

Wind of Change

Empowering a community to tackle heat islands collectively

Charlotte Muhl and Ina Engelke

Master Students

Institute of Environmental Planning

Leibniz Universität Hannover

<https://doi.org/10.15488/5570>

Introduction

Athens is exposed to high heat stress that has negative effects on its residents. This paper presents an approach to tackle the problem by empowering the community and strengthening local solidarity.

The area examined in this paper has a particular attribute: the park “Pedion Areos”. It presents a large potential for residents to escape heat stress. Unlike most areas within an urban structure, the park is mainly unsealed, leaving the surface permeable to water which lowers the urban heat island effect. The park’s vegetation cools the area by evaporation and providing shade (KLEERE - KOPER et al. 2012). Due to the limited monetary possibilities regarding the change of grey urban infrastructure, the concept which is presented in this paper focuses on strengthening the opportunities provided by the park and other potential green areas as well as empowering the people to responsibly participate in the district’s development in order to create a healthy living environment for its residents.

During the Summer School, on-site inspections of the designated study area were made. By doing that, the area was examined for the subjective feeling of heat, safety and social meetingpoints. Moreover, informal expert knowledge of the area was provided by Greek Architecture students. Detailed analyses of the constructed and social structure were made possible by Greek Census Data and the Athens Office of Resilience and Sustainability.

In order to scientifically justify the aspired strategy, further literature research was done. A big part of this research served the purpose of answering one important key question: What constitutes resilience of a society or neighbourhood? Linked to the crucial role green infrastructure in cities plays in answering this question, the various benefits of urban green were identified. In addition to that, the role of urban planners in the process of making a community more resilient against external threats such as heat islands was debated. Eventually, the key findings presented in this paper were brought together in the depiction of an ideal participatory planning process. The implementation of the presented concept has the potential to improve the current vulnerability of the neighbourhood around the “Pedion Areos” to heat stress and to furthermore generate a greater sense of community and belonging.

*Urban green
as a means to
reduce heat
islands*

Urban green provides several benefits for societies. The creation and improvement of green spaces contributes to a decrease of temperature (KLEEREKOPER et al. 2012). The vegetation improves the air quality by filtering emissions and particulate matter, thus also improving the local living quality. Beside these advantages, urban green also benefits the well-being of people in further ways. Humans evolved along with nature, always being closely related to it. That gives natural elements a high importance when it comes to designing spaces for people (BEATLEY and NEWMAN 2017, 3). Green and natural spaces improve the sense of place as it is received by people. They have biophysical benefits such as stress reduction (ibid., 18). Also the sense of place that is provided by green spaces strengthens the commitment to the neighbourhood (ibid., 14). The quality of the outdoor environment influences its usage, especially when it comes to optional activities when the person could also spend the time elsewhere (GEHL 2014, 147). More social spaces lead to more walking and to more time spent outside (BEATLEY and NEWMAN 2017, 16).

Being actively engaged with nature can also have additional benefits such as emotional rewards provided by gardening, food production or crafting. People that engage in nature show a higher generosity and helping behaviour (ibid., 18). When it comes to shocks, the residents' concern for the well-being of others has a high impact on the neighbourhood's resilience. On a personal level, near-natural spaces help to prevent social isolation because they provide the opportunity for informal contact and socialisation (ibid., 20). Also contact on modest levels is important. Even passive contacts, just seeing and hearing people positively influences peoples' well-being (GEHL 2014, 148).

Planners are confronted with a highly diverse field of action in urban development processes. Urban communities are by no means homogeneous, but are composed of numerous individual people who represent a broad variety of different values and interests (HEALEY 2007). Over the past years, the trend in urban planning has developed towards the realisation of projects with the participation of public as well as private actors. Spatial planners find themselves confronted with the difficult task of achieving a consensus between all involved actors and their often conflicting interests in order to find feasible solutions to local problems (ibid.; HALL 2000).

In public participation processes, it is strongly recommended to use mediation methods since they are not only necessary for the resolution of conflicts, but also provide a base for the production of knowledge. Hence, a mediator is needed to liaise between the conflicting parties (PELTONEN and SAIRINEN 2010). Encouraging a dialogue and intense collaboration between all interest parties is crucial for the success of a project, which is why communicative instruments are indispensable in participatory processes (BUHECKER et al. 2002). According to SEHESTED (2009), interdependence, negotiation and trust are the fundamental principles in managing such complex networks. At the same time, a certain amount of “metagovernance” is needed – a means in order to achieve a “regulation of self-regulation” (JESSOP 2002).

An urban planner aiming to manage a participatory process has to take over and balance different tasks and responsibilities, including dealing with political and economic matters, structuring the planning processes, and the resolution of conflicts (KLIJN AND EDELENBOS 2007). They need to interact with all parties “as a knowledge mediator, a broker, a counselor or a critical friend” (HEALEY 1997, 309). A very important yet difficult task in all this is to create a fair and democratic process in which not only the powerful, but also the weakest parts of the community can express their needs and interests (ibid.). An established strong neighbourhood management, for instance provided by a local planning office, is able to tackle potentially arising tensions and to develop effective responses to raised concerns while taking into account the political, strategic and local context. At the core of the planning process at a local level needs to be a dynamic neighbourhood manager – a dedicated person who is familiar with the neighbourhood and its particular diversity (SQW LTD. 2007).

The examined area lies in the north-eastern part of Athens in the district “Pedion Areos”. It lies adjacent to Leof, Alexandras street in the South, 28s Oktovriou in the West, Kefallinias in the North and Andrea Moustoxidi in the East. The neighbourhood is a residential area in which spaces are used for housing and small businesses. Also cultural and social attractions and institutions of services to the public are available within the area, such as schools, a university campus, a sports association,

Analysis

a hospital and others. Besides the park, the study area contains only a few other green or blue surfaces (see figure 1).



Figure 1: Map of the study area, without scale (Source: DRAKONTAEIDIS and PISIMIS 2017)

A high amount of sealing and the lack of open spaces lead to an accumulation of heat in warm periods. The surface temperature measured during a heat wave in June 2016 was relatively low in the study area compared to other districts of Athens. However, the surface temperature measured was higher than $46\text{ }^{\circ}\text{C}$ (BLOOMBERG ASSOCIATES and ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY n. d.). Although the study area was not highly affected by heat in comparison to other districts, heat stress presents a problem that demands action. The situation is intensified by the absence of cooling centers and insulation. More than a half of all buildings in the study area have no insulation (EKKE 2011a, EKKE 2011b) and the next cooling center is further than 0.5 km away from the closest point in the area (BLOOMBERG ASSOCIATES and ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY n. d., data from 2011).

Our study area includes the western part of the eponymous public park “Pedion Areos”. It provides shading and a generally cooler climate (see chapter *Urban green as a means to reduce heat islands*), which presents an opportunity to escape heat stress. The park has been renewed 2008-2010. Still illegal activities within the park such as drug consumption and trade as well as prostitution give it a bad reputation (DRAKONTAEIDIS and PISIMISIS 2017, verbal message). It is also used by homeless persons for shelter (ibid.).

Vacancies are present throughout the whole district. While empty housing space on upper floors is not much noticeable, empty retail spaces on ground level highly influence how people that are strolling by perceive the neighbourhood. Empty stores make the district appear run down, neglected and inanimate.

Streets in the area that do not serve as a transit area between different parts of the city are mostly narrow. A lot of streets are one-way streets with one lane reserved for parking. Pedestrian walks that are usually located on both sides of the streets are mostly slim and roughly passable. Their curbs are high and seldom flattened. These circumstances make it hard for people with strollers, in wheelchairs, with walkers or children with bikes to pass.

The social environment in the area is diverse. The composition of residents has not significantly changed within the last decade. There was neither an influx nor an outflow of a majority of a social group (DRAKONTAEIDIS and PISIMISIS 2017, verbal message). Today both the number of seniors and children are relatively low compared to the surrounding districts (BLOOMBERG ASSOCIATES and ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY a, n. d.; BLOOMBERG ASSOCIATES and ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY b, n. d.). The number of low-income households is high. 27,5-30 % of the households in the area have an annual income that is lower than 8.804 € (2008) (BLOOMBERG ASSOCIATES and ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY a, n. d.). Also the share of highly qualified workers within the area ranges between 0 and 35 % of the population which is below-average (MALOUTAS and SPYRELLIS 2015, www). There is also a high presence of citizens from other countries than Greece (ibid.). This analysis is based on data from 2011. The financial crisis Greece struggles with as well as the flow of refugees in the last years may have led to an intensification of the situation.

The culturally and financially heterogeneous and likewise place-bound population presents a challenge for the neighbourhood management. Before a strategy or plan can be developed, it is essential to understand the various meanings a neighbourhood can have for its residents. A key theme that needs to be taken into account is the fact that a high level of attachment to the neighbourhood is a precondition for the development of a sense of belonging as well as a sense of community among the residents (MANZO and PERKINS 2006). In the examined neighbourhood, the overall sense of community does not seem to be very strong, which may be caused by the lack of spaces for interaction. Further, since the neighbourhood is likely to have been their home for a long time frame, residents may be biased when exposed to change. The first important step for the neighbourhood management is to understand the people's emotional connection to a place, to be insightful and accompany them on the way. It is the planner's task to convey that the neighbourhood is the residents' living environment and that they have the opportunity to actively shape it.

Introducing the concept

Based on the analysis, our aspired goals for the concept presented here are to increase social equity, to lower the impact of heat waves and to reduce emissions and their impacts on the living environment through the creation of green, safe, and social places. Through the creation of such places residents shall receive the opportunity to spend time in cooler spaces with other members of the community.

Our concept to improve local grievances in the study area is based on the following working hypothesis: The more autonomous and self-sufficient a quarter or community is, the less dependent it is on external help in crisis situations (SCHNEIDER 2015, 123). Applied to the issue of heat stress or other extreme weather events, this approach suggests that local neighbourhoods can increase their level of resilience against these external threats by becoming more self-sufficient.

As explained in the first chapter (*Urban green as a means to reduce heat islands*), the quality and quantity of urban green areas and how they are used influences the people's well-being. Our study area contains roughly 30 ha of "Pedion Areos" park, which is supposed to be-

come a central place for participatory action, but holds a very negative reputation that repels most of the residents.

A feeling of safety is a necessary prerequisite in order for people to use a certain space. Since place attachments influence people's motivations as well as their individual and group behaviour in community planning and development processes, the local communities' prejudiced opinion on the park needs to be changed in the course of the procedure (MANZO and PERKINS 2006). Crime and environmental disasters disrupt place attachments by causing feelings of loss and alienation. Only if they are properly recognised and understood, these feelings can be used to mobilise citizen participation to (re-)build the community (ibid.). Opposed to that, shared interests (e.g. tackling the heat stress, improving the neighbourhood) can foster feelings of belonging to a group. The neighbourhood management has to fathom these feelings and emotions that the residents might be unconscious about.

„Place attachment, place identity, and sense of community can provide a greater understanding how neighbourhood spaces can motivate ordinary residents to act collectively to preserve, protect, or improve their community and participate in local planning processes.“ (ibid.: 347)

Our concept aims at the implementation of green, safe and social places in consideration of the knowledge about existing circumstances as well as the residents' needs and wants in a way that will strengthen the resilience of our neighbourhood in the district "Pedion Areos" against heat stress. That shall be done by informing the residents' sense of community, justice and sustainability. But more importantly, by empowering the people to take part in their district's development, the bond shall be strengthened as well as the identification as a community.

In order to achieve the aspired change, we have developed an – in theory – ideal process of planning and monitoring the desired development in the neighbourhood. Since the process itself is meant to be largely community-led, it is not possible to plan out specific projects or measures; instead, the purpose of this concept is to give advice for planners on how to provide the framework conditions in which the projects and measures chosen by the community in question can be implemented in a

sustainable and just way. Despite the clear focus on a community-led procedure, our concept relies on an adept combination of top-down and bottom-up approaches since both combined can often generate a greater adaptive capacity in the community than either could implemented in isolation (BUTLER et al. 2015).

*Implementing
the concept:
Procedural
steps*

The steps presented and explained below are all part of the overall concept and its implementation which aims to achieve a long-term change of the local society's mindset regarding their neighbourhood and their sense of community within its boundaries in order to increase the overall resilience against external threats such as heat stress (see figure 2).

1. Person in charge

The first necessary precondition for the successful and sustainable development and implementation of visions and ideas for the neighbourhood is the designation of a dedicated person who is responsible for the neighbourhood planning process and looks for the specific individual needs of the local residents as well as the concerned public. This person, designated by the city administration, holds the position of a neighbourhood manager who functions as a mediator with the clear aim to balance out the different, often competing needs and interests of different stakeholders and actors. These can also include political, economic and administrative actors on a local as well as regional, national or international level. Ideally, the manager has a history in the field of urban planning and is well-connected with important local service providers. They need to have the influence to actually induce meaningful changes. Furthermore, it is essential that they are present in the neighbourhood and engage in a direct, honest dialogue with the local community to ensure they are trusted and respected by all represented social groups, including marginal groups.

2. Information

The idea of the planning objective – which is to make the neighbourhood more resilient against external threats, especially heat stress – needs to be communicated to all relevant actors and interest groups in order to acquire broad support and acceptance for the purpose. This includes the neighbourhood's

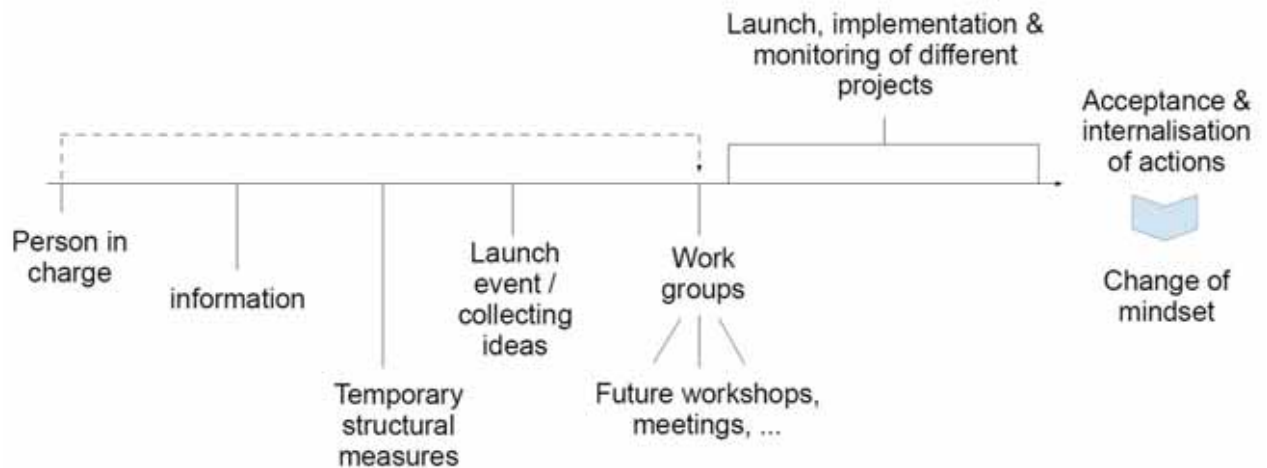


Figure 2: Timeline of the neighbourhood planning concept (Source: Own Depiction)

residents as well as the interested and possibly affected public and potential collaboration partners, such as different organised local groups, e.g. associations, societies, and political parties, and also schools and universities. First of all, all these actors need to be provided with some basic knowledge on the effects climate change has on their neighbourhood (BROTO et al. 2015, 9). It is important to only present relevant information which is directly linked to the planning objective, to raise the people's awareness of their neighbourhood's specific vulnerabilities and evoke a desire for engagement and action among them (ibid.). In addition to that, the actors need to be informed about the existence and contact details of the new neighbourhood manager in case of any arising queries and questions, and need to be made aware of the place and date of an imminent launch event during which more details about the planned climate compatible development are going to be announced and discussed. The information can be spread via local media, posters, flyers and the internet. Ideally, the new neighbourhood management has its own website presenting relevant up-to-date news regarding the planning process and progress (KREISZEITUNG VERLAGSGESELLSCHAFT MBH & CO. KG 2010, www). Potential cooperation partners should be contacted directly via email or mail.

3. Temporary structural measures

Case studies have shown that changes made to certain problematic places can have a significantly positive impact on the concerned spaces in very short time and a low budget. An impressive example for this is the "quick action approach" that has been

introduced by the New York City Department of Transportation (NYDOT). More than 50 selected places in New York have been transformed into pedestrian plazas within only a few days – and with the use of temporary materials, such as paint and planters. All plazas were created as temporary pilot projects with an initial testing period of six months. At the end of the trial period, the projects could either be turned into permanent solutions or undone with no remaining effects, depending on the actual success of each transformation. The results were immediate and overwhelmingly positive – with a clear majority of the New Yorkers approving of the changes and the approach having been copied multiple times in other cities (SADIK-KHAN 2013, [www](#)). As important as communicative instruments and bottom-up approaches are for planning, they also have a big downside to them: It takes a lot of time until the actual implementation of visible measures and noticeable changes take place, which can lead to frustration among the citizens as well as the planners (*ibid.*). Temporary measures that are implemented by the neighbourhood management in agreement with local authorities, however, are direct and quick. They demonstrate effectively that changes are actually happening, which can evoke trust in the whole purpose and increase the people's willingness to participate in the planning process in order to make sure the changes are going to be in their interest and to their individual as well as collective benefit (TAIT and HANSEN 2013; BIRCHALL and SIMMONS 2004, 7ff). If the temporary measures turn out to be broadly accepted by the relevant stakeholders and positive changes can be observed, it is always an option to turn the temporary solution into a permanent one. If not, no harm has been done because everything can be redeveloped into the former state (SADIK-KHAN 2013, [www](#)). This means that people still get a say and power in the final decision-making process, with the temporary measures functioning as an initial spark to get everyone on board.

4. Launch event to collect ideas

The next important step is to prepare and organise the announced launch event which gathers all interested actors in one place. This gathering should serve several purposes. At first, basic information about the reasons for the needed change and the planning objective should be presented to ensure that the attendants have a common basis of knowledge that will ena-

ble them to engage in and follow discussions. Concerned individuals or parties get the chance to voice their doubts, fears and hopes for the area and the community right from the start and, very importantly, within a sheltered framework due to the presence of a mediator (MANZO and PERKINS 2006). Another crucial aspect of the event is to obtain valuable information and insight into the local dynamics that only locals can provide and that might reveal hidden potentials or so far unknown (potential) conflicts (SQW LTD 2007, 9f). As explained previously, it is a crucial task of a neighbourhood planner to understand the people's emotional connection to a place and thus their motivations for blocking or rejecting community-based approaches and activities (see first chapter: *Urban green as a means to reduce heat islands*). By the time of the launch event, the neighbourhood manager should have developed and be able to present strategies to tackle the already previously known issues, such as the negative image of the park, and be open and willing to take further concerns raised into account as well. Involving residents in the process of actively developing and shaping their living environment is often very beneficial for the planning process since they contribute to the purpose with their own experience, knowledge and abilities (SQW LTD. 2007, 9). It is recommended to encourage the present actors to form small groups in which ideas and visions can be exchanged and developed (MANZO and PERKINS 2006). It has been proven that direct forms of participation increase the sense of responsibility of all actors, and of the residents in particular since they are going to be affected the most by the change of their living space. Responsible thinking and acting, in turn, is a key factor for the sustainable development of an area (ibid.).

5. Work groups

After the launch event, residents and other actors with similar ideas need to be brought together and encouraged to form working groups in which they can further draw up their ideas and visions for their neighbourhood. Before the groups start their actual work, they receive the opportunity to participate in workshops during which they can gain the basic knowledge and understanding of climate change, its consequences and its impact on cities. That way, it can be ensured that all group members can draw from an equivalent pool of knowledge. It is the

role of the neighbourhood manager to provide assistance and support throughout the work of the groups, create helpful contacts with external partners and also encourage an exchange between different working groups in an attempt to keep the planning processes transparent and open to input from actors who are not an integral part of a group. Throughout the planning and working procedure of the groups, conflict resolution and consensus building must remain one of the main goals of the manager. It can only be achieved by long-term face-to-face discussions in order to get to an agreement on projects, strategies, plans, policies, and actions (MANZO and PERKINS 2006). A collaboration on eye-level requires the production of shared values in a joint learning process (ibid.). Processes such as social learning, a fair exchange of knowledge, and the empowerment of the local people are an elementary aspect to developing an adaptive capacity – the ability of a system or community to adapt to changes of the environment (BUTLER et al. 2015). Moreover, a constant and intense collaboration with the aid of a neutral mediator is the only way of warranting the generation of a high knowledge diversity, an inclusive and just governance, as well as collective action and decision-making (ibid.).

As stated earlier, the process of developing visions and ideas is open and lies to a high degree in the hands of the working groups (see third chapter: *Introducing the concept*), hence no specific projects can be presented at this point. Since the main aim of all work groups and initiatives that may form will be to reduce the heat island effect and the resulting heat stress within the borders of the study area, it is very likely that some of the projects may focus on the enhancement of the amount of green infrastructure in order to provide shade and pointedly cool down different vulnerable places. Possible projects could include the creation of potentially publicly accessible pocket parks in the centre of residential blocks in cooperation with the owners of the buildings and their residents, thus punctually generating shade while allowing for a refreshing flow of air at the same time as a countermeasure against the radiation of heat off of the building facades (see figures 3 & 4). The problem of heat radiation could also be tackled by greening some of the facades (see figure 3), while the park would be ideal for joint activities such as

community gardening or the organisation of public events, maybe in cooperation with the university or local schools. Further temporary measures can be developed and implemented as well in collaboration with local authorities.

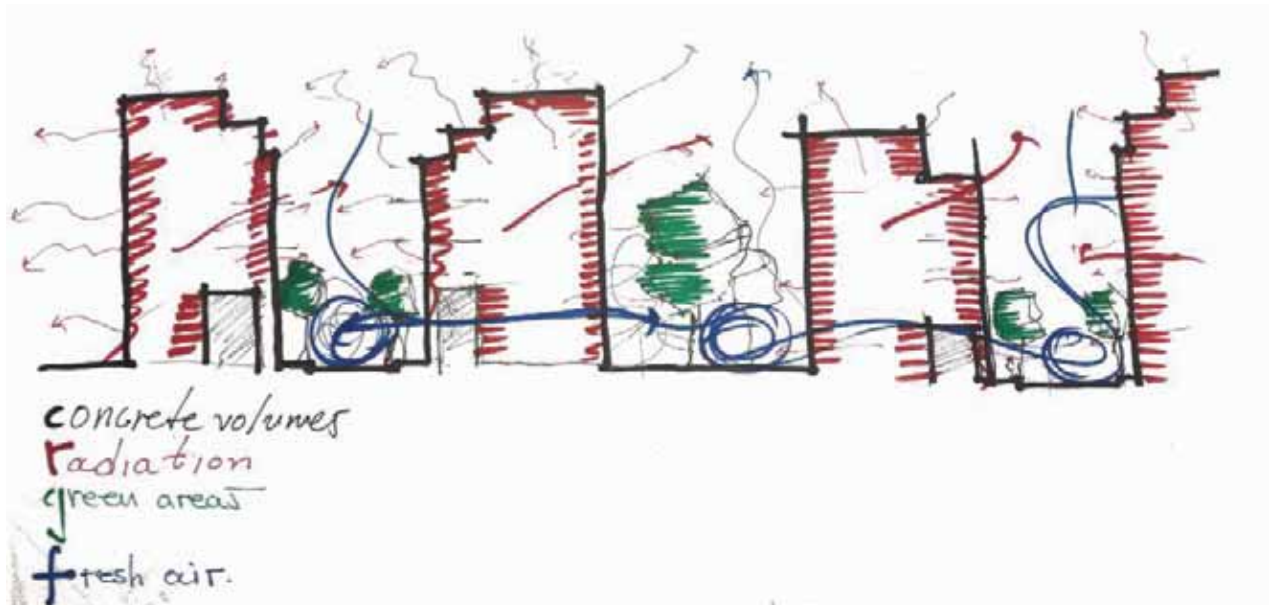


Figure 3: Potential flow of fresh air through the pocket parks (Source: DRAKONTAEIDIS and PISIMISIS, 2017)



Figure 4: Building with an open space in its centre and passages for air circulation (Source: DRAKONTAEIDIS and PISIMISIS, 2017)

6. Launch, implementation and monitoring of the different projects

As soon as the individual work groups and initiatives have worked out their concrete visions, concepts, strategies and actions, and have established a good collaboration with important supporting cooperation partners on different levels, the projects can be implemented in the neighbourhood. Again, working out the details should be mainly left to the community in form of the work groups as a means to empower them to actively shape their own living surroundings. However, purposely chosen top-down impulses can be helpful for launching a project, e.g. by providing designated areas of the park for gardening projects (HOELZEL 2015, www). Especially the park should be treated and zoned with care, since the presence of homeless people, prostitutes and criminals during the night time is a real issue that needs to be taken into account and to be dealt with. Having said this, it needs to be pointed out that

solving difficult social problems of this kind is not the task of the neighbourhood manager. It lies within the manager's responsibility, however, to acknowledge the problem, take it seriously and get in contact with professionals who are more suitable and better equipped to tackle this problem in consultation with all relevant stakeholders (SQW LTD. 2007, 13; 16). Another relevant issue the manager needs to take care of is the allocation of financial and other resources in order to enable the actual implementation of projects. Possible options may be the use of funds or partnerships (SEHESTED 2009; SQW LTD. 2007, 12f).

After the successful launch of the different projects and initiatives, it furthermore remains the manager's task to monitor and support the further development of the projects.

7. Acceptance and internalisation of actions & change of mindset

The residents of our study area in Athens have lived in a similar composition of people with different cultural backgrounds and a high discrepancy regarding the income of the different social classes for a significant amount of time now (see second chapter: *Analysis of the area*; DRAKONTAEIDIS and PISIMISIS 2017, verbal message). They have grown accustomed to the social roles and identities they have inhabited throughout this time. It takes time for these structures to slowly be changed, with this process requiring a long learning-process (MANZO AND PERKINS 2006). It is worthwhile to encourage such a shift within the community since its result may be a general change of the residents' underlying mindset – away from othering and a general feeling of alienation towards a more active participatory behaviour in the community (ibid.). Taking a part in shaping the local environment can help to generate a closer emotional connection and identification with a place – which would be a desirable effect in the case of the locals' very negative opinion of the "Pedion Areos" park (ibid.). At the same time, building and fostering new networks helps to increase the feeling of integration. Both – the feeling of identification and integration – count to the fundamental human needs. That, in combination with an improved physical living environment, enhances the ability of the neighbourhood to satisfy the needs of the residents and thus prevent them from spending their leisure time away from it (ibid.).

Our study area shows deficits regarding its adaptive capacity towards heat stress. In addition to that, the highly diverse local population lacks a common sense of togetherness and solidarity. In order to provide possibilities to escape the heat and also to strengthen the community, our concept strives to empower the residents to get involved in their neighbourhood's development.

Making use of communicative instruments in participatory planning processes is an effective way of motivating people and to actively engage them in shaping and improving their neighbourhood. Direct participation strengthens the sense of belonging on a physical as well as social level. The different steps, proposed by the concept, follow a clear line by steadily increasing the residents' involvement in the projects and generally within their neighbourhood. Projects and initiatives shall be designed with the aim of lowering the temperature and reducing emissions, and therefore will also contribute to tackling the negative effects of climate change. Moreover, the creation of cooler and bustling spaces may lead to closer connections between the residents, strengthening the local identity. Within the process it is the neighbourhood manager's role to cautiously mediate between the involved actors in order to enable an open and transparent progress, in which everyone feels respected and heard. Although the concept is partly based on short-term actions such as temporary measures and a launch event, it must be kept in mind that a majority of the residents already live in the neighbourhood for a reasonable duration, which makes it hard for them to quickly adapt to change. A process like the one presented here strives for a long-term change of mindsets, which is likely to be a tenacious procedure.

Conclusion

Bibliography

- BEATLEY, T. & NEWMAN, P. , 2017: *Biophilic Cities are Sustainable, Resilient Cities*. Published in Etingoff, K. (ed.): *Sustainable Cities. Urban Planning Challenges and Policy*. Apple Academic Press: Oakville.
- BIRCHALL, J. & SIMMONS, R., 2004: *What motivates members to participate in the governance of consumer co-operatives? A study of the Co-operative Group*. Published as part of the Stirling University Mutuality Research Programme, Research Report No. 2. Stirling.
- BLOOMBERG ASSOCIATES & ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY, a (n. d.): *Cooling Centers in Athens – Heat Action Planning*.

- BLOOMBERG ASSOCIATES & ATHENS OFFICE OF RESILIENCE AND SUSTAINABILITY, b (n. d.): Urban Heat Island Effect Factors in Athens.
- BROTO, V. C, ENSOR, J., BOYD, E., ALLEN, C., SEVENTINE, C. & MACUCULE, D. A., 2015: Participatory Planning for Climate Compatible Development in Maputo, Mozambique. UCL Press: London.
- BUCHECKER, M., HUNZIKER, M. & KIENAST, F., 2002: Participatory landscape development: overcoming social barriers to public involvement. In: *Landscape and Urban Planning*, 64 (2003). pp. 29-46.
- BUTLER, J.R.A., WISE, R.M., SKEWES, T.D., BOHENSKY, E.L., PETERSON, N., SUADNYA, W. YANUARTATI, Y., HANDAYANI, T., HABIBI, P., PUSPADI, K., BOU, N., VAGHELO, D. & ROCHESTER, W., 2015: Integrating Top-Down and Bottom-Up Adaptation Planning to Build Adaptive Capacity: A Structured Learning Approach. In: *Coastal Management*, 43:4. pp. 346-364.
- DRAKONTAEIDIS, G. & PISIMISIS, N., (Students of the School of Architecture at the National Technical University of Athens) verbal message, 22.05.2017
- EKKE – NATIONAL CENTER FOR SOCIAL RESEARCH, a 2011: Mapping Panorama of Greek Census Data 1991-2011. Category: Insulation. Variable: No Insulation (Percentage).
- EKKE – NATIONAL CENTER FOR SOCIAL RESEARCH, b 2011: Mapping Panorama of Greek Census Data 1991-2011. Category: Insulation. Variable: Double Glazing, external wall and either insulation (Percentage).
- GEHL, J., 2014: Outdoor Space and Outdoor Activities. From *Life Between Buildings* (1980). Published in Wheeler, S. M. & Beatley, T. (eds.): *The Sustainable Urban Development Reader*. Routledge: London.
- HALL, P., 2000: The centenary of modern planning. In: Freestone, R. (ed.): *Urban Planning in a Changing World*. E & FN Spon: London.
- HEALEY, P., 1997: An institutional approach to spatial planning. In: Healey, P., Khakee, A., Motte, A. & Needham, B. (eds.): *Making Strategic Spatial Plans: Innovations in Europe*. UCL Press: London.
- HEALEY, P., 2007: *Urban Complexity and Spatial Strategies. Towards a Relational Planning for Our Times*. Routledge: London.
- HOELZEL, F., 2015: Stadtentwicklung: Top-Down oder Bottom-Up? Retrieved from: <https://www.boell.de/de/2015/05/26/stadtentwicklung-top-down-oder-bottom-up>. (last accessed on 01.08.2017)
- JESSOP, B., 2002: *The Future of the Capitalist State*. Polity Press: Cambridge.
- KLEEREKOPER, L.; VAN ESCH, M.; SALCEDO, T. B., 2012: How to make a city climate-proof, addressing the urban heat island effect. Published in *Resources, Conservation and Recycling*. 64. pp. 30-38.
- KLIJN, E. & EDELENBOS, J., 2007: Metagovernance as network management. In: Sørensen, E. & Torfing, J. (eds.): *Theories of Democratic Network Governance*. Palgrave Macmillan: New York.
- KREISZEITUNG VERLAGSGESELLSCHAFT MBH & Co. KG, 2010: Regionalmanagement ist nun online. Published on the 16.12.2010. URL: <https://www.kreiszeitung.de/lokales/diepholz/regionalmanagement-online-1049253.html>. (last access 01.08.2017)
- MALOUTAS, T. & SPYRELLIS, S., 2015: Vertical social segregation in Athenian apartment buildings.

Published by Athens Social Atlas. URL: <http://www.athenssocialatlas.gr/en/article/vertical-segregation/>. (last access 31.07.2017)

- MANZO, L.C. & PERKINS, D.D., 2006: Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning. In: *Journal of Planning Literature*, Vol. 20, No. 4. pp. 335-350.
- PELTONEN, L. & SAIRINEN, R., 2010: Integrating impact assessment and conflict management in urban planning: Experiences from Finland. In: *Environmental Impact Assessment Review*, 30 (2010). pp. 328-337.
- SADIK-KHAN, J., 2013: New York's streets? Not so mean any more. Talk at TEDCity2.0 from September 2013 URL: https://www.ted.com/talks/janette_sadik_khan_new_york_s_streets_not_so_mean_any_more. (last access 01.08.2017)
- SCHNEIDER, M., 2015: Auf Verwundbarkeiten achten, Resilienz stärken. Perspektiven für widerstandfähige und lernende ländliche Räume. Published in: Franke, Silke (ed.): *Armut im ländlichen Raum? Analysen und Initiativen zu einem Tabu-Thema*. Hanns-Seidel-Stiftung, Argumente und Materialien zum Zeitgeschehen Nr. 97. München.
- SEHESTED, K., 2009: Urban Planners as Network Managers and Metagovernors. In: *Planning Theory & Practice*, 10:2. pp. 245-263.
- SQW LTD, 2007: *A Rough Guide To Neighbourhood Management. Making the Business Case for Neighbourhood Management. An Action Learning Set Report*. Published as part of the National Evaluation of the Neighbourhood Management Pathfinder Programme. London.
- TAIT, M. & HANSEN, C. J., 2013: Trust and governance in regional planning. In: *TPR*, 84 (3) 2013. pp. 283-312.