

INTÉZMÉNYKERTEK KÖZÖSSÉGI HASZNÁLATÁNAK LEHETŐSÉGEI

Iskolakertek lehetséges szerepe a városi zöldinfrastruktúrában

OPPORTUNITIES FOR PUBLIC USE OF INSTITUTIONAL GARDENS

The potential role of school gardens in urban green infrastructure

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ABSZTRAKT

Az intézménykertek olyan speciális zöldfelületek, amelyek különböző funkcionális és ökológiai előnyöket kínálnak, ezzel hatékonyan támogatják a városlakók jóllétét. Az intézményi zöldfelületek szerepe a történelem során sokszor változott a különböző társadalmi-politikai rendszerek függvényében, mégis számos történelmi példa van az intézményi kertek közösségi használatára. Habár az intézménykertek a városi zöldinfrastruktúra alapvető elemeinek számítnak, a korlátozott közhasználat miatt általában nem tartoznak a lakossági rekreáció elengedhetetlen szabadterei közé. A folyamatosan sűrűsödő, a történetileg magas beépítettségű, vagy egyéb okból zöldfelülethiányos városrészekben az intézménykertek városi zöldinfrastruktúrában betöltött szerepe kiemelten fontos, a közhasználat lehetőségeinek részletes elemzése aktuális kérdés.

A cikk általános áttekintést ad az intézményi zöldfelületek közösségi használatának főbb történeti példáiról, a funkcionális változást befolyásoló ideológiákról, társadalmi vagy környezeti tényezőkről. A szerzők a szakirodalmi áttekintés és a saját szakmai tapasztalataik alapján összefoglalják a különböző intézménykert típusok mai jellemzőit, karakterisztikáját, ezután pedig megvizsgálják azok közhasználatra való megnyitásának lehetőségeit és kihívásait. A kutatás esettanulmány formájában mutatja be az OASIS projektet, amely az oktatási intézmények zöldfelületeinek éghajlati alkalmazkodáshoz való hozzájárulását állítja fókuszba. Az esettanulmány jó példa arra, hogy az intézménykertek esetén a rendszerszemléletű kezelésben és fejlesztésben nagy lehetőségek rejlenek.

Kulcsszavak: intézménykert, iskolakert, zöldinfrastruktúra, közhasználat, korlátozott közösségi használat

ABSTRACT

Institutional gardens are special green spaces offering different functional and ecological benefits that can effectively support the well-being of urban residents. However, the role of institutional green spaces has changed throughout history, within various socio-political systems, and there have been many historical examples of the public use of institutional gardens. Today, institutional gardens are considered part of urban green infrastructure, but due to restricted public access – differing from completely private to semi-public use – we cannot state that they are essential open spaces for regular residential recreation. Continuously increasing urban density prompted new ideas in this field, which are worth analysing in detail. The article aims to give a general overview of the main historical examples of the public use of institutional green spaces, and the ideologies and the social or environmental factors affecting the functional change. After that, the authors – based on a literature review and professional experience – overview the current characteristics of the various types of institution gardens, then investigate the opportunities to open them for public use. Finally, the challenges of public use are systematically analysed. A case study analysis is presented on how educational green spaces could contribute to climate adaptation. The case study also aims to show that there is great potential in systematic thinking and reconsidering the role of institutional gardens in urban green infrastructure.

Keywords: institutional gardens, school gardens, green infrastructure, public use, restricted community use

INTRODUCTION

In this study, the authors focus on public institutions that provide the so-called human public services for society, and usually have significant green or multifunctional open space on site. These institutions are educational (nurseries, schools, colleges, universities), social (hospitals, health centres, rehabilitation facilities, care centres), cultural (museums, libraries, community centres), recreational (sport facilities, pools, zoos, botanical gardens), sacral (religious, cemeteries), and administrative (government offices). Most economic and financial institutions do not fulfil the criteria so they are excluded from the study. Of the seven categories, special attention is given to educational institutions, because most belong to the basic and mid-level social supply, and represent a special, densely integrated network comprising a well-distributed school system covering all urban residential areas. In terms of ownership, the authors did not make a distinction between institutions in the private sector, non-profit organizations, associations, or state or local government institutions. The study gives examples for all sectors and

all kinds of ownership, and focuses on the European context, but it is important to extend the horizon when talking about potentials, as the different socio-political-cultural context of non-European countries might bring new ideas to the table and examples worth considering.

The UN Sustainable Development Goals are very important guidelines that we have to take into consideration. Several of these development goals favour making institutional gardens accessible for all: *good health and well-being for all* (3), *reduce inequalities* (10), *resilient and sustainable cities and communities* (11), and *peace, justice, strong and inclusive institutions* (16) [1].

CHARACTERISTICS OF THE DIFFERENT TYPES OF INSTITUTIONAL GARDENS

The idea of making institutional gardens a public utility is not a new trend. Some types of institution have consistently had public access: for example, sacral institutions have always played an important role in community life (temple gardens, holy groves). The open spaces of ancient administrative institutions (Greek agora, Roman forum) were important for the public from the beginning – and the modern equivalents are still valuable public spaces. Recreational institutions typically had significant green spaces for community use in ancient times (Greek gymnasium, Roman baths [2]), while today most of these gardens have restricted use. On the other hand, educational and social institutions were typically hidden from the public (medieval monasteries and universities [3]), while today hospital gardens and university green spaces add significant value to urban green infrastructure. It is important to highlight that many of the first public parks in modern cities were originally private royal gardens or deer parks opened up to the public [4] to satisfy the increasing need for public recreation within growing cities [5].

Certain ideological drivers and political principles have supported the public use of institutional gardens. For example:

- democratic values in ancient times
- revolutions for freedom and equality [6] in the 18-19th centuries [7]
- social values in the communist-socialist countries supported the development of a public welfare system after the 2nd World War [8]
- ecological values and human wellbeing aspects from the second half of 20th century

Today, if we wish to measure the potential for public use, we must first understand the present characteristics of the different types of institutions. Figure 1 summarizes the main aspects of each sub-types, in terms of average lot size, ecological value, usual urban position, and the typical functions of the open spaces. Even within one

Figure 1: Typology and characteristics of institutional open spaces

type, various subtypes may show different characteristics. Looking at the typical urban position: institutions are located in central hubs, or in the outskirts, or both, or they form a network offering good distribution for the population. The urban position is dependent on need, importance, spatial requirements, and date of establishment. Usually, larger lot size indicates that the urban location might have a less central position. The ecological value is not always strictly determined by the area of the given urban lot: for example, in sport facilities, playing fields typically have lower ecological value because of their low biodiversity and green intensity, despite their large area.

POTENTIAL FOR PUBLIC ACCESS

Based on the main characteristics of institutional garden types, we have highlighted five situations when there is great potential for public use of institutional green spaces:

1. High ecological value

Large green institutions are important additions to the green infrastructure system, even with limited public access. However, while the ecological value is maintained even in private ownership, with public access we can allow people to enjoy the benefits of these green spaces.

2. Equal distribution

If the location of the gardens matches the population density, there is potential for mass opening to elevate the overall liveability of the city.

3. Multifunctional open spaces

Multifunctional open spaces allow for flexible usage, so functions or users can overlap in space, though separated in time.

4. Position in the urban landscape changed due to development

In the case of historical institutions, the original location in the outskirts has often turned into a central location due to urban expansion, meaning that the green space in question has an even greater importance in the urban fabric.

5. Potential benefit for the institution

There are some cases in which the internal institutional function of the green space not only tolerates but

positively demands wider public use. For example, in hospitals, the patients might benefit from wider public use of the garden in the form of communication and interaction, as they can see and interact with visitors from outside the institution.

It is important to highlight that for one institution several points can apply at the same time.

CHALLENGES ARISING FROM PUBLIC USE

Beside the benefits, there are always challenges caused by opening an urban green space to the public. What are the main issues we face when opening up an institution to the community, and how can we handle them? We offer solutions and examples for each of five key challenges:

1. Higher maintenance is needed

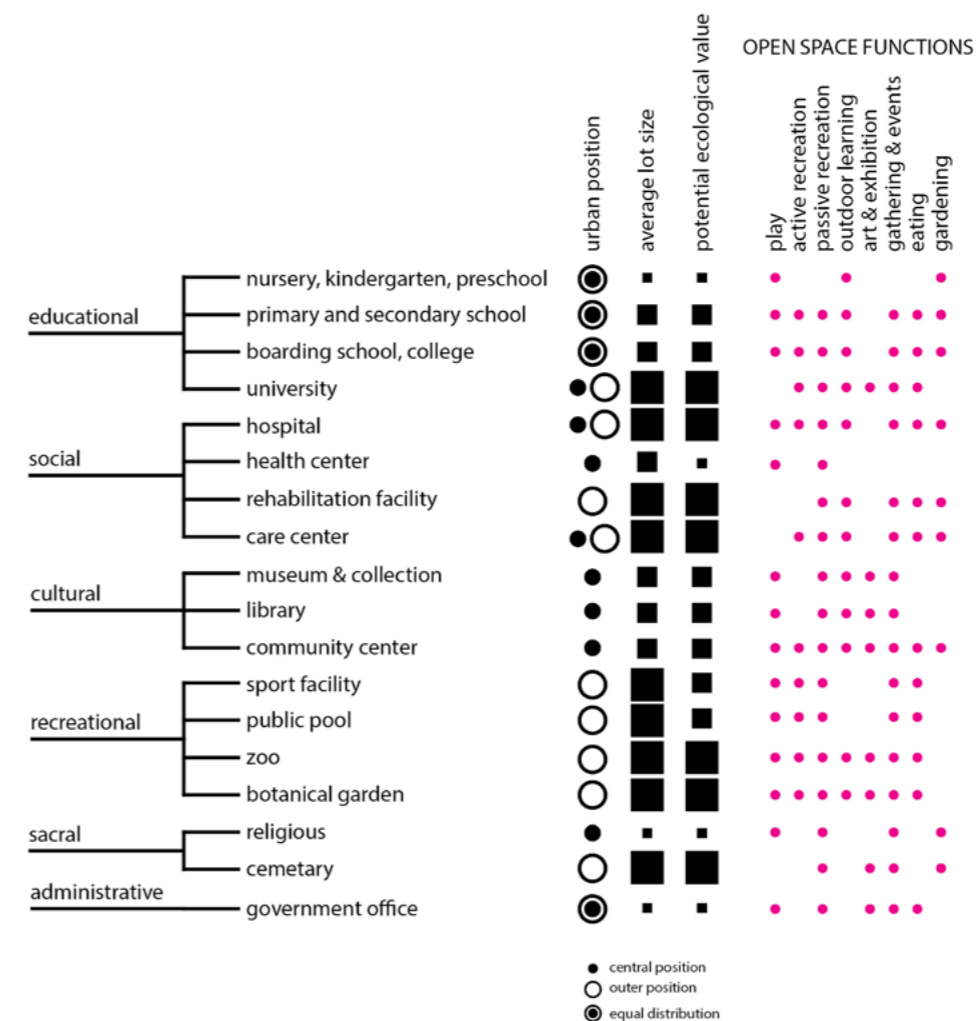
Restrictions in time, number of users, or forms of usage can be helpful in keeping the maintenance needs at an optimal level. It is essential to overview the management plan before allowing wider public access to the garden. In some cases, it may even need to be redesigned. There is also a possibility of obtaining external resources for higher maintenance needs either from the government or from the local community, so public use can be a win-win situation.

2. Hurts profit-oriented businesses

So-called 'green' or recreational institutions typically make their profit out of their outdoor facilities. These institutions can offer free admission for specific users, such as children, locals, the elderly, the disabled, etc. [9]. Free open days once a month [10] are a common feature of many recreational and cultural institutions. In some cases, broad public use may be the objective, to enhance the well-being of the local community, and therefore the local or state government takes over or financially supports an institution to provide free access [11].

3. Prevent smooth functioning of the institution

In children's educational institutions (nurseries, schools) or specific social institutions (sanatoriums, some rehabilitation centres, nursing homes, etc.) public use can cause disturbance. In these institutions, public use is either not compatible or has to be well regulated. Security, an



admission system, rules, and supervision are some of the tools that can support public access while still preserving the internal function. There are great examples of schools opening their gates after school hours or on the weekends, with supervision [12-13].

4. Mental barriers

Despite the high ecological value, in sacral and health care institutions there is usually a mental barrier to certain public uses. Adequate design (to reduce conflicts in functions) and clear rules (restrictions on usage) are essential for these institutional gardens to allow the wider community to enjoy the advantages of these valuable green spaces [14-18]. In the case of cemeteries, the cultural value and therefore tourism is a great potential [19]. For the community use of hospitals, we can see some good examples in Berlin and Vienna [20], but a great non-European example is the public Khoo Teck Puat Hospital in Singapore, which is a new establishment and was built closely intertwined with a park, enabling patients to use the park, while also allowing healthy people to walk or run around the hospital garden and visit patients [21-22].

5. Lack of proper connections and entrances

In order to integrate the institutional garden into the green infrastructure, we must pay attention to entrance and transition zones. Pierced fences, large, visible and welcoming entrances, and signage are great tools to support the integration of these green spaces. For example, cemeteries are often isolated and poorly connected to their surroundings, meaning that they can become blind spots in the city [23].

FIGHTING AGAINST URBAN HEAT WAVES WITH SCHOOLYARDS

The quantity and quality of a school's green space depends to a great extent on its position in the structure and fabric of the urban environment [24-25], but the diverse open space functions and balanced spatial distribution result in substantial potential for community use. While several schools across Europe have an open policy, there are only a few initiatives to build a network as part of a large-scale strategy. Table 1 shows a comparison of three European programmes aiming to cover the whole city. The Parisian OASIS programme is not chronologically

	Paris Oasis Schoolyards programme	Patis Escolars Oberts project	Open Schools Project
location	Paris, France	Barcelona, Spain	Athens and Thessaloniki, Greece
timing	ongoing since 2018	from 2020	from 2015
objective	80-100 schoolyards (aimed all 770 public schoolyards by 2040)	80 schools, 25 nursery schools	25 schools (1 school / neighbourhood)
	transforming and opening up of schoolyards	transformation and opening up schoolyards and nurseries	repairs of school building and schoolyards and opening them up
	after-school hours, organized activities	Friday-Saturday-Sunday and Holidays, supervised play and organized activities	after-school hours, organized activities
target group	most vulnerable people	children, teenagers, and families	all ages and social groups
idea behind / drivers	After serious heatwaves hit the city in to create cool islands. To support the idea of the 15 minutes city. OASIS = Openness, Adaptation, Sensitisation, Innovation and Social Ties.	Schools as educational centers. To offer free and open activities in the neighbourhood for children, teenagers, and families. Create climate shelters.	Using empty school buildings during afternoon hours to turn them into community centers. To create safe meeting spaces (lack of public open spaces). Free knowledge building and entertainment. Decentralized life-long learning structures in local communities. Empowerment of the city's institutions.
part of bigger strategy	Paris Climate Adaptation Strategy (2015), Paris Resilient Strategy (2017), Paris Biodiversity Plan (2018).	Barcelona Playable City	–
participation	co-design workshops students, 3-step community engagement process for locals, youth engagement in maintenance	participative budget, engaging students, families and teachers	user engagement and other participatory methods
funding	City of Paris, the State, Water management Agency Seine Normandie, European Regional Development Fund program	Barcelona City	Stavros Niarchos Foundation
challenges of opening up	noise, guarding, cleaning	–	proper participatory planning process, gain trust of the many stakeholders, background operation, supervision, cleanliness, liability, and coverage of operation costs and damages

the first, but it is a pioneer in terms of focusing primarily on the urban ecological potential of schoolyards.

As many European cities are currently laying stress on offering a better supply of public green space, making gardens publicly accessible can be a solution within the densely built urban fabric. While the World Health Organization recommends a minimum amount of nine square metres of publicly accessible green space per person, within 300 metres of where they live. Urban residents in Europe have, on average, 18m² of publicly accessible urban green space per person, but only 44% live within the threshold distance of 300 metres [33-34]. Beside the fact that a good ratio of green infrastructure is essential for improving the local climate and the well-being of the population, accessible green spaces are also crucial in alleviating urban inequalities [35-36]. Though the approach of teaching about ecology and sustainability

through the school garden is supported in many countries [37], the Parisian OASIS programme is the first that not only sees the potential in schoolyards, but also connects them with the urban green network. The “OASIS – Openness, Adaptation, Sensitisation, Innovation and Social Ties” schoolyard greening programme aims to renovate and open to the public 800 schools with a total area of 73 hectares. The project objectives are to reduce the urban heat island effect and create cool places, to provide pupils with a healthy and stimulating learning environment, to educate residents about the risk of climate change, and to create numerous meeting spaces to spur conviviality and solidarity. By 2040, the currently neglected, largely paved school yards with sparse tree canopies will be turned into valuable, open green spaces [Figure 2]. The catchment area of Parisian schools is 200 metres, which means that open school yards can

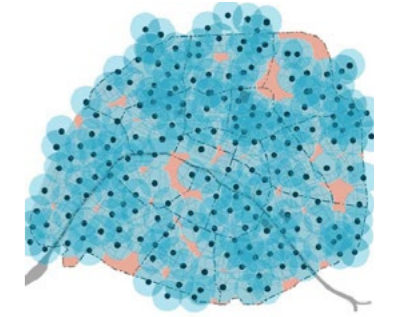
◀ Table 1: Comparison of open school programmes in Europe [26-32]

Figure 2a-b: A Parisian school yard before and after the transformation

SOURCE: [HTTPS://WWW.UIA-INITIATIVE.EU/EN/NEWS/TIPS-N-TRICKS-GREEN-AND-PLAYFUL-SCHOOLYARD-JOIN-US-UPCOMING-WEBINAR-AND-LEARN-ABOUT-OASIS](https://www.uia-initiative.eu/en/news/tips-n-tricks-green-and-playful-schoolyard-join-us-upcoming-webinar-and-learn-about-oasis)

Figure 3: Network of Parisian schools and their 200-metre catchment areas

SOURCE: [HTTPS://UIA-INITIATIVE.EU/EN/NEWS/PARIS-CREATING-OASIS-HEART-ITS-NEIGHBORHOODS-AND-WHY-MORE-CITIES-SHOULD-FOLLOW](https://uia-initiative.eu/en/news/paris-creating-oasis-heart-its-neighborhoods-and-why-more-cities-should-follow)



effectively serve the neighbourhood needs for everyday recreation [Figure 3]. Experts hope that the greening of schools will also impact the local climate. Statistically, Paris falls far below the European average (26% total green infrastructure, 11% urban green space, 20% urban tree cover [38] [39], meaning that this is a huge opportunity in terms of improving the quality of urban life [28,40-41].

DISCUSSION AND CONCLUSIONS

Opening a private open space for public use does not simply mean opening the gates – it entails a range of planning aspects and issues belong to a successful reutilisation programme, otherwise even large, valuable green spaces may remain unused. *Accessibility* is a key approach that has to be adhered to – both in the physical and mental sense. On the one hand, the site must be well integrated into the public urban space structure, with clear transition zones to highlight public use, and the regulations on public use must be clear. On the other hand, institutional green space needs to be part of residents’ mental maps. Events, tours, thematic city walks, and educational materials can be of great help in promoting community use and in getting to know and discover the values of the neighbourhood. Beside accessibility, an *appropriate design* is required to serve the needs of the community. Frequently, an institutional garden is underused because it is not attractive to the public: there are no inviting recreational functions and/or equipment to support citizens’ visits (toilets, refreshment kiosks, information, benches, tables, etc.). Proper *maintenance* is also an important aspect that can increase attractiveness, security, and comfort for both users and visitors.

Preserving and increasing green spaces is a major problem in most old cities, so developing and opening up

the existing institutional gardens for community use seem an obvious solution. Community use must never override the internal needs of the institution, but should benefit it. And there are indeed several benefits that might apply to an institution: increased visitor numbers, extra profits, enhanced building prestige, community development, relationship building, education, improved well-being, etc. Nowadays, when many kinds of institutions are struggling with visitor numbers and financial sustainability, community use can help redefine their image to make it more attractive to the public. Besides green spaces, there are certain functions (playground, cafe, library, parking, sport fields, water feature, etc.) that can be shared with the residents of the city. Municipal governance can likewise play a crucial role in negotiating agreements with institutions on how to harmonize public functions to reduce public space occupation while serving their needs. Finally, we lay stress on systemised development to achieve better supply and exploit opportunities. The OASIS open school programme of Paris seems a good example of taking advantage of and reimagining what we already have, to make it more beneficial for all. ©



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