Conflicting perspectives on urban landscape quality in six urban regions in Europe and their implications for urban transitions

Matthijs Hisschemöller [a], Viktar Kireyeu [b,*], Tara Freude [a], Florian Guerin [c], Olga Likhacheva [d], Ilenia Pierantoni [e], Ana Sopina [f], Timo von Wirth [a,g], Bojana Bojanić Obad Šćitaroci [f], François Mancebo [h], Massimo Sargolini [e], Anton Shkaruba [i]

[a] Dutch Research Institute for Transitions, Erasmus University Rotterdam, Burgemeester Oudlaan 50, 3062, PA, Rotterdam, the Netherlands
[b] Institute of Earth Sciences, Saint Petersburg State University, 7/9 Universitetskaya Emb., 199034 Saint Petersburg, Russia
[c] Lab'Urba (EA 3482), Université Gustave Eiffel, 16 Bd Newton, 77420 Champs-sur-Marne, France
[d] Institute of Medicine and Experimental Biology, Pskov State University, 2 Lenin Square, 180000 Pskov, Russia
[e] School of Architecture and Design, University of Camerino, Viale delle Rimembranze snc, 63100 Ascoli Piceno, Italy
[f] Faculty of Architecture, University of Zagreb, Fra Andrije Kačića Miošića Street 26, 10000 Zagreb, Croatia
[g] Wuppertal Institute for Climate, Environment and Energy, Döppersberg 19, 42103 Wuppertal, Germany
[h] École Supérieurs d'Ingénieurs de Reims (ESI), IATEUR, Université de Reims Champagne-Ardenne, 2 esplanade Rolland Garros, 51100 Reims, France
[i] Institute of Agriculture and Environmental Sciences, Estonian University of Life Sciences, Kreutzwaldi 1, 51006 Tartu, Estonia

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ABSTRACT

The European Landscape Convention urges countries to involve stakeholders including citizens in the governance of ordinary (urban) landscapes. This paper studies conflicting stakeholder perspectives on urban landscape quality in the context of urban sustainability transitions in six European urban regions in the Netherlands, Italy, France, Croatia, Belarus and the Russian Federation. Repertory grid technique helped to identify the dimensions through which persons evaluate urban landscape quality. Ninety-three (93) interviewees elicited 1400 bipolar constructs, such as "Edible green – Concrete" or "Community, group – Loneliness". They then selected two constructs they consider most relevant in the context of urban sustainability transitions, and ranked all pictures on a 10-points scale. The rankings were analyzed using Multiple Correspondence Analysis. We find that, in spite of the many social and cultural differences between the regions, stakeholders largely agree on the preferred direction of urban transitions; more green and blue spots where people can meet and undertake joint (leisure) activities. The main conflict is between, on the one hand, a preference for organized development and beautification and, on the other hand, naturalness (permeability of soil) and organic development. The paper considers several challenges for transition governance.

1. Introduction

Landscape is a multi-dimensional concept. The European Landscape Convention (ELC) defines landscape in article 1 as "*an area as perceived by people, whose character is the result of the action and interaction of natural and human factors*" (Council of Europe, 2000: 9). Importantly, the ELC addresses ordinary landscapes (both rural and urban) rather than cultural heritage. It refers to the physical characteristics of an area, as well as to the culture of its inhabitants and its economic and administrative features. The ELC constitutes a relevant guideline, trace and matrix at the interface of the perception, the organization and the preservation of a biophysical and social living environment (Sargolini, 2005), in which ecological and landscape qualities are interlinked (Sargolini, 2015). These refer to an environmental complexity, intangible and materialized at the same time. The concept of "landscape as a whole is synthetic; it is the *interface* where nature and culture come together so obviously" (De Jonge, 2009: 43). As an essential cultural element, the landscape turns personal, subjective interpretations and

individual meanings into a collective view. Landscape can be considered a common good to the extent that the diverse interpretations lead to a shared meaning. As such, landscape is part of the collective identity and history of people (Debarbieux & Arlaud, 2005; Kianicka, Buchecker, Hunziker, & Müller-Böker, 2006; Proshansky, Fabian, & Kaminoff, 1983; Sopina & Bojanić Obad Šćitaroci, 2015). Without a collectively shared meaning, a landscape does not exist (Sargolini, 2013).

Different perspectives on landscape quality reflect social transformations over time, e.g. changing views on nature. They also reflect the social contradictions and conflicts that clash within a specific period and place. Conflicts with respect to landscape quality tend to aggravate when space is scarce and conflicting claims on scarce space are plenty (e. g. Spyra, La Rosa, Zasada, Sylla, & Shkaruba, 2020). Especially in urban areas, conflicts related to land use and economic interests tend to dominate landscape planning (Mancebo, 2008). At present, it is acknowledged that for their survival, urban regions must engage into sustainability transitions in order to qualify as attractive places for people to live and work (Mancebo, 2017).

Transitions are understood as long-term processes of disruptive, non-linear societal change (Loorbach, 2007; Loorbach & Shiroyama, 2016; Rotmans, Kemp, & Van Asselt, 2001). Sustainability transitions are seen as unpredictable dynamics as they disrupt local understandings, local cultures and the economic fabric in regions. Transitions lead to tensions, conflicts as well as social innovation. Urban sustainability transitions relate to long-term change dynamics of urban systems building upon normative assumptions of finding ways to navigate towards more sustainable urban spaces (Frantzeskaki, Broto, Coenen, & Loorbach, 2017). Among the diverse facets of urban sustainability transitions, scholars recently called for a rediscovery of nature in urban change processes (Torrens et al., 2021). Nature-based solutions are supposed to enable urban regions to adapt to climate change and extreme weather events, provide higher qualities of life and acknowledge social (in)justices and local community needs. Urban regions find themselves increasingly under pressure, articulating and integrating conflicting interests into the urban landscape that, to put it in urban planners' jargon, relate to grey (transport), red (residential), green (nature) and blue (water) (e.g. Badiu, Onose, Niță, & Lafortezza, 2019; Lamond & Everett, 2019; Pochodyła, Glińska-Lewczuk, & Jaszczak, 2021; Qi, He, Wang, Zhu, & Fu, 2019; Vojinovic et al., 2016; Xue et al., 2022). They are forced to make new choices with respect to the so-called urban-rural continuum (Mancebo, 2014; Nilsson & Nielsen, 2013). This includes new ways of governance, ending practices where established rules and (power) networks dominate decision-making (Kabisch, Korn, Stadler, & Bonn, 2017; Von Wirth et al., 2014).

From a transition perspective, the problems related to the greening of urban landscape are unstructured. Unstructured problems are defined by high levels of uncertainty and conflict with respect to what information is relevant and which values are at stake for the actual problem situation as well as the proposed solutions (Hisschemöller & Hoppe, 2001). Given the diversity of affected actors, problem structuring requires an integrative and participatory approach, which enables the articulation, confrontation and, where possible, integration of conflicting perspectives on a specific issue (Cuppen, 2012; Hisschemöller & Hoppe, 2001). A perspective is defined as a specific (biased) articulation of facts and values that highlights specific information while neglecting other.

The ELC takes a transition perspective in that it recommends to take the long-term into account in the governance of landscapes, integrate knowledge from all relevant disciplines and rely on public participation and co-production with those who are involved. The ELC implementation has resulted in a large number of good practices, in particular in terms of landscape valuation and public participation in landscape management (Jones & Stenseke, 2011). Options for the application of the ELC approach are discussed for regions far beyond ELC's core geographical scope (Moore, 2012; Roe, 2007; UNESCO, 2011).

Policy-making according to the ECL principles is not an easy task. It presupposes an understanding of conflicting perspectives, e.g. between vested interests that resist choices for green and blue infrastructures for financial reasons. Complexities may increase, when citizens are divided among themselves with respect to the greening of urban landscapes (Shkaruba et al., 2021). Not all people appreciate more green, as their preferences have been molded and modified by sealed grey urban landscapes. Landscape transformations may change how people perceive their living environment (Berque, 1990; Raffestin & Roderick, 1990). Conflicting perspectives even occur at the personal level, e.g. a person's desire for safety may collide with the same person's desire for adventure and risk.

We hypothesize that a deepened understanding of the plurality of stakeholder perspectives on landscape qualities in the context of urban transitions will contribute to transition governance. This paper reports on a comparative study on how different stakeholders in six European urban regions evaluate landscape quality in the context of a transition towards more sustainable urban landscapes. The study was carried out in the Netherlands, Italy, France, Croatia, Belarus and the Russian Federation over the 2018–2020 period. It addresses the following research questions: *Which perspectives can be distinguished on the sustainability transition for urban regions and what can be learnt from comparing across and between different urban regions?*

The structure of this paper is as follows: Section 2 will discuss the research approach and methodology. Section 3 will present the qualitative and quantitative findings from the repertory grid analysis. Section 4 will analyze and discuss these findings. Section 5 will summarize our findings and conclude.

2. Methodology

2.1. Choice of method

For identifying the range of perspectives on urban landscape quality we used repertory grid technique (RGT). This method is chosen, because it captures the different perspectives and the ambiguities in personal perspectives. So, we cannot assume the range of perspectives is given, which is the idea underlying large scale opinion research or surveys (Hisschemöller & Midden, 1999). Instead, the goal of RGT is precisely to articulate the perspectives, i.e. the underlying dimensions through which stakeholders evaluate an issue (Dunn, 2001; Fransella, Bell, & Bannister, 2004; Kelly, 1955), in our case the direction of urban sustainability transitions. Repertory grid provides us with an open process of articulating different perspectives, their consistencies as well as their ambiguities. It combines a qualitative interview technique with a quantitative approach for analyzing the data. Because of its bottom-up character, repertory grid can be consiedered a grounded theory approach (e.g. Edwards, McDonald, & Young, 2009; Hadley, 2017; Hunter & Beck, 2000; McQualter, 1986).

This study is not the first to use the RGT for research into urban landscape quality. We refer to studies on green urban spaces in Zürich (Home, Bauer, & Hunziker, 2007) and Hong Kong (Wan & Shen, 2015) and on extreme weather events in the Netherlands (Vasileiadou et al., 2014). However, our contribution is innovative both in terms of scope, urban landscape quality, and its international and cross-cultural approach, taking into account six quite distinct European urban regions.

2.2. Identifying six case study areas

The study was carried out in five medium sized and one bigger urban region in Europe: in the Netherlands Drechtsteden (289,000 inhabitants), for Italy the region of Ancona (220,000 inhabitants), for France Grand Reims (296,000 inhabitants), for Croatia the Zagreb Urban Region (1,110,000 inhabitants), for Belarus Mahilioŭ (380,000 inhabitants) and for the Russian Federation the urban region of Pskov (210,000 inhabitants). The focus on medium sized urban regions rather than large cities is explained by the fact that they accommodate most of

European urban population (European Commission, 2011; Giffinger, Fertner, Kramar, & Meijers, 2007), while they still receive less attention in policy circles than larger cities. Such cities are key to sustainable development for the European Union. They are essential for avoiding rural depopulation and urban drift and are indispensable for the regional development, cohesion, and sustainability of Europe. Moreover, their general features, particularly their human scale, livability, as well as their geographical embeddedness and historical character, illustrate, in some ways, an ideal of sustainable urbanism. The choice to add Zagreb enabled us to understand whether stakeholders in such a larger urban area face similar issues in urban sustainability transitions compared to the five medium sized urban regions.

2.3. Identifying interviewees

For RGT, only a limited number of interviewees is required, because normally after 15–20 interviews no new constructs are articulated (e.g. Dunn, 2001). Most relevant criterion for the identification and selection of the interviewees is their diversity with respect to their stakes in urban transitions. For each urban region in the study, the research team invited about 15 stakeholders from local and regional governments, business, citizen initiatives, attentive citizens and urban planners / architects for an interview. Other criteria relate to a balance between female and male interviewees as well between younger and older persons.

Over 80 % of invitees appreciated the project's relevance and expressed willingness to cooperate. Interviewees were guaranteed anonimity.

2.4. The interview

RGT uses a bottom-up interview technique, which avoids steering by questioning (Dunn, 2001; Fransella et al., 2004; Kelly, 1955). Interviews concentrate on comparing triads of 'elements'. Elements can be short narratives or phrases (Van de Kerkhof, Cuppen, & Hisschemöller, 2009), peoples' or company names (Sühlsen & Hisschemöller, 2014) or pictures (Vasileiadou et al., 2014). They must have a meaning for the interviewees. This study used pictures of urban landscape elements. The research team identified about 60 pictures of urban landscape elements in the six urban regions involved in the research. Taking diversity as the main criterion, the team selected 18 from these (Fig. 2 in Section 3.2) to be used in all stakeholder interviews. Interviewees drew three pictures at a time. The returning interview question was: which two pictures are similar and how are these different from the third? In answering this question interviewees articulated bipolar constructs, such as green – stone, pedestrian – car traffic, safe – unsecure. After a certain period of time, when they had articulated 10–20 constructs, the interviewees were invited to identify the two constructs they consider most relevant for the

transition to more sustainab le urban landscapes. For these two constructs, they ranked all eighteen (18) pictures on a 10-point scale, where the most preferred option was given 10. This enabled to statistically analyze the interview data.

In the Fall of 2018, the research team carried out a total of $n = 93$ interviews, in each urban region 15 or 16 interviews. In total, the project carried out 93 interviews, which produced 186 constructs the interviewees considered most relevant for urban sustainability transitions. Table 1 lists some key information as regards the interviews.

2.5. Statistical analysis

The rankings for the most relevant constructs were entered in SPSS Statistics Version 25. From the total of 186 'most relevant' constructs, one was excluded due to missing values. Since the rating of pictures is a very personal and subjective activity, data were treated as nominal. Treating the data as nominal leaves out the order in the categories of each variable; only the grouping of objects in categories is preserved. The dimension of the data was reduced via optimal scaling using Multiple Correspondence Analysis (MCA). Through MCA, or homogeneity analysis, each construct is represented as a two-dimensional scale, featured by discrimination measures and a mean value.

The analysis creates a two-dimensional plot of the pictures 1–18 for all regions, which divides the 18 pictures into homogenous subgroups. The subjective evaluations are considered homogenous when pictures are classified in the same subgroups (IBM SPSS Categories 25). Pictures which are similarly evaluated by the participants are indicated with dots lying close to each other, dots lying apart indicate a contrast in evaluation. Clusters of pictures in the plot constitute a multidimensional perspective, i.e. articulating a narrative that consists of various bipolar constructs. Interpreting the plot requires to go back to the qualitative interview data.

2.6. Interpreting the findings

The meaning of bipolar constructs is determined by two factors: the wording and the ranking of the elements, in this case the 18 pictures. Interviewees may use similar wording but express different meanings (different rankings) or use different wording for quite similar meaning (similar rankings). This is considered an argument for using RGT, as this method allows for confronting the multidimensionality and complexity of how people make sense of social reality.

In order to identify contrasting perspectives on urban landscape quality, we analyzed the findings in several ways, taking into account both wording and rankings. As a start, we categorized, in a qualitative way, the most relevant constructs. This activity was primarily meant to come to grips with the large number of constructs, 185, that

Table 1
Main information on the interviews per urban region.

Urban region	Number of interviews	Interviewees			Stakeholder groups[b]					Number of selected constructs
		Number of interviewees[a]	Female	Male	Local government (municipality)	Business / entrepreneurship	Citizen initiatives	Attentive citizens	Experts in the fields of architecture and urban planning	
Zagreb (ZG)	15	15	9	6	3	3	3	2	4	30
Drechtsteden (D)	16	20	12	8	6	2	10	2	3	32
Ancona (A)	15	18	8	10	4	2	3	6	3	30
Mahilioŭ (M)	16	16	8	8	3	2	3	6	3	32
Grand Reims (R)	15	15	7	8	3	2	4	4	2	30
Pskov (P)	16	16	10	6	2	4	5	4	1	32
Total	**93**	**100**	**54**	**46**						**186**

[a] Some interviews were attended by >1 interviewee.
[b] Some interviewees may relate to more than one sector.

interviewees selected as 'most relevant'. Since categorization always involves subjectivity, we used an intersubjective approach for reaching intercoder agreement. The six researchers immediately involved in interviewing agreed on 8 categories. Subcategories represent so-called "unique constructs", i.e. constructs that share a unique meaning, showing sufficient difference in meaning from other unique constructs, although there is always overlap. We grouped together constructs that use similar wording or wording that are normally given a similar meaning. Section 3.1 presents our qualitative findings; the 185 bipolar constructs according to the categorization. Section 3.2 presents the findings from the statistical analysis, the distribution of the elements (the 18 pictures) over a two-dimensional plot. Here, similarity is not defined by wording, but by rankings.

Interpreting the outcome of the statistical analysis (Section 4) takes three steps. First, we look into the axes of the plot: for understanding the x-axis, dimension 1, we look into constructs with a high value, >0.7, for dimension 1 and a low value, <0.3, for dimension 2; for understanding the y-axis, dimension 2, we look into constructs with a high value, >0.7, for dimension 2 and a low value, <0.3, for dimension 1.

Secondly, in order to find out about conflicting perspectives across and among different regions, we look into the rankings of the different pictures for the various constructs.

Thirdly, for understanding specific clusters or contrasting elements within the plot we analyze what interviewees have said about specific pictures.

3. Findings

Section 3.1 presents the most relevant constructs identified by our interviewees. Section 3.2 presents the outcomes of the statistical analysis.

3.1. Most relevant constructs

Each interviewee articulated about 10–20 bipolar constructs in the first stage of the rgt interview. In total, over the six regions, 93 interviewees produced about 1400 bipolar constructs, many of these were similar or overlapping. Then, they selected the 2 constructs that they found most relevant for the direction of urban sustainability transitions. The 185 most relevant constructs that were included in our analysis cover a wide range of issues. Using an intersubjective approach, we agreed on distinguishing 8 categories:

1. Personal feeling about the spot
2. Amount of green and blue
3. Physical landscape quality characteristics
4. Publicness of the spot
5. Variety in urban landscape
6. Traffic domination
7. Visible planning and design
8. Accessibility

Within these categories, we distinguish subcategories or so-called 'unique constructs' that are presented below. The Tables 2 – 9 are meant to illustrate the richness of data collected, but they also shed light upon how passionately the interviewees spoke about urban landscape quality.

3.1.1. Personal feeling about the spot

The 37 constructs in this largest category express emotions with respect to the perception of urban landscape quality. Table 2 summarizes six subcategories. In all regions, stakeholders share a desire for friendly urban landscapes that give a sense of well-being, being at home and hospitality (2.1). The opposite are landscapes that give people feelings of confusion, stress, alienation or, as one interviewee puts it, show a 'very aggressive environment'. Sustainable urban landscapes fit

Table 2

Personal feeling about the spot.

Personal feeling about the spot (37×)			
Unique constructs		Examples articulated by interviewees	
1	Friendly and pleasant - Unfriendly and unpleasant (15×)	Ancona	Livable, comfortable - Unlivable
		Drechtsteden	Pleasant place to stay - Repulsive transit area
			At home - Alienated
		Reims	Appropriable (emotion, playfulness, etc.) - Unappropriable
		Pskov	More balanced environment - Very aggressive environment
		Mahilioŭ	Attractive architecture - Revolting architecture
2	Human scale - Not human scale (6×)	Reims	For humans, livable - Not for humans, unlivable
3	Identity - No identity (6×)	Zagreb	Sense of place (positive) - No sense of place
4	Lively - not lively (4×)	Zagreb	Lively - Lethargic
		Drechtsteden	Green experience - Dull, deathlike
5	Care - No care (3×)	Ancona	With care, maintenance - Abandoned, degraded
6	Safe - unsafe (3×)	Zagreb	Safety and Maintenance - Unsafe and neglected

Table 3

Amount of green and blue.

Amount of green and blue (36×)			
Unique constructs		Examples articulated by interviewees	
1	Green - No green (8×)	Pskov	Green area, harmoniously embedded in the urban landscape - No green area
2	Green - Stones (11×)	Mahilioŭ	Public green area - Built-up areas
3	Nature - no nature (5×)	Reims	Respect the existing naturalness (harmonious articulation between human activities and natural areas) - Artificiality of soil and nature
		Pskov	Natural green spaces, little-controlled - Lack of green, or strong regulation (topping etc.)
		Ancona	Nature in the city - Lack of nature
4	Designed green (3×)	Drechtsteden	Edible green - Concrete
5	Attention for water - No attention for water (6×)	Reims	Permeable grounds - Waterproof lands
6	Urban - Less urban (3×)	Mahilioŭ	Nature, over it urban dominates - Zones, connected with urban sprawl, urban crawls over nature

in with human scale versus landscapes that look 'straight and square' (2.2), they show identity (2.3), liveliness (2.4), care (2.5) and make people feel safe (2.6).

3.1.2. Amount of green and blue

From all categories, this one is most descriptive. We divided the 36 constructs into 6 subcategories (Table 3). Most basic is the distinction between (More) Green vs. No green (3.1). A variation on this theme is the opposition between green and stones or built (3.2). There is a general preference for (more) green. Some interviewees stress the relevance of nature (3.3), but others prefer some sort of designed (urban) green (recreational green, edible green) (3.4). Attention for water - No attention (3.5) relates to the presence and integration of surface water into the city, but also to groundwater and permeability of the soil (2× from Reims). The last unique construct (3.6) distinguishes between urban and non-urban green, thereby preferring the former for urban landscapes.

Table 4
Physical landscape quality characteristics.

Physical landscape quality characteristics (30×)			
Unique constructs		Examples articulated by interviewees	
1	No density - high density (7×)	Ancona	Low density (residential) - High density
		Reims	Open space - High density, constrained space
2	Connectivity - No connectivity (7×)	Zagreb	Visual and functional connectivity within urban landscape - Visual and functional disconnections within urban landscape
		Pskov	Lack of service lines (e.g. electric lines) - Many service lines
3	Historical - Non-historical (7×)	Mahilioŭ	Historical objects - no historical structures
4	Well-maintained - Not so well-maintained (6×)	Pskov	Beautification of all areas in the city (parks, recreational zones, etc.) - Lack of development
5	Architecture (2×)	Mahilioŭ	Authentic architectural style – Unremarkable architectural style
6	Spatial quality - No quality (1×)	Drechtsteden	Spatial quality - No quality

Table 5
Publicness of the spot.

Publicness of the spot (23×)	
Examples articulated by interviewees	
Ancona	Public space - Private space
	Community, group - Loneliness
Drechtsteden	Function for people - Inhabitants only
	Meeting - Individualism (withdrawal)
	Invites for activity - Restricts activity
Zagreb	Social activities friendly - Social activities unfriendly
	Design for users - public - Design for infrastructure
	Active use of landscape - Passive use of landscape
Pskov	Public spaces with different functions (playgrounds, squares, etc.) - Lack of public spaces
Reims	Meeting place, human activities - No human activities possible
	High use value - No use value

Table 6
Variety in urban landscape.

Variety in urban landscape (19×)			
Unique constructs		Examples articulated by interviewees	
1	Harmony - No harmony (11×)	Zagreb	Harmony (elements incorporated into the whole) - Unharmonious places
		Ancona	Coexistence of new and old - Old and new contrasting (resistant to changes)
		Reims	Balance between nature and humans - Mastery of nature by humans
2	Pluriformity - Uniformity (4×)	Zagreb	Diversity of urban landscape - Monotonous urban landscape
3	Multifunctional - monofunctional (4×)	Reims	Multifunctional, comfortable, accessible public spaces - Monofunctional, uncomfortable and inaccessible public spaces

Table 7
Traffic domination.

Traffic domination (19×)			
Unique constructs		Examples articulated by interviewees	
1	No cars - Cars (4×)	Mahilioŭ	Car cannot enter - Cars in the forefront
2	Pedestrians - Cars (5×)	Zagreb	Accessibility (pedestrian) - Accessibility (predominantly traffic)
3	Public transport - Cars (4×)	Ancona	No traffic - Traffic
			Sustainable public transport - Only cars
4	Attention for environment - No attention for environment (2×)	Reims	Transport infrastructure respecting vegetation - Transport infrastructure not respecting vegetation
			Cleaner vehicles - Many polluting and noisy vehicles
		Ancona	Technological, innovative sustainable (energy) solutions - Traditional, not efficient
5	Well organized - Not organized (3×)	Pskov	Multimodal transport - Only 1–2 types of transport
			Well-organized parking area (allow to have car-free zone in the center and interchange nodes and incentive parking) - Not-organized

Table 8
Visible planning and design.

Visible planning and design (11×)			
Unique constructs		Examples articulated by interviewees	
1	Well-planned/ designed - not planned (9×)	Zagreb	Designed area - Non designed area
			Consolidated / coherent planning - Not consolidated
		Ancona	Well ordered, designed - Casual, messy
			Planned - Unplanned, casual, spontaneous
		Mahilioŭ Pskov	Ergonomic - Non-ergonomic Improvement, land development and reclamation of abandoned areas (lack of neglected areas) - Many neglected areas
2	Unplanned - planned (2×)	Drechtsteden	Creatively together - BAU (Business as Usual) - planners work
			Organically grown - Designed by developer

Table 9
Accessibility.

Accessibility (10×)			
Unique constructs		Examples articulated by interviewees	
1	Access for transport – No access for transport (4×)	Pskov	Transport infrastructure, accessibility - Lack of transport
2	Access to green - No access to green (2×)	Mahilioŭ	Good access to park zones - No access to park zones
3	Accessible – Not accessible (2×)	Drechtsteden	Accessible - Inaccessible
4	For persons with physical limitation - Not for persons with physical limitation (2×)	Pskov	Barrier-free environment (+ for physically constrained people) – Many barriers

3.1.3. Physical landscape quality characteristics

30 Constructs relate to specific physical quality features of urban landscapes. In contrast to the constructs under Personal feeling about the spot, these are phrased in a way that suggests they are to some extent objectively measurable. The preferred quality features in Table 4 are Less density (4.1), Connectivity (4.2), History (4.3), Maintenance (4.4), and Architectural quality (4.5). An outlier within this category is the general phrasing Spatial quality (4.6).

3.1.4. Publicness of the spot

The 23 constructs in this category relate to the critical social dimension of urban landscape. We have chosen not to subcategorize this group, since dimensions in our view very much coincide. As Table 5

shows, some constructs imply a legal dimension, such as Public space - Private space, Cultural public spaces - Shopping mall, private spaces or Function for people - Inhabitants only. The construct Active use of landscape - Passive use of landscape regards landscape or public spaces that enable activities, play and recreation. This is in contrast to landscapes that are left out of public life, that are just trespassed by citizens and often neglected. This contrast is also articulated in constructs such as Place to meet - Place for traffic (passing by), and Design for users - public - Design for infrastructure. Preferred spots encourage social activities, e.g. Meeting place, human activities - No human activities possible, or Invites for activity - Restricts activity. The construct High use value - No use value, implies that use value increases the more a spot is used by a variety of people, a group that is socially heterogeneous. The term 'use value' is opposed to 'exchange value', where it is the economic value of the site that counts and not the use of it. The salience of all constructs in this subcategory appears to be the opportunities a place offers to be used by people and raise (shared) emotions. The best expression of this is found in the term uttered by one interviewee, 'appropriation', cited under category 1 above, Personal Feeling about the spot.

3.1.5. Variety in urban landscape

Under this category 19 constructs were elicited (Table 6). One could argue variety to be a specific feature of spatial quality, and we agree. However, it is a matter of opinion what is good and what is bad variety. Stakeholders in all regions stress the need for consider harmony (6.1), pluriformity as opposed to uniformity (monotony) (6.2) and multifunctionality of a place (6.3).

3.1.6. Traffic domination

19 Constructs articulate (undesired) impacts of various modes of transport for urban landscape quality. In Table 7 we distinguish five unique constructs. Interviewees would like the reduction or complete elimination of car traffic in the city (7.1), more space for pedestrians (7.2) and for public transport (7.3). Others stress the need for clean vehicles (7.4), whereas the last group expresses the need for a well-organized mobility system (7.5).

3.1.7. Visible planning and design

Quite some stakeholders stress the need for careful planning and design of urban landscapes (Tables 8, 8.1). What interviewees consider bad design is phrased as not consolidated, incidental task, casual, messy, spontaneous and neglected. In contrast, a few constructs reject top-down planning in urban landscaping as conservative and biased towards speculation and developers interests (8.2), questioning the role of urban planners and developers.

3.1.8. Accessibility

Accessibility of an urban area may be considered a condition for using it as a meeting place or recreational area. It can also be considered a legitimization for more road infrastructure. Accessibility was mentioned 10 times with different connotations (Table 9): access for transport (9.1), access to green zones (9.2), or accessibility in general (9.3). Two constructs ask attention for people with a limitation, e.g. a wheelchair or a pram (9.4).

In conclusion, 93 interviewees from six urban regions in Europe selected the 2 constructs that they found most relevant for the direction of urban sustainability transitions. This section presented a qualitative categorization of these 185 most relevant constructs, that cover a wide range of themes and issues. We distinguished eight categories and 32 unique constructs that, in our view, reflect an authentic meaning as compared to other unique constructs. In many respects unique constructs overlap, but, as we further analyze below, they also articulate contradictions and conflicts.

3.2. Output of statistical analysis

Fig. 1 below presents the findings from the MCA in a two-dimensional plot. The dots 1–18 in Fig. 1 represent the different elements, the pictures of urban landscape elements that were presented to the interviewees. The elements' position in the plot as well as their mutual distances reflect the rankings of the elements for the different constructs that the interviewees consider most relevant for urban sustainability transitions. However, the plot does not explain the distances between the different dots nor the meanings of Dimensions 1 and 2. This is what we need to analyze.

The pictures 1–18 that provide the elements in the plot are exhibited in Fig. 2. Fig. 2A highlights the four pictures grouped in the first quadrant of Fig. 1 (left on top): picture 3: a desolated spot in the center of Zagreb, picture 15: allotment gardens in peri-urban Reims, picture 8: entrance to the city of Ancona and picture 2: a parking lot near a maritime industrial site in Drechtsteden.

Fig. 2B highlights the three pictures grouped in the second quadrant (right on top): picture 11: riverbanks in peri-urban Pskov, picture 7: green space in a Pskov city district and picture 5: a city district in suburban Reims.

Fig. 2C highlights the six pictures grouped in the third quadrant (left below): picture 14: suburban area in Pskov, picture 17: area in downtown Zagreb, picture 4: a busy street in Reims, picture 9: a bus station in Ancona, picture 16: public transport in suburban Reims, and picture 10: Ancona harbor.

Fig. 2D highlights the five pictures grouped in the fourth quadrant (right below): picture 12: the Pskov river as in 11, but here with a designed recreational area, picture 6: market square in Ancona, picture 1: square near the old Dordrecht church (Drechtsteden), picture 18: square in Zagreb and picture 13: children playground in Drechtsteden.

It turns out that the interviewees have a preference for the landscape elements situated in the right quadrants of Fig. 1, i.e. the pictures 12, 1, 6, 11, 7, 18, 13 and 5. The pictures 14, 2 and 17 are least appreciated. These are the elements situated most left in Fig. 1. Also the other pictures in the left quadrants, i.e. pictures 3, 8, 9 and 4, score low. Fig. A.1, in Appendix A, presents the overall appreciation of the 18 landscape
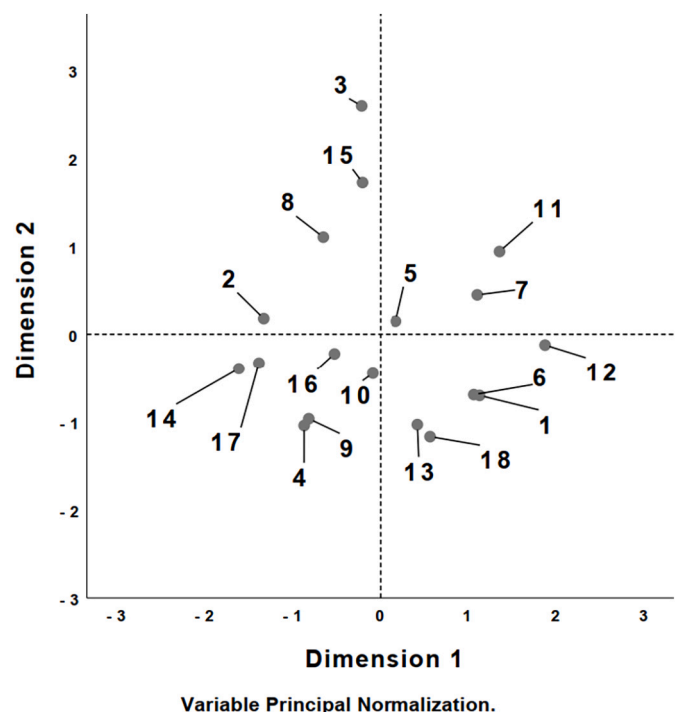

Variable Principal Normalization.

Fig. 1. Two-dimensional plot of elements 1 to 18 for all regions.

A Four pictures grouped in the first quadrant of Figure 1 (left on top)

picture 3: a desolated spot in the center of Zagreb

picture 15: allotment gardens in peri-urban Reims

picture 8: entrance to the city of Ancona

picture 2: a parking lot near a maritime industrial site in Drechtsteden

B Three pictures grouped in the second quadrant (right on top)

picture 11: riverbanks in peri-urban Pskov

picture 7: green space in a Pskov city district

picture 5: a city district in suburban Reims

C Six pictures grouped in the third quadrant (left below)

picture 14: suburban area in Pskov

picture 17: area in down-town Zagreb

picture 4: a busy street in Reims

picture 9: a bus station in Ancona

picture 16: public transport in suburban Reims

picture 10: Ancona harbor

D Five pictures grouped in the fourth quadrant (right below)

picture 12: the Pskov river as in 11 but here with a designed recreational area

picture 6: market square in Ancona

picture 1: square near the old Dordrecht church (Drechtsteden)

picture 18: square in Zagreb with a view corridor on the cathedral

Picture 13: children playground in Drechtsteden

Fig. 2. Pictures of urban landscape spots, the elements in Fig. 1.

elements by the interviewees.

4. Analysis: shared and conflicting perspectives on urban landscape quality

4.1. Across the regions

We will first concentrate on understanding the x and y axes of Fig. 1. Then, we will deepen our understanding from the plot by imaginary rotation, looking into diagonals. Finally, we will look into why certain elements are located in the center versus elements that have a marginal position in the plot.

4.1.1. Defining the x and y axis
Table 10 highlights 11 constructs that together explain the x-axis. In all cases, the preferred option is provided by features of elements that score strongly positive on the x-axis. The more to the right, people have access to nicely decorated green spots (M11C1), meeting places (D1C1), recreational areas (P7C1), green public places (A9C2), that are lively (ZG15C2), people can imagine to stay there (ZG15C1), as they are associated with harmony (D16C1), nice and pleasant (A9C1) and multifunctional (D9C1). Water is integrated in a pleasant urban landscape (D16C2). The more to the right of Dimension 1, the more a place is considered attractive and invites for social activity (D13C2). The more to the left, people have no access to green spots, places are petrified and stuffed with buildings, places to pass by, do not offer recreation, look confusing and messy, monofunctional and water is treated as a border or wall. You do not want to stay there; these places restrict (human) activities.

Indifferent of the wording used by the interviewees, the rankings for all constructs run from the right (positive) to the left (negative). This observation implies that, so far, there is large consensus on the values that shape the direction of a transition to more sustainable urban landscapes. This is also illustrated by Table A.1 in Appendix A.

Table 11 highlights the 3 constructs that together explain Dimension 2 in the plot.

We find that the more negative the value for a landscape element on the y-axis, the better accessible the spot and the more developed it looks. This is the preferred option in 2 of the 3 constructs, A11C1 and P8C2. However, we also find that the spots with a positive value for the y-axis are considered more sustainable in that they are water proof. This is the

Table 10
Constructs explaining the x-axis.

Interview	Construct	Dimension[b]		Mean
		1	2	
M11C1[a]	Good access to park zones - No access to park zones	0,885	0,17	0,527
P7C1	Recreational areas (playgrounds, sport grounds, etc.) - No places for recreation	0,825	0,135	0,48
Z15C2	Liveliness - Lethargic	0,852	0,189	0,52
A9C2	Green public spaces - Built public spaces	0,825	0,198	0,512
D16C1	Harmony - Messy	0,879	0,238	0,559
D16C2	Water into the city - Water as border / wall	0,875	0,227	0,551
D13C2	Invites for activity - Restricts activity	0,797	0,22	0,508
Z15C1	Imaginable - Hardly / not imaginable	0,757	0,265	0,511
D1C1	Place to meet - Place for traffic (passing by)	0,709	0,292	0,5
D9C1	Multifunctional - Monofunctional	0,722	0,228	0,475
A9C1	Nice to see, pleasant - Confusing, not nice	0,719	0,279	0,499

[a] The first letter stands for the specific urban region, the number stands for a specific interviewee in that region, and Cn stands for the first or second construct selected by this interviewee. Thus, M11C1 refers to the first most relevant construct by interviewee 11 in Mahilioŭ, Z15C2 is the second construct elicited by interviewee 15 in Zagreb, etc.

[b] As Section 2 explained, each construct is represented as a two-dimensional scale, featured by discrimination measures and a mean value.

Table 11
Constructs explaining the y-axis.

Interview	Construct	Dimension		Mean
		1	2	
A11C1	Accessible - not accessible	0,135	0,775	0,455
P8C2	Land development and reclamation of abandoned areas (lack of neglected areas) - Many neglected areas	0,216	0,878	0,547
R5C1	Not waterproof (gaps, not frozen…) - Waterproof	0,156	0,719	0,437

preferred option in R5C1. Whereas the interviewees in Ancona (A11) and Pskov (P8) stress the need for development and accessibility, the interviewee in Reims (R5) stresses the need for water permeability in urban areas.

Here we find conflicting perspectives on urban landscape quality. The conflict is illustrated by Table A.2 in Appendix A. Pictures that receive high rankings by interviewees A11 and P8 receive low rankings by interviewee R5 and vice versa. It can be added that there is a close relationship between area development (P8C2) and accessibility (A11C1). Several Russian and Belarusian interviewees used the term "благоустройство" [blagoustroystvo], which could be translated as "gentrification", although not referring to the socio-economic and demographic changes normally implied by this term. The Russian word relates to measures for making the territory look better by improving objects and increasing the comfort of citizens and the sanitary and aesthetic condition of the territory. This relates to roads and buildings but also to the shaping of lawns, trees and plants. The expression reflects ambiguity; since development not necessarily beautifies a spot and may decrease the 'naturalness' of an area. Area development and accessibility may therefore reduce spot's adaptiveness to climate change.

Summarizing the findings so far, large consensus on the direction of urban transitions involves multiple dimensions, including the green / blue and the social dimension, liveliness, harmony, multifunctionality and feeling good. Yet, there is a conflict between on the one hand human desire to intervene and preserving natural conditions (waterproof).

4.1.2. Deepening our understanding of the plot
In order to find out more with respect to contrasting perspectives, we take a closer look into the following:

- The 4th quadrant of Fig. 1 includes four urban squares in two clusters, 6 and 1 almost overlapping and 18 and 13 close together. We are interested to understand these clusters of elements.
- The third quadrant groups together various modes of transport (4, 9, 10 and 16). We are interested to learn why these elements are situated the way they are.
- We want to understand the position of picture 5, the suburban area in Reims, so close to the center of the plot.

We therefore insert the diagonals D3 and D4 in Fig. 3, that we may treat as alternative x and y-axes. D3 (x-axis) runs from green to stone, where picture 3, 11, and 15 stand for absolutely green, people being absent, and 4, 9, 14 and 17 for absolutely petrified (no green at all). Interestingly, the urban squares in the 4th quadrant below-right are now divided over two quadrants; with a positive value for D3 the squares that look green (1 and 6) and with a negative value for D3 the squares that look concreted (13 and 18).

D4 (y-axis) we interpret as running from privatized space to public space, or, in a slightly different phrasing, running from space that does not invite for togetherness and (joint) human activity to space that does. On top (upper left) we find the spots that score highest in terms of low esthetics, alienation, revolting architecture and neglect (words used by interviewees). For picture 15, the allotments in Reims, its outlier position can be explained by the negative comments on the electricity cables
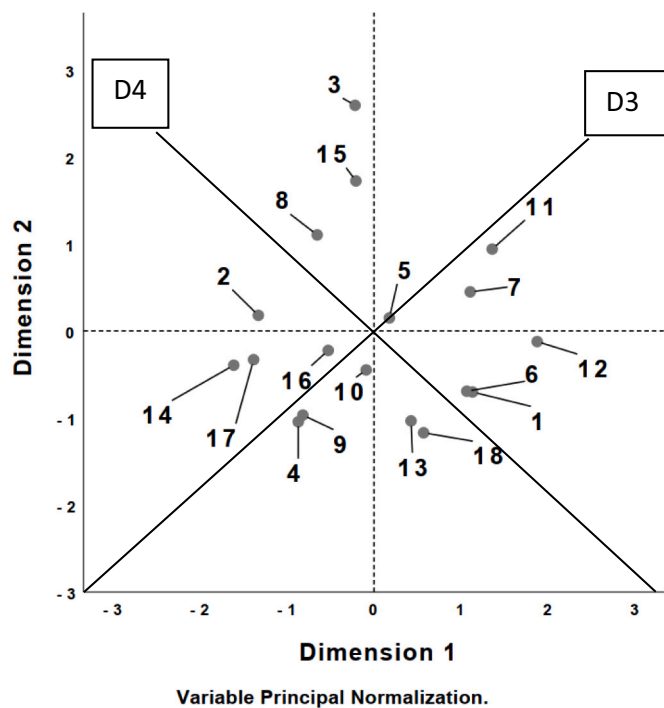
Fig. 3. Two-dimensional plot of elements 1 to 18 for all regions, diagonals inserted.

(not inviting), whereas some did not like the individualization implied by the allotments. To the bottom (right below) we find the spots where people go to meet and undertake joint activities. Most favored in this respect are the recreational spot picture 12 and the four squares (1, 6, 13 and 18). To mention a few aspects, these spots are more or less inviting and beautiful in terms of architecture, with green and they show history.

However, the lower quadrant also includes transport functions, the harbor (10), the bus station (9) and the busy street (4). These are landscape elements that, although not considered beautiful, are still associated with togetherness rather than individuality. In our interpretation, these places look familiar to most interviewees and are therefore accepted and to a certain extent even appreciated. The bus station is congested and dirty, but people feel much more familiar with it than with the desolated spot in Zagreb (picture 3). We add that the bus station provoked quite similar responses whereas reactions to the desolated spot were way more contradictory. Some stress the negligence, lack of development, its messy character. Others stressed the spot's green character and found the lack of human intervention especially thrilling. These contrasting observations make picture 3 in itself very different from picture 9, the bus station.

Whereas picture 3, provoking most contrasting responses, is situated furthest away from the center, picture 5 is closest. What is true for the bus station, is even more true for this suburban neighborhood in Reims. Our thesis about the relevance of familiarity is supported if we take a look into the built-up of the rankings (see Fig. A.2 in Appendix A). Pictures closest to the center show a normal distribution pattern in that there are more average scores than (very) low or (very) high. Pictures on more extreme positions follow a different pattern, as they have more contrasting (negative or positive) evaluations.

The position of picture 5 in one of the right quadrants of the plot is explained by the fact that it not only looks familiar to most people but also nice. However, (on D3) the spot is considered just a little bit green and (on D4) it just marks the border between individuality and togetherness. What may explain its position best is that everyone can agree on both the pros and cons of the suburban area in picture 5: the pros being the beauty, order and calm, the cons its petit bourgeois character and

dullness. Furthermore, the position of picture 5 reflects a compromise in the conflict between accessibility / development and options for climate adaptation, as it is very well organized but still offers possibilities for water retention.

In conclusion, what we learn from rotation and zooming in into different positions of landscape elements in Fig. 1 is that the green and social dimensions, which explain for the x-axis, are partially overlapping but also partially contradictory. When it comes to public transport for example, people tend to accept a certain neglect of urban landscape. Transport is a necessary condition to provide access to the spots where people want to be. We derive from this that public support for specific landscapes to a large extent depends on feelings of familiarity.

4.2. Similarity and conflict between the regions

What comes forward from the findings so far is the striking similarities among interviewees across the regions. Yet, what can be said with respect to conflicting perspectives between the various urban regions in our sample? Table 12 shows the frequency of mentioning of constructs for the various categories over the regions.

As regards the categories *Personal Feeling, Amount of Green and Blue, Publicness of the spot* and *Variety*, we do not find major differences between the regions. Differences in focus are first observed for *Physical Quality*. Under this heading, the relevance of history was stressed by interviewees from Mahilioǔ and Pskov, who both elicited 6 out of the 7 most relevant constructs under Historical-Non-historical. A possible explanation is that in many Russian and Belarusian cities historical elements did not survive World War II. Interviewees from Mahilioǔ and Pskov also stressed the relevance of variety and maintenance. Architecture was mentioned twice, both in Mahilioǔ. Other regional differences occur under the categories that were less frequently mentioned. Under Traffic Domination the constructs in four out of the five subcategories were articulated in all urban regions except Pskov. The fifth subcategory articulates 3 constructs from 2 Pskov interviewees only. The unique construct relates to a well-organized transport system, allowing for multiple forms of transport, sufficient parking space and car free zones in the innercity. We can derive from this that Pskov interviewees value car traffic more than the interviewees in other regions. Under the category Accessibility, two respondents from Pskov ask attention for people with a limitation. Here, we may think of people driving a wheelchair, but also people with buggies and strollers. The issue of a barrier free environment was brought up in interviews in various regions, but was only in Pskov mentioned among the most relevant transition issues for urban landscapes.

Under the category *Visibility of Planning* we find conflicting perspectives, too. Stakeholders from all regions except Reims mention the need for careful planning and design of urban landscapes. Most interviewees link planning and development in a positive way to beautification and maintenance. In contrast, two constructs from Drechtsteden interviewees blame top-down planning for unsustainability and neglect in urban landscaping, questioning the role of planners and developers. This is not, however, a conflicting perspective between regions but across regions, since not all Drechtsteden interviewees shared this view. This conflict largely coincides with the conflicting perspectives between accessibility and development vs. permeability for water, that we identified in Section 4.1.

In conclusion, a closer look into the regional similarities and differences suggests that the critical view with respect to planning is shared among stakeholders in several regions. Furthermore, interviewees from eastern Europe stress the value of history. Interviewees from Pskov highly value accessibility, especially for people with some sort of limitation.

5. Conclusions: implications for urban transitions

Landscape is a multi-dimensional concept that refers to an interplay

Table 12
Frequency of mentioning of constructs for the various categories over the various regions.

	Drechtsteden	Ancona	Reims	Zagreb	Mahilioŭ	Pskov
Personal feeling (37×)	9	8	5	9	4	2
Amount of green and blue (36×)	3	4	8	5	10	6
Physical quality (30×)	3	2	6	3	9	7
Publicness (23×)	6	4	3	2	1	5
Variety (19×)	5	3	4	3	3	1
Traffic (19×)	2	5	4	3	1	3
Visible planning (11×)	3	2	0	3	1	2
Accessibility (10×)	1	1	0	0	3	5

of natural and human factors. On the one hand, landscape presupposes a culturally shared meaning. On the other hand, landscape changes bring about conflicting perspectives about how to maintain or improve the quality of landscapes. This article addressed the research questions, which conflicting perspectives can be discerned on urban landscape quality and what can be learnt for urban sustainability transitions? Using repertory grid technique, a total of $n = 93$ stakeholders in six urban regions in Europe articulated both consensus and conflicting perspectives. So far, RGT has not been used in a comparative study on urban landscape quality, taking into account such a diverse sample of urban regions as reported here. The interviews generated a rich dataset, but also shed light upon how passionately the interviewees spoke about the topics. Given our experiences, the wider use of RGT in research on the dynamics in sustainability transitions for (urban) landscapes may certainly be considered.

Our research confirms that landscape has indeed a shared meaning. We introduced the notion of familiarity in order to express that, across the various urban regions, peoples' appreciation of landscapes is mediated by what they expect to see, e.g. the urban square as a social meeting point, the unattractive transport node that many nonetheless accept as a necessity, the historical innercity with green elements, the middle class suburban area. Some landscape elements are considered as overdone, they might be referred to as unhealthy or hostile to people, such as petrified multi-storage apartment buildings, sealed and dirty roads and parking spaces.

As regards the transition to more sustainable urban landscapes, our most salient finding is the convergence among stakeholders living under such different cultural traditions and regulatory frameworks as in the Netherlands, France, Italy, Croatia, Belarus and the Russian Federation. Stakeholders largely agree on directions for urban transitions towards more green elements, harmonious meeting places, where people can undertake joint activities. Such places have a lively character, are multifunctional and integrate green and blue elements in the urban landscape. Hence, our research also confirms 'landscape' being a very multidimensional concept. The choice to add Zagreb to our sample made it clear that stakeholders in a larger urban area face issues in urban sustainability transitions that are not different from those in the medium sized urban regions under investigation.

We also identified conflicting perspectives. Two conflicts appear critical. First, in terms of the physical landscape, many stressed a preference for well organized, well developed, accessible and well maintained landscape elements, whereas others argued for leaving the soil untouched and permeable, which would increase resilience against extreme weather events. Second, in terms of institutions and governance, the conflict relates to the amount of human intervention, top-down governance and planning. Whereas most stakeholders appreciate planning and maintenance, some argue for organic development over time and bottom-up landscaping. These interviewees caution us, that a sustainability transition will not merely affect physical urban landscape but simultaneously the institutions and routines that shape power coalitions between urban bureaucracies and developers. We also find some regional differences, especially where private transport is concerned. Furthermore, In the Pskov urban region, stakeholders attach high value to accessibility for people with a limitation, an issue not getting much attention in the other regions.

Since the interviews for our study were taken in the Fall of 2018, several critical events have occurred that have added to the barriers for urban sustainability transitions. The events in Belarus have forced activists, including fellow colleagues, to leave their urban regions with negative consequences for many citizen initiatives that were, to some extent, allowed up to the summer of 2020. Then the pandemic and the respective policies across Europe have made it more difficult for bottom-up processes to unfold at local level. To what extent will large groups of active people be leaving the cities and what would this mean for productive bottom-up citizen involvement? What about the qualities of urban landscapes, if vocal stakeholders would not have the opportunity to articulate their views on urban landscape quality? Most recently, the Russian invasion in Ukraine, followed by Western sanctions, without doubt discourages participation, dialogue and learning in and across regions in Eastern and Western Europe. We would argue that our study and its results stress the relevance of dialogue and participation in sustainability transitions and endorses implementation of the European Landscape Convention. This is, because of the consensus on the direction of the transition for sustainable urban landscapes among our interviewees, and because of the issues for transition governance implied.

CRediT authorship contribution statement

Matthijs Hisschemöller: Conceptualization, Methodology, Investigation, Writing – original draft, Supervision, Funding acquisition. **Viktar Kireyeu:** Methodology, Investigation, Writing – review & editing, Visualization. **Tara Freude:** Formal analysis, Methodology, Writing – review & editing. **Florian Guerin:** Investigation, Writing – review & editing, Visualization. **Olga Likhacheva:** Investigation, Writing – review & editing, Visualization. **Ilenia Pierantoni:** Investigation, Writing – review & editing, Visualization. **Ana Sopina:** Investigation, Writing – review & editing, Visualization. **Timo von Wirth:** Methodology, Writing – review & editing. **Bojana Bojanić Obad Šćitaroci:** Validation, Writing – review & editing. **François Mancebo:** Validation, Supervision, Writing – review & editing, Funding acquisition. **Massimo Sargolini:** Validation, Supervision, Funding acquisition, Writing – review & editing. **Anton Shkaruba:** Validation, Writing – review & editing.

Declaration of competing interest

The authors declare no conflict of interest.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi. org/10.1016/j.cities.2022.104021.

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