

Decision Making in City Planning: Processes of Visioning and Stakeholders Engagement and their Relation to Sustainable Land-Use in the SATURN Project

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The EIT Climate-KIC SATURN project deals with rural-urban territories, their landscapes and environmental challenges. The land of our cities and regions is fragmented and prone to several challenges in terms of ecology, governance and social coherence. As a result of unregulated overlapping of different land uses and complex governance patterns, landscape fragmentation creates severe challenges in the ways the land is perceived, identified and therefore managed. The SATURN consortium is working on different models to help address the governance and decision-making process and support on a policy level by applying holistic ideas of visioning and stakeholder engagement at a city scale. The diversity of the three hubs (Birmingham in central England, Gothenburg in western Sweden, and Trentino in northern Italy) is reflected by their approaches to stakeholders' engagement and visioning processes as well as especially adopted activities in each location. Within the SATURN project, we are investigating how these approaches could change perceptions and impact on landscape strategic actions. Through a series of especially designed workshops on landscape visioning and stakeholder engagement, the project aims to create a toolbox supporting urban, peri-urban and regional planning. This paper reports on the visioning and stakeholder mapping and analysis tools, and shares examples where these processes were tested during the broader SATURN scheme. Results demonstrate how the visioning exercise has changed public perceptions about an area and how this has affected the decision-making process of each city towards a more effective planning of sustainable landscapes. The stakeholder engagement activity demonstrates the importance of "mapping and analysis" of the various actors involved in a city and the ways a landscape project can effectively engage with them and seek further collaboration. Questions on how the results differ in cases where the stakeholder engagement process focused on a broad policy level or targeted specific actions for a certain region are being explored. Both the visioning and stakeholder engagement tools are subject to a holistic approach and a collaborative and open process between the stakeholders and the trainers, allowing the participants to build a vision for their regions and be one-step closer to systemic change.

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Introduction: The Saturn Pan-European Project

This paper is based on the experience and the findings gained through the pan-European project named “System and sustainable Approach to virtuous interaction of Urban and Rural Landscapes” (from now on referred as SATURN) co-funded by the EIT Climate-KIC. The SATURN project covers three specific urban-rural regions in Europe, Birmingham in the centre of England (United Kingdom), Gothenburg in western Sweden, and Trentino in northern Italy (Figure 1). These three territories have very different geographic and topographic conditions, yet they share similar challenges in terms of landscape management and adaptation to climate change.¹ Each region has been investigated through understanding the relations between urban cores, their surroundings and especially the food networks that contribute to a sustainable use of landscape and resources. In urban-rural regions, challenges posed by climate change are more complex due to the lack of systemic planning approaches and fragmented governance.

In order to develop a more comprehensive approach to such challenges, the SATURN project is underpinned by a three-tiered, interrelated approach. The first step is focused on establishing a methodology to generate a holistic multi-scalar spatial vision that can be applied in different contexts to put under discussion the current fragmented governance. To further support this holistic vision, a second step is based on a set of tools to map and clearly highlight the natural capital and the ecosystem services available in urban-rural fringes. This contributes new evidence to the wide benefits of the landscape as a whole. Stakeholders connected to such ecosystem services that can foster or hinder their development are then mapped and linked to the territorial vision. The third and last tier seeks to assess and translate the acquired knowledge into daily planning practice, to grow organisational capacity of local stakeholders and policy-makers. While going through the three steps of the process, stakeholders challenge their idea of territorial development through the visioning exercise, then they are asked to highlight the values of landscape and its actors identifying key players or beneficiaries through the engagement exercise, and finally, they focus on bringing this transformational change into planning routine, local strategies, and governance schemes. The outcomes of this process will need to be evaluated on a long-term basis going far beyond the 3-years project duration.

This paper is structured in three sections looking to build a comprehensive narrative around the topic and the experience of the SATURN project. In the first part, the authors build a preliminary literature review to set the frame in which the research is rooted. The interconnection between climate challenges and the inadequacy of planning frameworks are investigated to understand how the SATURN approach can improve the capacity of landscape planning frameworks. In the second section, therefore, the activities and the underpinning the activities of the SATURN project are presented and assessed in relation to the preliminary analysis of the challenges. An in-depth description of the activities and a

1. A. Nikologjanni, A. Betta, A. Pianegonda, S. Favargiotti, K. Moore, N. Grayson, et al., “New Integrated Approaches to Climate Emergency Landscape Strategies: The Case of Pan-European SATURN Project,” *Sustainability*, 12, no. 20 (2020): 8419.

comparison between the three different case studies is then presented. Trying to build a more extensive framework to understand positive and negative aspects and unpack different factors hindering or boosting the effectiveness of the framework looking at similarities or differences between the three. Finally, the first findings and operational possibilities are presented and discussed. The broader SATURN project looks at the governance of nature and landscapes and focuses on the relationships among cities, food growing, and the rural landscape across Europe. This paper examines one of the project's pillars, exploring the impact of visioning and stakeholder engagement on decision making. The methodology of the SATURN project has been previously published.²

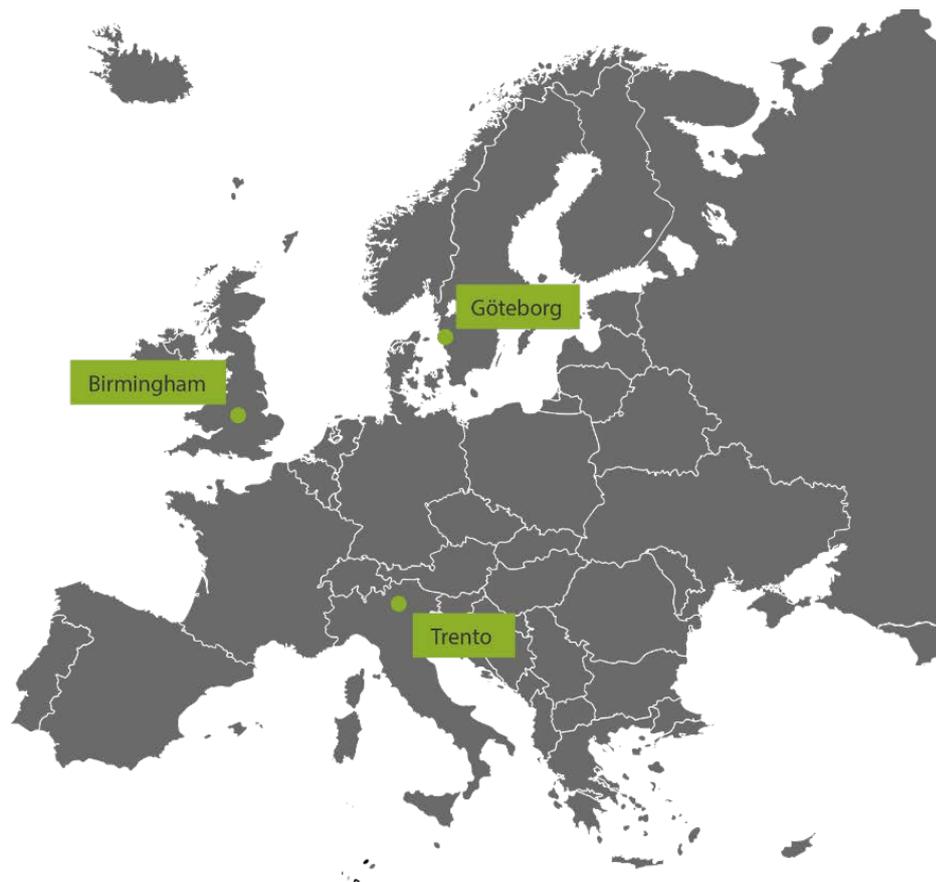


Figure 1. Map Showing the Three Locations of SATURN Hubs, (Trento-Italy, Birmingham-UK and Gothenburg-Sweden)

2. Ibid.

Climate Change Impact on Planning and Governance in Urban-Rural Regions

Researchers are suggesting that the population in urban areas is constantly growing and is expected to reach 70% of the overall population of the globe by 2050 adding more than 2.5 billion people to urban dwellers compared to 2000.³ The movement of people from rural to urban regions will occur mostly in developing countries in Asia or Africa (especially China, India, or Nigeria) but also European cities will see a progressive concentration of population in metropolitan areas while abandoning more rural or poorly connected areas. The combination of inbound migration from rural areas and progressive abandonment of buildings and infrastructures is creating enormous pressure at the edges of cities, making urban-rural fringes and peri-urban areas amongst the fastest-changing landscapes in Europe.⁴

The progressive urbanization, with its consequences such as the expansion of urban sprawl, in Europe goes together with the process of de-industrialization of the oldest factories located in the urban-rural fringes. These two processes are not contributing to strengthening urban cores or dense urban fabric but favours a seamless extension of urban-rural regions where built and open spaces are intertwined in an intricate system of processes and relations. Such 'hybrid regions' merging partially urbanized and partly rural landscapes could become increasingly common in the future. Also counter processes of deindustrialization, which are more common in Western countries, are also contributing to a growing presence of nature in the interstices of urban regions. Such intermediate landscapes pose several challenges to the current planning framework as their ecological and socio-economic structure is complex, fragmented and constantly evolving. The complexity and the changing pace of urban-rural regions differ from the rigid and sectoral structure of most planning tools and processes. The planning tools are instead mostly focusing their attention on slow land use transformations and sectoral challenges such as mobility or waste management rather than understanding the connections between phenomena and the impacts on land use.⁵ Moreover, most planning policies seem to be inadequate to deal with rapid transformations.⁶ Planning schemes still rely mostly on zoning or functional and transportation schemes linked to a specific vision of the city as an organism based on buildings, artificial infrastructures and engineered processes. This approach, which architectural counterpart is rooted in the Le Corbusier's model of the "machine a habiter" looks at the city as an entity separated from its surroundings where the main aim is to maximise the efficiency of single processes rather than looking at the complexity of the environment. This kind of approach looks at urban and rural areas as separate entities and does not contribute to reduce governance fragmentation since

3. Department of Economic and Social Affairs - Population Division, *World Urbanization Prospects: The 2018 Revision (ST/ESA/SER. A/420)* (New York, NY, USA: United Nations, 2019).

4. K. Nilsson, S. Pauleit, S. Bell, C. Aalbers and T. A. Sick-Nielsen. *Peri-Urban Futures: Scenarios and Models for Land Use Change in Europe* (Berlin-Heidelberg: Springer Verlag, 2013).

5. K. Hill, "Climate Change: Implications for the Assumptions, Goals and Methods of Urban Environmental Planning," *Urban Planning* 1, no. 4 (2016): Paradigm Shifts in Urban Planning

6. A. Piorr, J. Ravetz and I Tosics, *Peri-Urbanisation in Europe: Towards a European Policy to Sustain Urban-Rural Futures* (Nødebo, Denmark: University of Copenhagen, 2011).

it is underpinned by the idea that challenges and visions for urban and rural areas are completely different and without common concepts underneath. However, it is increasingly clear that climate change challenges, such as sustainable supply of food and water or the mitigation of extreme events, require a more comprehensive approach to landscape to encompass the wide range of processes and social, ecological or economical cycles involved.

The inefficiency of contemporary planning tools together with the urgency to face climate challenges requires for a deep and immediate systemic change. Most of spatial or environmental planning and management concepts in use are focused on “the over-arching concept of spatial suitability” of different functions on the landscape.⁷ Yet, the concept of “spatial suitability” is now being substituted by the idea of constant and permanent adaptation to extreme events and changes. The implications of such a shift are vast and profound and are affecting the practical sphere of planning practice as well as its very epistemological, ethical and ontological assumptions.

As it is unclear how and when environmental governance could differentiate from one mode to another,⁸ the SATURN project is exploring how this can be achieved based on collaborative governance processes and a more continuous involvement of local stakeholders.

Issues posed by climate change to urban and rural landscapes go far beyond merely affecting ecological processes or the physical structure of landscape, they are questioning deeply how we plan and manage the territory, its features and the ecosystem services it offers. Climate change will increase the number of extreme events and their unpredictability, causing growth in instability of ecosystems and risks of failure of infrastructures.⁹ Such a scenario in an already complex and fragmented context such as urban-rural regions can represent an unavoidable obstacle to local administrations unless a more holistic, systemic, and integrated approach to planning would not be taken.¹⁰ In order to reach an effective adaptation of land and water use the missing links and the strong bonds between agriculture, forests, water, biodiversity and energy have to be highlighted together with the reciprocal influences. An Integrated Landscape Management (ILM) strategy requires all actors to be involved on a shared basis of knowledge.¹¹

7. Hill, “Climate Change: Implications for the Assumptions, Goals and Methods of Urban Environmental Planning,” 2016.

8. P. P. Driessen, C. Dieperink, F. van Laerhoven, H. A. Runhaar and W. J. Vermeulen, “Towards a Conceptual Framework for the Study of Shifts in Modes of Environmental Governance—Experiences from the Netherlands,” *Environmental Policy and Governance* 22, no. 3 (2012): 143-160.

9. S. I. Seneviratne (Ed.), *A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC)* (Cambridge, UK, and New York, NY, USA: Cambridge University Press, 2012).

10. M. Winn, M. Kirchgeorg, A. Griffiths, M. K. Linnenluecke and E. Günther, “Impacts from Climate Change on Organizations: A Conceptual Foundation,” *Business Strategy and the Environment* 20, no. 3 (2011): 157-173.

11. C. Mann, M. Garcia-Martin, C. M. Raymond, B. J. Shaw and T. Plieninger, “The Potential for Integrated Landscape Management to Fulfil Europe’s Commitments to the Sustainable Development Goals,” *Landscape and Urban Planning* 177 (2018): 75-82.

The increasing frequency of extreme events questions the current planning approach based on sectoral and fragmented strategies with several institutions and local authorities or administrative bodies involved often lacking clear and precise guidance. Another challenge is related to the recognition of landscape's value system and the preservation of traditional sustainable practices from local communities.

Yet these challenges could become important opportunities for a radical change on how society approaches landscape, in particular to such landscapes that are often neglected and hidden from "mainstream" processes.

The Saturn Process: Building Capacity through Engagement

The SATURN project is based on the experiences the three hubs develop in their respective territories in order to investigate how to improve relations between urban areas and their surroundings. The consortium established a process made of three interrelated parts which are the holistic vision practice, the stakeholders' engagement practice and finally the capacity building practice to understand how to enhance urban-rural engagement.

Together with this process, various innovative actions are being shared across the HUBs to further enhance the impact. As the landscape morphology and the governance structure of each location of the three HUBs are very different, each one is developing tools at different scales and with different levels of stakeholders' involvement. In addition selected case studies work on the process to engage stakeholders and support them in building adequate capacities to face future challenges in their territories. This engagement process is built around a set of "exercises" and workshops that involve researchers and local actors in building a vision for their territory. Through several tools and reflection processes, the participants build an in-depth understanding of stakeholders' universe profile, their needs and the potential barriers related to their involvement in landscape management. The tools used are based on the EIT Climate-KIC Visual toolbox for system innovation integrated with the specific knowledge and experiences of the SATURN consortium. Therefore, few tools have been edited and others have been added and shared by the different members of the consortium. The tools included in the toolbox come from some best practices happening within the territory of consortium's members looking at reconnecting cities to their surroundings and that can be replicable and scalable. Some of the tested tools are linked with mapping and acquiring diverse knowledge on landscape features (such as the rural-urban metabolism tool of Trentino or the investigation on abandoned farming plots in Gothenburg). Others are related with fostering sustainable farming and businesses (as the model-farm in Gothenburg, the mentoring activities done in Trentino or the capacity building workshops help in Birmingham).

Having all HUBs working together on this process allows for cross-national and comparative analysis of the effectiveness of the engagement and offers important insights on how to scale up these tools and methods to different territorial and planning frameworks.

As described at the beginning of this paper, the complexity and the fragmentation of urban-rural regions calls for more systematic and holistic approaches in order to tackle challenges in a more effective way, therefore the strategic vision must be clear and shared among actors. A series of visioning workshops have been designed and tested across the three regions aiming to support the creation of overarching spatial visions for each area. The stakeholder engagement process focuses on both upscaling the consortium methods, but most importantly providing efficient ways to key actors of each area, such as cities and institutions, to improve their knowledge on their own stakeholders. The SATURN project has set up a tool to engage with stakeholders on a series of activities that dive progressively deeper into the landscape concept while participants get more conscious of their territory.

Aiming to address governance and landscape fragmentation, stakeholder engagement is a crucial part of the SATURN project process together with the co-development of a territorial vision to tackle governance challenges and build management capacity at the same time. As a key aspect of the project is to enhance systemic thinking regarding landscape planning, the three parts (vision development, engagement and capacity building) are strongly related and thought of as a comprehensive process.

The communication process with the local stakeholders that underpins the entire SATURN project is well described by the continuous engagement through workshops, training sessions and dissemination events between the different actors that contribute to the complete process. The best and stronger results are obtained when the different parts of the process interact with each other and when the outcomes are reciprocally shaped.

The stakeholder engagement tool is used to identify the key stakeholders of each location (public, private, companies, education, landowners, entrepreneurs) and the most urgent landscape management issues. Through a series of activities and continuous communication between the SATURN team and the identified stakeholders, the challenges are being translated into a territorial vision that identifies most promising solutions and contributes to build internal capacity in local administrations through sharing knowledge, plans and strategies. Understanding which and how to engage with the most significant stakeholders is a key moment and requires a strong multi-level and cross-sectoral approach to include all possible interested people. The result of the first phase is an extensive mapping of local actors and their relations with climate change challenges while possibly identifying new actors or previously unknown relations.

The second phase is based on the visioning practice which aims to go beyond the usual and daily practice to imagine how a different scenario could be developed in order to also inspire others to act consequently. The visioning practice is based on spatial and visual exercises to allow thinking out-of-the-box. Finally, summing all the work previously done, local actors are involved in capacity building activities in order to set a continuous learning process about climate challenges resulting in increasing coordinated efforts among different actors and scales.

The Activities: Process and Examples from the Hubs

The Stakeholder process consists of various stages such as mapping, analysis, evaluation, management and engagement. The engagement process of SATURN is based on gaining knowledge in order to describe certain components and achieve network mapping and therefore to further contribute to decision-making and planning at a local and regional level. The Stakeholder Engagement Process has been designed to take the participants through a journey of understanding, identifying and analysing with the aim to improve their chances to firstly identify the most beneficial connections and secondly to increase the level of engagement with actors. It is based on a series of workshops and activities with the aim to work in a holistic way from establishing the challenge and goals of each project to the point the team can increase capacity internally but also externally (to their partners and collaborators).

The first step of any workshop is for the most important issues and challenges related to the landscape evaluation to be identified and described, in order for the stakeholders to understand the impact these have on their territory and the key actors influencing decisions in the area. Based on the use of specific tools and an open discussion, the choice of a problem statement is being generated, summarizing all the current issues in the region. A potential support to the process can further be achieved through the use of visioning workshops (another tool tested within SATURN and generated by CATiD BCU) that involve local actors in the definition of a future scenario for their landscape and contribute to identify most urgent issues. Following this first initial, but essential phase, an in-depth analysis of the stakeholders' mapping and engagement is conducted through the use of various canvases dressed with design thinking and stakeholder management tools. During this process, stakeholders are being identified and mapped, and each stakeholder is examined in relation to the problem statement as well as other actors in the region.

The SATURN project has created a dynamic process for stakeholder engagement, looking at the relations of various stakeholders involved in strategic development and regional design schemes. This process consists of a systematic series of challenges to enable identification of stakeholders as well as the project goals and values, through a series of stakeholder management (stakeholder mapping, analysis and engagement exercises) and multilevel perspective to give better insights of the relationships within the challenge (project barriers and solutions). The process is based on a mix of visual tools and discussion/reflection sections, run by a trained coach and facilitator who has supported the hubs throughout the process. As mentioned in the previous sections, the existing challenges to actual planning processes in light of climate change require a more holistic and wide approach to the topic. To build more holistic strategies there is the need to include a larger set of expertise but also to change the way officers and practitioners involve local stakeholders and take advantage of their own expertise. The involvement of such stakeholders should be more extensive and should start from the very first phases of the planning processes through the establishment of a shared vision on the landscape in order to contribute not only to more comprehensive planning tools but also to build management capacity at local level.

The “Cooking Recipe Challenge” is a problem and goals identification and stakeholder management process developed by the Birmingham Hub of EIT Climate-KIC SATURN. It is the outcome of various workshops and visioning tools, leading to a tailored stakeholder engagement tool. The “Cooking Recipe Challenge” is a combination of several stakeholder mapping and analysis tools that allow to create a new methodology for stakeholder analysis and build capacity within the team. A selection of some of the EIT Climate-KIC stakeholder management tools (which are included in the Visual Toolbox and can be retrieved at <https://www.climate-kic.org/insights/visual-toolbox-for-system-innovation/>) together with other tools developed by the Birmingham Hub aim to set the scene of the project regionally and provide support to the different teams to engage with their local and regional stakeholders. Mapping key national and European actors (e.g., decision makers, politicians, civil servants, local authorities, researchers and professionals), evaluating their needs and demonstrating what SATURN can offer them, increases the actors’ understanding and engagement level, supporting a smooth transition of circular use of landscape. Moreover, such a process can foster a reconsideration of the view of landscape as a whole as well as an improved knowledge of the specificity of landscape elements, thus upgrading the capabilities of local stakeholders. One of the most important elements is that this process allows to build a sense of ownership to the different actors creating a community working collaboratively on the project. The starting point of the process is a flexible brainstorming session to allow everyone to express their position and opinion while building trust and a common ground between actors and facilitators. Following this step, the specific challenges are analysed and understood to build a roadmap to be followed for planning future actions. Among the tools used in the process are the Pentagonal Problem, the Goals Identification, the Actor Tree, the Relations Pie and the Empathy Map. Once the Stakeholder Universe has been developed, the research (“Fishing”) for Barriers can start in order to foster the search for solutions and next steps of the project. There are several benefits when involving stakeholders in the projects dealing with landscape value, peri-urban spatial strategies, local authority mechanism and decision-making processes. By building a process where the stakeholders are asked to actively participate, the team reduces the chances for absent stakeholders to disturb the process and it is likely that conflicts are also reduced.

Birmingham, Trento and Gothenburg Experiences

The Birmingham Hub worked closely together with the Naturally Birmingham (a new governance model for cities green spaces), the Tame Valley Wetlands Partnership and the Urban and Food Growing Network. A specifically designed process was developed in order to address the needs of each case study. The selected case studies for Birmingham, are focusing on governance and management, awareness and community engagement and visioning retrospectively and therefore the workshops were all using the SATURN tools but in a sequence, form and pace that suited each individual case study. As it is understandable, in real life

scenarios, tools need to be adjusted to the goals and challenges of each project. Starting with the Tame Valley, the Birmingham Hub, aimed to use the SATURN tools to explore further the vision developed in the Tame Valley and identify if this has been useful and successful or it has not, what are the barriers and who are the key stakeholders to support with its development. At the same time and using the same tools, very different discussions and outcomes occurred from the ‘Urban and Food Growing’ workshops since, this project focuses on urban farming with the aim to support community, spread awareness on landscape identity and the climate challenges and share support on mental health issues through landscape engagement. The third case study explored is the “Naturally Birmingham” project, a national scheme that aims to support the creation of green spaces in urban areas. As this is a major project for the city of Birmingham, it has been very significant in developing a new governance model for the city. This is still an ongoing project (due to finish in 2022), however it has managed to engage with several parts of the local authority and provide advice and a vision for a greener city. The SATURN workshops have helped to improve understanding of the territory and open up new ideas and opportunities for the Naturally Birmingham project team. Therefore, in this case the SATURN stakeholder engagement, visioning and capacity building tools were used with the aim to unlock new regimes and identify any blockages towards a systemic change.

Meanwhile, the Trentino HUB organised four different workshops with different stakeholders at both regional and municipal level starting with general propositions before going deeper into four main topics highlighted during the meetings. These topics are related to the most critical issues of the territory such as mobility within the region, sustainable forms of agriculture, circular economy processes and landscape preservation. The process has been developed following the results of the four workshops in order to get a more detailed and more structured idea about how stakeholders see the future of the territory. The four workshops spanned across half a year and involved a wide number and variety of actors (more than a hundred different people from the institutions and NGOs). The results have proven to be extremely useful for the people and institutions involved as this has allowed for new visioning approaches that differ from common practice. Prior to meeting the local stakeholders, an internal meeting was held by the SATURN research group in order to build the vision to be tested and challenged in the following meetings. The scope of this first step has been to set a reference “image” developed by local researchers that at the same time are not directly involved in landscape management processes. The first workshop was held in the autumn of 2020 involving officers and political representatives from the municipalities part of the SATURN project and from the government bodies of the Autonomous Province of Trento. Participants were asked to present their vision for the landscape in 2040 or 2050 which was then discussed in groups in order to define the most aspirational topics and challenges and investigate the role of every citizen or association in accelerating or hindering the development of the vision. In particular, the most cited broad challenges have been mobility, agriculture, touristic and cultural development, demographic changes. After the first workshop, extremely positive feedback was received, that practitioners used to confront themselves only

with colleagues with similar backgrounds, and therefore they did not have the possibility to broaden their scope and highlight the interrelations among different landscape challenges. The main topics which have been highlighted are all linked to a call to increase territorial connectivity and diversity both for humans, wildlife and plants. The main findings that have been highlighted in these first meetings have been used to define the working groups for the following workshops and contributed to build a set of scenarios also used in the successive meetings. In this way we held further work with specific municipalities in Trentino (such as Arco or Pergine Valsugana, both pilot cases of the project and with youth representatives from Rotaliana District including 8 different municipalities) where the topics and scenarios have been investigated more deeply and the analysis has been tailored to the specific context.

The case of Gothenburg is of importance as it brings together several projects related to multifunctional and sustainable peri-urban land use and green entrepreneurial models. As the work in the Gothenburg hub builds on a tested model of land lease in urban and peri-urban areas (Model Farm) it supports the sustainable ecosystem based on local management and cultivation of peri-urban areas in order to enhance the supply of ecosystem services, protect the environment and meet the needs of a growing population. The case consists of four different pilot actions connected to the enhancement of urban agriculture, stakeholder engagement, redevelopment of abandoned sites, and education of green entrepreneurs with the aim to create opportunities for more people to pursue a farming career, from “a farm box to hectares”. The city has also developed a Farmers Incubator together with the company Xenophilia to train and increase the number of ecological farmers committed to sustainable land management. Agripreneurship training (agricultural entrepreneurship) supports the farmers for the duration of the programme. Underutilized land and basic infrastructure is offered to the programme’s participants at favourable costs and is connected with the LAB190 action of mapping and developing land lease schemes. Gothenburg’s pioneer farming model, called the Model Farm, is a highly productive small-scale farm unit, providing education to potential farmers and entrepreneurs while supplying the local community with food. By creating a business model based on a sustainable and successful small-scale farming enterprise run within the Gothenburg municipality, the Model Farm serves as a driver for the integration of regenerative farming practices in the continuous evolution of urban and rural multifunctional landscapes. Test sites in Angered and Skogome aim to increase urban food production and promote green entrepreneurship in and around the city centre of Gothenburg. These test sites offer a leverage for small scale agricultural businesses, with minimum investment, and allow for incremental growth within the test sites as well as the possibility of relocation to larger plots of land within the municipality.

Discussion and Initial Findings: Changing Approach, Re-Imagine the Future

The overall process designed by the EIT Climate-KIC SATURN project and the combination of the different tools used, help local administrators, stakeholders

and researchers to build a bigger more holistic vision for the future of their region. This is a key step to bring systemic change in governance processes and foster strategic partnerships. The integration of different tools in a specifically designed process supports the identification of strategic aims and wide goals based on an exploration of issues and the potential of the landscape in each region. This precise identification is fundamental to avoid broad, yet unclear territorial strategies, and therefore their lack of effectiveness in land management. Diving in the details of a specific challenge is then helpful to connect different stakeholders and face challenges with a trans-disciplinary perspective, pursuing the quest for systemic change in landscape management. This perspective also gives researchers and universities a different role within society and acts as a support to collaborative and shared solutions for local problems. The design or management team can make better decisions about the most relevant and influential stakeholders, work on new engagement methodologies and prioritise the barriers of every challenge or project. This is strongly connected with the need to overcome the actual potholes in climate or landscape strategies that are being developed across Europe often at borough or municipal level but that are missing a coherent regional or national framework.

Despite the different approaches and structure of the visioning/engagement processes, both Birmingham and Trentino HUBs have highlighted a positive impact on daily practice of local stakeholders and an improvement of the understanding of climate challenges to urban-rural landscapes.

In the case of Trentino a strong increase of the awareness of the value of the landscape and the current challenges has been recorded with several activities initiated by the local authority with the aim to increase landscape value and awareness. While in Birmingham SATURN has supported the creation of the City of Nature vision for the city as well as worked together with the groups aiming to share awareness on the value of the landscape and increase the food growing community initiatives. Local actors, responding to Trentino's and Birmingham's workshops, have highlighted the importance of multidisciplinary, inclusivity and working collaboratively during the workshops despite the wide participation of several sectoral agencies and administrations. Such statements help to spread the concept that landscape challenges are interconnected and cannot be tackled one by one as separate challenges or be assigned to one national agency over the other.

Another important achievement is related to the participation of both NGOs and public authorities to the same process with equal participation rights allowing for more cooperative approaches on governance going beyond a sort of competitive scenario that reduces effectiveness of landscape planning. One of the municipalities that joined the initial visioning workshops held in Trento, has since contributed to organise one of the most successful workshops, is the city of Arco, a medium-sized town located on the Northern side of the lake Garda (Italy). The stakeholders that joined the process were both from the public authority and from the private sector (either for profit or non-profit), all aged under 40 years old, creating a multidisciplinary group of people that has already been identified as a success story due to its diversity and open mindfulness. Moreover, reflecting on the backcasting and the necessary actions to develop the landscape in a more sustainable and coherent

way contributes to identifying the most promising stakeholders to be involved according to the actions needed. The whole process resulted in the municipality redrafting its planning priorities according to the most urgent issues emerging from the SATURN process. At the moment the local administration of Arco is actively looking for external funding and resources to finance further actions aimed at recovering abandoned and underutilized land, enhance environmental management of green areas and improve youth engagement in territorial development.

Even though the three areas are developing their work at very different scales and, in the case of Gothenburg, they are working on very ‘hands-on’ activities, the possibility to widen the perspective and rethink the broader vision through the engagement and visioning process has proven to be useful. The visioning and stakeholder engagement processes helped to increase the impact of the work done within the SATURN project thanks to the possibility to reconnect practical actions to a wider conceptual framework, therefore ensuring that resources and energy are not split across an excess of many different processes across scales or actors resulting in a lack of coherence and holistic approach to landscape management.

Conclusions

The impact of Stakeholder Engagement and Visioning on the decision making process are significant. While they create a platform to collaborate and discuss these processes developed and tested throughout the SATURN project, have allowed for new actions taken by local authorities and key decision makers. While we cannot talk about a full systemic change yet, SATURN has demonstrated new possible ways in which a spatial approach can be developed at a city and regional scale.

The stakeholder engagement tool can create systemic change and a new way of operating in spatial strategies and climate related strategic decisions in our cities and regions. The teamwork required by this process has allowed for several productive discussions between the partners and has also helped utilize past experience and knowledge of each team member which have been shared introducing innovative ways to cooperate across European local administrations. The identification of new actors and networks has been one of the most valuable outcomes, allowing the SATURN partners to involve additional, often very interested and engaged actors. It has also given access to the local ecosystem of start-ups working on topics related to this project. As a way to further test the process of stakeholder engagement and reassure a smooth transition to build capacity for both the members of SATURN consortium and its key actors, the Birmingham Hub has opened this process to selected case study partners who have been willing to dedicate their time to evaluate the different tools, and the overall process developed by the Birmingham Hub.

The visioning approach developed by CATiD (BCU) and the WMNP Lab BCU, has been used to engage and mentor a wide range of stakeholders within and beyond the region. The approach was adapted for use with our SATURN partners in the Swedish and Italian hubs and to deal with the restrictions and challenges of the COVID-19 pandemic. The outcomes of these workshops have been used to

inform the development of the visioning tool that could be applied in a wide range of contexts and situations. During the activities carried out across all SATURN locations, the spatial visioning exercise changed the nature of the discussions about the stakeholder engagement and impacted on the “problem statement” set for each location. The main finding of this process is to demonstrate that no part of the process is objective and neutral but is always contingent. Perceptions as to the significance or importance of specific stakeholder changes subject to the definition of the problem to be solved or the vision to be implemented. A related finding is the suggestion that the spatial vision needs to be articulated as far as possible before workshops are undertaken.

The two processes presented by this paper will need to be further developed and adapted to accommodate natural, morphological, social and cultural characteristics of each country, however they are recommended to allow for systemic change and open new ways of thinking on spatial strategies.

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