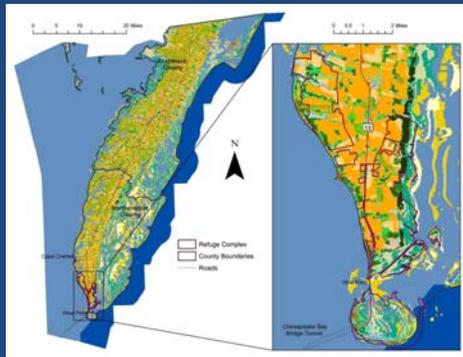


Data Issues

- Consider how well CC effects data match your resource data in resolution
 - If species is associated with fine grain features (e.g., rare soil type, north facing slopes, etc.) can you determine vulnerability from downscaled climate data? (one option: use geophysical features to further “filter” results)
 - What about migrants with key part of range outside the U.S.? (outside existing downscaled data, one option—live with uncertainty of GCM scale)

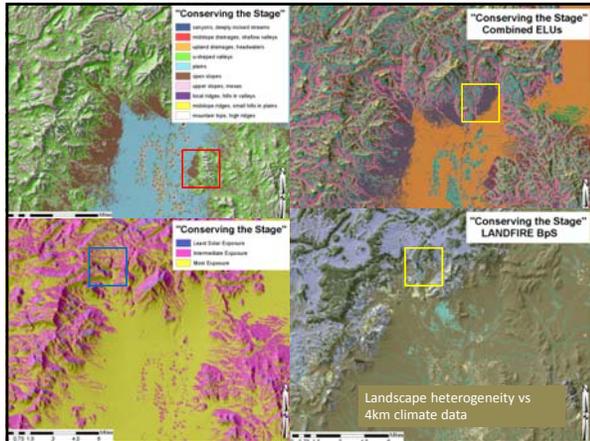
Grain of Resource Distribution

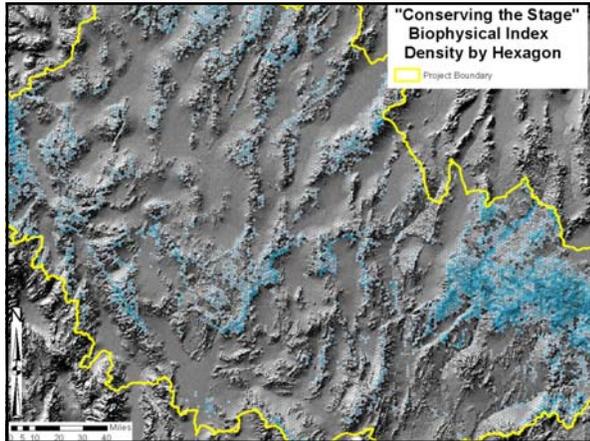


Grain of resources matters for how they can be assessed:

- Spatial/quantitative: stressors must roughly match scale of resource distribution
- Qualitative: examine stressor scenarios and “hypothesize” vulnerability outcome







Considerations for Implementation Scale

Informs what are the useful types and scale of products to inform decision making

- Geographic position can matter:
 - On the coast vs upland
 - Implementers with small or narrowly defined jurisdictions (e.g., only river management)
- Type of implementation
 - Broad brush policy
 - Comprehensive use/management planning
 - Narrow site scale project design or regulation

Scale of Implementation

- Scales often mixed within the same landscape:
 - Federal region
 - State government
 - Local governments
 - Agency jurisdiction
 - Watershed management
 - Individual land owner
 - Project site

All in same planning area

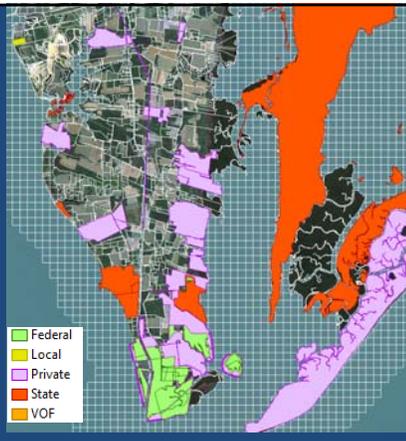
Context vs Scale of Implementation

Eastern Shore of Virginia National Wildlife Refuge

- Context: Chesapeake region influences policies and broader ecosystem function
- Implementation: 1850 acres refuge but highly influenced by surrounding land planners, owners, other NGOs activities



Grain of Implementation



Conclusion

- Scale has large implications
 - Types of possible assessments
 - Data needed
 - Uncertainty
 - Applicability to different scales and purposes
- Scale can only be somewhat controlled
 - Downscaling and modeling
 - New data collection and mapping
 - But projects will inherently contain resources and processes functioning at a variety of scales
 - One size fits all will not serve the assessment well
 - But can't have the ideal scale for all features
 - Compromise is necessary
