



ELSEVIER

Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Landscape and Urban Planning 69 (2004) 149–151

LANDSCAPE
AND
URBAN PLANNING

This article is also available online at:
www.elsevier.com/locate/landurbplan

Introduction

The social aspects of landscape change: protecting open space under the pressure of development

The extent of developed land in many parts of the world has increased rapidly in recent decades, posing significant challenges to the protection of forests, agricultural lands, and other natural and culturally modified green areas in urban and rural settings. Sustaining these open spaces has long been seen as a critical issue economically, and it is now increasingly being seen as integral for sustaining our psychological health and our ethical relationship to the non-human world as well. As human population spreads across the landscape, natural resource managers and policymakers need to better anticipate and respond to the widespread changes and increasing pressures affecting open spaces. Social science research can play an important role in providing answers to address these vexing management concerns.

In October 1998, the USDA Forest Service, North Central Research Station (NCRS) launched a program of integrated research examining issues of development-related landscape change within the seven-state region of the North Central US (Gobster et al., 2000). In early discussions about the program, NCRS scientists representing the wide range of disciplinary expertise came to recognize that many of the issues underlying landscape change—problems and effects as well as solutions—were human in nature, and that in order to address them a solid research grounding in the social sciences was needed. As part of a small group of social scientists in the station, this gave us a unique opportunity to provide leadership and substance on this new NCRS initiative. Working with station scientists, university scholars, and natural resource practitioners, we began a research program aimed at understanding change in our region

as well as establishing linkages to ongoing efforts that extended beyond it.

To begin bringing the fruits of these efforts together, in June 2002 we organized a series of four sessions for the Ninth International Symposium on Society and Resource Management at Indiana University to examine current research and management experiences dealing with the social aspects of landscape change. Many of the talks focused on the North Central US, with contributors sharing local case studies and regional analyses that characterized the trends and challenges facing this varied landscape. These were complemented by talks describing national level assessments and work from other regions and countries. Together, the sessions spanned a diverse range of issues affecting urban, rural, and wildland settings.

As editors we have helped bring 10 of the original 18 talks from these sessions into paper form for this special issue, along with 2 additional papers (Vogt and Marans, Sullivan et al.) that stem from landscape change work sponsored in part from our station initiative. While the set collected here by no means covers all of the aspects of social science research relating to landscape change, it is our intent to provide researchers and practitioners with a solid representation of the issues.

Dwyer and Childs begin the discussion by showing how problems and opportunities stemming from people's movement across the landscape defy traditional means of categorization, challenging natural resource managers to understand and develop programs and policies that bridge urban, suburban, and rural areas and constituencies. Through examples and ties to other papers in this special issue, the authors provide

a useful overview of key substantive topics regarding the social aspects of landscape change. By focusing on private forestlands in Wisconsin's "Northwoods", Gobster and Rickenbach provide an overview of another sort. Using a process model of landscape change as a framework for asking questions, the authors examine how natural resource oriented stakeholders view parcelization and development patterns, causes, and effects, as well as the effectiveness of strategies aimed at stemming their negative consequences. By using this framework, the authors are able to identify the critical boundaries of landscape change issues for this group of stakeholders.

This same process model of landscape change is used to organize the remaining papers in this special issue. To better understand the patterns of landscape change in the North Central region, Hammer et al. use cluster analyses of housing density and housing growth data from the US Census for 1940–1990 to identify areas of the region with high growth potential. With parallels to the topical analysis by Dwyer and Childs, the authors' numerical methods reveal patterns of concern at the periphery of metropolitan areas, in smaller urban centers, and in rural recreation areas throughout the region. Palmer analyzes land use patterns in a different way, through the use of landscape metrics derived from landscape ecology and tied to people's perceptions of changes in scenic quality. Looking at a portion of the Cape Cod, Massachusetts landscape over a 20-year period, Palmer's analysis shows both the stability of perceptions over time and how landscape metrics can be used to predict the effects of land use changes on those perceptions. Alig and his colleagues complete this section with a look at some of the critical causes of landscape change, using National Resource Inventory data spanning 1982 and 1997 to look at changes in urbanization across the US and its regions. The authors find population density and personal income to be the most effective predictors of urbanization, and from their results project continued urban expansion over the next 25 years, with the magnitude of increase varying by region.

While the effects of landscape change are many and usually talked about in a negative way, there can be significant positive benefits to people and nature. This may be particularly true for new homeowners and suburban fringe areas, as a series of papers focusing on subdivision design in the rapidly developing area

of southeast Michigan attest. In a survey of new homeowners in traditional and open space conservation subdivisions, Kaplan and Austin find a strong preference among their sample for nearby natural settings, particularly forested ones. Following up on their work, Austin suggests that the protection of these settings may be more likely if they are in communal ownership as part of an open space conservation subdivision. A third, independently executed work by Vogt and Marans concurs with these findings, but also suggests that for some people the protection of natural areas and other open spaces faces stiff competition among the full range of considerations that go into home purchase decisions. While the researchers show that buyers of homes in conservation subdivisions place a high value on the natural, open characteristics of the landscape, buyers in general tend to put their highest priorities on home and neighborhood features, schools, and access to transportation in their purchase decisions for new homes in suburban fringe areas. As conservation developments are still a small proportion of the new home market in fringe areas of the US, the authors argue that this type of development needs broader support among consumers and policymakers before it can become an effective strategy for protecting open space.

Strategies for open space protection are the central focus of the final set of studies included in this volume, and here a variety of approaches to public policy, planning, and management are represented. Bengston et al. begin with a review of public policies for managing urban growth and protecting open space. In a systematic assessment of recent acquisition, regulatory, and incentive approaches instituted across the US, the authors glean some key lessons for improving policies with respect to their evaluation, implementation, complementarity, coordination, and stakeholder involvement. While the authors lament that little in the way of empirical policy evaluation has been accomplished, the following paper by Williams et al. demonstrates the value of doing so. The authors take an economic approach and show that the incentive-based Tennessee Forest Greenbelt Program has been ineffective in stemming the conversion of forestlands to other users. Sullivan et al. conduct an evaluation of another kind, looking at the perceptions of stakeholders toward vegetative buffer strips as a management strategy to ameliorate conflicts between farmers and residents at the rural–urban fringe. Using visual simulations of

alternative management scenarios, the authors show how buffers of various types can be designed to meet the approval of concerned stakeholders. Stewart et al. conclude this section by describing an effective approach to planning that uses photo elicitation as a public involvement tool. The authors focus on a large federal prairie restoration project taking root within a rapidly developing area of the Chicago urban fringe and identify themes about community learning, enactment, and improvement that can serve as a basis for establishing community visions for landscape change.

Since its inception, *Landscape and Urban Planning* (and its forerunners *Landscape Planning* and *Urban Ecology*) has been concerned with issues of landscape change as addressed by diverse perspectives from planning, ecology, and design. The human dimensions of landscape change holds an important place in this discussion and it is hoped that through this special issue we have contributed to the dialogue.

This theme issue is dedicated to Dr. David S. Shriner (1945–2003), who as Assistant Director of

the North Central Research Station provided a sustaining leadership and an endearing enthusiasm for landscape change research.

Reference

- Gobster, P.H., Haight, R.G., Shriner, D., 2000. Landscape change in the Midwest: an integrated research and development program. *J. For.* 98, 9–14.

Paul H. Gobster*

Susan I. Stewart

David N. Bengston

*USDA Forest Service, North Central Research
Station, 1033 University Pl., Suite 360*

Evanston, IL 60201, USA

*Corresponding author. Tel.: +1-847-866-9311x16

fax: +1-847-866-9506

E-mail address: pgobster@fs.fed.us

(P.H. Gobster)