Online Dynamic (Wiki) Wind (Power)-Wildlife-Habitat Decision Tools: Catalogue and Community of Practice

A Project Proposed for ESIP Energy and Climate Cluster
ESIP Summer 2011 Meeting, Santa Fe, NM

July 15, 2011
ESIP Project Idea

• An online Dynamic (Wiki/Drupal) Wind (Power)-Wildlife-Habitat Decision Tools Catalogue and community of practice to
  - build transparency of the decision tool architecture, data, and functionality;
  - aid the decision maker in tool selection and use appropriate to their planning goals;
  - focus improvements to the kit of decision tools where needed; and
  - facilitate partnerships in tool development and application.
ESIP Community of Practice

- **Users**
  - Provide requirements and feedback

- **Tool developers**
  - Engage in defining/refining the proposed architecture
  - Develop a classification of the types of functions wind (power)-wildlife-habitat decision tools may perform
  - Populate the catalogue

- **Academic and Research Community**
  - Innovate to update or create new decision tools that can address unmet user needs
  - Engage in education and awareness

ESIP can facilitate a partnership between developers and users
ESIP Wiki - Information for Each Decision Tool

• A matrix of decision tool functions and features
  - For the field manager, allows transparency to user’s process, and
  - For the developer allows for search of tools with desired features

• Listing of base data layers, their source, and follow on adjustments to the data layer that are component to the decision tool
  - This transparency gives an easy way for identifying data gaps in tools, and which tools are obsolete or really need to be updated, and in what way
  - (Later) build a companion catalogue for each referenced base data layer, and create a linkage table for decision tools and their datasets

• Tracking of updates to decision tools e.g.,
  - recompiled with new base layer data,
  - values for stressor to receptor relationship updated
  - different screening criteria capabilities added

• Keeping a tally of applications of each decision tool
  - Determination of how widely the tool is used and for what applications

• Contact information for decision tools
  - Facilitating partnerships for “down the road” activities
ESIP Wiki – Other Information

- User requirements
- Metadata about the decision tools
- Use cases
- Collaborative environment
- Mapping tools to user applications
- Connecting tools to datasets
- How to better utilize and maximize the value of this tool
- Gap analysis
Tools

Tools include methods and software/web tools that can help improve coastal-marine spatial planning and management decision making.

**AGNPS - Annualized Agriculture Non-Point Source Pollution Model**
AGNPS - Annualized Agriculture Non-Point Source Pollution Model (AGNPS) is a joint USDA - Agricultural Research Service (ARS) and Natural Resources Conservation Service system of computer models developed to predict non point source pollutant loadings within agricultural watersheds.

**Tool Type:** COMPREHENSIVE PROCESS  
**Tool Cost:** FREE

**AGWA - Automated Geospatial Watershed Assessment Tool**
The Automated Geospatial Watershed Assessment (AGWA) Tool is a GIS-based watershed management tool that parameterizes and runs two watershed models, KINEROS2 and SWAT. AGWA is designed to provide qualitative estimates of runoff and erosion relative to landscape change.

**Tool Type:** SOFTWARE/WEB TOOL  
**Tool Cost:** FREE

**ALCES**
ALCES is a landscape simulator. It was developed as a strategic-level simulation tool intended for use by resource managers, the scientific community, industrial landusers, and the general public.

**Tool Type:** SOFTWARE/WEB TOOL  
**Tool Cost:** >$200
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Use of the Wiki Information

- As a platform for gathering user experience, sense from community of scientific rigor, and degree that data/conceptual model is up to date
- As an aid for any possible peer review requirements of the available decision tools
- As a platform to determine which tools are comparable
- To identify areas for possible tool interoperability
  - linking tool inputs and outputs that operate at different spatial scales
- Support activities to evaluate and further refine assessment tools
  - e.g., upcoming AWWI-Western Governors’ Association Landscape Assessment Tool workshop (January 2012)
Sample Listing of Wind-Wildlife-Habitat Tools for the Catalogue

- Rapid Assessment Tool (USGS in collaboration with USFWS)*
- WGA Western Governors’ Wildlife Council’s Decision Support Systems (States as described under the WGA-DOI-USDA-DOE wildlife MOU)*
- Energy By Design siting tools (The Nature Conservancy (TNC); funded by AWWI and DOE)*
- Pandion/Normandeau Habitat-Based Wind-Wildlife Risk Tool (Commissioned by DOE)*
- AWWI Landscape Assessment Tool (funded by AWWI and DOE, TNC developed)
- Oklahoma Lesser Prairie Chicken Spatial Planning Tool

* Under development
Target Schedule

- Oct/Nov 2011 – Workshop (Washington DC ?)
- Jan 2012 – User Requirements / Architecture Draft (ESIP Meeting)
- Jul 2012 – Online System 1.0 (ESIP Meeting)
- Jan 2012 – Update v2.0 (ESIP Meeting)