

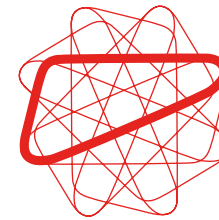


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METROLAB MAGAZINE

DELTA

ON THE RESILIENCE OF METROPOLITAN LANDSCAPES



METROLAB FORUM

International Dialogue
on Metropolitan Planning

Special
Opening Event
MetroTalk -
how to feed the
future metropolis?

04.10.2021
17:00-18:30

METROTALK WORKSHOPS

Philipp Loidolt-Shen, Azolla Ecosystems, Vienna
Vanessa Braun & Daniel Löschenbrand, Urban Food Atlas, Vienna
Christoph Fink, Metropolitan Cooking, Vienna

19:00-21:00

MOVIE NIGHT

Everything's coming together, while everything's falling apart: *The ZAD*, AT/DE 2017, 36:00 min, OmU
So this is where we are now, AT 2020, 20:53 min, OmU

05.10.2021
09:30-12:00

METROPOLITAN WALKSHOP

Regional Park DreiAnger with Christina Stockinger, City of Vienna, and Renate Zuckerstätter, SUM North

17:00-19:30

INTERNATIONAL LECTURES

FERTILE SOILS

Hélène Coussedière, BASE Landscape Agency, Paris

"NEULAND GEWINNEN" - HOTSPOTS OF TRANSFORMATION

Siri Frech, Raum+Strategie – Office for Coproductive Urban & Rural Development; Neuland gewinnen e.V., Berlin

MUCH ENERGY, LITTLE SPACE: METROPOLITAN STORIES ABOUT WIND POWER

Pia Kronberger-Nabielek, PBL Netherlands Environmental Assessment Agency

NEW LIFE TO MARKETS BETWEEN LOCAL AND GLOBAL DISTRIBUTION SYSTEMS

Daniela Patti, Eutopian Research & Action, Rome

REVITALISING FORMER MILITARY CAMPS AS AN ECOSYSTEM NETWORK

Paraskevi Tarani, RiConnect, Major Development Agency, Thessaloniki

FORUM DISCUSSION

Herbert Bartik, Urban Innovation Vienna, Anna Detzlhofer, DnD Landschaftsplanung, Andreas Gugumuck, Future Farm Vienna, Helga Kromp-Kolb, Climate Change Centre Austria, Christina Stockinger, City of Vienna



Location: Die Schöne, Kuffnergasse 7, 1160 Vienna

Contents

3 Editorial

6 Understanding Resilient Landscapes

7 Metropolitan Walkshop through the Regional Park DreiAnger

9 «Vienna has some catching up to do in cooperating with the city region» Interview with Christina Stockinger

12 MetroTalk Workshops

14 Azolla Ecosystems Philipp Loidolt-Shen

16 Urban Food Atlas Vanessa Braun & Daniel Löschenbrand

18 Metropolitan Cooking Christoph Fink

20 Learning from International Approaches

21 «Let's Conquer the Soil» – The New Fertile Soils Chain Hélène Coussedière

24 «Neuland gewinnen» - Hotspots of Transformation Siri Frech

28 Lots of Energy, little Space: Metropolitan Strategies about Wind Power Pia Kronberger-Nabielek

30 Revitalising Former Military Camps as an Eco-System Network Paraskevi Tarani

34 The Condition of Local Food Markets in Rome Daniela Patti Et al.

38 Discussing the Resilience of Metropolitan Landscapes

39 «There is this gap between what we want to achieve and what we do to achieve it» Forum Discussion

42 Key Findings on Creating Resilient Landscapes

Editorial

*Dear planners, researchers, city administrators,
mayors, and metropolitan residents,*

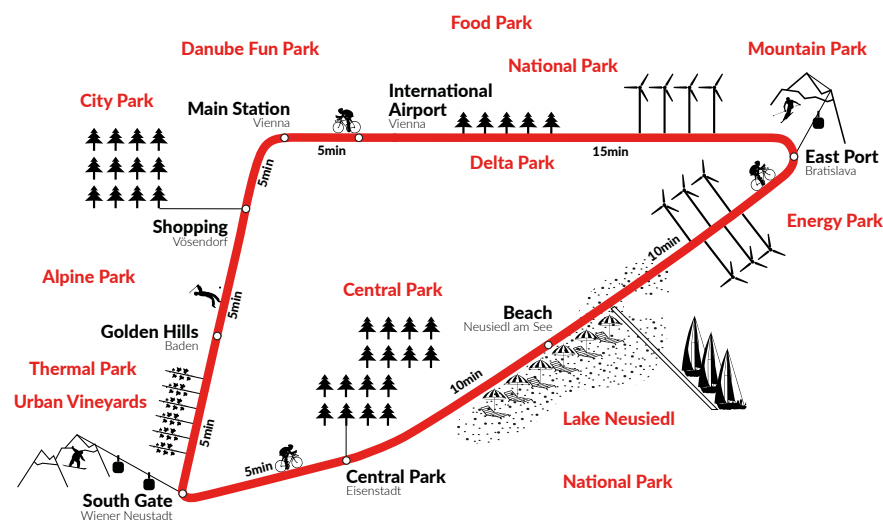
Based on the fact that cities and urban areas are responsible for 75% of global energy demand and emit about 80% of greenhouse gases, they are obliged to take effective measures to reduce CO2 emissions. Due to the strong spatial, but also ecological, climatic and energetic interrelationships between cities and their surrounding areas, the metropolitan perspective across administrative borders is of great importance in tackling the climate crises. Actions are not only needed in climate protection and climate adaption, but also in the fields of biodiversity loss and land consumption, sustainable energy systems, as well as circular value chains. This urgency of holistic cross-border thinking and acting becomes evident when looking at the SuperWien Metropole, stretching between Vienna, Bratislava and Wiener Neustadt. Against the backdrop of enormous population growth over the last decades, which has led to an increase in (motorized) mobility and high land consumption, sustainable solutions must be found at the metropolitan level.

In the discussion on how to fight the increasing climatic and ecological threats and their negative impacts on our habitats, resilience has become a new buzzword. The target to become resilient has also been incorporated into metropolitan strategies, presenting approaches on how to increase the ability to cope positively with unpredictable crisis situations. Questions such as how to shift to renewable energy systems, how to create more sustainable production and consumption cycles, how to use soils more efficiently, etc. come into

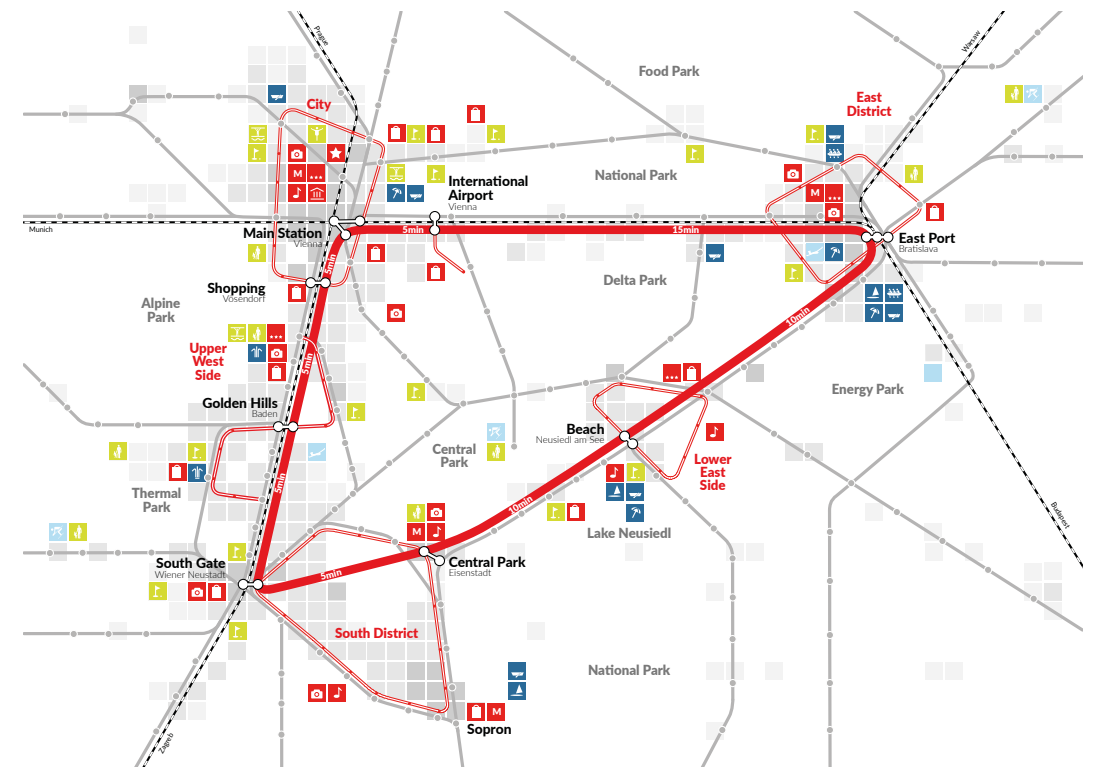
the focus of metropolitan planning. All these new challenges make metropolitan landscapes important spatial reference points. In addition to compact growth of the built environment of metropolitan areas (see *MetroLab Magazine #2 GROWTH*), great emphasis must be put on the preservation and modest development of its landscapes as well as the green and blue infrastructure.

With these questions in mind *MetroLab* developed a vision for the *SuperWien Metropole*¹, anticipating six million future inhabitants of the extended metropolitan region around Vienna. The living quality of *SuperWien Metropole* is not only defined by its urban centers, business districts and working areas, but also, to a large part, by its different types of natural and cultural landscapes – delta areas and large-scale parks are supplemented by urban agriculture and vineyards. As the built environment is getting denser and denser due to increasing population growth, free spaces gain importance for recreation in nature and have a crucial effect on the climate and air quality. The different types of landscapes within the *SuperWien Metropole* do not only serve as places for sports and recreation, but also for the production of food and renewable energy, such as on-shore wind power or solar energy. This makes the metropolitan region less dependent on imports of external resources while promoting the well-being of metropolitan residents. This vision was the starting point to initiate an international dialogue on metropolitan planning and development. ►

¹ Stefan Mayr & Cédric Ramière (Eds.) (2018): *SuperWien Metropole. A New Capital for Europe*. Bolzano and Vienna: Folio Publisher.



Mental Delta Map



SuperWien Delta Leisure Map

ABOUT RESILIENT LANDSCAPES

Like the third *MetroLab Forum*, held in October 2021, this third issue of the *MetroLab Magazine* is dedicated to the question *Can metropolitan areas become resilient?* To open the debate, the regional park project *DreiAnger* in the north-east of Vienna, is used as an example to show how to preserve, activate and better connect existing green spaces within metropolitan areas. The project coordinator, Christina Stockinger, in conversation with *MetroLab*, gives an insight into the main challenges when implementing a green space project like this. The regional park not only stretches across administrative borders, but with its agricultural land also provides an answer to the question of how to feed the future metropolis.

The *MetroTalk*, which kicked off the *MetroLab Forum*, focused on the topic of sustainable metropolitan food cycles and presented, among

others, an innovative solution of future-oriented farming that produces food in a decentralized, small-scale and environmentally friendly way. Furthermore, the research project *Urban Food Atlas* made visible how food and space are interwoven within Vienna, by mapping their connections, dependencies and resource flows.

This issue of the *MetroLab Magazine* also presents international approaches dealing with spatial strategies towards an integrated and climate-friendly metropolis (see guest articles in this issue). The architect Hélène Coussedière from Paris reports about a current applied research project and shows how to fight challenges of increasing pressure on the resource of agricultural and natural land by creating local reuse networks that generate fertile soils, recognizing soil as a resource that should not only be preserved, but also be further utilized when

being excavated. The German landscape architect Siri Frech highlights the potential of self-sufficiency as a basis to create resilient metropolitan areas and emphasizes the importance of actor-supportive planning and promotion. By highlighting the reuse and activation project of 15 ex-military camps in Thessaloniki the architect and urban planner Paraskevi Tarani reflected on how much potential such functional voids within its metropolitan area have, as they can create a network of ecosystem places within the dense urban fabric. The spatial planner and researcher Pia Kronberger-Nabielek shows that there is a palpable tension between the planning and implementation of climate targets, which comes to the fore when assessing the effectiveness of regional planning policies to the deployment of wind energy. By referring to case studies from Belgium and the Netherlands she

explains why planning agents need to be more aware of path dependencies in spatial decisions concerning renewable energy. Finally, the architect and urban planner Daniela Patti and her co-authors describe the identity of traditional food markets in Rome and argue that revitalizing these structures could not only be an opportunity to improve food accessibility, but also reactivate new public spaces as a result. Whether and to what extent the various approaches and their innovative elements presented can be transferred to the Viennese context of cross-border development is discussed in a concluding article reflecting the panel discussion with local experts. The main findings on how to make metropolitan areas more resilient, based on the expert interviews, international approaches and the panel discussion, are summarized in the concluding chapter of this magazine. ■



METROPOLITAN WALKSHOP THROUGH THE REGIONAL PARK DREIANGER

The *DreiAnger Regional Park* in the north of Vienna is designed as an inter-municipal recreational area. It connects not only the three historic “Anger” villages Stammersdorf (Floridsdorf, Vienna), Gerasdorf (Lower Austria) and Süßenbrunn (Donaustadt, Vienna), but also the European nature reserve Bisamberg and the recreational area Norbert Scheed Forest. Thus, it forms the missing link to the historical idea of Vienna's green belt.

Guided by the aim to activate this landscape, taking into account the existing agricultural activities and to make this area more attractive for people seeking recreation, the regional park was developed within the framework of the EU project *LOS DAMA* (for more information about the project, have a look at the interview with Christina Stockinger on p. 9).

What opportunities but also challenges does the cooperation between Vienna, Lower Austria, the districts of Floridsdorf and Donaustadt and the municipality of Gerasdorf hold? How are conflicts of use dealt with and what is the importance of securing green space for a city?

Together with the project coordinator Christina Stockinger from the *City of Vienna* and the *Metropolitan-Area Manager* Renate Zuckerstätter, a group of about 15 people explored the regional park. In conversation with *MetroLab*, they gave an insight into the special characteristics and potentials of this area on the fringe of Vienna, but also explained what needs to be considered when implementing cross-border projects and what the chances are for further cross-border projects in the Vienna Metropolitan Region.

The 3,000 ha landscape area is characterized by a special dynamic: In addition to small villages with agricultural fields, which plays an important role in feeding the metropolitan region, there are wide settlement areas with single family housing and “some kind of density”, as Renate Zuckerstätter explains. The settlement pressure on the fringe as well as in the surrounding municipalities is steadily increasing, not least due to the pandemic. At the same time, the regional park is an important habitat for numerous animal and plant species and a local recreation area for Viennese and Lower Austrians.

«There is no such thing as a strategic agglomeration plan. The regional park is one of the few projects where the municipality of Vienna works together with a municipality in the surrounding.»

Renate Zuckerstätter

One of the main challenges in the development of the project was due to the fact that the municipality and districts involved are located in two different federal states and, thus, have different nature protection laws, as well as spatial planning and building laws.

Both, Christina Stockinger and Renate Zuckerstätter agreed that the regional park is a very special project that tested a novel way of cooperating in the cross-regional border area. A lot can be learned from this project for future cooperation within the Vienna Metropolitan Region. ■

UNDERSTANDING RESILIENT LANDSCAPES



«VIENNA HAS SOME CATCHING UP TO DO IN COOPERATING WITH THE CITY REGION»

Interview with **Christine Stockinger**

MetroLab: The quality of life in the *SuperWien Metropole* is defined, to a large part, by its different types of landscapes. Considering the increasing consumption of land and the challenges related to the climate crisis, green and blue infrastructure must be preserved to create a resilient metropolitan area. What do you see as the main challenges and opportunities for the *SuperWien Metropole*?

Christine Stockinger: Vienna certainly has some catching up to do when it comes to cooperating with the city region. This works very well in terms of mobility and economy, but on many topics the exchange is not yet there. The *Biosphere Park Vienna Forest*, which extends across Vienna's city limits, is a historical joint product that was secured ages ago.

«Such cross-border projects greatly depend on the commitment of the individuals involved.»

We also cooperate with the province of Lower Austria on the *National Park Donau-Auen*. However, the cooperation with the surrounding municipalities works on a good-will basis; there is no formal regional level in Austria, as there is in Switzerland or France, for example. This means that such

cross-border projects greatly depend on the commitment of the individuals involved, and there is a risk that projects will falter if the person, for example the mayor, or the political party changes. The informal character has advantages and disadvantages; if the cooperation works well, decisions are quickly and easily made.

What is special about the *Regional Park DreiAnger* as an instrument of regional development? Were there any (international) role models for it?

The *DreiAnger Regional Park* is about jointly developing and preserving the landscape reaching from the Bisamberg in Vienna Floridsdorf to Gerasdorf bei Wien to the Norbert-Scheed-Wald in Vienna Donaustadt. In contrast to protection projects such as the Donau-Auen, this is a very vibrant area, whose dynamics are to be preserved. The term Regional Park comes from Germany and served as a model to try out the concept in a smaller framework for the first time. ►



Renate Zuckerstätter & Christina Stockinger
SUM North & City of Vienna



This QR code takes you to the video documentation of the *Metropolitan Walkshop* organized by *MetroLab*, which took place during the third *MetroLab Forum #3 DELTA*.

The term "Regional Park" also underlines the importance of cooperation between municipalities, disciplines and also stakeholders for its realization. The cross-border cooperation was made possible by the support of the EU within the framework of the project LOS_DAMA! (Landscape- and Open Space Development in Alpine Metropolitan Areas), which covered the planning of the Regional Park.

Within the framework of the *DreiAnger Regional Park*, administrative boundaries are to be overcome through cooperation between the *City of Vienna*, the *Province of Lower Austria* and the municipality of *Gerasdorf bei Wien*. What does it take to successfully implement cross-municipality/cross-state projects? What do you consider the central levers and also challenges?

Green and open spaces are a generally positively perceived topic. Cooperation is much more complicated when it comes to more unpopular topics such as settlement development. Initially, of course, there was a certain skepticism, but this quickly dissipated once the advantages of integrated development were communicated. The commitment and re-election of the mayor in Gerasdorf and the district leaders in Floridsdorf and Donaustadt were also decisive. If there had been a major exchange of political actors, there would have been a risk that the objectives would also have changed. Depending on the territory, the financing of the implementation measures is borne by the districts of Donaustadt or Floridsdorf or Gerasdorf bei Wien. Here, the administrative boundaries become clearly apparent. I do not exclude that there will be a common budget for the development of the regional park, but this certainly takes time.

«The concept of the regional park also underlines the importance of cooperation between municipalities, disciplines and also stakeholders for its realization.»

Which tools did you use in the development of the regional park? What tools for city-regional cooperation have been tested?

In a first step, a landscape plan with visions and concrete ideas for the cross-border recreation area was developed with the involvement of various stakeholders from agriculture, civil society, administration, economy and also committed residents. For this purpose, a steering group consisting of key stakeholders from the province of Lower Austria, the municipality of Gerasdorf bei Wien and the two Viennese districts, the Marchfeld Canal operating company and the *Stadt-Umland Management Vienna/ Lower Austria* was set up to develop and coordinate ideas. In a two-day ideas workshop, citizens were able to bring in local knowledge. Their ideas were presented and discussed at a green-space-conference to which a wide variety of stakeholders and NGOs from Vienna and Lower Austria were

«Initially, projects that could be implemented quickly, such as finding a common name and installing a wayfinding system, were launched to position the regional park and make it visible and tangible to the public.»

invited. In addition, stakeholder discussions were held, among others with farmers. It is important to note that the goal was always to preserve agriculture and merely to give it a face with the development of the regional park in the sense of making it tangible. In parallel, a landscape planner developed ideas for the landscape. The actions and instruments in order to achieve the goals are specified in the action plan. Initially, projects that could be implemented quickly, such as finding a common name and installing a wayfinding system, were launched to position the regional park and make it visible and tangible to the public.

What is your vision for the *SuperWien Metropole*?

«It is important to first secure and connect the green spaces and then think further in terms of settlement development. [...] the chances for such a development in Austria are good, if the pressure of suffering becomes greater.»

My vision for the metropolitan region is that both thinking and acting will be much faster. I believe that green spaces are a particularly important topic for the city region, because otherwise there is a danger that the settlement cores of the cities and the surrounding communities will merge at some point and no green spaces have been secured. It is important to first secure and connect the green spaces and then think further in terms of settlement development. In my opinion, the chances for such a development in Austria are good, if the pressure of suffering becomes greater. The pressure of suffering is not yet great enough to recognize this and make it a priority. Of course, I hope that the *DreiAnger Regional Park* will serve as a role model and show how city-regional projects can successfully be implemented. ■

*Christine Stockinger studied landscape planning at the University of Natural Resources and Life Sciences in Vienna. She has been working for the City of Vienna since 2003. After several years in the Municipal Department for Forestry and Agriculture, she now works as a landscape planner in the Department for Urban Development and Planning. Among other things, she is responsible for the development of the cross-community regional park *DreiAnger* in the north of Vienna.*



METROTALK WORKSHOPS

HOW TO FEED THE FUTURE METROPOLIS?

In times of increasing ecological threats and social challenges, it is important to develop ecologically and socially sustainable solutions for shaping our common future. In order to highlight the importance of a successful cohabitation of future communities and their surrounding ecosystems, we launched the *MetroTalk*¹, revolving around the question of how we want to feed the future Vienna metropolitan area. The workshop series took place in the courtyard of the gallery *Die Schöne* and served as a kick-off for the two-days *MetroLab Forum*.

By inviting different practitioners from Vienna who deal with the topic of metropolitan food cycles and aim to build awareness in the field of urban

food production, we expanded the transdisciplinary platform of knowledge exchange by opening up the discussion.

The *MetroTalk* was launched by the construction of a recirculating aquaponic system, followed by an interdisciplinary food mapping workshop. The event was accompanied by an experimental cooking session. Thus, we did not only learn about new concepts of sustainable food production and the food cycle system in Vienna, but also explored how delicious food from the metropolitan area can taste.



This QR code takes you to the video documentation of the *MetroTalk* organized by *MetroLab*, which took place during the third *MetroLab Forum #3 DELTA*.

¹The *MetroTalk* was supported by the call *Creatives for Vienna* by the Vienna Business Agency with a special focus on Future Communities.

AZOLLA ECOSYSTEMS

Philipp Loidolt-Shen

"fof one" - MODULE ONE
(prototype)

Production capacity
per year:

300-900kg fish
6.336-19.200 salads
612-1920kg
fruit or vegetables



Sooner rather than later, conventional, harmful farming practices will have to adopt more sustainable approaches in order to prevent our climate from collapsing. The future oriented farming module, "fof one" is a prototype to demonstrate the potential of decentralised, small-scale and environmentally friendly methods of food production. *Azolla Ecosystems* enables gastronomers and supermarkets to grow their own produce, on demand, always fresh and right where it's consumed or sold. This system has the potential to save food waste and CO₂, but also to curb the exploitation of our waters and degradation of soils. Additionally it contributes to local food sourcing and -security. The aquaponic systems (a closed cycle in which fish produce the nutrients for plants and they in return clear the water) will be installed inside supermarkets and gastronomy and provide a steady supply of fish and veggies, herbs and fruits.

URBAN FOOD ATLAS

Vanessa Braun & Daniel Löschenbrand

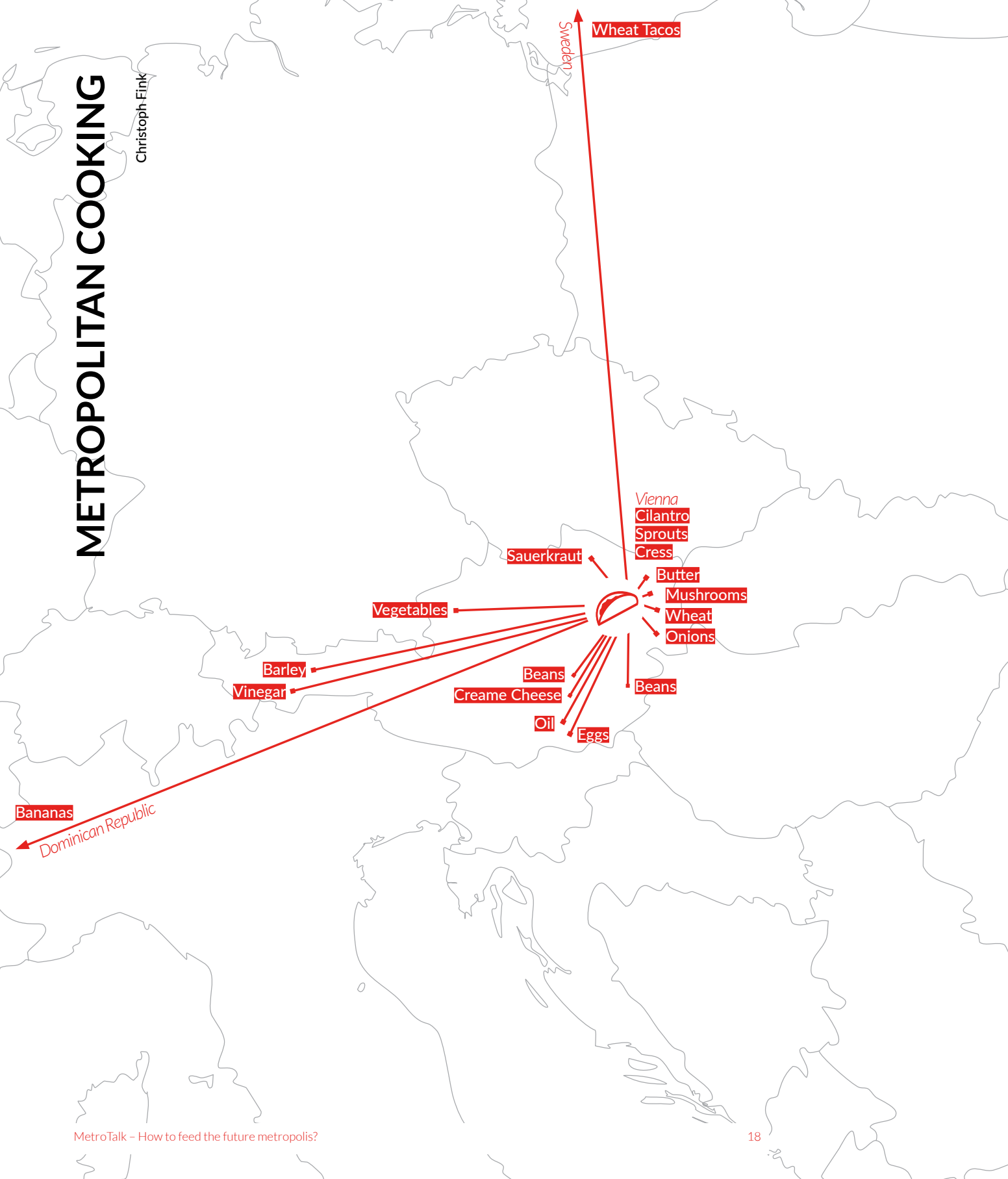


Feeding the city or even a metropolitan region in a sustainable way is one of the crucial challenges of the 21st century. How food and space can be interwoven, where connections, dependencies and resource flows exist, how food-related urban typologies can be classified and assessed on the basis of climate-friendly, resilient development is the main focus of the *Urban Food Atlas*. The project exerts a mixed quantitative-qualitative methodology (cross-media mapping, interactive workshops, interviews with experts, collective data acquisition) with the following main objectives:

- » Create a visual image and analyse the food perceptions related to space of the Viennese population, with approaches of citizen science.
- » Conceptualise the spatial implications of food-related urban typologies to address resource sharing from the urban planning perspective.
- » Enable communication and knowledge-sharing between civil society, practitioners and the planning community by producing a prototype that creatively intertwines bottom-up and top down approaches.

METROPOLITAN COOKING

Christoph Fink



INGREDIENTS OF THE METROPOLITAN TACOS:

- » **Nutbutter-Mushroom-Cream Cheese with crispy Sauerkraut**
Butter (Upper Austria), Cream Cheese (Styria), Mushrooms (Lower Austria), Sauerkraut (Lower Austria)
- » **Cumin-Sourdough-Miso-Bean Hummus with Miso-Mayo, Crispy Onion & Cress**
Wheat (Lower Austria), Barley (Tyrol), Beans (Styria and Burgenland), Oil (Styria), Vinegar (Tyrol), Eggs (Styria), Onions (Lower Austria), Cress (Vienna)
- » **Pulled Banana Peel-Chili with Sour Cream, Red Bell Pepper Jam & Cilantro**
Bananas (Dominican Republic), Mushrooms (Lower Austria), Sour Cream (Styria), Vegetables (Austria), Beans (Burgenland), Cilantro (Vienna)
- » **Green Pea Guacamole, Onion Pickle & Pea Sprouts**
Peas (Lower Austria), Oil (Styria), Onion (Lower Austria), Sprouts (Vienna)



certain zones, you're just allowed to have industrial companies, which creates a lot of vacant and polluted areas



LEARNING FROM INTERNATIONAL APPROACHES

«LET'S CONQUER THE SOIL» – THE NEW FERTILE SOILS CHAIN

Hélène Coussedière

How can we design urban planting projects without sacrificing the fertile and living soil coming from the stripping of agricultural and natural areas?

We have been asking that question, at BASE¹, for over 5 years and responded by creating a local fertilization chain for sterile and inert deep land in Lyon, coming from the excavated lands of the metropolis.

“60.000 ha of agricultural and fertile land, the size of a French department, is artificialized every seven years.”²

This statement is commonly linked to the issue of disappearing agricultural land, but is less often associated with the consumption of fertile soil used for the construction of public spaces and parks. In order to guarantee adequate planting soil, we, as landscape architects, must dictate the use of topsoil for the development of urban projects. In the absence of any other supply, the soil for artificial design comes from the excavation of agricultural and natural land. By trying to increase the quality of life in the city, we paradoxically participate in the rarefaction of a unique resource that is taken away from the living milieu by consuming fertile land.

The pressure on this resources creates three major problems, which we already face: rarefaction of the resource, inflation of its price and high carbon and ecological costs. The key now is to identify and qualify potential local land resources, as well as to

encourage institutional authorities to cooperate with private sector actors. This constant exchange, between field data and stakeholders, is the ideal recipe for a process that is tailored to the territory and particularly flexible for its development on a larger scale.

In Lyon, this approach has allowed the development of the *Productive Landscape*© concept - a pioneering landscape that creates economic and ecosystem values. Economic progress is created by providing a methodology for setting up local reuse networks that generate fertile soils, biomass-energy, phytoremediation, among others. This approach is being applied in Lyon with the *Terre Fertile 2.0* platform, which was installed on the urban sites Vallée de la Chimie and Champ de la Confluence

STRATEGIC DEVELOPMENT OF THE FERTILE EARTH SECTOR

In order to strategically develop the fertile earth sector, we at first need to look at the composition of the material "soil". If we dig beyond the first 30 centimeters, we will find soil unsuitable for planting. The organic material is low in air and water concentration and consequently devoid of any microbiological life.

With an appropriate technical process for soil amendment, it is possible to catalyse their fertilisation in a relatively short time to conform the expected qualities of the topsoil for ►

¹ BASE is a landscape agency founded in 2000 with more than 70 landscape architects, designers, architects and engineers in three offices in Paris, Lyon and Bordeaux

² Europe 1 (2016): L'équivalent d'un département français disparaît: il tous les sept ans?

planting. This excavated layer is abundant on the metropolitan territory. By collecting and re-using road and building materials, it would be possible to set up a local land industry in Lyon for the construction of public spaces.

During our work on the *Chemical Valley 2030*

master plan, we have brought together a network of political, private, technical, economic and scientific stakeholders on this topic. Together, we enumerated the available excavated soil resources, and identified the topsoil required for metropolitan development projects. This work made it possible to create a



Figure 1: Soils of the Chemical Valley © BASE



Figure 2: Creation of Fertile Land at the Chemical Valley © BASE

link between the absence of silty excavated earth and its local reuse after fertilization. We used the technological risk prevention plan to create storage for the land factories in the valley, made out of excavated lands. A way of fertilizing the soil has been developed on two metropolitan sites: the Vallée de la Chimie and the Champ de Confluence

TECHNICAL SET-UP ON TEST SITES

With the support of a call for projects *L'Appel des 30* we selected companies developing or wishing to develop economically profitable technical processes for the fertilization of excavated soil in the Vallée de la Chimie.

Under our leadership, two pilot projects for the recycling of excavated land were launched:

- » The «*Lône de Pierre Bénite*»: refertilization of extracted soil to create extensive wood biomass plantation, to provide boiler rooms in the metropolis (Suez - Valterra - Société Forestière)
- » The «*Terre Fertile 2.0*»: platform for the fertilization of excavated soil from organic amendments, reusable in the plantation of public space (*Economic Interest Grouping (EIG) Terres Fertiles 2.0*)

Champ de la Confluence in Lyon is another experimental urban site, where industrial wasteland is transformed into a new district. Buildings will be located in an urban forest.

As the duration of the urban project created vacant spaces, we used a platform in these areas to experiment with the reuse of the excavated loams. Soils were mixed with organic materials in different ways and laid out in windrows: a transitory landscape able to arouse people's curiosity.

In this project, the Productive Landscape consisted of a pioneering experimentation of uses: one of these examples was the Station Mue. Designed by the collective *Bruit du Frigo*, it's a hybrid public wood structure that speaks about the Champ de la Confluence and the values it carries. It

is designed to host workshops and animations with the actors and associations of the area, like a real Agora.

IMPORTANCE OF THE LOCAL CONTEXT

From this experience we can learn the importance of local anchoring: knowing and considering the available resources, identifying the necessities and the actors that animate the territory. This is the importance of operating within a chain logic: collegial composed of strategic and technical-economic points of view.

This alchemy must form the basis of an approach that aims to share an evolutionary process, rather than a fixed project image.

Beyond the question of soil fertility, we are trying to develop tools within the *Productive Landscape* that allow other ways of thinking landscape design. We could envision a landscape practice that prepares territories and people for the rapidity of the new urban transformations, including climate change. ■

Hélène Coussedière
graduated from the ENSAL Lyon and ENSAPLV Paris and worked as an architecture teacher and researcher. Between theory and practice, she is focusing on landscape representations and contemporary imaginaries linked to ecological issues. At BASE, she is developing the editorial unit *Backland* while also working on large scale territory projects, being attached to metropolitan issues and urban transition. Besides that she is currently developing the book «*Terres fertiles*», which will be published in 2022.

«NEULAND GEWINNEN» – HOTSPOTS OF TRANSFORMATION

Siri Frech

There are two sides to my work as a planner. On the one hand, I develop and design plans with a focus on strategic spatial development and process design with a special preference for spaces that have fallen out of the classic planning cycle. On the other hand, I support people in becoming creatively active themselves in their living environment, their region, and in changing and further developing their own spaces together with other people. These are small niches where new things are tried out and often realized.

A graphic in the *Flagship Report* of the *German Advisory Council of Global Change* shows the influence that these niche experiments can have on global developments and that this work in niches should not be underestimated. Perhaps my work with these niches could also be called supportive planning. Here I am not the designer, but I accompany people to realize their own development ideas. In view of the enormous challenges posed by climate change and the socio-economic changes it requires, it seems to me that there is hardly any other way than for many people in their regions to work together to shape these changes. Every creative force is needed here. And the connection between metropolises and surrounding areas will play an important role in this.

LOCAL ACTORS BRINGING ABOUT LOCAL CHANGE

A groundbreaking approach to supporting these local changes is the *Robert Bosch Stiftung's Neulandgewinner* program. It was developed in

2012 for rural areas in eastern Germany and I have been intensively accompanying it since 2014. The approach is not to support topics and projects, but to find the people in the regions who recognize potential for change for the community and develop and implement suitable projects together.

The rural areas in eastern Germany are a special area in terms of transformation. Here, it was not only the agrarian-industrial transformation that changed almost all historical structures. The peaceful revolution and the end of the GDR in 1989 brought about a complete collapse of social and economic structures. So, these are spaces with cracks, gaps, and fractures. Ideal breeding grounds for new niche developments.

The *Neulandgewinner* program seeks and supports actors in these spaces who test new things for themselves and the community and establish them if they are successful. We spend a lot of time tracking down these people through an elaborate selection process and then actively support them over a period of two years. The support is divided into three areas:

- » there is financial support for the implementation of projects. The money can also be used for living expenses so that there is enough time and energy for the realization of the project. In addition, no personal contribution has to be made and the money is transferred in advance so that no out-of-pocket expenses are incurred.
- » The creation of a strong network between



Figure 1: Diversity of New Innovative Projects in Rural Areas as Part of the Programme Neulandgewinner © Neulandgewinner e.V.

the actors is actively supported. There are several networking workshops and an annual festival. In addition, an association, Neuland gewinnen e.V., was founded to expand this networking beyond the circle of supported people. Thus, a network of over 120 actors has been created so far.

- » Every *Neulandgewinner* receives two years of mentoring. In other words, personal support during the funding period that responds to their individual needs and current developments in the project.

This new, person-centred approach makes it possible to really find the people in the regions who can take other people with them and bring new things into the world.

And since the focus of the programme is not on the projects but on the individual approaches of

the actors, the results are also very colourful and the fields of impact very broad:

- » New infrastructures - such as the construction of the first e-filling stations on the island of Usedom or the opening of an open workshop for wood and metal work and the pressing of juices.
- » Revitalisation of vacant buildings - here new development concepts for hard-to-develop properties are found and established through testing, sometimes over many years. New festival sites and cultural hubs for the city are being created.
- » New educational venues - where new forms of knowledge transfer for young and old are rehearsed and established by opening new schools, testing new educational offers and developing teaching units where young ►

¹ Grin, J., Rotmans, J. and Shot, J. (2021): Transition to Sustainable Development

- people learn how to find a job in the region so they don't have to move to the city.
- » New mobility - which not only connects place, but also people or new and old forms of sharing.
 - » New Culture - whose projects range from highly professional Mirco Operas in empty churches to free instruments and free lessons for all children in the region.

LOCAL CREATIVITY PROMOTES SELF-EFFICIENCY

Through these projects, many new forms of local creativity are emerging. By establishing new offers, strengthening new engagement and highlighting new opportunities, new cultural creativity emerges. Social creativity is strengthened by activating village life and local culture or by establishing new cooperations. And through the new spaces and places that are created, a spatial creativity grows through which new resources are discovered. These important developments can also be concentrated on one point: It is the strengthening of local self-efficacy. People and regions that have experienced that they can influence and shape their own future will deal with future challenges differently. They know how to react to changes or even use them for their own benefit. This is an important basis for resilient regions.

Strengthening self-efficacy is also the most important goal in the participation processes that I develop and accompany. The aim here is not only to strengthen individuals, but also entire regions by jointly developing a concept for the future and the necessary projects. One example of this is the project *Zukunft Goldberg-Mildenitz*, in which 36 villages and a small town jointly developed a future concept. We worked on three levels at the same time:

- » We established a long-term new culture of communication by setting up citizens' councils.

- » In different steps we have tested and established a new culture of cooperation. Here, issues are discussed together and projects are developed.
- » And a new structure has been established for the long-term implementation and monitoring of the projects developed, so that the many voluntary efforts are given a professional framework.

This is just a small insight into the *Goldberg Principle*. You can find more information about the project and our approach on my homepage.

SUPPORTING BOTTOM-UP TRANSFORMATION

Finally, I would like to emphasize once again how valuable this actor-supportive planning and promotion is, because it is always the people who initiate and realize change. And for major transformations, we need a lot of people to tackle this in their own way. The experts alone will not do it. My credo in conclusion: Build niches and develop micro-utopias. They will work! ■

Siri Frech is a landscape architect and graduate of the TU Berlin and the ETH Zurich. Through her work in the variety of spatial design, cultural development, participation and urban transformation, among others with *Urban Catalyst*, she has gained considerable experience with creating new alternatives to traditional planning. Since 2014 Siri started to work in rural areas by mentoring the project *Neulandgewinner e.V.* Here she focuses on the transformation of rural Areas in East Germany by supporting local pioneers and citizen based planning.



Figure 2: Joint Development of New Ideas and Local Projects in Rural Regions of East Germany © Neulandgewinner e.V.

LOCAL COUNCILS
A long-term discussion culture between citizens, communes and local county

COLLECTIVE WORKSHOPS
Thematic working structures from kitchen table interview to project hub

REGIONAL OFFICE
Local implementation structure between citizens, communes and local county

FUTURE

Figure 3: Future Strategy of Neulandgewinner © Neulandgewinner e.V.

LOTS OF ENERGY, LITTLE SPACE: METROPOLITAN STORIES ABOUT WIND POWER

Pia Nabielek-Kronberger

A lot of energy is still needed to transition our fossil-based energy systems. With the 2015 *Paris Agreement*, international energy politics have shifted to a more implementation-oriented course of action. Our most urgent task today is to reach countries' climate mitigation pledges. There are, however, no simple and ready-made solutions. Energy trajectories - defined from an international perspective - are not easily translated into local and place-based implementation pathways. Current attempts of goal achievement often have to cope with unforeseen problems and lock-in effects. We can calculate desired energy futures yet to keep implementation in pace with the complex realities of energy and social practice is another matter.

Concerning implementation practices, much can be learnt from wind power. Wind turbines were once considered the iconic image for successful energy transition together with the Danish 'energy' island of Samsø. While wind turbines represented the most modern generation of green energy plants, Samsø communicated the idealistic image of rural communities that are 100 percent energy self-sufficient. Both represent early considerations when dealing with sustainable energy trajectories: the economic concern of optimal utilization of technologies for harvesting energy (choosing large-scale wind power), the territorial concern of governing the allocation of energy plants

(focusing on thinly populated areas) and the social concern to allow for local participation (creating win-win situations). Yet these early answers to implementation problems appeared to be tricky. In the space of only two decades, wind power has become one of the most contested topics in today's societal debate about energy. It also has become quite obvious that the Samsø concept alone won't do. In the long run, energy-consuming metropolitan areas must sincerely contribute to climate mitigation.

Post-2020 energy trajectories have to cope with little space and increasing complexity. Earlier



Figure 1: Wind energy park © Pia Nabielek

This article is based on the following:
Nabielek (2020): Wind Power Deployment in Urbanised Regions. An Institutional Analysis of Planning and Implementation
Evers et al. (2019): PBL policy analyses 'Onshore Wind Power: lessons and experiences'
Matthijssen et al. (2021): Monitor of the Netherlands Regional Renewable Energy Strategy

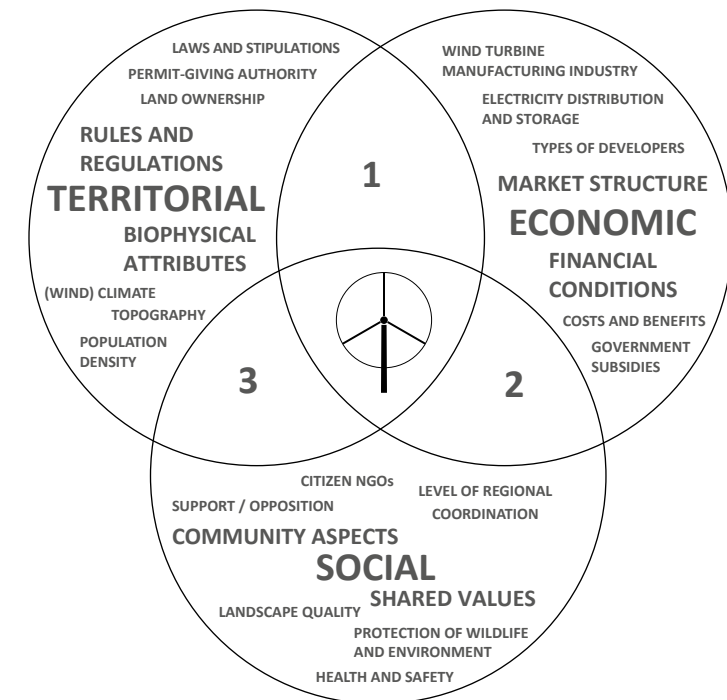


Figure 2: The three dimensions of the spatial aspects of wind power

experiences with wind power are an important source of knowledge to understand the spatial and social challenges of these newest implementation strategies. Through wind power, countries such as the Netherlands have learnt that the regional level is key for locally supported planning decisions. Wind power also provides for much experience with spatial and legal instrumentalization, for example the widely applied practice to restrict renewable energy to so-called suitability (or preference) areas. These earlier decisions have created clarity about location-choices yet introduced new path-dependencies. One of greatest challenge for next-generation metropolitan plans is therefore to cope with earlier implementation practices, and conditions that seriously restricted the amount of leeway when it comes to searching for alternative solutions. Current attempts are therefore much more concerned to give room for 'negotiation' between the a large

spectrum of actors and their diverging stakes. Promising strategies foster regional cooperation, instrumental diversity and alternative technologies and thus - a wider and regionally varying spectrum of possible courses of action. Future energy trajectories are hopefully more aware of imperfection and allow for flexibility while, at the same time, create commitment. ■

Pia Nabielek-Kronberger has authored books, articles and reports since 2005. Her most recent research work focuses on the ways in which planning practice deals with the energy transition. She studied spatial planning at TU Wien and was employed as a researcher and lecturer at the Rotterdam University of Applied Sciences. Her doctoral thesis received the Award of Excellence from the Austrian Federal Ministry of Education, Science and Research. Pia Nabielek currently works as a scientific employee at the PBL Netherlands Environmental Assessment Agency in The Hague.

REVITALISING FORMER MILITARY CAMPS AS AN URBAN ECOSYSTEM NETWORK IN THESSALONIKI

Paraskevi Tarani

Thessaloniki is a mid-sized city situated in northern Greece, on the Thermaic Gulf, part of the Aegean Sea. It is the second largest city in Greece, with a metropolitan population of 1.12 million residents. The city sprawls around an arc of coastline at the top of the Thermaic Gulf. A major spatial characteristic of the city's metropolitan area is its extensive and multifunctional coastal line connecting various urban activities, most of them of regional and national importance, such as the Axios River Delta, Thessaloniki Port, and Macedonia Airport.

Thessaloniki's urban shape differs from other European cities that extend circularly around their historic center. Stretching out inevitably between its natural boundaries of Mt Chortiatis and the Thermaic Gulf, the city is conceived as a linear city, having its activities arranged more or less in a line along the sea front. A closer look at the urban hinterland reveals a butterfly pattern, whose mechanical skeleton consists of the public transport networks. The city indeed seems to balance symmetrically along the sides of a central axis¹. Another event that formed the shape of modern Thessaloniki is the fire which broke out on August 18th 1917 and destroyed 128 hectares of the historic center, including the commercial sector, and left 70,000 people homeless. After that, an *International Commission for a New Plan of Thessaloniki* was set up, led by the French architect Ernest Hébrard who happened to be in the city as director of the archaeological service in the *Armée*

de l'Orient (Army of the Orient). The implementation of the new plan resulted in the radical modernization of the urban form, for the intra muros city. The old spatial patterns were eliminated and the urban fabric was homogenized, introducing a new urban space².

THE FORMER MILITARY CAMPS: VALUABLE LAND TO PRESERVE

Due to the importance of the Thermaic Gulf and its residential advantages, numerous settlements developed around it, dating back to the Neolithic Era and the Bronze Age, forming the very beginnings of Thessaloniki city. The Romans contributed to the city's rapid growth. The construction of Via Egnatia (146-120 BC), connecting the East to the West part of the Empire, contributed to make Thessaloniki a major commercial, cultural and military center.

From the 7th to the 10th century, Thessaloniki continued to develop in all ways, often playing a leading role and thus demonstrating its great importance and position. It was the Balkan gateway and once again played a leading role as a center of military operations.

During *World War I*, Thessaloniki served as the military operations center of the *Macedonian Front*, housing the renowned *Armée d'Orient*, allies of the Entente. English and French military camps sprouted throughout the outskirts of the city.

As a result, today there are today 15 terrains of land which used to be military camps and have now been abandoned. Issues regarding land ownership and the questioning of their urban character have led to these former military sites remaining unused within the dense urban fabric of Thessaloniki's metropolitan area.

The former military camp of Pavlos Melas covers an area of 35 hectares, in a key location in the northwestern part of metropolitan Thessaloniki. The former camp has been declared a historic site, and some of its buildings have been designated as historic monuments. Today, a master plan has been developed that focuses on land-use priorities and the reuse of historical buildings. With a design logic based on the idea of preserving and strengthening the natural ecosystem that has "occupied" the vacant land, the master plan of the *Metropolitan Park* serves to develop a public place where nature and human activities of leisure, culture and sports can coexist harmoniously.



Figure 1: Thessaloniki Metropolitan Area. Geography, Natural Advantages and Urban Shape

The former military camp of Kodra, located in the east of the metropolitan city, was already the largest camp in the Balkans at the time of the Turkish occupation. Most of the remaining buildings date back to the beginning of the 19th century. ▶

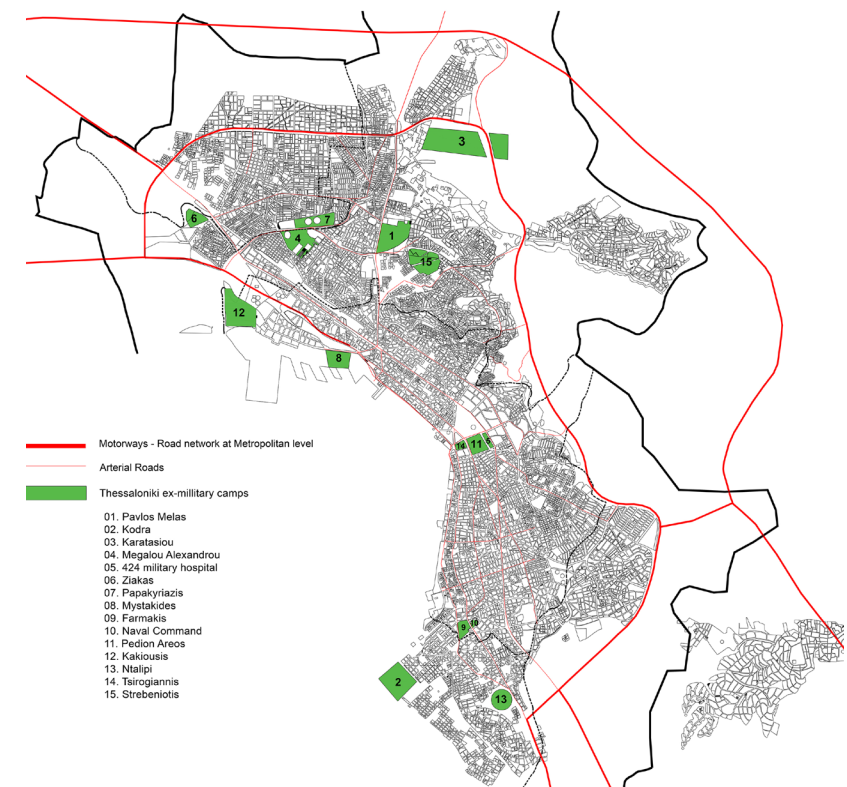


Figure 2: Thessaloniki former military camps

¹Vougiar S. (2010): The myth Thessaloniki: The Myth of the linear City.

²Hastaglou - Martinidis V. (1997): A Mediterranean City in Transition: Thessaloniki between the Two World Wars. In "Facta Universitatis", Series: Architecture and Civil Engineering. Vol.1, No 4, pp.493 - 507. University of Niš

The ex-military camp of Kodra is now an open space of great importance within the dense urban fabric of Thessaloniki, due to its location, its archaeological interest, and its natural beauty. During the pandemic, the place has been embraced by hundreds of users for various activities. The *Municipality of Kalamaria* is now in the procedure of developing a Local Urban Plan for the redesign of the camp.

THE METROPOLITAN CITIES NETWORK "RICONNECT" AND THE RISE OF AN IDEA

The former military camps, in the shape of "islands" within the dense urban fabric, allow the development of a series of collective green public spaces interconnected as an ecosystem network. Natural elements, ecosystem functions, collective activities and green open spaces can find their place between the original landscape and the historical substance. The initiator of this approach was the *RiConnect* project, in which Thessaloniki has been involved through the *Major Development Agency Thessaloniki (MDAT S.A.)*. *RiConnect* is a network of eight metropolises whose aim is to rethink, transform and integrate mobility infrastructures to reconnect people, neighborhoods, cities and natural spaces. It is an *URBACT* project, co-financed by the *European Regional Development Fund*. *RiConnect* is developing planning strategies, processes, instruments, and partnerships to foster public transport and active mobility, reduce externalities and social segregation and unlock opportunities for urban regeneration. The long-term vision is a more sustainable, equitable and attractive metropolis for all.

In the framework of *RiConnect* project, Thessaloniki aims to develop an Integrated Action Plan for the city's ex-military reserved land, aiming at:

- » Raising awareness among people and authorities for the overall planning of the former military land, that it is not seen separately, but as an ecosystem network
- » Considering the former military camps as available land where a network of new collective green spaces can be developed in connection with the city's existing natural resources
- » Promoting intermunicipal collaborations and projects for green infrastructures and green collective spaces on the metropolitan level. ■

Paraskevi Tarani is an architect and urban planner. She has been involved in various urban regeneration projects, developing architectural practices that would turn conceptual research into practical knowledge. Apart from that she is an adjunct lecturer at the University of Thessaly as well as at the Aristotle University of Thessaloniki. In 2018, she joined the team of Major Development Agency Thessaloniki (MDAT), being in charge of various projects dealing with urban issues on a metropolitan scale.



Figure 3: Master Plan of the Transformation of the Former Military Camp of Pavlos Melas to a Metropolitan Park



Figure 4: Regeneration Project of the Former Military Camp of Pavlos Melas



Figure 5: Regeneration Project of the Former Military Camp of Kodra

THE CONDITION OF LOCAL FOOD MARKETS IN ROME

Daniela Patti, Levente Polyak, Manuel Torresan

With 39% of the metropolitan area of Rome being agricultural land¹, the city is one of the biggest agricultural municipalities in Europe. This brings along the importance of the agricultural sector, which has recently undergone strong challenges. Over the last 10 years there has been a relatively small diminishing of the agricultural land in comparison to the drastic reduction of the number of enterprises, where very small land owners sold their property to larger ones. This has fostered an increase of the average plot size, which remains nevertheless very small in Rome, with less than 5ha.

This is a farm typology covering nearly half of the agricultural land in the metropolitan area. Yet the other half of the territory is owned by farming enterprises with over 50ha of land, which make up for only 2% of the total number of farms in the territory², the reason for this to be traced back to the history of its aristocracy and clergy. Within such a scenario, there has been a recent return towards agriculture especially from younger generations, as

a result of the economic crisis. This has brought to the competition for cooperatives of young farmers to run farms on public abandoned land. In 2014 four plots of land were identified within the boundaries of the City of Rome for which hundreds of applications were submitted, showing the increasing interest of young people in the possibility of working in the agricultural sector. This initiative was the result of pressure coming from a civic network advocating for a better use of public abandoned land.

With food production and short distribution chains gaining increasing attention from the public in Rome, initiatives and projects related to markets also started taking place. In fact, the City of Rome has a remarkable infrastructure of 119 food markets distributed over the entire municipality, with 27 covered markets, 33 kiosk complexes and remaining street markets. As figure 2 illustrates, covered markets are predominantly located in central neighborhoods, whilst kiosk complexes can be found in more peripheral social housing areas



Figure 1: Photos of the typologies of markets (covered market, street market).

¹PTPG. (2010): "Piano Territoriale Provinciale Generale della Provincia di Roma (PTPG)".

²ARM - Azienda Romana Mercati. Sistema Agricolo Roma (2013): l'agricoltura ed il sistema agroalimentare romano verso una nuova PAC.

³Torresan, M. (2019): "Il bacino d'utenza dei mercati giornalieri di Roma. Quanti romani hanno un mercato sotto casa?" In Il rilancio dei mercati. Spazio pubblico, servizi comunitari ed economia circolare, edited by D. Patti, L. Polyak, and M. Torresan. Vienna: Cooperative City Books.

⁴Terra!Onlus. Magna Roma, perché nel Comune agricolo più grande d'Italia i mercati rionali stanno morendo. Roma (2018): Terra!Onlus.

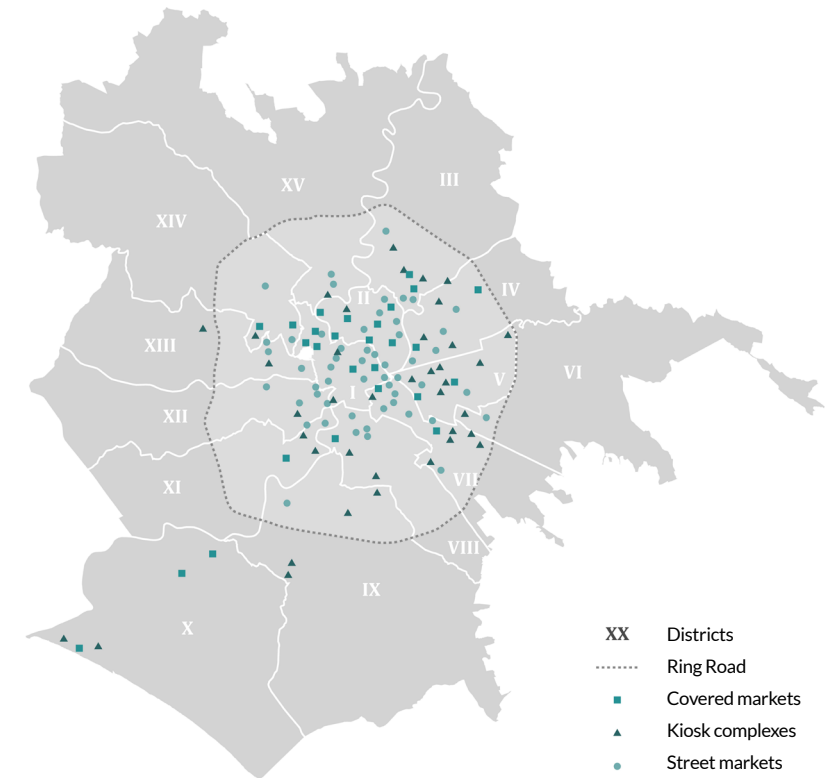


Figure 2: Map of markets in Rome according to typology.

and street markets, which make up for nearly half of all markets in the city, are located predominantly in central areas³.

Despite the great potential, walking through large part of the markets of Rome, there is a visible condition of decline and abandonment. Currently markets risk of disappearing due to shopping malls in the periphery and due to fancy window shops in the city centre, to which a micro-commercial activity as those in markets, often family run, cannot compete⁴. On the one hand it is possible to see the low investment on the side of the public administration towards the maintenance of the structures, often valuable from an architectural point of view, and on the other the large number of empty stalls that show the difficulty that most vendors have to respond to the current demand within contemporary society.

In fact, many markets operate with an extremely limited number of vendors, often below 15 units, hindering the economic attractiveness of the market. Under such difficult conditions, there has been some attempts from vendors and local

inhabitants to relaunch the markets. Whilst this is undoubtedly necessary in Rome, the models and programs to be pursued require a thorough thought in order to respond to the spatial, socio-cultural and economic conditions in which the different markets are positioned. With such a strong agricultural identity and such a diffused market infrastructure throughout the city, the relaunching of market structures in Rome could be an opportunity to improve food accessibility, in terms of costs and quality, but also to reactivate neighbourhoods in terms of employment and socio-cultural offer. ■

Daniela Patti is an architect and urban planner with a PhD in urbanism from the TU Wien. She is a co-founder of Eutopian where the co-authors Levente Polyak and Manuel Torresan work as well. Her recent work focuses on the governance of peri-urban landscape and the revitalisation of local food markets. She regularly works for URBACT and Urban innovative Actions on Urban Poverty programs and is board member of the Wonderland Platform for European Architecture.



**«Neuland gewinnen» -
Hotspots of Transformation**
Siri Frech,
Raum+Strategie, Neuland gewinnen e.V., Berlin



**Revitalising Former Military Camps
as an Eco-System Network**
Paraskevi Tarani,
Ri-Connect, Major Development Agency Thessaloniki



**«Let's Conquer the Soil» -
The New Fertile Soils Chain**
Hélène Coussédière,
BASE Landscape Agency Paris



International Lectures

The international lectures were held as a live event. The guest articles in this magazine reflect the presentations and give an insight into the current developments in sustainable urban landscapes in France, Germany and Greece.



Watch the livestream of the International Lectures and the Forum Discussion to dive deep into the debate on the resilience of urban landscapes.



DISCUSSING THE RESILIENCE OF METROPOLITAN AREAS

«THERE IS THIS GAP BETWEEN WHAT WE WANT TO ACHIEVE AND WHAT WE DO TO ACHIEVE IT»

Forum Discussion

What are the main challenges for metropolitan areas in dealing with the climate crisis and biodiversity loss? What measures can be taken in urban planning and development to meet these challenges and what role does a shift in thinking towards a circular economy and self-sufficiency play in this?

Inspired by the international contributions, the panel discussion on resilient urban landscapes explored some of these pressing questions of our time.

Even though Vienna has maintained its relatively high level of green space of about fifty percent of the city's size over the past few decades and is committed to provide a certain amount of green space per person, it faces major environmental challenges just like other cities around the world.

one of the top priorities when it comes to protecting green spaces and rethinking land management within the metropolitan area.

The reused organic farm *Zukunftshof/Future Farm*, located on the southern outskirts of Vienna in an urban development area with 120 hectares of fertile soil, serves as “a kind of flagship project for urban agriculture”, says Andreas Gugumuck, urban farmer and snail breeder who runs the farm. His cooperative relies on the principles of the circular and sharing economy to help make the metropolis more self-sufficient:

«Our goal is to make urban agriculture a big issue for the city.»

Andreas Gugumuck

«We have two parallel crises: the climate crisis and the biodiversity crisis»

Herbert Bartik

says Herbert Bartik, representing the *Future Cities* department of the *Urban Innovation Vienna*. While Vienna is already strategically and practically addressing the climate crisis, he stresses that the city should also be seen as a place of biodiversity, accommodating an even greater variety of species than rural areas that are dominated by industrialized agriculture. Therefore, the integration of the issue of biodiversity and urban agriculture in urban development concepts and strategies, such as the new *Urban Development Plan (STEP 2035)*, should be

He also advocates vertical farming along buildings and raises awareness about local food production. Producing food, not only for the world market but also selling it locally, would be one way of making regional agricultural production more tangible while contributing to the identity of the metropolis. Christina Stockinger, who works for the *Department of Urban Development and Urban Planning of the City of Vienna*, agrees that agriculture has an identity-forming character for the city region and thus contributes to the common metropolitan vision. Nevertheless, she points out that it is particularly important in agriculturally dominated areas to coordinate different use demands and to cooperate with local farmers to mediate between them ▶



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Future Cities, Urban Innovation Vienna



Christina Stockinger
Project Manager Regionalpark
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Helga Kromp-Kolb
Chairwoman of the Climate Change Centre
Austria, University of Natural Resources
and Applied Life Sciences Vienna



Andreas Gugumuck
Farmer & Entrepreneur,
Future Farm



Anna Detzlhofer
Managing Director,
DnD Landschaftsplanung

Forum Discussion

The Forum Discussion was held as a closing event of the third *MetroLab Forum #DELTA*. On the basis of the previous International Lectures, the resilience of the metropolitan area of Vienna was discussed by different local experts who contributed a variety of perspectives.

and the residents. According to her, campaigns that draw attention to agricultural activities near recreation areas are an important measure for conflict prevention. *“It should be a win win situation for everyone who uses the land.”*

As far as achieving climate targets and sustainability goals is concerned, on the one hand Helga Kromp-Kolb, chair of the *Climate Change Centre Austria*, argues that experimenting with different forms of circular economy at the neighborhood level is an important start, but needs to be expanded to the level of metropolitan areas to achieve real change. Anna Detzlhofer, on the other hand, argues that city-regional strategies need to be translated to the local level in the form of concrete projects, such as the *Cooler Straßen/cooling miles* that she and her team at *DnD Landschaftsplanung* are implementing in various Viennese districts to help cool down heat islands in the city. She believes that the high level of appreciation of these innovative measures, which improve the microclimate is a sign that;

«Landscape planning changed from a 'nice to have' to a 'must have'.»

Anna Detzlhofer

The pressure of suffering due to the oppressive heat in dense neighborhoods has become so great, that in inner-city locations it is no longer necessary to discuss if a tree or a parking space is more important. But since this is not the case for all places, Helga Kromp-Kolb is convinced that *“we urgently need to rethink how we want to live and what we want to achieve.”* This requires a certain mindset that is no longer based on the idea of exploiting our natural environment, but rather acting in its favor. From an urban planning perspective, Kromp-Kolb suggests, it would be helpful to *“[...] think about what the city of Vienna could look like in 2040, which is the date the*

Austrian government has set for net zero carbon dioxide emissions.” Since we would have to reduce emissions by 95% to ensure a healthy environment by then, this would mean that we don't have to discuss new roads, but how to preserve green spaces, reduce parking areas and shopping centers.

Creating more resilient urban landscapes therefore implies that we need a more resilient economy, even if that means breaking with traditional growth paradigms, as Kromp-Kolb insists;

«The way we currently run our economy, the way we run our finances essentially is based on making use of nature to an extent that nature can no longer support.»

Helga Kromp-Kolb

To achieve sustainable development in today's industrialized world, we need to produce and consume less - fewer material things, less energy, fewer resources, but this can also lead to greater satisfaction and happiness, which affects all aspects of life, including urban life and all planning aspects.

Finally, an important step in changing not only our cultural practices but also our way of thinking, and here all panelists agree with each other, is to empower the local people and involve them in urban transformation processes. We as planners can do so by creating places where we can co-create ideas and visions for a resilient, integrated, and sustainable landscape on the metropolitan scale *“as the scale we should talk about”* (Herbert Bartik). An important condition for this is to think outside the box, not only in a mental but also geographical sense, because, as Christina Stockinger says;

«We shouldn't focus on administrative borders, they don't reflect people's worlds.»

Christina Stockinger ■



Watch the livestream of the International Lectures and the Forum Discussion to dive deep into the debate on the resilience of metropolitan areas.

KEY FINDINGS ON CREATING RESILIENT LANDSCAPES

1. THE ZERO CARBON CITY REGION AS AN ULTIMATE GOAL

As cities and urban agglomerations are currently the largest emitters of greenhouse gases, there is a great sense of urgency to take responsibility for reducing CO₂ emissions. Due to strong urban-rural linkages in terms of ecology, climate, and energy, the metropolitan area is the appropriate framework for developing and effectively implementing climate change mitigation and adaptation strategies.

Transforming existing structures in terms of a holistic transition to a carbon-free urban region means, among others, promoting the development of low-emission and climate-friendly settlement structures and creating energy-efficient building and infrastructure systems. Moreover, climate goals can only be achieved with an energy transition away from fossil fuels and towards renewable energy sources. Ultimately, action must be taken now to achieve the 1.5-degree-target of the Paris Climate Agreement and become climate neutral.

2. CIRCULAR ECONOMY AT ALL LEVELS AS A PREREQUISITE FOR RESILIENCE

Circular value chain measures are needed to improve the resilience of metropolitan areas.

The concept of the circular economy, which aims to close material and energy loops through durable design, maintenance, repair, reuse, remanufacturing, refurbishment and recycling, is an important component of our future carbon- and climate-neutral economy. It implies rethinking our usual way of producing and consuming and supports the idea of the sharing economy.

Now it is time to take the model of the circular economy, which is already being practiced in civic society led initiatives (e.g. in urban agriculture), to the next level. Experiments at the neighborhood level need to be scaled up to the metropolitan level where, for example, recycling building materials can bring about real change. However, since almost every transformation requires energy and generates a certain amount of waste, the concept of the circular economy cannot stand alone.

3. LOCAL AND REGIONAL POTENTIAL MUST BE STRENGTHENED IN THE SENSE OF SELF-SUFFICIENCY

Based on the idea of the climate-neutral city region following the model of the circular economy, metropolitan areas must activate and strengthen their own local and regional potential and focus on existing resources in terms of energy efficiency, renewable energy systems and local and sustainable food production. However, this transformation towards a self-sufficient metropolitan area is only possible if there are appropriate spatial concepts for it. To establish a largely independent energy supply, it is necessary, for example, to provide land for the expansion of renewable energy infrastructure. Urban agriculture and innovative forms of (vertical) farming also require space to grow food in a sustainable way within the city region. Therefore, local land resources should be identified and qualified - not only in the interest of self-sufficiency, but also of biodiversity.

4. BIODIVERSITY AND LAND MANAGEMENT ARE THE KEYS TO CREATING RESILIENT LANDSCAPES

Besides climate change, the loss of biodiversity is another fundamental crisis of this century. The protection of functioning ecosystems and their integration into urban development concepts and strategies, which are not only related to the municipal, but also to the metropolitan level, is a major challenge and places high demands on land management. As there is no specific agency for dedicating land for biodiversity (as there is for securing affordable housing, for example), new planning instruments are needed.

In view of increasing land consumption, soil sealing and urban sprawl, urban development and planning are strongly challenged to ensure and strengthen the diversity and quality of open spaces and green and blue infrastructures that contribute to the ecological balance of the living environment. In addition to strategically planned green networks, innovative strategies are needed to create and protect fertile soils that serve as arable land. In this respect, zoning also plays a significant role.

5. A RADICAL CHANGE IN THINKING IS NECESSARY TO CREATE RESILIENT LANDSCAPES

There needs to be a fundamental rethinking of the way we live and work together, which implies a general change in values in our social and economic system. Since unsustainable lifestyles are deeply embedded in economic, social and cultural practices (e.g. intensive use of motorized transport, or occupying too much living space per person), these need to be renegotiated with the help of raising awareness. In order to prevent action only being taken when the pressure of suffering (e.g. due to the increase of heat islands) becomes too great, it is enormously important to empower the local population. Accordingly, one of the key challenges is to contribute to problem-solving competence by raising general awareness of problematic urban transformation processes. Finally, creating resilient urban landscapes requires not only a variety of measures through climate-sensitive planning (adaptation to climate change, preservation of biodiversity or reuse of existing resources), but also the involvement of people and their local creativity and knowledge. The real hotspots of transformation are our minds.

Index

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