

Incorporating Sustainability in West Indian Ocean Ports

The Transition Towards Green Ports

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Content

- The Sustainability Agenda
- Operationalising Sustainability in the West Indian Ocean Ports

What is Sustainable Port?

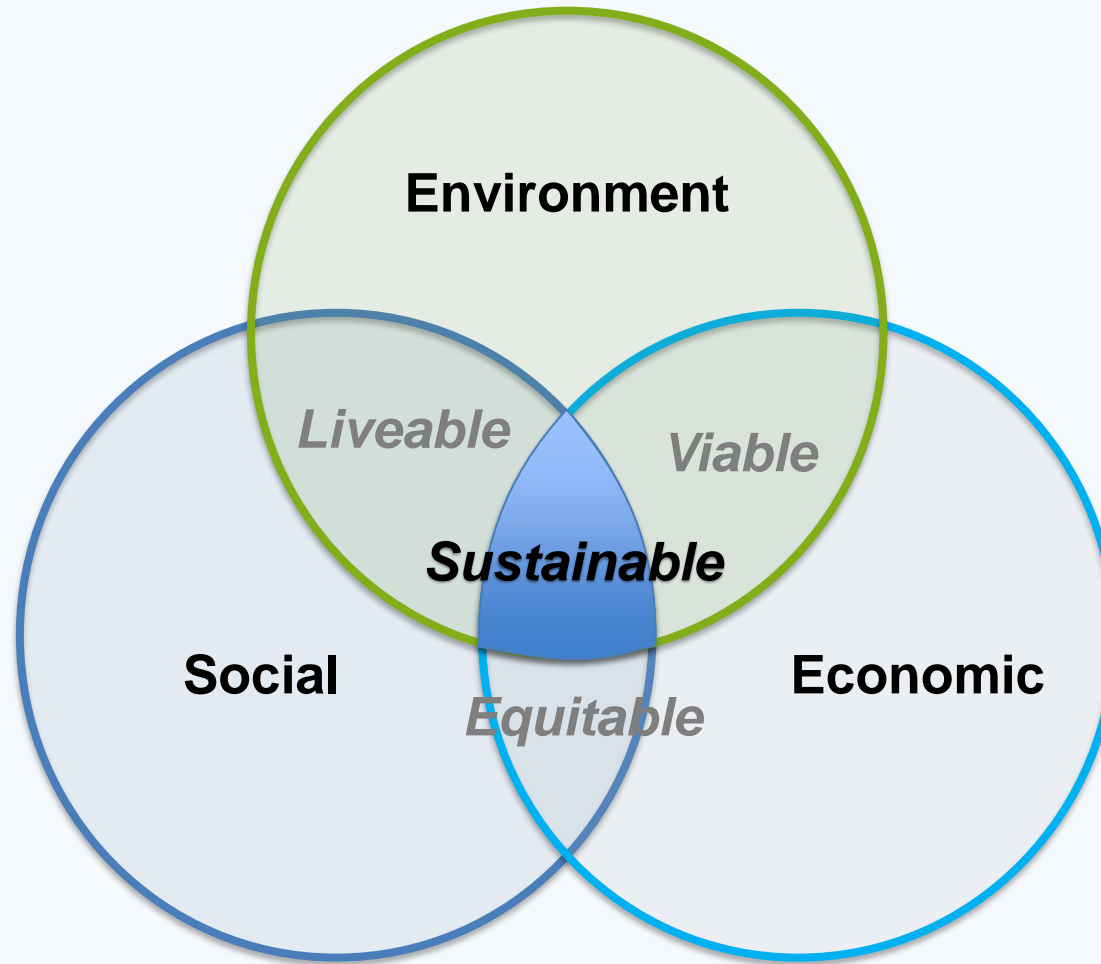
Green Port

+ Blue Port

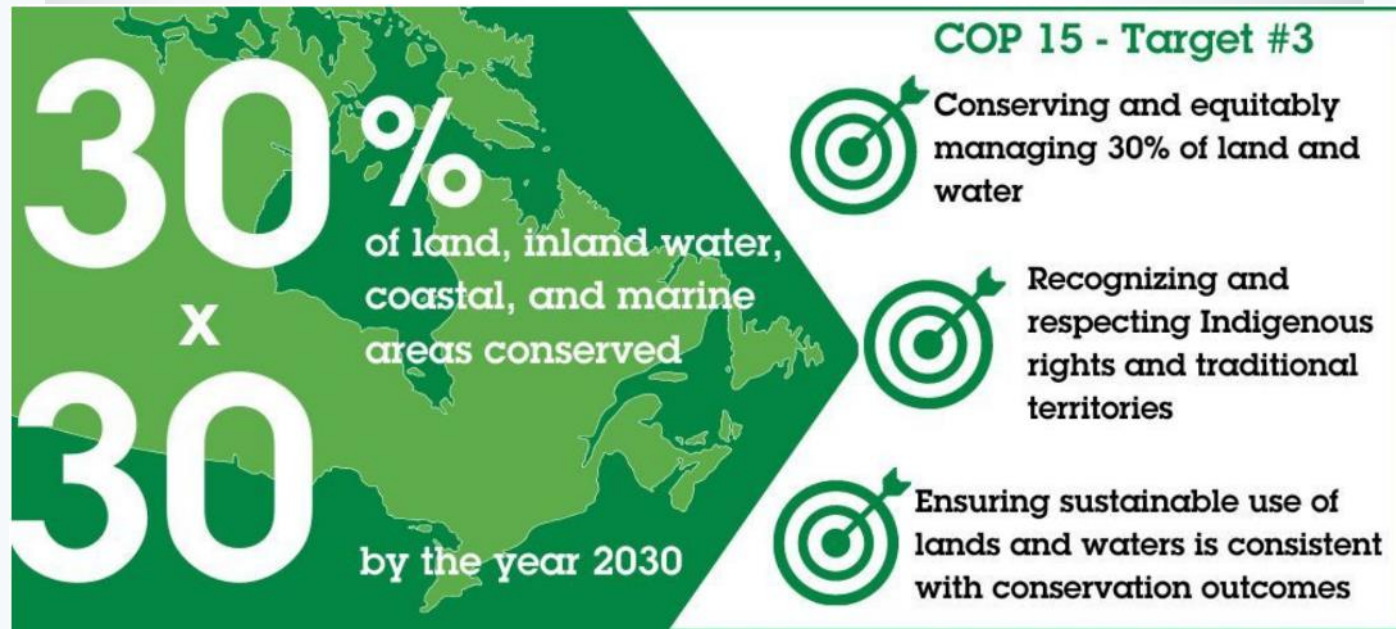
+ Peoples Port

+ Smart Port

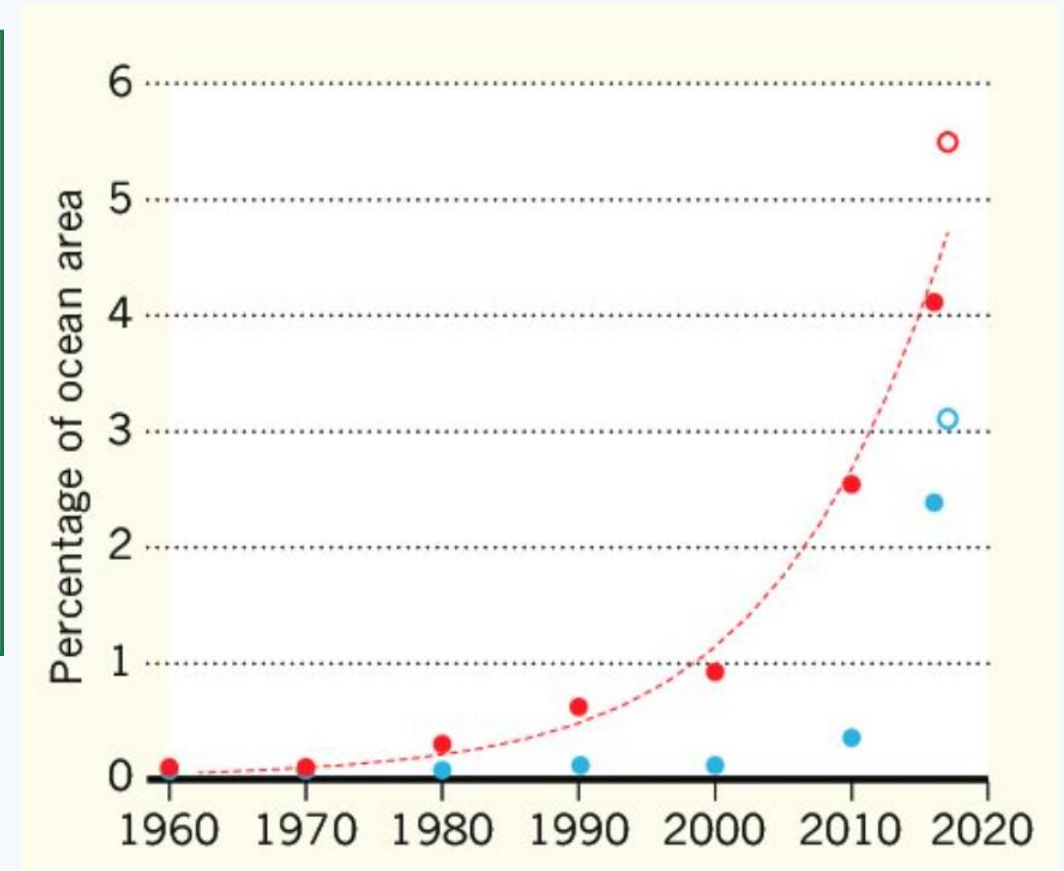
Sustainable Port



It's a green earth



- In 1988 Galapagos Marine Reserve was the second largest Marine Protected Area in the world.
- Today it is ranked 25th



Conservation ≠ Sustainability



**SUSTAINABLE
DEVELOPMENT** **GOALS**



Conservation ≠ Sustainability



SUSTAINABLE DEVELOPMENT GOALS

ECONOMIC SDG



SOCIAL SDG



ENVIRONMENTAL SDG



Drivers of Sustainability

Low-carbon, sustainable green development and operation will become inevitable ports



Sustainability initiative in ports of the West Indian Ocean



Sustainability initiative in ports of the West Indian Ocean

- **Kenya** Ports Authority: Adopted Green Port Policy
- **Tanzania** Ports Authority: Developed Green Port Policy
- **Mozambique** Port of Maputo: Reducing greenhouse gases, restoring forests
- **Madagascar** Port of Toamasina: 'Going green principles' in new development plans
- **South Africa** Transnet National Ports Authority: Alternative energy sources e.g. greening of energy sources at lighthouses
- **Seychelles** Port Authority: National Heritage Plan for Port Victoria, Environmental and Social Policy, Environmental Management System towards achieving ISO 14001 certification
- **Reunion** Port Reunion: Sustainable Development and Management Plan promoting energy efficiency, environmental quality and social equity
- **Mauritius** Ports Authority: Green Port Concept, with wide scope pertaining to sustainability initiative to improve energy efficiencies, trans to renewable energy
- **Port Management Association East and Southern Africa & Maritime Technology Cooperation Centre-Africa:** Baseline energy audit surveys and establishing the extent to which ports in the region have embraced GPP

Sustainability initiative in ports of the West Indian Ocean

Towards Sustainable Port Development in the Western Indian Ocean Situation Assessment

Towards Sustainable Port Development in the Western Indian Ocean Scenario Analysis

Towards Sustainable Port Development in the Western Indian Ocean

Toolkit for Sustainable Port Development in a Blue Economy

August 2024
(Final Draft)



August 2024
(Final Draft)

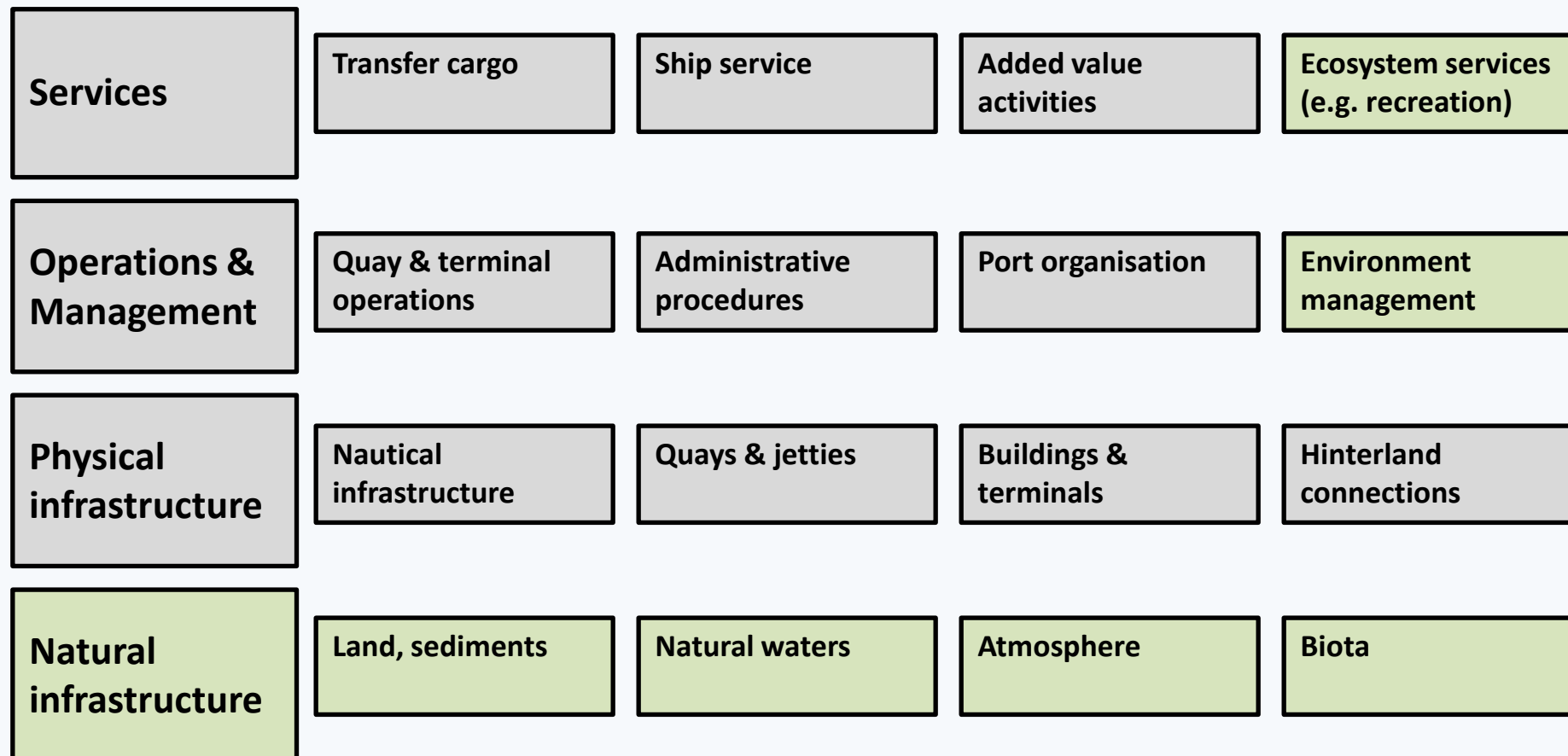


August 2024
(Final Draft)



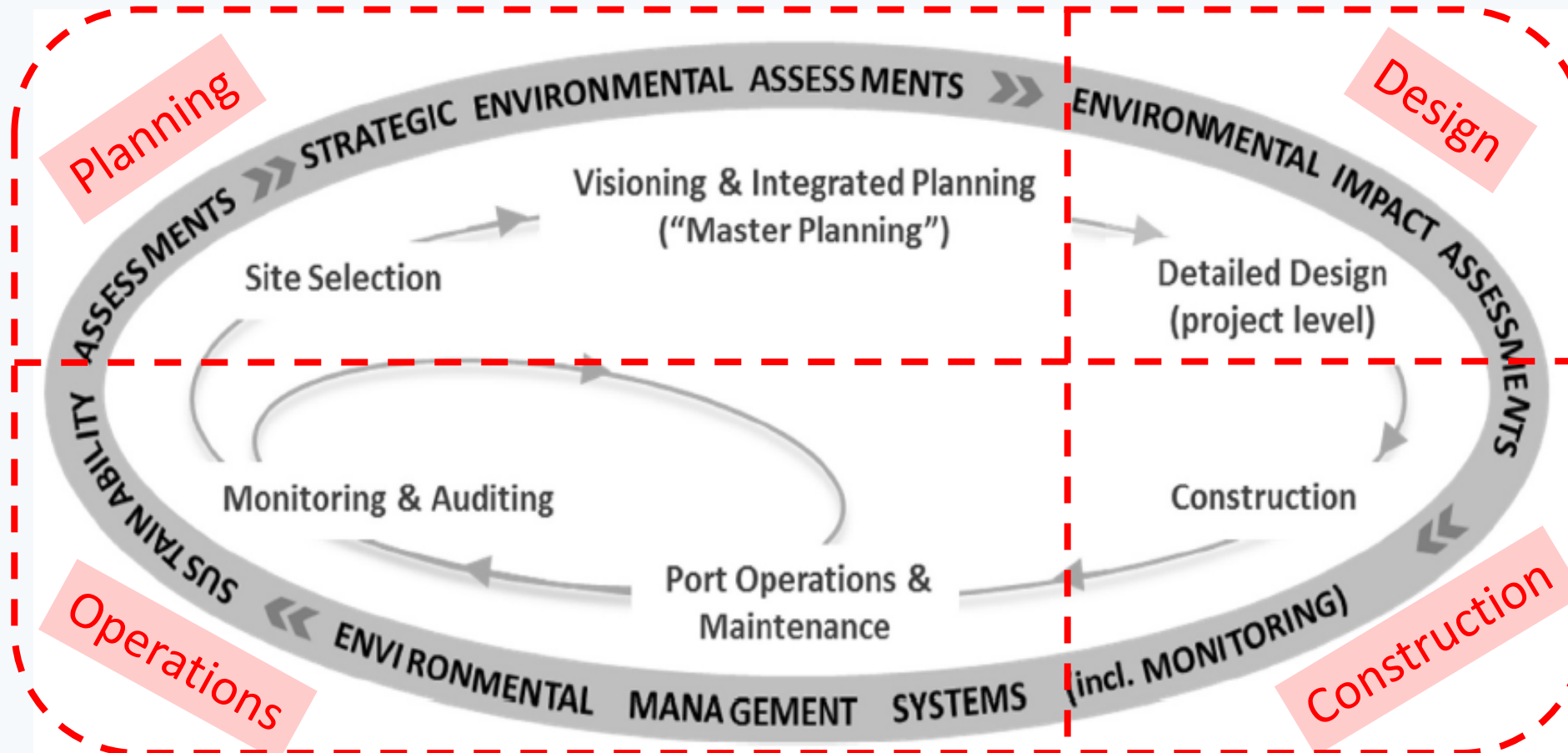
Fundamental prerequisites

- Embed the natural environment in port infrastructure systems: **A new port inframodel**



Fundamental prerequisites

- Integrate planning, engineering and environmental management cycles: [A Framework for Integrated Port Management](#)



Consultation and Participation

- Developed in consultation with regional Port Managers and Government representatives, Marine Scientists
- Participatory, in-person workshops



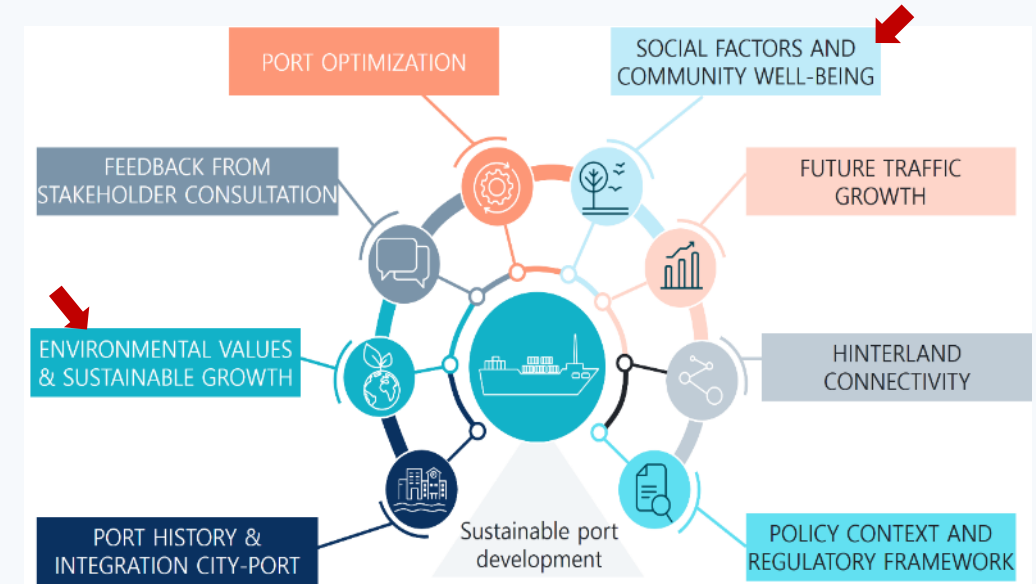
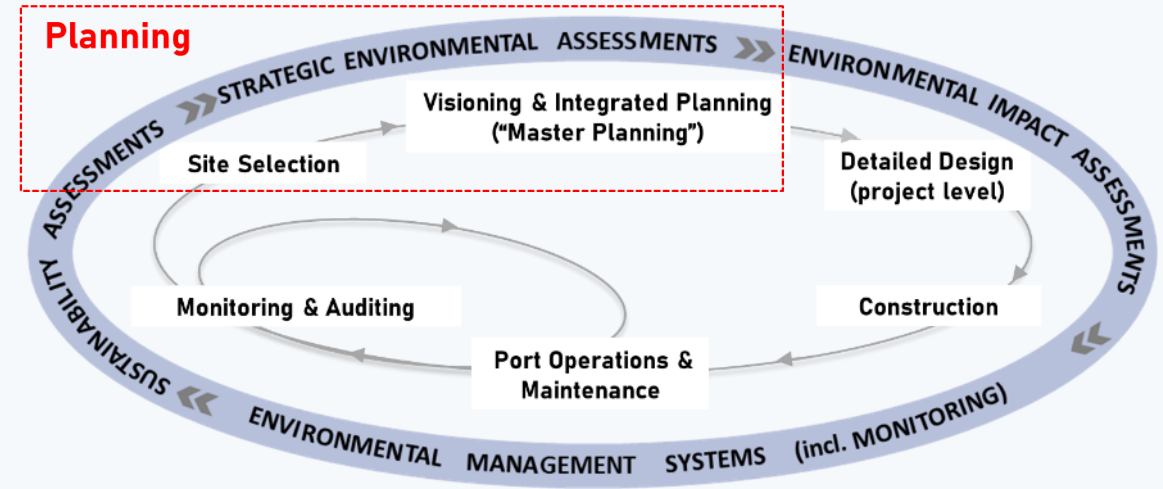
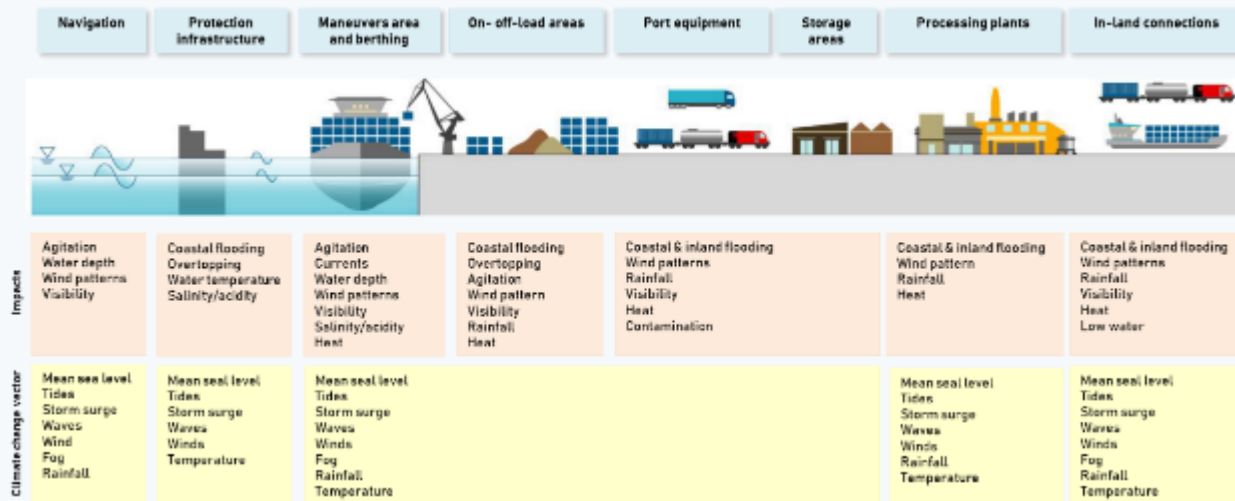
Planning Phase

Main environmental process:

- Strategic Environmental Assessment (SEA)

Other Tools included for this Phase:

- Environmental issues to consider during Site Selection and Master Planning
- Consideration of Climate Change Planning



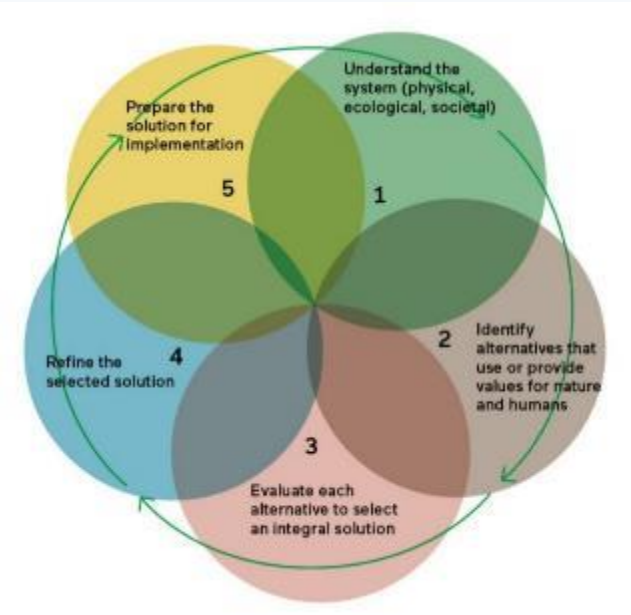
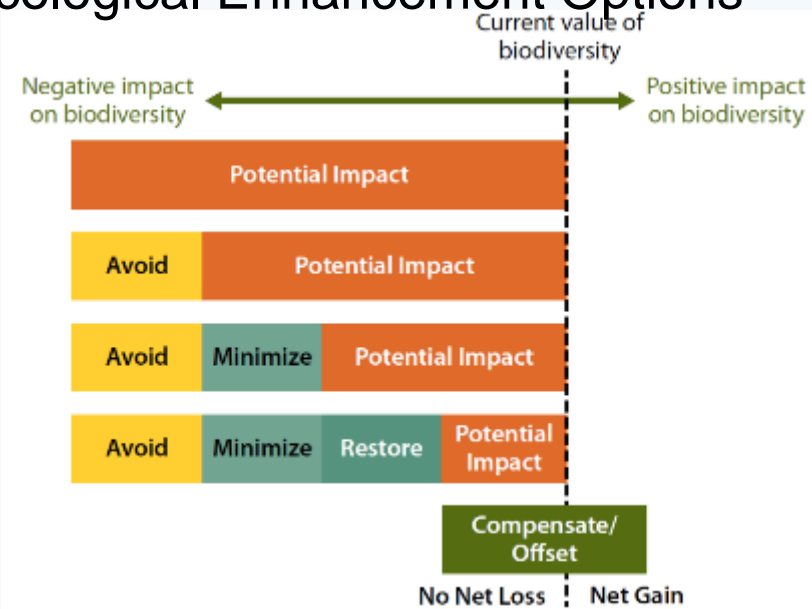
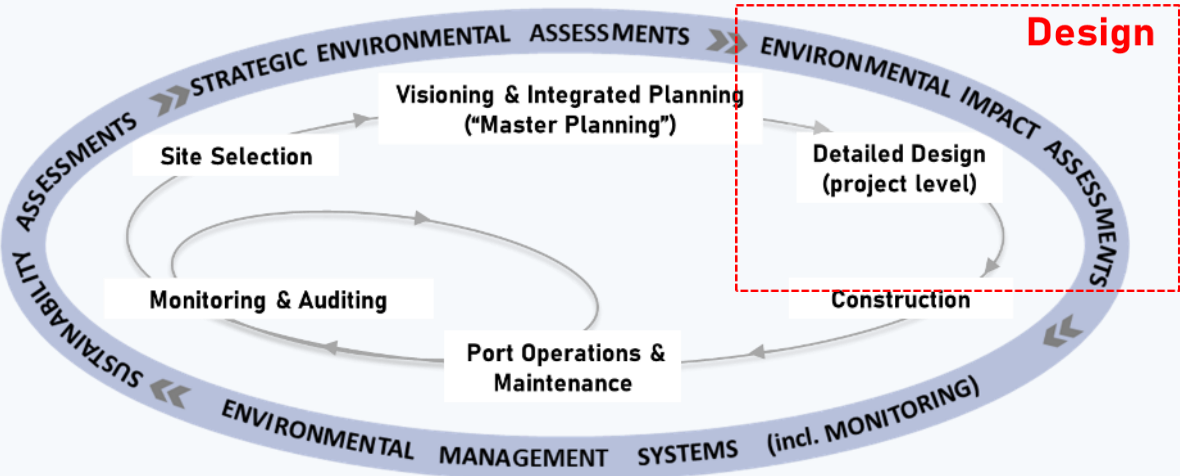
Design Phase

Main environmental process:

- Environmental Impact Assessment (EIA)

Other Tools included for this Phase:

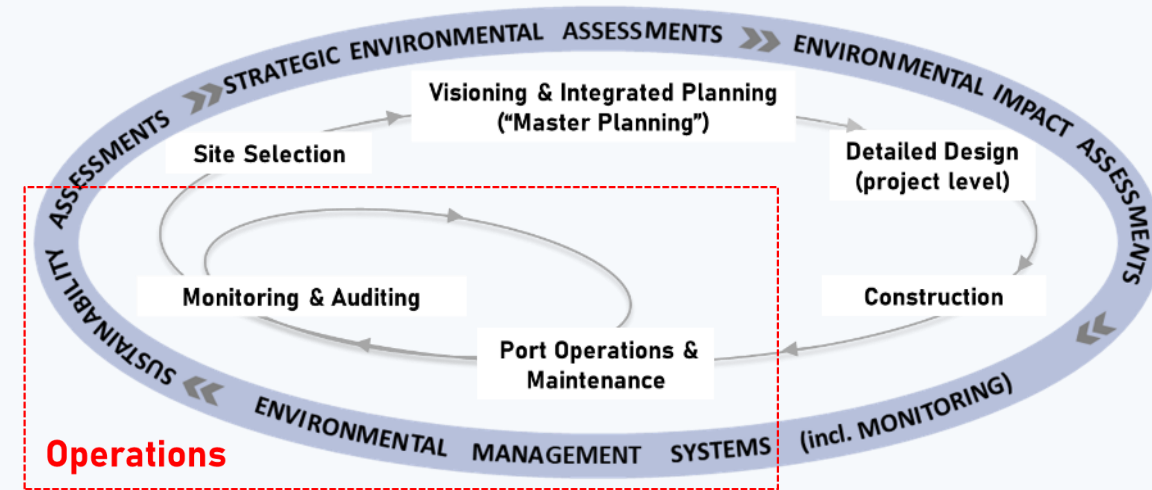
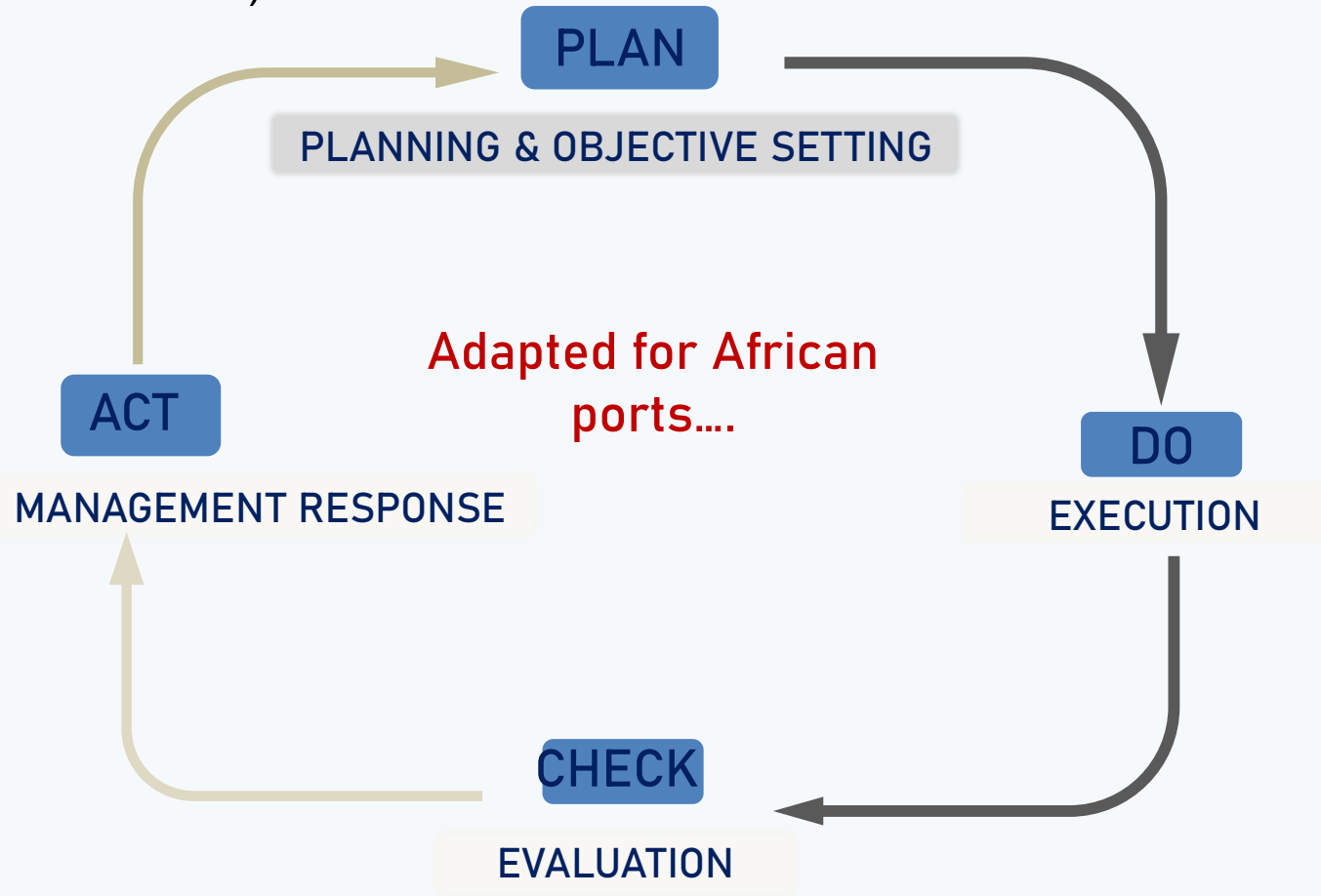
- Design for Biodiversity Offsets
- Building-with-Nature Design Approach
- Ecological Enhancement Options



Operations Phase

Main environmental process:


- Environmental Management System (e.g., ISO 14001)



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ARTICLE

Adapting environmental management systems for African ports

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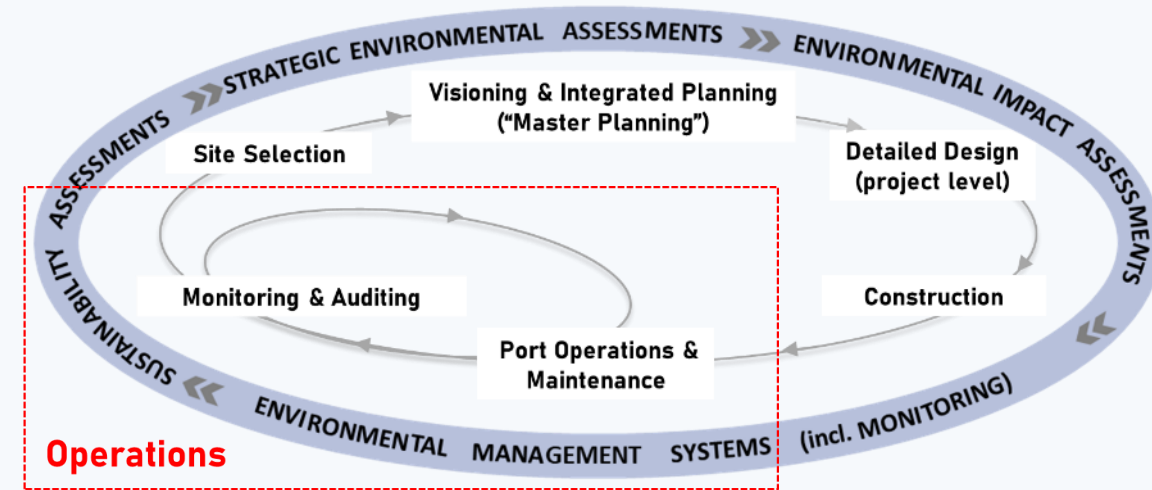
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Operations Phase

Other Tools included for this Phase:

- Manage Carbon Footprint
- Considerations for External Financing
- Sustainable Use of Materials and Land
- Energy Efficiency, Waste, Water Consumption
- Ballast Water Management
- Sustainable Hull Cleaning
- Improving Port Environmental Quality
- Marine Litter Clean-up Technologies
- Oil Spill Contingency Planning
- Environmental Monitoring and Evaluation



- Ecosystem Restoration
- Environmental Information Systems
- Effective Capacity Development
- Introduction to Natural Capital Accounting
- Sustainability Performance Index

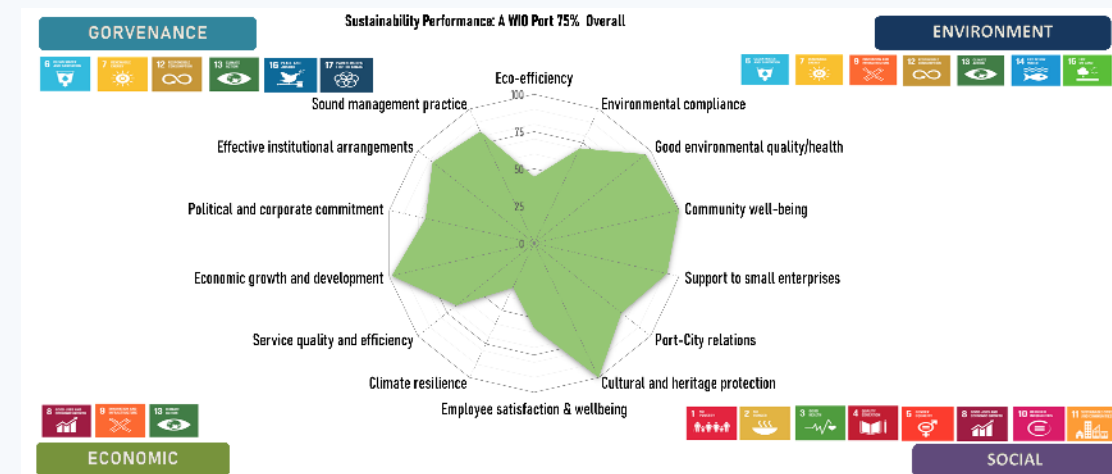
Content of the Toolkit for Sustainable Port Development

SECTION	TOOLS	SECTION	TOOLS
Planning	Guidance on Strategic Environmental Assessment	Operations	Guidance on Environmental Management Systems
	Site selection and Master Planning		Circular Economy in Ports
	Planning for Climate Change		Examples: Sustainable Port Development Actions
	Scenario Analysis Tool for Planning		Securing External Finance for Port Development Projects
Design	Guidance on Environmental Impact Assessment		Sustainable Use of Materials and Land
	Concept of Nature-based Solutions		Energy Efficiency Management
	Design for Biodiversity Offsets		Management of Carbon Footprint
	Building-with-Nature Design Approach		Management of Water Consumption
	Ecological Enhancement Options		Waste Management
Construction	Construction Environmental Management Plans		Ballast Water Management
	Dredge Management (also relevant in Operations)		Guidance on Sustainable Hull Cleaning
	Considerations for Port Decommissioning		Towards Improving Port Environmental Quality
			Ecosystem Restoration
			Marine Litter Clean up Technologies
			Oil Spill Contingency Planning
			Environmental Monitoring and Evaluation
			Environmental Information Systems
			Effective Capacity Development
			Introduction to Natural Capital Accounting
			Sustainability Performance Index (linked to SDGs)

Implementation

Participating parties:

- Test and adopt IPM Framework in national port policies – to guide logical alignment between engineering vs environmental processes
- Test and adopt Toolkit as national guideline for port planning & operations
- Not realistic to implement all practices at once (resource constraints)...
- Follow incremental implementation process guided by site-specific priorities identified in consultation with local stakeholders
- Use a sustainability performance system to prioritise investment and track progress ('Tool' in Toolkit)
- Pilot projects (South Africa, Seychelles)
- Port Management Association of Eastern & Southern Africa (PMAESA) – Leading roll out across ports in region





Thank you

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