

# Circular land use management in cities and urban regions – a policy mix utilizing existing and newly conceived instruments to implement an innovative strategic and policy approach

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## Contents

1.	Circular land use management: an innovative strategic and governance approach .....	3
1.1	The principle of reuse and phases of land use .....	3
1.2	Space-oriented potentials for circular land use management.....	3
1.3	Stakeholders involved in circular land use management .....	5
1.4	Circular land use management against the backdrop of German sustainability policy .....	6
2.	Instruments for circular land use management.....	6
2.1	Testing of instrument using simulation games for city (urban region) circular land use management .....	
2.1.1	Simulation game method.....	6
2.1.2	Stakeholders in simulation games, simulation game variations and participating regions and cities.....	7
2.1.3	Existing and new instruments tested.....	8
3.	Policy mix for managing circular land use management .....	10
3.1	Package of existing instruments which promote circular land use management to reinvigorate internal development .....	10
3.1.1	Additional existing instruments which promote circular land use management in urban regions with patterns of increasing development (particular aim: protecting undeveloped and recreational spaces).....	11
3.1.2	Additional existing instruments which promote circular land use management in urban regions with patterns of decreasing development (particular aim: conversion, demolition, renaturalization) .....	12
3.2	Combining new instruments to promote circular land use management .....	12
4.	Integrated action plans for city and urban region circular land use management .....	14
5.	Conclusions .....	15
	Bibliography .....	18

## Abstract

The German government's National Strategy for Sustainable Development aims at reducing land utilization from the 100 ha per day currently used today to 30 ha a day and at realizing three times as much internal development as external development by the year 2020. Circular land use management is a key policy and strategic approach for implementing the two-pronged strategy of quantity and quality management necessary to achieve these objectives. Circular land use management primarily focuses on systematically exploiting the potentials of existing structures and reusing derelict land. It allows for zoning of new land for development on a small-scale under certain conditions. Consequently, this strategy endeavours to diminish new development in "green belts" and to activate previously developed building land. Realizing a Circular land use management policy requires employment of a policy mix which pools existing and new instruments in the fields planning, information, organization and cooperation, funding and budgeting, marketing and dispositions. New instruments which provide goal-oriented incentives capable of effectively influencing current land use and zoning practices are necessary because existing instruments have limited potential with regards to achieving these aims. The German government and other important groups of stakeholders – the *Länder*, public stakeholders at the municipal and regional levels, private enterprise, institutions which own land, the real estate industry and private households and small-scale property owners – should cooperate closely to establish appropriate framework conditions for Circular land use management.

**Keywords:** Circular land use management, land use management, urban and regional planning, sustainability

## 1. Circular land use management: an innovative strategic and governance approach<sup>1</sup>

Circular land use management represents an integrative policy and governance approach which presupposes a changed land use philosophy with regard to land utilization.<sup>2</sup> This modified land use philosophy can be expressed with the slogan “avoid – recycle – compensate”.

### 1.1 The principle of reuse and phases of land use

Similarly to the recycling-based principles which have become commonplace in recent years in areas such as waste and water management, “circular land use management” should become an established policy in sustainable land utilization. Materials cycles serve as a model for circular land use management: the constructed city is understood as a system with a structural makeup which is subject to various usage phases and where, in certain instances, entire districts and industrial areas are dismantled and made suitable for subsequent use, whereby the total area of land used should remain unchanged. Structures no longer fit for reuse are demolished or renaturalized; infill measures are implemented in areas with high settlement pressure. The idea of a “circular” of use thus seizes upon the notion of a use cycle of the allocation of building land, development, use, abandonment and reuse (cf. Fig. 1)..

### 1.2 Potential of circular land use management

A strategy of this nature primarily and systematically seeks to exploit the potential to develop existing building sites and reuse derelict land. It focuses solely on internal development (recycling abandoned sites, higher density development, infill development, multiple use, etc.). The entire use cycle, from planning to utilization, disuse, dereliction, and building and land recovery form the core of the strategy. The ultimate aim is dynamic site preservation. In an ideal scenario this vision would be realized if only land which is currently in use were utilized for new settlement initiatives. Zoning small areas of new land for development is not categorically ruled out, assuming abandoned sites are being reused in other areas.

Circular land use management, therefore, aims to minimize rezoning of “green belt” land (for development) and activate existing building land, including, among other options, derelict land, gaps between buildings and exploiting possibilities for infill development (cf. Table 1).<sup>3</sup>

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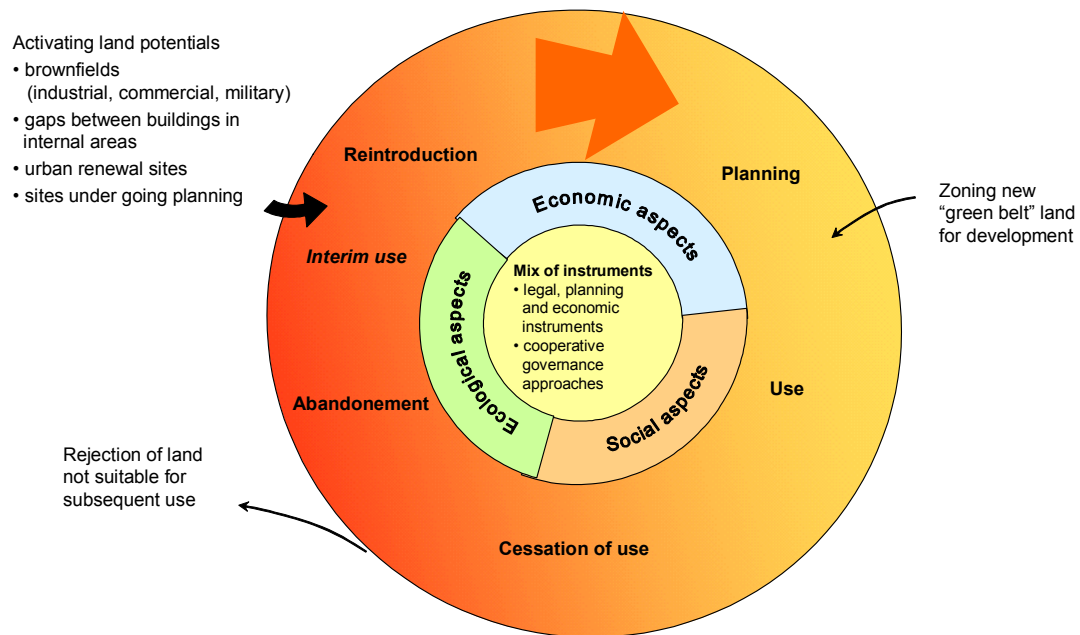
1 This paper is based on the findings of study conducted in the research field Circular Land Use Management in Cities and Urban Regions of the national research programme Experimental Housing and Urban Development (*Experimenteller Wohnungs- und Städtebau*), ExWoSt. The German Institute of Urban Affairs (Difu) examined this research field from 2003 to 2007 on behalf of the Federal Office for Building and Regional Planning (BBR) and the Federal Ministry of Transport, Building and Urban Affairs (BMVBS), and in cooperation with the project group *Stadt + Entwicklung* (City + Development), Leipzig and the special research group Society for Institutional Analysis (sofia), Göttingen/Darmstadt.

2 The basic theoretical principles of land recycling are expounded upon in detail in: Federal Office for Building and Regional Planning (BBR) (published by), *Perspektive Flächenkreislaufwirtschaft* special publications series for the ExWoSt research field *Fläche im Kreis*, Vol. 1. “Theoretische Grundlagen und Planspielkonzeption”, revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al. (BBR), Bonn 2006.

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3 The amount of brownfields currently available for construction in Germany is listed at 128,000 ha: land formerly used for industrial and commercial purposes (48 percent), real estate previously occupied by the military (41 percent), abandoned tracts of land used for transport infrastructure, railway and port facilities (twelve percent): cf. Federal Office for Building and Regional Planning (BBR): “Bauland- und Immobilienmärkte 2001. Ergebnisse der Baulandumfrage”, Bonn 2001. Federal Statistical Office calculations estimate that the total amount of brownfields within towns and cities across Germany increased by 12.7 ha per day between 1993 and 2000; cf. Federal Statistical Office: “Umwelt. Umweltproduktivität, Bodennutzung, Wasser, Abfall”, Wiesbaden 2003; comprehensive surveys of existing brownfields are not available.

Figure 1: Phases and potentialities of circular land use management \*



\*Source: German Institute of Urban Affairs, own diagram.

Table 1: Expansion and internal development opportunities of land\*

<b>Expansion opportunities</b> (outlying land which has yet to be developed)	Theoretical development reserves with no (specific) planning status Regional planning reserves (anticipated building land) <sup>1</sup> Preparatory land use plan reserves (building land awaiting development) Legally binding land use plan reserves which are fundamentally reclaimable (raw building land)
<b>Internal development opportunities</b>	Gaps between buildings (land prepared for building/building land) within the ambit of settlement-expanding legally binding land use plans Gaps between buildings within the ambit of legally binding land use plans using pre-existing developments and unplanned interior areas. Scarcely developed lots/opportunities for infill Brownfields Vacant buildings Land which will be abandoned in the foreseeable future

<sup>1</sup> Only in North Rhine-Westphalia.

\*Source: German Institute of Urban Affairs, own diagram.

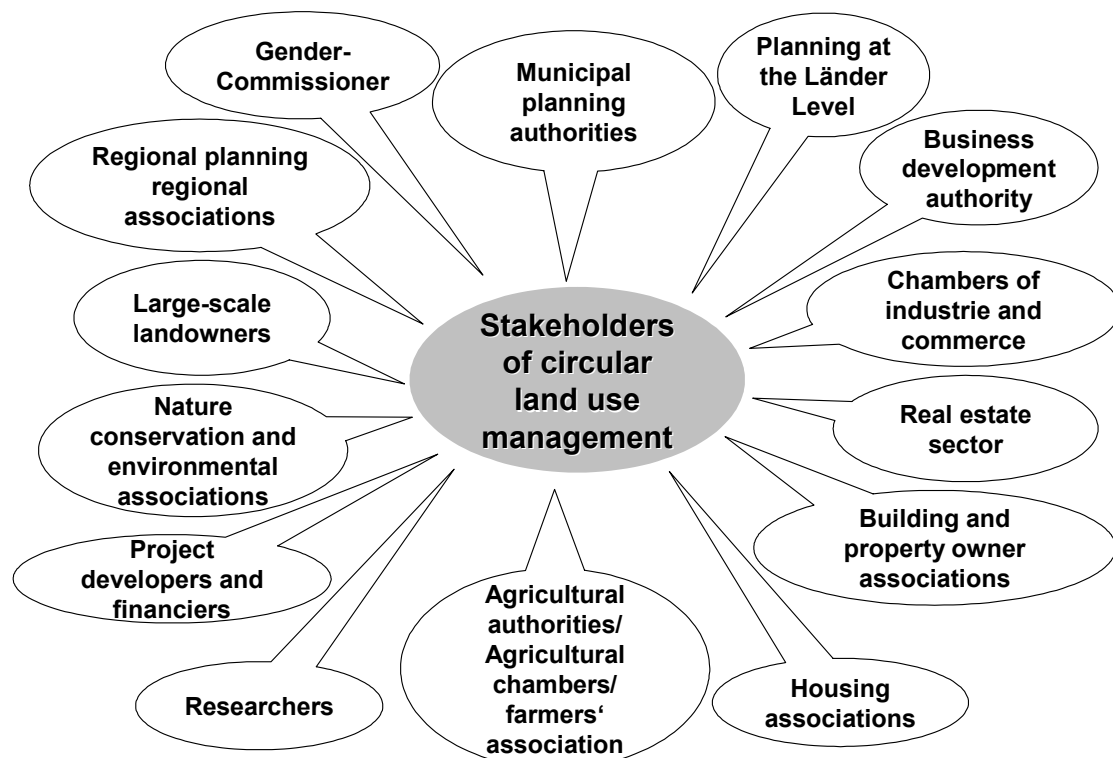
### 1.3 Stakeholders involved in circular land use management

Circular land use management in urban regions cannot be driven by the actions of a single primary stakeholder but can only be achieved through the coordinated efforts of the various public and private stakeholders who, as planners, property owners and land developers, influence or govern how land is used.

This includes municipal policymakers, the various local administrative departments (urban affairs, urban planning, environment, business development, real estate, finance), regional planning departments, businesses, business development associations, developers, estate agents, large property owners, banks, planning offices, environmental and nature conser-

vancy associations, committees made up of members of civil society et al. (cf. Fig. 2). Conceiving tenable circular land use management strategies and taking the steps necessary for their implementation can only be achieved through constructive collaboration and consideration of these stakeholders' interests. This is of particular relevance to reusing derelict land, which is often viewed as the sole task of the municipality and all too rarely as an undertaking which must be resolved through a cooperative effort of both the public sector and private enterprise. The ability to cooperate, appropriate cooperative structures and communication, information dissemination and mediation services are therefore of the utmost importance for successful circular land use management.

Figure 2: Stakeholders in circular land use management\*



\*Source: German Institute of Urban Affairs, own diagram.

## 1.4 Circular land use management against the backdrop of German sustainability policy

The circular land use management policy and governance approach supports the following land usage goals formulated by the German Federal Government in the 2002 National Strategy for Sustainable Development:<sup>4</sup>

- reducing land utilization to 30 ha per day by 2020<sup>5</sup> and
- realizing three times as much internal development as external development by 2020.

Subsequently, circular land use management simultaneously pursues quantitative and qualitative management aims and concerns ecological, economic and social aspects of land use. It is therefore an issue of both land consumption and of space efficiency.<sup>6</sup> Given the demographic developments in Germany, such as future population decline and an ageing society, the economic aspect of land utilization is growing in significance.<sup>7</sup> While, as a rule, reuse of brownfields and gaps between structures allows existing infrastructures to be exploited, permitting building on new land usually entails enhancing or installing new technological infrastructures (e.g. adequate traffic accessibility, utilities and waste management facilities) and social infrastructure (e.g. childcare and educational facilities, other necessities for the public good). This represents a key interface between ecological, economic and social aspects of land utilization. At the same time, infrastructure capacities and the long-term financial scope for providing requisite infrastructures significantly de-

termine the quality and cost-effectiveness of residential, commercial and office sites. Furthermore, the costs of site maintenance are also contingent upon these factors; a financial burden which – in the face of anticipated demographic change – will be borne by future generations.

## 2. Instruments for circular land use management

Circular land use management requires a uniform, integrated and harmonized course of action which encompasses the entire spectrum of policies and activities, is fused into a single, explicit integrative political approach and employs a correspondingly complex package of instruments (policy mix). In this instance current and potential new instruments are pooled while accounting for regional differences in framework conditions. These instruments primarily affect governance in the areas planning, information, organization and co-operation, funding and budget, marketing and arrangements.

### 2.1 Testing of instruments using simulation games for city (urban region) circular land use management

#### 2.1.1 Simulation game method

Simulation games were run for the research field Fläche im Kreis (circular land use management in cities and urban regions) as a method of strategic development and were linked to simulations already performed for draft laws. Examining the vast palette of possible courses of action via simulations does, however, pose special challenges. The simulation games began with a review of the various courses of action existing instruments provide to players at the regional and local levels. The review determined what these courses of action can achieve in terms of urban region circular land use management under the actual conditions in the regions. In contrast to retrospective case studies, this was geared at further developing existing methods in order to better tailor them to the circular land use management objectives set forth by the German government. As is typical of the simulation approach, although the further development of measures and strategies for urban regions was based on real conditions, the results remain those of a non-binding experiment.<sup>8</sup>

4 Cf. German Federal Government: "Perspectives for Germany: Our Strategy for Sustainable Development", Berlin 2002; German Federal Government: "Fortschrittsbericht zur Nationalen Nachhaltigkeitsstrategie", Berlin 2004; German Federal Government: "Koalitionsvereinbarung zwischen CDU, CSU und SPD vom 11 November 2005."

5 At present around 100 ha of undeveloped land are used for settlement and transport purposes; this includes approximately 60 ha for buildings and surrounding open spaces. The land occupied by settlement and transport infrastructures in Germany accounts for roughly 4.56 million ha (as of 31 December 2004), or 12.8 percent of the country's total area (6.7 percent buildings and surrounding open spaces, 4.9 percent transport infrastructure, 0.9 percent recreational space).

6 Cf. Fabian Dosch and Peter Jakubowski: "Steigerung der Infrastruktur-Effizienz durch Flächenkreislaufwirtschaft", in: Informationen zur Raumordnung, No. 5 (2006), pp. 293–304.

7 Cf. Federal Statistical Office (published by): "Bevölkerung Deutschlands bis 2050. 11. koordinierte Bevölkerungsvorausberechnung", Wiesbaden 2006.

8 Arno Bunzel and Thomas Preuß: "Planspiel als Methode der Strategieentwicklung", in: Federal Office for Building and Regional Planning (BBR) (published by), ExWoSt-Informationen No. 25/2 Fläche im Kreis, Bonn 2005, pp. 26–27.

### 2.1.2 Stakeholders in simulation games, simulation game variations and participating regions and cities

The *Fläche im Kreis* urban simulation games entailed simulation scenarios with ten to twelve different stakeholders from the public and private sectors for each of the five regions (cf. Fig. 2) examining the potential of existing and alternative instruments in implementing circular land use management policy. Two successive simulation variations were executed:

- Simulation game I – “as-is”: mid-term circular land use management strategy under the current framework conditions with a time horizon extending until 2010.
- Simulation game II – “new instruments”: implementation of an innovative policy mix to govern growth,

- conversion and demolition processes with a time horizon extending until 2020.

StadtRegion Stuttgart<sup>9</sup> (Baden-Württemberg), the regions Mölln (Schleswig-Holstein), Rheinhessen-Nahe (Rhineland-Palatinate), the City of Duisburg (North Rhine-Westphalia) and the North Thuringia planning region (Thuringia) participated in the simulation games for circular land use management. These regions vary in their natural surroundings, sizes and populations, economic development dynamics and population trends. This means each faces unique challenges with regard to land utilization. The simulations included both growing (StadtRegion Stuttgart) and shrinking regions (North Thuringia planning region, the City of Duisburg) as well as others with balanced development dynamics (the Mölln region). The Rheinhessen-Nahe region is experiencing growth and shrinkage in equal measure (cf. Table 2).

Table 2: Regions and cities participating in the simulation games\*

Regions/cities simulated	Total area (km <sup>2</sup> )	Total Inhabitants	Participating regional authorities	Type of region/ development dynamic
StadtRegion Stuttgart	269	667,687	City of Stuttgart, towns of Filderstadt, Ostfildern, Verband Region Stuttgart	Densely developed urban agglomeration, extremely economically dynamic
Rheinhessen-Nahe region	3,041	840,000	Districts of Alzey-Worms, Bad Kreuznach, Birkenfeld, Mainz-Bingen, City of Mainz	Greater Rheinhessen: densely developed urban agglomeration, extremely economically dynamic; immediate vicinity: less densely developed, lacks infrastructure in some areas
Mölln region	192	28,900	City of Mölln, municipal subdistricts (Ämter) Breitenfelde and Nusse, District of the Duchy of Lauenburg (Herzogtum Lauenburg)	On the edge of the urban agglomeration of Hamburg, predominantly rural
City of Duisburg	233	503,664	City of Duisburg	High density of buildings, undergoing far-reaching economic and spatio-structural transformation
North Thuringia planning region	3,661	413,902	Districts of Nordhausen, Kyffhäuser, Eichsfeld, Unstrut-Hainich, Cities of Nordhausen, Sondershausen, Rossleben, VG (Verbandsgemeinde) Uder and VG Eichsfelder Kessel	Predominantly rural area, undergoing shrinking demographic process, in particular the districts of Nordhausen and Kyffhäuser, relatively stable developments in the district of Eichsfeld

\*Source: German Institute of Urban Affairs, own diagram.

9 Stuttgart, the capital of Baden-Württemberg, along with the bordering towns of Filderstadt and Ostfildern.

### 2.1.3 Existing and new instruments tested

A specially developed regional work programme served as the methodological basis of the simulation games for the regions examined. The research group formulated and monitored the work programme. This included introducing the se-

lected instruments, explaining how they function and relevant incentive mechanisms.

Overviews 1 and 2 show the instruments tested in simulation game phases I and II.

Overview 1: Instruments tested in the “as-is” urban planning simulation\*

Field of activity/ instrument category	Instrument
Planning	Regional schemes Intermunicipal planning Influencing land consumption when formulating preparatory land-use plans Appraisal of the land requirements Urban redevelopment concepts Additional neighbourhood and site planning Influencing land consumption when formulating legally binding land-use plans Concepts to establish resource compensation areas (land for equalization and alternative measures) resource compensation areas and compensation measure pools, Limitation on land usage possibilities Temporary use Renaturalization
Information	Informational instruments to influence property owners Informational instruments to influence municipal and administrative land use management decisions Municipal council resolution on land management policy
Organization	Organization within public administration Delegation of responsibilities for urban region circular land use management tasks
Cooperation	Project-related cooperation between public and private players Forms of public-private partnership applicable to all projects Framework agreements/coordinated strategies
Investment and funding programmes, budget	Funding programmes Appropriating financial resources from municipal budgets
Marketing	Marketing through public stakeholders Real estate marketing
Arrangements	Urban development measures Urban redevelopment measures Building orders Demolition orders Designating protected areas through nature conservation authorities
Other	Planning which links the preservation and enhancement of open spaces, protection of recreational spaces and agriculture

\*Source: German Institute of Urban Affairs, own diagram.

The new instruments were tested in view of the findings of the first phase of simulation games, which demonstrated that the existing package of instruments was not sufficient to accomplish the German government's ambitious land use policy aims. This meant testing instruments which cre-

ated new (financial) incentives with regards to land consumption.

All told, the *Fläche im Kreis* planning simulation games tested nearly 50 instrumental approaches.

Overview 2: Instruments tested in the "new instrument" simulation games\*

Field of activity/ instrument category	Instrument
Influencing the cost of land	Property tax reform (land value tax, land tax, land use tax) Land transfer tax reform
Price mechanisms for zoning undeveloped land	Cost-benefit analysis Levy on zoning land for building site use or apportionment for zoning Tradeable land-use certificates
Funding measures and subsidies	Reform of fiscal equalization scheme at municipal level Zoning-oriented tax codes Low-interest loans for businesses and municipalities to implement internal development measures Liability insurance for demolition Surplus funds for demolition Real estate funds <sup>10</sup>
Additional economic framework conditions	Abolition of commuter allowance Abolition of first-home buyer allowance
Legal and planning instruments and issues	Obligation to demolish in the inner zone Exemption from nature protection law impact regulations for brownfield redevelopment Additional procedural modifications

\*Source: German Institute of Urban Affairs, internal diagram.

<sup>10</sup> With respect to this, so-termed B-Site Funds and C-Site Funds were examined; In the ABC Model projects for brownfields are classified in terms of their cost-return relationships: projects on B Sites are initiated with public start-up funding and/or risk-sharing between private investors/developers and public authorities, e.g. in the form of public-private partnerships. Greater risks must be accepted when the cost-profit ratio is close to one. No short- and mid-term self-reinforcing reuse can be expected on C Sites. Low land values, high set-up

costs and, in most cases, extremely dense spatial concentrations of derelict land play a significant role in rendering this type of brownfields economically unfeasible; cf. Uwe Ferber: "Finanzierung des Flächenrecyclings in Deutschland", in: Stephan Tomerius, Baldur Barczewski, Judit Knobloch and Volker Schrenk (ed.): "Finanzierung von Flächenrecycling", Berlin (Difu-Materialien 8/2003); and CABERNET (Concerted Action on Brownfield and Economic Regeneration Network, 2006), homepage: [www.cabernet.org.uk](http://www.cabernet.org.uk).

### 3. Policy mix for managing circular land use management

Instrument packages were derived from the simulation games results for the existing and new instruments which were selected by those participating in the simulation study, and research group evaluations.<sup>11</sup> The fact that urban region development dynamics require complementary sets of instruments has been taken into consideration. As the simulations demonstrated, growth and shrinkage in urban regions often occur in close proximity. Within the regions, towns with surrounding urban areas represent localized tracts of land with specific characteristics and interest conflicts. The need for more effective instruments to reduce land utilization varies from region to region, therefore the activities of local players will continually focus on adapting instrument packages appropriately to solve area-specific problems. It must be taken into account that some of the new instruments discussed here still require a uniform national legal framework. In light of this, the instruments the research group recommended were consciously geared towards the main strategic circular land use management objectives:

- strengthening internal development,
- protecting undeveloped and recreational space,
- conversion, dismantling and renaturalization.

This ensures instrument packages will meet the needs of cities and urban regions whether they are experiencing growing, stable or shrinking development trends.

Any deviations of research group recommendations from the appraisals made by the regions in the simulation games regarding new (economic) instruments result from the fact that incentive and subsidy programmes to promote internal development require finances from revenues for uses which put a high strain on land.

#### 3.1 Package of existing instruments which promote circular land use management to strengthen internal development

Independent of the development patterns in individual urban regions, the following existing instruments proved particularly suitable due to their great effectiveness in achieving circular land use management policy aims:

- regional schemes,
- intermunicipal planning,
- appraisal of land requirements (a key component of regional planning and preparatory and legally binding land use planning),
- informational instruments to influence municipal and administrative land use management decisions,
- additional neighbourhood and site planning (e.g. test planning, framework plans, master planning),
- delegation of responsibilities for urban region circular land use management tasks,
- municipal council resolutions on land management policy,
- existing funding programmes.

Supplementary:

- informational instruments for property owners,
- marketing.

The existing array of planning instruments, such as regional planning and intermunicipal planning, have great potential in limiting land utilization. In many urban regions this potential can be exploited to a greater extent than it has been to date. Thus, cities and urban regions aiming to implement circular land use management policies should pay special attention to realistically appraising land needs, to projecting binding population and land use forecasts, to establishing standards for ascertaining land use potentials and to setting specifications for own need and for allowances for land which has potential for housing and commercial development. Only after these steps have been taken would the land-consumption minimizing effects of preparatory and legally binding land use planning take shape. Accompanying informational instruments influencing land use management decisions by municipal politicians and authorities can contribute to greater awareness of how land is used and ensure more transparency regarding the costs (and long-term residual costs) and benefits of zoning decisions.

Additional neighbourhood and site planning (informal planning instruments) should be implemented as

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11 Detailed results of the simulation games are given in: Federal Office for Building and Regional Planning (BBR) (published by): *Perspektive Flächenkreislaufwirtschaft* special publications series for the ExWoSt research field *Fläche im Kreis*, Vol. 2: "Was leisten bestehende Instrumente?", revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al., (BBR), Bonn 2007.

accompanying planning instruments to ensure employment of a pre-formulated, harmonized internal development strategy. Urban planning concepts, test planning, participative processes and other instruments can be useful aids for developing important urban sites and neighbourhoods.

The responsibility assignment of urban circular land use management duties should consist of a combination of “soft” and “hard” structural and instrumental approaches. In the face of the complex range of tasks, the urgency of the problem and the need for flexible action, cooperative undertakings will tend to be “soft” forms of collaboration. Finding solutions for delegating tasks which nurture urban region circular land use management presents long-term challenges because the spatial scope and range of areas covered by intermunicipal cooperation must be defined and the organizational consequences of intensifying cooperation weighed. In the long run, aside from new organizational forms and delegation of tasks, a high degree of commitment to spatial planning and an effective balancing of intermunicipal interests must be established regarding land use concerns.

Municipal council resolutions on land management policy could serve as statements of concerted personal commitment on the part of a single municipality or a group of municipalities. Despite the limited obligation inherent in such resolutions, they have considerable potential to influence land use management decisions and to spur activity on existing building sites.

In the realm of funding programmes, current and new EU, federal government and *Länder* programmes should focus more pointedly on circular land use management issues. Concomitant to this, existing incentives which are counterproductive should be eliminated. Here, similar to planning instruments, it is a matter of tweaking the existing array of instruments.

Further existing instruments should supplement the instrument package for urban region circular land use management:

Informational instruments geared towards influencing property owners can spur activity on sites, because it is often real estate owners’ reluctance to sell which obstructs site development. However, there continues to be a lack of basic (e.g. economic) incentives to incite such activity; this is because – along with other conceivable reasons for reluctance – running costs for real estate are comparatively low. However, activities to incite development on internal sites only appear feasible if no competition from new land zoned for development exists and no new land

is made available. In view of the trend of increasing costs for individual modes of transport and the changing demands of households as a consequence of demographic shift, informational instruments will become more influential in determining where people choose to live. Nonetheless, such tools can only have the desired effect if housing markets in urban centres and cities are designed to accommodate the individual desires and lifestyles of families and people of all ages.

Under certain conditions public and real estate industry activities can also help spur development of brownfields and gaps between buildings. On the part of public authorities this includes marketing and tasks such as approaching and stewardship of investors. Further activities include clarifying property ownership issues, drafting building laws, equipping sites for building and resolving environmental contamination issues. In contrast, the success of real estate marketing for the purposes of circular land use management depends on the marketability of existing sites in urban areas, market competition from new land zoned for development and demand behaviour. The research group diverges from the evaluations made by the regions participating in the simulation in that it assigns a (growing) relevance to marketing, in particular of internal sites, because the intrinsic value of real estate in public and private hands is gaining importance.

### 3.1.1 Additional existing instruments which promote circular land use management in urban regions with patterns of increasing development (particular aim: protecting undeveloped and recreational space)

The following existing instruments target activity required in growing regions where high demand for land leads to a continual disappearance of open space, increasing use conflicts and strains land utilization capacities:

- concepts to establish resource compensation areas (land for equalization and alternative measures, resource compensation areas and compensation measure pools),
- designation of protected areas through nature conservation authorities,
- preservation and enhancement of open spaces: recreational spaces, special use zoning in peripheral areas, (glasshouse production), agriculture.

Although resource compensation area schemes and compensation measure pools do not directly reduce land utilization for building activities, they are expected to improve the quality of resource compensation measures, which in turn may contribute to validating existing and planned building areas. It is also assumed that this instrument has the capacity to reduce the pressure on high-value agricultural land. A fundamental solution to the problem of the disappearance of agricultural land cannot be attained through the building activities, or through land requirements for resource compensation measures which accompany such building activities.

The designation of protected areas also has a predominantly secondary impact on achieving the quantitative aims of circular land use management; it can, however, be of great relevance to quality assurance in urban and rural areas (quality objectives: preservation and development of high-value open spaces).

Regions with a high demand for building land appear to require comprehensive use and land-protection schemes/multiple-use concepts for existing open spaces which at once address issues relevant open space preservation, agriculture and recreation and biotope and species protection. Instrumental approaches which are scaled to this end tend, however, to be unrelated in practice; they encompass strategic environmental audits, nature conservation laws, agriculture structure surveys and concepts and approaches such as establishing regional parks, green corridors and green-belt concepts.

### 3.1.2 Additional existing instruments which promote circular land use management in urban regions with patterns of decreasing development (particular aim: conversion, demolition, renaturalization)

Shrinking regions and cities require additional instruments to adequately address the consequences of population loss, vacant buildings, functional deficits and surplus space:

- urban redevelopment,
- funding programmes targeting brownfields and C Sites respectively.

Urban redevelopment concepts play a prominent role in shrinking regions because they are inherently integrative and implementation and player-oriented. They assist in occupying vacant buildings and elimi-

nating functional deficits in districts where such problems are particularly acute. In addition to issues of real estate economics, which have commonly been a major concern of urban redevelopment in eastern Germany, urban planning issues are becoming increasingly important to sustainable urban renewal.

Certain urban redevelopment measures can be used to implement measures to convert developed sites into open spaces. This demands future programmes which permanently rezone sites so they cannot be used as building sites and temporarily free sites from building uses (green interim uses). In the long run such funding and organizational approaches (e.g. foundations, C-Site Funds) can contribute to low-cost consolidation of low-demand markets in shrinking regions. This would, in turn, create better opportunities to reuse so-called B Sites.

## 3.2 Combining new instruments to promote circular land use management

As illustrated in Chapter 3.1, pooling and strict adherence to existing instruments opens up a number of possibilities to make steps towards circular land use management aims. An appreciable bolstering of governance capacity and the ability to institute penalties is a prerequisite for planning practices which are conducive to circular land use management, particularly for regional planning. Stricter implementation of available planning and informational instruments should also foster more effective internal development, a priority planning field. The instruments available to date are, however, insufficient to meet the quantitative and qualitative land utilization aims set by the federal government. New instruments which complement the effects of existing planning, informational instruments and economic incentives which foster circular land use management policies are needed. The existing instruments, which are predominantly planning instruments, do not affect a change in municipal decision-makers' zoning policies, and neither lessen nor constructively exploit intermunicipal competition, the main motivation for zoning new sites for development. This applies in equal measure to regions with a history of growth and regions experiencing shrinkage. Existing instruments and the incentives they offer are not effective in influencing the behaviour of land market players in a fashion which fosters circular land use management. This shortfall is the main reason for scepticism when assessing the capacity of existing instruments to achieve circular land use management aims. This

estimation also underscores the need for supplemental economic equalization instruments.

In the main, economic instruments for circular land use management follow three approaches:

- influencing *property prices* (e.g. reforming the property tax system or land-transfer tax reform) to roll back/decrease the incentives to build on new sites offered to public and private parties who want to build;
- introducing price mechanisms for *zoning new land* for development (e.g. establishing tradeable land-use certificates or apportionment for zoning building land in combination with cost-benefit analysis) to further motivate municipalities to pursue internal development planning;
- creating *financing options* and tailoring *funding measures* to suit circular land use management (e.g. by reforming the fiscal equalization scheme at municipal level, low-interest loans, real estate funds, demolition liability insurance, subsidizing renaturalization) to greatly strengthen internal development.

The diversity of parties addressed and aims make it evident that these instruments can only make a significant contribution to achieving circular land use management objectives if they are employed as a package, i.e. implemented simultaneously. Furthermore, because the effects of these tools have little influence on spatial allocation, they must be continually developed and implemented hand in hand with existing planning and legal instruments.

Property tax reform offers avenues which could be exemplary in spearheading efforts to reduce discrepancies in real estate prices for internal and external areas. Such reforms, however, create only weak impulses if policymakers adhere to the maxim of balancing tax revenue and spending. Significantly further-reaching price structure interventions are necessary on this count, but implementing them would require an extended political process of political consensus building.

Introducing price mechanisms for issuing municipal zoning permits appears to be a necessary step to create a counter-incentive to the incentives to use further land. In municipalities, willingness to pay apportionments for zoning undeveloped land is relatively high in comparison to receptiveness to adopting tradeable land-use certificates or levies on zoning building land, both equally effective instruments. One reason is the fear of substantial transaction costs incurred to determine personal price negotiation rights and price monitoring costs which result from

performance zoning regulation.<sup>12</sup> This alone warrants a preference for a cost-sharing contribution for zoning undeveloped land. When extending cost-sharing apportionments municipalities directly link development with the expectation that revenues will remain in the region to fund goal-oriented circular land use management projects. It would therefore also appear prudent to earmark resources generated from tradeable land-use certificates for uses which clearly serve municipalities in pursuing circular land use management management goals in their respective regions.

Municipal financial equalization is just one way to accomplish this. Allocations specifically geared towards revitalizing brownfields, measures for renewing existing structures and infill, and other internal development measures could create tangible circular land use management incentives. The resource scope should target countrywide circular land use management requirements, or rather actual existing remediable development sites.

Real estate funds too require financing and should be supplied with resources using an appropriate set of instruments. They can be employed to remove sites from the land use cycle and as a tool to activate real estate which is not immediately marketable for circular land use management. Reducing overlaps in site use would increase the marketability of other brownfields with more scope for subsequent structural use. This can, however, only be realized using public monies. An approach which conforms with expert analysis and is conceptually suitable would offer the possibility for controlled and need-based resource allocation.

Monies from revolving funds could be made available to create marketable conditions on sites which are not immediately marketable (B Sites). Such funds are initiated with public and private capital for selected sites and allow marketing revenues to into subsequent projects. However, revolving funds assume certain minimum demand for real estate and are therefore primarily suitable in growing regions and regions with balanced development dynamics. Like real estate funds, such funds must be supplied with start-up capital.

A key finding of the simulation games is the limited transparency available to municipalities regarding the impacts of zoning new land for building. This insight is of central importance because cognizance of the residual costs of zoning new building land also

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12 For current research initiatives on this issue visit [www.refina-info.de](http://www.refina-info.de).

depends on whether economic instruments are effective or not. Municipalities exhibit a great interest in suitable modes of assistance. Thus, minimum transparency requirements with respect to cost-benefit relationships must be formulated for municipal decisions on using undeveloped land for housing and commercial structures. Suitable parameters should also be developed on how to produce this transparency for investment costs and residual costs in the realm of structural, technical and social infrastructure, as well as a fiscal benefit.

Decisions on zoning undeveloped land and their long-term financial consequences must be examined in view of anticipated demographic developments.<sup>13</sup> This demands no less than a virtual paradigm shift in municipal policy, for according to the simulations, municipalities are only nominally capable of making arrangements which maximize the costs and benefits of zoning lands for development, even if only in terms of budgetary consequences.

Private parties willing to build also choose their sites based on financial feasibility rather than on what makes economic sense. It is necessary to incite those willing to build to pay closer attention to residual costs (e.g. commuting costs) and the risks posed by demographic shift (decline in prices when populations are shrinking = demand).

To summarize it can be concluded that, as far as financial instruments are concerned, municipalities favour an apportionment for zoning over a levy on zoning or tradeable land-use certificates. This is due to the high transaction costs anticipated and the disconnect from regional use logic. It is equally sensible to put the revenues generated into aim-oriented allocations through a new fiscal equalization scheme or into real estate funds. However, in order for economic instruments to effectively achieve objectives, municipalities need an analytical tool kit which shows them the costs and benefits of their zoning decisions. A majority of municipalities are eager to implement cost-benefit analyses. All three economic instrument approaches (real estate prices, price mechanisms for zoning undeveloped land, financial aids) must be considered to round out the existing planning, statutory and communicative instruments to successfully implement circular land use management policies.

<sup>13</sup> If an area's population is shrinking significantly, tax revenues and municipal revenue sharing decrease; concomitantly, time adjustment measures to regulate existing vacant housing strain local budgets.

#### 4. Integrated action plans for city and urban region circular land use management

In addition to examining existing instruments in co-operation with simulation participants, the simulation games for all five regions also compiled integrated action plans for urban region circular land use management.

The integrated action plans for urban region circular land use management represent an instrument package which can be implemented or initiated locally, and which can contribute to brownfield redevelopment and reducing land utilization. The packages of measures described usually aim at reducing zoning undeveloped land and exploiting the potential of existing land on previously developed sites.

Integrated action plans for urban region circular land use management are informal instruments to establish circular land use management in the short- and mid-term. They result from discussions on land use policy aims for urban regions, analysis of how existing governance instruments to regulate land utilization are employed and assessments of instrumental, spatial and organizational shortcomings. They specify a package of measures necessary in the short and mid-term to make headway towards accomplishing city and urban region land policy aims. These measures are normally closely linked with established instruments of formal and informal spatial planning. The action plans also list stakeholder responsibilities, aspects of process organization and management as well as performance reviews and time schedule for implementation. Integrated action plans are extremely implementation oriented. They cannot and should not replace current planning, instead the measures depicted in the action plans should be meshed with spatially relevant formal and informal planning or existing sectoral planning and draft planning.

The key element of an integrated action plan is providing a detailed portrayal of each measure foreseen in the measures package. Recommendations for outlining such a portrayal are:

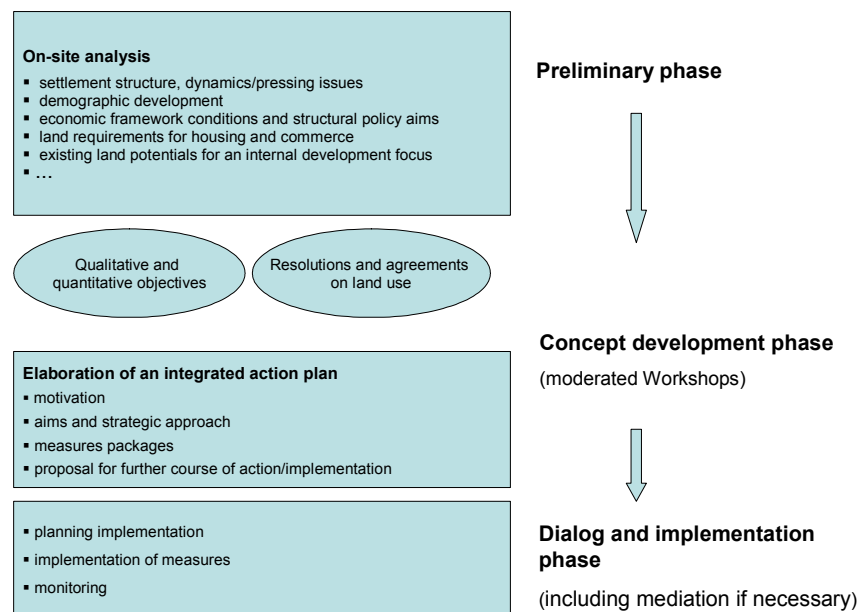
- a brief description of each measure,
- a description of how the measures assist in eliminating current problems/achieving established goals,
- a list of the responsibilities of city and urban region land use management players,
- a description of the type, extent and source of financing for measures,

- a time schedule for implementing measures,
- expected effects of each measure.

When compiling an integrated action plan for city or urban region circular land use management, a discursive approach appears prudent (workshops, expert forums, etc.). Three full-day closed workshops were held for the Fläche im Kreis simulation games, with the results ultimately leading to an integrated action plan. Work groups should be intensely mediated so any conflicts of interest which may arise can be named, commented upon and noted.

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Figure 3: Compiling an integrated action plan to promote urban region circular land use management\*



\*Source: German Institute of Urban Affairs, own diagram.

## 5. Conclusions

1. Circular land use management is a key policy and strategy approach.

Circular land use management is a vital strategy approach for implementing national strategy for sustainable development and is therefore adequate for achieving the federal government's sustainable development aims with a dual strategy: quality management – using internal development to spare external areas and increasing the value of settlement sites – and quantity management – restricting utilization of new land.

2. Integrated action plans for city and urban region circular land use management must be developed.

Integrated action plans for city and urban region circular land use management effectively aid in reach-

ing stipulated quantity and quality aims for land utilization at the local and urban region levels.

3. A policy mix of existing and new instruments is required.

Existing and new instruments implemented through a policy mix promoting city and urban region circular land use management should support the priority of internal development and, in addition, should promote a higher instance of recycling of brownfields, conversion, demolition and conservation of open spaces and of recreational areas in a manner commensurate to the needs of each urban region.

4. Existing instruments must be implemented consistently.

If implemented more consistently or through slight amendment of the (existing) legal framework, a number of the existing instruments could be im-

diately beneficial to achieving circular land use management aims. Key requirements for this include adequate personnel for regional offices, transparent administrative actions and coordination of circular land use management policies.

5. Established instruments as part of a circular land use management policy mix.

Instruments already in place which foster a policy mix which focuses on internal development include:

- regional schemes,
- intermunicipal planning,
- appraisal of land requirements (a key component of regional planning and preparatory and legally binding land use planning),
- informational instruments to influence municipal and administrative land use management decisions,
- additional neighbourhood and site planning (e.g. test planning, framework plans, master planning),
- delegation of responsibilities for urban region circular land use management tasks,
- municipal council resolutions on land management policy,
- existing funding programmes

and in addition

- informational instruments for property owners,
- marketing.

The following existing instruments should be employed to protect open and recreational spaces, particularly in urban regions experiencing growth:

- concepts to establish resource compensation areas (land for equalization and alternative measures, resource compensation sites and compensation measure pools),
- designation of protected areas through nature conservation authorities,
- integrated schemes to preserve and develop high-value open spaces: areas for relaxation, agriculture, public gardens, recreational areas.

To adequately counter the impacts of population loss, vacant buildings, functional deficits and site overlaps, shrinking regions and cities require supplementary instruments such as:

- urban redevelopment,
- funding programmes targeting brownfields, i.e. C Sites.

6. New instruments which complement existing instruments are needed for circular land use management.

Current instruments and the incentives they offer are not effective in influencing the behaviour of land market players in a fashion which fosters circular land use management. To reach the German government's ambitious land use policy aims, new instruments with aim-oriented incentives are needed which can effectively influence land use and zoning land for development.

Because of the diversity of aims and parties addressed, new instruments should only be employed as part of a package. Furthermore, because the effects of these instruments have little influence on spatial allocation, they must be continually developed and implemented hand in hand with existing planning and legal instruments.

7. New economic incentives to reduce land utilization and to prioritize internal development must be created.

In the context of a policy mix, a variety of new circular land use management instruments could contribute to reaching the federal government's land use policy aims by offering new (economic) incentives:

- Influencing real estate prices to lessen the incentives for private and public parties who wish to use undeveloped land; e.g. by reforming the property tax system or land transfer tax reform,
- introducing price mechanisms for zoning undeveloped land to further motivate municipalities to pursue internal development; e.g. by establishing tradeable land-use certificates or apportionment for zoning in combination with cost-benefit analysis,
- introducing financing options and tailoring funding measures so they are conducive to circular land use management and significantly strengthen internal development; e.g. by reforming the fiscal equalization scheme at municipal level, low-interest loans, real estate funds, demolition liability insurance, subsidizing renaturalization.

8. New instruments must be manageable, comprehensible and transparent.

The form and feasibility of new circular land use management instruments must be comprehensible and simply designed so they are manageable. Economic instruments, such as tax remedies, must be recognizably bound to circular land use manage-

ment objectives at both the appraisal and implementation stage. It makes sense to link financial incentives to incite private parties to pursue circular land use management with planning parameters which promote development of existing structures and sites (“support and stipulate”).

9. Public authorities: the driving force of circular land use management – cooperation between municipalities, *Länder* and the federal government are paramount.

Public authorities act as a key player and driving force in the introduction and implementation of circular land use management by creating a framework which significantly influences the behaviour of real estate market players.

The German government and other important groups of actors – the *Länder*, public players at the municipal and regional levels, private enterprise, large-scale property owners, the real estate industry, private households and small-scale property owners – should cooperate closely in future to establish appropriate framework conditions for circular land use management. This should be actively supported through a shift from initiatives and programmes with selective approaches to a comprehensive action strategy.

Independent of concrete legislative competencies, the federal government should act as an initiator and role model for circular land use management.

10. Further survey of arrangements and testing of new instruments are needed.

A variety of measures were recommended to the federal government to create appropriate instrumental framework conditions for circular land use management:

- improvement of the regulatory impacts of spatial planning,
- more support for activating internal development land potentials
- more support for private initiatives to revitalize brownfields,
- expert assistance in conceiving and for practical introduction of B-Site Funds,
- expert assistance in conceiving and for practical introduction of C-Site Funds,
- activating land potential on sites owned by the federal government,
- fostering the provision of information on sites and conscious land use,
- further elaboration of urban renewal instruments,

- creating tenable benefit-burden equalization schemes for the case of blocking development on land or zoning new land for development,
- trials for the introduction of new levies for zoning undeveloped sites,
- trials for the introduction of tradeable land-use certificates,
- trials for comprehensive property tax reform,
- testing the introduction of compulsory allocation of funds for internal development measures in the context of fiscal equalization schemes at municipal level,
- testing further development of obligations to demolish structures and unseal land, and the introduction of demolition liability insurance.

More detailed elaboration, impact research and trials are necessary to establish a final structure for, or rather before implementing, these instruments, many of which are new.

## Bibliography

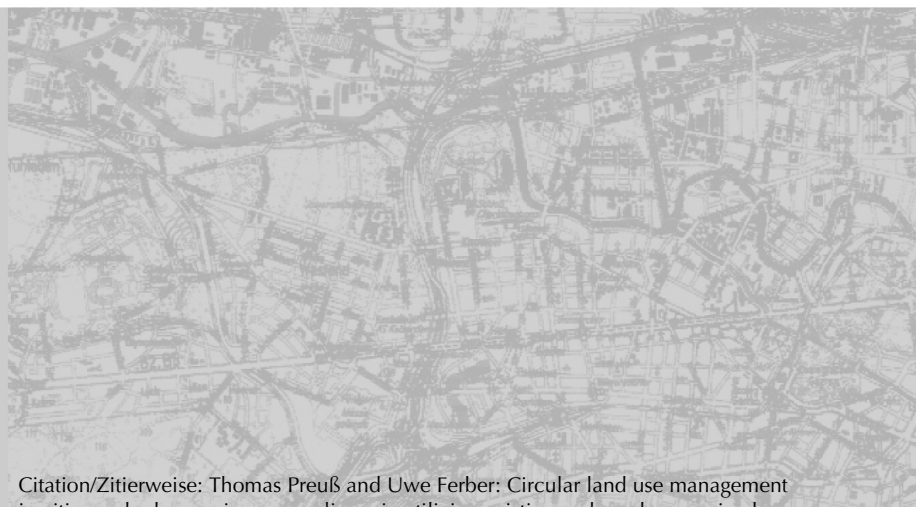
- Bunzel, Arno, and Thomas Preuß: Planspiel als Methode der Strategieentwicklung, in: Federal Office for Building and Regional Planning (BBR) (published by), ExWoSt-Informationen No. 25/2 Fläche im Kreis, Bonn 2005, pp. 26–27.
- CABERNET (Concerted Action on Brownfield and Economic Regeneration Network) (2006), homepage information, [www.cabernet.org.uk](http://www.cabernet.org.uk).
- Dosch, Fabian, and Peter Jakubowski: Steigerung der Infrastruktur-Effizienz durch Flächenkreislaufwirtschaft, in: Zukunft städtischer Infrastruktur, in: Informationen zur Raumentwicklung, No. 5 (2006), pp. 293–304.
- Federal Ministry of Transport, Building and Urban Affairs (BMVBS), Federal Office for Building and Regional Planning (BBR) (published by.): Kreislaufwirtschaft in der städtischen/stadtregionalen Flächennutzung, revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al. (BBR), Bonn 2007 (Werkstatt publication series: Praxis, No. 51).
- Federal Office for Building and Regional Planning (BBR) (published by): Perspektive Flächenkreislaufwirtschaft special publications series for the ExWoSt research field Fläche im Kreis, Vol. 1: Theoretische Grundlagen und Planspielkonzeption, revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al., (BBR), Bonn 2006.
- Federal Office for Building and Regional Planning (BBR) (published by): Perspektive Flächenkreislaufwirtschaft special publications series for the ExWoSt research field Fläche im Kreis, Vol. 2: Was leisten bestehende Instrumente?, revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al., (BBR), Bonn 2006.
- Federal Office for Building and Regional Planning (BBR) (published by): Perspektive Flächenkreislaufwirtschaft special publications series for the ExWoSt research field Fläche im Kreis, Vol. 3: Neue Instrumente für neue Ziele, revised by Thomas Preuß et al. (German Institute of Urban Affairs et al.) and Fabian Dosch et al., (BBR), Bonn 2007.
- Federal Office for Building and Regional Planning (BBR) (published by): Potenzialanalyse (Expertise), revised by Thomas Preuß, Bonn 2004, updated 2007.
- Federal Statistical Office (published by): Bevölkerung Deutschlands bis 2050. 11. koordinierte Bevölkerungsvorausberechnung, Wiesbaden 2006.
- Federal Statistical Office: Umwelt. Umweltproduktivität, Bodennutzung, Wasser, Abfall, Wiesbaden 2003.
- Ferber, Uwe, and Thomas Preuß: Flächenkreislaufwirtschaft – Steuerungsinstrument für Wachstumsregionen?, in: Verein zur Förderung des Instituts WAR (published by): Wachstumsregionen – Handlungsansätze für mehr Nachhaltigkeit, 77. Darmstädter Seminar Umwelt- und Raumplanung, Darmstadt 2006 (WAR publication series, Volume 174), pp. 41–48.
- German Federal Government: Koalitionsvereinbarung zwischen CDU, CSU und SPD vom 11. November 2005.
- German Federal Government: Perspektiven für Deutschland – Unsere Strategie für eine nachhaltige Entwicklung. Fortschrittsbericht zur Nationalen Nachhaltigkeitsstrategie, Berlin 2004.
- German Federal Government: Perspectives for Germany: Our Strategy for Sustainable Development, Berlin 2002.
- Preuß, Thomas, and Uwe Ferber: Circular Flow Land Use Management: New Strategic, Planning and Instrumental Approaches for Mobilisation of Brownfields, Berlin 2006 (German Institute of Urban Affairs, Occasional Paper).
- Preuß, Thomas, and Uwe Ferber: Flächenkreislaufwirtschaft: Neue strategische, planerische und instrumentelle Ansätze zur Mobilisierung von Brachflächen, in: Anja Besecke, Robert Hänsch and Michael Pinetzki (ed.): Das Flächensparbuch. Diskussion zu Flächenverbrauch und lokalem Bodenbewusstsein, Berlin 2005 (TU Berlin, ISR-Diskussionsbeiträge, No. 56), pp. 177–185.
- Tomerius, Stephan, Baldur Barczewski, Judit Knobloch and Volker Schrenk (ed.): Finanzierung von Flächenrecycling, Berlin 2003 (Difu-Materialien 8/2003).

## Zusammenfassung

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Die Nationale Nachhaltigkeitsstrategie der Bundesregierung setzt flächenpolitischen Ziele der Reduzierung der Flächeninanspruchnahme von derzeit etwa 100 Hektar auf 30 Hektar pro Tag sowie der Realisierung eines Verhältnisses von Innen- zu Außenentwicklung von 3 zu 1 bis zum Jahr 2020. Für die Umsetzung einer hierfür erforderlichen Doppelstrategie aus Mengen- und Qualitätssteuerung ist die Flächenkreislaufwirtschaft ein zentraler Politik- und Strategieansatz. Die Flächenkreislaufwirtschaft verfolgt vorrangig und systematisch die Ausschöpfung von Potenzialen der Bestandsentwicklung und der Wiedernutzung von Brachflächen. Unter bestimmten Voraussetzungen lässt sie eine geringfügige Flächeneuenausweisung zu. Sie zielt somit auf sowohl auf die Verminderung von Flächenneuenausweisungen auf der „grünen Wiese“ als auch auf die Mobilisierung von Bauland im Bestand. Für eine Realisierung der Flächenkreislaufwirtschaft müssen bestehende und neue Instrumente in den Handlungsbereichen Planung, Information, Organisation und Kooperation, Fördermittel und Budget, Vermarktung und Anordnungen in einem Policy-Mix gebündelt eingesetzt werden. Da das Zielerreichungspotenzial bestehender Instrumente begrenzt ist, sind neue Instrumente mit zieladäquaten Anreizen für notwendig, die sowohl die bestehende Flächennutzung als auch die Flächeneuenausweisung wirksam beeinflussen können. Der Bund und weitere bedeutende Akteursgruppen – Bundesländer, öffentliche Akteure auf kommunaler und regionaler Ebene, private Unternehmen, institutionelle Flächeneigentümer und Immobilienwirtschaft sowie private Haushalte und Eigentümer kleinteiligen Grundbesitzes – sollten zukünftig eng bei der Schaffung geeigneter Rahmenbedingungen für eine Flächenkreislaufwirtschaft zusammenwirken.

**Schlagwörter:** Flächenkreislaufwirtschaft, Flächenmanagement, Stadt- und Regionalplanung, Nachhaltigkeit



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