



Developing Spatial Zones: Decision-Support Tools

Seychelles Marine Spatial Planning Initiative

Workshop #3

21-22 August 2014



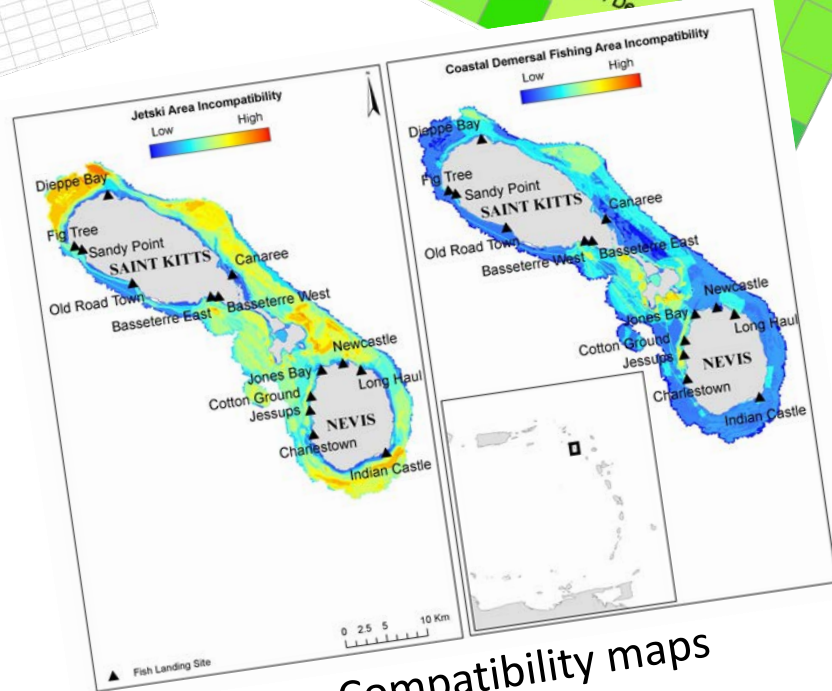
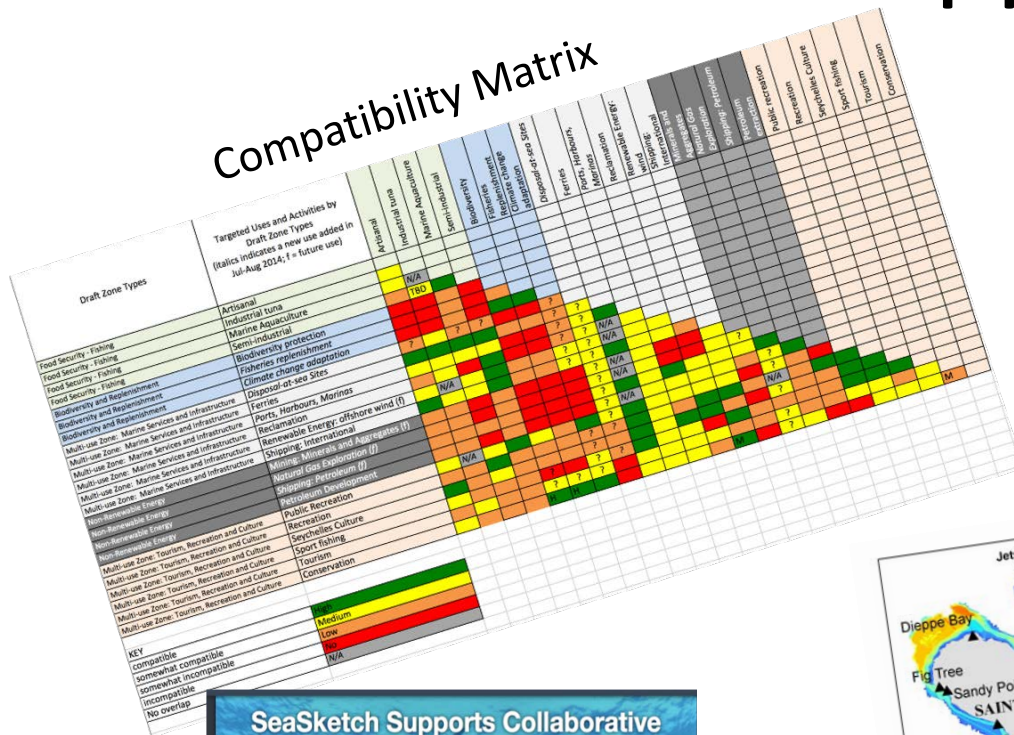
The Nature Conservancy
Protecting nature. Preserving life.

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Seychelles Marine Spatial Planning Initiative

www.seychellesmarinespatialplanning.com

Compatibility Matrix



Compatibility maps



Seychelles Marine Spatial Planning Initiative
www.seychellesmarinespatialplanning.com

Getting lines on a map...

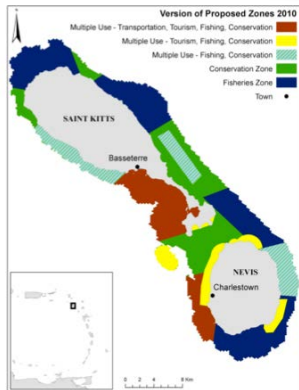
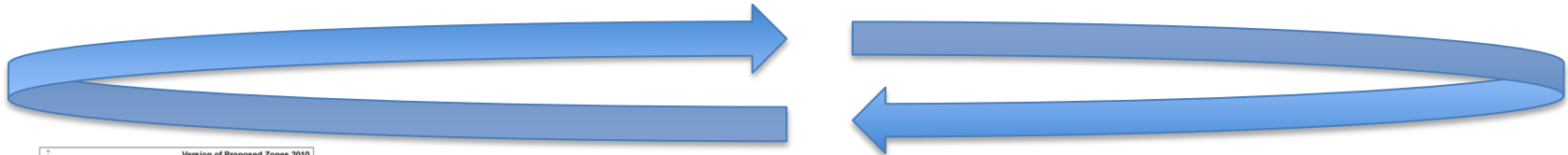
Information from stakeholders & process

What do you care about, and what do you need to protect?

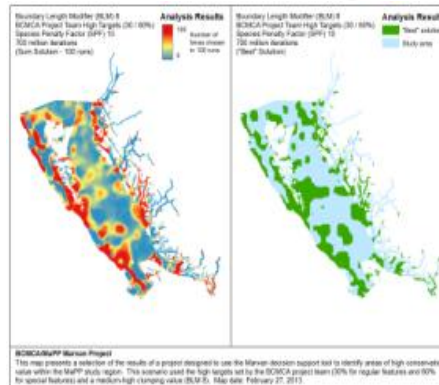
Draft Conceptual Zones

Decision Support Tools

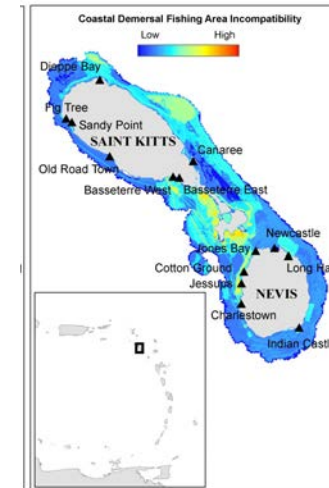
Data Layers for Uses & Activities to inform zones



Developing zones



→ Design alternatives



Analyse Information and display spatially

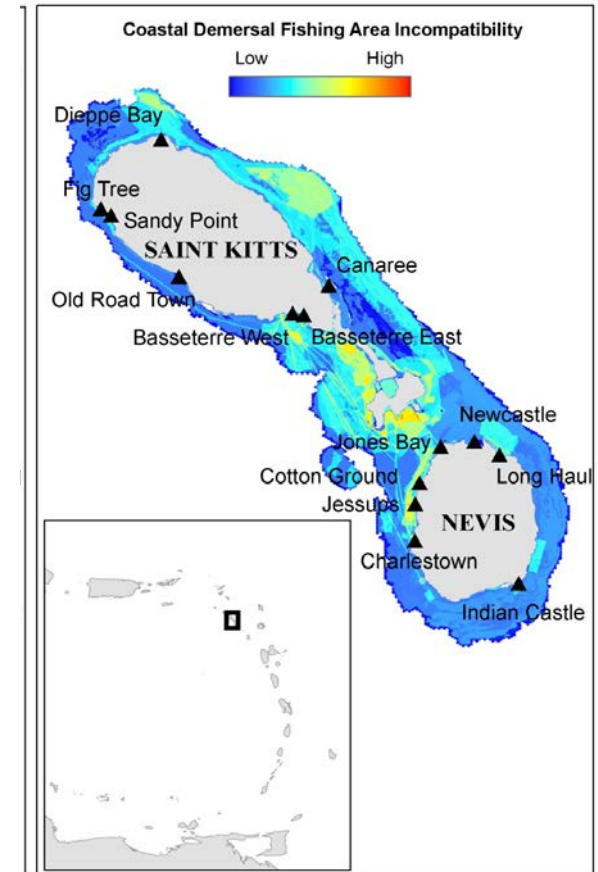
Turning the matrix into map

Compatibility Matrix

Draft Zone Types	Targeted Uses and Activities by Draft Zone Types (italics indicates a new use added in Jul-Aug 2014; f = future use)	Artisanal	Industrial tuna	Marine Aquaculture	Semi-Industrial	Biodiversity	Fisheries	Climate change	Replenishment	Disposal of sea sites	Ferries	Ports, Harbours, Marinas	Reclamation	Renewable Energy	Shipping	Aggregates	Natural Gas	Petroleum	Public recreation	Seychelles Culture	Sport fishing	Tourism	Conservation
Food Security - Fishing	Artisanal																						
Food Security - Fishing	Industrial tuna																						
Food Security - Fishing	Marine Aquaculture		N/A																				
Food Security - Fishing	Semi-Industrial		TBD																				
Biodiversity and Replenishment	Biodiversity protection																						
Biodiversity and Replenishment	Fisheries replenishment																						
Biodiversity and Replenishment	Climate change adaptation																						
Multi-use Zone: Marine Services and Infrastructure	Disposal at sea sites	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Marine Services and Infrastructure	Ferries	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Marine Services and Infrastructure	Ports, Harbours, Marinas	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Marine Services and Infrastructure	Reclamation	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Marine Services and Infrastructure	Renewable Energy: offshore wind (f)	N/A	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Non-Renewable Energy	Shipping: International	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Non-Renewable Energy	Shipping: Mineral and Petroleum (f)	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Non-Renewable Energy	Shipping: Petroleum (f)	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Non-Renewable Energy	Petroleum Development	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Public Recreation	N/A	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Recreation	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Seychelles Culture	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Sport fishing	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Tourism	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Multi-use Zone: Tourism, Recreation and Culture	Conservation	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?



“Compatibility Map”



We need spatial data to depict the uses!

Example: St Kitts and Nevis, Agostini et al.

Range of Data Types for Zoning

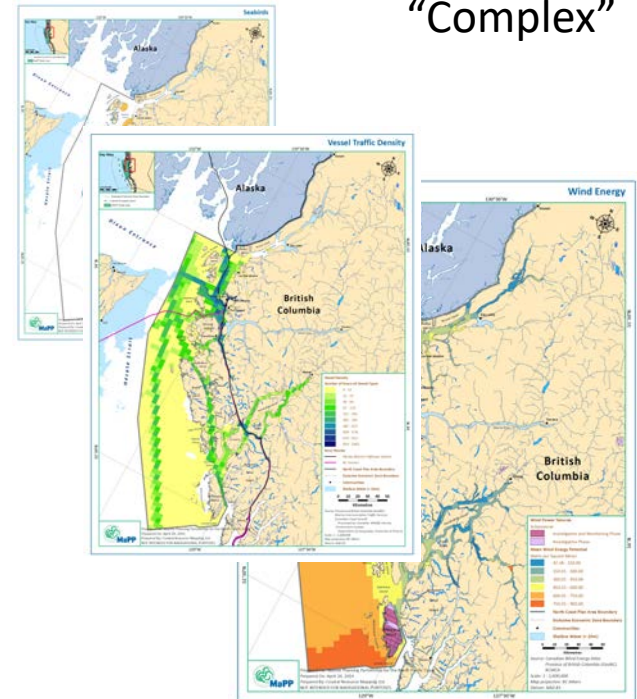
“Simple”



Expert Mapping

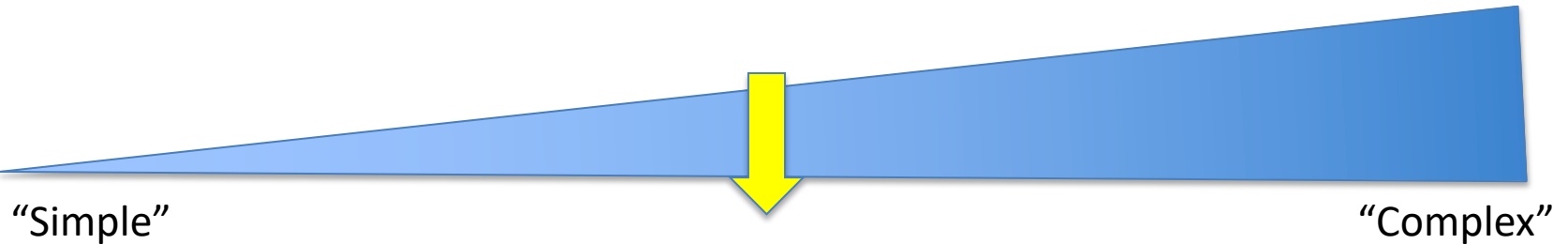


“Complex”

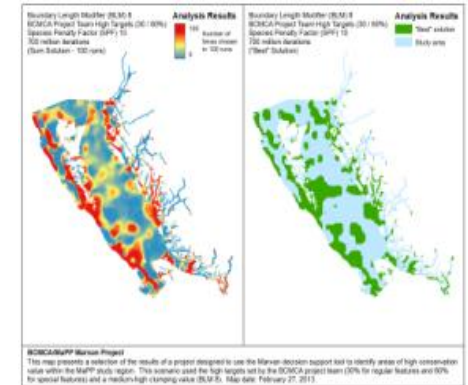


Empirical and Quantitative

Approaches to Spatial Zoning



Draw Zones

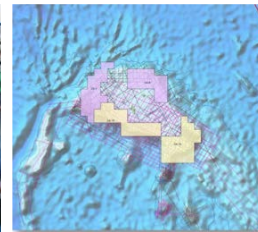


Representation

→ Design alternatives

Spatial Zoning

- View alternatives to make informed choices.
- Creating a map for what they know and care about.



Questions?

