



Pacific Region  
Infrastructure Facility

# Improving National Building Codes and Standards in the Pacific



# 1. What is a Building Code?

A building code sets out the rules for which designers and builders must comply with. They are the MINIMUM standards to ensure buildings are safe, accessible and resilient.

Owners can build their buildings stronger, higher performing, or more luxurious, but they must meet these minimum requirements.

# 2. What is a Building Standard?

Building Standards cover things such as design loads on structures, type, strength and testing of building materials, fire safety, electrical wiring and plumbing and drainage rules.

By referencing the standards in the code this allows standards to be updated as needed (ie. as technology improves) without having to re-write the code.

### 3. What is a Building Act?

The Building Act is the legislation which requires people to comply with the building code.

### 4. What is the Role of National Building Codes in the Pacific Region?

National Building Codes have an important role to play in ensuring the design and delivery of construction in the region is to acceptable standards of **structural sufficiency, fire safety, health and amenity**, that resist the impacts of natural disasters and climate change and ensure value for money construction outcomes.

Unsuitable or inadequate building codes and/or the poor application & enforcement of the building codes contribute to poor and unsafe built environment outcomes.

## Boy, 6, Electrocuted In Lami

*A father's wish to see his only son in his school uniform for the first time has been shattered. Timoci Kaivu, a merchant seaman, is still on the high seas,*

By Arieta Vakasukawaqa, Suva

31 Jan 2016 11:29



The electrical wire in which, Tomasi Melb Kaivu, 6 was electrocuted at Lami village on Friday afternoon. PHOTO: Arieta Vakasukawaqa.

A father's wish to see his only son in his school uniform for the first time has been shattered.

Timoci Kaivu, a merchant seaman, is still on the high seas, unaware that his son, Tomasi Kaivu, a Year One student of Veitu Primary School, was electrocuted near his home in Lami Village at about 4pm last Friday.

His wife, distraught Timaima Ravanua, 28, said she

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## Eight-year-old boy who died at Fiji resort believed to have been electrocuted

Winitana was holidaying with his Sydney family at the Club Lham Denarau Island resort

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from Sydney was killed in a suspected electrocution at a Fiji

7 year boy who was found motionless at a resort in Fiji is believed to have died from electrocution, Fiji police have confirmed.

The boy is identified as Cairo Winitana, who was holidaying with his family at the resort on Fiji's main island.

Police say the investigation is still under way and have not yet confirmed whether they have received the postmortem results, nor what may have caused the electrocution.





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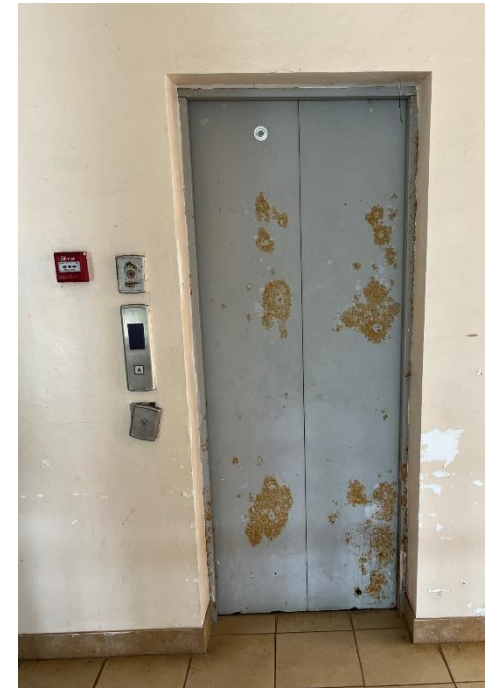
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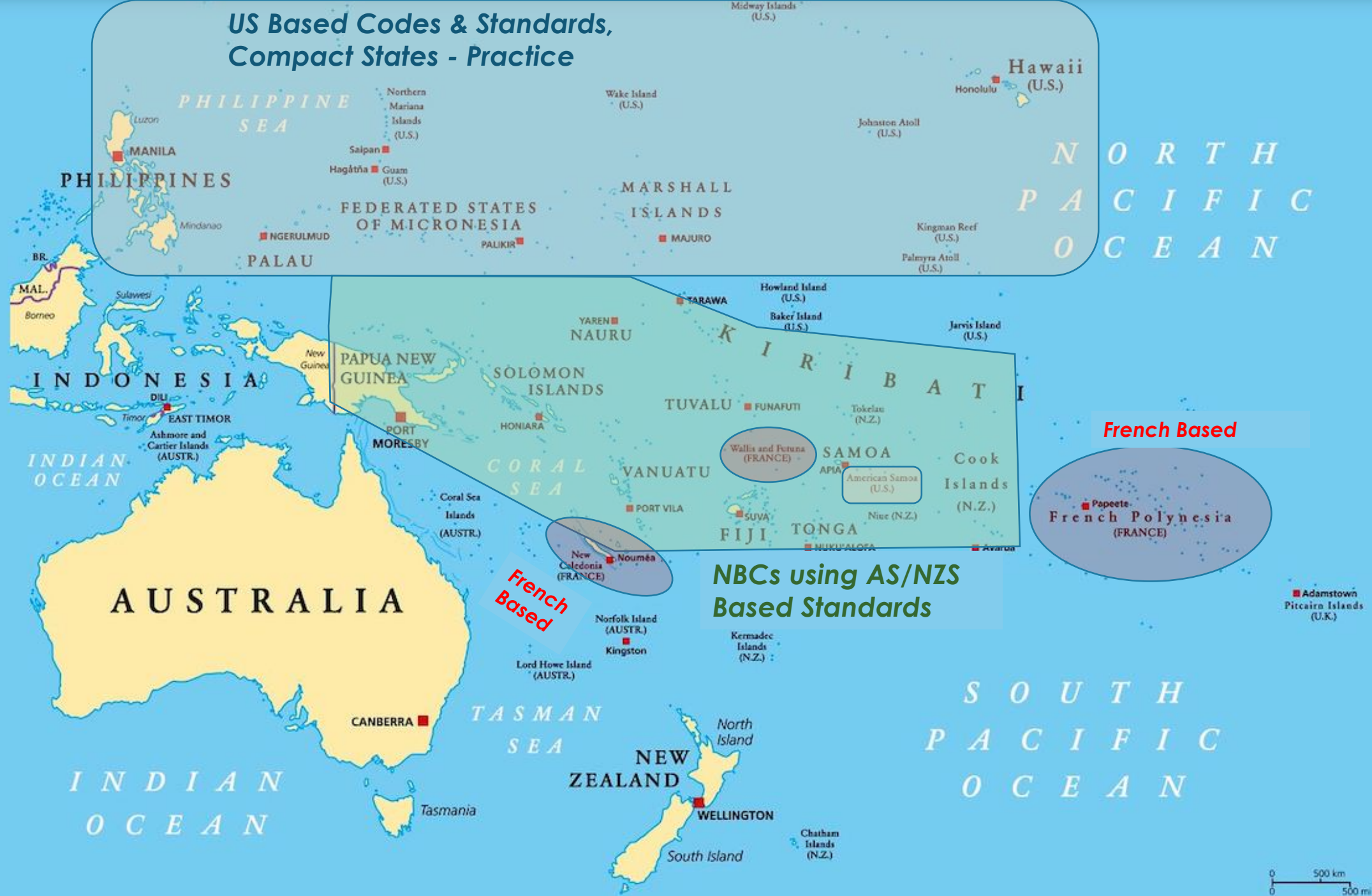
# PRIF Technical Assistance - Improving National Building Codes and Standards in the Pacific

Two objectives:

- At **regional** level, support improvements to National Building Codes, their implementation & enforcement, & contribute to efficient & effective application of design & construction standards across the Pacific.
- At **national** level, support strengthening of legislation & regulatory frameworks, improving building acts, codes & associated standards, & identifying opportunities to improve capacities for enforcement (FSM, Nauru, & Kiribati).



# US Based Codes & Standards, Compact States - Practice



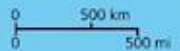
N O R T H  
P A C I F I C  
O C E A N

French Based

NBCs using AS/NZS Based Standards

French Based

S O U T H  
P A C I F I C  
O C E A N



# Overview of Current building Codes and Standards across the Pacific

	Cooks	FSM	Fiji	Kiribati	Nauru	Niue	Palau	Marshall	Samoa	Solomons	Tonga	Tuvalu	Vanuatu
NBC exists	✓	✗	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓
NBC legislated	✓	✗	?	?	○	✓	✗	✓	✓	○	✓	?	✓
NBC recently updated	✓	○	○	○	○	✓	✗	○	✓	○	✓	○	✗

# Recent Initiatives

## **Cook Islands**

2017-19 Gov of Cook Islands -  
SPC/European Union

## **Samoa**

2017-19 Gov of Samoa –  
Global Environmental  
Facility/UNDP – Green Climate  
Fund/UNDP - World Bank  
Group/GFDRR

## **Niue**

2014-20 Gov of Niue

## **Tonga**

2018-19 Gov of Tonga World Bank Group /  
GFDRR

## **FSM, RMI, Palau (North Pacific Islands)**

2022 United States Department of Interior  
Office of Insular Affairs.

# Kiribati And Nauru National Building Codes

PRIF work on the Kiribati and Nauru building codes has been leveraged off the recent NBC initiatives of PRIF's development partners.

Specifically:

- Solomon Islands Building Code (DFAT)
- Tuvalu Building Code (World bank)
- Cook Islands Building Code (SPC/European Union)
- Fiji Building Code (ADB)



# Kiribati & Nauru National Building Codes

## Complexity Levels

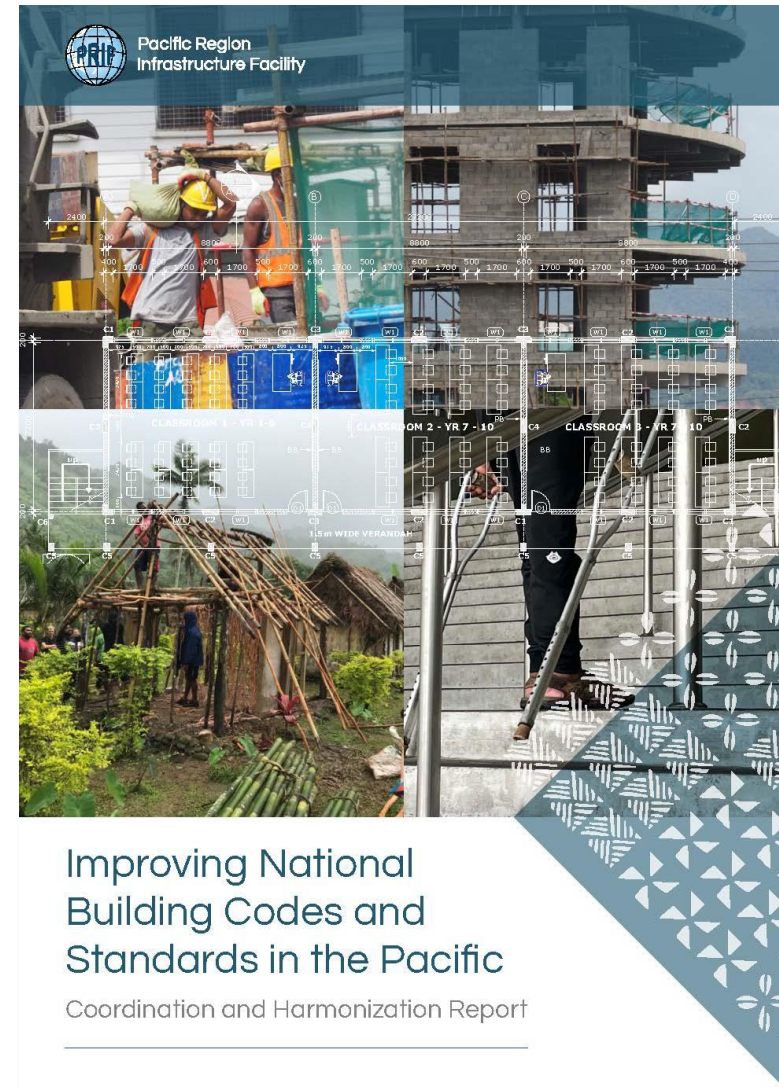
Over the next 10 years most buildings to be constructed in Kiribati and Nauru will be buildings of normal complexity requiring commonly used building techniques and standards, but there is the possibility that a small percentage of buildings will be of a higher complexity requiring a more sophisticated technical approach.

In recognition of the technical capability and capacity constraints in Kiribati and Nauru and to simplify the permitting process for most buildings, it was decided that

- the deemed-to-satisfy requirements for normal complexity buildings will be accommodated in a straightforward and easily understood building code, while
- the deemed-to-satisfy requirements for high complexity buildings will be met by meeting the requirements of a more sophisticated building code, such as the Australian National Construction Code,

# Coordination and Harmonization Report

## Key Recommendations



# Survey and Consultative Process

Building on the 2019 Diagnostic Study consultative process the Technical Assistance established points of contact and working relationships with:

- Infrastructure Departments and regulators in 13 Pacific Island countries
- Construction working groups, comprising both government and industry, in Solomon Islands, Fiji, Nauru & FSM
- Development partners and regional stakeholders





# NBC Areas Surveyed

The survey took a holistic approach to improving building outcomes:

1. NBC & HBM relevance and use
2. Legislation, building regulation & governance including improvements to building control institutional frameworks & compliance enforcement
3. Capability of Local Design & Construction Practitioners & trades people
4. Training, capacity building & the institutionalization of building code practice.
5. NBC awareness & promotion
6. Regional coordination & harmonisation of NBC practice

# Examples of Survey Findings

1. Building manuals
2. Accessibility for the Disabled

# Building Manuals

An important finding from the stakeholder surveys and consultations was the value of Building Manuals for the construction of simple, single-story buildings such as houses, community churches, halls and school buildings.

## **Purpose of Construction Building Manuals:**

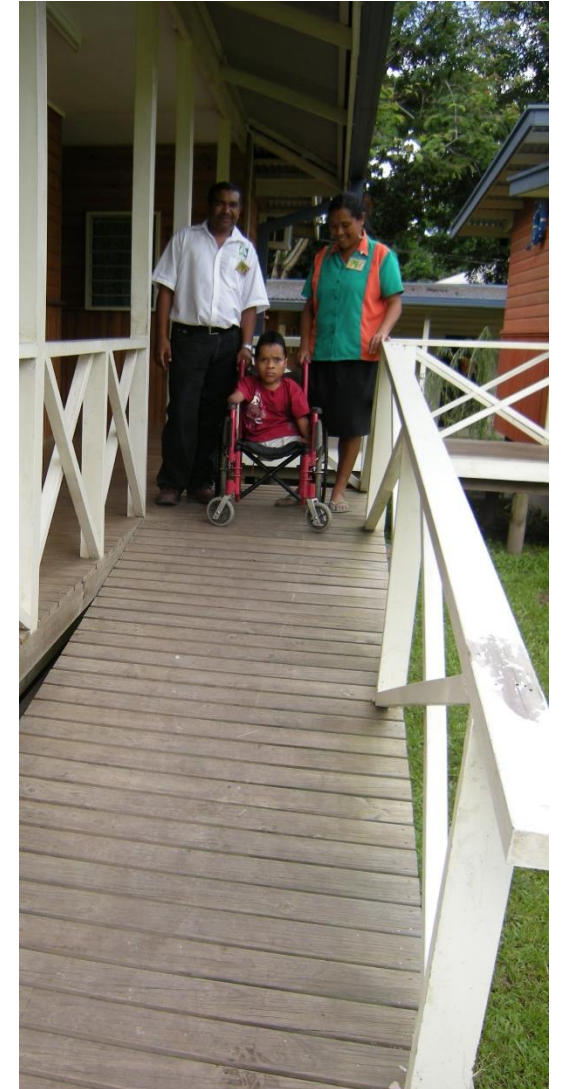
- Enables low income & lower middle income Pacific Island owners & builders, to construct simple buildings that comply with the code without having to employ expensive building professionals.
- Eases the burden on the regulators who will be required to assess the building applications & enforce compliance.

Construction Building manuals are to be developed to compliment the Kiribati and Nauru building codes.

# Design for Access & Mobility

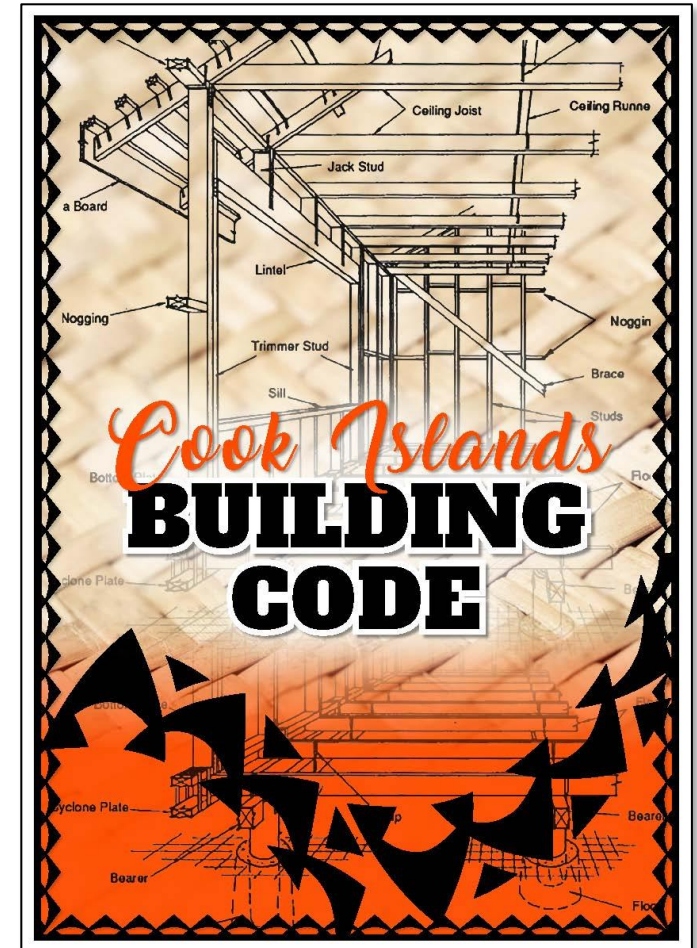


- Some codes reference **AS 1428.1 Design for Access and Mobility**, others reference the **DFAT Accessibility Design Guide: Universal design principles for Australia's aid program**
- Many requirements of **AS 1428.1** are unachievable within a Pacific context
- The approach by many disability groups in PICS is for **access** to be focused on **dimensions**, both horizontal (eg door widths) & vertical (eg ramps).
- Mechanical means of access (eg lifts, hoists) should be avoided as they break down & compound barriers to people with a disability.
- Pacific Disability Forum are developing a Pacific-focused Accessibility Standard.



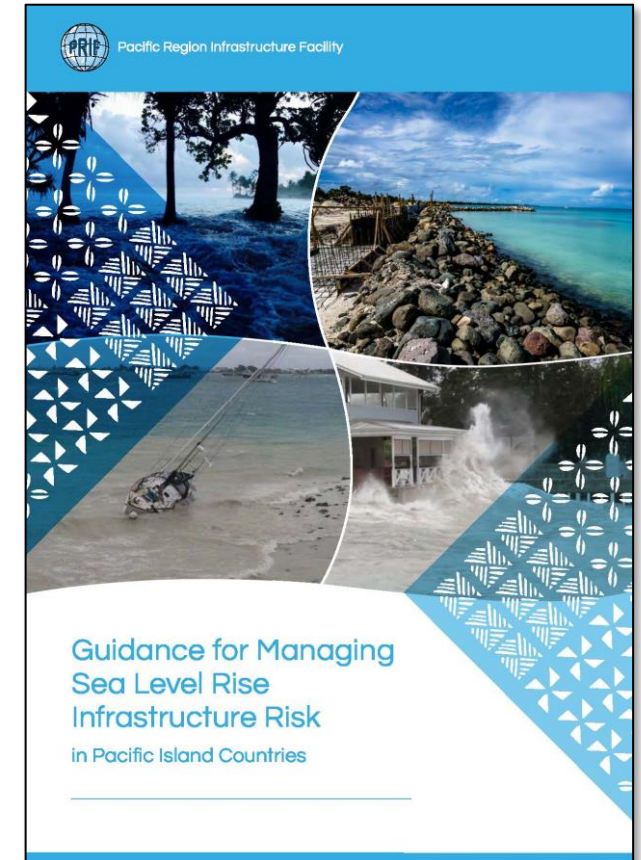
# Recommendations - Short Term

1. Building codes & building manuals to be kept up to date & relevant
2. Standards New Zealand & Standards Australia to develop mechanisms that would enable key reference standards to be viewable to regulators & local practitioners at nil or discounted fee.
3. Assist Pacific Island Country Ministries/Departments, responsible for administration & enforcement of construction to perform a sustainable budget & resource management gap/need analysis



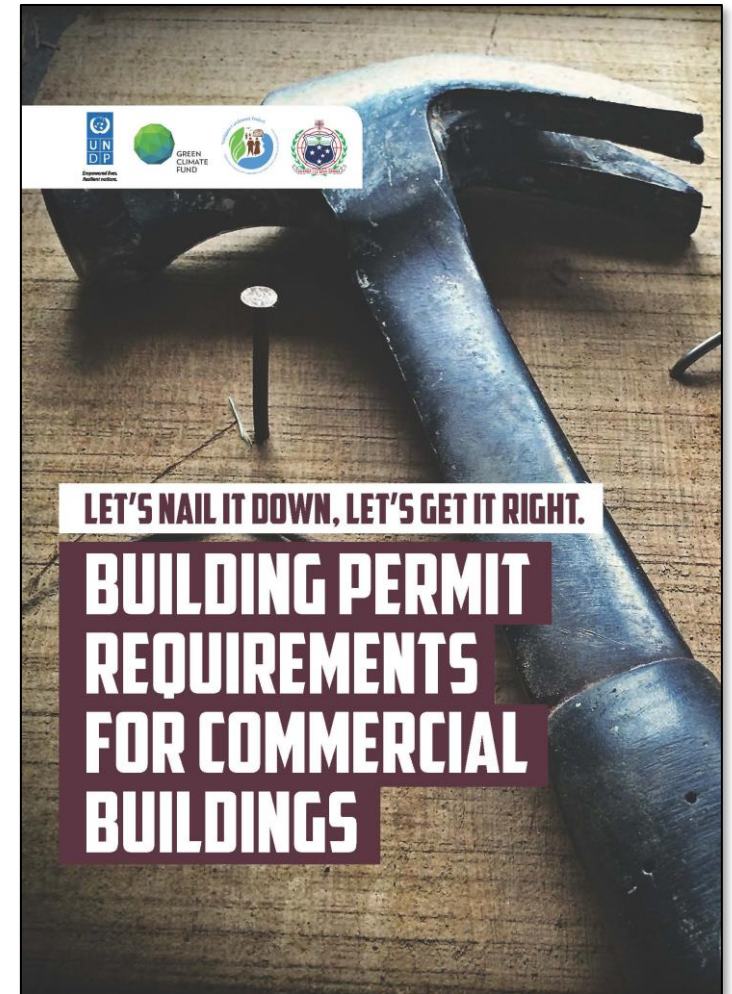
# Recommendations - Medium-Term

1. Pursue country specific hazard studies (wind, seismic, flood, etc...) that provide updated design parameters for integration into NBCs.
2. Assist Pacific Island Countries assess national & subnational legislation, regulations, & building control institutional frameworks & address the disconnect between national building code management & the administration & compliance enforcement at sub-national level.
3. For ease of doing business & creating regional qualifications, perform a regional feasibility study on establishing a Pacific regional construction practitioner certification/accreditation & mobility program



# Recommendations - Long Term

1. Establish a regional Pacific organization to coordinate, advocate, manage, and advise/support Pacific island Countries on building legislation, building codes, design criteria and standards.
2. Develop promotional & awareness activities at regional level to be tailored for activities at a national level
3. Building codes and building manuals incorporated into construction training programs at secondary schools, technical institutes & universities.
4. Develop appropriate Pacific Island focused building code admin & inspection capacity building & training programs at a regional level & deliver the programs at a national level at regular intervals.



Thank you!



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