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Measuring the Effects on the Quality of Local Plans Based on the Principles of Collaborative Ecosystem Management

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From the *Journal of Planning Education and Research*
2003 22: 407-419

In recent years there has been a shift in how natural resources are analyzed. The new approach, ecosystem management, has moved away from focusing on individual species to a more comprehensive approach over the entire ecological system. This shift has led to changes in planning for ecosystems.

Researcher Samuel Brody examined how the involvement of stakeholders in the comprehensive planning process in Florida affects plan quality for the long-term management of ecological systems. The study seeks to determine which stakeholders have the greatest impact on plan quality and finds that the participation of certain stakeholders has a positive impact on ecosystem plan quality.

Brody examined comprehensive plans of eight cities and counties from Florida's east and west coasts and the Florida panhandle. Five stakeholder participant categories were studied:

- resource-based industry
- business
- environmental non-governmental organizations (NGOs)
- local government
- other stakeholder groups

The study explored how both general stakeholder involvement and the participation of specific stakeholders affect the planning process.

Methods: Measuring Stakeholder Involvement

- Survey on public participation and planning conducted
- Personal interviews with planning staff
- Measured the presence of each stakeholder group
- Measured representation of each group throughout the process
- Measured the participation of five core participant categories:
 1. resource-based industry
 - agriculture
 - forestry
 - marine
 2. business
 - development associations
 - commercial development groups
 - homeowners associations
 3. environmental NGOs
 4. local government
 5. others
 - neighborhood groups
 - elected officials
 - affordable-housing groups
 - representatives of special districts

FINDINGS

Although theory suggests that having a broad stakeholder representation is ideal, this study found that large representation does not necessarily lead to higher plan quality regarding ecosystem management. There tend to be too many competing interests, which can lead to a “lowest common denominator” in plan quality in order to reach any type of agreement.

The representation of individual stakeholders did have a significant impact on the quality of the plan:

1. The presence of resource-based industry groups (agriculture, forestry, marine, and utilities) had the strongest positive influence on the ecosystem plan. The resource-based industry is an important stakeholder to bring to the table when developing a plan since two-thirds of the land base in the United States is privately owned and there is a common interest in preserving the land and resources for future sustainability.
2. The presence of NGOs also has a significant positive impact on the plan due to the environmental data and knowledge these organizations can offer.
3. The presence of local governments tended to negatively affect the quality of the ecosystem plan because many governmental agencies may not benefit in the long run from ecosystems management. Further, these agencies may have conflicting goals that can negatively affect plan quality.
4. The study found that population also strongly influences plan quality. Areas that are more populated tend to experience more growth pressures, which may produce a greater perceived and/or actual need to protect remaining biodiversity.

For environmental planning, a broad representation of stakeholders may not be as beneficial as expected. Planners should focus on encouraging participation among the types of stakeholders that would positively affect environmental/ecosystem plan quality. The groups that have the highest positive impact on a plan are those that have common interests or goals. Specific stakeholders can also bring knowledge and additional resources to the planning process.

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KNOWLEDGE TO ACTION: Interpretation for Practice

Ecosystem plan coding protocol: The five components of ecosystem plan quality (with example indicators)

1. Factual basis

- A. Resource inventory
 - i. Habitat corridors
 - ii. Areas with high biodiversity
- B. Ownership patterns
 - i. Distribution of species
 - ii. Conservation lands mapped
- C. Human impacts
 - i. Environmental regulations described
 - ii. Carrying capacity measured

2. Goals and objectives

- A. Maintain intergenerational sustainability of ecosystems
- B. Restore ecosystems/critical habitat
- C. Protect integrity of ecosystem
- D. Protect high biodiversity
- E. Protect rare/unique landscape elements and endangered species
- F. Maintain connection among wildlife habitats

3. Interorganization coordination and capabilities for ecosystem management

- A. Position of jurisdiction within bioregion specified
- B. Coordination with private sector
- C. Coordination with other organizations/jurisdictions specified
- D. Conflict management processes

4. Policies, tools, and strategies

- A. Regulatory tools
- B. Incentive-based tools
- C. Land acquisition programs
- D. Other strategies
 - i. Designation of special taxing districts
 - ii. Public education programs

5. Implementation

- A. Regular plan updates and assessments
- B. Enforcement specified
- C. Designation of responsibility
- D. Clear timetable for implementation
- E. Monitoring for plan effectiveness and response to new information