



# Environmental Management for the Pacific Aviation Investment Programme

Kristina Healy

27 November 2014

**AECOM**

# Presentation Outline

1. Pacific Aviation Investment Programme (PAIP) overview
2. Environmental management approach
3. Physical and geographical challenges
4. Administrative and legislative challenges
5. Solutions



# **Pacific Aviation Investment Programme (PAIP)**

World Bank funded programme implemented in four phases over a five to ten year period (approved 2011, funding US\$125 million).

Aims to improve aviation infrastructure, management and operations, to help make air travel to and from the Pacific Islands safer and more efficient.

First phase included aviation operations and infrastructure in Tonga, Tuvalu and Kiribati.

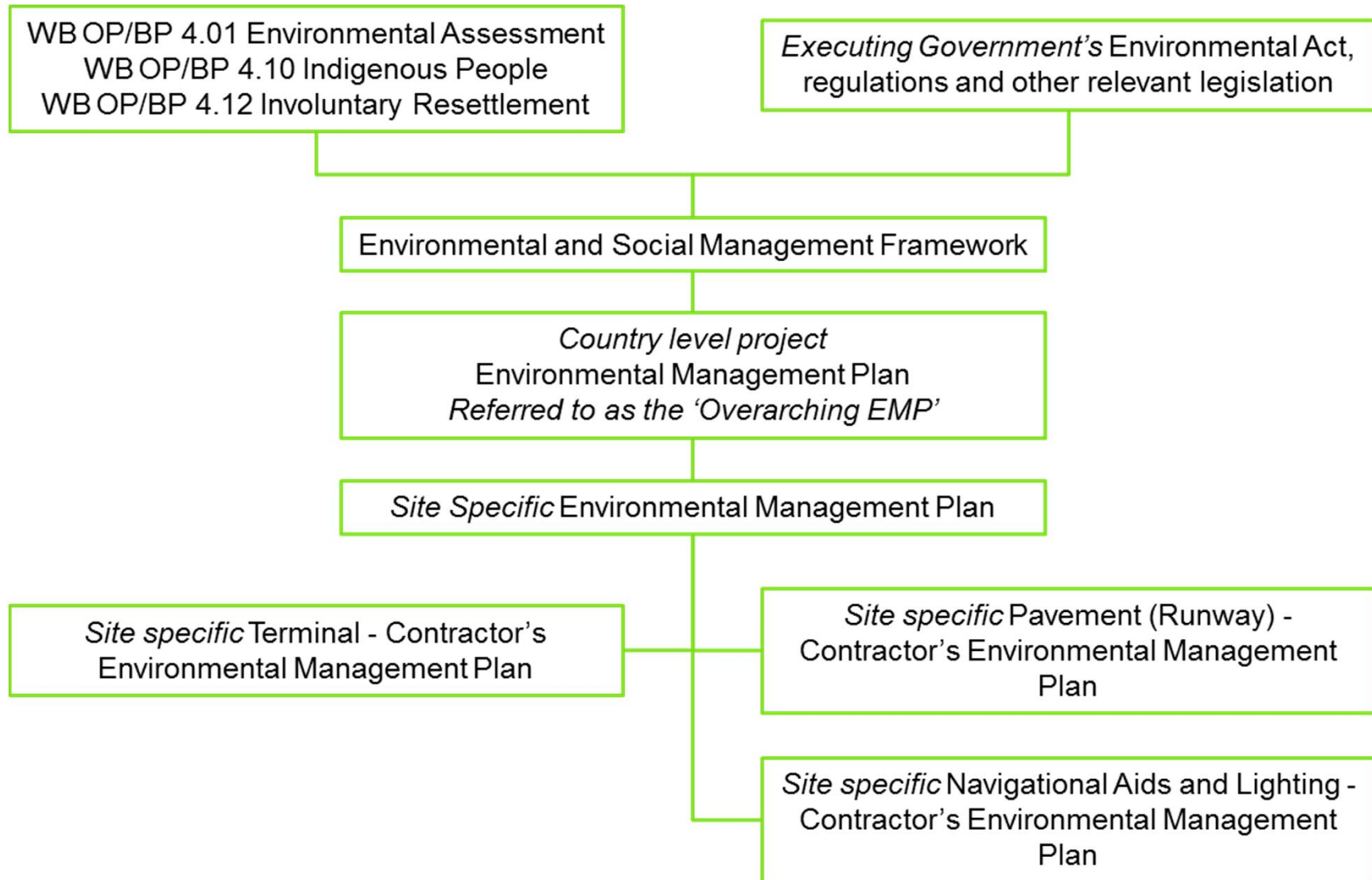
Other aid programmes have provided additional funding for specific components.



# PAIP Overview

- Infrastructure components in each country included:
  - Runway pavement rehabilitation
  - Terminal maintenance and upgrades
  - Navigational aids and lighting
  - Security
- Category B project under WB environmental and social screening guidelines
  - Potentially limited adverse social or environmental impacts
    - Impacts few in number
    - Site specific
    - Largely reversible
    - Readily addressed through mitigation (requires an EMP)

# Environmental Management Approach



# Tonga



Fua'amotu International  
Airport

Tongatapu



Lupepau'u Airport

Vava'u

# Kiribati



Bonriki International Airport  
Tarawa



Cassidy International Airport  
Christmas Island



# Tuvalu



Funafuti International  
Airport

Fongafale



# Physical and Geographic Challenges

- All sites are remote islands and atolls with limited capacity for international transport (air or sea)
- Availability of physical resources, primarily aggregate for runway pavements
- Supporting infrastructure/ services for construction and operation
  - Solid waste management
  - Wastewater treatment and management
  - Water supply
  - Other transport infrastructure (e.g. roads, ports)

# Physical and Geographic Challenges



- Scars of past construction and upgrade work and other aid projects (long term cumulative impacts still affecting the environment and society)
- Unexploded ordinance and human remains (WWII)

# Physical and Geographic Challenges



- Availability of land and population density



# Administrative and Legislative Challenges

- Scale of assessment required by WB policy and country legislation (EMP vs. EIA)
- Timeframes and approval schedules for funding, legislative and procurement requirements and available design information
- Town planning and land management (encroachment and protection of airfield land)

# Administrative and Legislative Challenges

- In country capacity – feedback and consultation; enforcement and monitoring of environmental and social mitigation measures
- International cross boundary movement of waste (including hazardous waste)

# Solutions

- Import all materials and equipment (fumigation and contaminant free)
- Reuse, recycle, remove all waste and equipment
- Pack it out, including clean up of historical impacts (e.g. bitumen spill, old machinery)
- Cross referencing and document naming for compliance with country legislative and WB policy requirements
- Consultation, public support and ongoing involvement in airport development and operation



An aerial photograph of a coastal area. A long, straight runway or road runs horizontally across the middle. To the left of the runway is a large, irregularly shaped body of turquoise water. To the right is a large, rectangular area of green water, possibly a lagoon or a series of connected ponds. The surrounding land is covered in dense green vegetation. The ocean is visible on the right side of the image, with white waves breaking against a dark shoreline.

Thank You

[kristina.healy@aecom.com](mailto:kristina.healy@aecom.com)