

FUNAFUTI GREEN WASTE MANAGEMENT PROGRAM RISK MATRIX ASSESSMENT



SPREP

Secretariat of the Pacific Regional
Environment Programme



The **Pilot Program for Climate Resilience: Pacific Regional Track (PPCR-PR)** is a regional program which aims to strengthen integration of climate change and disaster risk considerations into ‘mainstream’ policy making and related budgetary and decision-making processes (i.e. ‘climate change and disaster risk mainstreaming’).

The PPCR-PR is implemented by the Secretariat of the Pacific Regional Environment Program (SPREP) and Asian Development Bank (ADB) and is funded through the Climate Investment Funds (CIF).



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RISK MATRIX ASSESSMENT

LIKELIHOOD (OF EVENT)	CONSEQUENCES (OF EVENT)				
	Insignificant	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

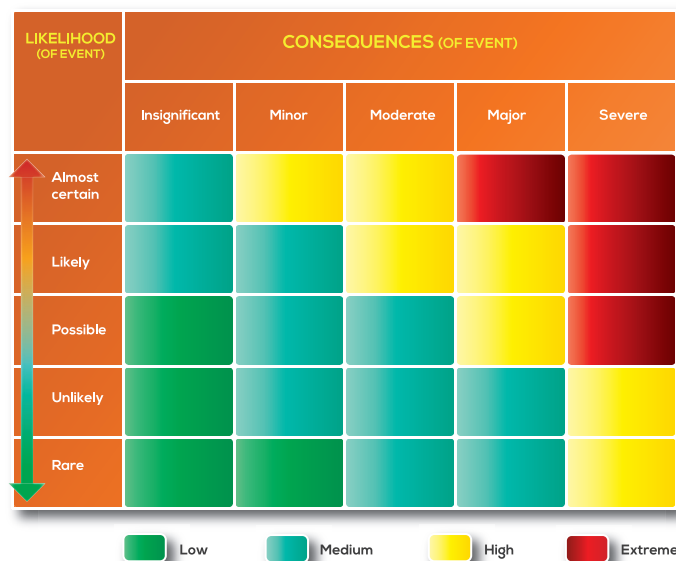
Legend:

- Low
- Medium
- High
- Extreme

This risk matrix was prepared for the ‘Funafuti Green Waste Management Program’ – a program which is being implemented by the Solid Waste Authority of Tuvalu (SWAT) and which is part of the *National Integrated Waste Policy and Action Plan (2016)*.

The overall objective of the Funafuti Green Waste Management program is to ‘*reduce the volume of green waste going to landfill*’. The program design includes three inter-related strategies to achieve the overall project objective. These comprise:

1. Strategies to *reduce the amount of green waste generated at source, and to improve segregation at collection points*. These include an awareness initiative for home composting and segregation, and strengthened enforcement of solid waste regulations pertaining to segregation.
2. Strategies to *improve the efficiency of green waste collection and conversion services*. These include revisions to the green waste collection schedule, revisions to the asset management plan, modifications to practices for producing mulch, modifications to practices for producing woodchips, and introduction of a new pricing and cost-recovery strategy. A further and key strategy is to produce a new product – compost. Compost is a mixture of mulch and manure.
3. Strategies to *increase the (demand and) level of use of recycled product*. This is an advertising campaign for mulch, woodchip and compost products.



CLIMATE CHANGE AND DISASTER RISK MATRIX FOR THE FUNAFUTI GREEN WASTE MANAGEMENT PROGRAM

1. NATURE OF RISK		2. MAGNITUDE OF RISK			3. RISK TREATMENT STRATEGY	
External factor	Component of project design/logic affected by external factor	Likelihood of external factor occurring (almost certain, likely, possible, unlikely, rare)	Consequence of external factor, if it occurs (insignificant, minor, moderate, major, severe)	Overall risk rating (low, medium, high, extreme)	Risk treatment measure	Overall risk rating, with risk treatment (low, medium, high, extreme)
Insufficient financial resources	Equipment failure at end of life, leading to service disruptions. Affects achievement of sub-objective/strategy 2	Likely	Major	High	Funded asset management plan + Pricing/cost-recovery strategy	Low
Unwillingness for households to pay for collection services	SWAT reliance on (variable) Government and Donor funding sources + related service standard decline Affects achievement of sub-objective/strategy 2	Likely	Moderate	High	Well-researched pricing/cost-recovery strategy	Low/ Medium
Unwillingness of pig farmers to supply clean dung (inadequate and/or incorrect incentives)	Reduction in compost production + accumulation of green waste at depot/landfill Affects achievement of sub-objective/strategy 2	Possible	Major	High	Dry litter R2R demonstrations based on trials + critical oversight and endorsement of final R2R demonstration design by SWAT (with particular attention to incentives and incorporation within broader Tuvalu Integrated Waste Policy and Action Plan) + close monitoring of quantity and quality of pig dung + evaluative exercise to explore impediments/inadequate incentives issue(s)	Medium
Cyclone and storm surge	Damage to equipments and composting facility Affects achievement of sub-objective/strategy 2	Unlikely	Major	Medium	Make sure composting facility includes climate resilient design measures, including additional capacity for peak loads expected if cyclone occurs	Low
Sea spray	Damage and depreciation of equipments Affects achievement of sub-objective/strategy 2	Almost certain	Minor	Medium	Asset management plan factors in shorter life cycle of key equipments, and particular attention to maintenance	Low
Unwillingness for consumers to pay for final product (mulch, wood chips, compost)	Accumulation of products and raw green waste at depot/landfill Affects achievement of sub-objective/strategy 3	Possible	Major	High	Well-researched pricing/cost-recovery strategy + location of product and cashier at (more convenient) new depot	Low
Planned expansion of Taiwan farm does not eventuate (funding/change in policy direction)	Accumulation of products and raw green waste at depot/landfill Affects achievement of sub-objective/strategy 3	Unlikely	Major	Medium	Monitor progress of farm extension	Medium

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