

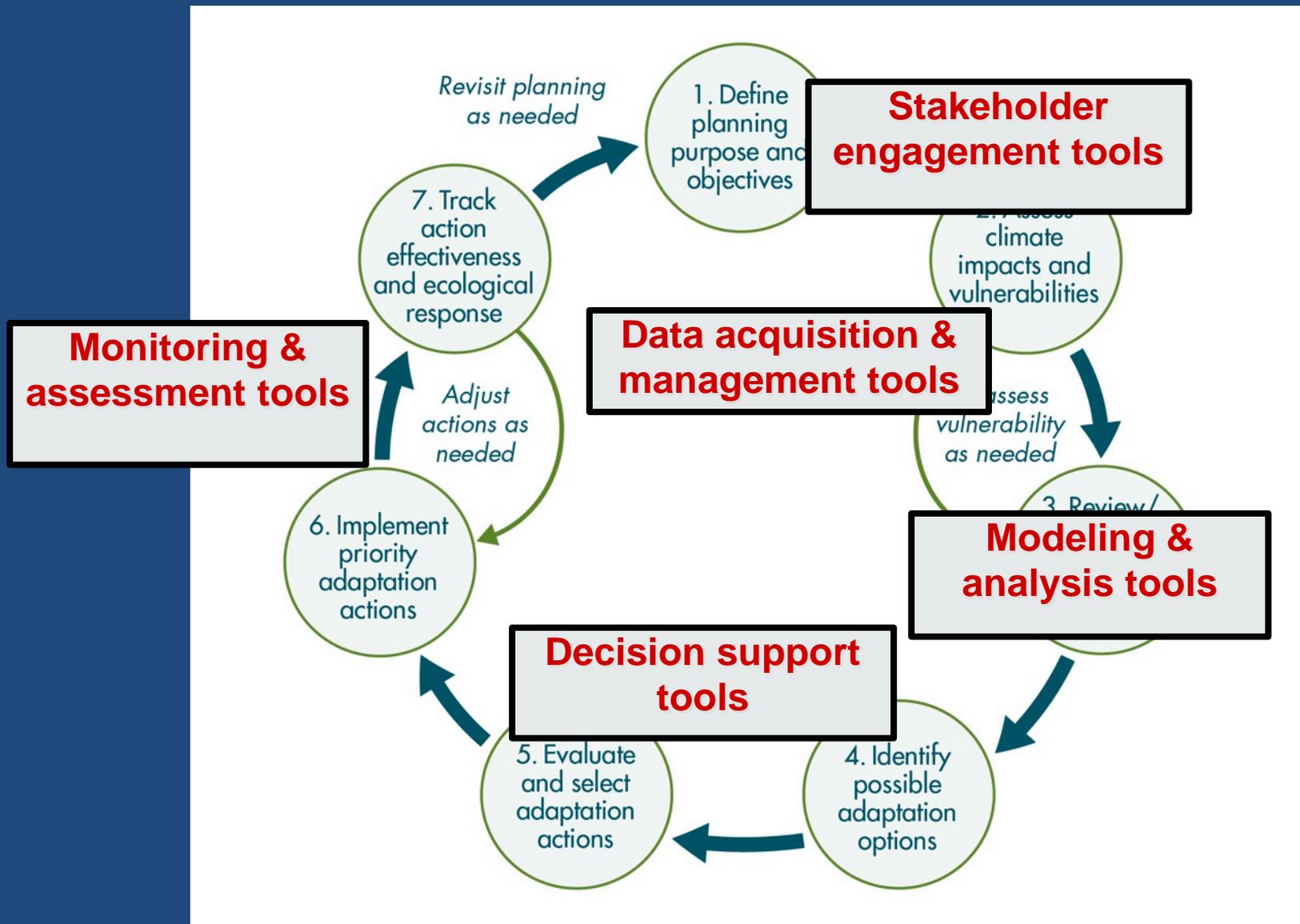
TOOLS SELECTION

What is a Tool?

- Documented guidance
- Application of data access and analysis
- Regulatory activities
- Engagement strategies
- Decision support system

SOMETHING THAT HELPS YOU!!!

Climate-Smart Conservation Cycle



Two key principles for choosing data and tools

1. Your goals and objectives should drive the selection of tools and data, not vice versa
2. The sophistication of the VA should not exceed the sophistication of possible uses of VA results.

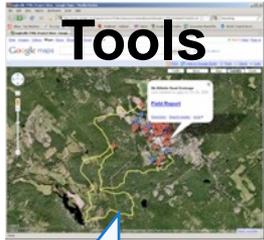
Choosing tools and data comes back to the basic questions:

- *What is the goal of your VA?*
 - *“Assessment questions”: what do you need to know to answer them?*
- *Who will use the output and how?*
- *What resources do you have?*

If you don't ask the right question, every answer feels wrong
Ani DiFranco

Factors to Consider:

Visualization

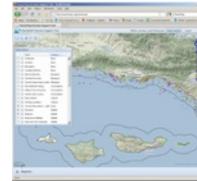


Tools



Web-based
Tools

GIS-based
DSTs



Models

Toolkits



FUNCTIONALITY

LEARNING CURVE

COST

SKILLS AND DATA NEEDED

L
O
W

H
I
G
H



You don't have to pick just one!

Can use different tools and data at different points in the engagement or adaptation planning process

Toolkits: Linking groups of tools via interactive process

Planning Process/Stakeholder Engagement

Development Tools

- Planning
- Energy
- Infrastructure
- Forestry

Integration
Tool
(Vista, CommViz)

Data and Modeling Tools

- Geophysical Processes
- Ecosystem Processes
- Socioeconomic models
- Biodiversity
- Ecosystem Svcs

Conservation Planning Tools

- Mitigation
- Land Allocation/Optimization

INTEGRATED LAND-SEA PLANNING

A TECHNICAL GUIDE TO THE INTEGRATED
LAND-SEA PLANNING TOOLKIT

Final Draft - August 14, 2009

Mission-Aransas NERR Land-Sea Planning Team

Mission Aransas National Estuarine Research Reserve
NatureServe
NOAA Coastal Services Center
Placeways, LLC
Texas Sea Grant



MANAGER'S GUIDE TO
REFUGE VULNERABILITY ASSESSMENT
& ALTERNATIVES:
OVERVIEW AND PRACTICAL CONSIDERATIONS

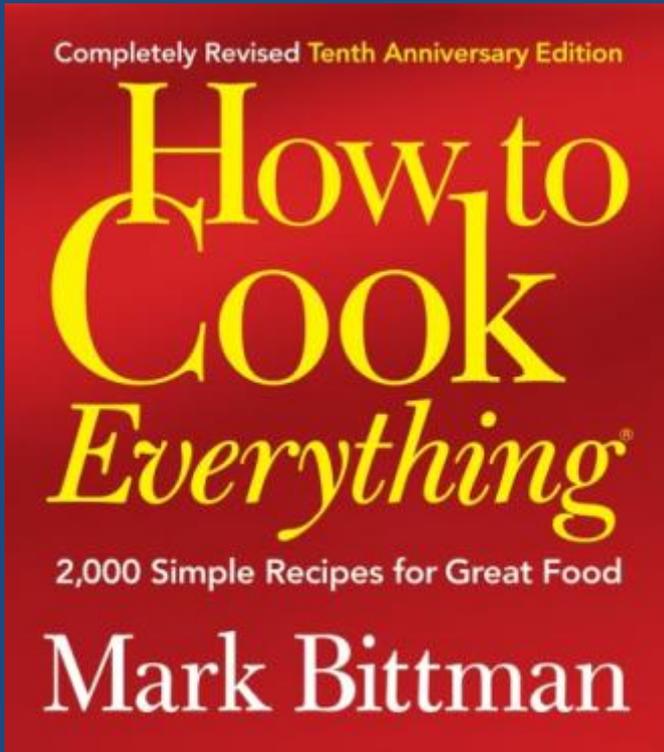
Final Draft
June 2012



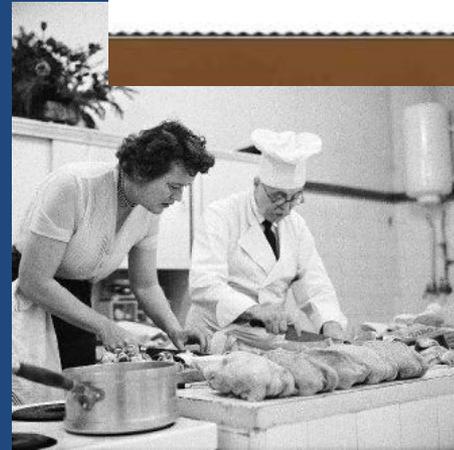
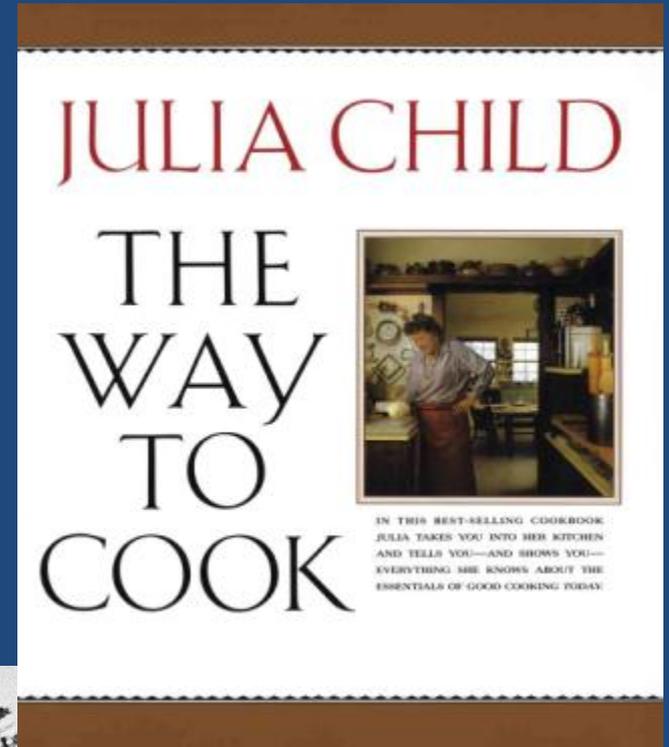
What we think you want to know *(but may not tell you)*

- What tools, processes, or approaches are best for helping me move forward?
 - Who to engage
 - How to engage them
 - What information/data I need and where to get it
- What are the best practices?
- What are the pitfalls to avoid?

Putting VA Principles into Practice



VS



Tool Types

- Portals
 - Tools portals, e.g. Digital Coast, EBM Tools, CAKE, WeAdapt
 - Data portals, e.g. PNW Climate Sensitivity Database, NE Climate Data, DataBasin, Climate Wizard

Tool Types

- Portals
- Visualization
 - Complex (e.g. Climate Wizard)
 - Simple (e.g. CanViz)

Tool Types

- Portals
- Visualization
- Analytical
 - NatureServe Vista, CC Vulnerability Index
 - SLAMM

Tool Types

- Portals
- Visualization
- Analytical
- Socioeconomic
 - COAST
 - Spatial Trends in Socioeconomics

Tool Types

- Portals
- Data access
- Visualization
- Analytical
- Socioeconomic
- Indices

EXTRA SLIDES

The Problem with Tools...

Complicated and Confusing



Require considerable capacity

Tend to drive a top down, “Predict-and-Plan” process

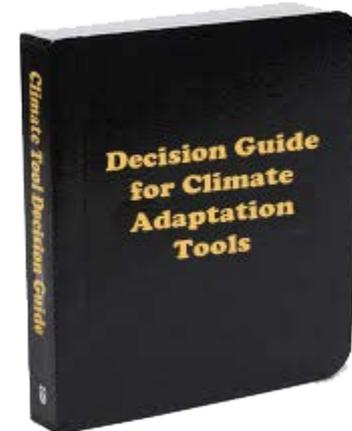
WAYS TO THINK ABOUT TOOLS

Type

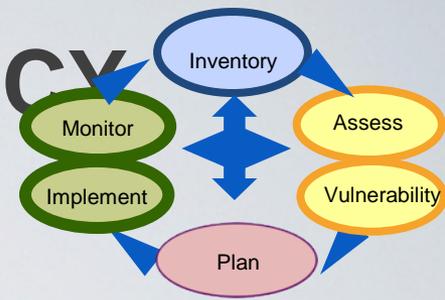
Function

How it assists planning process

Sectors addressed

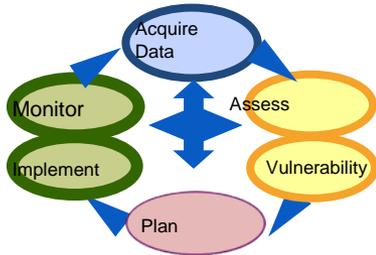


HOW TOOLS AFFECT THE POLICY CYCLE

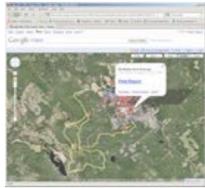


	Stakeholder Engagement	Scoping	Assess			Plan	Implement	Monitor
			Impact	Vulnerability	Risk			
CanVis	↔		↔					
SLR Viewer*	↔		↔					
Our Coast, Our Future*	↔		↔					
SimCLIM*		↔						
SLAMM		↔						
CommunityViz	↔							
NatureServe Vista*	↔							
HAZUS		↔						
SoVI		↔						
CCVI		↔						
InVEST*	↔							

TYPES OF TOOLS



Process



Visualization



Web-based



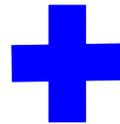
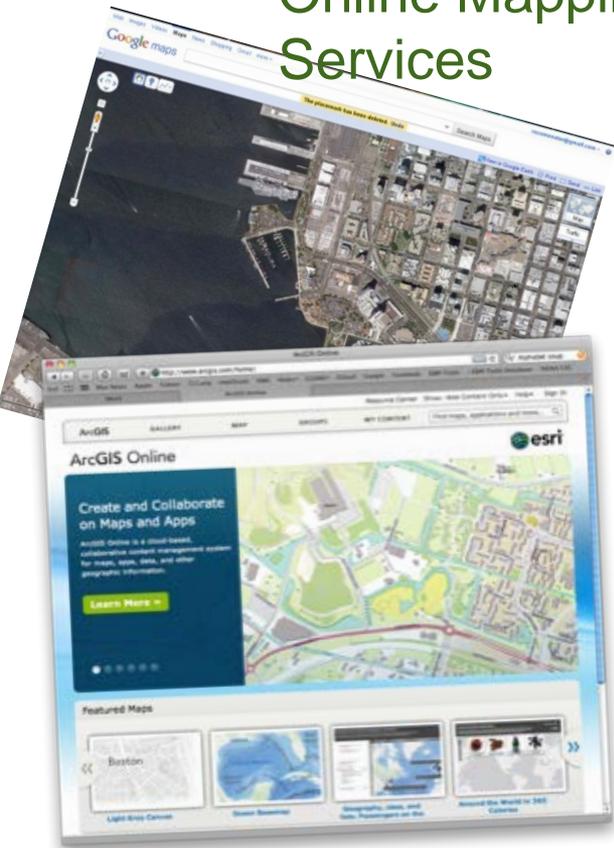
Desktop GIS



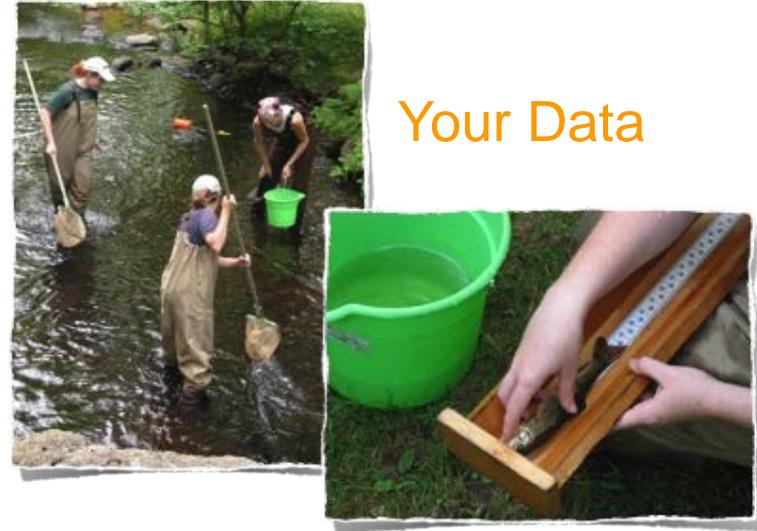
Toolkits

Starting Simple: Online Mapping and “Mashups”

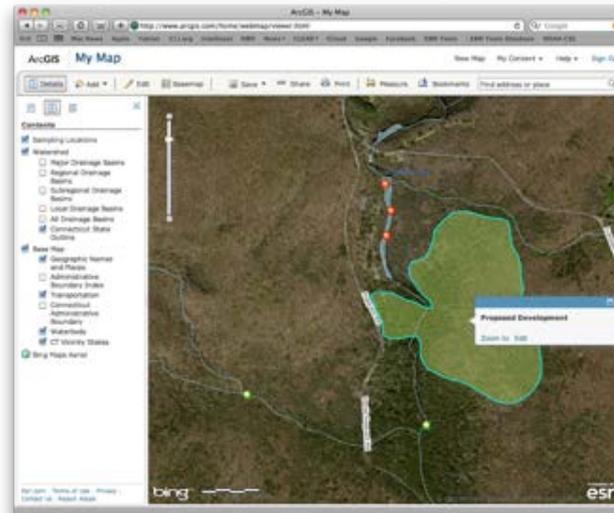
Online Mapping Services



Your Data



New “Mashup” Map



Web-based Tools



SLR and Coastal Flooding Impact Viewer
(NOAA CSC)

Geographic Focus: National



Coastal Resilience

(The Nature Conservancy & Partners)

Geographic Focus: Regional/Local

(LIS, GOM, Florida Keys, Ventura area in CA)



Climate Wizard

(The Nature Conservancy)

Geographic Focus:

National/Global

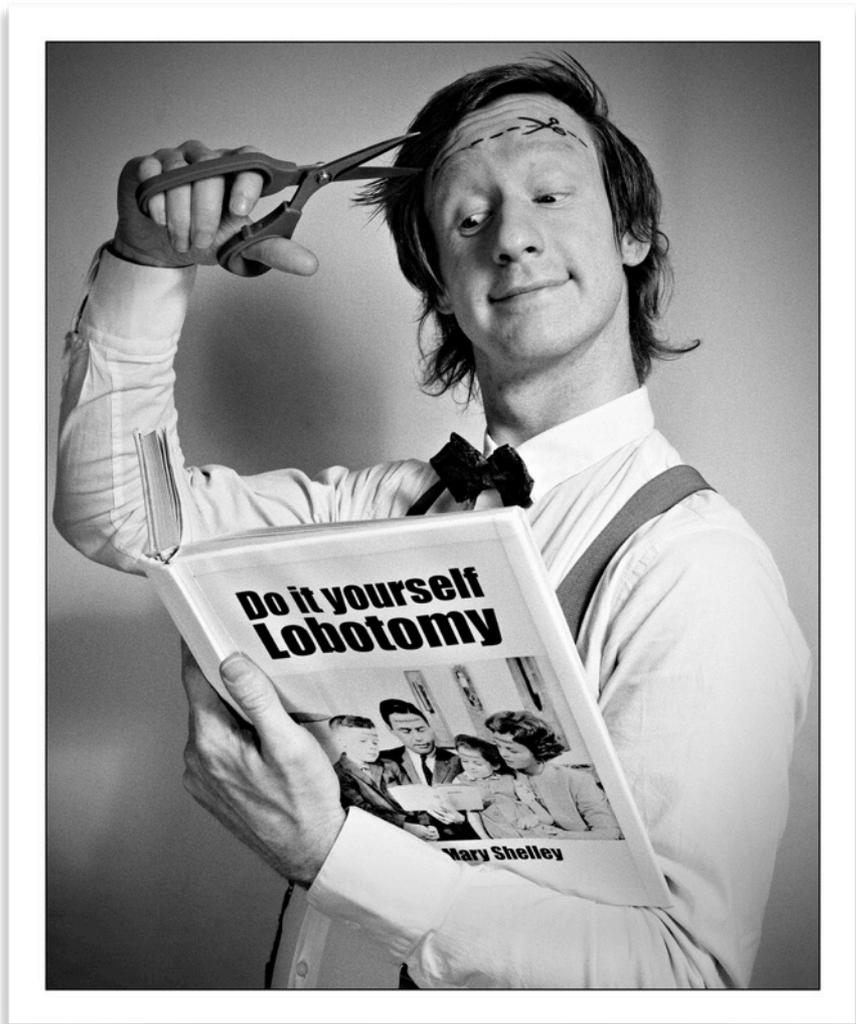
Pros & Cons of Web-Based Tools

Pros

- ✓ Easy to start: its all been done for you
- ✓ Usually easy to use: good interfaces and limited options

Cons

- ✓ Often limited to pre-run packaged analyses
- ✓ Usually limited to its data, can't integrate local data
- ✓ Often can't readily save and download data and your results for further work



So you want to do more yourself?

GIS-based Decision Support Tools

communityviz[®]



A planning tool that allows communities to develop and compare alternate scenarios.



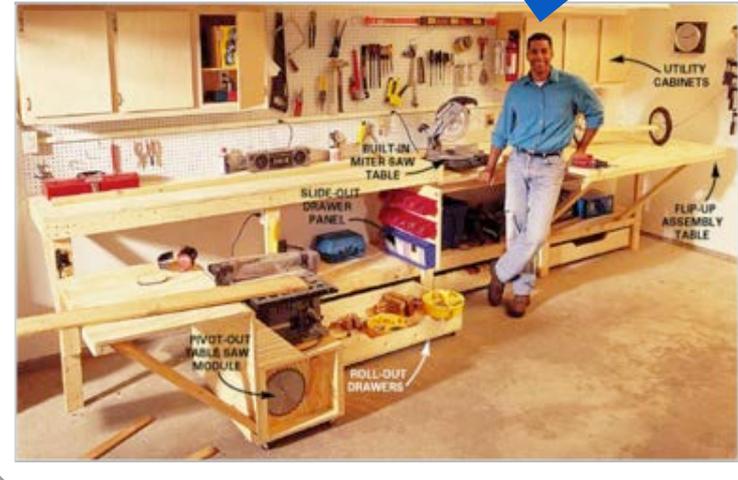
For the Serious DIY: Toolkits

I built my toolkit in just one weekend!

Planning projects have diverse needs and issues

Generally not a single, one-size-fits-all tool available

Still, there are many tools that can address parts of your needs, SO....



Linking groups of tools through an interactive process gives the flexibility to address an almost unlimited number of issues, with existing tools.



Steps in Assembling a Toolkit

Produce an information workflow that supports your project objectives & decision product needs

Search & select tools that can produce the needed products from available data

Filter selection for tools that meet your resource/capacity

Try to pick tools that are able/proven to work together if possible

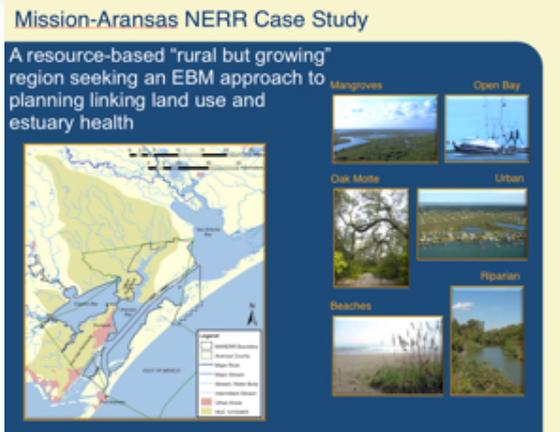


Integrated Planning for Resilient Communities

Berkeley-Charleston-Dorchester, SC

Function:

Supports integrated hazard- and ecosystem-based land use planning

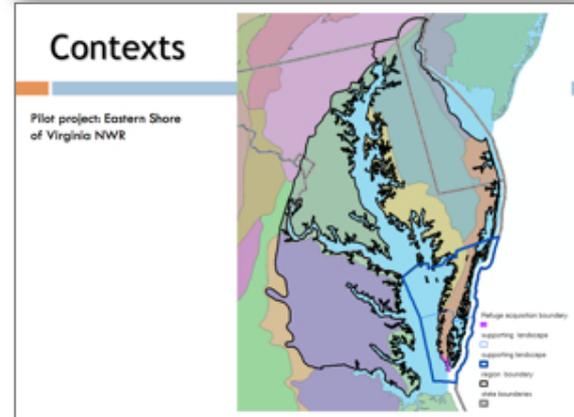


Integrated Land-Sea Toolkit

Mission-Aransas NERR, TX

Function:

DST to assess the effects of urbanization on water quality and biodiversity



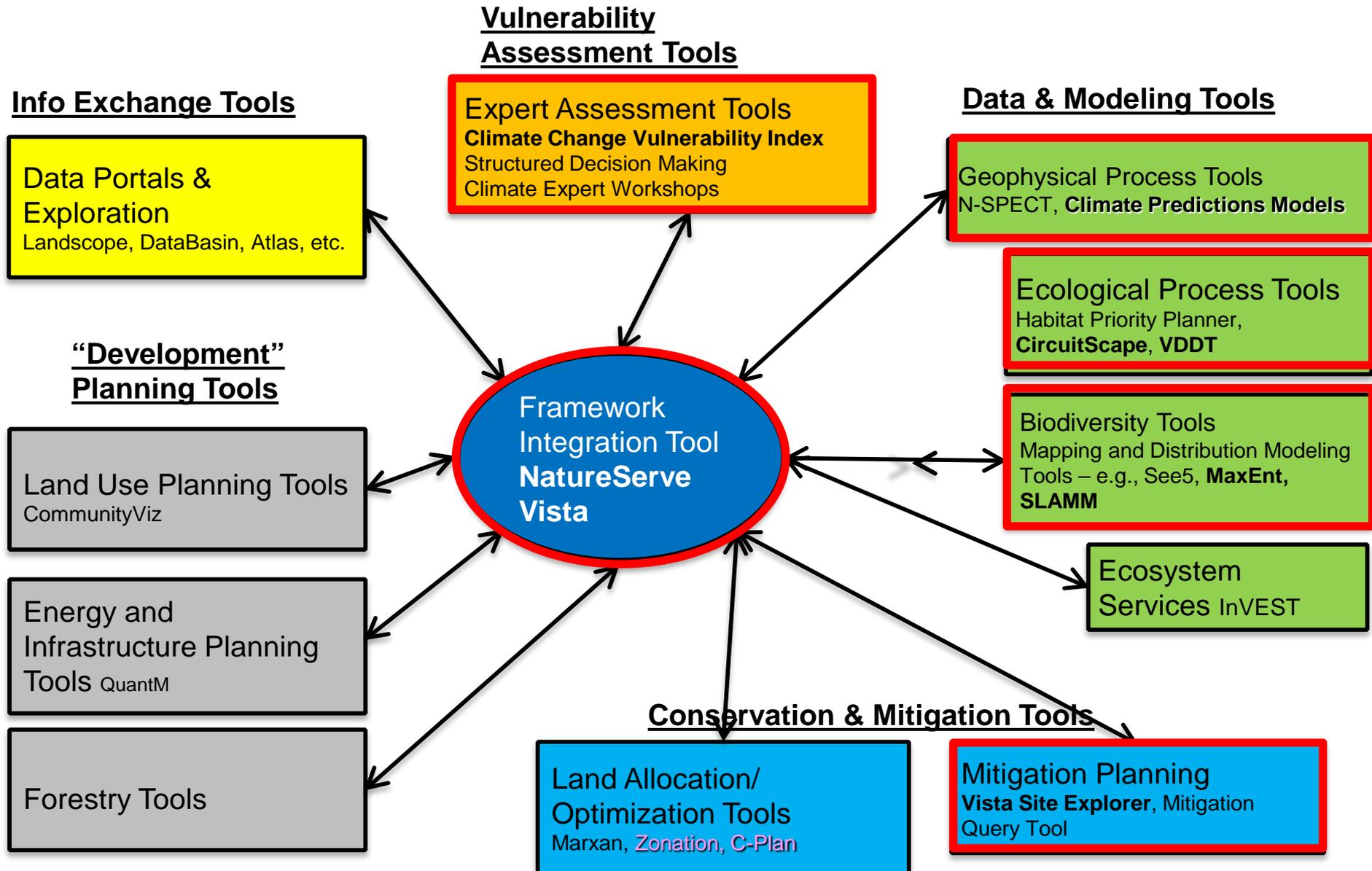
Refuge Vulnerability Assessment & Alternatives Toolkit

VA, NV, CA

Function:

Cumulative effects assessment for wildlife refuges and evaluate management scenarios

RVAA Pilots Toolkit



RVAA Process Steps

Crist et al., 2012

Step 1 Characterization

Policy framework
Resource Inventory

Step 2 Prioritize Issues

Resources List
Mission-Critical Infrastructure List
Stressors List
Regional context assessment
Tools: Gap Analysis (GIS)

Step 3 Data Needs

Sources and Costs
Availability and Timing
Tools: data portals, e.g., DataBasin, Climate Wizard

Step 4 Current Conditions

Resource distribution
Scenario Development Management
Stressors
Tools: Maxent, NatureServe Vista, Envision, HPP

Step 5 Forecasts

Scenario Development
Stressors (future growth, development proposals, climate change)
Tools: Visioning, NatureServe Vista, SLAMM, Community Viz, Maxent, VDDT

Step 6 Evaluate Effects

Issues, Opportunities, and Conflicts
Tools: NatureServe Vista, N-SPECT, VDDT, HPP

Step 7 Strategies

Concepts and lists for actions to mitigate undesired effects
Adaptation
Tools: Miradi, NatureServe Vista

Step 8 Inform Alternatives

For new or revised plans
Tools: NatureServe Vista, Marxan, CommunityViz, N-SPECT, VDDT

Example of a process tool but coupled with technical tools



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