



Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol



Taming expansive land use dynamics – Sustainable land use regulation and urban sprawl in a comparative perspective

Jana Bovet*, Moritz Reese, Wolfgang Köck

Department of Environmental and Planning Law, Helmholtz Centre for Environmental Research GmbH – UFZ, Permoserstrasse 15, 04318 Leipzig, Germany

ARTICLE INFO

Article history:

Received 26 May 2016

Received in revised form 14 March 2017

Accepted 21 March 2017

Available online xxx

Keywords:

Sustainable land management

Urban sprawl

Comparison of land use planning laws

Key governance requirements for

sustainable land management

Effectiveness

Land use

Sustainability indicator

ABSTRACT

Urban sprawl and infrastructure pose a major sustainability challenge. It is therefore extremely important for countries to implement advanced land use planning and steering instruments that are designed to mitigate urban sprawl and to enforce thrift development within a coherent legal framework of sustainable land use governance. The following article presents the results of a comparative legal assessment that looks at how this major challenge is tackled in certain countries (Germany, Switzerland, the Netherlands, Spain, Poland). The assessment is placed within a broader analytic framework based upon four key requirements of sustainable land use regulation which are also important precondition to successful mitigation of urban sprawl. These key requirements of sustainable land use regulation are described in the first part of the article. In the second part we present the results of the comparative assessment and describe how the key requirements are implemented in the land use regimes of the countries assessed, with a special focus on the mitigation of open space consumption. The evaluation shows the extent to which Germany, Switzerland, the Netherlands, Spain and Poland have advanced in adjusting their environmental and planning laws to the demands of sustainability and how, despite this, diverse opportunities for improvement remain. One important conclusion relates to the key requirement of setting clear sustainability targets and implementing regulatory mechanisms relating to those targets. In this regard a major deficiency of the existing national approaches lies in the fact that, so far, only two countries have set clear political targets: Germany has set a target to reduce land take for human settlements and transport infrastructure to a maximum of 30 ha a day and Switzerland has set a target of limiting land consumption for residential purposes at 400 m² per capita. But even there, there is no effective regime in place to ensure that the targets are met. Another conclusion relates to the key requirement of integrated and responsive steering and points to the importance of formal planning and assessment regimes in ensuring that shared environmental interests are properly integrated and that spatial planning and zoning are regularly monitored and reviewed. In this regard, we see that all the countries assessed have implemented monitoring systems and formal Environmental Assessments (EA) for land use and construction plans. However, the way these EAs are designed differs considerably, and therefore the national implementation is sometimes ineffective.

© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

Open spaces and healthy soils are fundamental to sustaining the natural environment and ensuring the production of healthy food. However, settlements and infrastructures are still expanding at extremely high rates in most regions across the globe, and very often green land is consumed in excessive and inefficient ways. The consumption of open space by urban sprawl and infrastructure development poses a major threat to sustainability (EEA, 2016).

Urban sprawl is not only an ecological issue but also generates increasing costs (due to the need to maintain infrastructure) and affects social issues such as people's well-being and health care (Bundestag, 1998). It is therefore important for countries to implement advanced land use planning and steering instruments that are designed to mitigate land take and to enforce efficient development within a coherent sustainable land use governance framework. This includes, in particular, a legal framework that manages land use with the ultimate aim of ensuring sustainable development (Newig, 2011; Gaines, 2014; Kopfmüller, 2006; Kahl, 2008; Köck, 2007; Rehinder, 2002). However, designing an effective framework for the sustainable, efficient use of open space is not at all a trivial task, especially considering the various short-term (political and

* Corresponding author.

E-mail address: jana.bovet@ufz.de (J. Bovet).

economic) dynamics driving extensive land use developments. An effective governance framework will need to place effective curbs and controls on such dynamics in addition to pursuing a long-term sustainability path. At the same time, conflicting economic and political dynamics cannot simply be ignored. Instead – as will be shown in more detail below – an adequate governance framework must ensure that these dynamics are continuously observed and are channelled wisely towards broadly agreed sustainability objectives.

Given the nature of this challenge, the authors of the present article conducted a comparative assessment among a few selected countries (Germany, Switzerland, the Netherlands, Spain and Poland), exploring, among other things, how land use planning and approval regimes take account of the basic requirements of sustainable land use regulation, which are also basic precondition to curbing green space consumption effectively and efficiently. In the following we present the broader conceptual framework of this comparative assessment and, more specifically, define the four key requirements of sustainable land-use steering on which the assessment focusses. We then outline the crucial challenge of open space consumption and present the results of our survey in that specific regard. A number of interesting findings relating to other significant challenges of land management which cannot be presented here are available in the overall report (Köck et al., 2015).

2. Research design and framework – four key governance requirements for sustainable land management

As mentioned in the introduction, the comparative survey presented here is framed by four key requirements of sustainable land management which are also crucial in mitigating open space consumption in an effective, efficient, legitimate and durable manner. These are key requirements for sustainable land management as a whole, which is why they are necessarily abstract and do not claim to cover all the needs of sector-specific land-use policies. Furthermore they focus on legal implementation in spatial planning systems, on instruments for conceptualisation and realizing the spatial planning, and on its impact on building approvals. We do not consider economic instruments like cohesion programs but since our main interest is concentrated on to legal instruments this focusing is reasonable.

The four key governance requirements for sustainable land management will be outlined briefly in the following. In order to do so, we first need to allude to the general framing of the sustainability concept (2.1) before describing the more specific requirements for sustainable land use governance (2.2).

2.1. Sustainable land management

30 years after its introduction as a principle of societal development (WCED, 1987), sustainability today is a commonly agreed land management ideal and, more generally, an omnipresent maxim of politics and society. In particular, policies dealing with natural resources and land use regularly refer to the principle of sustainability (European Council, 2006; European Commission DG Environment, 2014; Pearce and Turner, 1990). Although the sustainability concept has been broadly accepted and positively received, it must be acknowledged that considerable ambiguity and disagreement remain about what it actually means in practice. The vagueness of this concept is highly apparent (Balkema et al., 2002; Mitcham, 1995; Persson, 2013), and no globally agreed definition or binding definition of it exists – despite the fact that the notion of sustainability is referred to fairly frequently nowadays even in law (e.g. Art. 1 (b) Directive 2000/60/EC; recitals of Directive 92/43/EEC on the conservation of natural habitats and of wild fauna

and flora; Art. 11 AEUV; Art. 3 Abs. 3 und Abs. 5 EUV) and in the legal literature (Magraw and Hawke, 2008; Sands, 2009; Wolfrum, 2000). Three decades of intensive debate about sustainability have generated a wide diversity of sustainability concepts which differ from one another in rather significant ways. Most notably, disagreement exists regarding the interconnections between and the ranking of ecological, economic and social aspects of well-being. Approaches based solely on ecological criteria (German Advisory Council on the Environment, 1994; Köck, 2007; Winter, 2008) have been followed by “three- and multidimensional” (Crawford, 2012; Kopfmüller et al., 2001; Sahely et al., 2005; Weiss, 1989) as well “trans-dimensional” and “integrative” concepts, each emphasizing different values, priorities and preconditions for sustainable management.

However, despite the persisting disparity it is possible to identify a number of ‘core features’, so to speak, of sustainable land management. By “core features” we mean those which are key to virtually all the sustainability concepts under discussion and which also point to the core requirements of sustainable governance and legal steering. These are in essence: the long-term preservation of a decent state of the natural living conditions coupled with the integration and optimization of ecological, economic and social needs. Long-term preservation refers to the requirement of “intergenerational justice” expressed conclusively by the World Commission on Environment and Development in the Brundtland Report. Here, sustainable development is defined as seeking “to meet the needs and aspirations of the present without compromising the ability to meet those of the future” (WCED, 1987). It is widely agreed that this substantial sustainability goal cannot be achieved without an effective mode of decision making that is long term and knowledge oriented as well as responsive. This means that the consequences of, for example, land use decisions for the sustainable balance of ecosystems must be constantly predicted, assessed and taken into account. Moreover, these impacts need to be monitored so that land use decisions can be reviewed and adapted as deemed necessary in order to keep sustainability on track. Last but not least, maintaining an optimal balance between environmental, economic and social needs over the long term requires that such interests can be openly expressed and discussed by the relevant stakeholders. Meaningful participation is frequently highlighted, therefore, as a fundamental procedural element of sustainable development. We also subscribe to this procedural perception of the sustainability concept, as shown below when we identify our key requirements for sustainable land management.

2.2. Key governance requirements for sustainable land management

A whole array of governance requirements can be inferred from the basic elements of sustainable development mentioned above. For the purpose of our comparative assessment we have identified the following four key requirements which appear to us to be of utmost importance for implementing the sustainability concept, not least with regard to land management and the regulation of urban sprawl.

2.2.1. The existence of sustainability targets and a form of quantified implementation

In order to operationalize the fundamental concept of long-term socio-ecological balance in terms of environmental impacts, it is imperative to define clearly the level of ecological quality we wish to preserve as part of a sustainable balance with social and economic interests. No matter what level of ecological integrity we decide to sustain, the fundamental concept of saving a given item of ecological capital for future generations can only be implemented if the level of conservation is agreed upon and expressed

Download English Version:

<https://daneshyari.com/en/article/6546222>

Download Persian Version:

<https://daneshyari.com/article/6546222>

[Daneshyari.com](https://daneshyari.com)