



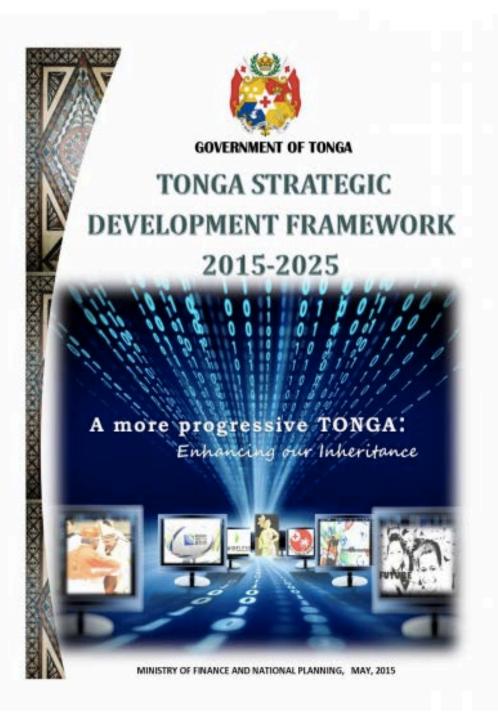


Initiating a Science, Technology and Innovation (ST&I) Policy Development Process in the Kingdom of Tonga

Taaniela Kula

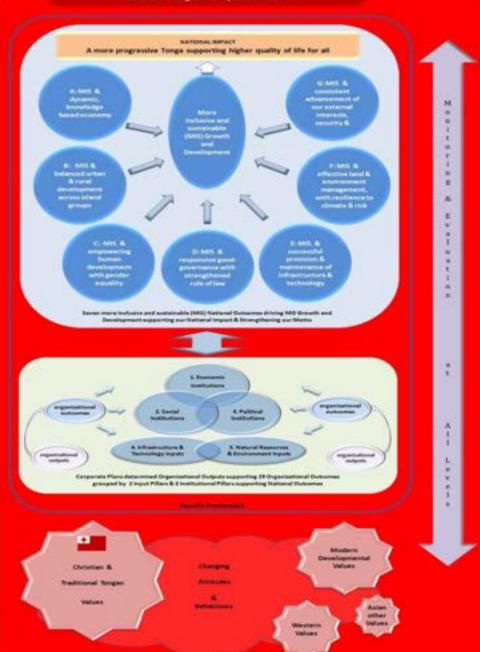
Deputy Secretary, Ministry of Lands, Survey & Natural Resources, Kingdom of Tonga, tkula@naturalresources.gov.to

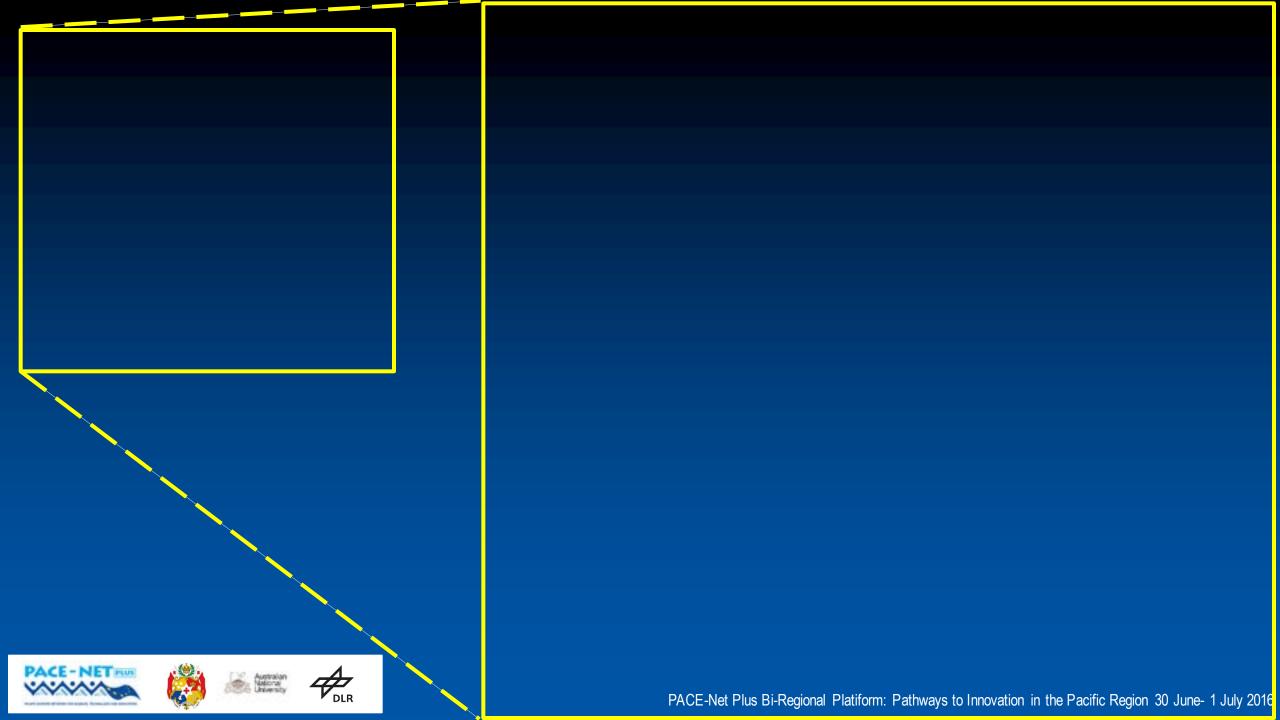
PACE-Net Plus Bi-Regional Platform: Pathways to Innovation in the Pacific Region 30 June - 1 July 2016, Tanoa International Hotel, Nadi, FIJI



The TSDF Vision

God and Tonga are My Inheritence

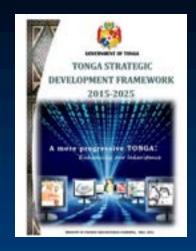




Tonga Strategic Development Framework 2015-25

Explicitly and implicitly recognised the role of ST&I, e.g.

National Outcome A, dynamic knowledge-based economy:

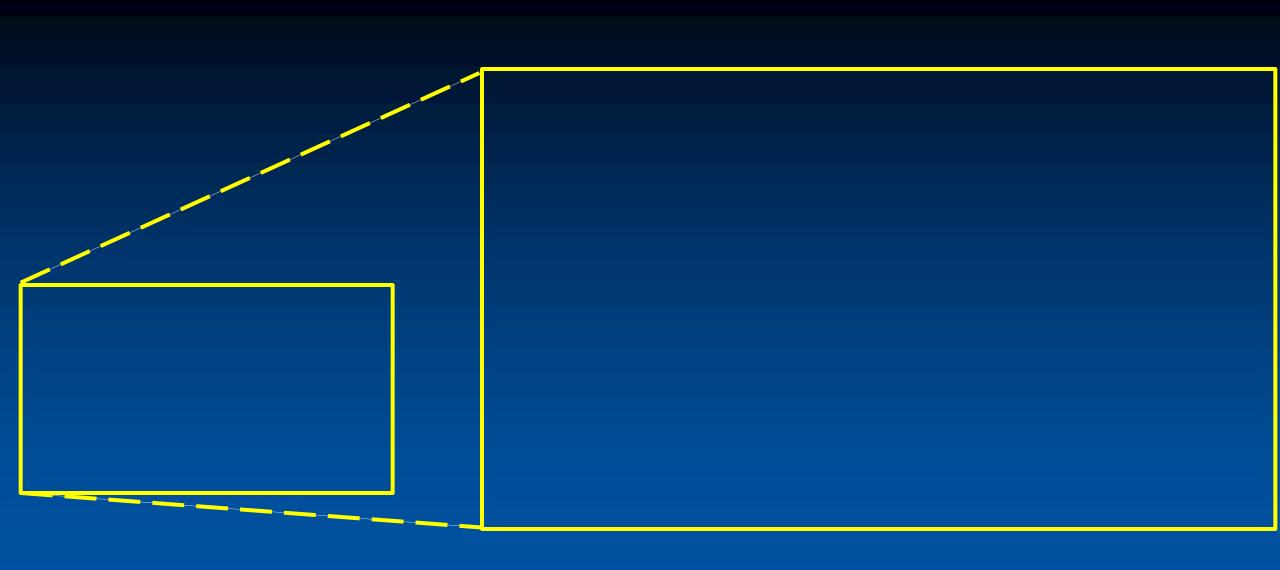


"We must build our economic capacity by increased productivity and by applying better knowledge supported by improved application of research and development. ... Within the primary and secondary industries, however, the application of new knowledge and technologies has the potential to increase the value-added of our production."















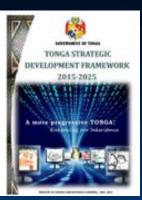


Tonga Strategic Development Framework 2015-25

Explicitly and implicitly recognised the role of ST&I, e.g.

Pillar 4: Infrastructure and Technology Inputs:

"Improved use of research & development focussing on priority needs, based on stronger foresight ... we must become more willing to try new ideas, to test them under local conditions and to engage with others in the region and beyond with similar interests to us. This is a central part of becoming more innovative within a progressive Tonga



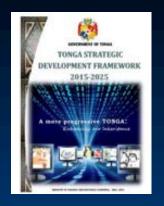






Tonga Strategic Development Framework 2015-25

Explicitly and implicitly recognised the role of ST&I, e.g.



Pillar 5: Natural Resources and Environment Inputs,

"With the right skills, technology and infrastructure we can greatly enhance the contribution natural resources make to inclusive development..."; "Our limited resource base and sensitive environment require people with the right skills and attitude to manage and protect them."; and "We also need access to appropriate technologies and infrastructure which support rather than threaten our sensitive environment Lack of skills and appropriate attitudes also mean that we may not manage the resources and environment properly...".









Consultation with Key and Relevant Agencies and Industries

19 one on one interviews with:



























- Ministry of Lands & Natural Resources (4) CEO, Deputy CEO,
 Legal Administrator, IWRM Officer
- Ministry of Education & Training (1) Acting CEO
- Environment Department (2) Director, EIA Officer
- Marine & Ports Department (1) Director
- Spatial Planning Authority (1) Director
- Energy Department (1) Director
- Public Health Department (1) Senior Public Health Officer
- Ministry of Fisheries
- National Planning Division (1) Principal Economist
- His Majesty Royal Armed Forces (1) Naval Commander
- Tonga Meteorological Services (1) Climate Forecaster
- Attorney General's Office (1) Legal Counsellor
- Tonga USP Campus (2) Director, Deputy Director
- Tonga Water Board (1) General Manager
- Tonga Telecommunication Corp;
- Tonga Power Limited (1) General Manager

National Workshop on ST&I Policy Framework Development





Principles

The Policy Framework must be developed by Tongans for the benefit of Tonga



Principles

ST&I Policy Framework must be consistent with:

- The Tonga Strategic Development Framework 2015-25
- Existing policies, strategies and plans, particular those on environment, natural resources, energy and climate
- International and regional initiatives & agreements

Principles

ST&I Policy Framework must:

Focus on gaps in Tonga-relevant knowledge not repeat overseas work

Have an implementation plan, key performance indicators, and monitoring and

evaluation framework

Include traditional science & knowledge

Involve youth, they are the future



Outputs – Main Emphasis

- ST&I education in our schools and technical colleges needs to be improved
- Coordination in ST&I in Tonga needs to be improved (Research Centre?)
- Access to ST&I information is inadequate (Research Centre?)
- Lack of analytical and product testing facilities (Research Centre?)
- Food safety and security is difficult to guarantee (Research Centre?)
- Sustainability of food, energy production, resource consumption and environmental systems are vital to a more progressive Tonga
- Adapting and responding to climate extremes, variability, and change and natural disasters
- In-country capacity in ST&I

Flooding in Nuku'alofa 11 June 2016

Source: Matangi Tonga

Affirmed Key Actions under the proposed ST&I Policy Framework

- A Tongan National Research Centre
- A ST&I Council/ Task force for governance and coordination
- A Centre for Innovation to support business development
- ST&I talent identification both locally and globally and a network to support local ST&I Initiatives and implementation
- Adequate laboratory equipment to enable critical tests and experiments locally
- Improve International Marketing through certifying quality of products
- Enhance data and knowledge sharing, effective communication to stakeholders
- Closer collaboration between ST&I relevant agencies and incentives for ST&I

Development of ST&I Policy Vision and Goal

Vision:

A framework for enacting the research, innovation, science and technology components of the Tonga Strategic Development Framework II 2015-2025.

The Overall Goal:

To ensure advanced education, applicable research, affordable technology, accessible innovation and sharing of knowledge for a more progressive Tonga supporting a higher quality of life for all.

Expected Impacts

- ST&I Policy will enable enactment of existing references in policy documents within the Government and allow further mainstreaming of ST&I
- Enhance Tonga's capacity by utilising its local and globally dispersed ST&I talents and expertise
- ST&I Governance systems, organisational structures and linkages established
- Improved ST&I knowledge and jobs created to contribute to a more progressive Tonga



Achieved Outcomes

- First Inter-Ministerial ST&I Meeting in Tonga
- ST&I Goal, Vision and Key Actions where jointly identified and endorsed
- Key Action areas: Knowledge sharing; Research Infrastructure; Governance;
 Education & Training; Entrepreneurship, Innovation, & Business Creativity
- High-Level Political Support for ST&I Process (Deputy Prime Minister)
- Inter-ministerial commitment for continuous support for the ST&I Policy

ST&I Policy process initiated by Tongans for Tongans with contribution from external partners

Lessons Learned

- ST&I Initiatives and Talents exist in Tonga but are hidden by role in the workplace, employment sector, a culture of humbleness and lack of opportunity for exposure.
- Sharing of ST&I knowledge, achievements and experience among sectors and with the public at large encourages ST&I collaboration in Tonga.
- The right champions, the enabling political environment and internal & external resources are necessary to drive and implement the ST&I Policy in Tonga.
- International contribution and shared facilitation can speed up the ST&I Policy
 - development process.

Tonga ST&I Policy Initiation Team and Supporters



Malo 'aupito Sincere Thanks!



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