Education Management System
EPA  Environment Protection Agency
EPZ  Economic Processing Zone
ESA  Education Sector Analysis
ESMF  Environmental and Social Management Framework
ESSF  Environmental and Social Screening Form
FDI  Foreign DIRECT INVESTMENT
FMP  Forest Management Plan
GDP  Gross Domestic Product
ICT  Information and Communications Technology
KIST  Karume Institute of Science and Technology
KVIP  Kumasi Ventilated-Improved Pit
M&E  Monitoring and Evaluation
MDG  Millennium Development Goals
MKUZA  Zanzibar Strategy for Growth and Reduction of Poverty (translation)
MoESWYWC  Ministry of Empowerment, Social Welfare, Youth, Women and Children
MoEVT  Ministry of Education and Vocational Training
MoLHWE  Ministry of Lands, Housing, Water, and Energy
MSE  Math, English and Science
NBC  National Bank of Commerce
NEMC  National Environmental Management Council
NEP  National Environmental Policy
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>OP</td>
<td>Operational Manual</td>
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<tr>
<td>PBZ</td>
<td>People's Bank of Zanzibar</td>
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<tr>
<td>PDO</td>
<td>Proposed Development Objective</td>
</tr>
<tr>
<td>PER</td>
<td>Preliminary Environmental Report</td>
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<tr>
<td>POM</td>
<td>Project Operations Manual</td>
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<tr>
<td>RBF</td>
<td>Resettlement Policy Framework</td>
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<td>RGZ</td>
<td>Revolutionary Government of Zanzibar</td>
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<tr>
<td>SACMEQ</td>
<td>Southern and Eastern Africa Consortium for Monitoring Educational Quality</td>
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<tr>
<td>SEIP</td>
<td>Secondary Education Improvement Project</td>
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<tr>
<td>SIDA</td>
<td>Swedish International Development Cooperation Agency</td>
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<tr>
<td>SIG</td>
<td>School Improvement Grant</td>
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<tr>
<td>SMC</td>
<td>School Management Committee</td>
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<tr>
<td>SUZA</td>
<td>State University of Zanzibar</td>
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<tr>
<td>TA</td>
<td>Technical Assistance</td>
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<tr>
<td>TC</td>
<td>Teacher Center</td>
</tr>
<tr>
<td>TESS</td>
<td>Teacher Training for Enhanced Student Support</td>
</tr>
<tr>
<td>ToR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>TTCL</td>
<td>Tanzania Telecommunications Company Limited</td>
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<td>TZS</td>
<td>Tanzanian Shilling</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children's Emergency Fund</td>
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<td>United Republic of Tanzania</td>
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<tr>
<td>VIP</td>
<td>Ventilated-Improved Pit</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<td>ZBEIP</td>
<td>Zanzibar Basic Education Improvement Project</td>
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<td>ZEDP</td>
<td>Zanzibar Education Development Plan</td>
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<tr>
<td>ZHELBP</td>
<td>Zanzibar Higher Education Loans Board</td>
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<tr>
<td>ZIE</td>
<td>Zanzibar Institute of Education</td>
</tr>
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<td>Zanzibar Investment Promotion Authority</td>
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CHAPTER ONE: INTRODUCTION

1.1 Overview

The Revolutionary Government of Zanzibar (RGZ) has requested loans or credits from the World Bank for the implementation of the proposed Zanzibar Improving Student Prospects project (ZISP). This report is the Environmental and Social Management Framework (ESMF) to be used for the project, in order to ensure that all environmental and social safeguards are adequately addressed by the project components.

1.2 Purpose of the Environmental and Social Management Framework

The Proposed Development Objective (PDO) of ZISP is to improve the quality of – (i) instruction and (ii) learning Environment - in targeted grades and subjects.

Targeted grades are upper primary and lower secondary (Standard 5 – Form II) and targeted subjects are Math, English and Science (MSE).

The focus on English, Math, and Science subjects reflects the prioritization of skills that are most in demand by the labor market. However, the project includes several system-level reforms and interventions that are expected to improve instructional quality and student support in all subjects.

ZISP is comprised of four main components:

- Component 1: Effective Math, Science, and English (MSE) Instruction
- Component 2: Improved School Autonomy and Learning Environment
- Component 3: Hubs for Enhanced MSE Learning
- Component 4: Systems Transformation and Project Management

The component relevant to this document, Component 3, costed at approximately US$ 11.5 million, is linked to the PDO in that it will support the impactful provision of learning facilities and resources for improved Math, Science, and English achievement. It will also reduce the overcrowding that is resulting both from rapid population growth, and the double cohort resulting from elimination of Standard 7\(^1\).

It will include building and equipping of:

- i. Additional classrooms to reduce overcrowding, and improve learning conditions, in heavily congested schools
- ii. Facilities and equipment to promote Math, Science, and English learning (Science rooms, Language labs, ICT facilities, and Rooms for extra classes and/or Teachers)

\(^1\) Education Sector Analysis (ESA) has estimated that 150 new secondary classrooms are required per year to accommodate rapid population growth (including the double cohort bulging its way through the system, starting 2016).
Construction of learning facilities will take place in 25 existing secondary schools, with each site serving not just the school itself, but also neighboring schools. School selection is based on a needs-based criteria derived from district level aggregates for pupil-classroom ratios and share of schools without science labs.

Each site will be equipped with one of three possible types of learning facilities:

1. **EMS Infrastructure Package Only (17 sites):** This is the basic package that will be provided to all 25 sites. It will include the provision of the following:
   a. Science room, serving as a multipurpose laboratory for Physics, Chemistry, and Biology
   b. Students’ EMS resource room: Library, Language lab, ICT
   c. Teachers’ room and/or additional room for extra classes, built in a one-story structure.

2. **EMS Infrastructure and Classrooms Package (8 sites):** This will include, in addition to the package described in (1), the provision of classrooms to reduce overcrowding and improve learning conditions in heavily congested schools.
   a. In 6 sites/schools, 8 classrooms will be constructed and the total package will be accommodated in a two-story structure\(^2\).
   b. In 1 site, 12 classrooms will be constructed and the total package will be accommodated in a two-story structure. The site is in Chake Chake, one of the most densely-populated regions in Zanzibar.
   c. In 1 site, 24 classrooms will be constructed and the total package will be accommodated in a three-story structure. The site is in Urban/West\(^3\), one of the most densely-populated regions in Zanzibar.

The components of the project are described in more detail in Chapter 2.

Operational Policy 4.01 of the World Bank requires the RGZ to prepare an Environmental and Social Management Framework (ESMF) to screen for and manage the potential and actual environmental and social impact of the project, and to manage its overall environmental and social impact in a strategic manner. The ESMF is based on the aim of mainstreaming environmental and social considerations fully into the participatory process for identifying, planning, implementing, and monitoring activities and/or sub-projects.

The RGZ is further required to disclose the ESMF document in-country as a stand-alone document, so that it can be accessed by the general public, local communities, potential project-affected groups, local NGOs, and all other stakeholders, as well as at the Infoshop of the World Bank.

### 1.3 Principles of the ESMF

The ESMF has been prepared on the basis of the principle that sustainable development is the underlying philosophy of the National Environmental Policy (NEP) of Zanzibar. Therefore, this ESMF is designed in order to maximize the contribution of the project to sustainable development of education infrastructure in Zanzibar, in line with national policy aspirations for a healthy environment. Specifically, the

\(^2\) The cost of EMS package + 8 classrooms would be about $364,000 without equipment and furniture

\(^3\) In this site, eight schools, called Kwerekwe A–H, are grouped together in one large site. One of these is a temporary school that was created from exhibition buildings in the 1980s and it is in appalling condition; this structure will be demolished.
implementation of ZISP has the potential to contribute to environmental management capacity on the grassroots level, through partnering with all stakeholders in steering project development. This is being done in the following ways: (i) preliminary consultations undertaken in preparation of the ESMF have been undertaken at the school level. Within this process community representatives, school officials, and local leaders (Shehas) were given a platform and opportunity to reflect on environmental and social issues and concerns with regard to potential infrastructure provision; (ii) this feedback from the community and ultimate beneficiary levels will be mainstreamed at district and central levels to improve attention to environmental and social concerns; (iii) various risk mitigation measures outlined within the ESMF will provide an important tracking mechanism and feedback loop to sustain consultations and focus on key environmental and social issues.

1.4 Preparation of the ESMF

The ESMF is the result of a preparation study with the following objectives:

- To assess the potential areas of environmental and social impact of the proposed ZISP project
- To inform the project preparation process of the potential environmental and social impacts of potential project activities, and propose relevant mitigation measures
- To establish clear directives and methodologies for the environmental and social screening of project activities that will be supported by the proposed project
- To provide guidance on the process to ensure environmental assessments will be prepared in compliance with national legislation and OP 4.01, and also serve as a guideline by providing generic EMPs.

The key deliverable of this study is the ESMF Report addressing the ZISP project.

1.4.1 Activities completed for preparation of the ESMF

Activities completed during the preparation to date include:

- Familiarization with background documentation
- Field visits to proposed ZISP project sites in Unguja and Pemba, including meetings with head teachers and shehas, undertaken from February 1 – 5, 2016
- Meetings with project staff in the Ministry of Education and Vocational Training, and other relevant arms of the RGZ
- Preparation of this ESMF report

The MoEVT first identified potential schools to be targeted for construction projects, following the below criteria:

1. Secondary schools with levels of up to Form IV or Form VI
2. Schools with lack/shortage of laboratory, Library or Computer rooms facilities
3. Schools with space for construction of Laboratory/Library/Computer rooms
4. Schools which are in a location that is accessible by other schools so that they can share the facilities (Laboratory, Library and Computer rooms)
5. Schools which are in other islands (e.g. Kojani, Tumbatu)
6. Schools with a large student body
The MoEVT then worked together with the Ministry of Land, Housing, Water and Energy to ensure that the MoEVT itself, as owner of school sites, had a copy of the land title in its possession for each site.

MoEVT staff then visited all 25 (originally 34) sites, and administered an environmental and social checklist questionnaire (see Annex 2 for full text). This questionnaire was administered to the head teacher, the village sheha (traditional leader), and any other informed persons who were available, including interim or assistant head teachers, and Parent Committee Heads. The full dataset with responses to all questions, and site photographs, are available.
CHAPTER TWO: DESCRIPTION OF ZISP ACTIVITIES

2.1 Project Development Objectives

The PDO is to improve the (i) Quality of instruction and (ii) Student support for early resolution of learning gaps in targeted grades and subjects. Targeted grades are upper primary and lower secondary (Standard 5 – Form II) and targeted subjects are English, Math, and Science.

The focus on English, Math, and Science subjects reflects the prioritization of skills that are most in demand by the labor market. However, the project includes several system-level reforms and interventions that are expected to improve instructional quality and student support in all subjects.

2.2 Components of the ZISP Project

Component 1: Effective Math, Science, and English (MSE) Instruction (estimated cost: US$9 million)

The main objective of this component is fundamentally to transform the way in which Math, Science, and English are taught to students in upper primary and lower secondary grades. Through this component, teachers will be equipped better to transmit knowledge and skills, and also to provide focused student support for early resolution of learning gaps. This will be done through a cohesive set of interventions that together address constraints in three key domains—availability of trained teachers, teacher skills, and teacher incentives and accountability structures.

Accordingly, the component includes three types of activities:

a. Retraining of selected in-service teachers to increase the supply of Math and Science teachers in lower secondary grades

b. Training of all English, Math, and Science teachers in targeted grades in enhanced student support

c. Teacher management reforms to strengthen teacher accountability and motivation structures.

Retraining to increase the supply of Math and Science teachers: This activity will help alleviate the acute shortage of Math and Science teachers for lower secondary grades by supporting the government’s efforts to correct subject specialization mismatches in the form of undersupply of Math and Science teachers and oversupply of Arts teachers.

About 600 lower secondary Arts teachers will be re-trained to teach lower secondary Math and Science. Eligible teachers for this re-training have been identified based on baseline aptitude and interest. Teachers who successfully finish the training and are able to adequately reflect it in their classroom teaching will be entitled to the diploma and salary/benefits enjoyed by regular Science and Math teachers. This commitment will be formalized through a government order. To ensure that this government order is issued in a timely fashion, it is included as a disbursement condition for construction activities. This implies that actual construction cannot begin until this government order is issued.

Teacher Training for Enhanced Student Support (TESS): This in-service training aims to improve pedagogy and increase the level of direct student support provided by teachers for early resolution of learning gaps. In addition, teachers will be trained to provide guidance and counselling to improve students’ socio-
emotional readiness for the labor market. It will focus on five dimensions: supporting lagging students through extra classes and tutoring, formative student assessments (including provision of item banks), student counselling and guidance, overall pedagogy, and English proficiency. This training will be given to all English, Math, and Science teachers teaching upper primary and lower secondary (Standard 5-Form II).

Both re-training and TESS are designed as a series of short-term, cluster-based, in-service training courses delivered through the 12 existing Teacher Centers (TCs) to which each primary and secondary school in Zanzibar is mapped. The TCs will serve as resource centers not just for providing the training but also for follow-up support, mentoring, coaching, and refreshers. Where appropriate, training approaches will incorporate scaffolding and lesson-scripting techniques for maximizing effectiveness. Mechanisms will be instituted to reflect resulting pedagogical improvements in teachers’ performance evaluations and professional development. Project DLIs disburse against evidence of targeted teachers’ proficiency in lower secondary Science and Math and TESS skills.

**Teacher Management Reform:** These activities will focus on improving the incentives and accountability structures teachers face, and tie them more directly to the quality of instruction and student support. It will include the following:

- **Teacher inspection reform:**
  a) School inspectors and head-teachers will be trained and resourced better to measure/track instructional quality and student support
  b) Frequency of inspections will be increased
  c) Feedback loops between inspectorate and schools will be strengthened (with support from TA enabled data platforms)

- **Teacher performance-management reform:** Annual recognition awards will be given to best-performing teachers – in terms of instructional quality and student support – at the school and district level. In addition, the project will help facilitate reforms to the teacher Scheme of Service so that teacher promotion becomes more directly performance-based.

Project DLIs disburse against evidence of annual school-level inspections (and related data provision), and provision of teacher awards.

**Provision of e-Readers:** This activity will aim to improve MSE learning through the use of low-cost e-Reader tablets. Digital devices like e-readers will be used to deliver curriculum content directly. They will also provide students with easier, cheaper, and faster access to innovative technology-based learning tools, games, references, and information. A key benefit of these devices is that they offer highly individualized instruction allowing students to learn at their own pace – features that can be particularly beneficial for struggling students who might have problems keeping pace with classroom instruction. Under this component, tablets would be distributed to lower secondary schools for school and possibly home use, with the capability to download and operate a range of self-paced, open-source software applications. A phased approach will be used during implementation wherein schools with access to MSE hubs and ICT connectivity will be prioritized. Conditional on these pre-requisites, to the extent possible, phasing-in will take place in a randomized way so that lessons can be learned to maximize development effectiveness during implementation.
**Component 2: Improved School Autonomy and Learning Environment (estimated cost: US$9 million)**

The main objective of this component is to equip schools with autonomy, resources, and incentives to improve the quality of both instruction and student support by improving the overall learning environment of the school. To this end, School Improvement Grants (SIGs) are provided. SIGs are expected to remove charges to parents in secondary schools (in support of the government’s policy of free basic education), and provide additional resources and incentives at the school level to improve learning environment in the face of expanding access. This component will also explicitly support capacity building of school management committees (SMCs), and community outreach to strengthen social accountability mechanisms in education service delivery. To this end, training will be provided to SMCs and information campaigns undertaken for parents and communities.

The SIGs will have two parts:

a. **Base School Improvement Grant**: will be delivered to all schools on a per capita basis tied to the number of students enrolled in secondary grades

b. **Performance-Based Top-Up Grant**: will be awarded to schools exhibiting strongest performance improvements in Standard 6 and Form II exams in English, Science, and Math

Schools will be provided with a menu of options on how they can use the grants. To enhance school autonomy and provide space for localized solutions, the menu of options will be broad and flexible. They will include a particular focus on activities like extra/after-school classes and tutoring sessions for students who need additional focused support, student guidance and counselling, and implementing formative assessments. Project DLIs disburse against evidence of timely disbursement of SIGs to schools.

**Component 3: Hubs for Enhanced MSE Learning (estimated cost: US$11.5 million)**

The main objective of this component is to support the impactful provision of learning facilities/resources for improved Math, Science, and English achievement.

It will include building and equipping of (a) 147 additional classrooms to reduce overcrowding and improve learning conditions in heavily congested schools; and (b) facilities and equipment to promote Math, Science, and English learning (Science room, language lab, information and communication technology [ICT] facilities, and room for extra classes and/or teacher preparation). Construction of learning facilities will take place in 25 existing secondary schools—with each site serving as a hub for neighboring schools. Hence, construction of facilities will serve a total of 78 lower secondary schools. Criteria for site selection is needs-based. Proposed interventions are designed such that they are not duplicative of ongoing infrastructure investments by other donor partners.4

It is expected that the proposed facilities/resources will not only increase student achievement directly, but also have positive impacts on student motivation, effort, and aspirations. They will also help more directly align education provision in schools with the skills required by labor markets. Cost-effectiveness

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4 Several other donors are financing construction of facilities for the early childhood education and primary grades; more details are available in the ZISP Strategic Directions Paper (2015).
and efficiency will be maximized by (a) ensuring that, where possible, the same block can be accessed by multiple schools, using a cluster-based approach; (b) making facilities multipurpose; and (c) leveraging latest technological advances to reduce unit costs. Recurrent operating costs of laboratory blocks will be financed through SIGs (and secondary school capitation grants after project completion). Outreach activities targeted at school administrators, teachers, and students will be implemented to ensure that all physical facilities constructed under the project are used for maximum learning impacts, and align well with other project components.

Table 1: Secondary Schools Selected For Construction Under ZISP

<table>
<thead>
<tr>
<th>PEMBA</th>
<th>Schools</th>
<th>No. of Students</th>
<th>Details</th>
<th>District</th>
<th>Nearby Schools</th>
<th>No. of Students (hub schools)</th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>KISIWA PANZA (Island)</td>
<td>394</td>
<td>1 story</td>
<td>Mkoani</td>
<td>1 CHOKOCHO</td>
<td>310</td>
</tr>
<tr>
<td>2</td>
<td>KANGANI</td>
<td>680</td>
<td>1 story</td>
<td>Mkoani</td>
<td>1 MKANYAGENI</td>
<td>398</td>
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<td></td>
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<td>2 MJIMBINI</td>
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<td></td>
<td>3 MTAMBILE</td>
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<td>3</td>
<td>KINOWE</td>
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<td>Micheweni</td>
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<td>4 HARUNI</td>
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<td>Micheweni</td>
<td>1 MKIA WA NG’OMBIE</td>
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<td>KOJANI (Island)</td>
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<td>1 CHWALE</td>
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<td>3 MICHAKAJNI</td>
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<td>9</td>
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<td>3 FURAHA</td>
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<tr>
<td>10</td>
<td>CHAKE CHAKE</td>
<td>MSE + 12 classrooms package (2 story)</td>
<td>Chake Chake</td>
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<td>2 PONDEANI</td>
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<td></td>
<td>3 NG’AMBWA</td>
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<td>4 WESHA</td>
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UNGUJA
<table>
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<tr>
<th>Schools</th>
<th>No. of Students</th>
<th>Details</th>
<th>District</th>
<th>Nearby Schools</th>
<th>No. of Students (hub schools)</th>
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<tbody>
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<td>JANG’OMBE</td>
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<td>2 story Urban</td>
<td></td>
<td>JANG’OMBE</td>
<td>1551</td>
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<td>KISAUNI</td>
<td>289</td>
<td>1 story West</td>
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<td>MAUNGANI</td>
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<tr>
<td>MWANAKWEREKWE</td>
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<tr>
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<td></td>
<td>package (3 story)</td>
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<td>MWANAKWEREKWE B</td>
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<td>MWANAKWEREKWE C</td>
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<td>REGEZA MWENDO</td>
<td>1213</td>
<td>2 story West</td>
<td></td>
<td>KIANGA</td>
<td>485</td>
</tr>
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<td></td>
<td>MWERA</td>
<td>716</td>
</tr>
<tr>
<td>CHUINI</td>
<td>1109</td>
<td>1 story West</td>
<td></td>
<td>MBUZINI</td>
<td>317</td>
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<td>MFENESINI</td>
<td>806</td>
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<tr>
<td>MTONI KIGOMENI</td>
<td>1003</td>
<td>1 story West</td>
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<td>MTONI KIDATU</td>
<td>501</td>
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<td>BUBUBU</td>
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<tr>
<td>TUMBATU (Island)</td>
<td>655</td>
<td>1 story North A</td>
<td></td>
<td>TUMBATU</td>
<td>655</td>
</tr>
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<td>JONGOWE</td>
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<td>KIJINI</td>
<td>169</td>
<td>1 story North A</td>
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<td>MBUYU TENDE</td>
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<td>FUKUCHANI</td>
<td>304</td>
<td>1 story North A</td>
<td></td>
<td>POTOA</td>
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</tr>
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<td></td>
<td></td>
<td>KIDOTI</td>
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</tr>
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<td></td>
<td>KILINDI</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KIGUNDA</td>
<td>174</td>
</tr>
<tr>
<td>KITOPE</td>
<td>522</td>
<td>1 story North B</td>
<td></td>
<td>PALE</td>
<td>421</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MUANDA</td>
<td>429</td>
</tr>
<tr>
<td>DONGE</td>
<td>716</td>
<td>1 story North B</td>
<td></td>
<td>PALE</td>
<td>421</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MUANDA</td>
<td>429</td>
</tr>
<tr>
<td>MAHONDA</td>
<td>796</td>
<td>2 story North B</td>
<td></td>
<td>MGAMBO</td>
<td>147</td>
</tr>
<tr>
<td>UROA</td>
<td>324</td>
<td>2 story Central</td>
<td></td>
<td>MARUMBI</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PONGWE PWANI</td>
<td>34</td>
</tr>
<tr>
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<td></td>
<td>CHWAKA</td>
<td>324</td>
</tr>
<tr>
<td>BWEJUU</td>
<td>353</td>
<td>1 story South</td>
<td></td>
<td>PAJE</td>
<td>260</td>
</tr>
<tr>
<td>UNGUJA UKUU</td>
<td>411</td>
<td>1 story Central</td>
<td></td>
<td>UZI</td>
<td>230</td>
</tr>
</tbody>
</table>

**Component 4: Systems Transformation and Project Management (estimated cost: US$3.7 million)**

This component will focus on four areas: (a) Examination reform; (b) Mainstreaming enhanced student support at the school level; (c) Strengthening data systems and supporting project M&E; and (d) Project implementation support. Outcomes associated with (a), (b), and (c) are included in project DLIs.

Examination reform: This area aims to improve student assessment activities in Zanzibar so they can be supportive instead of punitive. This would include (a) training and equipping of the Zanzibar Examination Council on Form II exam creation, administration, marking, and analysis; (b) development and dissemination of item banks for English, Math, and Science for Standard 5–Form II that can be used both
at the central level and at the school level by teachers in setting formative assessments; (c) generation of automated, standardized school- and student-level reports providing subject disaggregated data on student exam performance; and (d) improvement in Form II exams through an evaluation of its format and content structure, outreach to teachers and students, and instituting a Form II certificate to serve as a credible labor market signal.

**Mainstreaming enhanced student support at the school level:** TA will finance activities related to design and implementation support (including provision of a team of facilitators at the MoEVT) for provision of three types of student support at the school level: (a) early identification of learning gaps through formative assessments; (b) remediation of learning gaps through extra classes; and (c) tutoring, guidance, and counselling.

**Strengthening data systems and supporting project M&E:** Within this area, the focus will be on (a) creation of comprehensive interlinked education databases—teacher information system (including an inspection platform) and examination database; each database will include unique school, teacher, and student identifiers, which will be used to link each database with the central EMIS database; (b) dissemination of compiled/enhanced EMIS information at all levels (ministry, district education officers, and schools) through education abstracts and school reports; and (c) project-related data collection, including for impact evaluation, independent verification, and direct beneficiary feedback. Support in this area will be carefully aligned and harmonized with support from other donor partners and projects to avoid fragmentation and duplication and maximize complementarities.

**Project implementation support:** TA will finance activities related to design and implementation support, including provision of a team of facilitators at the MoEVT for (a) project design and implementation support; (b) design and supervision of construction activities; (c) comprehensive end-to-end capacity building on school grants; and (d) project-related communication and sensitization.

*Unallocated: (estimated cost: US$1.8 million)*
CHAPTER THREE: BASELINE DATA

3.1 Size and Geographical Location

Zanzibar is a small archipelago comprised of Unguja (commonly referred to as Zanzibar Island), Pemba, and several smaller outlying islands. It is an autonomous part of the United Republic of Tanzania (URT), and therefore has its own government – the Revolutionary Government of Zanzibar (RGZ) – which oversees internal affairs. However, some agencies (such as the Ministry of Defense and the Bank of Tanzania) serve the union as a whole.

Zanzibar is located in the Indian Ocean, lying at 39° east and 6° south. It is separated from the mainland by a 40 km channel. The islands of Unguja and Pemba have areas of 1660 km$^2$ and 981 km$^2$, respectively; together this is equivalent to 250,000 ha of land.

Administratively, Zanzibar is divided into five sub-regions (three in Unguja and two in Pemba), which themselves are comprised of ten districts, as shown in the table below. The administrative capital and seat of government for Zanzibar as a whole is Zanzibar Town (Stone Town). In Pemba, the administrative center is Chake Chake town. However, each district has its own administrative center from which government service is coordinated.

Table 2: Administrative districts in Zanzibar

<table>
<thead>
<tr>
<th>Regions and Districts</th>
<th>Unguja</th>
<th>Pemba</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North Unguja</td>
<td>North Pemba</td>
</tr>
<tr>
<td></td>
<td>- North A</td>
<td>- Wete</td>
</tr>
<tr>
<td></td>
<td>- North B</td>
<td>- Micheweni</td>
</tr>
<tr>
<td>South Unguja</td>
<td>- South Central</td>
<td>- Chake Chake</td>
</tr>
<tr>
<td></td>
<td>- Central</td>
<td>- Mkoani</td>
</tr>
<tr>
<td>Urban/West</td>
<td>Urban</td>
<td></td>
</tr>
<tr>
<td></td>
<td>West</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Population and Settlement Patterns

According to the 2012 Tanzania Census, the total population of Zanzibar is 1,303,569. Of this, 896,721 people live in Unguja and 406,848 people live in Pemba. The average household size for the archipelago is 5.1 people. Zanzibar has one of the fastest-growing populations in the world - the current population growth rate is around 2.8%.
The population of Zanzibar is predominantly rural and young. An estimated 68% of youth live in rural areas, and children less than 15 years of age account for 43% of the population.

The region with the largest population is Mjini Magharibi (Urban West); its population of 593,678 comprises 46% of the total population of Zanzibar, and 66% of the Unguja population. Mjini Magharibi also has the highest population growth rate: the average annual intercensal\(^5\) population growth rate for the archipelago is 2.8%, but this figure leaps to 4.2% for Mjini Magharibi.

Mjini Magharibi also tops the charts in terms of population density. Population density for Zanzibar on average is 1392 people per square kilometer, but in Mjini Magharibi the figure is nearly double, at 2581 people per square kilometer, making it the second most-densely populated region in Tanzania overall, after Dar es Salaam.

Given the finite nature of land, especially in the case of islands, increasing population density has major implications on future land demand for conflicting uses, such as for agriculture to feed the growing population and secure export crops, forestry to meet the demand for wood, housing and settlement, industries, recreation, and conservation.

Table 3: Total Population of Zanzibar by District and Region

<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zanzibar</td>
<td>1,303,569</td>
</tr>
<tr>
<td>Unguja North</td>
<td>187,455</td>
</tr>
<tr>
<td>Unguja South</td>
<td>115,588</td>
</tr>
<tr>
<td>Urban West</td>
<td>593,678</td>
</tr>
<tr>
<td>Pemba North</td>
<td>211,732</td>
</tr>
<tr>
<td>Pemba South</td>
<td>195,116</td>
</tr>
</tbody>
</table>

3.3 Climate

The climate of Zanzibar is tropical and maritime, and follows the monsoon winds. These are the northeast trade winds from December to February, and the southeast monsoon from March to November.

The main rainy season (masika) occurs between March and June due to the southeast monsoon winds, and the short rains (vuli) usually fall from October to December. There is also substantial inter-monsoonal precipitation: records show that one-fifth of total rainfall in Zanzibar occurs between the rainy seasons.

Average rainfall for the islands is about 1500 mm per annum, with a minimum of 1400 mm and a maximum of 1800 mm. February to late March is the driest period of the year, with about 20 mm of rainfall during this time.

According to Khiari (1992), the overall pattern of rainfall on the islands has changed in terms of volume and reliability. Rainy seasons have been observed to start late and end early and abruptly; hence overall precipitation has decreased.

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\(^5\) Between censuses, which in Tanzania are done every 10 years
These changes have a negative impact on forest planting targets, as planting programs depend on the onset, duration, and reliability of rainfall.

The highest temperatures occur during the short dry season, with a maximum mean of 33°C in Unguja (and a minimum of 23.3°C), and 29°C in Pemba (minimum of 21.1°C).

3.4 Soils

Soils in Zanzibar are categorized into two main classes: the shallow, infertile, rocky coral rag soils in the east, and the deep, fertile soils in the west. In the coral rag, shifting cultivation is the dominant farming system, whereas the deep soils support permanent agriculture and plantation crops. Hence, areas with deep soils are densely populated compared to coral rag areas.

Zanzibar bedrock and parent material is predominantly made up of limestone of maritime origin. Compared to the eastern sides of the islands, the western sides have been overlain in larger proportion with alluvial sands, silts, and clays, with freely-drained reddish soils formed from these sediments called kichanga.

Darker kinongo soils, derived from limestone parent materials, are found toward the east. These soils become darker in color, with increasing humus content and pH as one moves farther eastward. The soil depth decreases until finally coral rock is exposed on the surface, with soil confined to pockets in depressions on the rock surface. The remaining kinamo heavy soil type is found in isolated areas.

3.5 Ecology

Unguja and Pemba are typical coastal low-lying ecosystems, influenced by the Indian Ocean and underlying coral limestone geology. Both islands are endowed with mangrove vegetation estimated to cover nearly 6.1% (16,000 ha) of the total land area, which is about 232,800 ha. The mangrove forest area is the second-largest natural forest vegetation after the coral rag thicket, which is estimated to cover 40% of the total land area.

Both Unguja and Pemba have some critical ecological habitats which harbor species of international conservation. The Jozani Chwaka Bay National Park is a 50 km² (19 sq mi) national park. The Zanzibar red colobus, found in the park, a rain forest species (unlike the black-and-white colobus found in other regions of Africa), is also known as Kirk's red colobus. It is now adopted as the flagship species for conservation in Zanzibar, from the mid-1990s. Other species of fauna found in the park are the Sykes monkey, bush babies, more than 50 species of butterfly and 40 species of birds. The nocturnal Zanzibar tree hyrax, which has four ‘toes’ on its front feet and three on its back, is said to be the first hyrax species that has acclimatized to the forest. Wild life attractions of Zanzibar also include dolphins apart from deep sea fishing for tuna, marlin, and shark. Another animal in the forests of the Unguja Island unequaled elsewhere is the Zanzibar leopard but this species has not been sighted since 2003.

The local economy is influenced largely by activities which exploit the marine and coral rag forest ecosystems.
3.6 Marine Environments
The entire coastline of Unguja and Pemba islands is threatened by degradation associated with non-sustainable human activity, such as coastal construction; dumping of solid and liquid effluent, including untreated sewage; non-sustainable fishing through the use of nets, poison, and blasts; dynamite fishing in coral reefs; anchor damage; collection of live coral; and over-exploitation of turtles through slaughter and collection of eggs. The problem is partly driven by an economy that is largely dependent on exploitation of primary resources, and compounded by an absence of strong policy guidelines on the exploitation of marine resources. If left unchecked, marine degradation has the potential to undermine strategic economic interests in Zanzibar, such as biodiversity, fisheries, and tourism.

3.7 Land
The National Environmental Policy identifies land degradation to be one of the main ecological concerns in Zanzibar today. The isles are home to unique ecosystems that are world-renowned as reservoirs of biodiversity. In Unguja, the most famous biosphere is the Jozani-Chwaka Bay Conservation Area: estimated to cover 5000 ha, the Area is made up of the Jozani Forest Reserve, mangroves, and the coral rag forest. It is the largest terrestrial natural forest on Unguja, and is the remainder of the forest that once covered most of the island. The mangrove formation of Chwaka Bay is the largest stand of mangrove forest in Unguja; its estimated 2800 ha make up around 15% of the forest cover of Zanzibar. The Jozani-Chwaka Bay Area is home to many rare and endemic species, and is thus an important reservoir for biodiversity. At the regional level, the area forms part of the Eastern African Arc Mountains, ranked among the top 25 biodiversity “hot spots” in the world.

It is commonly acknowledged that deforestation in Zanzibar began in the 1830s with the introduction of the clove-planting program. The current deforestation rate in Zanzibar is estimated at 950 ha per year\(^6\), and is driven by the demand for timber, fuel, and charcoal, and the clearing of land for cultivation and settlement. Shifting cultivation, through which land is cleared of vegetation, cultivated for several seasons, and then abandoned, is a major contributor to soil quality degradation (as well as deforestation).

According to available information (DCCFF, 2002), annual firewood consumption in Zanzibar is estimated at 3,068,977 m\(^3\) (77% in Pemba and 23% in Unguja). Coral rag is most commonly used for firewood in Unguja, and clove tree wood in Pemba. Despite overharvesting, this demand is not met locally, and a substantial volume of wood is imported from the mainland.

Other forms of land degradation are associated with non-rehabilitation of quarries, which leave gaping craters that pose hazards to people and livestock, and create breeding grounds for water borne diseases.

Zanzibar is home to the endemic Zanzibar Red Colobus and the Zanzibar leopard. The Zanzibar leopard (Panthera pardus adersi) is an elusive and possibly extinct subspecies of leopard endemic to Unguja Island. Increasing conflict between people and leopards in the 20\(^{th}\) century led to their demonization, and attempts to exterminate them. Efforts to develop a leopard conservation program in the mid-1990s were shelved when wildlife researchers concluded that there was little prospect for the animal’s long-term survival.

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3.8 Water
All water in Zanzibar is under threat. Shallow groundwater is under threat of contamination from sewers, leaking sewage, and percolation of contaminated runoff water. Brackish and sea water is also under threat from direct discharge of untreated sewage and runoff water, and through location of municipal dump yards along creeks and estuaries. Dump yards also pose a threat to mangrove ecosystems in Unguja. Being a coastal ecosystem, Unguja is faced with the problem of perpetual seepage of saline water into the groundwater. The hazard is compounded by overexploitation of groundwater, which allows the saline water table to flow freely into boreholes. Many boreholes in Unguja yield saline water.

3.9 Economic Profile
The economy of Zanzibar depends mainly on cloves for export, subsistence agriculture, and the tourism industry. Since the early 1990s, there has been a shift from a monopolist economy to free enterprise, as part of the economic recovery program. The agricultural sector makes up about 50% of GDP, and employs nearly 70% of the labor force, which in turn earns about 90% of Zanzibar's export value. Manufacturing has potential for development if entrepreneurs/investors could be attracted to the sector. The public sector as a proportion of GDP is quite high. The main contributors are wholesale, retail trade, and public administration. At present, the RGZ is the largest single employer in Zanzibar.

Economic Overview
Since the mid-1980s, Zanzibar has been pursuing a liberalized economic system of free trade and free enterprise. This marked the shift away from a centralized economy in which agriculture was the sole sector not dominated by government planning. The main drivers of the Zanzibari economy are agriculture, trade, tourism, and the services sectors.

Zanzibar’s economy has experienced robust, albeit somewhat erratic, growth in recent years. According to the most recent Socio-Economic Survey published by the Office of the Chief Government Statistician (2014), Zanzibar’s economy grew by 7.0 percent in 2014, down from 7.4 percent in 2013, but an improvement over the 4.9 percent expansion in 2012. Inflation stood at 5.6 percent, edging up from 5.0 percent in 2013. Food price increases were a major driver, with non-food inflation actually falling by almost two full percentages point over the same time period.

Table 4: Zanzibar Macroeconomic Fundamentals, 2010-2014

<table>
<thead>
<tr>
<th>GDP Growth Rate (2007 Constant Prices)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, and fishing</td>
<td>3.3</td>
<td>4.7</td>
<td>-8.3</td>
<td>13.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>Industry</td>
<td>4.6</td>
<td>18.4</td>
<td>7.5</td>
<td>3.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Services</td>
<td>4.8</td>
<td>8.3</td>
<td>4.8</td>
<td>4.6</td>
<td>9.8</td>
</tr>
</tbody>
</table>

All data quoted in this section comes from Integrated Labor Force Survey, 2006. This is the latest available Labor Force survey for Zanzibar.
This economic growth has been fuelled by strong FDI. In 2011, Zanzibar received US$176m of new foreign direct investment, which is a 319% increase from 2010. Over 85% of this was in the tourism sector. Currently, the Zanzibar Investment Promotion Agency has close to 93 new investment projects approved, which would lead to further development opportunities.

Zanzibar’s economy remains dominated by and dependent upon the agricultural sector, mainly the production and sale of cloves and clove products. Trade, tourism, and other service sectors are also major contributors to economic growth.

Zanzibar’s imports make up 75% of its trade volume, with mainland Tanzania acting as a large supplier of goods. The archipelago has a narrow export basket, and persistently runs a negative trade balance. This deficit has widened in recent years; the 2013 trade deficit was 21 percent greater in 2014 than the previous year.

**Agricultural Sector**

Agriculture is the second-largest contributor to Zanzibar’s GDP, making up approximately 30 percent of the region’s output (27.9 percent in 2014). The sector employs more than 70 percent of the working-age population, and earns around 80 percent of Zanzibar’s export value.

Despite its crucial role in the economy, the sector is plagued by erratic growth and inefficiency. Problems include obsolete technology (especially for irrigation), insufficient financial services, constraints to investment, a weak framework for marketing, low uptake of the use of fertilizer and other inputs, post-harvest losses (reaching 40 percent on average across crops), and the impacts of climate change.

Cloves and clove stems are major cash crops, with international prices moving upward over the last few years, but the crop itself suffers from production fluctuation: clove output varies a great deal year-on-year because of the cyclical nature of the plant’s bud production. Zanzibar usually experiences a bumper crop every 4 years.

Looking more broadly at the sector, production has nearly halved in the last half-century, with production dropping to approximately 10,000 metric tons per year from 24,000 metric tons in the 1950s, and the number of clove trees falling from around 4 million trees to 2 million.

Zanzibar’s 2004 ten-year Clove Development Strategy sought to combat these issues, providing free seedlings to farmers and increasing the prices paid for cloves to 80 percent of the market price. The Zanzibar State Trade Corporation (ZSTC) remains the sole legal buyer of cloves; although the prices ZSTC offers to farmers have increased, they are still below world market prices, spurring some farmers to smuggle cloves for illegal sale in mainland Tanzania or in Kenya.
The next-largest cash crop by value is seaweed, an industry which emerged in the late 1980s and made Zanzibar the world’s third-largest exporter of the crop by the following decade. However, production has fallen rapidly due to rising water temperatures, and damage from bacteria. According to the most recent Bank of Tanzania statistics, exports fell from 14,393 tons in 2012 to just 9,845 tons in 2013; this translated to a 33 percent reduction in export value.

Other cash crops include copra (the dried kernel of the coconut, from which oil is extracted), other spices, fish products, fruits, and vegetables.

In addition to crop cultivation, fishing is another important agricultural economic activity in Zanzibar. However, this industry is plagued both by underutilization of deep sea stocks and overfishing of areas close to the shore, as well as other resources management issues. For the most part, fishing methods are traditional and artisanal, and fishermen frequently resort to illegal practices such as dynamiting. Production remains at subsistence levels.

**Tourism and Other Services**

Services overall are the largest contributor to Zanzibar’s GDP, rising from 41.5 percent in 2013 to 44.7 percent in 2014. Tourism alone contributed 27 percent of GDP in 2012, and was responsible for 80 percent of forex earnings.

Zanzibar overhauled its tourism sector in 2014, following a “Results for Prosperity Lab” out of which the Multi-sectoral Tourism Development Program was formulated. This Program sought to integrate the National Tourism Policy and National Tourism Master Plan into a multi-sector strategy that would promote “a sustainable tourism industry that cares for norms and cultural diversity, protects the natural environment, and shares unique and rich experiences with visitors while providing a leading role in economic growth and decent employment”.

The public sector as a proportion of GDP is quite high. The main contributors are wholesale, retail trade, and public administration. At present, the RGZ is the largest single employer in Zanzibar.

**Manufacturing sector**

Zanzibar has a very small manufacturing sector. Its share of overall GDP is approximately 6.5 percent, but growth over the last five years has been erratic, fluctuating from 3.5 percent to as high as 9.9 percent.

The sector is oriented around chemical products, and consumer goods such as food, beverages, tobacco, and textiles. Exports of finished/processed goods are insignificant, contributing less than 5.0 percent to total export earnings. These products are made under Economic Processing Zone (EPZ)-type manufacturing, limited furniture products, and other wood products.

**Energy**

The energy sector in Zanzibar is constituted by electric power, petroleum, and products supplemented by firewood and its products. Coal and gas are rarely used in households or by industry. 70 percent of Zanzibar’s electric power demand is met by mainland Tanzania through a submarine cable; the remainder (fueling Pemba) is thermally-generated power. Between 70-75 percent of the electricity generated is used
by households, while less than 20 percent is used by industry. Firewood, charcoal, and kerosene are widely used for cooking and lighting in both urban and rural areas.

Households overwhelmingly rely on wood fuel (firewood and charcoal) for energy generation. Zanzibar relies on wood imports from mainland Tanzania to bridge deficits in local supply.

**Hydrocarbons**

Large reserves of petroleum and natural gas have been discovered on and offshore in East Africa in recent years, and the potential for discoveries in Zanzibar is high.

However, ambiguity in petroleum resources management has stymied exploration activity. One view is that petroleum exploration is constitutionally a Union matter, and therefore governed by the state-owned Tanzania Petroleum Development Corporation (TPDC). The other is that current production-sharing mechanisms under the TPDC are not satisfactory, and that the Zanzibar Directorate of Petroleum (DoP) is better able to manage Zanzibar’s resources and revenue. Although the DoP has issued exploration licenses, the inconsistency has prevented any exploration in Zanzibar since 2004. Proposed changes to the Constitution would have resolved some of these issues, but the referendum on the new constitution, originally slated for April 2015, was postponed indefinitely.

**Mining**

All geological surveys conducted have indicated that Zanzibar has no significant mineral deposits. In this respect, the mining sector of Zanzibar is constituted by stone quarrying used for construction and lime making. It is a very insignificant proportion but based on the importance of the resource to the construction sector, stone mining becomes an important ingredient to the lives of rural people, especially those living in coral rag areas. Nevertheless, non-sustainable management of quarrying business presents a major ecological concern in Zanzibar.

**Transport and Communications**

Zanzibar has a total road network of 1,600 kilometers of which 85 percent are tarmac or all weather surface. The remaining is earth road which is annually rehabilitated to make it passable throughout the year. Zanzibar has now a thriving sea transport network which by using publicly owned ships and private speed boats serves the ports of Zanzibar, Dar es Salaam, Pemba, Tanga Mtwarra and Mombasa. Using the two main airports of Unguja and Pemba, Zanzibar is well connected to the rest of the world. The Zanzibar main airport can now handle bigger planes, which has resulted in an increase in passenger and cargo inflows and outflows. Similarly, Zanzibar is well served by the newly restructured public telecommunication company (TTCL) and 4 private owned mobile systems. Through these systems the whole of Zanzibar (Unguja and Pemba) is widely covered and connected to most parts of the world.

**Building and Construction**

The construction industry has benefited from the government infrastructure program introduced as a result of Mkuzu II, and considerable FDI in hotels specifically. In 2012, the sector contributed TZS67bn to GDP (average annual growth at 5%) and was responsible for the formal employment of over 6,090 local people. The industry is highly dependent on labor from the Tanzanian mainland. Over 50% of skilled roles are fulfilled by non-Zanzibaris who travel on short-term contracts. The industry also has a
considerable informal sector, the size of which is difficult to fully determine. Estimates suggest that beyond the formal statistics, an additional 50% of labor is employed on an informal, non-contractual basis.

**Financial Sector**

Accessibility to credits and other financial resources is an important ingredient towards social and economic development. Although Zanzibar has very little control on monetary policy issues and the levers of its financial institutions is low, the existing national bank of PBZ, NBC, Postal Bank and other small financial institutions play a significant role in serving the economy.

**Employment**

The current number of people in formal and informal employment is difficult to determine, as the last integrated labor force survey was conducted in 2006. However, based on other more recent government statistics, it is estimated that the formal workforce in Zanzibar numbers approximately 86,000 people.

The education level of the general workforce is low, with less than 10% being educated beyond secondary school level. Around 25% of the workforce have not completed primary level education; the figure is higher for women. Although significant headway has been made in primary level enrolment with a large school-building program, dropout rates at secondary level remain high (less than 60% of students advance to secondary education and less than 45% of these complete the lower secondary level). As a result of this high dropout rate, youth unemployment in Zanzibar is higher than in mainland Tanzania, standing at 17.1%. Overall unemployment is at 4.4%, and has gradually declined since the last Integrated Labor Survey in 2006, when it was recorded at 5.5%.

A total of 10,000 school leavers enter the job market annually. However, the majority of the youths are ill prepared professionally because the education system fails to provide necessary professional skills or trades with the results that such youth have nothing to do except loitering, drug abuse, and working as commercial sex workers. As part of the strategy to arrest the deteriorating youth situation, the MoEVT is reviewing the education curricula and master plan to focus more weight on technical education, functional education and labor market demands, as supported by ZISP.

**Economic Prospects**

The economy of Zanzibar is continuously affected by instability of clove prices in the world market, fluctuation in oil prices, and the rise in prices of many intermediate goods and machinery which Zanzibar imports. The suitable weather as well as improved prices in external markets is expected to stimulate economic performance, but real growth is expected from the current emphasis on non-agricultural sectors mainly industrial and service sectors. Combined with current and on-going pace of investment and stability, the economy was expected to sustain at an average level of 5.0 percent.

**3.10 Social Profile**

Zanzibar faces the following social issues:

**Acute poverty**

It is estimated that 22% of the population of Zanzibar lives “in poverty”. This population is distributed unevenly throughout the islands with up to 60% living in poverty in some rural areas. Economic growth in
Zanzibar averaged 6% in 2004, and GDP per capita was estimated at $300 (compared to $260 on mainland Tanzania).

**Crisis in Education**

With a median age of 17 years, Zanzibar has a young population. This signals strong potential for demographic dividends for economic growth and poverty reduction, provided young people can become productively engaged in the labor market. Basic education—primary education and lower secondary education—is essential for imparting the foundational skills required for this productive engagement, but currently the Zanzibar education system is not serving a large proportion of its students in an optimal way.

Students do not master key foundational skills, and these lags persist to higher grades, with no evidence of corrective measures. According to SAQMEQ III (2007), almost 66 percent of Standard 6 students had not mastered nationally defined basic learning competencies. Students progress more or less automatically through lower grades (Standard 1 to 6) with no system for identifying and correcting learning gaps, and then are weeded out in large numbers in exit examinations (end of primary (Standard 6), and or middle of lower secondary (Form 2)). Not surprisingly, students perform very badly in these curriculum-driven tests, and those who fail generally drop out of school: student survival rates drop by nearly 50 percent between Forms 2 and 4.

This means low economic and life prospects for young people, despite spending substantial time in the education system. The majority of students who fail leave the system without any formal credentials, and thus have limited chances for entering formal sector jobs. This is especially true for high-growth sectors like tourism, an industry which fills workforce needs by importing labor from mainland Tanzania, and from other countries, despite high levels of un- and under-employment in Zanzibar.

There is also a large stock of young people who have recently left the system and entered the labor force with very rudimentary skills, who will remain in the labor force for a long time.

**Gender Issues**

Roughly, there is gender parity in access to pre-primary and primary schools – the gender parity index for gross enrolment ratios across districts ranges from 0.97 to 1.1. Imbalances exist in completion rates and access to ordinary secondary schools, where enrolment of girls outnumbers boys in all districts. For children aged 14 to 19, girls are as likely as boys to be out of school (approximately 30%).

As a whole, women in Zanzibar are often poorer than men, own less land and livestock, and have fewer years of schooling. Gender imbalances are rooted and sustained by traditional and cultural values.

In 2010, the RGZ established Ministry of Empowerment, Social Welfare, Youth, Women and Children (MoESWYWC), the successor to a previous ministry focused on women and children, which was later to include labor and youth issues. The mandate of the MoESWYWC is:

“To improve people’s lives through economic empowerment, the provision of quality social services and good governance, and to work towards a well-protected and empowered society
that observes human rights and safeguards the interests and concerns of women, children, youth, and the elderly and other vulnerable groups."

A gender committee has been created to ensure that sectoral investments prioritize the needs of both men and women.

Land ownership is a complex issue in Zanzibar: Tanzania’s constitution enshrines equal rights to property ownership, but Zanzibar does not have a land policy that explicitly guarantees women’s land rights. Customs also play a role; however the RGZ and a number of NGOs have collaborated on awareness campaigns to inform women on their rights and means of advocacy regarding land.

3.11 Education Sector

**Government Vision**

Education is central to Zanzibar’s development objectives as reflected in various key strategy documents including Vision 2020, Zanzibar Education Policy, and Zanzibar Strategy for Growth and Reduction of Poverty (MKUZA II).

With respect to education the MKUZA objectives are: to ensure equitable access to demand-driven quality education which is gender responsive. To achieve these objectives, the Zanzibar Education Development Program (ZEDP: 2007-08 – 2015-16) had two main objectives: (i) Increased and more equitable access to education, and (ii) Improve relevance and quality of education throughout the sector

**Access to Education**

**Pre-Primary Level**

**Access**

The Education Policy of 2006 introduced two years of pre-primary education as a part of basic education. With this change enrolment in pre-primary has generally increased in the last five years. In pre-primary, the Gross Enrolment Rate (GER) stood at 26.5 percent and Net Enrolment Ratio (NER) at 17.9 percent in 2012. In public schools almost 38 percent of students enter primary grades with some pre-primary education.

Number of pupils enrolled in pre-primary was a little over 21 thousand in 2009.

**Supply**

On the supply side, the pre-primary education is mainly dominated by private providers. Private share of pre-primary enrollment is 76 percent. The total number of pre-primary schools was 261 in 2009 (32 of them are government owned).

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10 There has been some decline in pre-primary enrollment since 2011.
The pupil-classroom ratio in pre-primary was 27 and pupil teacher ratio was 21.6 in 2013. About 10 percent of government teachers were untrained in 2013.

The government has also launched a radio-based pre-primary education program titled Radio Instruction to Strengthen Education (RISE)\textsuperscript{11} which currently enrolls about 3000 students.

**Primary Level**

At the primary level a new curriculum has been developed for the 6-year cycle and is in the process of being phased in. Under this new curriculum, English is introduced as the language of instruction from Standard IV in an effort to raise students’ English competency before they enter secondary education. The first cohort to use the new curriculum is currently in Standard V. This means that in January 2016 there will be an abnormally large intake into Form I as both students completing Standard VI and Standard VII will be graduating from primary education.

**Access**

Zanzibar has made significant progress in increasing the number of students attending basic education. Gross Enrollment Rate (GER) in primary education has steadily increased from 92 percent in 2001 to 122 percent in 2012\textsuperscript{12}. And the net enrolment ratio (NER) increased from 75.7 percent in 2006 to 81.4 percent in 2010.\textsuperscript{13}

According to the Educational Statistical Abstract (2010-2013), the increase in the primary GER might to some extent be a statistical artefact driven by an earlier (under 2002 census) underestimation of the school age population. However, a high GER signals capacity constraints at the primary level.

The gender parity index for the GER indicates that at the national level males and females experience equal access to primary education.

The number of primary schools has increased from 277 in 2008 to 290 in 2009. In 2008 the total size of primary level was about 216,731 students.

**Supply**

The pupil-classroom ratio at the primary level in government schools, which was 75 in 2013, has declined slightly over the past four years. This has been the result of investments in classroom construction as the number of students at this level has been increasing steadily.

In terms of facilities among government primary schools, 83 percent of schools have access to water and 81 percent to electricity while 53 percent of schools operate on double shift in 2013. The pupil-teacher ratio was 36.1 in the same year. About 4 percent of government teachers were untrained in 2013.

**Efficiency**

The survival rate to the end of primary was 80 percent in 2013. This is very close to the mainland survival rate of 81 percent and stands above the rate found in many SSA countries. The transition to Form I is 95.5

\textsuperscript{11} MKUZA II
\textsuperscript{12} Education for All Assessment, 2001-2013
\textsuperscript{13} MKUZA II
percent and the repetition rate was 5 percent as of 2013. Primary repetition rates have increased from 2.5 percent in 2001 to 4.7 percent in 2012.

While performance is low in all subjects in the Standard VII Examinations, performance in Mathematics is particularly poor.

Secondary Level

Access
The Government of Zanzibar envisions introducing four years of compulsory secondary education. Enrolment has been stagnant at the ordinary secondary level (OSL) and there has been a 54 percent decline in enrolment at the advanced secondary level. Currently a large proportion of students fail the Form 2 examinations making them ineligible to progress to Form 3.

Supply
On the supply side, secondary schools are better equipped than primary schools and face fewer capacity challenges, due partly to low share of progression of students from primary to secondary grades.

The pupil-teacher ratio was 21 percent in government schools and 11.7 percent in private schools in 2013. About 2 percent of government teachers were untrained in 2013. The pupil-classroom ratio at the secondary level in government schools was 46 in 2013.

The pupil-classroom ratio at the primary and secondary levels has declined slightly in government schools over the past four years. At the secondary level, while more classrooms have been constructed, a decline in the number of students is also driving the reduction in the pupil-classroom ratio.

Among government secondary schools, 89 percent have access to both water and electricity. About 26 percent of secondary schools operate on double shift.

The government has made considerable investments in input-provision for secondary education, partly through the ZBEIP project (2007-2013) with World Bank. Over the past five years (2009-2013), 19 new secondary schools were built and 6 schools rehabilitated. In addition, about 300 new classrooms were constructed to expand space for schools with shortage of space.

The number of trained teachers increased from 9,422 in 2008 to 9,788 in 2009, while the number of untrained teachers is currently below a thousand (939). On pupil-teacher ratio, the government managed to bring it back down to 29 from 31 in 2007.14

Efficiency
The dropout rate at the end of primary education is high; just over a third of students survive in the system until Form 4. Around 64 percent of students drop out even before completing Form 4.

Transition rate from Form 2 to Form 3 is only 54.6 percent. Rates have remained stagnant since 2009 (was 53.6 percent in 2009). These high rates of drop-out are mainly driven by high rates of students failing Form 2 examinations. Transition rate from Form 4 to Form 5 is only 8.4 percent.

14 MKUZA II
In 2013, 19,322 students sat for Form 2 examination, out of which about 41 percent failed. In 2013, 69 percent students passed Form 4 examination which is an increase from 53.1 in the previous year.

**Government Budget**

Zanzibar’s budgeted education expenditure from 2002-2012 has remained steady at 4-5 percent of its Gross Domestic Product with Actual Spending as a percentage of GDP being on average 0.3% lower. Zanzibar’s expenditure on education as a percentage of GDP does not seem out of line with that of other countries in the region.

However, actual spending on education as a percentage of GDP has followed an upwards trend while budgeted spending has a declining trend.

About 75 percent of the MoEVT recurrent expenditure is spent on salaries. Development spending by MoEVT is described in the table below.

**Development Spending by RGoZ and DPs by project 2011/12 – 2013/14**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Expenditure 2011/12 (million TSH)</th>
<th>Expenditure 2012/13 (million TSH)</th>
<th>Budget Estimates 2013/14 (million TSH)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RGoZ Loans/Grants</td>
<td>RGoZ Loans/Grants</td>
<td>RGoZ Loans/Grants</td>
</tr>
<tr>
<td>Rehabilitation of MoEVT headquarters</td>
<td>25</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Strengthening of Technical Education</td>
<td>223</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Strengthening of Compulsory Education</td>
<td>407</td>
<td>19,595</td>
<td>18,857</td>
</tr>
<tr>
<td>Science and Technology in Higher Education</td>
<td></td>
<td></td>
<td>277</td>
</tr>
<tr>
<td>Strengthening of Library Services</td>
<td>155</td>
<td>55</td>
<td>400</td>
</tr>
<tr>
<td>Strengthening of Pre-Primary Education</td>
<td>110</td>
<td>445</td>
<td>50</td>
</tr>
<tr>
<td>Strengthening of Primary Education</td>
<td>1,000</td>
<td>407</td>
<td>4,644</td>
</tr>
<tr>
<td>Construction of two Primary Schools in West District</td>
<td></td>
<td></td>
<td>135</td>
</tr>
<tr>
<td>Strengthening of Alternative Education</td>
<td>35</td>
<td>65</td>
<td>1,230</td>
</tr>
<tr>
<td>Construction of Islamic College Pemba</td>
<td>50</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Construction of SUZA Phase II</td>
<td>1,610</td>
<td>760</td>
<td>1,660</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,615</strong></td>
<td><strong>20,800</strong></td>
<td><strong>3,017</strong></td>
</tr>
</tbody>
</table>

Source: Educational Statistical Abstract, 2010 - 2013

**3.12 Physical Cultural Resources**

Unguja and Pemba Islands both have numerous physical cultural resources, among them the World Heritage site of Stone Town.
The Stone Town of Zanzibar contains many of the fine buildings that reflect the particular culture of Zanzibar and the homogenous elements of the cultures of Africa, the Arab region, India, and Europe over more than a millennium. The buildings of the Stone Town, executed principally in coralline ragstone and mangrove timber, set in a thick lime mortar and then plastered and lime-washed, reflect a complex fusion of Swahili, Indian, Arab and European influences in building traditions and town planning.

The major buildings in Stone Town date from the 18th and 19th centuries and include monuments such as the Old Fort, built on the site of an earlier Portuguese church; the house of wonder, a large ceremonial palace built by Sultan Barghash; the Old Dispensary; St. Joseph’s Roman Catholic Cathedral; Christ Church Anglican Cathedral commemorating the work of David Livingston in abolishing the slave trade and built on the site of the last slave market; the residence of the slave trader Tippu Tip; the Malindi Bannara Mosque; the Jamat Khan built for the Ismaili sect; the Royal Cemetery; the Hamamni and other Persian baths.

CHAPTER FOUR: POLICY FRAMEWORKS FOR ZISP

See the “Policy Documents” list at the end of this paper for a full list of policy documents, and links to texts.

4.1 Administrative and Regulatory Frameworks for Education

4.1.1. Project Administration
ZISP will be carried out in the Zanzibar archipelago only. Under the Constitution of the United Republic of Tanzania, Zanzibar enjoys a certain degree of autonomy, including an autonomous Ministry of Education and Vocational Training (MoEVT) for governance of education matters. This is the institution which will spearhead implementation of ZISP. Implementation of the project will be carried out through the existing structures of the MoEVT, including various departments, district education boards, and education institutions.

The Permanent Secretary is the executive responsible for overall management of education in the MoEVT, while the Commissioner for Education is the Technical Head of all education matters.

Administratively, Zanzibar is divided into five regions and 10 districts. Delivery of services in education is effected through the 10 districts, each of which has a District Education Officer charged with the responsibility of overseeing the activities for that district.

4.1.2. Institutional arrangements and coordination
The MoEVT will provide overall policy guidance and supervision to ZISP. Through the Department of Policy, Planning, and Research, the Ministry will clarify participants’ roles, including capacity building requirements, at all levels for project implementation. This will be achieved through development of a Project Operations Manual (POM), which will specify the responsibilities of all actors involved at each level. The Project Operations Manual is meant to ensure efficient and effective project implementation. The POM will also provide guidelines on the code of conduct for all project actor, to ensure compliance with RGZ and World Bank requirements for project management.
4.1.3. Policy Framework for the Education Sector

Zanzibar has had several multi-year plans determining the overall policy framework for the education sector, the most recent being the Zanzibar Education Development Plan (ZEDP) 2008/09–2015/16. ZEDP expires this year, and will be replaced by a new five-year education policy, which will be formulated in an Education Sector workshop in 2016.

Since independence, education policy in Zanzibar has been characterized by the pledge of compulsory and free basic education for all. Until recently, community and individual contributions were encouraged, to fill needs ranging from provision of supplies to the construction of classrooms. The MoEVT abolished individual contributions for primary education in July 2015, and aims to abolish individual contributions for secondary education in the near future.

Domestically, Vision 2020 is the key document which articulates the aspirations of Zanzibar. It is supported by the three MKUZA poverty reduction plans, the Education Policy 2006, and ZEDP. These policy documents have enabled ambitions to become reality, and are key to the ongoing measurable improvement of the education sector.

Education policy in Zanzibar has also been guided by international declarations and conventions such as:

- The Millennium Development Goals for Education (MDGs, 2000)
- The Jomtien Declaration on Education for All (EFA, 2000)
- The Dakar Declarations (2000)
- The Sustainable Development Goals (2015)

These global commitments aim at empowering the poor and disadvantaged to pursue their fundamental human rights, such as education, development, and protection.

4.2 Framework for Environmental Management

4.2.1. Administrative Framework

Zanzibari law and the Constitution of the United Republic both place the responsibility of environmental management on the shoulders of all citizens and residents of Zanzibar. The National Environmental Policy for Zanzibar (NEP) also recognizes that environmental management is not the responsibility of a single government agency, but assigns the role of coordination of environmental matters to the Department of Environment (DOE) in the First Vice-President’s Office. For the purposes of this ESMF, the DOE is the technical reference point in environmental management.

4.2.2. Legislative and Policy Framework for Environmental Management

The Zanzibar Environmental Management Act of 2015 replaced its predecessor, enacted in 1996, as the overarching framework legislation for environmental protection in the Zanzibar archipelago. The 2015 Act also established both an Environmental Management Authority (ZEMA) and an Environmental Advisory Committee, which, respectively:
• Act as the governing body for environmental issues
• Advise on implementation of policy, strategy, and environmental management plans

The RGZ published its most recent National Environmental Policy for Zanzibar (NEP) in 2013. The NEP seeks to provide the framework for making the fundamental changes that are needed in order to incorporate environmental considerations into the mainstream of decision-making. The NEP seeks to provide guidance and planning strategies in determining how actions should be prioritized, and provides for the monitoring and regular review of policies, plans, and programs. It further provides for sectoral and cross-sectoral policy analysis, so that compatibility among sectors and interest groups can be achieved and the synergies between them exploited. The NEP recognizes the Environmental Impact Assessment (EIA) process as a means of ensuring that natural resources are soundly managed, and of avoiding exploitation in ways that would cause irreparable damage and social costs.

Additional policies and laws relating to environmental management in Zanzibar are:

• The Stone Town Conservation and Development Authority Act, No.4, 2010
• The Fisheries Act, No. 7, 2010
• Zanzibar Water Sector Policy, 2004
• National Forestry Policy for Zanzibar, 1999
• Zanzibar Biodiversity Strategy, 1996
• National Environmental Policy for Zanzibar (NEP), 1992
• The Forest Resources Management and Conservation Act No. 10 of 1996
• Wild Animals Protection Decree Cap 128
• Wild Birds Protection Decree Cap 129
• Zanzibar Municipal Council Act No. 3 of 1995
• The Districts and Town Councils Act No. 4 of 1995
• The Town and Country Planning Decree (Cap 85): Stone Town Planning Regulations of 1994

4.2.3. International Conventions
Under the Union with mainland Tanzania, Zanzibar is party to many international agreements on biodiversity, climate change, and desertification. Those critical to ZISP are:

• Paris Climate Agreement (2015)
• Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)
• UN Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification (1994)
• Convention on Biological Diversity (1992)
• UN Framework Convention on Climate Change (1992)
• Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
• Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris (1972)
• Phyto-sanitary Convention for Africa, Kinshasa (1967)
4.2.4. The EIA Process in Zanzibar

As outlined in Act No. 3 of 1996, The EIA guidelines and procedure involves the following:

**Registering a project:** The proponent is required to register the project with the DoE by way of preparation of a Project Report. If it is an investment project, the proponent submits a project profile to ZIPA which then distributes it to concerned Departments for comments to determine the need or otherwise for an EIA. ZIPA then calls a technical meeting; the Zanzibar Invest Committee meets to review the report and determine whether EIA is required. It is at this stage that the decision is made whether to conduct an EIA or not and the project is classified to determine the level at which the environmental assessment should be carried out.

**Screening:** Where an EIA is deemed necessary, the Investor is required to contact with DOE which screens the project to develop ToR and suggest consultants to undertake EIA.

**Review of the EIS:** EIA is then undertaken and report submitted to DOE for review. A Technical Review Committee established by the NEMC reviews the EIA and decides whether the EIA is acceptable or not. If the EIA is approved the DOE issues an EIA Certificate to confirm that the project may proceed. The process takes 60-90 days but the TOR expires within one year of issue if the respective EIA has not been undertaken. The EIA procedure in Zanzibar requires public consultation.

**Auditing the completed project:** The DOE undertakes periodic and independent audits of the project. Depending on its findings, it will issue an Environmental Auditing Report.

4.3 The World Bank’s Safeguard Policies

ZISP will trigger the Environmental Assessment OP/BP 4.01 World Bank safeguards policy, which requires an environmental assessment (EA) of project proposed for Bank financing. The EA process takes into account the natural environmental (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property); and trans-boundary and global environmental aspects.

OP 4.01 requires that the ZISP project as a whole be screened to determine the extent and type of EA process: ZISP has been assigned a Category B status, which describes projects likely to have potential adverse environmental impacts on human populations or environmentally important areas—including wetlands, forests, grasslands, and other natural habitats—but which are less adverse than those of Category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects. The EA process for Category B projects examines the potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

An Environmental and Social Management Framework (ESMF) is a requirement for Category B projects. This ESMF has therefore been designed to ensure that all investments under ZISP will comply with all environmental laws of the Revolutionary Government of Zanzibar, and the Environmental and Social Safeguard Policies of the World Bank.
The ESMF requires use of the screening checklist (in Annex 3) to identify potential adverse impacts of the construction component of ZISP, and thereby determine the corresponding mitigation measures to incorporate into planned activities.

ZISP intends to build science laboratories, the dearth thereof has been identified as a critical contributing factor for low student performance in Math and Science. Such construction, even if small-scale civil works, will have some level of environmental impacts related to (i) physical location of site, (ii) waste and wastewater management from labs, (iii) construction related waste management, and (iv) worker safety. ZISP will also build two hostels for female students, the architectural design for which are required to respect socio-cultural norms in Zanzibar.

OP 4.01 further requires that the ESMF report must be disclosed as a separate and stand-alone document by the RGZ and the World Bank as a condition of Bank appraisal of ZISP. The disclosure should be both in Zanzibar, where it can be accessed by the general public and local communities, and at the Infoshop of the World Bank. The date for disclosure must precede the date for appraisal of the program.

4.4 Impact Screening Under World Bank and RGZ Procedures

Criteria for Impact Screening under World Bank Policies: The screening process used by the World Bank classifies proposed projects into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. Going by World Bank categories, environmental and social impact assessment for projects is required as follows:

**Category A:** A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.

**Category B:** A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are less adverse than those of Category A projects. These impacts are site-specific: few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

**Category C:** A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

**Category FI:** A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

4.5 Comparison of World Bank and RGZ Policies on Environmental and Social Impact Assessment

Zanzibar, through the Environmental Management for Sustainable Development Act No. 2 of 1996, makes it mandatory for all major development projects (including RGZ projects) to be preceded by an EIA study, leading to development of an Environmental Impact (EIS). Part IV of Act No. 2 of 1996 provides a comprehensive framework for environmental assessment of projects, and this requirement is recognized in other legislation such as the Forest Resources Management and Conservation Act No. 10 of 1996. Thus,
under RGZ laws, environmental assessments, and this ESMF, are fully mainstreamed in all development processes, and consistent with World Bank policies.

Where there is a conflict between the Laws of the RGZ and the Bank, World Bank Safeguard Policies will prevail.

4.6 Disclosure
OP. 4.01 further requires that this ESMF report must be disclosed as a separate and stand-alone report by the Executing Agencies and the World Bank, as a condition for World Bank Appraisal of the projects. In keeping with this requirement, the draft report will firstly be made publicly available to project-affected groups in Zanzibar by placing a public notice in a national newspaper, making the report available at the MoEVT, and posting it on the Internet. This measure will also satisfy the Act No. 3 of 1996 requirement that EIA reports are disclosed and subjected to review by the public. Following revisions, the ESMF will be submitted officially to the World Bank, and made publicly available on Infoshop at least 30 days prior to the Board date.
CHAPTER FIVE: THE ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK

5.1 Introduction
The organization for the construction activities and implementation of the ZISP, under this section, are expected to screen for site selection; potential environmental and social impacts; mitigation of impacts; and to be able to outline steps for monitoring of potential impacts, with a process for triggering subsequent environmental and/or social assessments, where necessary.

5.2 General Environmental Concerns
From diverse sources (National Environmental Policy, DOE-Pers. Comm., dcff.com, etc.) the following have been identified as the critical environmental problems facing Zanzibar today:

- Degradation of marine environments (habitat and biodiversity)
- Land degradation through over-harvesting of mangrove and coral rag forests, solid waste dumping, and non-sustainable quarrying methods
- Water contamination from sewage and other waste

Brief commentaries and summaries for specific impacts are provided in the sections below, to provide a background against which potential adverse impacts of ZISP can be assessed.

5.2.1 Degradation of marine environments
The entire coastline of Unguja and Pemba islands is threatened by degradation associated with non-sustainable human activity, such as coastal construction; dumping of solid and liquid effluent, including untreated sewage; non-sustainable fishing through the use of nets, poison, and blasts; dynamite fishing in coral reefs; anchor damage; collection of live coral; and over-exploitation of turtles through slaughter and collection of eggs. The problem is partly driven by an economy that is largely dependent on exploitation of primary resources, and compounded by an absence of strong policy guidelines on the exploitation of marine resources.

If left unchecked, marine degradation has the potential to undermine strategic economic interests in Zanzibar, such as biodiversity, fisheries, and tourism.

In appreciation of the need to conserve biodiversity, the RGZ formulated a National Conservation Strategy in 1996 which addressed the cause of biodiversity decline and the factors underlying such trends. The overall objective of the Strategy is to reduce the negative impacts on biodiversity in Zanzibar, and develop sustainable economic and social use of indigenous ecosystems and species. Components of the strategy include:

(i) Developing a body of resource managers capable of conserving biodiversity.
(ii) Improving Legal and Policy framework for biodiversity conservation.
(iii) Increasing financial resources available for biodiversity conversation.
(iv) Managing ecosystems by using integrated plans to provide economic benefits.
(v) Increasing conservation action in the field, prioritized to maximize effects on biodiversity.
(vi) Increasing knowledge of poorly studied biodiversity.
(vii) Monitoring trends of biodiversity.
Building public support and participation in biological diversity conversation through education and awareness.

5.2.2 Land degradation
The National Environmental Policy identifies land degradation to be one of the main ecological concerns in Zanzibar today. The isles are home to unique ecosystems that are world-renowned as reservoirs of biodiversity. In Unguja, the most famous biosphere is the Jozani-Chwaka Bay Conservation Area: estimated to cover 5000 ha, the Area is made up of the Jozani Forest Reserve, mangroves, and the coral rag forest. It is the largest terrestrial natural forest on Unguja, and is the remainder of the forest that once covered most of the island. The mangrove formation of Chwaka Bay is the largest stand of mangrove forest in Unguja; its estimated 2800 ha make up around 15% of the forest cover of Zanzibar. The Jozani-Chwaka Bay Area is home to many rare and endemic species, and is thus an important reservoir for biodiversity. At the regional level, the area forms part of the Eastern African Arc Mountains, ranked among the top 25 biodiversity “hot spots” in the world.

It is commonly acknowledged that deforestation in Zanzibar began in the 1830s with the introduction of the clove-planting program. The current deforestation rate in Zanzibar is estimated at 950 ha per year, and is driven by the demand for timber, fuel, and charcoal, and the clearing of land for cultivation and settlement. Shifting cultivation, through which land is cleared of vegetation, cultivated for several seasons, and then abandoned, is a major contributor to soil quality degradation (as well as deforestation).

According to available information (DCCFF, 2002), annual firewood consumption in Zanzibar is estimated at 3,068,977 m$^3$ (77% in Pemba and 23% in Unguja). Coral rag is most commonly used for firewood in Unguja, and clove tree wood in Pemba. Despite overharvesting, this demand is not met locally, and a substantial volume of wood is imported from the mainland.

Other forms of land degradation are associated with non-rehabilitation of quarries, which leave gaping craters that pose hazards to people and livestock, and create breeding grounds for water borne diseases.

Zanzibar is home to the endemic Zanzibar Red Colobus and the Zanzibar leopard. The Zanzibar leopard (Panthera pardus adersi) is an elusive and possibly extinct subspecies of leopard endemic to Unguja Island. Increasing conflict between people and leopards in the 20th century led to their demonization, and attempts to exterminate them. Efforts to develop a leopard conservation program in the mid-1990s were shelved when wildlife researchers concluded that there was little prospect for the animal’s long-term survival.

5.2.3 Water contamination
All water in Zanzibar is under threat. Shallow groundwater is under threat of contamination from sewers, leaking sewage, and percolation of contaminated runoff water. Brackish and sea water is also under threat from direct discharge of untreated sewage and runoff water, and through location of municipal dump yards along creeks and estuaries. Dump yards also pose a threat to mangrove ecosystems in Unguja.

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Being a coastal ecosystem, Unguja is faced with the problem of perpetual seepage of saline water into the groundwater. The hazard is compounded by overexploitation of groundwater, which allows the saline water table to flow freely into boreholes. Many boreholes in Unguja yield saline water.

5.3 General Social Concerns
Zanzibar faces the following social issues:

5.3.1. Acute poverty

It is estimated that 22% of the population of Zanzibar lives “in poverty”. This population is distributed unevenly throughout the islands with up to 60% living in poverty in some rural areas. Economic growth in Zanzibar averaged 6% in 2004, and GDP per capita was estimated at $300 (compared to $260 on mainland Tanzania).

5.3.2. Crisis in Education

With a median age of 17 years, Zanzibar has a young population. This signals strong potential for demographic dividends for economic growth and poverty reduction, provided young people can become productively engaged in the labor market. Basic education—primary education and lower secondary education—is essential for imparting the foundational skills required for this productive engagement, but currently the Zanzibar education system is not serving a large proportion of its students in an optimal way.

Students do not master key foundational skills, and these lags persist to higher grades, with no evidence of corrective measures. According to SAQMEQ III (2007), almost 66 percent of Standard 6 students had not mastered nationally defined basic learning competencies. Students progress more or less automatically through lower grades (Standard 1 to 6) with no system for identifying and correcting learning gaps, and then are weeded out in large numbers in exit examinations (end of primary (Standard 6), and or middle of lower secondary (Form 2)). Not surprisingly, students perform very badly in these curriculum-driven tests, and those who fail generally drop out of school: student survival rates drop by nearly 50 percent between Forms 2 and 4.

This means low economic and life prospects for young people, despite spending substantial time in the education system. T
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