

TONGA

Health & Safety Snapshot and case Studies

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Case Study One – TONGA - NNUP



- » Nuku'alofa Network Upgrade Project – Area 5 (under the Pacific Renewable Energy Investment Facility)
 - Project Number: 49450-036 TON, Approval Number: 0868-TON.
- » Issue
 - Complex organization structure
 - Rigid approval system
 - Health and safety laws are not built into Tonga's constitution.
 - Company lacks Safe Work Method Statements and operational procedures for construction works.
 - Support services supporting Project Managers such as IT, HR, Finance require more advanced training to cater for our needs of the project.

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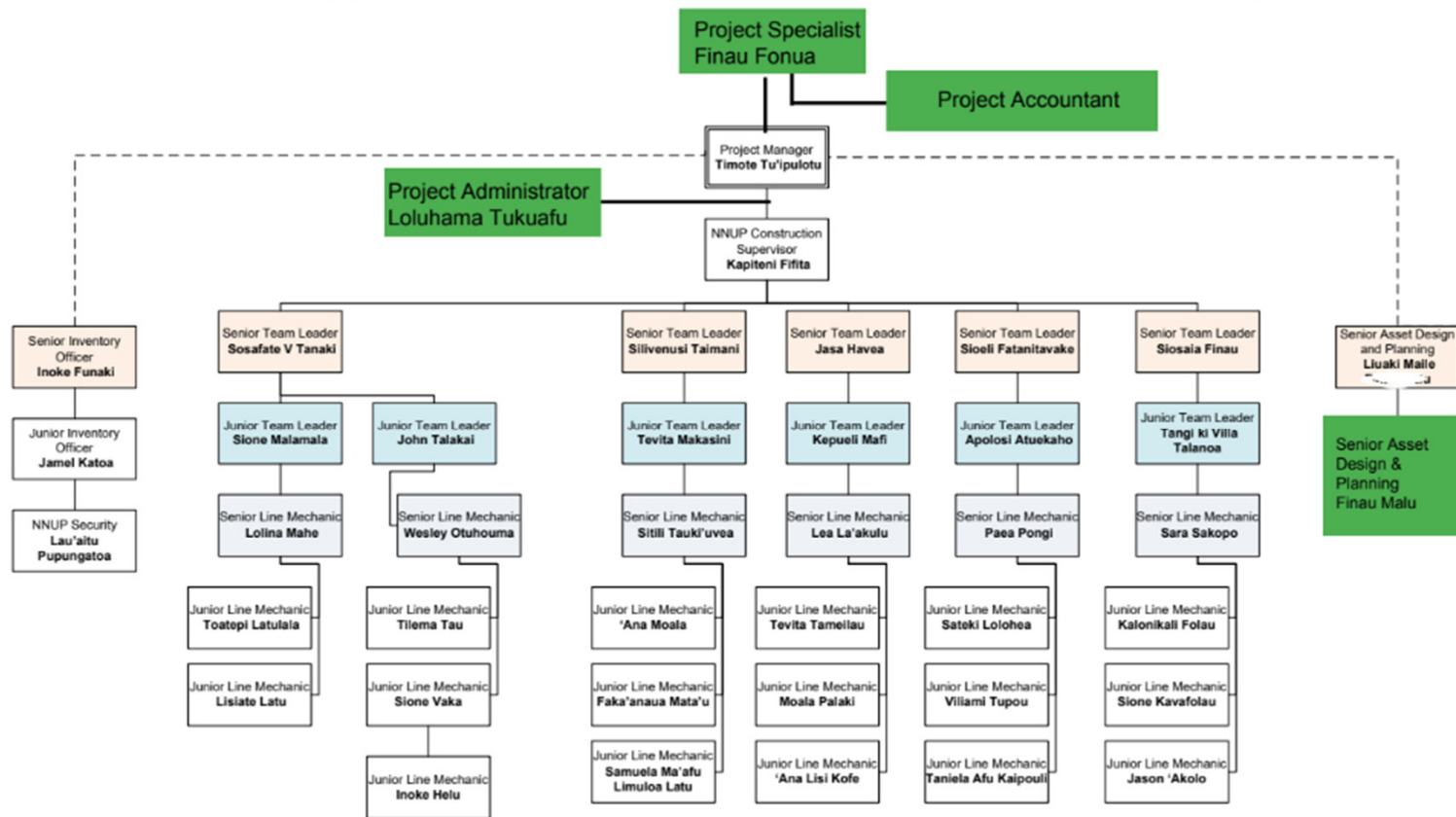


» Outcome

- Strengthen the current organizational structure
- Develop Safe work method statements and company operating procedures.
- Request training to maintain and increase competency.
- Improve Quality Assurance in the field by equipping the teamleaders with phones, and uploading of photos, quality assurance documents, timesheets etc into our project folder from the field.
- Carrying out a recorded detail morning tool box briefing where incidents are discussed, important reminders, teaching our industry rules 1.0hr at the start of the week.
- Keep a live “Risk Management Matrix” and continue to monitor.

Case Study One – TONGA - NNUP

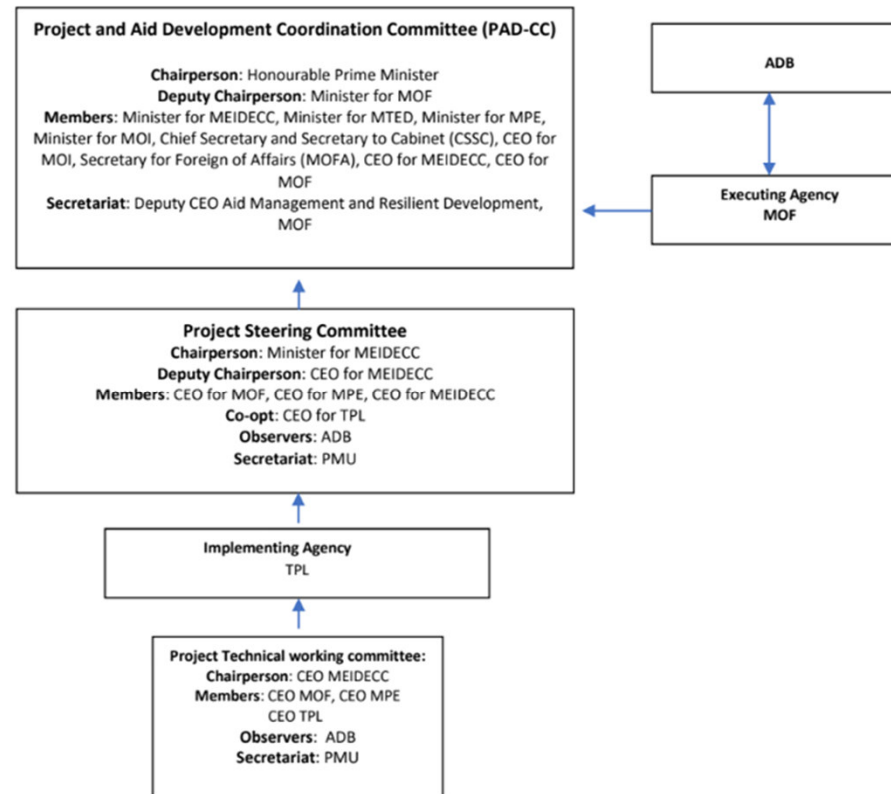
Nuku'alofa Network Upgrade Project Organisation Chart from 1st May 2024 to 1st May 2025 Area 5



Case Study One – TONGA - NNUP



Figure 6 – Organizational Structure taken from the PAM manual.



ADB = Asian Development Bank; CEO = chief executive officer; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications, MOF = Ministry of Finance, MOI = Ministry of Infrastructure, MPE = Ministry of Public Enterprise, MTED = Ministry of Trade and Economic

Case Study One – TONGA - NNUP



The ADB team directly working with TPL are listed below:

1. Grace King – Project Officer – first point of contact of overall project.
2. Maureen Hazelman – Project Analyst – first point of contact of overall project.
3. Faga Kotoitubou – Project Assistant – project accountants focal on FM.
4. Ferila Brown – Safeguard Focal – Dorothy Foliaki focal.
5. Beatrice Olsson – Gender Focal – new gender specialists focal.
6. Setty Bass – Consultant Procurement – procurement focal, can support with preparing bid evaluation, reports or request for quotation packages.
7. Jenny Chu – Procurement Specialists – final approvals of all procurement.

Feedback: A project review mission from the ADB team was conducted on the 19th-22nd September 2023, to review the progress and discuss implantation, relating to the Nuku'alofa Network Upgrade Project (NUUP). The mission held meetings with representatives of the Ministry of Finance (MOF) and Tonga Power Ltd (TPL) and conducted site visits.

A memorandum was made available to TPL with a detailed action plan with strict timeframes and deadlines to complete by 15th December 2023.

Project Steering Committee (PSC)

Made up of representatives from Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Environment, Climate Change and Communication (MEIDECC), Ministry of Public Enterprise (MPE), TPL, ADB and PMU.

The management roles and responsibilities are:

- Provide strategic direction, guidance, and oversight of the project.
- Provide policy oversight.

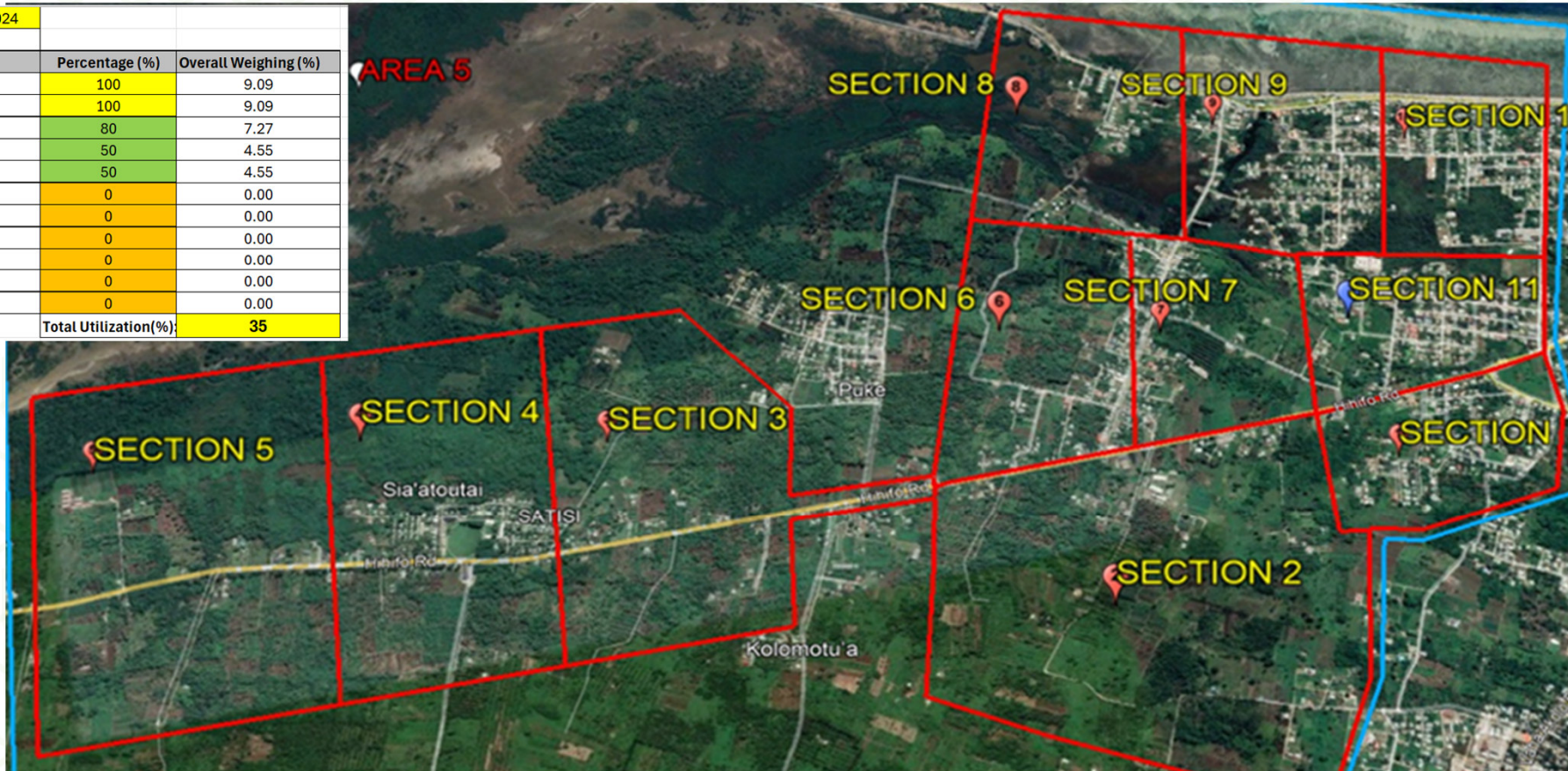
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Date Data inputted:	16th May 2024		
Inputted By:			
Villages	Section	Percentage (%)	Overall Weighing (%)
Tu'atakilangi	1	100	9.09
Kupolu	2	100	9.09
Siaatoutai	3	80	7.27
Siaatoutai	4	50	4.55
Siaatoutai	5	50	4.55
Hofoa	6	0	0.00
Hofoa	7	0	0.00
Sopu	8	0	0.00
Sopu	9	0	0.00
Sopu	10	0	0.00
Halovave	11	0	0.00
Total Utilization(%):			35



Country specific H&S Challenges – TONGA



» Resource challenges

- Lack of professionals in health and safety to assist with the auditing, monitoring near miss info, implementing the safety culture, carrying out investigations.
- Do not have a training budget in our current contract to educate and lift our internal staff.

» Company challenges

- Lack our basics such as our safe work method statements, approved worked procedures and enforcing it.

Country specific H&S Challenges – TONGA



Risk No.	Risk Element	Describe the Details of Risk Event	Consequence(s) of the Risk Event	Initial Risk		
				Likelihood 1-3	Consequence 1-3	Level of Risk
3	WORKS / DESIGN / ENGINEERING					
3.10	Construction - Working from heights	Falling from heights	Result in serious injury or fatality	Likely	Extremely	Extreme
3.20	Construction - Exposure to uncontrolled energy	Electrical Shock	Result in serious injury or fatality	Likely	Extremely	Extreme
3.30	Heavy Plant and Equipment - Excavators, Cranes, Bucket truck.	Crush, harm to body, collapse.	Result in serious injury or fatality	Likely	Extremely	Extreme
3.40	Construction - Dropped objects	Objects dropping on individual from heights	Injury to head and face	Likely	Extremely	Extreme
3.50	Public - causing harm to workers	Public confrontation and Violence	Harm to workers	Likely	Extremely	Extreme
3.60	Construction - Vehicles travel	Struck by vehicle, Accidents,		Likely	Extremely	Extreme
3.70	Construction - Pole Collapse	While lifting load wooden poles can collapse		Likely	Extremely	Extreme

Country specific H&S Challenges – TONGA



- » OUR 2 MAJOR RISK IDENTIFIED RECENTLY
- » A. Failure of the ABC bundle conductor
- » B. Failure of the wooden poles.



Figure 2 – Is a ATPFL pole at the TPL yard showing ground rot and decay from the base of the pole extending up to 3.0-4.0m.



bare conductor holding the bundle for strength.

Figure 4 – ABC conductor found at the TPL yard left over stock with red arrow pointing to the metallic sheath surrounding the insulated area.



Case study 2 – New Zealand



- » LIVE LINE UNDERSLUNG JOINT TESTING
- » A. Working at Heights – human load
 - Controls – 1) Live line rope – x4. (hook check x2)
 - 2) Procedure for the hook mechanical/electrical
 - 3) Physical Belly strop around the helicopter and the hook.
- » B. Working with Energized Conductor
- » Controls – 1) Competencies 5 years line mechanic + 3 years live line works.
 - » 2) Safety Observer in helicopter + on ground to keep live line minimum approach distance.
 - » 3) Insulators lengths can vary from 2.0m to 2.2m. But this is what we must keep.

Case study 2 – New Zealand



- » LIVE LINE UNDERSLUNG JOINT TESTING
- » C. Working with helicopters
- » 1) Competencies – Helicopter pilot 100hrs minimum on live line underslung works.
- » 2) Twin engine and able to lift load if one engine fails to safety.
- » 3) Crew Resource management training for all personnel.

- » Play VIDEO