

# Evaluation at the Nexus

Evaluating Sustainable Development and Natural  
Resource Management and Development

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Andy Rowe  
ARCEconomics  
Salt Spring Island, BC, Canada

# Logic for this presentation

1. Sustainable development goals, climate change, natural resource management are all nexus interventions
2. Nexus interventions have distinguishing characteristics that evaluators need to understand and address and which require adaptation of evaluation approaches and methods
3. Connectivity is an essential concept for evaluation at the nexus as well as for policy, program and project design
4. The intellectual capacity for evaluation at the nexus is not nearly what it needs to be

# Distinguishing Characteristics of Nexus Evaluands

- Two-system evaluand
  - Always dealing with evaluation subject that has both human and natural systems
  - The systems are coupled and dynamically influence each other at points of coupling
  - Scale (temporal and spatial) usually differs by system

# Implications of Nexus Evaluands for Approach and Methods

- Think of two coupled systems as having more moving parts than a single system evaluand
- Many evaluation methods use comparison to try to quiet or control changes attributable to forces other than the intervention being evaluated
- Settings where we can control moving parts in two coupled systems are infrequent unless they occur naturally
- Nexus settings are often more challenging evaluations and sometimes we cannot take the evaluation as far as with single system settings
  - For example we might only be able to do contribution analysis (what intervention contributed to what we observe) compared to attribution (what we observed and what the intervention contributed). See for example GEF [Climate Change Mitigation Impact Evaluation](#).



# Connectivity

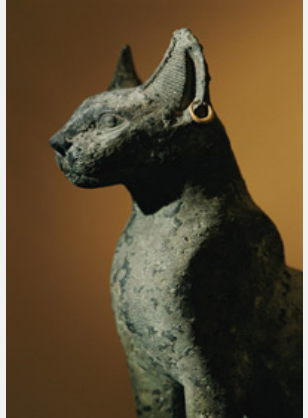
1. Important for understanding Nexus evaluands, but can be obscure
2. Is a concept that we have not sufficiently integrated into evaluation generally.
3. In evaluation some believe program logics capture connectivity

*Cats and Climate  
Change* 5



Connectivity as  
mechanism of  
change

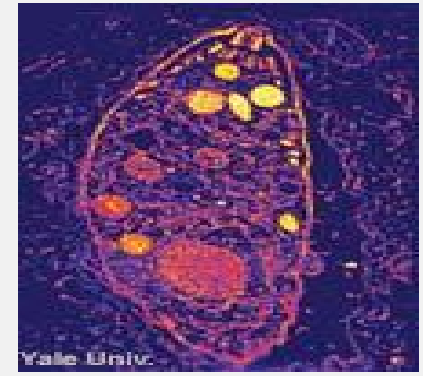
# Cats, Sea Otters, Sea Grass and Global Warming



Humans domesticated cats which became the most invasive species on earth



Cats annually kill an estimated 40% of the songbirds in North America



Cats get parasite *Toxoplasma gondii* from eating infected rodents, small birds or other small animals



# Cats, Sea Otters, Sea Grass and Global Warming



JupiterImages

Cats poop in kitty litter, each deposit can contain up to a million parasites, litter now public transport for parasites



Litter flushed down toilets, disposed in other ways that takes parasites into municipal water and sewer systems, carried to near shore ocean waters



Mussels, crabs and other filter feeders ingest parasites that then become concentrated in these critters



Connectivity as  
mechanism of  
change

# Cats, Sea Otters, Sea Grass and Global Warming



Sea otters eat mussels, crabs and other filter feeders, parasites infect and kill sea otters

Sea otters play a critical role in seagrass health by consuming algae and marine insects growing (due to nutrient runoff from fertilizers and other sources) on seagrasses



Coastal seagrass beds store up to 83,000 metric tons of carbon per square km, mostly in the soils beneath them - a typical terrestrial forest stores about 30,000 metric tons per square km, most of which is in the form<sup>8</sup> of wood.



Connectivity as  
mechanism of  
change

# Cats, Sea Otters, Sea Grass and Global Warming



# Connectivity and contemporary evaluation

- It is sometimes useful to think of a connected chain such as cats, sea otters and sea grasses as an *unrestricted theory of change*.
- Evaluation in general tends to accept the direct reach of the intervention as the limit of the evaluand
  - The rise of results accountability, performance measurement in combination of organisations around smaller cost or functional units has limited the direct reach of interventions
  - If we stay within the reach of interventions we rarely get to the public interest (Chelimsky reference)
  - And by staying with the reach of interventions evaluation tends towards reinforcing silos whereas it should at least be silo-connecting and more usefully silo-busting.
- This is an area where lessons from evaluation at the Nexus can enhance evaluation in general

# Weak intellectual infrastructure for evaluation at the Nexus

- Compared to health and human service settings
  - There are few evaluation-trained or broadly evaluation experienced people working in NRM, CC, sustainable development or other Nexus settings
  - Effectively no professional development or academic training opportunities
  - Peer reviewed publications are relatively infrequent and it is often more challenging to place articles in peer reviewed vehicles.
- Evaluation in general has not begun to develop capacity to work with natural sciences or to incorporate appropriate natural science into evaluation methods.
- Evaluation approaches and methods need to be adapted or new approaches developed to serve the range of Nexus settings that would benefit from evaluation.
- Natural scientists are neither familiar nor comfortable with social science methods or evaluation questions
- Evaluation at the Nexus brings social and natural sciences together and requires both sciences.

# Concluding Comments

1. This book addresses evaluation at the Nexus and is an important and still very early step to identifying the challenges and issues that involves.
2. I have identified the Nexus as a two-system setting involving two or more coupled systems usually operating at different temporal and spatial scales
3. It will usually be more challenging to undertake evaluation at Nexus settings
  - Understanding the connections between and along systems can be very challenging. Connectivity concepts can assist us here.
4. Current capacity of evaluation is relatively weak for evaluation at the Nexus, and the broader evaluation field has yet to grasp that it needs to adapt to address the top issues of today such as climate change and sustainable development
5. We need more efforts such as this book to rapidly build the ability of evaluation to contribute to these issues.