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Reduction of Land Use Rate

Summary

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SUMMARY

The high consumption of land for settlement and transportation is seen by many as a significant problem on the route to sustainable development. Soil as an environmental medium is a non-reproducible resource which is one of humanity's finite natural assets fulfilling many essential functions. Land cannot however actually be »consumed« in the proper sense of the word; but it can be used in such a way, that the spectrum of future opportunities for use are significantly restricted. As the supply of land is limited and non-reproducible, the various types of utilisation are in competition with each other. In contrast to water and air, there are very diverse types of private rights with regard to land. As the ecological value of the soil is not generally reflected in the real estate price, land is frequently consumed in the »ecologically wrong place«.

A regionally differentiated approach is required, which takes the different quality, carrying capacity and susceptibility of soils into account. The overarching goals of sustainable development have to be the maintenance of the multifunctionality of soils, the protection of open spaces and the pursuit of a land reserves policy, which also opens up the broadest possible range of possibilities for use to future generations.

The present final report on the TA project »Reduction of Land Use Rate – Objectives, Measures, Impacts« is not concerned with an analysis of the usefulness of the »Target-30-ha« or with alternative types of land use. Furthermore the target of a sustainable land use rate is not analysed. The report is more concerned with a critical discussion of instruments and measures with regard to their contributions to the achievement of objectives. No recommendations are made.

In connection with the current discussion of targets for sustainable land use, the TAB analyses are based on sources from pertinent, policy actors, NGOs etc. from the environmental debate (Part I, Chapter 2); otherwise, and in particular for the discussion of the instruments and measures in the context of the debate on reform (Part II), the report is based on scientific sources.

LAND USE RATE FOR SETTLEMENT AND TRANSPORTATION AND ITS CONSEQUENCES

In the longer-term retrospective view, a continual trend towards an increase in the space required for settlement and transportation, unconnected to population



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and job development, has become apparent. This trend has only slowed in recent years. Whereas until the mid-1980s the extension of transport infrastructure was notably responsible for the increase in land consumption, area for buildings has since taken over. Living space has contributed disproportionately strongly to growth in this category in recent years. The living space per inhabitant has almost tripled over the past 50 years and is now at more than 40 m²/head. The reasons for the increase in living space consumption are primarily an increase in wealth, an increase in living standard, and an increase in the number of households while the sizes of households are decreasing.

In general it can be said that the greater the number of apartments are in a building, the smaller the living space is per apartment. There is also a direct connection between the type of housing and the area required. In terms of square metres of living space, detached and semi-detached houses require many times the plot area of apartment buildings. In recent years building activity has progressively shifted in favour of land consuming types of construction.

Expansion of settlement and transportation has for the main part taken place at the expense of agriculture. This means a loss of fertile arable land and leads to extensive disturbance of the ecological soil functions, which in turn has repercussions on the whole ecological balance of the area. The filter and buffer capacity of the soil is affected, as is the water balance, the exchange between the earth's surface and the atmosphere as well as the flora and fauna biotopes. Almost half of the land which is used for settlement and transportation is sealed on average. Sealing reduces natural evaporation and prevents the seepage of rainwater, leading to a rapid drainage of rainwater into the sewerage system. The consequences of this are more severe floods, a decrease in groundwater recharge and a warming of the local climate.

The demand for building land in recent years has focussed primarily on the hinterland of conurbations and rural areas. The most fundamental reason for this is the significant difference in land prices between town and country. Settlement dispersion is accompanied by a higher specific land use rate per inhabitant. The spatial expansion of built-up areas leads to an increase in traffic flows which means that the individual has to undertake ever longer journeys in order to have a break in the countryside. If you take into consideration the fact that the area affected by transportation far exceeds the space directly used, for instance through dividing up and isolating previously connected open spaces, and the effects of noise and pollution, then it can be seen that land consumption statistics only incompletely reflect the true extent of use.

In addition to ecological effects, the negative social and economic consequences of urban sprawl are also becoming more apparent. In spite of ongoing settlement growth, the regional population is steadily declining in the core towns in particular. As predominantly young, better off families with children migrate, the decline in population in the core towns results in unbalanced social structures (a greater percentage of old people, a high share of one-person households, a high share of welfare recipients), under-utilisation of the existing infrastructure as well as declining income tax revenues.

DEMOGRAPHIC CHANGE AND LAND CONSUMPTION

According to forecasts from the Federal Office of Statistics, the population will remain at about the same level until 2020, and then from 2020 will decline in spite of immigration. The age structure of the population will shift over the next few years to the disadvantage of the younger generations, and the number of old and very old people will increase significantly. These developments will display themselves very differently from region to region. The rural and urbanised areas of Eastern Germany are the most affected by the demographic changes of aging and shrinking. The population of the conurbations in the new Länder will remain stable until 2020. Drops in the population and ageing processes occur more slowly in Western Germany and will not acquire the same dynamic as the new Länder. The economically prospering regions of Western Germany will still have gains in population as they remain attractive for immigrants from home and abroad, whereas the population in economically weaker regions will have started to decline by 2020.

The number of households, which is a critical parameter for living space demand, will as in the past continue to increase until 2020 – at the same time as the size of households is decreasing. From 2020 however the number of households will also decrease. The increase in household numbers, the decline in their size and the so-called remanence effect, which arises when older people remain in apartments that are actually too large after their children have left home, will result in a further growth in living space per head by 2020 as well as an increase in the overall demand for living space. This will not abate until after 2030 and then will develop very differently from region to region. In economically weaker regions which are still registering population loss by migration, there will be below average growth until 2020, possibly even a partial slump, whereas demand for living space in economically prospering regions will increase significantly. In these areas there will continue to be an overstretched housing market, while in



other regions the number of unoccupied properties will have to be reduced by demolition. The demand for the construction of new apartments will decrease gradually until 2010 and thereafter more rapidly.

Although the demand for living space will continue to increase over the next 20 to 30 years, the demographic development will already have an effect on the new use of land for settlement and transportation, as the generations of the 20 to 35-year-olds and the 35 to 50-year-olds, therefore those generations, who are responsible for providing the main demand for detached houses, started to dwindle as early as 2001. These potential customers will furthermore be able to avail themselves to a considerable extent from the stock, especially as these are generations which will inherit homes and apartments on a notable scale from their parents and grandparents. Simulation calculations on land use rates which were carried out within the scope of the TAB project already show a primarily demographically-related drop in the land use rate in a status quo prognosis to 81.5 ha/day in 2020 and to 74.5 ha/day in the year 2030. Demography has probably also contributed to the decrease in land consumption observable in recent years.

TREND REVERSAL IN LAND CONSUMPTION?

The comparison of the three all-German survey cycles available to date (1993–2004) indicates a continuous reduction in the growth of building areas in the course of the new use of land for settlement and transportation. The main reasons for this in the past few years are primarily the economic slowdown and the associated sharp decline in building investments. It can of course be assumed that a revival of building activity will also result in a renewed increase in land consumption. On the basis of the demographic development and a looming trend towards reurbanisation, supported in the meantime by various empirical studies, a long-term reduction in the additional demand for land can however be reckoned with.

According to the results of the home ownership study carried out by TNS Infratest, more than half (52%) of new property owners in Western Germany purchased »second-hand« property between 2001 and 2003. As regards the spatial distribution of demand, an increasing transfer into the conurbations can be made out. The trend towards urban living that is manifesting itself in Western Germany is also apparent in the East, albeit with a time delay, according to TNS Infratest. The findings of TNS Infratest are confirmed by the Difu (German

Institute of Urban Affairs) Study » Living in the City – a Renaissance« and the current Trend Research Study by DB Immobilien (2006).

Due to the development of housing demand in recent years, a parallelism can be detected at the current point in time between suburbanisation and reurbanisation. Which of these trends will prevail in future depends upon the extent to which the federal, regional and local authorities are able to improve the framework conditions for building and living in the city. With the demographic development in mind, action is required as an uncurbed additional land use rate in spite of a shrinking population could lead to considerable bad investments.

The Situation of the Municipalities

The intercommunal competition for residents, employees and business enterprises is seen as an essential motor for the generous designation of building land and with it for high land consumption. If the local authorities are able to attract new business enterprises and residents through the provision of attractive building land, then this will have positive effects on the most important sources of income for the local authorities. The revenue from land tax and local trade tax increases; through the increase in the number of inhabitants, the income from the municipal share of income tax as a rule also increases, as do the key allocations made by the Länder, which depend in part on the population. In an attempt to hold their ground in the intercommunal competition, most sites are developed in practice today as »greenfield developments«, even when there are extensive building land reserves and brownfield sites available in inner urban areas. This is not least down to the priorities of the developers, who much prefer building land on the outskirts. From the point of view of private households this is above all due to the lower land prices, whereas for the business customers other advantages can be added such as better transport connections, sufficient business extension options etc.

The building land strategy which appears most profitable for individual municipalities however, turns into just the opposite the more municipalities make building land available on their outskirts. Considering the stagnating or even declining population and employment trend on a national level, the settlement success of one municipality generally implies migration losses for other municipalities, without an overall improvement of the economic situation in the region. The greater the supply of building land, the higher the risk that the enormous cost of the opening-up will not pay for itself owing to a lack of demand. Through the excess supply of cheap building land in »greenfield developments«



local authorities in particular, who have wagered on the consistent development of inner-city locations, run the risk of not finding anyone to buy.

The intercommunal competition is further exacerbated by the difficult financial situation in which the German local authorities have found themselves in for a number of years. The financial difficulties faced by the local authorities are illustrated by the severe drop in municipal investments from 33 bn Euros in 1992 to 18.6 bn Euros in 2005 and by the considerable increase in the level of interim public borrowing to bridge short-term liquidity bottlenecks from 1 to 2 bn Euros in 1992 to approximately 24 bn Euros in 2005. The tense financial situation is however in no way attributable to lavish spending habits. The causes lie rather on the revenue side, whereby all of the essential sources of income for the local authorities are affected. These include in particular the important revenues guaranteeing municipal financial autonomy through real taxes (local trade tax and land tax), as well as the 15% local authority share of income tax.

Real local trade tax revenue was indeed subject to strong fluctuations between 1972 and 2002, however in the long-term these revenues have not increased and remain well behind economic growth. In contrast revenues from land tax have seen a continual real increase over the last 20 years and have kept up with general economic growth. This is not least due to the growth of the assessment basis, i. e. to the increase in the commercial and residential building area. The development of revenues from the municipal share of income tax in recent years on the other hand has been unsatisfactory. Apart from the weak economy, both the income tax reform and the massive tax concessions in the 1990s in connection with the rebuilding of the East German economy have had negative effects on revenue.

Against this background a reform of local government finance, which would not only serve fiscal sustainability but also ecological sustainability through weakening the previously existing incentives to expand the supply of building land, is still topical. When the next attempt is made, there is a lot to be said for having a look at a reform of local trade tax and land tax at the same time.

Objectives of sustainable land use

In view of the negative consequences of settlement dispersion, a reduction of land consumption has for years been considered a central objective of sustainable development. In the federal government's land protection concept (Bodenschutzkonzeption der Bundesregierung) which was passed in 1985 there was a demand for a »trend reversal in land consumption«. In the draft Environmental

Priority Programme (Umweltpolitischen Schwerpunktprogramm) developed by the federal government in 1998, a limit on the additional land use rate for settlement and transportation purposes of 30 ha/day by 2020 was postulated for the first time. The Red-Green federal government included this objective in its sustainability strategy for Germany in 2002. The German Council for Sustainable Development (RNE), the German Advisory Council on the Environment (SRU), nature conservation associations and the Academy for Spatial Research and Planning (ARL) for example call even more rigorously for zero growth in land consumption as did the Enquete Commission »Protection of Man and the Environment« (1998). In their judgement the conversion from undeveloped to developed sites should be entirely compensated in the long term by the simultaneous recultivation of urban brown fields.

The necessity of a drastic reduction of the land use rate is anything but uncontroversial however in the current debate, whereby the practicability of quantitative reduction targets in particular is called into question. Apart from the German Association of Towns and Municipalities (DStGB), the associations in the construction and housing industry in particular are against the political determination of such objectives. From their point of view, a curbing of the supply of land for settlement would lead to land price increases fuelled by shortages, make new construction dearer, endanger further jobs in the building industry, appear as a negative locational factor for economic competitiveness, and cause increasing distribution conflicts. Apart from this they find the creation of a linear connection between the growth of the settlement area and ecological deterioration impermissible.

The controversy concerning the pros and the cons of a reduction in the land use rate makes it clear that the objectives of sustainable urban development have to be differentiated. In doing so the fact that there will be major regional differences in the future demand for land needs to be taken into consideration. Whereas in some regions substantial vacancies are already registered today in residential and commercial buildings, there is continual high demand in other areas. Against this background, the planning of settlement development in Germany needs a dual strategy, according to many experts, of both quantitative and qualitative guidance, which again also requires regional differentiation. Such a strategy should include the following target components among others:

- > Promotion of inner urban development through the redirection of the demand for land into areas which are already settled (mobilisation of available land reserves, reutilisation of brownfields, filling of vacant lots, posturbanisation, mixed-use development, qualitative upgrading of existing structures and adap-



- tation to user's changing needs).
- > Land-saving settlement development through intercommunal coordination of building land designation, establishing urban growth limits, concentration on suitable locations consistent with regional planning objectives, preference given to land and cost-saving methods of construction, greater site density and other efficient models for use (e.g. multi-storey commercial buildings).
 - > Conservation or recovery of natural soil functions through the redirection of unavoidable land use rate to land with a lower productive capacity, caused either naturally or due to a previous use, reduction of new sealing to the necessary minimum, decontamination of contaminated sites.
 - > Protection of open spaces through the avoidance of further landscape divisions, a significant reduction of new land use for transportation, the quantitative protection of the remaining larger unsettled landscapes.

The complexity of this task brings home the fact that success will only prove achievable with a whole package of measures, which would also have to include tax law, building and regional planning law, housebuilding subsidies and the promotion of urban renewal and development as well as transport policy. The combination of instruments as well as the intensity of their action would have to be planned, so that overall a fair sharing of benefits and burdens is ensured and that negative economic and social repercussions are avoided where possible.

The instruments of planning law

There is a wide range of planning instruments available for the control of land use, which through fundamental amendments made in recent years to the German regional planning act (Raumordnungsgesetz-ROG) and the German Federal Building (Baugesetzbuch-BauGB) have been considerably extended and improved. Many of the reform proposals, which were introduced into the debate on the reduction of land consumption, have already been converted into applicable law through the European Law Adaptation Act for the Construction Sector (Europarechtsanpassungsgesetz-EAG Bau) which came into force on 20th July 2004.

These include e.g. the long requested revision requirement for land development plans, the flexibilisation of planning designations (»temporary building permit«), the specification of the soil protection clause, and the extended opportunities for municipalities to defend themselves against the settlement of large-scale retailers. With regard to the targeted inner urban development and the upgrading of the city centres to residential and living areas, the newly introduced

regulations on urban redevelopment and on the »Socially Integrative City« also acquire substantial significance. It remains first of all to be seen, what effects these reforms will have in practice.

The general perception, which is also confirmed by a written survey by TAB of the pertinent associations, is that the insufficient implementation of the land policy targets is not attributed to a dearth of efficient planning instruments, but rather to the lack of political will on the part of the actors to apply them. In order to enforce site-specific objectives, such as e.g. the protection of sensitive landscapes or valuable biotopes, the primarily regulatory instruments of spatial planning have proven themselves according to the prevalent opinion and remain indispensable for the future. In order to achieve quantity-specific objectives such as a reduction of the land use rate, their effectiveness is called into question and demands are made for supporting economic instruments. Within the scope of such a strategy, land consumption should be made more expensive and thereby economically less attractive. Advocates of this approach are interested in cutting back the promotion of consumption (commuter's tax allowance, land tax, property acquisition tax) as well as also introducing new land policy control instruments.

Some, such as the German Council for Sustainable Development, the Academy for Spatial Research and Planning and the nature conservation associations plead in addition for the selective amendment and tightening of planning law. Proposals have been made including an extension of the justification requirement for construction on the outskirts, the transformation of the obligation to tolerate the removal of buildings (§ 179 BauGB) into an active demolition order at the owner's expense and an alteration of the Federal Land Utilisation Ordinance (Baunutzungsverordnung).

POTENTIALS OF REGIONAL CO-OPERATION

In addition to the traditional forms of co-operation such as associations of local authorities, regional associations, joint bodies and contingencies provided for in §§ 203 to 205 BauGB of intercommunal co-operation within the scope of urban land use planning, new instruments for voluntary co-operation have been institutionalised by an amendment to the German regional planning act in 1998 (BauROG). These include urban development contracts in accordance with § 11 BauGB, urban networks, regional development concepts and contractual agreements on the preparation and implementation of regional plans (§ 13 ROG) as well as the possibility of drawing up regional land development plans in ac-



cordance with § 9 para. 6 ROG. The local authorities thus have many forms of co-operation available to them, which differ with regard to their spatial layout, the subject matter, the constellation of actors, the degree of institutionalisation as well as their legal binding force.

In order to ensure the prudent use of land and at the same time the efficient expenditure of scarce budget resources, various parties have called for an intensification of intercommunal co-operation in the field of building land designation. Due to the close functional integration, the shortage of spaces in core towns and the difference in land price when compared to the hinterland, this seems particularly sensible in city regions. In practice however, setting up a regionally co-ordinated land management system proves difficult there, because prospering municipalities in the hinterland often do not see a need for co-operation.

The results of expert opinions commissioned by TAB, as well as other available studies, show that a wide range of forms of co-operation exist in Germany, which from the point of view of their respective objectives (improvement of regional competitiveness, improving the quality of the location, increasing efficiency, finding solutions to land shortages etc.) can certainly all be classified as successful. What the analysis also shows however is that the achievement of land-saving urban development is generally not one of the original objectives of the various co-operation approaches. Yet they still at least offer indirect control mechanisms which can have positive effects on the land use rate.

Thus e.g. intercommunally co-ordinated industrial space development can contribute to prevent the inflation of building land designation, reduce the opening-up expenditure, concentrate local potentials and thereby ensure an improved utilisation of industrial space which is made available. Intercommunal compensation land pools facilitate more efficient ecological upgrading measures on the one hand and the achievement of more compact urban structures on the other hand, which in turn contain the expansion of the settlement area in the countryside.

The greatest chances for success are currently considered to be in the co-operational relationships in the provision of information. They create a common data pool in respect of the regional situation, foster communication as well as the development of a regional perspective, simplify the integration by the municipalities of their own development objectives and opportunities into a greater spatial context and lead to a sensitisation for the interests of others. In addition protracted arguments regarding the benefits and burden sharing are not to be expected with this form of co-operation. On the whole, experience teaches us

that it is easier for the local authorities to agree upon a co-operative path forward if this is combined with benefits for all concerned.

The two Regions Stuttgart and Hannover are seen as outstanding examples of successful intercommunal co-operation, as they are already showing the first signs of a regional land budgeting policy. Positive effects are also expected from joint preparatory land use planning by adjoining municipalities, as this allows for co-ordinated building land designation, helps to direct settlement activity towards suitable sites and reduces aggregate land use rate. The prerequisite for the fulfilment of the expectations placed on this instrument however is that a simple addition of the land requirements expressed by the participating municipalities in the intercommunal planning process does not take place.

The surveyors commissioned by TAB and other experts see serious obstacles to the intensification of intercommunal co-operation in the »parish-pump mentality« of the municipalities and their fear of having to accept limitations to their self-government within the scope of co-operation, as well as above all fiscal constraints and uncertainties concerning financial adjustment regulations.

In order to eliminate these obstacles, various parties have called for a fundamental local government finance reform, which should ensure a sound basis for municipal funding and ease the competitive situation. With a view to keeping a fair balance between core towns and municipalities in the surrounding area, the introduction of a »regional infrastructure rate« has been suggested, with which the municipalities in the hinterland should participate in the costs for the provision of higher level infrastructure facilities (clinics, theatres, museums, secondary schools etc.). To encourage compliance, additional targeted financial incentive systems are seen as necessary on the level of the Länder. Some of the actors questioned, such as the Association of German Architects (BDA), the Academy for Spatial Research and Planning (ARL) and the nature conservation associations however consider this to be insufficient and argue for a greater increase of competences on a regional level.

INFORMATIONAL INSTRUMENTS

A lack of knowledge of the consequences of high land consumption and soil degeneration might partially explain why the legal possibilities have not been exhausted by the planning authorities and also the fact that land-saving and sparing has to date hardly attracted popular support. Information and education measures to raise awareness of the problems are viewed as necessary both for the



general public and important actors. These include further education, documentation of best practice examples, and guidelines on land management.

The information bases for municipal land-related decisions are frequently incomplete, as the follow-up costs which are associated with the providing of building land, such as expenditure for the maintenance of the transport infrastructure, as well as for the construction and operation of social facilities (kindergartens, schools etc.) are wholly or partially ignored by the local government actors in their decision-making. That is why comprehensive cost considerations for opening-up sites and their comparison with the costs for the use of inner urban development potentials have to be instruments of rational land management.

Statistical data serving as a basis for soil protection policy and the monitoring of the results is seen as insufficient by various parties. The central indicator in the land policy debate of the »increase in space for settlement and transportation in ha/day« is seen as too rough, as it subsumes land used harmfully, e.g. plots with a high level of soil-sealing, into the same category as land used in an environmentally compatible way. For this reason a supplement of the land statistics by indicators which more exactly reflect the qualitative change of areas is considered necessary, e.g. indicators of the degree of sealing, of the reutilisation of brownfields etc.

FISCAL INSTRUMENTS

The additional land use rate is the result of decisions made by different actors, acting within a network of prevailing fiscal conditions, which are in no way »land-neutral«, but set counter-productive incentives. Therefore many demands have been made to review existing fiscal conditions or even to develop them further for land policy control purposes, although this meets with rejection from other quarters.

Property acquisition tax

Property acquisition tax is not only considered as in need of reform from a land policy, but also from an economic and social viewpoint, as it favours new building and discriminates over the purchase of existing building stock, it restricts urgently required vocational mobility as well as making the establishment of home ownership for threshold households more difficult. The reform proposals submitted by various parties range from the abolition or reduction of the tax rate over the spreading of tax rates according to the location of the plots

(different tax rates whether purchasing in areas with existing stock or including newly opened-up areas) or exemptions from tax liability (e.g. when purchasing properties from existing stock) up to the conversion of property acquisition tax into a site development charge. The tendency is for all of the reform proposals to make the purchase of land in newly opened-up areas more expensive while promoting the purchase of properties from existing stock through lower or no taxation and thereby stimulating inner urban development.

Land tax

Land tax has come under fire chiefly because it is based upon an outmoded assessment basis, which does not take account of changes in value which have occurred in the meantime and thus violates the principle of equality in taxation. The criticism from a land policy point of view is that it favours detached and semi-detached houses both through its determination of the assessment base as well as through lower assessment factors. Due to its low rate it provides incentives to speculatively stockpile undeveloped plots in the settlement inventory.

Proposals for the reform of land tax range from an update of the assessment base to reform models with land policy control effects. They apply either to the land value or the ground area or they combine these two assessment bases. The proposals are further differentiated as to whether buildings (in value or in area) are also taxed. Whereas value-oriented reform models which assume stable land values promise long-term fiscal efficiency, area-oriented tax models have the disadvantage that real revenue, assuming constant municipal assessment rates, continually sinks due to inflation. With regard to land policy control effects however area-oriented tax models offer slight advantages.

These considerations have led to reform proposals which combine both assessment bases in order to compensate their respective weaknesses. What can be mentioned here is the combined land value and area tax with the additive linking of the two components and the combined land use and land value tax with the multiplicative linking of the components. The latter promises to maintain the respective specific strengths of the pure forms, namely the ecological control effects of the land use components and the fiscal efficiency of the land value components.

All previous quantitative assessments however, including simulation calculations carried out in the TAB project, show that regardless of which model, revenue-neutral land tax structuring would have hardly any effect on land consumption. For this reason, but also against the background of chronic municipal underfinanc-



ing, there is a recommendation for the requirement of revenue neutrality to be given up and the building up of land tax as a stronger pillar of local government finance. An increase in land tax can also be justified in that the taxation of the factor of land in Germany is rather moderate when compared internationally.

These considerations suggest the awarding of greater weight to the land tax compared the local trade tax than to date within the scope of a reform of the local government finance system. It can be surmised that if a revenue-neutral reform of both taxes were carried out at the same time with a new weighting of the share of revenue in favour of a reformed land tax, then the whole reform package would more readily find acceptance. In addition the potential land policy control effects should also be strengthened, as a relief in local trade tax should reduce municipal competition for the settlement of companies.

»Ecologisation« of municipal financial equalisation

Several proposals have been made to place the municipal financial equalisation system (kommunaler Finanzausgleich), which is carried out by the Länder primarily for the cushioning of differences in revenue, stronger in the service of land protection. Local authorities should be rewarded for keeping land free for ecological functions and thereby compensated for losses in revenue caused by not designating new residential and commercial areas. As holding back open spaces fundamentally only results in opportunity costs for the municipalities, but hardly in any direct costs giving rise to expenditure-creating financial requirements, this type of compensation is indeed considered by different authors to be alien to the demand and cost-oriented approach of municipal financial equalisation.

There are some limited opportunities for the ecologisation of municipal financial equalisation through allocating funds for land saving measures which require extraordinary expenditure, such as e.g. for land recycling and renaturation projects.

ECONOMIC INCENTIVES

In comparison with the fiscal instruments described above, instruments aimed exclusively at creating economic incentives for a prudent and sparing use of land have been under discussion for a long time already. On the one hand it is a question of instruments which target local authorities as actors, e.g. tradeable land use certificates or the building land designation charge, and on the other hand of instruments which are intended to influence the behaviour of private actors

(property developers, investors), e.g. a new site development charge or a new soil sealing charge.

Tradeable land use certificates

The basic idea behind this concept is to determine the quantitatively maximum permissible designation of land for a specific spatial level (federal, Länder, regional) and to distribute this in the form of tradeable land use certificates to the local authorities either free of charge or by auction. If a municipality wishes to designate building land in excess of this quota, it will have to purchase additional designation contingents from a land exchange (Bodenbörse). Municipalities which do not use their allocated certificates would be able to sell these and thereby raise revenue.

Before such a system can be implemented however, certain difficult questions need to be resolved which could turn out to be major obstacles to the acceptance of the instrument. These relate to e.g. the methods of distribution of the land use certificates and the scheme to be used for this, the control of quota over time, the limitations of the certificates and market differentiations according to location and/or use.

Above all the initial allocation of land use certificates, in the first instance to the Länder and from these to the local authorities, is seen in particular as a potentially explosive process because, as investigations show, very different allocations can be produced dependent upon the allotment formula used. Therefore protracted bargaining processes can be reckoned with alone in the search for consensus-based formulae, which in turn could lead to questionable land policy compromises and exceptions. As further difficult formal questions need to be resolved additionally, it can be assumed that a lot of time will pass before this instrument can display its land policy effects.

Building land designation charge

The building land designation charge (Baulandausweisungsumlage) represents an alternative concept to tradeable land use certificates. The local authorities have to pay a charge for the new designation of building land to the respective Land according to the size of the new building area. The charge is an instrument which controls by price, which from an ecological point of view at least – compared with the tradeable land use certificates with their quantity control – is a second-best solution, as the exact fulfilment of a fixed quantitative target cannot be guaranteed. The revenue generated by the charge is to be returned to the



municipalities using a suitable distribution formula. A part of the revenue could also be used to promote desirable land policy measures.

When compared to the tradeable land use certificates, the building land designation charge is the simpler instrument, one advantage countering the disadvantages of lower ecological effectiveness and economic efficiency. As investigations indicate, both instruments meet with little approval from the local authorities.

Site development charge

With a site development charge (Neuerschließungsabgabe), to be paid by property developers and investors, the opening-up of new building land on the outskirts is to be made more expensive and inner urban development indirectly stimulated. Provided the local authorities were also subject to it when designating new transportation areas, it could be considered as an alternative to the tradeable land use certificates and the building land designation charge. If e.g. the municipalities successfully pass the building land designation charge on to the end users, then quantitatively similar land policy control effects should ensue for both instruments, given the same duty or charge rate. The site development charge should, in comparison with the tradeable land use certificates and the building land designation charge, be politically easier to enforce, as the municipalities would not be so directly affected in their designation behaviour.

Soil sealing charges

Through a soil sealing charge (Bodenversiegelungsabgabe) incentives are to be created, which on the one hand reduce the rate of new sealing while on the other hand support unsealing of land which has already been developed. With most of the proposals under discussion it is a matter of a single payment, which is liable when new sealing is carried out. For the main part it is intended to offer incentives for the containment of new sealing. In addition there are also proposals for split charges, with new developments paying a single duty imposed upon sealing, and sealed plots subject to an annual duty dependent upon the degree of sealing. This has been criticised as it would result in higher administrative costs compared to a once-only new site development charge, and an expected increase in the already high living costs in Germany in the case of a charge on stock.

One instrument which has already been introduced in a large number of municipalities is the sealing-dependent waste water charge. The amount charged is not dependent on the volume of fresh water drawn, but also upon the amount of rainwater, which flows from the plot into the public sewage water system and

which is greater the higher the degree of sealing. As the drainage of rainwater into the public sewerage system incurs costs, site owners with large sealed areas utilise local services comparatively more than owners with a smaller area sealed. Sealing-dependent waste water charges therefore lead to greater equity in charges. The amount charged is not dependent on the volume of fresh water drawn, but also upon the amount of rainwater, which flows from the plot into the public sewage water system and which is greater the higher the degree of sealing. The principle of equivalence underlying the law of charges however sets narrow limits for using waste water charges as an instrument of land policy.

FINANCIAL PROMOTION

The state has provided numerous stimuli in the past for the expansion of housing stock through tax concessions, direct subsidies and development programmes. Bearing the situation on the housing markets and the anticipated effects of the demographic development in mind, various parties are today calling for a restructuring of funding and a new orientation in housing policy.

Social housing

State subsidies for housebuilding have a long tradition in Germany dating back to the Weimar Republic. In accordance with the 2nd House Building Law of 1956, the construction of housing for rent, the modernisation of housing stock and the creation of home ownership were promoted. With the amendment of the House Building Law in 2001 a paradigm shift was implemented: from the provision of housing for »broad levels of the population« to basic provision for those in need.

The revision should make allowances for the fact that the creation of residential accommodation is no longer in the foreground today, but rather the targeted, flexible and needs-based support of households, »who are unable to provide themselves with suitable housing on the market«. With the demographic development in mind, the subsidies should in future concentrate on the socially orientated use of available housing stock, instead of subsidising the building of new expensive social housing. This should occur through the purchase of existing housing stock, the modernisation of housing stock, the purchasing of rights to nominate tenants in existing buildings as well as the continuation or establishment of rent commitments.



As a result of the stock-oriented structuring of the Housing Support Act (Wohnraumförderungsgesetz), positive effects are expected from the new regulation with regard to land protection. Doubts have however been expressed from an urban sociological point of view. As the number of households on the housing market who are unable to adequately provide for themselves is rising, and the supply of low-cost housing is continually shrinking as a result of the deregulation of the housing markets and the withdrawal of the state from housebuilding subsidies, there is inevitably a concentration of socially deprived groups in certain areas. With that the danger of social segregation is growing.

Promotion of home ownership

Although the modification of the owner-occupied housing allowance (Eigenheimzulage) at the beginning of 2004 took account of several of the main criticisms of the old regulation, it remained the most controversial instrument of the promotion of housing development. Above all the allocative distortions and the negative land policy control effect activated by this subsidy were criticised. Also after introduction of the equal treatment of new and old buildings in the promotion system, there were doubts as to whether this would suffice to bring about the desired redirection of investments from new buildings into existing stock. Various parties therefore supported a focussing and/or regional differentiation of the home ownership promotion scheme. Proposals were made, including a concentration of the support on families with several children, on threshold households in high price regions, on the purchase of properties from existing stock or new building on inner-city brownfields.

Others pleaded in comparison for a removal without replacement of the owner-occupied housing allowance, arguing that the subsidisation of home ownership in the light of what can be characterised in the meantime as a better than good housing supply in most regions, increasing vacancies and a fundamentally different situation on the property markets was no longer up-to-date. There was a fear of the risk of bad investment, if the promotion were to be continued as hitherto, as a loss in value of property on the outskirts of urban areas in particular could be reckoned upon.

The owner-occupied housing allowance was abolished with effect from 1st January 2006. Running subsidies were not affected however, i.e. property developers, who had started to build their own homes before 1st January 2006, as well as buyers, who had signed a notarial contract of purchase or joined a co-operative before 1st January 2006, are still entitled to subsidies according to the arrangements of the owner-occupied housing allowance law. The final pay-

ments will stop in 2013 when the eight-year subsidy period ends. The abolition was justified on the grounds that widespread promotion is now unnecessary considering the relaxation of housing markets and distinctly lower finance and building costs. The removal of the owner-occupied housing allowance put the cutting of no longer justified subsidies into practice. At the same time the federal government announced its intention to better integrate self-occupied residential property into subsidised retirement schemes by 1st January 2007 in accordance with the coalition agreement.

The associations as well as the trade union in the construction and housing industry have prepared a proposal for the inclusion of home ownership into the Riester subsidy, which also covers housing association accommodation, rights of residence and rented residential property. The “Building-Riester model” they presented increases the freedom of choice between different types of old age pension schemes and also leaves the decision as to new construction or purchasing from housing stock up to those entitled to support. A link of the subsidy to urban development and ecological criteria, as has been suggested within the framework of the debate on the owner-occupied housing allowance, is not provided for in the model.

Promotion of urban renewal and development

The opinion is unanimous that the promotion of urban renewal and development has proven itself in recent years to be an important instrument for the achievement of inner urban development, for the upgrading of existing structures, for the redevelopment and reuse of urban brownfields, for the implementation of a functional mixed-use development and for the revitalisation of the core towns. In spite of its relatively limited financial volume when compared to other promotion programmes, positive area effects could be achieved on a larger scale as a result of high multiplier effects.

The written survey by TAB of the pertinent associations shows this positive assessment is shared by the majority of the associations surveyed and financial topping-up is called for, above all for the urban renewal programmes »Socially Integrative City«, »Urban Reconstruction East« and »Urban Reconstruction West«. Emphasis is laid in particular by the associations in the construction and housing industry on the necessity of providing assistance in the form of public funds to make inexpensive building land available for private customers and housing companies in inner-city locations. Only if local authorities are able to offer an opportunity for home ownership also to threshold households in the cities, can they ensure that urban living is sufficiently attractive and the trend



to suburbanisation is stopped. In order to mobilise available land reserves, additional funds for the preparation of brownfields of all types must first of all be made available. Apart from this the allocation of the funds available should be more specifically targeted.

Commuter's tax allowance

Besides the housing subsidy programmes which have a direct influence on the demand for building land, there are other state subsidies such as the commuter's tax allowance (Entfernungspauschale), which have indirect effects on the land use rate. The commuter's tax allowance is criticised primarily because it favours long-distance commuters and thereby strengthens the incentive to migration into peripheral areas with favourable land prices. Also according to basic social principles this support is considered questionable, as the recipients of larger incomes profit disproportionately. Various parties, such as for instance the German Institute of Urban Affairs (Difu), the German Association of Towns (DST) and the nature conservation associations, therefore call for the abolition of this »urban sprawl bonus«. Others, such as the German Institute for Economic Research (DIW), advocate a gradual reduction over a longer period of time in order to give taxpayers time to adapt.

The federal government has cut back the commuter's tax allowance in the meantime, however for financial and not land policy reasons. From 2007 deductions can only be made from the 21st kilometre of travel to the place of work. Long-distance commuters are thus still treated favourably; this is seen explicitly by the federal government as a hardship provision for this group of employees.

EFFECTS OF THE MEASURES TO REDUCE THE LAND USE RATE FOR SETTLEMENT AND TRANSPORTATION

The discussion of the effects of the use of instruments to reduce the additional land use rate to 30 ha/day by 2020 in the TAB report focuses on the calculation of both the area effects as well as the economic impact (e.g. on tax revenue, gross domestic product, employment, cost of living). Further social and economic consequences are not the subject of this discussion. Neither are recommendations made for particular measures nor a final evaluation of the Target-30-ha or alternative land management concepts.

The Institute of Economic Structures Research (GWS) carried out simulation calculations on future land consumption for TAB using the PANTA RHEI envi-

ronmental economic simulation model. According to the GWS base prognosis, which assumes an extrapolation of the status quo conditions and describes a possible future development without new (land) policy interference, the daily increase in space required for settlement and transportation in the year 2020 will still be at around 81 ha dropping to 74.5 ha by 2030. The target of the German sustainability strategy of 30 ha/day will thus not have been reached at all and will not even be reached by 2030.

The predicted reduction can essentially be explained demographically. The demographic development, which follows the middle variant of the 10th co-ordinated population forecast of the Federal Office of Statistics in the base prognosis, will lead to a drastic reduction in new building from an annual construction of 365,000 apartments in 2000, to approx. 270,000 in 2010 and approx. 203,000 in 2020 to approx. 115,000 in 2030. The importance of private households as being responsible for the additional land use rate for settlement and transportation will thus be clearly reduced, although the living space per head will continue to rise from currently approx. 40 m² to over 48 m² by 2030.

The analyses show that when applying individual measures or individual instruments with a low intervention intensity, no appreciable area effects are achieved. This is also true, as mentioned above, for a revenue-neutral land tax reform. Calculations for a pure area tax, a pure land value tax and a combined land value and land area tax result in deviations for 2020 of little more than 1 ha/day compared to the base prognosis. The effects resulting from the abolition of the property acquisition tax for the purchase of existing building stock are similar.

The abolition or reduction of counterproductive subsidies, in the form of the owner-occupied housing allowance and the commuter's tax allowance, would also only have a modest impact on future land consumption, whereas the fiscal effects would be considerable. On the assumption that the funds saved were not put to another use, national debt would be considerably reduced; however the macroeconomic effects, e. g. on gross domestic product and employment, would be small.

In order to achieve such an ambitious target as the Target-30-ha it seems that only combinations of different instruments are likely to be suitable. What would be promising would be e. g. a set of instruments, which would combine a non revenue-neutral land value and land area tax, leading to a 1% total charge on land value, with a site development charge nominally increasing to 40 Euro/m² by the year 2020. The rate charged could be only half as high by 2020, if you proceed from the perspective that this set of instruments is only intended to



SUMMARY

achieve a reduction of the daily new use of land to 50 ha/day, with the remainder up to the closing of the gap on the Target-30-ha being brought about by planning, informational and co-operative instruments.

Overall it can be ascertained that these are measures with relatively moderate and not a priori untenable intervention intensities which could lead to the achievement of the Goal-30-ha. The effects on economic indicators such as gross domestic product, employment and rental costs, as the simulation analyses show, are likely to be very slight.

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