InVEST
integrated valuation of environmental services and tradeoffs

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INTRODUCTION & HANDS-ON WITH MARINE INVEST

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activities (stressors)

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ecosystem






implementation (management & monitoring)


values (benefits)


InVEST MODELS
ASSESSING ES OUTCOMES

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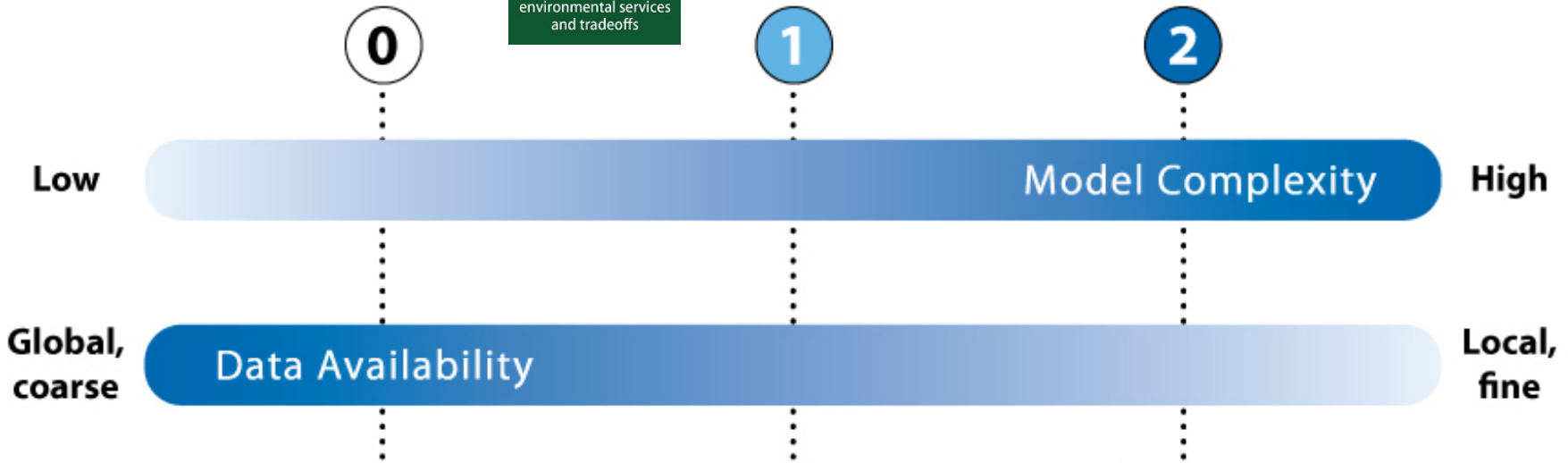
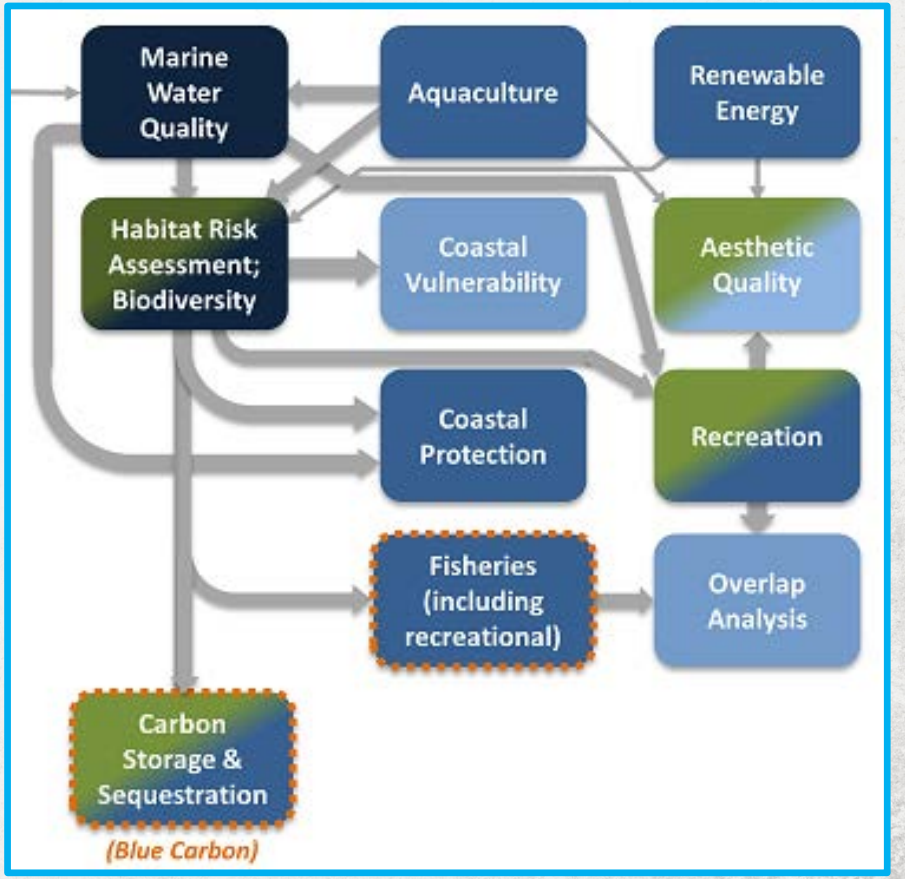


MARINE INVEST
MODEL LINKAGES



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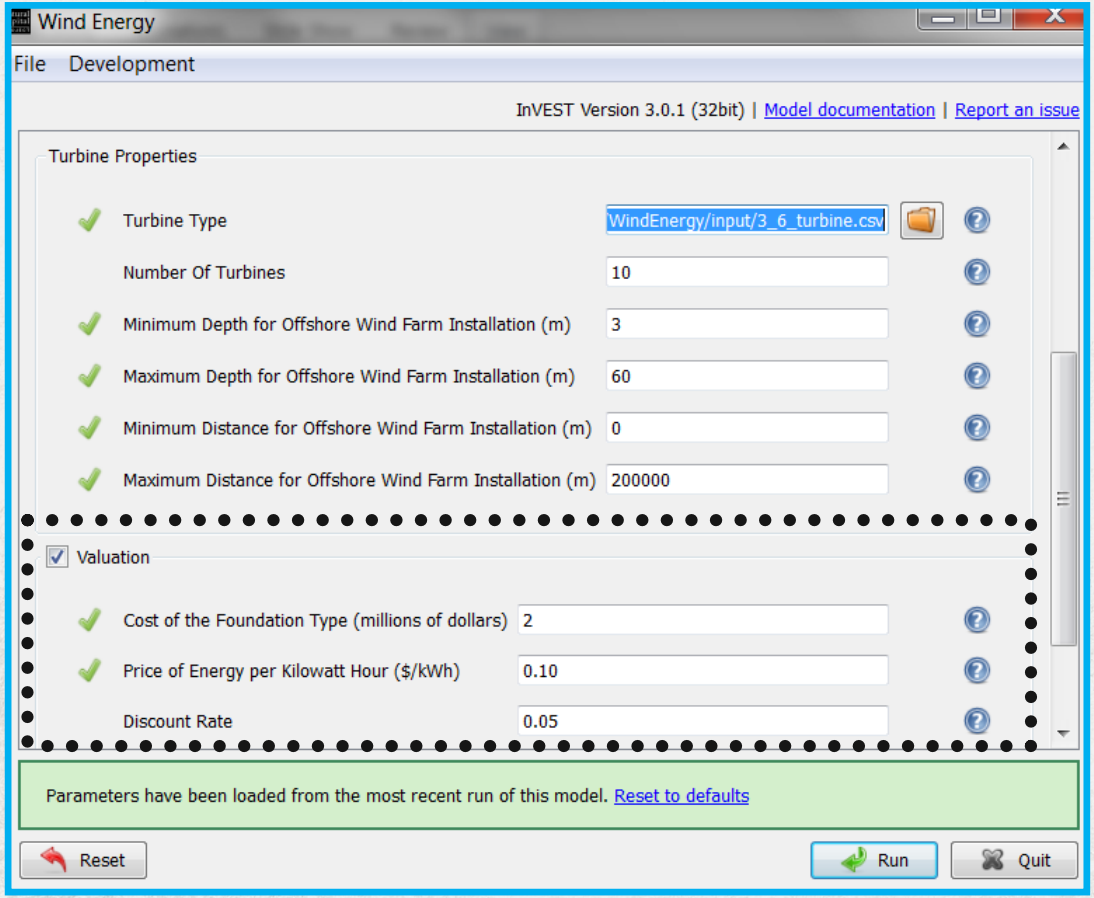

Value

Economic & social impacts

SCALE

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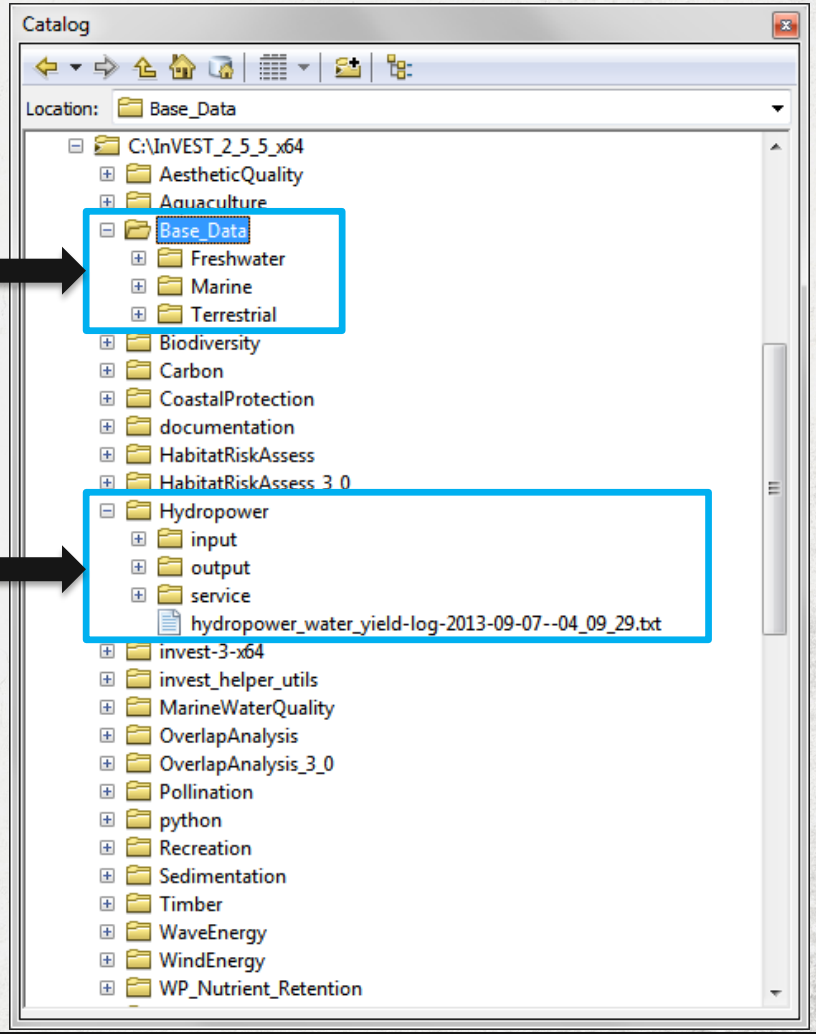
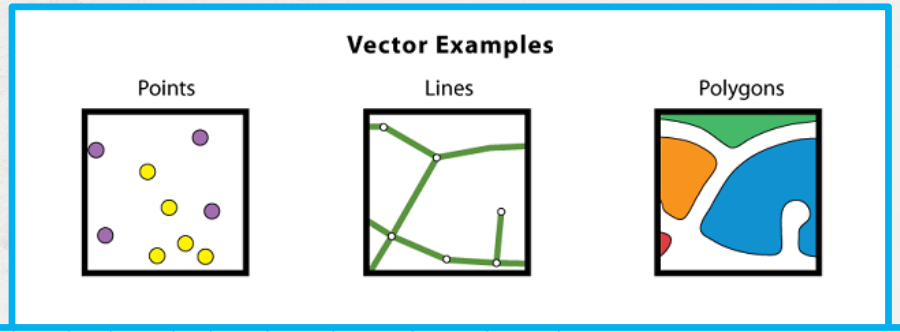
Marine InVEST Models	Scale		
	Global	National	Local
Habitat Risk Assessment			
Coastal Vulnerability			
Marine Water Quality			
Coastal Protection			
Recreation & Tourism			
Aquaculture			
Fisheries			
Scenic Quality			
Renewable Energy			
Coastal Blue Carbon			

INVEST
FOLDER STRUCTURE

Base data (common layers) for each toolset

Sample data for each model





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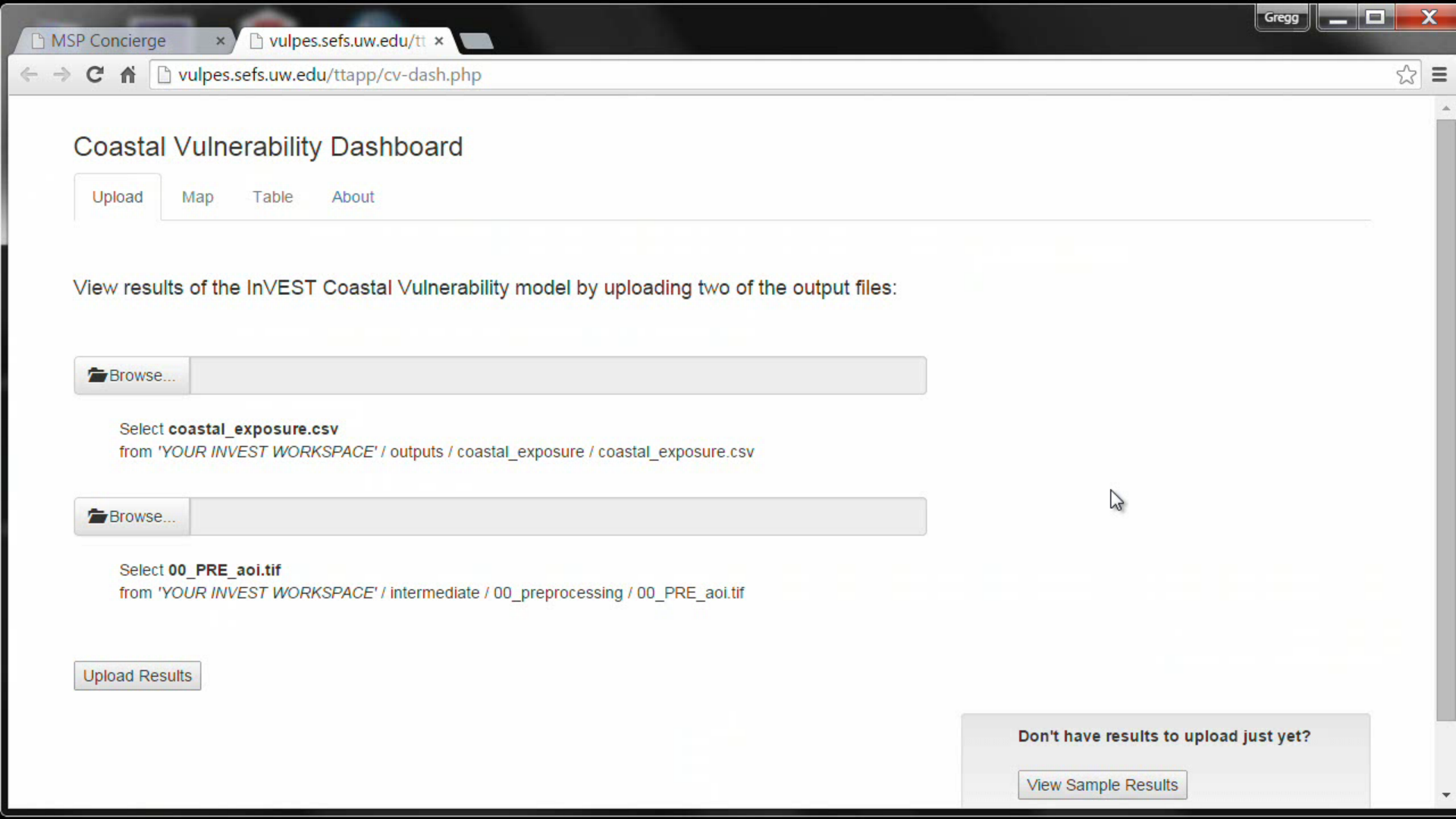
HELPER TOOLS

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Wind Energy	Wave Energy	Recreation	HRA	Finfish Aqua	Blue Carbon	Coastal Vulnerability (T0)	Coastal Protection (T1)	Scenic Quality	**InVEST (v3.0.1) Data Inventory**	**Key:** **R = required biophysical** **O = optional biophysical** **V = optional valuation**		
2	Models									Data requirements	Type	Table name	Sources
3			O	R		R	O	O		Habitat/species map	vector map		
4			O			R				Land use/land cover (LULC)	raster map		
5							R	R	R	DEM (topography)	raster map		Global: World Wildlife Fund (90m)-http://www.world
6							O	R		DEM (bathymetry)	raster map		
7	R						R	O		wind field			Wave Watch III (global provided in model)
8		R					R	R		wave field			Wave Watch III (global provided in model)
9	R	R								device operation			some device information provided in model
10								O		tides			location data given in user guide
11							O			shoreline type/backshore characteristics			
12							O	O		benthic biogenic habitats			global datasets available, given in user guide
13				R						human use activities	vector map		
14			O				O	O	R	location and type of infrastructure placed in nearshore			

Model input	Description	Year	Format	Minimum Resolution/ Scale	Geographic coverage of source	Current Source / Status / Resolution
Coral reefs	A composite of best available data on corals that include locations of the following reef classifications: fore reef, patch reef, reef crest, and shallow Gorgonian beds	1998	Polygon Shapefile	National	Barbados	CZMU; Bng Marine Area habitat surveys (ea
Beaches / dunes	A composite of best available data for beaches and dunes	2011	Polygon Shapefile	National	Barbados	TNC; Digitized off Google Earth and Bing ae
Land cover	Land cover that indicates the presence of coastal-marine ecosystems providing services to people	1997	GeoTIF	National	Barbados	CZMU; based on 1997 ground-truthed aerial


MSP Concierge
vulpes.sefs.uw.edu/tt
Gregg
vulpes.sefs.uw.edu/ttapp/cv-dash.php
Coastal Vulnerability Dashboard
Upload
Map
Table
About
View results of the InVEST Coastal Vulnerability model by uploading two of the output files:
Browse...
Select coastal_exposure.csv
from 'YOUR INVEST WORKSPACE' / outputs / coastal_exposure / coastal_exposure.csv
Browse...
Select 00_PRE_aoi.tif
from 'YOUR INVEST WORKSPACE' / intermediate / 00_preprocessing / 00_PRE_aoi.tif
Upload Results
Don't have results to upload just yet?
View Sample Results

HOW DO WE GET HERE?

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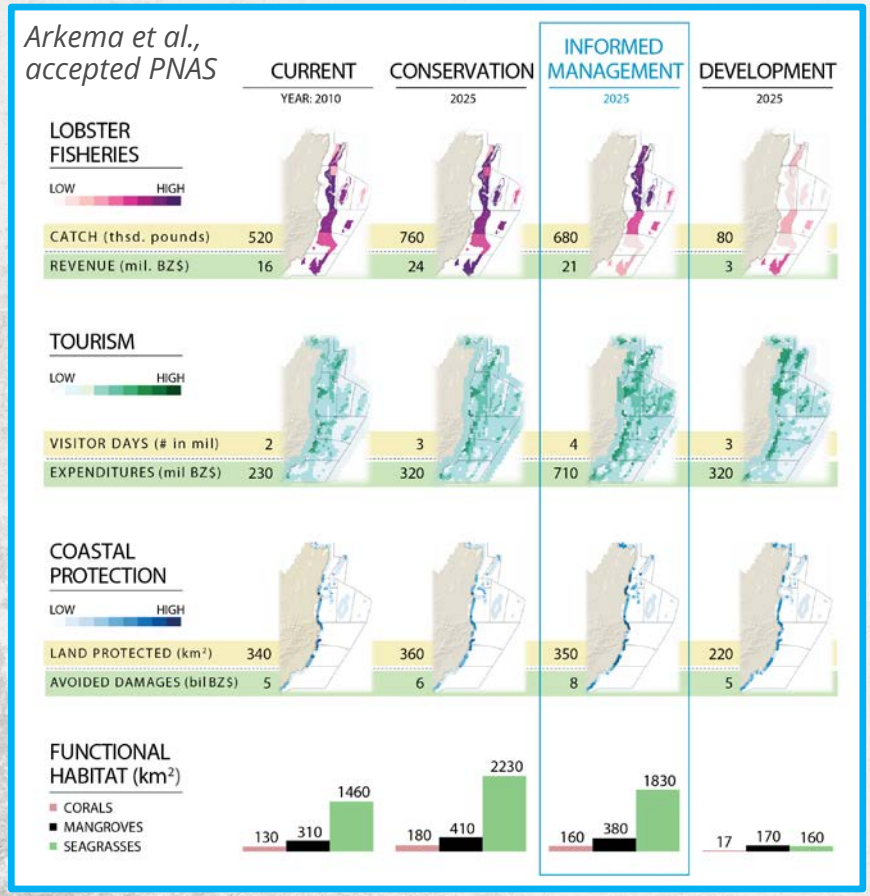
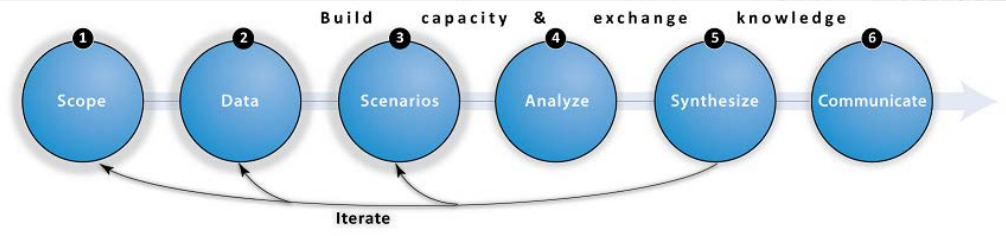
Arkema et al., accepted PNAS



Rosenthal et al. 2014 IJBSESM



Break-out sessions

- Model theory and methods
- Live demonstrations and case studies
- Interpreting results

Q&A

Recreation

Aquaculture

Fisheries

Coastal Protection

Coastal Blue Carbon

Scenic Quality

Habitat Risk Assessment

Renewable Energy (wave and wind)