How to Analyze A Social-Ecological System

Steve Carpenter, Scenarios Thinking Seminar, 2007

What is the question?

What are the boundaries of the system? What is the spatial grain of the analysis?

What is the time horizon? What is the frequency of projection (every year? to the endpoint?)?

What are the components (ecological-social-political-economic) within the system?

What are the connections and feedbacks (physical, biogeochemical, biotic, social, economic, political) within the system?

What are the inputs and drivers?

> What is not controllable? What is controllable? Where are the control points?
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> What is ambiguous or uncertain? What is known (even if random)? Can learning be managed and if so how?
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> What are the TINAs (There Is No Alternative)? What can plausibly be changed?

What are the outputs for the scenario exercise?

Recheck: What was the question again? Is it the right question? What information do we need to answer the question? Will we get the information we need from this analysis? Repeat the sequence as needed.