

## WHAT ARE THE OUTCOMES OF ECOSYSTEM MANAGEMENT EFFORTS?

**Ecosystem management (EM) is an approach to managing natural resources that considers multiple species in whole ecosystems, involves the collaboration of multiple participants, and balances social needs with ecosystem protection. Since 1995 the Ecosystem Management Initiative has been tracking EM approaches across the country to characterize and learn from this experience. Based on phone and written surveys of 100 cases in 1995, 1999 and 2003, here is a picture of the *ecological, social and process outcomes* of these efforts over time.**

### Cases at a glance

**Age** of a project ranges from two to 32 years old in 2003, with an average age in 2003 of 10-15 years.

**Area** ranges from 60 to 410,000,000 acres, with the majority of projects less than 500,000 acres, on both private and public lands, frequently with federally listed threatened or endangered species on site.

**Ecosystem** types vary widely, but most projects focus on wetland, river, forest and/or grassland ecosystems, while fewer are based on desert or coastal systems.

**Resource use** commonly in project areas includes development, agriculture, timber and/or recreation.

For more information and additional fact sheets see:

[http://www.snre.umich.edu/ecomgt/research/em\\_trends.htm](http://www.snre.umich.edu/ecomgt/research/em_trends.htm)

### What ecological improvements are occurring?

- Many projects report that the **health or integrity of the ecosystem** has improved. Specifically, many **restoration activities** have been completed and, at least for half the projects, there has been a considerable increase in **protected area** (through acquisitions, easements or reserves).
- Improvements in *public* resource management are often greater than improvements in *commercial* or *industrial landowners' practices*.
- For most projects there has been only slight or no improvement in hydrology, water quality, rare species populations, or invasive species.

### Are social or economic conditions improving?

- Almost half of the projects report an increase in **public awareness** of environmental issues as a result of project efforts, and for some projects **recreational** opportunities or access improved.

- The majority of projects report slight or no improvement in the stability or diversity of the **local economy** or **community well being**.

### Are there process improvements?

- The majority of projects report considerable progress in **knowledge**, such as identification of areas for protection and improved scientific understanding of the area, as well as the **collaborative process**, including stakeholder communication or cooperation, support, trust and respect.
- Overall, projects report more progress related to planning, organizing and obtaining information, than progress in improving social or ecological conditions.

### What outcomes are occurring?

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|--|---|
| Most common                            | ➤ Identified critical areas                                       |
|  | ➤ Scientific understanding  |
|  | ➤ Stakeholder cooperation, support, trust or respect, involvement |
|  | ➤ Monitoring data   |
|  | ➤ Public environmental awareness                                  |
|  | ➤ Completed restoration activities                                |
| Least common                           | ➤ Improved decision-making structures                             |
|  | ➤ Water quality   |
|  | ➤ Protected community character                                   |
|  | ➤ Rare native species populations                                 |
|  | ➤ Commercial/industrial landowners' practices                     |
|  | ➤ Invasive species reduction                                      |
|  | ➤ Community well-being  |
| ➤ Stability/diversity of local economy |   |

### How do outcomes change over time?

Compared to younger projects or those in the planning phase, older or more advanced projects report significantly greater ecological and social improvements, such as increased native species diversity and viable habitat and more diverse/stable economies and protected community character. This, together with the high ratings of process improvements across all projects, suggests that planning, information and collaboration improvements *precede* substantive improvements.

In terms of fundraising, older projects report less success of fundraising efforts than younger projects. This may be because fundraising is less of a focal strategy of older projects, or because obtaining seed money is less difficult than continued funding

### Sources

Schueller, Sheila K. and Steve L. Yaffee. Trends in Collaborative Ecosystem Management from 1999 to 2003. *In prep.*

Brush, Mark, Allen Hance, Kathleen Judd, Elizabeth Rettenmaier. 2000. Recent Trends in Ecosystem Management. A Master's Project completed for the School of Natural Resources & Environment, University of Michigan, Ann Arbor, MI.

Yaffee, Steven L. Ali F. Phillips, Irene C. Frentz, Paul Hardy, Sussanne Maleki, and Barbara E. Thorpe. 1996. Ecosystem Management in the United States: An Assessment of Current Experience. Washington, DC: Island Press.