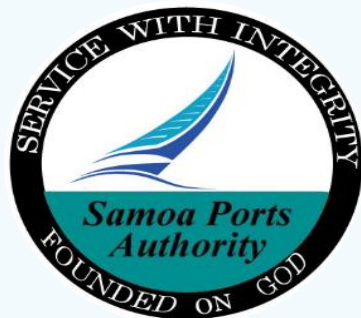


'Apia Green Port'

Small steps, huge potential



Ms. Silalomanu Isaia – SPA
Assistant Manager, Port Operations
Samoa Ports Authority

Vision for Apia Green Port

→ To be a “green” port

- Optimising energy efficiency, adopting environmentally sustainable practices and developing in a sustainable manner; and
- Operationally efficient, safe, and resilient to climate change and future commercial challenges

→ To be a safe port

- Enhancing preventative and preparatory measures to ensure timely and effective response to disasters in a coordinated manner

→ To be a gender equal port

- Institutionalising gender equality in its green port operations and management

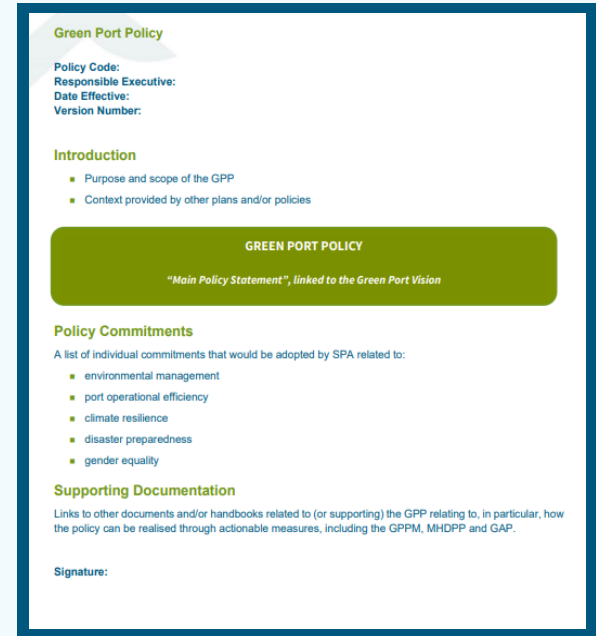


Project Outputs ► Project Inputs

- **Green Port Policy** – including commitments to environmental management, operational efficiency, climate resilience, disaster preparedness and gender equality
- **Green Port Practice Manual** – a practical handbook to guide improvement of performance and daily operations
- **Multi-Hazard Disaster Preparedness Plan**
- **Green Port Initiatives** – to optimise operational and energy efficiency and promote environmentally sustainable practices



“Health Check”



“Health Check” topics

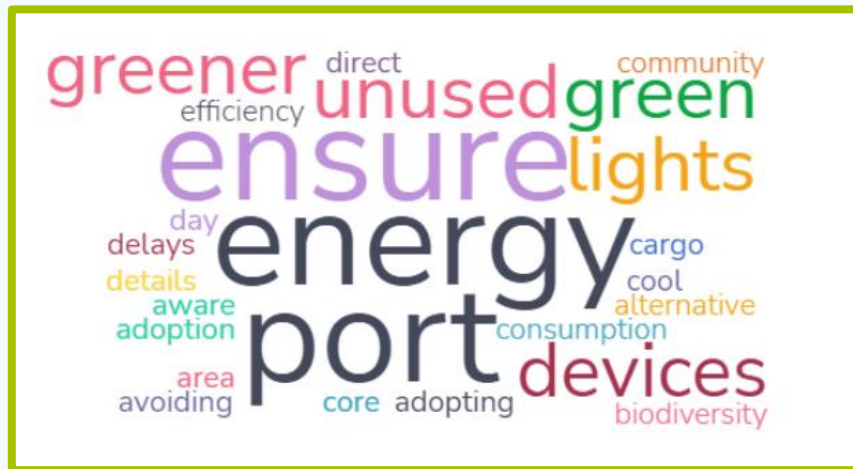
❖ Environmental management

- ❖ Energy efficiency & transition
- ❖ Pollution control
- ❖ Environmental sustainability

❖ Operational efficiency

- ❖ Regulatory control
- ❖ Marine & cargo operations
- ❖ Digital maturity
- ❖ Quality of infrastructure

❖ Climate resilience



❖ Disaster preparedness

- ❖ Pre-event planning
- ❖ Resources
- ❖ Surveillance & monitoring
- ❖ Post-event recovery

❖ Social sustainability, inc. gender

- ❖ Gender equality
- ❖ Engagement
- ❖ Social issues

Health Check Scoring

Theme	Topic / Measure of:	Indicator	Scoring Criteria				
			0	1	2	3	4
Green Port	Environmental Management	Local renewable energy generation	Not considered at all yet	Interest shown and options considered by port	Feasibility study conducted for renewable energy generation potential	Designs underway and funding applied for	Initiatives implemented and infrastructure available; existing installed capacity
	Operational Efficiency	Security infrastructure - fencing, lighting, gates, CCTV for secure and safe port facility management	No complete port boundary fencing or gate controls. Insecure.	ISPS grade boundary fencing and gates in good repair	Port lighting to support safe 24hr operation and security surveillance by patrols	Manual procedures to manage access control, inspections and security patrols	Digital access control system in place to manage entry/exit, with CCTV and inspection facilities at gates for ISPS level 1-3

Health Check Scoring



Enhancing the Safety, Security and Sustainability
of Apia Port, Samoa

Apia Green Port Health Check - Results



Theme	Topic / Measure of:	Indicator	Score	Port target	Comment
Marine and cargo operations		Safe navigation supervision (VTS, Aids to Navigation)	1	3	Limited navigation aids. Not aware of a Harbour Master Directions or Port Guide book. Written notice of ship arrivals received from stevedores.
		Monitoring and communicating port weather, physical conditions & bathymetry (surveying sea floor)	1	3	No regular surveys (draft & seabed). They were not clear of the last survey date, or outcome. Last dredge was 2003 to -11mCD. SPA consider that there is a need to dredge again.
		Vessel congestion & marine service resilience at port	2	3	Was level 0 (not measured), but we are trying to bring this in via PortMeter. Initial view is minimal, level 2 or 3. Not enough data to be clear yet. Little data to support the awareness factor. Did not establish if they measure wait time, though suspect the agents do record such information. Stevedores notify SPA of delays in writing. Some congestion associated with the presence of fishing vessels - cruise and tankers have priority.
		Vessel cargo handling services, reliability & performance	1	3	Trying to embed measurement through Port Meter (although Bentham do this). Training - unknown. Three stevedores manage the yard and CHE separately. They have different contracts with SPA, based on moves, time or other (being determined). Can't establish if container location is shared among the 3 stevedores - ACTION to determine. Throughput is recorded via manifests. Plan to introduce a CBS. However, JW advised that their would be little point in SPA investing in this if the terminal/vessel handling continues to be controlled by the stevedores.
		Terminal yard management, stock control & supervision	1	3	Manifests are provided by the Agents, paper, not email. SPA maintain a tally but cannot track boxes. Container locations are managed by the individual stevedores. No central database or record. No sharing of equipment. This causes delays. Plans are being considered for a TOS (CBS), though not sure how this will work with current Stevedore practice.

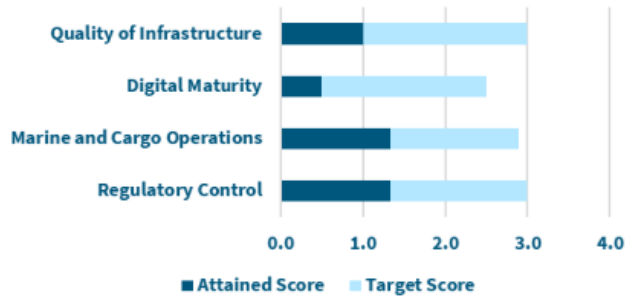


Health Check Results 2022

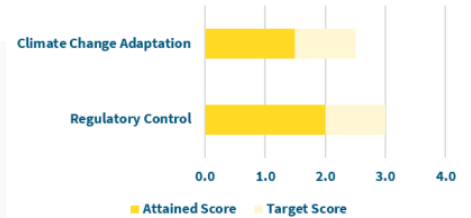
Environmental Management



Operational Efficiency



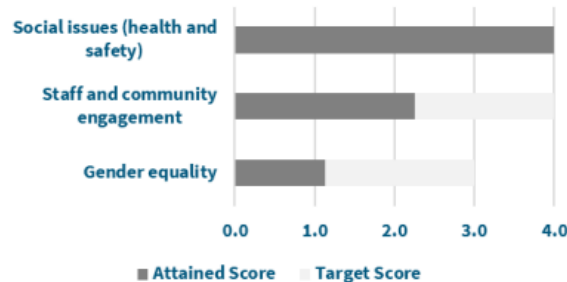
Climate Resilience



Disaster Preparedness



Social Sustainability



Apia Green Port Policy Statement

The Samoa Ports Authority will strive to:

- *Optimise resource use and decarbonise port operations*
- *Adopt environmentally sustainable practices and develop in a sustainable manner*
- *Be operationally efficient, safe, and resilient to future climate change and commercial challenges*



Green Port Policy Commitments

Environmental Management

1. To ensure the efficient and sustainable use of resources - electric power, diesel and water - within the port
2. To manage port operations to prevent pollution and impact on the environment and local communities; measure and reduce emissions to the air and sea
3. To responsibly manage and reduce waste generated by port and shipping activities - reduce, re-use, recycle
4. To reduce reliance on fossil fuels and support decarbonisation by embracing renewable energy use
5. To comply with all environmental legislation, codes and regulations that the port and Samoa are signatories to
6. To protect and conserve biodiversity within the port's influence

Operational Efficiency

7. To improve operational and navigational safety
8. To reduce operational costs through greater efficiency in the yard and reduction in delays

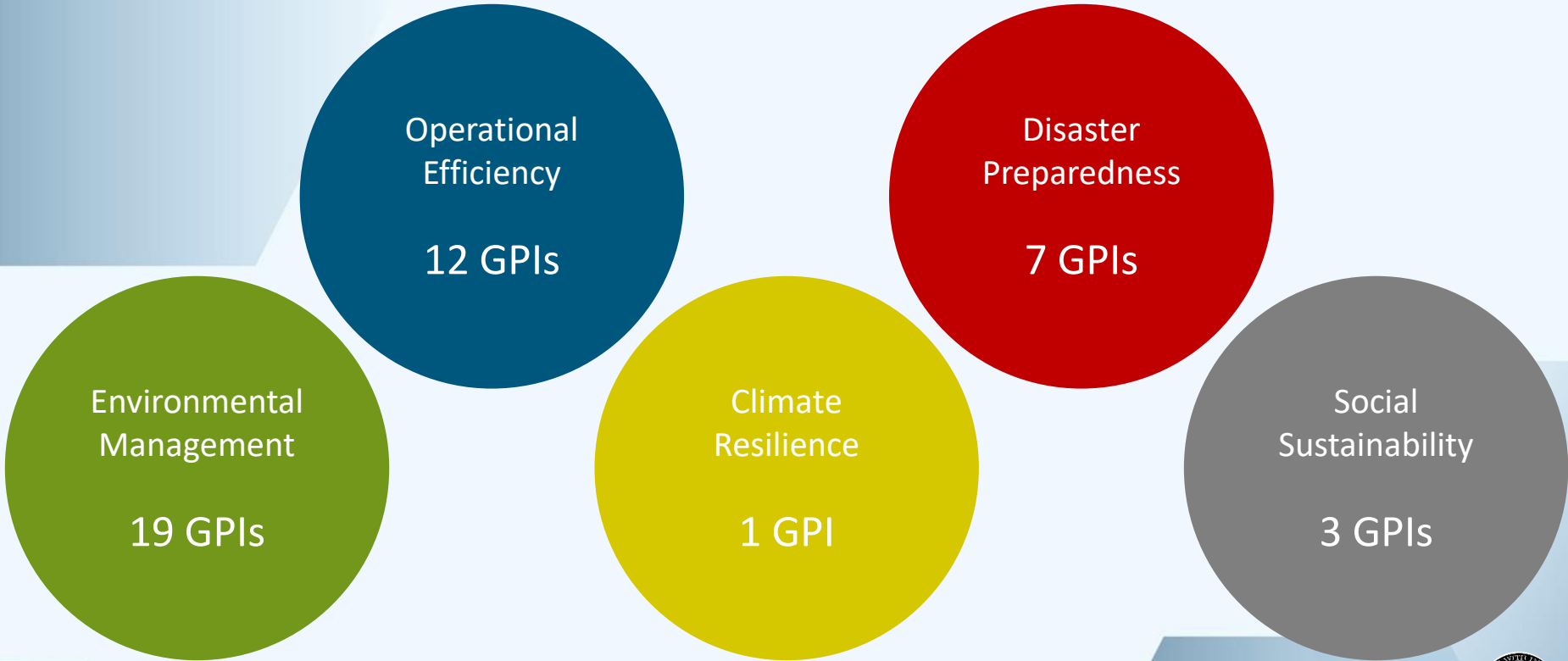
Climate Resilience

9. Ensure that port assets and operations are resilient to climate change for continuous service delivery

Green Port KPIs ► Green Port Initiatives

Environmental Management		
#	Policy Commitment	KPI
E1	To reduce reliance on fossil fuels and support decarbonisation by embracing renewable energy use	Percentage renewable electricity consumed (kWh) by SPA (and tenants) as a proportion of overall electricity consumption
		Carbon footprint total tCO2e (tonnes of carbon)
E2	To ensure the efficient and sustainable use of resources - electric power, diesel and water - within the port	Diesel use (litres consumed vs cargo throughput volume; e.g. litres/TEU)
		Electricity use (KWh)
		Water use (m3)
E3	To manage port operations to prevent pollution and impact on the environment and local communities; measure and reduce emissions to the air and sea.	Number of complaints (Capture incident reports from Apia residents of noise, light pollution)
		Air quality pollution event monitoring (Continuous monitoring; number of events above a given threshold of PM2.5/NOx/SOx concentration)
E4	To responsibly manage and reduce waste generated by port and shipping activities - reduce, re-use, recycle	Total waste (Tonnes of waste generated/collected by type)
		Recycling (x% of overall waste recycled)
E5	To comply with all relevant environmental legislation, codes and regulations that the port and Samoa are signatories to	Compliance with all relevant international, national and local legislation.
E6	To protect and conserve biodiversity within the port's influence	Biodiversity (Water quality through monitoring of oil pollution or other pollution events affecting seawater)

Green Port Initiatives ► Long-list of 42



Operational Efficiency

GPI

#22



See also:

Strategic Asset Management Plan ► Asset Management Plans

What?

- An ISO55000-compliant SAMP will give structure and process to taking care of critical port assets.
- For the most important assets, an AMP will be required for inspection intervals and key maintenance tasks.

How?

- Produce an SAMP for SPA portfolio of land, infrastructure, equipment assets, including an inventory of assets owned and matrix of criticality for port operations.
- Develop AMPs to improve resilience and reliability of key assets.

Benefits?

- Improved business resilience and continuity.
- Reduced risk from climate change and typhoons.
- Directed best-value for asset-related investment.

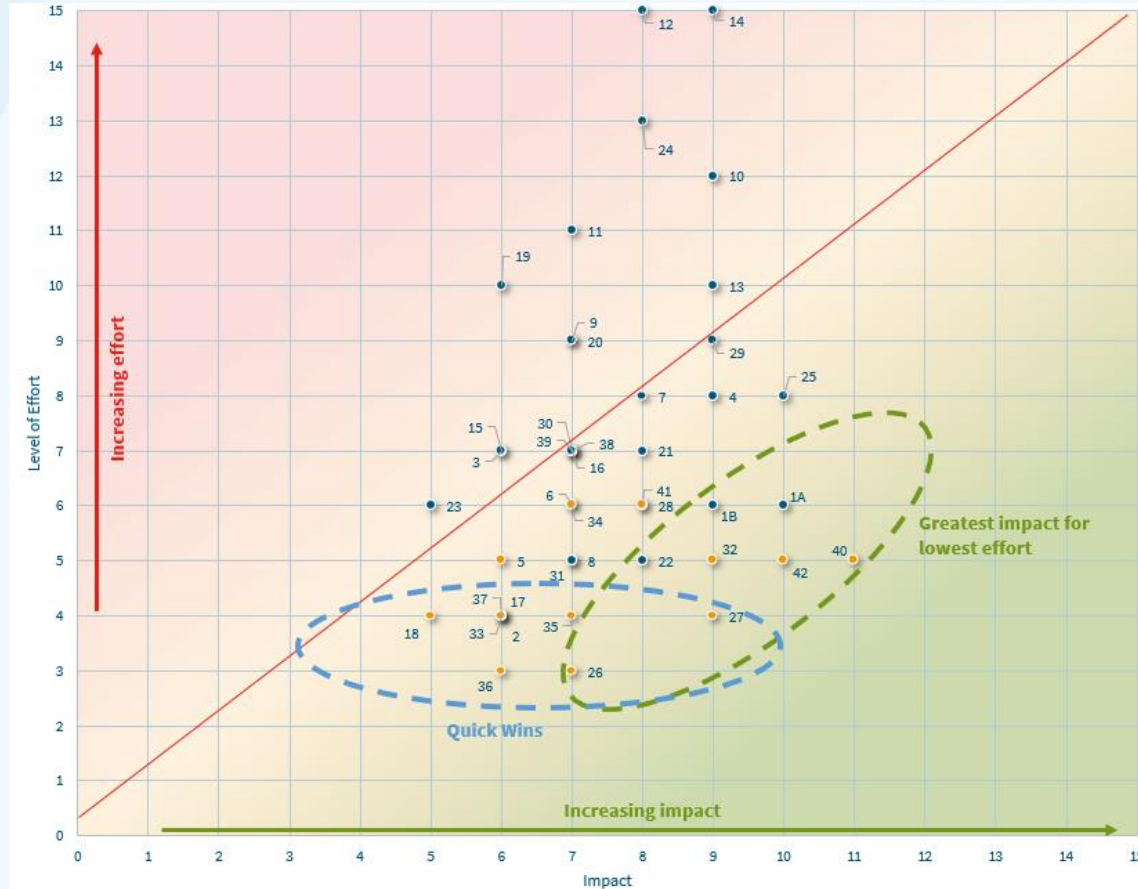
Pre-Requisites?

- Staff availability and knowledge to support an SAMP.
- Inventory/ownership records for port assets.
- Maintenance records and history to feed into directing AMPs.

Green Port Initiatives ► Impact vs Effort

Environment
Social
Commercial

Cost
Resources
Timeframe



High Impact / Low Effort



Impact



Green Port Initiatives ► Short-list of 13



SPA's ambitions need to be realistic and achievable
Small steps, huge potential...

Group Name	Original GPI #	Original GPI Title
2 Green Port Awareness Raising	18	Green Port Ambassadors
	2	Training – Resource Use Awareness and Behavioural Change
Rainwater Collection for Grey Water Usage	3	Rainwater Collection for Grey Water Usage
5 Environmental Management and Enhancement	4	Environmental Management Plan
		Green infrastructure
Review of Safety Policy for 24/7 Operations	21	Review of Safety Policy for 24/7 Operations
Strategic Asset Plan & Asset Management Plans	22	Strategic Asset Plan & Asset Management Plans
3 Operational Management Plans		Yard and asset management
	27	Traffic Management Plan
	38	Hazard Identification & Disaster Risk Assessment
1 Disaster Preparedness		Hazard identification and risk management
	37	Disaster Management Storeroom
Solid Waste Management	6	Solid Waste Management
Smart Lighting	8	Smart Lighting
4 Solar PV on Building Rooftops		Solar PV
	19	Vehicle Low Emission Zone
Harbour Instructions for Visiting Vessels	31	Harbour Instructions for Visiting Vessels
Training Relevance Review and Revised Protocol	42	Training Relevance Review and Revised Protocol

THANK YOU
FAAFETAI TELE LAVA
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