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Conservation Thresholds for Land Use Planners

A Wingspread Conference Sponsored by:

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Conference Objectives & Themes¹

Wingspread Conference Goal and Objectives

Advance the field of conservation planning by identifying robust and measurable implementation strategies that support the development and application of science-based conservation thresholds.

The specific objectives of this working meeting are to:

- Identify the type and format of conservation thresholds needed by planners to transform traditional planning approaches into innovative and effective conservation tools;
- Highlight gaps in the conservation biology literature and available resources that could be utilized to support the development of science-based planning thresholds;
- Identify the most significant obstacles to applying science-based conservation thresholds; and
- Develop a set of clear recommendations for advancing the application of conservation thresholds.

¹ The development of the conference themes was guided by the views and recommendations outlined in a series of essays by leading conservation biologist and land use planners commissioned by ELI in 2006. See Kihlslinger, R.L. and J. Wilkinson (eds.) 2007. *Lasting Landscapes: Reflections on the Role of Conservation Science in Land Use Planning*. Washington D.C.: Environmental Law Institute

Framing Issues

Conservation planning is defined by the development of biologically defensible plans that maintain natural habitat in the amount, configuration, and quality safely above the threshold at which population viability and richness of native species begins to decline precipitously.² Effective conservation planning is also characterized by planning that supports human health and sustainable communities, as well as conservation goals.³

To date, conservation planning successes have depended on “an auspicious combination of high-quality information, visionary leadership, a linkage between and translation of science and planning, and solid funding,” often jump-started by a regulatory planning requirement.⁴

How can we make these auspicious convergences more commonplace, proactive, and carried out at a landscape scale?

Generalizations, Platitudes, and Acknowledged Realities

- Our understanding of the natural world is imperfect and uncertain.
- Highly specific rules of thumb are not defensible when applied generally, as each case is special and idiosyncratic.
- Setting specific conservation thresholds is challenging and can be dangerous.
- Conservation thresholds should be tailored for specific situations with the input of scientific expertise that relies upon the best available information.
- In the face of competing values, the role of science is not to provide *the* answer; science can, however, ensure that critical biological issues are addressed and decided on a fair and level playing field.
- To support conservation planning, scientists may need to engage constructively with parties that hold very different values and to accept compromise.
- Planners are in great need of a starting point – rules of thumb – for how to proceed when detailed, case-specific information is deficient and access to scientific expertise is limited.
- Conservation planning should not allow the perfect to be the enemy of the good – planning will proceed with imperfect information or no information. The choice is ours and the sooner the better.

² Noss, R.F. 2007. Conservation Thresholds: Overview and Commentary. In Kihlslinger, R.L. and J. Wilkinson (eds.) *Lasting Landscapes: Reflections on the Role of Conservation Science in Land Use Planning*. Washington D.C.: Environmental Law Institute.

³ Perlman, D.L. 2007. Views of a Conservation Biologist. Kihlslinger, R.L. and J. Wilkinson (eds.) *Lasting Landscapes: Reflections on the Role of Conservation Science in Land Use Planning*. Washington D.C.: Environmental Law Institute.

⁴ Noss, R.F. 2007. Conservation Thresholds: Overview and Commentary. Kihlslinger, R.L. and J. Wilkinson (eds.) *Lasting Landscapes: Reflections on the Role of Conservation Science in Land Use Planning*. Washington D.C.: Environmental Law Institute.

The “What,” “Where,” “When,” “Why,” and “How” of Conservation Planning

The “what,” “where,” “when,” and “why” of conservation planning are largely developed in the existing conservation literature. The goal of this conference is to focus on the “how” of conservation planning by developing a set of clear recommendations for effectively carrying out conservation planning and applying conservation thresholds in practice.

- **What should be protected through conservation planning?**

Methods for determining *what* to protect to ensure that the full complement of native plants, animals, and natural communities is conserved, is well developed in the conservation literature (i.e., umbrella species, keystone species, at-risk species, representative samples of intact ecosystems).

- **Where should conservation planning tools be put into practice?**

Methods for setting geographic priorities – identifying and prioritizing the *where* – for the conservation of native plants, animals, and natural communities are largely captured (and debated) in the conservation literature.

Although the opportunities for conserving biodiversity may be most critical in exurban areas, the principles can be applied in urban, suburban, and rural settings.

- **When should conservation planning come into play?**

As soon as possible and as proactively as possible before populations of plants, animals, and natural communities are reduced below the threshold at which conservation measures can ensure their viability.

- **Why should conservation planning be used to protect native plants, animals and natural communities?**

Because the conservation of the full array of native plants, animals, and natural communities is vital to the economy, sustainability, provision of ecological services, quality of life, etc. These arguments are well developed in the conservation and economic literature.

- **How can conservation planning be most effectively carried out?**

Conservation planning is “mired in an implementation crisis.”⁵ *We need far more guidance on how to apply conservation science principles in a planning context.*

Possible Implementation Strategies

- Develop *communications tools* for land use planners to communicate the value of conservation planning to decisionmakers, such as local governments, and for scientists to communicate the knowledge that will enable decisionmakers to carry out effective conservation.

⁵ Knight, Andrew T., Richard M. Cowling, and Bruce M. Campbell. 2006. “An Operational Model for Implementing Conservation Action.” *Conservation Biology*. 20(2): 408-419.

- Develop *requirements and incentives* for proactive conservation planning.
- Develop tools to *measure the effectiveness* of conservation planning, and provide for *adaptive management* where needed to achieve the intended outcomes.
- Develop requirements and incentives to enable public and private decisionmakers to *overcome the disconnect between the different scales* at which land use planning and regulation, and effective planning for conservation of biodiversity are carried out.
- To the extent possible, *tailor conservation thresholds* for each specific situation, relying upon scientific expertise and the best available information.
- Develop outreach programs to provide planners with access to a robust *technical support infrastructure*, and provide *interdisciplinary training* for planners and conservation scientist

