

UrbanLink15'

A Collaborative Research on Hybrid Work and 15-Minute Cities

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Abstract

The goal of UrbanLink15's research was to identify healthier lifestyles and sustainable facilities that support residents from the economic, social, and environmental impact. The initiative focuses both on promoting hybrid work developed as a relationship between organizational workspaces, living spaces, and neighbourhood co-working spaces, and the (re)connection with the sustainable mobility solutions of the concept of '15-minute city'. The article presents the research results (a survey, two focus groups and solutions of the application projects) achieved with the support of researchers, practitioners, and students from different specialties such as architecture, engineering, management, applied science organized in two main topics: (1) workplace relationships, living spaces within the framework of "15-minute city"; (2) alternative mobility through green-blue corridors and gardens. The research refers to the metropolitan area of Timisoara, Romania. In the last part of the article, good practices are included, as the Seestadt



asperm projects; this will serve as an example based on the data analysis from a local mobility behavior study (Mobilitätspanel Seestadt asperm, realized within the framework of the asperm.mobil LAB) and will underline the existing relations between the workplaces and the living spaces, looking at changes imposed by the home-office sanitary regulations due to the pandemic situation.

Keywords: Hybrid Work, 15-Minute City, Green Wetlands, Alternative Mobility, Community Project, COVID-19 pandemic

1. Introduction

The SARS-CoV-2 pandemic has accelerated the megatrends manifesting in the labour market and, especially, the increase of shared workspaces (or working from anywhere) and the digitization solutions to support remote work. Hybrid work, both at home or in other places, including the spaces of employer organizations or collaborative ones, will remain an important working way, due to the positive implications, from economic and ecological perspectives, but also due to the better balance created between personal life and professional life. Working and learning remotely has become more widely accepted during the pandemic and it probably will be accepted in the post-pandemic era (defining the new normal way of living) (Nieuwenhuijsen, 2020). Therefore, the high cost of living in many cities around the world (e.g., related to housing, utilities, facilities) has pushed people to move in the suburbs, exurbs, or in other metropolitan areas altogether (Florida et al., 2020). During this period, flexible working conditions and the availability of more affordable housing outside the city were shown to be preferred for balancing the working and social conditions of life; population to living areas placed approximately ‘15 minutes’ from the city center becomes more and more obvious; the concept has become of great interest not only for the residents of urban areas’ habitants but for other stakeholders as public communities, transport companies, real estate companies, architecture companies, designers, etc.

On the other hand, climate change and ecological imbalances are still the main challenge of the 21st century, and here modern approaches of social, urban organization have a and will have major responsibility. In the nearest past, practical approaches based on planning paradigms (e.g., “car-friendly city” (Crawford, 2000) have created the field for new urban models, most frequently used are the “city of short distances” (Feldtkeller, 2008), the “compact city”, the “walkable city” or the “Cities for People” initiatives and solutions (Crawford, 2000). The models are based on the intensive use of green mobility and the growth of green areas, wetlands that has recently been recently accelerated due to the pandemic context of work and living; an emergent implemented is “15 minutes cities” (as supported by the research of Selzer and Lanzendorf, 2019). It has been recognized that ‘in a number of cities, novel planning concepts are being introduced that go some way to address urban planning issues: compact city, superblocs, 15-minute city, the car-free city, or a combination of these’ (Sietsma et al., 2021). Thus, accordingly, optimizing and improving car traffic had been the core idea of urban transport planning for decades, but today environmental aspects have increasingly been considered and concepts for ‘traffic calming’ (Newman and Kenworthy, 2014), ‘pedestrian

zones' (Selzer and Lanzendorf, 2019) or "car-free inner cities' (eg Oslo (Rydningen et al., 2017)), as well as car-free or car-reduced neighborhood design have completed approaches to more sustainable metropolitan area. Furthermore, the actual context of the digital transformation era has imposed the extended use of smart technologies and intelligent devices, all of which are associated with the "smart mobility" (Selzer and Lanzendorf, 2019).

In this context, the article presents the UrbanLink15' research which aims to define healthier lifestyles and sustainable facilities that support them, considering economic, social, and environmental impact of human activities. The focus of UrbanLink15' research (developed in the context of a public-private initiative in Timisoara city, Romania) is on the relationship between organizational workspaces, living spaces and local coworking spaces that meet the need for professional relationships, outdoor activities, natural ways of green wetlands ways, and the need for community improvement. The structure of the article consists of the following chapters: (1) the presentation of the UrbanLink15 approach, the research methodology and the achieved results; (2) a debate on some good practices in the field that could inspire future measures to be implemented in the city of Timisoara, Romania.

2. Methodology

2.1. Description of the UrbanLink15' initiative and project contest

UrbanLink15' initiative (as presented on the ErgoWork Society website, <https://urbanlink15.wordpress.com/2021/02/08/competitia-urban-link-timisoara-15/>) has been designed to discover innovative ways, ideas for post-pandemic hybrid work and to implement the '15-minute cities' concept in the metropolitan area of Timisoara, Romania. The target group envisaged by the project consist of students from different specializations and years of study, from universities located in Timisoara (they are familiar with the city life and living and could express pertinent, feasible solutions to the actual problems). The UrbanLink15' initiative consists of several stages for knowledge capitalization, tutoring, documentation, etc. before the participants submit their final projects, as briefly described in Figure 1.

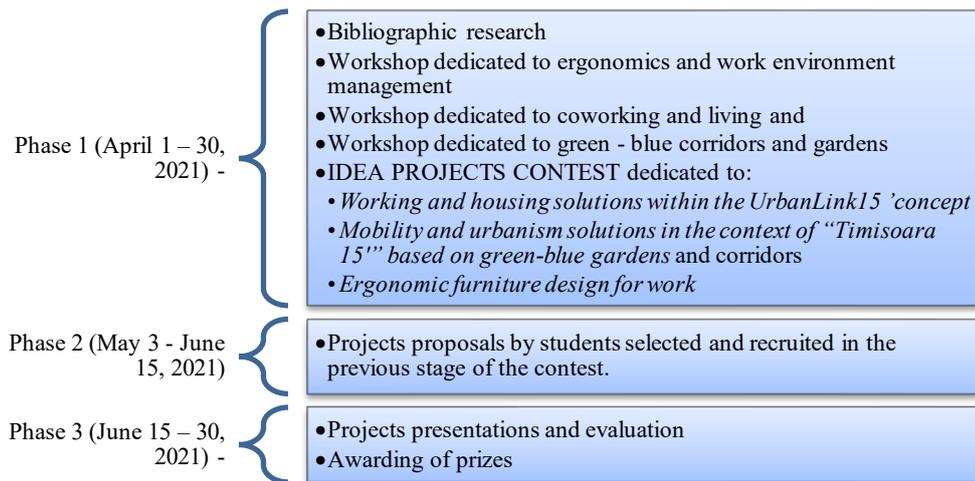


Fig. 1: Schematic description of the UrbanLink15' initiative

2.2. Methods and tools used in the UrbanLink15' research

The first stage of UrbanLink15's research has been developed using two methods: (1) an online survey based on a designed questionnaire and (2) application of the focus group technique (2 sessions of 1-hour duration and participants were asked to act and react under the time pressure). The questionnaire was used to capitalize on opinions on factors that influence individual well-being of respondents in general and how the pandemic changed this perception, particularly. There were anonymous respondents participating in the research, the respondents consisting mainly of students from different universities of Timisoara, Romania. The survey has been developed online (<https://forms.gle/V8V1Vey9eHeAMq4AA>) asking students to distribute the questionnaire to other colleagues and friends (snowball techniques for collecting responses from a randomly created sample). The focus group technique was applied for two groups of eight participants each. Each session has two topics of debate:

- (1) Applying '5 Whys' analysis for two debate items: 'Why we should work?' and 'Why we should not work?';
- (2) Participants were asked to express their opinions on the best way they work, how they live and spend extraprofessional activities (social tasks to be accomplished, how leisure and relaxation time are consumed) with maximum satisfaction.

The purpose of applying both methods of research was to create a correlation between the perception of well-being of the personnel and the need for new sustainable ways to work and live according to the emergent adaptation to climate changes and urbanization (facing the growing population of the urban area of Timisoara, Romania). Thus, the proposed approach defines qualitative research; the results are not available at the level of the entire city population,

but it is a first pilot study exploring the proposed correlation. Furthermore, it is necessary to consider two aspects of the presented research: (a) the sample consists of participants with a predominant behaviour in work performance behaviour, which are students belonging to the Z Generation; (b) “The social desirability bias” is mostly associated with the answer about task orientation and personal development/way of life than were provided by the answer regarding individuals ‘orientated towards relaxation behaviour’.

3. UrbanLink15’ research results and debates

1. Results of the online survey

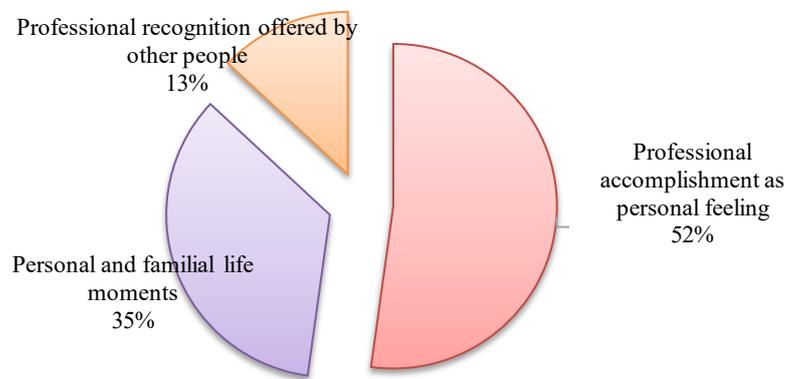


Fig. 2: UrbanLink15’ research results showing the ‘happiest moment from personal life’.

The present research is considered a pilot one (due to the small sample of 23 respondents) and will be extended in the nearest future, because the methodology is considered well defined and pretested. The first question is open and descriptive one about ‘one of the happiest moments of my life was when ‘... (Figure 2). Most of the answers were about professional situations and a few about personal lives. The second question asks respondents about their perception on “the situations that make them feel well’ (Table 1).

#	Situation that makes it well (survey research results)	Hierarchy
1.	To be with my friends and with people who make me feel comfortable	1
2.	To be appreciated by the people that are around me	2
3.	To have good results in what I am doing and to be very well compensated this	3
4.	To work in a good quality environment, well equipped from a technical and technological point of view	4

5.	To work alongside other people who share the same values and principles	5
6.	To be able to travel and meet new people and see new places, without any limitations	6
7.	To have adequate living conditions and be able to perform my hobbies with my friends, without worries about tomorrow	7
8.	To be able to afford long walks and various activities outdoors, in nature	8
9.	Other situations	9
10.	To be able to contribute to the improvement of living conditions for the people who are suffering and, in general, to have a positive impact on the humanity	10
11.	To have the necessary living conditions and to do only do as I wish, without having too much interaction with other people	11
12.	To be able to meditate and practice a spiritual life, without any material concerns and with a minimal invasive impact on other people and the Earth in general	12
13.	To be able to contribute to the preservation of biodiversity and to the sustainable management of the Earth's resources	13

Tab. 1: The hierarchy of the situations that make the respondents feel well.

As seen in Table 1, the first two situations are related to social needs (belonging and recognition) followed by three statements related to professional accomplishment. Situations related with wellbeing, not related with others, or connected with the need to have positive contribution on the community and the planet generally, are in lower positions of the presented hierarchy.

A question to test the interest of the respondents in ‘meaning of life’ and ‘meaning of work’, as components of personal perception, feeling was referring to the Japanese Ikigai concept (☐ ☐ ☐ ☐, ‘a reason for being’) (Lassiter, 2017); Ikigai is represented as a Venn diagram (as a conceptual model) with four overlapping qualities (Lassiter, 2017): ‘What do you love?’; ‘What are you good at?’; ‘What does the world need from you?’; ‘What can you get paid for?’ In this case, the survey results underlined that only 26% of the respondents knew about the Ikigai concept and they were able to develop definitions, in their own words, that correctly reflect the concept. Furthermore, a question in the designed questionnaire was ‘What do you miss the most during the pandemic?’ Most of the responses (15 of 23) were about social life – direct interaction. Other important responses were about lack of physical activities, such as

university and cultural interactions, participation in restaurants and club events and other physical spaces (most related to the lifestyle of students).

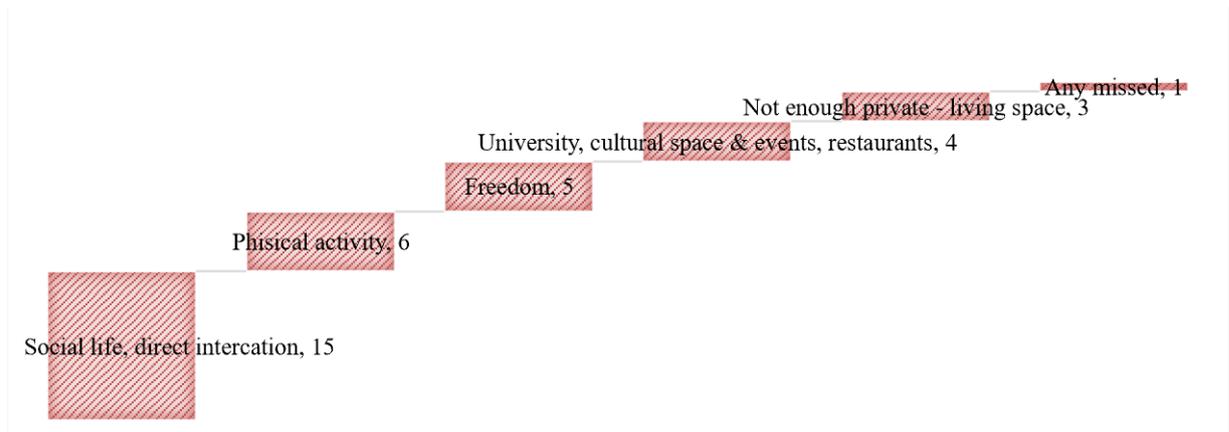


Fig. 3: UrbanLink15’ research showing the distribution of responses about the missing aspects of life during the pandemic crisis.

The last question of the survey was about ‘pandemic lessons learned’ and most of the answers were associated with the idea of enjoying, re-evaluating and appreciate every moment of real-life interaction, friendship limits, and human kindness and patience.

2. Results of the Focus Group

The first answers related to the reasons to ‘do the work’ were dominant in money or financial support for living and all respondents declared that they want to have (achieve) a certain standard of living. Following the topics of debate on ‘Artificial Intelligence (AI) and robotics development and application in the future’, the participants in the focus group have discovered that the workforce demand will be reduced and probably guaranteed minimum income (GMI) will be a common solution applied by governance. Therefore, the maximum interests are how motivation to “do the work’ goes beyond the first level of reasons.

Motivation factors for “doing the work” (answers)	Levels of why (motivation)
For money	1
To have a life standard	2
To follow your passion	3
For human and environment contribution	3
For a useful feeling	4

A way to express yourself to the others	4
Personal growth and self-esteem	5

Tab. 2: Focus group results – The hierarchy of reasons why to “do the work”.

As seen in Table 2, the results of the survey show that there are all categories expressed by the respondents, including issues that are not related to money and cover basic needs mentioned. Furthermore, in Table 3 is presented the hierarchy of the reasons associated with the attitude of ‘not working’ that are not related to money and cover basic needs, mentioned during the UrbanLink15’ focus group.

Motivation factors for “not working” (answers)	Levels of why
Not get out from the own comfort zone	1
Not deviate from following the own passion	2
Not affect the own freedom of choice	3

Tab. 3: Focus group results – The hierarchy of reasons for “not working”.

Although the basic idea of the initiative was ‘15-minute cities’, the bibliographic research and the content of the ideas of the youth projects revealed many cases in which personal choice was assimilated with a ‘dream of the way of life and work’, but designed according to classic patterns based on the house in the city, movement and free time spent in nature, a job in the city and ensuring mobility between different areas of activity by car. On the other hand, the winning projects and research results showed that young people believe in the choice (dream) of living in a model of life, work, and mobility based on the ‘15-minute concept’, adopting a hybrid work style, encouraging, and supporting the development of urban communities, alternative mobility through green-blue corridors.

4. Good practice

1. Aspern Seestadt show case and living LAB

A good example of a sustainable pilot project that can be developed in the spirit of a ‘15-minute city’ is Aspern Seestadt from Vienna (<https://www.aspern-seestadt.at/en>), one of Europe's largest urban development projects. In Vienna's fast-growing 22nd district in the north-east part of the city, a new urban centre is taking shape: a smart city with a heart, designed to accommodate the whole spectrum of life. Through a multiphase project development (til 2028), high quality housing will be built ‘for more than 20,000 people and, eventually, an equal



number of workplaces'. Built on a foundation of innovative concepts and forward-looking ideas, this city-in-a-city combines high quality of life with economic drive. Diverse, open, and planned for the future, with excellent transport links, aspern Seestadt is a business hub of international dimension and a living environment with a high feel-good factor, a perfect combination of urban flair and laid-back pace.

Aspern Seestadt is both a showcase project and a 'living laboratory' for cutting-edge technologies, considered an ideal environment in which to study the future of urban energy supply. ASCR Aspern Smart City Research is entirely dedicated to this field of study. The consortium of Siemens, Vienna's infrastructure and utilities operators Wien Energie and Wiener Netze, Vienna Business Agency, and Wien 3420 AG co-founded the venture in 2013 with the aim of demonstrating how the cities of the future can function in a climate-friendly manner.

Building on international experience, ASCR Aspern Smart City Research is not limited to individual aspects but looks at the system as a whole: data on buildings, the electricity grid, information and communications technology, and user behaviour all feed into one overarching energy research programme. A key element of the living concept is the Seestadt aspern neighbourhood management team, which helps new residents settle in and find their feet, facilitate the development of a lively community, provide information on the latest developments in and around Seestadt, and support initiatives for active involvement in the neighbourhood.

2. Alternative mobility through green wetlands

Urbanization involves increasing amounts of impervious surfaces, which conflicts with the need for green areas (Johansson et al., 2020). Built areas and green spaces are integrated within cities, but the need for blue and green infrastructure is increasing. Such infrastructure might be used to improve water infiltration or reduce the heat island effect and air pollution. Green corridors in the urban environment have recreational opportunities for citizens and significantly contribute to the conservation of biodiversity conservation and improve the quality of groundwater. They can also help mobility. Citizens, especially the active population, can benefit from the advantages offered by such infrastructure during their daily commute, when exercising or walking.

A) Aspern Seestadt Mobility Concept

Since planning began in the early 2000s, the Seestadt mobility concept has been based on a city-friendly mix of mobility that conserves resources and contributes to a high quality of life.



Six central building blocks are intended to enable residents and workers to move in a sustainable manner in and around Seestadt; high-level public transport right from the start, a city of short distances, the restriction of individual motorized transport, alternative mobility offers, the involvement of residents inside as well as pilot and research projects.

The innovative mobility concept is based on the principles and values of sustainable development. The aim is to create a mobility mix that conserves resources and contributes to a superlative quality of life. The target is that 40% of trips to Seestadt will be made by public transport, 40% by bike or on foot, and only 20% by car, moped, or motorbike. These are possible because Seestadt is a city of short distances. Furthermore, the local shopping concept Aspern shopping is designed to ensure just that; residents and visitors can easily do all your shopping on foot or by bike, and for those occasions when your purchases are heavier than usual, the Seestadt Flotte bike fleet has electric cargo bikes for hire. The principles behind aspern mobil are reflected by the following ideas: get from A to B as quickly and energy-efficiently as possible while providing ample space to linger and enjoy life. That is why we attach such great importance to the design of our public spaces. Seestadt is full of attractive pedestrian zones with plenty of space for strolling and wide cycle paths. All this is possible because most of the parking is off-street, in communal underground garages, which leaves lots of room above ground for cyclists and pedestrians.

B) Mobility data from Mobilitätspanel Seestadt Aspern

The Pern mobility survey has been carried out in the built quarters of Seestadt since 2019. Residents use smartphones to record their routes and provide insight into everyday life. The paths of the randomly selected participants are recorded by an application: the ‘path collector’. In addition, participants fill out questionnaires about themselves and their household. The mobility data of 142 people were collected and 114 personal questionnaires plus 67 household questionnaires were filled out. Respondents were able to record their journeys for 7 days (on average, they recorded their journeys for 4 days). The mobility survey and the post-processing of outliers has not finally completed; future results may differ from those shown. The partial results are represented in a mobility simulation made as a video show (<https://vimeo.com/457721212>). The Seestadt ern are out and about throughout the city and beyond over the course of a day. Above all, the interrelationships within the district are also easy to read, including, for example, routes to destinations such as the Stadlau business park or the Danube Center as work and shopping locations. This network that spans the city and especially the district can also be seen well in the video simulation.

5. Conclusions and final remarks

As discussed in the present article, UrbanLink15' is a feasible approach to capitalize on innovative solutions for the city of Timisoara. Applying a coherent research scenario (one survey, two focus groups and the proposed projects review and selection by experts), there have been capitalized opinions from the young habitants (belonging to Z Generation) about how they would like to work and live in the city and neighbourhood areas. Finally, we conclude that the research objective was achieved on a small scale and few innovative ideas were identified for healthier lifestyles and sustainable facilities that support residents from the economic, social, and environmental impact; All participants in the UrbanLink15' initiative have profited from the interactive discussions on hybrid work developed as a relationship between organizational workspaces, living spaces, and neighbourhood coworking spaces, and the (re)connection with the sustainable mobility solutions of the concept of '15 minute city'.

From the perspective of the UrbanLink15 research results cumulated with formal discussions with different groups of participants, the following conclusions and recommendations have been provided:

- Hybrid work will be preferred even by students of the Z Generation students because they need to balance the professional life with the social life dimension (like the findings of Errante (2021)). The ideas of the projects of working and housing solutions within the UrbanLink15 concept and the ergonomic furniture design for the ideas of the work projects ideas (capitalized at the moment of writing this article) have provided interesting solutions, easily adapted to the lifestyle and working style in Timisoara;
- In the field of mobility and urbanism solutions in the context of 'Timisoara 15' based on corridors and green-blue gardens, the strong need for sports facilities in the suburb of Timisoara city, pedestrian and bicycle riding roads to allow proper social distancing and to improve active transportation; maintaining public green spaces and corridors near residences will allow residents to exercise and maintain a healthy lifestyle (as presented and supported also by Selzer and Lanzendorf (2019)). Furthermore, the students have been more 'aggressive' in proposing concrete solutions for green-blue gardens (more extended near the Bega River and the sanitation channels of the swampy area in the local area), water gardens in the campus area and which they can continue, in the long-term support of LAB living. The findings of the presented research are similar to those presented by (Cortes, 2021; Banerjee and Rai, 2020; Alraouf, 2021; Chan, 2021);

- In the same context, another solution that emerged from the UrbanLink15' research was the expansion of outdoor sidewalks / walkways and parklands near businesses, restaurants, and shopping areas on the boulevards to allow businesses (especially restaurants) to use these spaces for dedensified business activities, simultaneously with the increase in outdoor air quality;
- Private developers (companies in the area) should also be encouraged to implement design elements that prioritize indoor air quality and outdoor private space to make multi-unit housing both safer and more competitive with detached, single-family housing. This may be particularly crucial in the immediate post-pandemic period when anxieties about contracting the virus, coupled with greater workplace flexibility, may drive a new era of de-densification; a potential anti-new urbanism. The consequences of this demographic shift could be severe and long-lasting; future research should investigate the magnitude and consequences of such changes.
- Additional design recommendations and guidance from researchers and academic specialists should be provided to local stakeholders, including those from the metropolitan area of the city, for planning, promoting, funding, constructing, and maintaining public green spaces and corridors to allow people to perform sport activities and maintain a healthy and happy lifestyle. In general, designing municipal strategic plans for resilience will need to be based on strong stakeholders' management accompanying by mitigation strategies, resource allocation, information provision, and coherent intergovernmental cooperation not only at the city level but also in the West Region of Romania (a good practice has been provided by Maes et al. (2019)).

Finally, the good-practice solution demonstrated by the aspern Seestadt from Vienna (Austria) should be analysed in deep to find which solutions could be adapt and implemented in the local conditions of Timisoara (Romania). Collaboration of the universities in Timisoara, with colleagues from the Technical University of Vienna, could provide the context for the development of new projects development with the purpose of awareness of sustainable development awareness in the case of the new Z Generation (future inhabitants of the cities); These can be supported with the participation of the institutions of the mayors of both cities' mayors' institutions (possible solutions were provided by Herman and Rodgers (2020) and Berg (2020)). In addition, as Bereitschaft and Scheller (2020) suggested, there should be analyse other similar projects and initiatives from other cities in Europe that manage to better manage

urban design, planning and development with respect to sustainable development values and principles should be analysed.

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