The majority of European cities is becoming denser each year. Whilst urban green spaces used to be the first to give way to new buildings, a growing awareness about the many benefits they provide have had many local governments abandon – or at least slow down – construction plans. Still, many local governments find it difficult to create, manage and maintain urban green areas. In most cases, shrinking public budgets and actual or perceived costs for greening the city are stated as the reason.

Before investing, many local authorities are interested in the relative merits of the different alternative uses of public space. To properly account for these it is necessary to look at the entire urban green infrastructure (UGI) network of a city and the services it offers as well as the individual types of green spaces within it. Calculating the value of an area is far from simple, the diverse individuals and communities living in cities differ in how they are aware of, use and thus value urban green infrastructure (UGI). Not all benefits and thus values can – and should be – measured in monetary terms.

Knowing in more detail which groups of people in a city benefit from the range of urban green spaces and the services they provide helps municipalities define and potentially distribute obligations towards these spaces. This can open doors to alternative financing, management or maintenance resources to keep the cities as green as possible.

Linking UGI benefits to values

The value of green spaces is determined by the amount, arrangement and quality of multiple attributes. For example, a small urban park might be regarded as attractive – and of value – by users if it is well designed, houses a diverse set of species, has open space to do sports or meet neighbours at a café. The preferred qualities and their relative value may vary from user to user, depending on what they want to do in the park and –more broadly – on their circumstances and socio-economic background. The point of valuing urban green is to understand the trade-offs between the range of green area attributes.
These trade-offs can be captured particularly well when different value dimensions (e.g. ecological, social, economic) are taken into consideration.

GREEN SURGE suggests that the valuation of green spaces has to go beyond solely looking at monetary gains. Valuation should address green spaces as stand-alone as well as integrated parts of a city-wide UGI network. While it is not easy and usually requires academic support to disaggregate individual factors and qualities (most people appreciate a place in its totality), valuing UGI nevertheless requires an understanding of which green spaces or corridors support which services and how these are distributed across the city. Valuation also asks for a solid knowledge of the politics, rights and physical limits to access to these services. To get the full picture, local governments therefore advise not to reduce valuation to an econometric exercise. Instead, they should take a broader approach and integrated different studies looking at the various aspects of urban green infrastructure.

**Using integrated valuation for UGI decision-making**

Integrated valuation studies attempt to bring different dimensions together. Whilst not straightforward, they may help local governments start a discussion with citizens, civil society organisations (CSOs) and businesses on the value of green spaces in a city. They can illustrate interlinkages between the different economic, social and ecological value dimensions (including synergies and trade-offs), produce new insights on the different types of green spaces and address the type and range of preferences urban dwellers have. Integrated valuation also helps ascertain non-monetary values of UGI. The social value of UGI cannot be determined by people’s willingness to pay. It also includes symbolic and intrinsic values of a space or the value of the sense of place, i.e. the attachment people have to an area. Integrated valuation also needs to reflect that there are individual and shared values amongst people and both types need to be taken into consideration.

**Example:**

Integrated valuation in practice: value of urban green spaces in Łódź, Poland

Łódź is a fairly large city of 700,000 inhabitants. There are different types of green spaces spread unevenly across the city with forests making up 7% of the city area, parks 3%, allotment gardens 2% and cemeteries around 1%. Łódź scores poorly in terms of green space availability in a number of studies, which suggests that green areas are a sought after commodity. GREEN SURGE conducted hedonic pricing studies to firstly assess the economic impact of green areas on the real estate market – depending on their size and type – and secondly integrate this economic perspective with social values ascribed to the spaces by the city’s residents. The first hedonic pricing study concluded that some types of green space had a particularly significant impact on property prices. For example, a 1% increase in distance to the large Łagiewniki Forest translated on average into a decrease of price of an apartment by PLN 110 per square metre, i.e. 2% of the average square meter price in Łódź. Similarly, a 1%
increase in distance from large parks, resulted in an estimated reduction of PLN 57 per square metre, i.e. 1% of the average square meter price. Cemeteries had a different effect: Prices for apartments increased the further away properties lay from a cemetery. However, distinguishing green spaces based on their sizes and types does not reflect people’s preferences sufficiently. The second hedonic pricing study therefore took into account whether green spaces, which had been valued positively or negatively within a participatory mapping survey, influenced real estate prices accordingly. The most important finding was that hedonic pricing results were generally consistent with those of the participatory mapping survey. The integration of both approaches, however, also revealed some trade-offs between different value dimensions. For example, informal green spaces which were perceived by their users as lacking well-maintained greenery still exerted a positive influence on property prices. On the other hand, positively evaluated informal green spaces had no impact at all on housing prices. This could have been caused by the fact that informal green spaces were perceived differently following a monetary and a non-monetary approach. In other words, these spaces regular users and nearby apartment buyers perceived them differently, reflecting the diverging needs and preferences of these two groups surveyed.

DEFINING RIGHTS AND OBLIGATIONS TOWARDS UGI

A right is a privilege granted to a citizen, CSO or business in the form of continued use of a particular space, product or service associated with UGI, granted only on the basis that said person or body agrees to fulfil ecological obligations stipulated in advance. An obligation is something by which one is bound or obliged to do something.

Valuing UGI needs to also explicitly include identifying the different beneficiaries as well as the bundles of benefits they derive from green spaces. Local governments can use this information to define user rights and corresponding maintenance obligations towards green space. The latter can be coupled with monetary levies or in-kind contributions with the aim of reinvesting them in constructing, managing and maintaining UGI.
Involving intermediaries to moderate the valuation process

GREEN SURGE also revealed that the value of UGI is best established together with a group of relevant stakeholders, likely including researchers or other experts specialising in valuation. This helps capture the range of different views and perceptions. Local governments, citizens, entrepreneurs and researchers express values differently. Therefore, a trusted and accountable facilitator may help ensure that the range of perspectives is included in the valuation of UGI and an agreement on a fair system of rights and obligations is reached. The role of intermediaries is particularly important when eliciting shared values, i.e. the values held by the urban society at large and not merely by individual residents. In the end a combined and broadly anchored knowledge base can improve the efficiency, relevance and safeguarding of green spaces and the services provided. It also paves the way for local governments to co-manage UGI and support citizen-led initiatives strategically, going beyond solely financing green spaces.

Further mechanisms can be found in GREEN SURGE “Urban Green Infrastructure Planning: A Guide for Practitioners”.

FINANCING MECHANISMS FOR REINVESTING IN UGI

Local authorities can avail of a range of financing mechanisms such as:

- **Land tax**: Added value generated through proximity and access to UGI can be taxed and reinvested into public green spaces.
- **Land leasing**: State-owned land is leased out and revenues can be reinvested in maintenance and improvements of UGI on site or in other location.
- **Retail sales tax**: Taxes are levied on retail sales (e.g. tourism, properties, businesses) and generated funds are invested by local government into UGI. Taxes may not be reinvested where levied.
- **Special tax districts**: Taxes are levied within specified territory locally and funds collected are reinvested according to purpose taxed in the area.
- **User group diversity** (e.g. socio-demographic characterization, residence, origin)
- **Club neighbourhoods**: A group of economic agents set up an institution to fund and organise the improvement of local UGI. The institution levies a fee to reinvest in shared UGI and related services and thus in the overall value of the neighbourhood (e.g. homeowner association, business improvement district).

Further mechanisms can be found in GREEN SURGE “Urban Green Infrastructure Planning: A Guide for Practitioners”.

Resource:
GREEN SURGE “Urban Green Infrastructure Planning: A Guide for Practitioners”

References:

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Between 2013 and 2017 GREEN SURGE has worked on identifying and developing ways of planning, creating and managing urban green space whilst at the same time strengthening its biodiversity, making it accessible and available to all groups of society and promoting an economy based on green infrastructure.

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