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Urban green commons: Insights on urban common property systems

Johan Colding^{a,b,*}, Stephan Barthel^{a,b,c}, Pim Bendt^a, Robbert Snep^d, Wim van der Knaap^e, Henrik Ernstson^{b,f}

^aThe Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences, Box 50005, Stockholm, Sweden

^bStockholm Resilience Centre, Stockholm University, Kräftriket 2B, Stockholm, Sweden

^cDepartment of History, Stockholm University, SE-106 91 Stockholm, Sweden

^dAlterra, Wageningen UR, PO Box 47, 6700 AA Wageningen, The Netherlands

^eWageningen University, Land Use Planning Group, PO Box 47, 6700 AA Wageningen, The Netherlands

^fAfrican Centre for Cities, University of Cape Town, Environmental and Geographical Science Building, Upper Campus, Rondebosch, South Africa

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ABSTRACT

The aim of this paper is to shed new light on urban common property systems. We deal with urban commons in relation to urban green-space management, referring to them as urban green commons. Applying a property-rights analytic perspective, we synthesize information on urban green commons from three case-study regions in Sweden, Germany, and South Africa, and elaborate on their role for biodiversity conservation in urban settings, with a focus on business sites. Cases cover both formally established types of urban green commons and bottom-up emerged community-managed habitats. As our review demonstrates, the right to actively manage urban green space is a key characteristic of urban green commons whether ownership to land is in the private, public, the club realm domain, or constitutes a hybrid of these. We discuss the important linkages among urban common property systems, social-ecological learning, and management of ecosystem services and biodiversity. Several benefits can be associated with urban green commons, such as a reduction of costs for ecosystem management and as designs for reconnecting city-inhabitants to the biosphere. The emergence of urban green commons appears closely linked to dealing with societal crises and for reorganizing cities; hence, they play a key role in transforming cities toward more socially and ecologically benign environments. While a range of political questions circumscribe the feasibility of urban green commons, we discuss their usefulness in management of different types of urban habitats, their political justification and limitation, their potential for improved biodiversity conservation, and conditions for their emergence. We conclude by postulating some general policy advice.

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1. Introduction

There is increasing concern on how to design more ecologically sustainable cities. Those discussions gaining most prominence are architectural, or technical, including green buildings, green roofs, or the investment in low-carbon energy systems. In this paper we argue that an often-neglected dimension of sustainable city-making lies in how property rights are configured. In particular we compare cases in different countries that have managed to create what we refer to as 'urban green commons', areas that allow

residents and citizens to actively rework urban nature in ways that support ecological processes, while allowing for a collective caring of pieces of land in the city. Taken together urban green commons work against three dominant trends in cities – those of privatization of land, lowering contact between people and nature, and the impoverishment of ecological habitats and functions. Through our case studies we hope to point toward an area of research and practical development of more sustainable city-making.

Indeed, it has been suggested that the mechanisms behind the privatization of common land in the 16th century also pertain to modern-day cities. The privatization of public land in cities is currently so pervasive that property-right scholars regard it as a global phenomenon (Webster, 2003; Lee and Webster, 2006). An economic explanation is that urbanization results in scarcity of land in cities, accompanied by an increase in land prices with a

* Corresponding author at: The Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences, PO Box 50005, Stockholm, Sweden.
Tel.: +46 8 6739500; fax: +46 8 152464.

E-mail address: Johanc@beijer.kva.se (J. Colding).

subsequent subdivision of land that favors the growth of private land ownership (Barzel, 1997; Lee and Webster, 2006). In this argument, privatization leads to more efficient exchange, equating to a lowering of *transaction costs* – or the costs of creating and policing contracts that establish ownership over a commodity (e.g. land) (North, 1990; Webster, 2002).

Without taking adequate measures, loss of public domains could lead to that an increasing majority of people is denied the opportunity to practically engage with ecosystems in their immediate surrounding (Colding, 2011). This could spread ‘environmental generational amnesia’ among burgeoning urban populations (Miller, 2005), which in turn could affect policies to effectively deal with the global loss of ecosystem services (MA, 2005) climate change, and influence aspirations of human societies to reconnect to the biosphere (Folke et al., 2011).

The purpose of this paper is to shed new insights on urban common property systems. As the work of Elinor Ostrom reveals, natural resources throughout the world can be successfully governed by common property systems that are different from private or state property regimes, contradicting claims that natural resources need to be privatized or be controlled by the state or else face destruction due to collective action problems. Most common property studies have centered on rural settings, e.g. village woodlots, pastures, and irrigation water systems (Ostrom, 1990), community-managed forests (Alcorn and Toledo, 1998), pastoral systems (Niamir-Fuller, 1998), and local fisheries (Hanna, 1998; Acheson, 1988). When it comes to urban settings there exist remarkably fewer studies. For example, a subject online-search of the *Digital Library of the Commons* (in February 2011) reveals that only 110 of all available papers on common property (i.e. 1.4%) deal with ‘urban commons’.

In this paper we deal with urban commons in relation to urban green-space management, referring to them as *urban green commons*. Applying a property-rights analytic perspective, we synthesize information on urban green commons from three case-study regions in Sweden, Germany, and South Africa. They include studies on allotment areas in Stockholm, community gardens in Berlin, and emerging forms of urban commons in the post-apartheid city of Cape Town. We also discuss the potential of urban green commons in densely populated areas, with a focus on business sites based on Dutch site analyses.

We draw on previous case studies by the authors, supplemented by a review of relevant information in the economic literature (e.g. Webster, 2002; Lee and Webster, 2006) and the common property literature (e.g. Ostrom, 1990; Berkes, 1989; Berkes et al., 2003). We begin by presenting a background on the major concepts and issues dealt with herein, including providing a definition of what we mean by the term ‘urban green commons’. Next we deal with examples of urban green commons from the case-study regions. Based on reviewed cases, we synthesize and discuss some critical features of urban green commons based on analyses of bundles of property rights (Ostrom and Schlager, 1996) and theories on congestion of public domains (Lee and Webster, 2006). We move on to discuss the applicability of urban green commons in urban settings, conditions for their emergence and conclude by postulating some general policy advice.

2. Background

2.1. Property rights and natural resource management

Property-rights regimes (Table 1) comprise rights to resources and the rules under which those rights are exercised, representing key institutions for controlling stocks and flows of natural resources (Hanna et al., 1996). By the term institutions, we mean the rules and conventions of society that coordinate human interaction, including formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions and self-imposed codes of conduct), and their enforcement characteristics (North, 1990; Colding and Folke, 2001). Institutional scholars claim that no single type of property-rights regime can be prescribed as a remedy for resource overuse and environmental degradation; rather policy should focus on establishing regimes that are designed to fit the cultural, economic, and geographic context in which they are to function (Ensminger, 1993; Hanna et al., 1996).

Common property regimes, which is the focus of this paper, are systems of social arrangements that regulate the maintenance and consumption of common-pool resources. Due to that common-pool resources generally are subject to the problems of congestion, overuse, pollution, and potential destruction there is a need to devise and enforce rules that avoid such mischievements and/or impose limits for use (Colding and Folke, 2001). In common property regimes, control and management rights to resources are in the hands of an identifiable community, or a group of users, that may craft their own institutions for management of the resources within given legislative forms of society (Berkes and Folke, 1998; Berkes et al., 2003). Hence, users in such systems manage resources collectively by way of a wide array of rules-in-use, norms and social mechanisms (Berkes et al., 2003; Colding et al., 2003; Ostrom, 2008). Membership may either be formally defined or according to *ex post* criteria such as residence or acceptance by existing members in the group. Another important characteristic of common property regimes is that the users have the right to exclude outsiders, in recognition of that the right to exclude also is the right to include (Webster, 2007). Moreover, ownership to land is often vested in the community or groups of users, although in reality such ownership is often contested, e.g. in the case of indigenous land rights (Alcorn and Toledo, 1998; Colding and Folke, 2001).

Most natural resources can be classified as “common property resources” (or, common-pool resources). A common-pool resource (CPR), is categorized by two attributes: non-excludability and subtractability, meaning that exclusion (or control of access) to the resources is problematic and individual use of it is capable of subtracting from the welfare of other users (Berkes, 1989).

2.2. Congestion and separation of attributes in public domains of cities

Two dimensions are fundamental for understanding the instability of public domains in cities. One is *congestion*, referring to the degree of competition within a public domain, or “the numbers of individuals who jointly consume it, and the range of

Table 1
Types of property-rights regimes with owners, rights and duties. In the property-rights literature, resources can be controlled and managed under four types of property-rights regimes: common property, state property, private property, and open access.

Regime type	Owner	Owner rights	Owner duties
Private property	Individual	Socially acceptable uses; control of access	Avoidance of socially unacceptable uses
Common property	Collective	Exclusion of non-owners	Maintenance; constrain rates of use
State property	Citizens	Determine rules	Maintain social objectives
Open access (non-property)	None	Capture	None

Source: Hanna et al. (1996).

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