**Session Name:** Methods for Navigating Wicked Terrain

**Speakers:** Edward Wilson, The Headwaters Group Philanthropic Services

 Glenn Page, SustainaMetrix

**Session Date/Time**: 6/24/2011 11:00 AM

**Notetaker:** Katelyn Cummings

**Main Themes:**

* Purpose of this session:
	+ To demonstrate ways to deal with “wicked problems”
* Mind mapping can be used to better illustrate wicked problems, such as Marcellus Shale in PA.
* Learning about a community before trying to fix the problem can be an effective approach in evaluation.

**Detailed Notes:**

**Speaker One: Drilling Down on the Impacts of Hydrofracking: Using mind Mapping Software to Navigate a Wicked Problem**

* The Marcellus Shale problem in PA holds enormous potential for extracting natural gas.
	+ 4,500 active wells and growing
	+ Possibility for economic improvement and potential for environmental destruction
* Used mind mapping software to demonstrate the problem
* Typical “wicked problem” -> multiple, connected, ill-defined issues that are inseparable and cannot be solved by technical solutions
* Mind mapping software can easily show opportunities as well as threats, can include lots of information under subheadings
* Shows both sides of the story
	+ Natural gas could be a bridge fuel to more sustainable energy
	+ Leaking gas may negate the savings from using CO2
* Environmental impacts
	+ Air pollution
	+ Land use impacts
	+ Water resource impacts -> No one knows what’s in the fracking fluid
	+ Cumulative impacts on water
		- Forest fragmentation
		- Increases in quarrying
* Human impacts
	+ Job Creation - possible inflation, also workers imported from other states
	+ Bought up local housing
	+ Increased crime
	+ Energy Boom towns

**Speaker 2: Response to Ecosystem Change: Using a Complexity Lens**

* Currently in an anthropocene, human activities are affecting the ecosystems
* How do we begin to adapt and respond?
* The program, called Hen Mpoana, wants to improve the ecosystems in Ghana
* On Ghana’s shores, there is offshore drilling for oil
* Why should they care about the coastline
	+ They eat a lot of fish
	+ It’s where they live
* Their approach is to listen to the people and understand the place before trying to make changes
* If you understand the challenges, you can better frame the solutions.
* Looking at ecosystem based governance
* Decline in fish catching major problem
* Number of fish out there is going down and the amount of time it takes to catch them goes up
* Major issues are intertwined
	+ Expanding population
	+ Climate change
	+ Oil and gas development
	+ Loss in environmental services and goods
	+ Threats to biodiversity
* Changes in ecosystems -> Response to change ->Looking at trends/ strengths & weaknesses
* Need to ask “wicked questions” to bring up all the elephants in the room
* People of the place come together to share information

**Points of Discussion:**

* How can we affect behavioral change?
* How can working with local populations be more effective?
* Use time lining tools
* Figure out ways to switch out of the status quo
* Find out what has gone on there
* Help create their narrative/get them apart of the process

**Websites/Programs:**

* [Personal brain](http://www.thebrain.com/products/personalbrain/)
* [Spicy Nodes](http://www.spicynodes.org/)
* [Cmap tools](http://cmap.ihmc.us/)
* [Debate Graphs](http://debategraph.org/home)
* [SustainaMetrix](http://www.sustainametrix.com/Sustainametrix/Home____.html)