Environmental and Social Monitoring Report

Number 1: Semestral Report
July, 2017

Tonga: Climate Resilience Sector Project

Prepared by Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications

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TONGA: Climate Resilient Sector Project (CRSP)

SEMI-ANNUAL SAFEGUARD MONITORING REPORT No.2
(January 2017 – June 2017)

Prepared by

SMEC-ITS Pacific Ltd and Environmental Safeguard Unit of the PMU Climate Resilient Sector Project (CRSP)
### Document Information

<table>
<thead>
<tr>
<th><strong>Project title</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Document title</strong></td>
<td><strong>ESU SEMI-Annual Safeguards Report No. 2 (January – June 2017)</strong></td>
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<td><strong>Date</strong></td>
<td><strong>July 2017</strong></td>
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## I. ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ARR</td>
<td>Assessment Reviewed Report</td>
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<td>EIA</td>
<td>Environment Impact Assessment</td>
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<td>CEMP</td>
<td>Contractor Environment Management Plan</td>
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<td>CCA</td>
<td>Climate Change Adaptation</td>
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<td>CRSP</td>
<td>Climate Resilience Sector Project</td>
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<td>CCTF</td>
<td>Climate Change Trust Fund</td>
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<td>IA</td>
<td>Implementing Agencies</td>
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<td>MET</td>
<td>Ministry of Education and training</td>
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<td>Environment Assessment Committee</td>
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<td>ESU</td>
<td>Environment Social Unit</td>
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<td>MEIDECC</td>
<td>Ministry of Metrology Energy Information Disaster Management Environment &amp; Climate Change</td>
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<td>MOFNP</td>
<td>Ministry of Finance and National Planning</td>
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<td>Geological Information System</td>
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<td>MLSNR</td>
<td>Ministry of Lands Survey and Natural Resources</td>
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<td>JNAP</td>
<td>Join National Action Plan</td>
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<td>Executing Agencies</td>
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<td>NEMO</td>
<td>National Emergency Management Organization</td>
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<td>MOH</td>
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<td>Ministry of Foreign Affair</td>
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<td>Public Services Commission</td>
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<td>Project Management Unit</td>
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<td>Public Services Commission</td>
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<td>PIU</td>
<td>Project Implementing Unit</td>
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<td>IWRM</td>
<td>International Water Resources Management</td>
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<td>SMA</td>
<td>Special Management Area</td>
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<td>PPCR</td>
<td>Pilot Programmed for Climate Resilience</td>
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<td>NEMO</td>
<td>National Emergency Management Organization</td>
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</tbody>
</table>
Contents

I. ACRONYMS AND ABBREVIATIONS 3

II. EXECUTIVE SUMMARY 5

III. INTRODUCTION 5
   A. Recent Revisions of Project scope and design 6
   B. ADB Safeguards and CRSP Reporting 6
   C. Safeguards Reporting (January 2017 to June 2017) - Update of Outstanding Issues 8

IV. SAFEGUARDS REVIEW 10
   A. Social and Environmental safeguards 15
      1. PMU Administration and Management 15
      2. PMU Coastal Protection 15
      3. Ha’apai Hospital 16
      4. Schools Upgrade 18
      5. Mangroves 22
      6. Climate Change Trust Fund 22
      7. SMAs 23
   B. SAFEGUARDS CROSS CUTTING ISSUES 24

V. APPENDIX 1: CRSP PROJECT VARIABLES 25

VI. APPENDIX 2: ENVIRONMENTAL SAFEGUARD UNIT (ESU) STRUCTURE AND ROLES 28

VII. APPENDIX 3: LAVENGAMALIE INCEPTION MEETING 30

VIII. APPENDIX 4: TONGAN GOVERNMENT ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENTS 33

IX. APPENDIX 5: SEIA & SOCIAL VULNERABILITY GUIDELINES 35

X. APPENDIX 6: CONTRACTOR ENVIRONMENT MANAGEMENT PLAN (CEMP) 36

APPENDIX 7: CONSTRUCTION SAFETY SIGNAGE AND SAFETY EQUIPMENTS 40

Table 1: Outstanding Issues from 2016 ................................................................. 8
Table 2: Safeguard Activities within the CRSP ....................................................... 10

Figure 1: Conceptual Design for Hahake Coastal Protection ............................. 16
Figure 2: Ha’apai Hospital Floor Plan ................................................................. 17
Figure 3: Inception meeting at Lavengamalie .................................................... 18
Figure 4: GPS Fanga ‘o-Pilolevu ................................................................. 19
Figure 5: GPS Kolomotu’a ................................................................. 20
Figure 6: GPS Hala’ovave ................................................................. 20
Figure 7: GPS Ngele’ia ................................................................. 21
Figure 8: Lavengamalie School ................................................................. 21
Figure 9: Mangrove planting in western Tongatapu ........................................ 22
Figure 10: Drone survey from Kolonga to Nukuleka ........................................ 22
Figure 11: Map Location of 7 SMAs Vava’u ................................................... 23
II. EXECUTIVE SUMMARY

This report has monitored the Social and Environmental Safeguards of the Climate Resilience Sector Project (CRSP) for the period of January 2017 to June 2017. During this reporting period, the ESU has monitored the CRSP project activities, identifying challenges and measures to address these challenges as well as proposed activities for the next period of activities. This is summarized below in Table 2: Safeguards Activities.

Key outcomes highlighted in this report indicate that the project and its subprojects are largely on-track to meet the ADB Social and Environmental Safeguards. While two sub-projects: Mangrove Rehabilitation; and Metrological Data had lagged behind schedule due to scope changes but are both on track for proposed activities.

Gender dimensions of Climate Change activities are a key cross-cutting component, which is addressed under a Gender Action Plan (GAP). This area is lagging behind and requires a more coordinated approach with more strategic activities that encompass efforts to build social and environmental resilience to climate change.

III. INTRODUCTION

The (CRSP) is being implemented by the Government of Tonga (GoT) under Phase II of the Pilot Program for Climate Resilience (PPCR). The project seeks to mainstream climate resilience into government planning and address country priorities focusing on the most vulnerable sectors and communities. The overall proposed outcome seeks to strengthen Tonga’s enabling environment for climate adaptation and disaster risk reduction at national and local level. For further details on the CRSP please see Appendix 1.

This report is the second Semi-Annual Safeguard Monitoring Report for Tonga from January 2017 to June 2017. The purpose of the report is to document social and environmental safeguard monitoring activities. The focus of the activities over this period particularly relate to Safeguards are as follows:

Output 1: Ensuring climate resilience is mainstreamed into development planning of key vulnerable areas.
   Activities: Scholarships, training, legislation reviewed, community assessments, inventory of water resources.

Output 2: Monitor Tonga’s climate data and information.
   Activities: Hydro-meteorology and coastal monitoring data dissemination system.

Output 3: Established Finance Mechanism to support community adaptive investment.
   Activities: CCTF management, management and monitoring of community projects to be funded under CCTF.

Output 4: Increase ecosystem resilience and climate infrastructure investment
   Activities: Established 7 Marine Special Management Areas (SMAs) under CRSP, climate proofing of school, evacuation road, coastal protection, hospital, mangrove mapping.

Output 5: Ensure project implemented successfully with appropriate due diligence.
A. Recent Revisions of Project scope and design

The following changes have been made to the project scope:

- The number of SMAs has been increased from 6 to 7 in a cost neutral manner following the ADB mission to Tonga in April 2016.
- The mangrove inventory will be carried out based on a GIS approach supported by ground truthing where necessary. It will include scanned data in the past 40 years on mangroves distribution in Tonga. This will be carried out before any planting regimes are considered.
- The alignment of Popua evacuation road has been changed slightly to allow use of an existing ‘Right of Way’ and to avoid any land acquisition that was necessary for the original alignment.
- Marking of the new Hospital site in Ha’apai by the Prime Minister is proposed for July 2017. This will include the unveiling of the signboard of the proposed new Hospital.
- Following public consultations, the three targeted schools in Tongatapu have had rainwater capture and storage added into their design. Two tanks with the capacity of 10,000 litres have been included. Following the inception meeting with Lavengamalie PTA committee, the project scoping was changed in a cost neutral manner. The drainage system was relocated accordingly to meet Lavengamalie PTA committee requirements.
- Monitoring of the school upgrades under Contractor Environment Management Plan (CEMP, refer to Appendix 6).
- The task for marine jetties and wharves construction rehabilitation will be taken over by the World Bank directed and approved by the project steering committee. The USD .85K will be reallocated to the Ha’apai Hospital Sub-project to ensure quality and standard will not be compromised. CRSP will only conduct condition survey work.

B. ADB Safeguards and CRSP Reporting

The Tonga EIA procedure and ADB IEE submissions both include limited social, cultural and economic assessments as well as environmental aspects. Public consultation is a critical component of each document to gain an understanding of public views and suggestions as well as encourage community ownership of outcomes. These consultations have been carried out for each sub-project and integrated into the relevant IEE/ESIA. In some cases, this leads to modifications in the detailed designs. For example, in the case of the Hahake sea wall, communities were asked to provide the best locations for the boats to be moored and or launched from, as well as gaps in the seawall for family access to the beach.

The ADB Safeguards seek to promote sustainability of project outcomes by protecting the environment and affected people from projects’ potentially adverse impacts. The key steps that need to be included for the CRSP projects are as follows:

- **Guidance on safeguard screening** for projects that impact indigenous people who may be impacted by a project – beneficially or adversely.
- **Determine current state of social issues** - includes consultation and participation, gender and social safeguards and other social risks.
- **Screening and Categorization**: determines the requirement for, and type of environmental assessment that must be undertaken.
- **Scoping**: identifies significant potential project impacts (environmental and social), providing a clear focus for the environmental assessment, and outlines the content of the assessment report and important studies usually in the form of terms of reference (ToR).

- **Analysis of Alternatives**: considers all feasible alternatives for improving project implementation and outcomes, taking account of economic, financial, technical, environmental and social factors.

These elements have been integrated into the preliminary work undertaken in preparation for subproject implementation as well as subsequent monitoring efforts. In particular, the following activities which address social and/or environmental safeguards have been considered and/or addressed:

- **Community consultations in communities impacted by project activities**: These consultations provide several purposes including: information dissemination with regards to climate change dimensions; assess local realities and how the project can best be implemented to benefit all stakeholders; as well as nurture a necessary relationship with local communities in order to encourage local ownership of not only the outcomes but also their ongoing maintenance.

- **Compatible Land Use**: while subprojects will be located either on government or existing sites, they may still border private land. This includes the Hahake Seawall and Ha’apai hospital.

- **IEEs** carried out for Schools Climate proofing will consider the school children by acknowledging the important health and safety requirements on the environment. It will provide a brief statement on local environmental realities. An IEE has also been carried out and approved for the Ha’apai hospital and IEEs are under preparation for evacuation roads and coastal defenses.

- **SEIAs** – Social Environment Impact Assessments have been undertaken for the more significant projects which may impact neighboring communities and stakeholders in a variety of ways. This has included: the Ha’apai Hospital Relocation; Climate Proofing Evacuation Roads; and the Hahake Coastal Seawall.

- Furthermore, in the absence of a comprehensive Climate Change Hazard Analysis (ideally developed from the design stage of the CRSP), a **Hazard Assessment** and associated **Social Vulnerability Assessment** have been integrated into the SEIA for the more significant projects. It is suggested that this should be included into the format on an ongoing basis in order to qualify and quantify activities. The level of Social Vulnerability can be assessed against project outcomes and necessary adjustments made accordingly.

- Gender dimensions have been and will continue to be integrated into program activities and outputs. Key aspects of this have included:
  - Gender Sensitization of PMU Staff to give them an insight into the benefits of mainstreaming gender into all projects.
  - Update the Gender Action Plan as initially drafted in the PAM. This activity is currently underway.

- Consideration of increasing employment diversity in order to build community resilience has been integrated into criteria for the CCTF community grants.
• CCTF grant funds eligibility focused towards ensuring the project assists those that are most vulnerable and involves building community resilience to climate change impacts.

C. Safeguards Reporting (January 2017 to June 2017) - Update of Outstanding Issues

The outstanding issues from the 2016 reporting period are largely strategic issues, attributed to the management of subprojects, lack of coordination and weak collaboration with line Ministries and associated agencies on climate change and disaster risk management. Table 1 below outlines the outstanding issues from 2016.

Table 1: Outstanding Issues from 2016

<table>
<thead>
<tr>
<th>Output</th>
<th>Activities</th>
<th>Outstanding</th>
<th>Steps taken to address</th>
</tr>
</thead>
</table>
| Output 1: Ensuring Climate resilience is mainstreamed into development planning of key vulnerable sectors | • Climate Change Scholarship Program  
• Technical Trainings for professionals  
• Legislative review  
• Community vulnerability assessments and plans  
• Water resources inventory and study of water supply design of Niuafou | Staff training and short-term course on CCA | Scholarships awarded  
Ongoing trainings  
Community Vulnerability Assessments commenced  
Water resource inventory underway |
| Output 2: Improve capacity to monitor and manage Tonga climate data and information | Hydro-meteorological and coastal monitoring and data dissemination systems | Staff training coastal monitoring and data dissemination | PMU review of the system and equipment workable to METEO in terms with quality and cost base |
| Output 3: Establishing a sustainable financing mechanism to support community based adaptive investments | CCTF Management Management and Monitoring of community projects funder CCTF | Endowment investment pending ADB approval  
CCTF board meeting to approve community application for CCTF fund program | Remains pending – advice sought on endowment account investment  
Addressed |
| Output 4: Increasing ecosystem resilience and climate infrastructure investments | • Establishment of 7 SMAs  
• Climate Proofing Schools  
• Evacuation and Post disaster access road  
• Hahake Coastal Protection | SMA increase from 6-7 budget neutral, ADB mission to Tonga Apr 2016, SMA sites to gazette and approved by Cabinet  
Climate proofing of schools (Kolomotu’a) | SMAs preparation work well underway in Vava’u  
School climate proofing well |
<table>
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<tr>
<th>Output 5: Ensuring that the project is successfully managed and implemented</th>
<th>Due diligence and monitoring</th>
<th>Recruitment of Deputy Team Leader – for government endorsement</th>
<th>Ongoing actions to strengthen coordination with line ministries and other agencies</th>
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</thead>
</table>

- Climate proofing marine landings
- Relocate Ha’apai Hospital to a less vulnerable area
- Mangrove assessment and rehabilitation

waiting clearance from Min. of Land and Survey for road stead for drainage connection from school to lagoon

Hahake EIA screening approved major, EIA report preparation.

Hospital budget USD2.3 million. For construction work

Mangroves: Project scoping change to GIS inventory and ground truth. Procure scanner, laptop and camera

underway

IEE and EIA undertaken and approved by GoT and ADB

Addressed
### IV. SAFEGUARDS REVIEW

#### Table 2: Safeguard Activities within the CRSP

<p>| CRSP Unit          | Sub-Project        | Reporting Period | Project Stage | Activity                        | Social or environmental safeguard | Changes made                                                                 | Outputs                                                                 | Impacts                                         | Challenges                                | Mitigation efforts             | Status                      | Next Steps                                                                 |
|-------------------|--------------------|------------------|---------------|----------------------------------|------------------------------------|-----------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------|-------------------------------|-----------------------------|-----------------------------|----------------------------------------------------------------------------|
| PIU - coastal protection | Hahake seawall     | Jan to June 2017 | Planni ng     | Regulatory compliance - IEE or ESIA. | Environmental Safeguard            | Awareness raised                 | Access to relevant consistent and updated information. An estimated of 3 km of hard revetment protection to be constructed | Perceived community safety and encouragement of economic diversity | Nil significant at this stage                  | Public consultations and community involvement. | SIA submitted and endorsed IEE |                                                                           |
| PIU - Ha’apai hospital | Ha’apai Hospital   | Jan to June 2017 | Planni ng     | Official commencement - turning the earth | Social Safeguard – Indigenous       | Approvals and project onset       | Access to relevant consistent and updated information. A 23-bed capacity hospital, NCD, ANC, dental clinics, public health office, underground electrical cables, emergency generator, overhead water tower, 500kl water reserve, new, access road, filtration systems | Perceived community security. | Nil significant at this stage                  | Improved local consultation                | Design complete – to ADB; then for tender; |                                                                           |
| PIU - upgraded schools | Schools water tanks, gutters etc | Jan to June 2017 | Constr uction | Climate proofing roads, schools and hospital | Environmental Safeguard            | Monitoring systems established    | Evidence of enhanced community resilience and/or capacity. School upgrade works underway are: GPS Fanga, GPS Kolomotu’a, Lavenga Side School, GPS Hala-o-Vave, GPS Ngele’ia. | Improved school health | Nil significant at this stage                  | Public consultations and community involvement. | M&amp;E of activities                      |                                                                           |</p>
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<tr>
<th>CRSP Unit</th>
<th>Sub-Project</th>
<th>Reporting Period</th>
<th>Activity</th>
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<th>Changes made</th>
<th>Outputs</th>
<th>Impacts</th>
<th>Challenges</th>
<th>Mitigation efforts</th>
<th>Status</th>
<th>Next Steps</th>
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<td>PMU - Mangrove rehabilitation</td>
<td>Mangrove rehabilitation</td>
<td>Jan to June 2017</td>
<td>GIS mapping</td>
<td>Environmental Safeguard</td>
<td>Access to relevant consistent and updated information. Accurate baseline data of mangroves throughout Tonga</td>
<td>Improved information to make informed decisions</td>
<td>Rescoping of project leading to reduced resource for inventory</td>
<td>Replanting/planting shoreline covers/inventory of mangroves</td>
<td>GIS Mapping inventory - past and present – ongoing but will bring back on track</td>
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<td>PMU - CCTF</td>
<td>Admin and management</td>
<td>Jan to June 2017</td>
<td>Planning and programme initiation</td>
<td>Social safeguards and national legislation</td>
<td>Small project funding for communities enhancing CCR ...</td>
<td>Self-generating funding sources for small community CC projects</td>
<td>Community ownership and self-sufficiency encourage specific focus on women</td>
<td>No project application from Niua’s</td>
<td>Govt to decide on funds investment; Advice sought from ADB, PMU &amp; local banks awaiting recommendation</td>
<td>GRM</td>
<td>Need to encourage project from Niuas for next tranche</td>
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Page 11 of 41
<table>
<thead>
<tr>
<th>CRSP Unit</th>
<th>Sub-Project</th>
<th>Reporting Period</th>
<th>Project Stage</th>
<th>Activity</th>
<th>Social or environmental safeguard</th>
<th>Changes made</th>
<th>Outputs</th>
<th>Impacts</th>
<th>Challenges</th>
<th>Mitigation efforts</th>
<th>Status</th>
<th>Next Steps</th>
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<tr>
<td>PIU - SMAs</td>
<td>SMAs</td>
<td>Jan to June 2017</td>
<td>Data collection</td>
<td>Consistent data and training</td>
<td>Environmental Safeguard</td>
<td>Monitoring systems established</td>
<td>Evidence of enhanced community resilience and/or capacity.</td>
<td>Adequate staffing with appropriate skills</td>
<td>Nil significant at this stage</td>
<td>Integration of gender dimensions</td>
<td>Training required for updated equipment</td>
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<td>PMU Scholarships and training</td>
<td>Admin and management</td>
<td>Jan to June 2017</td>
<td>Management</td>
<td>Scholarships awarded; Short Term Training Contract commence d</td>
<td>Social Safeguard</td>
<td>Training carried out</td>
<td>Increasing local capacity -30% women targeted projects -40% women participation in the scholarship approved by the PSC. 300 people are expected to benefit from these trainings component</td>
<td>Adequate staffing with appropriate skills</td>
<td>Nil significant at this stage</td>
<td>Relevant focused training</td>
<td>Ongoing M&amp;E of student's performance Ongoing STT; Post grad and Masters 2018</td>
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<tr>
<td>PMU - admin and project management</td>
<td>Admin and management</td>
<td>Jan to June 2017</td>
<td>All project phases</td>
<td>Due diligence and oversight; M&amp;E</td>
<td>Social and environmental safeguards and national legislation</td>
<td>Monitoring systems established</td>
<td>Evidence of enhanced government capacity, eg policy clauses</td>
<td>Performable activities covered by small core ESU team</td>
<td>Considerable access to reliable data; processes to working 'smarter'; strengthening links with relevant ministries</td>
<td></td>
<td>Coordinatio n &amp; compliance updates and rescoping of PMU roles - suggest MEIDECC staff member part of ESU with training</td>
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<tr>
<td>CRSP Unit</td>
<td>Sub-Project</td>
<td>Reporting Period</td>
<td>Project Stage</td>
<td>Activity</td>
<td>Social or environmental safeguard</td>
<td>Changes made</td>
<td>Outputs</td>
<td>Impacts</td>
<td>Challenges</td>
<td>Mitigation efforts</td>
<td>Status</td>
<td>Next Steps</td>
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<tr>
<td>PIU - Meteorological data</td>
<td>Admin and management</td>
<td>Jan to June 2017</td>
<td>Planning</td>
<td>Consistent data and training</td>
<td>Environmental Monitoring System</td>
<td>Access to relevant consistent and updated information to improve capacity to monitor and manage Tonga Climate data and information deliverables</td>
<td>Improved information to make informed decisions</td>
<td>Input delay, based on design modifications suggested by bank</td>
<td>Improved access to reliable data</td>
<td>PMU consultant</td>
<td>reviewing equipment/</td>
<td>PMU consultant reviewing equipment/design with Met dept senior advisors</td>
</tr>
<tr>
<td>PIU - IWRM</td>
<td>Admin and management</td>
<td>Jan to June 2017</td>
<td>Data collection</td>
<td>Consultation</td>
<td>Environmental Safeguard</td>
<td>Access to relevant consistent and updated information such as water resources inventory, integrated water resources management plans, water supply design of Niuafo'ou</td>
<td>Specific emphasis on women's involvement</td>
<td>Nil significant at this stage</td>
<td>Relevant focused training</td>
<td>Procurement</td>
<td>with ADB Lot 2</td>
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<td>PIU - MOI</td>
<td>Infrastructure</td>
<td>Jan to June 2017</td>
<td>Construction</td>
<td>Climate proofing schools and hospital</td>
<td>Social and environmental safeguards and national legislation</td>
<td>Evidence of enhanced community resilience and/or capacity.</td>
<td>Climate proofing of schools</td>
<td>Rescope and limited coordination</td>
<td>Link with relevant stakeholders strengthened</td>
<td>Procurement</td>
<td>on track; Outer island marine landing scope to be clarified</td>
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**ESU Color Key Indicators:**

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
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<tbody>
<tr>
<td>Green</td>
<td>On-Track</td>
</tr>
<tr>
<td>Yellow</td>
<td>Re-scoping and design preparation underway</td>
</tr>
<tr>
<td>Red</td>
<td>Challenges occurred during implementation</td>
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Challenges occurred during implementation.
A. **Social and Environmental safeguards**

Main safeguard aspects of the CRSP project and its subprojects will be briefly discussed below.

1. **PMU Administration and Management**
   
   a. **Environment Sustainable Unit (ESU)**

   The CRSP project is progressing effectively in all 13 subprojects across Tonga. Monitoring of the project safeguards is carried out by the ESU team (see Appendix 1). The ESU’s role is important to monitor project outputs, meet reporting requirements and ensure that the project is on-track. The ESU has already started to monitor the school climate proofing developments in Tongatapu and coordinate training related to the CEMP. Monitoring the project in the outer islands is an ongoing challenge with current staff and time required for travel.

   b. **Potential broadening of ESU integration into relevant ministries**

   A proposed adaptation to the ESU recommends the involvement of a government office in the monitoring of the projects. This is important to better co-ordinate, manage and monitor efforts as well as for greater program sustainability. This person(s) will be trained to carry out this role, building knowledge and diversify the monitoring and evaluative skill base.

   It is suggested that local government officials may be involved and mobilized in the future to help monitor ongoing efforts in the outer islands. Furthermore, it is also important to update the CEMP to include Gender Sensitisation for all contractors.

2. **PMU Coastal Protection**

   MOI- PIU is currently working on the designing of the Hahake coastal adaptation from Nukuleka to Kolonga. The selected design is based on a 1:100 year wave event superimposed on a 1:100 year water level event recommend at this study (Figure 1). The bid documents are scheduled to be ready for tender before the end of October 2017.

   An SIA and Vulnerability Assessment have been undertaken and an IEE/EIA is currently under draft and due in mid-August for submission to the Department of Environment for approval.
3. **Ha’apai Hospital**

The proposed Ha’apai hospital design and planning is underway with MOI-PIU. The concept has been approved by ADB (Figure 2) and the detailed design is underway. Hospital open tender is proposed for August and construction to commence by September 2017.

---

**Figure 1:** Conceptual Design for Hahake Coastal Protection
Figure 2: Ha’apai Hospital Final Floor Plan
4. **Schools Upgrade**

The project is upgrading 5 schools in Tongatapu namely GPS Fanga, GPS Kolomotu’a, Lavengamalie Side School, GPS Hala’ovave and GPS Ngele’ia shown below in Table 1. The climate proofing of schools strengthen the ability of the schools to cope with climate change and associated extreme weather events such as hurricane and storm surges.

The procurement process for the school’s upgrade includes the following actions:
- Inception meeting minutes report
- Order of position letter to access the site
- Contractor Environment Management Plan (CEMP).

Environmental and Social safeguard activities have focused on complying with the Contract Environment Management Plan (CEMP) and obtaining approvals. The project is classified as category B for Environment and category C for Involuntary resettlement and Indigenous persons. The project has no involuntary resettlement impacts and is classified as a **minor** development under the *EIA Act 2003* and *Regulation 2010*.

Key relevant safeguard aspects of the school’s upgrade include the following:
- Relevant IEEs were undertaken for all schools and approvals received from Government and ADB.
- An Inception meeting with MOI PIU/PMU and Lavengamalie PTA was conducted prior the commencement of construction (Figure 3 and Appendix 2).
- A half day CEMP training was organized by MOI-PIU and PMU for contractors after they signed the contract. The training clarifies CEMP guidelines and requirements for contractors to comply with and report upon. The CEMP is a binding document for contractors. Within 30 days of signing the contract they must submit any operational queries to PMU / PIU for endorsement.
- School upgrades are underway and proposed to be completed by August. Monitoring through observation, interviews of the contractor and photographs is carried out by the ESU officers as required. Issues reported are deemed minor and include: waste, noise, safety and housekeeping matters.

![Figure 3: Inception meeting at Lavengamalie](Image)

*Photo Taken: April 2017*
a. School Budget and Targets 2017

<table>
<thead>
<tr>
<th>SI NUMBER</th>
<th>Name of school</th>
<th>Initial Budget</th>
<th>Revised budget</th>
<th>Target award date</th>
<th>Target complete date</th>
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<tbody>
<tr>
<td>1</td>
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<td>0.086</td>
<td>30 Jan 17</td>
<td>30 Sept 17</td>
</tr>
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<td>2</td>
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<td>0.082</td>
<td>30 Jan 17</td>
<td>30 Aug 17</td>
</tr>
<tr>
<td>3</td>
<td>GPS Kolomotu‘a</td>
<td>0.088</td>
<td>0.086</td>
<td>30 Jan 17</td>
<td>30 Aug 17</td>
</tr>
<tr>
<td>6</td>
<td>GPS Hala‘ovave</td>
<td>0.046</td>
<td>0.046</td>
<td>28 Feb 17</td>
<td>31 Aug 17</td>
</tr>
<tr>
<td>7</td>
<td>GPS Ngele‘ia</td>
<td>0.046</td>
<td>0.046</td>
<td>28 Feb 17</td>
<td>31 July 17</td>
</tr>
</tbody>
</table>

b. Work Progression on School Upgrade

The progression of the upgrading of 5 schools will be described in the photographs below. They were taken in June 2017 during the PMU site monitoring with outputs showing 4 climate proof and infrastructure development improvements.

**Figure 4**: GPS Fanga -‘o-Pilolevu

(A) Leveling of school playground; (B) Car parking fences; (C) Drainage connects to the main road; and (D) Drop off and pick up point to avoid children missing school on rainy days.

Photos were taken in June 2017.
Figure 5: GPS Kolomotu’a
(A) Inspection Officer (MOI-PIU) supervising construction work; (B) The laying of drainage pipes; (C) Leveling of school ground to avoid inland inundation; (D) School parking area

Figure 6: GPS Hala’ovave
(A) The existing damaged school building is now closed; (B) Commencing of new school building
**Figure 7**: GPS Ngele'ia
Minor renovations with replacement of louvre frames, windows and doors, and a supply water tank

**Figure 8**: Lavengamalie School
Relocation drainage system from Old site (C) to new site (A); Dredging work in progress (B)

**Next steps**
The school construction plan is scheduled to complete by August 2017.
5. **Mangroves**

Dr Arthur Webb, Mr. Richard Kautoke, and Sione Tukia Lepa visited western Tongatapu in June to ground truth mangrove cover and provide safeguard options along the coastline of Kolonga to Nukuleka, Sopu, Popua, Puke, Hofoa and western site of Tongatapu. GIS-QGIS and safeguard team utilized scanner, satellite Images, QGIS, drone, and Arc GIS software to calibrate mangroves cover. The 12/13 satellite data inventory will be used as the baseline to calculate the changes occurred over time. Total mangrove covers in 2012/2013 for Tongatapu is 811.24 hectare. Mangrove inventory work will continue during Q3.

**Figure 9:** Mangrove planting in western Tongatapu

![Mangrove planting in western Tongatapu](image)

**Figure 10:** Drone survey from Kolonga to Nukuleka

![Drone survey from Kolonga to Nukuleka](image)

**Next steps**

The data processing are digitizing and using 2012 Quick Bird satellite imagery for Tongatapu and Vava’u. Historical aerial photos and current satellite imageries will be used to detect changes with coverages.

6. **Climate Change Trust Fund**

A total of 213 projects have been submitted from across Tonga (apart from the two Niua’s) and a shortlist has been submitted to the CCTF board meeting pending approval. Social vulnerability
and gender criteria have been integrated into the project approvals process. Subsequently, CCTF community based project funding integrates the following criteria:

- allocates 30 percent of community based projects for women’s groups
- allocates 30 percent for outer island projects
- subject to capacity development
- projects that seek to enhance resilience to climate change in communities.

**Next steps**

The next tranche of funding needs to better target projects from the Niua’s, considering their vulnerability and that no application has been made from these islands. Implementation of the projects is due to commence in the latter half of 2017.

### 7. SMAs

The project will establish 7 community SMAs to introduce sustainable fishing and management of coral reefs in Vava’u (Map 1). Seven proposed SMAs are noted in the red circles. The project is currently under implementation and is due to be launched by the King on July 5th 2017. The SMA team is preparing anchors, deployment and installation of buoys as boundary markers and billboards by the end of June or beginning of July.

**Figure 11: Map Location of 7 SMAs Vava’u**

The project will carry out national workshops that: share monitoring information; community approaches and methodologies; as well as share, good practices. The SMA committee must include two women representatives as stated in the *Fishery Management Act 2002*.

Equipment procured for the SMA monitoring include: drone; underwater camera; and diving gear.
B. SAFEGUARDS CROSS CUTTING ISSUES

a. Gender Dimensions

A gender sensitization training program was developed in January 2017 to carry out training of relevant government officials, contractors and other relevant stakeholders. A focus of the ESU during this period was to promote gender sensitization aspects within the project outputs. A CRSP Gender Sensitisation workshop was carried out with the PMU and the PIU staff to deliver gender sensitization training and encourage the integration of gender dimensions into their activities at every level. A second workshop focused on gender and climate change awareness amongst Government staff. The target audience included: Government Ministries, namely MOFNP, PIUs, PMU, Department of Climate Change and MEIDECC. Further workshops will be carried out by the National Gender Specialist.

Discussions with the Ministry of Internal Affairs and the Women’s Division within MIA highlight the potential to collaborate especially in areas that seek to empower women on coastal protection activities. This includes replanting mangroves, stopping illegal fishing, recycling waste and a beautification program.

b. Social Impact and Social Vulnerability Assessment Guidelines

A draft Social Environment Impact Assessment and Social Vulnerability guidelines (Appendix 4) have been drafted, which provides the ESU with a clear baseline of information regarding the social vulnerability of people and communities in Tonga in relation to the impacts of climate change. This supports the efforts to focus resources on those most socially vulnerable to climate change.
V. APPENDIX 1: CRSP PROJECT VARIABLES

Project Outputs and activities

Output 1: Climate resilience mainstreamed into development planning of key vulnerable sectors.
This will include:

(i) Upgrading climate resilience skills. The project will:

(ii) Provide 20 government staff working on climate resilience related areas access to Short Term Training on climate change adaptation (CCA) and disaster risk reduction (DRR)

(iii) Provide up to 20 scholarships for Tongan citizens to undertake academic degrees on CCA and DRR subjects at the University of the South Pacific

(iv) Deliver about 35 courses to government staff, private sector and NGOs to a total of about 300 people.

(v) Integration of climate resilience in the legal framework. The project will review prevailing statutory laws that are relevant to the implementation of CCA and DRR policies and provide recommendations on integrating these policies into existing statutory laws, in particular building codes and laws relating to development planning and water and natural resources.

(vi) Strengthening coordination and monitoring of community vulnerability assessments and plans. The project will (a) standardize the methodology to be used in Tonga for CCA and DRR community based plans, procedures and the associated institutional set-up (b) disseminate data through a readily accessible data base on CCA and DRM community based plans, as well as on integrated water resource management plans (c) strengthen MEIDECC’s capacity to coordinate, monitor and evaluate the activities implemented by communities.

(vii) Improvement of Water Resource Inventories and Integrated Water Resource Management (IWRM) and Coastal Zone Monitoring by developing (a) integrated water resources management plans in 6 communities (b) a manual on rainwater harvesting and drought management to enable the development of community based rainwater harvesting projects (c) a GIS data base for all Tonga on IWRM and (d) carrying out a feasibility study on the water supply requirements for the island of Niuafo’ou (population 524).

Output 2: Improve monitoring and management of Tonga climate data and information.

Establishment of national hydro-meteorological and coastal monitoring and data dissemination systems to improve early warning for cyclones, storm surges, drought and tsunamis through (a) designing and installing hydro-meteorological and coastal monitoring and data dissemination systems; and (b) training staff in national emergency management office (NEMO), natural resources division and meteorology division to operate these systems and interpret data.

Output 3: Sustainable financing mechanism to support community based climate responsive investments. This will include:
Establishing a Tonga Climate Change Trust Fund (CCTF). The project will support CCA responsive investments approaches identified and implemented by vulnerable communities, particularly women. The CCTF is established in accordance with the Public Finance Management Act 2002 and managed by Ministry of Finance and National Planning (MFNP). It is initially endowed with a capital sum of $5 million, of which an initial capital sum of $4 million will be placed in an endowment account and an initial capital of $1 million will be placed in operational account to finance small community CCA projects.

Output 4: Eco-system Resilience and Climate Infrastructure Investments. This will include:

(i) Increasing the ability of coral reefs to recover after climate related events. The project will establish 6 community managed special marine management Areas (SMA) to introduce sustainable fishing and management of coral reefs that will benefit approximately 1,000 persons in outer islands. The project will support national workshops to share monitoring information, community approaches and methodologies, as well as share lessons learned.

(ii) Improved management of mangroves for climate adaptation. The project will (a) identify and support potential sites for further investment in mangrove planting to provide shoreline protection; (b) develop best guideline practices and support field demonstrations on the use of mangroves as natural infrastructure. (c) Prepare a full mangrove inventory of Tonga as a baseline for the identification and quantification of value of mangroves for coastal protection/ecosystem services particularly in relation to protection of the coastal infrastructure from the impacts of natural disaster and climate change.

(iii) Upgraded evacuation and post disaster access roads. The project will upgrade 6.9 kms of roads to provide evacuation and post-disaster access roads to two villages in Tongatapu and one in the island of ‘Eua.

(iv) Enhanced coastal protection. The project will build and monitor coastline protection in eastern Tongatapu. This seeks to reduce building and road damage, household income loss, statistical value of life loss and emergency costs, maintain mangrove benefits such as improved breeding grounds for fish, carbon sequestration and run-off nutrient filtering; as well as recreation and amenity benefits by preserving the shoreline and beaches.

(v) Upgraded Schools. The project will upgrade 5 schools in Tongatapu by improving roofing, building structures, road access, and drainage to reduce school closure during severe weather events. The expected benefits include: avoiding income/time loss from school closures; inconvenience to parents; avoiding damage due to flooding; piped water costs, and reduce measures needed to manage droughts and disasters.

Additional subprojects
Several additional subprojects have been identified as candidate to be addressed under CRSP will include:

(i) Climate proofing existing outer island marine landings. An inventory and condition survey will be undertaken.

(ii) Planned relocation of Ha’apai Hospital to a less vulnerable site on higher ground. The current site is located no more than 5 metres from the low-lying coastline of Lifuka island in the Ha’apai group. This coastal site is zoned and classified extremely vulnerable to
coastal erosion and inundation from storm surges and potential sea level rise.

(iii) Popua Road. This additional road will be added to the evacuation and post-disaster access roads subproject. It will benefit the two villages of Patangata and Popua in Tongatapu. It will improve the security of the local population in the event of a major climate related event by both allowing for evacuation and allowing post disaster access by emergency vehicles.

(iv) Upgrading 7 additional schools. These additional schools will be added to the climate proofing of school’s subproject in improving roofing, building structures, road access, and drainage to reduce the number of days that schools are closed during cyclone season and to adapt them to other effects of climate change such as droughts.
VI. APPENDIX 2: ENVIRONMENTAL SAFEGUARD UNIT (ESU) STRUCTURE AND ROLES

The ESU was formed within the PMU with responsibilities to ensure that all environment and social monitoring results are captured and reported.

The ESU comprises:

1. Ms Lu’isa Tu’i’afitu-Malolo, Director for Climate Change
2. Mr. Winston Halapua, National Project Coordinator / Deputy Team Leader, CRSP
3. Ms. Esetelelita Fulivai, National Community Consultation Specialist
4. Sione Tukia Lepa, National Social Gender & Community Development Specialist
5. Mr. Vaha’akolo Palelei, Procurement Specialist - Quality Engineering Assurance
7. Mr. Peni Halai, MoI-PIU Inspector

The ESU is tasked with ensuring that the ADB SPS (2009) is applied to all sub projects to promote the sustainability of project outcomes by protecting the environment and people from potential adverse impacts. The ESU reviews, monitors and supervises the sub projects throughout the project duration in conformity with the Safeguard Policy Statement (SPS) and the laws of Tonga.

ESU Responsibilities

The ESU has five main roles highlighted in the Design Monitoring Framework (DMF). These roles include:

- Screening
- Implementation
- Monitoring
- Reporting
- Evaluation
**Screening**
All new sub-projects must have potential social and environmental impacts identified, minimized and where necessary mitigated, through Initial Environmental Examination reports and/or Resettlement Plans and/or Social Environment Impact Assessments. For projects that are located proximate to any area of cultural significance a Cultural Heritage Mapping Report must also be attached.

**Implementation**
The ESU undertakes monthly environmental site monitoring on any civil works, such as the school upgrade, evacuation roads, foreshore construction.

**Monitoring**
The ESU must monitor the implementation of the project Gender Action Plan with annual evaluations on the achievement of identified indicators.

**Reporting**
On quarterly basis, all environmental monitoring and other activities of the ESU must be summarized and included as an annex in each Quarterly Project Report.

On a six monthly basis, this information is collated and presented as a Safeguards Monitoring Report and submitted to the ADB. This is a public report and will be disclosed for public access via the ADB website.
VII. APPENDIX 3: LAVENGAMALIE INCEPTION MEETING

Opening
The regular monthly meeting of PIU/PMU was held on Wed, 29th April 2017 at MOI PIU Conference room at 03-00pm-430pm. Following the opening prayer, Winston Halapua, the Chair delivered welcome address highlighting the importance of working together between PIU/PMU at the beginning to be able to monitor and report on progress.

Attendance:
1. Winston Halapua (Chair)
2. Dr S M Atiqul Islam
3. Malakai Vakasiuola
4. Tukia Lepa
5. Edgar Cocker
6. Nikolasi Palu
7. Vaha'akolo Palelei
8. Edilberto Cabrera

1. Approved of the agenda
The agenda was unanimously approved for distribution and discussion.

2. Approved of Minute
This agenda was unanimously approved for distribution and discussion

3. Announcement
- New member of PIU Mr.Edilberto Cabrera, International Quality Assurance Engineer
- The construction work for drainage only will stop temporary until change of drainage layout is solved

4. Key Issues highlight at the meeting
1. Inception meeting with stakeholder
2. Order of Possession letter
3. Sign and information board for public safety and information

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>OUTCOME</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inception meeting with stakeholder; Key point:</td>
<td>The issue on the argument provided by Lavengamalie side school committee was discussed in the meeting that the school committee was not informed of the inception meeting before construction started.</td>
<td>1. PMU kind word apology for inception meeting being delayed.</td>
</tr>
<tr>
<td>1. Stagnant water</td>
<td>MOI-PIU explained that it was supposed to be held on last week but due to the unavailability of the contractor, it was not held. However, the contractor started the work before inception meeting, which was planned to be held in this week. MOI-PIU apologized for</td>
<td>After the meeting with the Lavengamalie side school committee on 18 March 2017, the issue has been solved. There is no question in this regard. That meeting can be considered as the inception meeting as contractor's representative was also present in the meeting.</td>
</tr>
</tbody>
</table>
this to Lavengamalie school committee in the last meeting with them. After that they do not have any complain on this issue.

2. Lavengamalie proposed to change the drainage layout from the front side of the school to the back side of the school as it passes in front of the Church President’s House.

MOI-PIU explained that the proposed design what they have done is sound in the engineering point of view as it follows the lowest contour of the ground. However, during the design MOI-PIU also considered the option proposed by the committee but as this layout passes through a private land in order to dispose water to the lagoon as per the information MOI-PIU gathered from the Ministry of lands and survey during that time. Now the committee says that the land is owned by church and they can arrange an agreement between church and school to pass the drain through the land. If this comes true then this option can still be considered for design.

MOI-PIU will consider the proposed option and work with the school committee for finding the feasibility of the proposed drain layout whether the drain can be fit within the space left behind between the school boundary and private land. Further where the drain will pass the church land to dispose the discharge to lagoon, it is required to be confirmed that this land is owned by church and it is required to have an agreement between church and the school before hand. ESU of PMU will ensure the ADB’s safeguard requirements in this regard as per ADB’s safeguard policy.

3. Lavengamalie request to close the drainage before the school holiday started.

The drainage will remain as it is now until the layout issue is sorted out. The drainage is well protected with 200m polythene net for safety. The school Principal was advised to refrain from using this area temporary until issues is solved.

<table>
<thead>
<tr>
<th>Order of Possession documents</th>
<th>Contractor already provided sign board display at the exit and near the drainage system for information and safety of construction work. A 24-hour telephone number is displayed on the board for any complain</th>
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</thead>
<tbody>
<tr>
<td>Order of Possession document</td>
<td>Order of Possession document endorsed by MOI will be delivered to contractors to all three schools including Lavengamalie, Fanga and Kolomotu’a as soon as possible.</td>
</tr>
<tr>
<td>endorsed by MOI</td>
<td></td>
</tr>
<tr>
<td>and delivered to Contractor</td>
<td></td>
</tr>
<tr>
<td>before start of construction</td>
<td></td>
</tr>
<tr>
<td>work on 13th March 2017.</td>
<td></td>
</tr>
<tr>
<td>However, the MOI endorsed</td>
<td></td>
</tr>
<tr>
<td>letter will be issued shortly</td>
<td></td>
</tr>
<tr>
<td>Sign and information for</td>
<td></td>
</tr>
<tr>
<td>Public Safety</td>
<td></td>
</tr>
<tr>
<td>Contractor timely installed</td>
<td></td>
</tr>
<tr>
<td>the sign on site though it is little bit late</td>
<td></td>
</tr>
<tr>
<td>The meeting agreed for 1 hour presentation on scope to the Lavengamalie side school explaining the current design layout and its advantage</td>
<td>Brief presentation on the scoping of the work and explanation of current design layout will be provided by Kolo on Thursday 20 April 2017 to be held at the Lavengamalie side school</td>
</tr>
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</table>

**Adjournment**

Meeting adjourned at 4:30pm. The next meeting will be held on Thurs 18\textsuperscript{th} of May, 2017, 03-00pm at MOI PIU. 
*Minutes submit by Sione Tukia.*
*Approved by (Winston)*)
VIII. APPENDIX 4: TONGAN GOVERNMENT ENVIRONMENTAL IMPACT ASSESSMENT REQUIREMENTS

The Tonga Environmental Impact Assessment (EIA) Act was passed in 2003 with MEIDECC as the Executing Agency (EA). Regulations to support the Act are captured in the Environmental Impact Assessment Regulations 2010. Under this regulatory framework, all major development activities must be notified to the Minister of MEIDECC through the Environment Assessment Committee for endorsement (designated authority). With this notification, the proponent must submit a Determination of Category of Assessment Form 1 providing an overview of the proposed development and a number of details in relation to the existing environment, potential environmental impacts and mitigation measures. The EIA Department then makes a decision as to the scale of the project whether minor or major according to EIA guideline (Figure 2). If deemed major works then an EIA is required. If deemed minor works then a waiver of an EIA is given although environmental conditions may be imposed. The EIA report will advertise on radio and newspaper for public comments. After two weeks of publication, an EAC Meeting is called to endorse the EIA Report with recommendations. All relevant CRSP projects are subject to this procedure.
### FORM 2: MINOR ENVIRONMENTAL IMPACT ASSESSMENT

**Project ID No.: EIA No. 165/2016 - 17**  
**Name of Project:** CRSP – MEIDECC: Tongatapu School Climate Proof Upgrade & Repair.  
**Contact Person:** Malakei Vakasuluola/Tukia Lepa  
**Contact Number:** 24668

**Conditions of Approval:**

1. That Environment Officers from EIA Unit may carry out site inspections during the repairing & upgrading phase for monitoring purposes.
2. Resources and Supplies will be used wisely to avoid pollution of the environment. Any excess waste material will be disposed off carefully at Tapuia or proper disposal area.
3. Any removal of vegetation is to be kept at a minimal degree, ensure they are being replaced to reinstate for the ones that will be depleted.
4. The Construction Environmental Management Plan (CEMP) should be adhered to as contractor will act accordingly in a very responsible and sustainable manner. The EIA Unit will join the CRSP PIU in monitoring the work in accordance with the CEMP terms.
5. Should the structure and scope of work alters, the EIA Unit should be notified to ensure environmental impacts that may arise will be mitigated.

**Approve:**

![EIA MINOR APPROVED]

**Date:** 08/12/16

---

**This is to confirm that all required information has been lodged in accordance to the requirements of the Act.**

**Signature:**

![Signature]

**Print Name:** Mr. Paula Mā'u  
**Determining Authority:** Chief Executive Officer, Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC)
IX. APPENDIX 5: SEIA & SOCIAL VULNERABILITY GUIDELINES

A. What is SOCIAL ENVIRONMENTAL IMPACT ASSESSMENT (SEIA)?
SEIA includes the process of analysing, monitoring and managing the intended and unintended environmental and social consequences/impacts (both positive and negative) that are likely to follow from specific development project on nearby communities and also identify potential longer term solutions to the environmental (biophysical) and social vulnerability of communities.

B. Who is the SEIA for?
The SEIA is for communities, private sector and for government agencies.

C. Why do an SEIA?
1. To ensure communities participate in decision making around development priorities that impact their livelihoods and potentially harmful impacts are minimised and wherever possible avoided, while project benefits are maximised. This will develop an understanding of the environment, social and associated economic characteristics of the nearby communities and households.
2. To ensure the private sector nurtures a relationship with local communities and their surrounding environment, workforces, and relevant stakeholders. This will seek to reduce future compensation payouts and improve making decisions.
3. To ensure government agencies (competent authorities) obtain better local information upon which to make decisions.
## X. APPENDIX 6: CONTRACTOR ENVIRONMENT MANAGEMENT PLAN (CEMP)

**Contractor Environment Management Plan January - June, 2017**

**Name of Contractor:** A Group Construction, TTS Construction, Oregon Pacific Construction International, Name of

**Schools:** GPS Fanga, GPS Kolomotu'a, GPS Hala-'o-Vave, GPS Ngele’ia, Lavengamalie Side School

**Compliance Officer:** Kolo/Tukia/Peni (PMU&MoI PIU)

Date: February - July 2017,

<table>
<thead>
<tr>
<th>Activities</th>
<th>Impact</th>
<th>Measure</th>
<th>Implementation</th>
<th>Supervising</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
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<tr>
<td><strong>Before Construction</strong></td>
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<td></td>
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</tr>
<tr>
<td>Order of Position Letter</td>
<td>Approved access to construction site</td>
<td>Endorsement by MOI CEO</td>
<td>Consultant</td>
<td>MOI PIU</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>Inception Meeting</td>
<td>Date of meeting</td>
<td>Minutes¹</td>
<td>Consultant</td>
<td>MOI PIU/PMU</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>CEMP</td>
<td>Compliance</td>
<td>Training</td>
<td>Consultant</td>
<td>MOI PIU/PMU</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check, ongoing training</td>
</tr>
<tr>
<td>Land</td>
<td>Government lands</td>
<td>Endorsed by the Government</td>
<td>Consultant</td>
<td>MOI PIU/PMU</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>(b) Raising school grounds to avoid flooding.</td>
<td>Reduce number of days school closed</td>
<td>Contractor to only use only certified quarry and transportation</td>
<td>Consultant</td>
<td>MOI PIU</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>(c) Working in rainy weather</td>
<td>Health and Safety</td>
<td>Contractor to try and avoid earthworks in rainy weather</td>
<td>Consultant</td>
<td>MOI</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
</tbody>
</table>

¹ Appendix 2: Minute of the inception meeting at Lavengamalie Schools, 03rd of March, 2017.
<table>
<thead>
<tr>
<th>(d) Noise</th>
<th>Interference with school lessons and exams</th>
<th>Contractor to try and do work during school holidays or after hours</th>
<th>Consultant</th>
<th>MOI</th>
<th>Y</th>
<th>Work Supervisor Diary, Monthly report, ESU spot check</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) Health and sanitation</td>
<td>Removing damaged building materials</td>
<td>Recycle wastes if possible</td>
<td>Consultant</td>
<td>MOI</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>(f) Plant and Animal</td>
<td>Conservation of biodiversity</td>
<td>Compliance</td>
<td>Consultant</td>
<td>MOI</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>(a) EMP reviewed</td>
<td>Approved CEMP</td>
<td>Continue monitor and reporting</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td>Approved CEMP by MOI PIU/PMU</td>
</tr>
</tbody>
</table>

**Construction**

<table>
<thead>
<tr>
<th>(a) Construction camp</th>
<th>Workers living in unsanitary conditions</th>
<th>If possible, workers should live off site</th>
<th>Contractor</th>
<th>MOI</th>
<th>NA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>If on site provide adequate sleeping quarters</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Provide sanitary arrangements for toilets, showers, laundry.</td>
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<td></td>
<td></td>
<td>Provide clean cooking facilities</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Provide sufficient drinking water</td>
<td></td>
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<td></td>
<td></td>
<td>Provide garbage bins for workers. Waste in the bins should be cleared periodically.</td>
<td></td>
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</tr>
<tr>
<td>(b) Protecting workers safety</td>
<td>Accident risk from equipment</td>
<td>Safety precautions provided for workers:</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Introductory briefing on health and safety.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Warning and/or Precaution Signs on safety.</td>
<td></td>
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<td></td>
<td></td>
<td>Provide full PPE; Helmets, boots, high vis jackets etc</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(c) Drainage</td>
<td>Water pollution/odours</td>
<td>Install temporary perimeter drains for rain drainage</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supervisor report drainage to be completed in dry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpile materials</td>
<td>Dust and poor air quality</td>
<td>All stock piled materials to be covered. Water sprays to be used for dust suppression in dry weather. All vehicle movements must follow strict safety protocols with all materials covered.</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td>Supervisor report (stock pile materials covered and taken later for disposal) Noted: if waste not stored in safe location and covered then must be removed by the end of week day (Friday) to avoid accidents. Work Supervisor Diary, Monthly report, ESU spot check</td>
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<tr>
<td>Solid wastes</td>
<td>Littering and garbage</td>
<td>All construction waste to be removed from site and sent to landfill. No dumping of waste in neighbouring fields. No open burning of waste.</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td>Supervisor Diary &amp; Monthly report</td>
</tr>
<tr>
<td>Stagnant water areas</td>
<td>Mosquito breeding habitat</td>
<td>Removal and draining of stagnant water areas.</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td>Work Supervisor Diary, Monthly report, ESU spot check</td>
</tr>
<tr>
<td>Security of site</td>
<td>Trespassing</td>
<td>Given proximity of school no children to be allowed on or near the work site.</td>
<td>Contractor</td>
<td>MOI</td>
<td>Y</td>
<td>Supervisor report, (safety/security fence in place/sign board (check letter of security notification given to school principal)</td>
</tr>
</tbody>
</table>
### Impacts and Mitigation – Operation

<table>
<thead>
<tr>
<th>(a) Resident’s complaints</th>
<th>No response to complaints</th>
<th>Establish complaints response mechanism</th>
<th>Contractor</th>
<th>MOI</th>
<th>Y</th>
<th>Work Supervisor Diary, Monthly report, ESU spot check &amp; ESU liaise directly with school principal(s) and surrounding community whether issues occurred during construction. Ongoing monitoring by MoI &amp; ESU. Add ADB Redress Mechanism details into CEMP</th>
</tr>
</thead>
</table>

**Summary & CEMP glimpses during ESU No.2 work shown in the pictures data below**

Upgrading of schools is in good progress so far. Safeguard addressed and reminded all contractors’ CEMP procedures required. The safe use of substances such as paints, storage of materials, noise control, safe transportation and delivery of materials on site, solid waste disposal particular off cuts to be removed by contractor from site and transferred to the land fill. Sharp roof metals and rods to be covered securely after working hrs. Safeguards / CEMP are enforced.
Mol PIU service, contractors’, ESU, recipient and PMU are working closely to monitor compliance aspects of CEMP. Photos below illustrate the joint effort conducted by Mol and Safeguards to monitor compliance requirements.

**APPENDIX 7: CONSTRUCTION SAFETY SIGNAGE AND SAFETY EQUIPMENTS**

1. Signage and PPE
2. Occupation Health and Safety – PPE and Safety equipment

Occupation Health and safety is a priority for employer and to comply with MOI building code for infrastructure development in Tonga. The list of equipment is used for human protection during construction work it includes head, safety shoes, goggles, gloves, life jacket and fire extinguisher. ESU conducted random spot checks to ensure not to compromise safety procedure requirements.