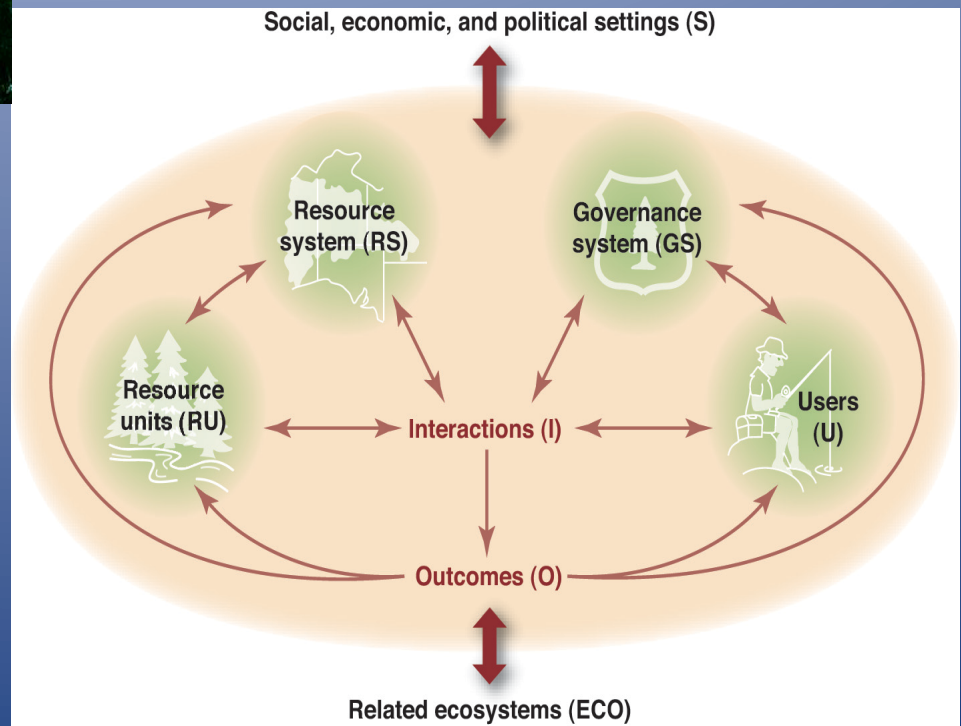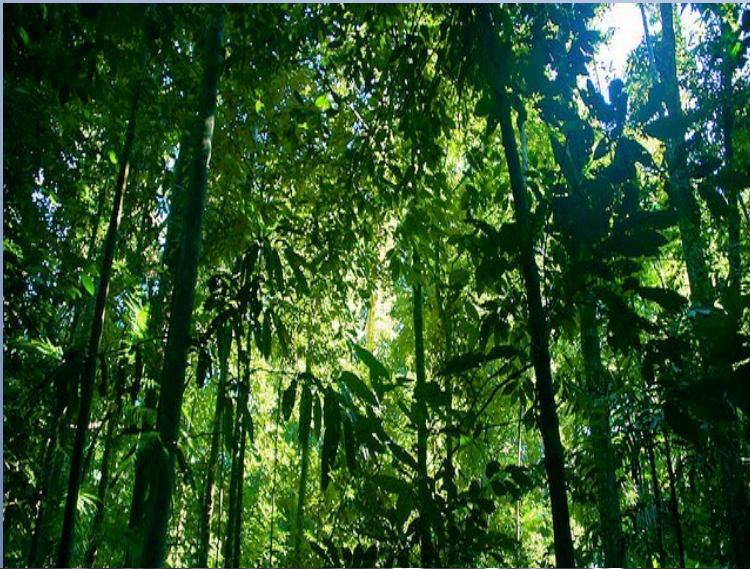# Studying Common Pool Resources

Edella Schlager
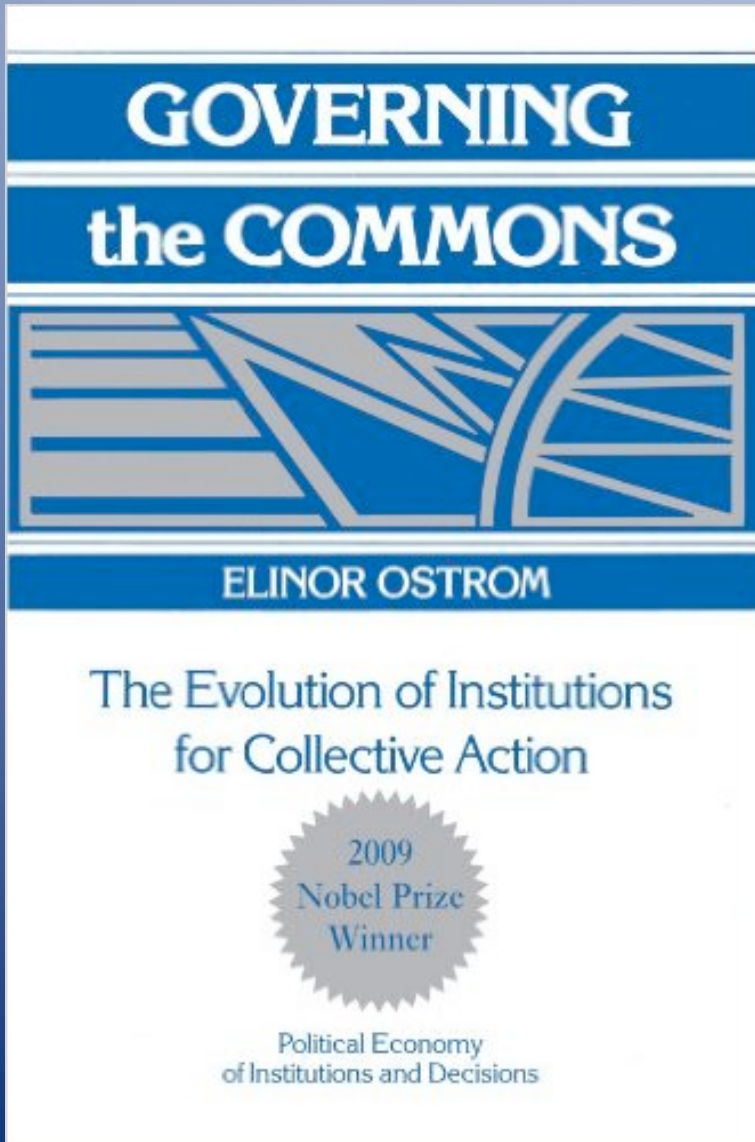
School of Government and Public Policy

Elinor Ostrom. 2009. "A General Framework for Analyzing Sustainability of Social-Ecological Systems" Science 325(5939):419-422.

Schlager, E and T Heikkila. 2009. "Resolving Water Conflicts: A Comparative Analysis of Interstate River Compacts" Policy Studies Journal 37(3):367-392.

GOVERNING the COMMONS

ELINOR OSTROM

The Evolution of Institutions for Collective Action

2009 Nobel Prize Winner

Political Economy of Institutions and Decisions

Table 2. Conflict Configurations Addressed by Compact Commissions (N = 8)

Configuration	Interstate Parties	Distributional	Compatibility	Upstream Downstream	Complexity	Number of Cases
One	1	1	0	0	0	3
Two	1	1	0	1	0	2
Three	1	0	1	0	0	1
Four	1	0	0	0	0	2

1 = condition is present in case, 0 = condition is absent in the case.

Each row represents conflict cases that exhibit a specific configuration of conflict characteristics or conditions. For instance, configuration one, found in three cases, consists of conflicts that involve interstate parties and distributional issues. Overall, the table illustrates that compact commissions address conflicts involving interstate parties and various combinations of other conditions, such as compatibility conflicts between state la...

Table 3. Conflict Configurations Addressed by Alternative Venues (N = 15)

Configuration	Interstate Parties	Distrbutional	Compatability	Upstream Downstream	Complexity	Number of Cases
One	0	1	1	0	0	1
Two	0	1	0	0	0	2
Three	0	0	1	0	0	2
Four	1	0	0	1	0	2
Five	1	0	1	1	0	1
Six	1	0	1	1	1	1
Seven	1	1	0	0	1	2
Eight	1	1	0	1	1	1
Nine	1	1	0	0	0	1
Ten	1	1	0	1	0	1
Eleven	1	0	1	0	0	1

1 = condition is present in case, 0 = condition is absent in the case.

Each row represents conflict cases that exhibit a specific configuration of conflict characteristics or conditions. For instance, row one consists of a conflict case addressed by a venue other than a compact commission that involved intrastate parties and distributional and compatibility issues. Overall the table illustrates that venues other than compact commissions address a diverse set of conflict cases that exhibit a number of different combinations of issues.

Chhartre, A and A Agrawal. 2008. "Forest Commons and Local Enforcement" Proceedings of the National Academy of Sciences 105(36):13286-13291.
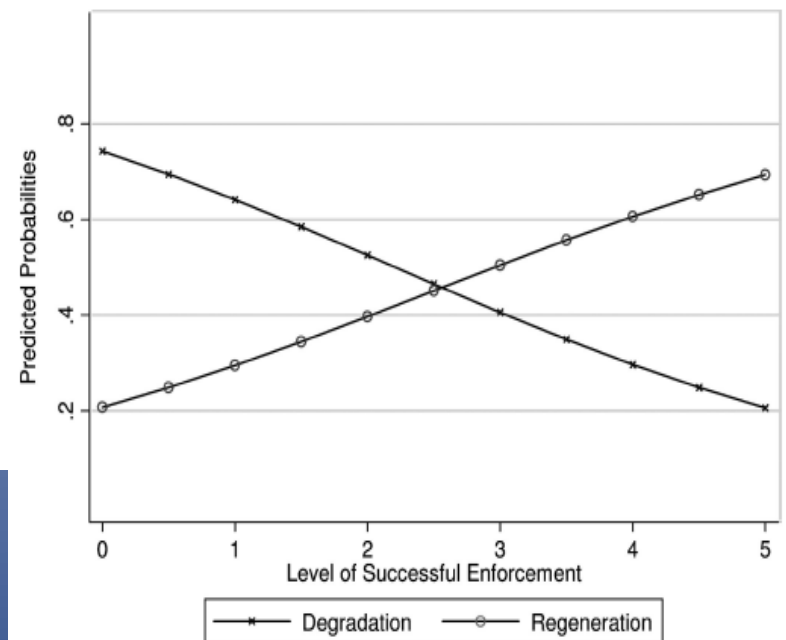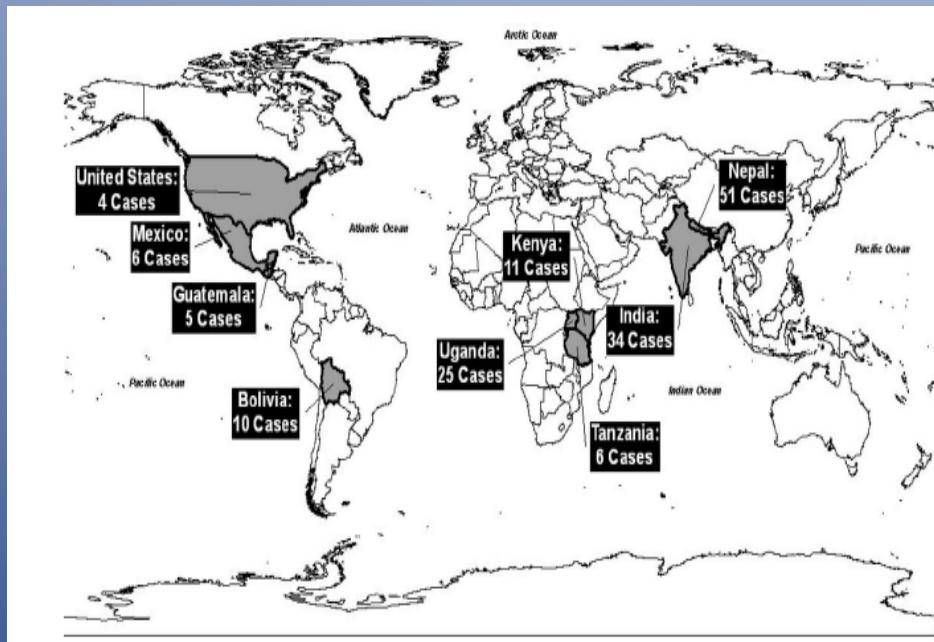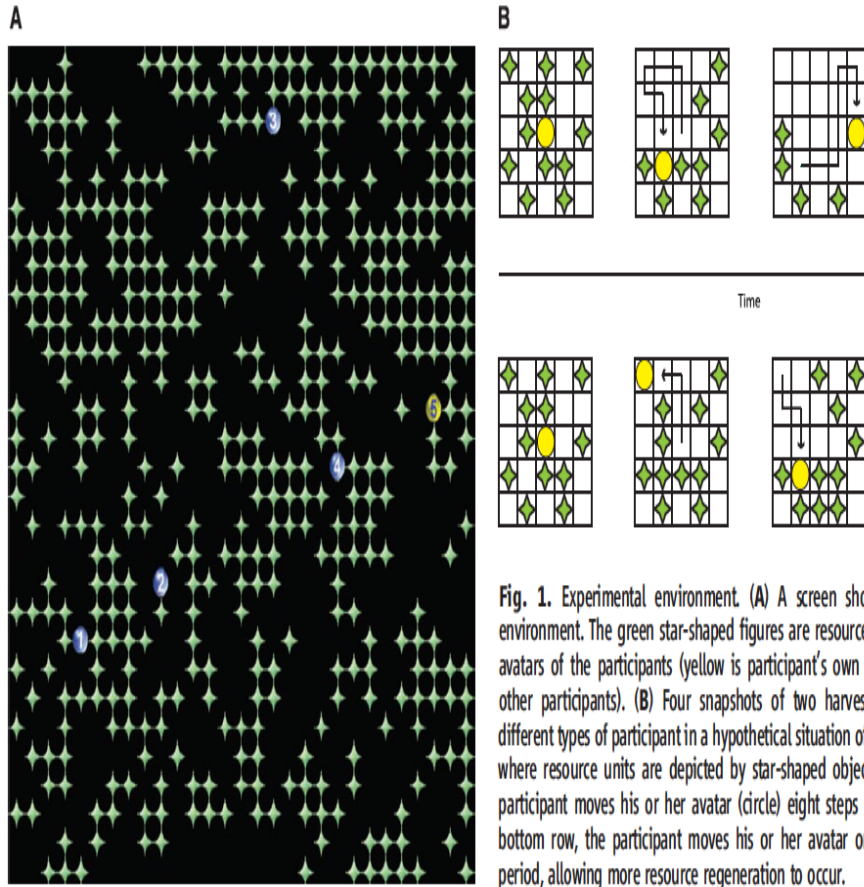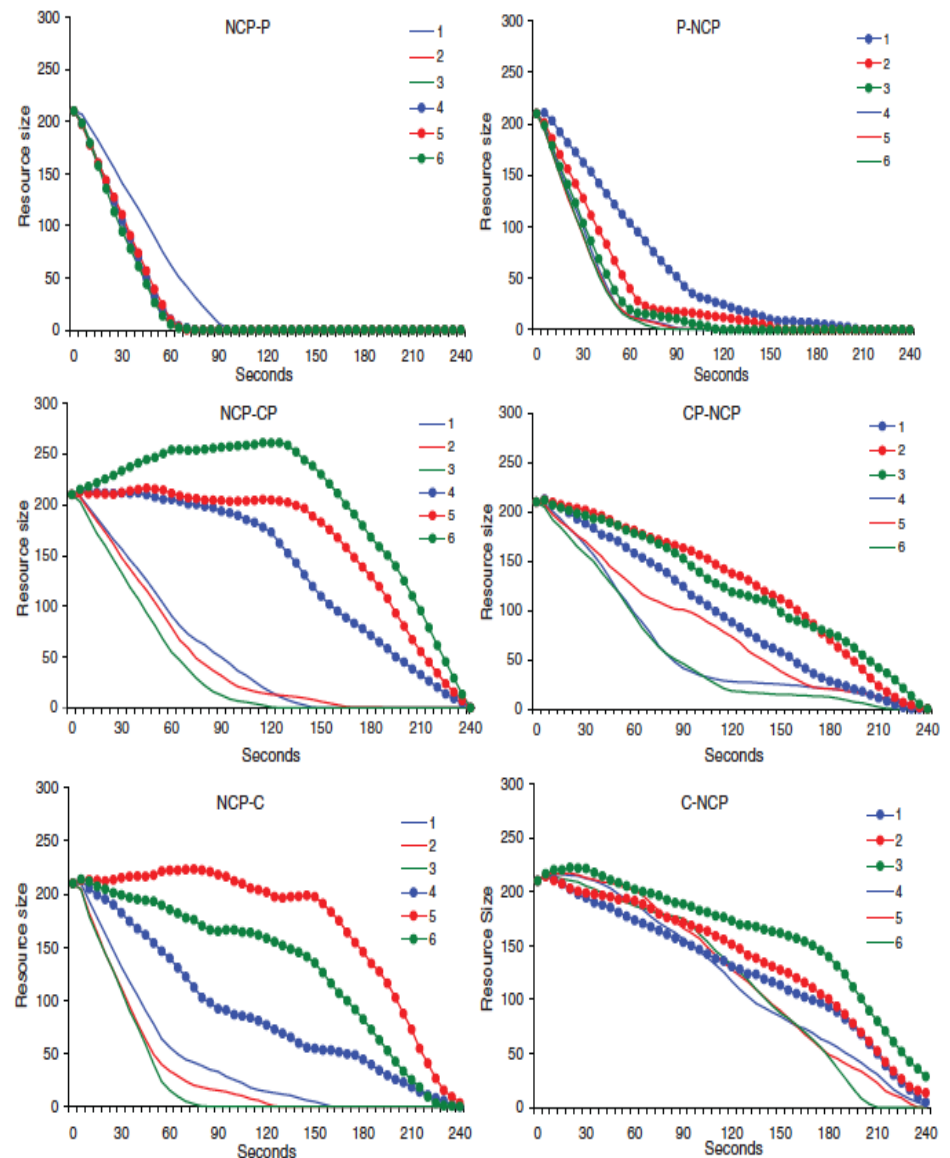

Fig. 2. Relationship of level of enforcement with the predicted probability that a forest has degraded or regenerated. The level of successful enforcement (x axis) varies between 0 = no enforcement and 5 = strict enforcement. Probabilities are calculated holding all other variables at their median values.

LABORATORY EXPERIMENTS

A

B

Time

Fig. 1. Experimental environment. (A) A screen shot environment. The green star-shaped figures are resource avatars of the participants (yellow is participant's own a other participants). (B) Four snapshots of two harvest different types of participant in a hypothetical situation of where resource units are depicted by star-shaped object participant moves his or her avatar (circle) eight steps p bottom row, the participant moves his or her avatar on period, allowing more resource regeneration to occur.
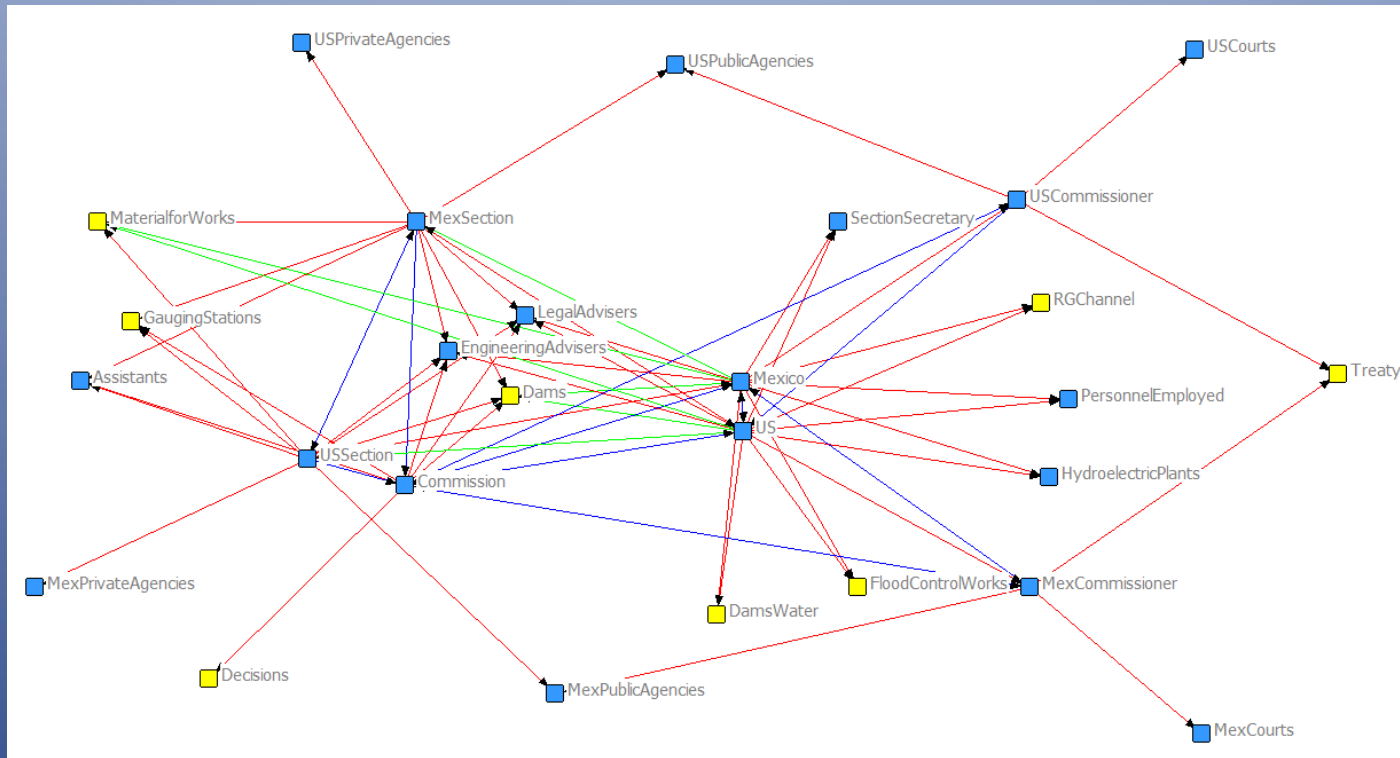

Fig. 2. Resource availability at given times. The diagrams show the average remaining level of the resource for the five or six groups of each treatment. Each diagram shows a treatment condition, and each line represents a particular period. The treatment is a combination of two sets of three periods of a specific condition. The names for these conditions are noted in the upper left of each display: NCP for neither communication nor costly punishment, C for communication, P for costly punishment, CP for communication and costly punishment. A treatment A-B refers to condition A for the first three periods and B for the last three periods. The colors and shapes referring to data of each period are noted in the upper right.

Janssen, M, et al. 2010. "Lab Experiments for the Study of Social-Ecological Systems" Science 328:613

Network Analysis

Rio Grande Treaties (1906, 1944)
between US and Mexico

Blue Nodes: actors
Yellow Nodes: infrastructure

Red ties: choice rules
Blue ties: information rules
Green ties: payoff rules