Integrated System Assessment

Stewardship is achieved through the design of behavior at the interface of social and ecological systems. Systems are nested and operate at multiple scales-the earth is a shared system now dominated by human behavior. While ecological systems are tangible, social systems are largely a fabrication of consciousness. Stewardship design requires identifying a system of appropriate scale for our work, and discerning both ecological and social context, at both larger and smaller scales than our system of interest. Large scale structures and processes are often stable and slow, and smaller scales are often fast and evolving. We are both influenced and inherit our purposes from our context within larger scale systems. We act on larger systems only through the cumulative effects of work within our zone of influence. There are likely optimal scales at which to cause a durable change in system state. The complexities of systems are best integrated in places at a human scale. Design is driven by values. At any scale, the functions of a system are shaped by the interactions among processes and structures, resulting in the emergence of functions or dynamics. Often a few defining processes regulate system behavior. Some system dynamics are stable and generative, which we describe as natural, human, or economic capital. Many different forms of capital are realized and sustained at different scales. Stewardship is the process of developing and sustaining diverse forms of capital through the cultivation of effective individual actors within a nested human-ecological system.

