Rādītāji Latvijas pilsētu ilgtspējīgas attīstības novērtēšanai

Indicators as a Tool to Assess the Sustainability of Urban Development in Latvia

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Introduction

Planning and development of expanding urban areas throughout the world is a complex decision-making process having a direct impact on human health and the environment both locally and globally [HABITAT 1996]. Global environmental problems such as depletion of the ozone layer, global warming resulting from the production of greenhouse gases, and the loss of biodiversity find their roots to a large degree in the cumulative processes of global industrialization, urbanization, and increasing consumer consumption.

The concept of sustainable development has been formulated in an attempt to reorient and focus thinking towards a style of individual and community living, resource consumption, and economic development that allows for a balanced co-evolution of the economic, physical, and social environments while living within the carrying limits of the supporting ecosystems [World Conservation Union / UNEP / WWF, 1991]. The best-known definition of sustainable development is set out in the Brundtland Report [World 1987]: "*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*. Sustainable development, as a new paradigm, entails a profound shift in the way we view the world we live in and represents a shift or a new set of values in decision-making [Milbrath 1996].

The challenge of sustainable development is that there is no simple way to model and to predict the interaction of individuals, societies, and natural systems: therefore, policies aiming at sustainable development cannot be based on precise models. Policies need to be flexible in two directions. Flexibility is required over space, since problem perception, values, and interaction patterns are strongly shaped by culture and vary spatially. Flexibility is also needed over time since precise forecasting is basically impossible. The consequences of this basic need for flexibility are:

- Sustainability is a general idea that must be interpreted concretely in specific contexts;
- Sustainability cannot be achieved by a command and control approach since there are no adequate causal models;
- Sustainability can only be approached through a practical management process that includes permanent learning [Schleicher-Tappeser and Strati 1999: 49].

This paper examines the opportunities that exist for urban planners and the broad public in Latvia to monitor, assess, and learn from urban planning practices and development trends using indicators.

Sustainable Development Planning in Latvia

In Latvia, sustainable development as a value, even if expounded in policies and planning documents, is ultimately rarely considered during the largely sector-based decision-making process. In essence the problem of enlivening sustainability is ultimately the responsibility of local government – in accord with the principle of subsidiarity [Strati and Schleicher-Tappeser 1999:71] and the popular rallying cry of sustainable development "think globally, act locally" [Gilbert et al. 1996] – which in Latvia is often least open to and has the least capacity to meet the challenges of sustainability.

Local politics in Latvia are tainted by political patronage and vested interest. At the municipal level experts (planners) frequently have their "hands tied" regarding promoting and implementing best urban practices to address complex planning issues. Either it is not practical to go against the "political winds", or political decisions are simply made contrary to adopted planning policies and measures. Compounding matters further is the fact that adverse global impacts resulting from local activities are often not self-evident, having no immediate readily apparent impact on human health

and the environment locally; thus, they are not priority issues amongst planners, politicians, and the broad public. Similarly, the sum of many individual planning decisions, which alone do not have immediate local consequences to the environment and the quality of urban life, in the longer term have an adverse impact on the urban system. In this milieu, in Latvia, urban planning practices that have been tried and shown to be unsustainable in the long-term in urban areas of developed industrialized countries [White 1994; Miller 1996] are frequently being repeated.

According to the Chapter 28 of the Rio Declaration, local authorities in each country should undertake a consultative process with their populations and achieve a consensus on a "Local Agenda 21" for the community. Subsequently, local authority programmes, policies, laws and regulations to achieve Local Agenda 21 objectives should be assessed and modified, based on local programmes adopted [United Nations 1992:200]. Although Latvia has signed and ratified the Rio Declaration, Local Agenda 21 has not been prepared by any of the largest cities.

One of the characteristic features of cities in Latvia is that in lieu of Local Agenda 21 environmental strategies and action plans have been developed that attempt to also include the broader aspects of sustainable development. This phenomenon finds its roots in the fact that initiators of the Local Agenda 21 process (typically municipal environmental departments), to date have not received strong political support; thus, meaningful input from other municipal sectors and stakeholders in the community has been limited. Consequently, not only has community consensus not been achieved, but limited integration of environmental, social, and economic development issues in municipal policies exists.

Study Methods

In this study city development plans were analysed, since, unlike environmental policy and action plans, they reflect development priorities in all sectors within a municipality. The development plans of four of the seven national level cities in Latvia (Table 1)—Riga, Jelgava, Jurmala, and Rezekne—were studied (the cities of Daugavpils, Liepaja and Ventspils presently do not have approved development plans) to establish the degree to which proposed urban development policies in these cities are linked to the principles of sustainability, with specific attention being directed to the issues of transportation and green space. Furthermore, existing opportunities to monitor and assess the implementation of development plan policies are reviewed including:

- Development plan implementation reports;
- Indicators published in statistical bulletins and indicators available in municipal departments that can be used to evaluate the sustainability of urban development.

Table 1

Population and Area of National Level Cities in Latvia*

Latvijas Republikas pilsētu iedzīvotāju skaits un teritorija*

City	**Population** (beginning of 2000)	**Area** (km^2)
Riga	**788283**	**307.20**
Daugavpils	114510	72.48
Liepaja	94807	60.37
Jelgava	**70918**	**60.30**
Jurmala	**58993**	**115.48**
Ventspils	46423	55.36
Rezekne	**40095**	**17.48**

* [CSBL 2000a, 2000b]

Selected Sustainability Themes and Issues

Transportation

The transportation sector was selected for analysis, because it has a large impact on resource consumption (energy, land area) in urban areas and is consequently one of the sectors where the integration of economic, environmental, and social aspects of development is particularly important. Transportation typically is one of the largest sources of carbon dioxide emissions and a substantial contributor to total nitrogen dioxide and nitrogen monoxide emissions, as well as a major cause of high noise levels. Automobile related infrastructure occupies a sizeable part of the limited public and private space of a city. In relation to the social realm, the selected transportation solutions influence the degree to which residents have access to their city [White 1994; Whitelegg 1993].

The Charter of European Cities and Towns Towards Sustainability [ICLEI 1994] includes urban transportation as a separate section and indicates that the city should give preference to environmentally cleaner types of transportation, particularly pedestrians, cyclists, and public transportation, and that urban development plans should give priority to combining these modes of transportation. Private automobiles should only serve as a supplemental mode of transportation. Reducing dependence on the private automobile is one of the most important preconditions for creating a more sustainable city [Tolley 1990; Zuckerman 1991]. At the simplest level creation of a more compact city form can be furthered with the aid of zoning by-laws, specifying development densities and their distribution relative to public transportation networks, reducing overall the amount of space in the city allocated to the private automobile and, in particular, the number of automobile parking spaces in the city centre, and improving the effectiveness of the public transportation system [Miller 1996; Whitelegg 1993]. Studies show that from the perspective of sustainability the most effective method of addressing urban transport problems (congestion, air pollution, etc.) from a technical and from an economic standpoint is to improve the public transportation system, not to widen existing roads or to build new roads and bridges [HELCOM PITF 1999].

Development plan policies were analysed against the following transportation issues supporting urban sustainability:

- Improvement of conditions for pedestrians;
- Promotion of bicycle use;
- Development of public transportation;
- Construction of city by-passes to reduce transit traffic volumes in the city;
- New road and bridge construction;
- Construction of new automobile parking facilities in the city centre.

Green Space

The preservation of green space and biological diversity is another aspect of urban development plans that can be used to gauge a city's commitment to sustainability. Although the type and amount of "green and blue" natural areas in any urban area is dependent on the geographic location and a community's aesthetic appreciation and values [Porteous 1996], preservation of biological diversity is nevertheless integral to the concept of sustainability, whereby balanced co-evolution between social, economic, and environmental development dimensions is sought. In relation to this theme, at the simplest level, development plans can be analysed with respect to proposed changes (both in type and degree) in the green structure (forests, parks, gardens, pasture, city squares, greenbelts along waterways, and family gardens).

Integration of the existing green space structure into one system is very important for the proper functioning of urban ecosystems and for the preservation and enhancement of biological diversity. Creation of green corridors linking disparate green spaces enhances the integration of the green space structure. Although it is not always possible to integrate the green space structure, biological diversity can be increased in individual green spaces, thereby increasing ecological capacity.

The policies of the development plans were analysed against the following green space issues:

- Proposed changes in the area of the green space;
- Integration of the green space structure through the creation of new green corridors;

- Enhancement of biological diversity;
- Preservation of family gardens—proposed changes in the area occupied by family gardens.

Analysis of Development Plans in the Context of Sustainability

Table 2 summarizes the analysis of the development plans [Jelgava 1999; Jurmala 1995; Rezekne 1997; Riga 1995] in relation to issues of sustainability. The development plans for the cities of Riga, Jurmala, and Jelgava include sustainable development as one of the plan principles. The development plan for Rezekne does not explicitly contain reference to sustainable development, but in terms of its main policies the plan addresses the key aspects of urban sustainability in a relatively integrated fashion.

Table 2

Evaluation of the Development Plans in Relation to Transportation and Green Space Issues

Transporta un zaļās zonas jautājumu analīze attīstības plānos

Issues	Jelgava	Jūrmala	Rēzekne	Rīga
Sustainable development as a goal or main principle	+	+	-	+
Transportation				
Improvement of conditions for pedestrians (as a policy/specific actions)	+/+	+/+	+/+	+/+
Promotion of bicycle use (as a policy/specific actions)	+/+	+/+	+/+	+/-*
Development of public transportation (as a policy/specific actions)	+/+/-	+/-	+/-	+/+
Building of by-passes to reduce transit traffic	+	+	+	+
Building of new roads, bridges (as a policy/specific actions)	+**/+	+/+	+/+	+/+
New parking lots in the centre of city	+	+	-	+
Green Space				
Amount of green area	will be reduced	will be reduced	changes not shown	changes not shown
Family gardens (to develop existing ones/to reserve place for new ones)	+/- / -	+/-/-***	+/-/-	+/- / -
Green corridors (as a policy/concrete actions)	+/+	-	-	+/-
Increase of biological diversity	+	+	+	-

"+" – planned as a policy or target
"-" – not planned as a policy or target
"+/-" – partly planned

* Transportation Department of Riga City Council has developed "The Concept Paper for the Promotion of Bicycle Use in Riga" where specific actions are proposed.
** It is planned to complete only construction projects already approved.
*** For new gardens land area is reserved outside of city boundaries.

Transportation

In relation to the theme of transportation, all of the development plans analysed have policies to reduce reliance on the private automobile. Specific policies include improving conditions for pedestrians, improving the public transportation system, developing opportunities for cyclists, and policies to limit the movement of private automobiles to and in the city centre. The transportation policies in the development plan for Riga give priority to pedestrians, cyclists, and public transportation over automobiles.

Notwithstanding the previous, all of the analysed development plans, except for the plan in Jelgava, propose new road and bridge construction. In Jelgava, only on-going projects are to be completed. Furthermore, all of the development plans advocate a policy of developing and constructing new

parking lots in the city centre. Development of automobile parking facilities is not typically included in measures intended to reduce reliance on the private automobile or to create of a more sustainable city.
A contradictory feature of the City of Riga development plan is that policies dealing with automobile infrastructure are elaborated in considerable detail, including alternative locations for a bridge(s) across the Daugava River and a network of right-of-ways reserved for new high-speed roads. No such specific and detailed proposals are presented for the public transportation system. From the previous, it is evident that during implementation of the Riga development plan, for example, it is more likely that the precisely defined, but the less sustainable policies, will receive support from decision-makers.

Green Space

The policies in the development plans for Riga and Rezekne do not indicate whether a change in the area and/or distribution of green space is expected during the life of the plans, whereas the Jelgava and Jurmala plans anticipate a reduction in the area of green space. Typically, the green space designation in the plans permits green space to be developed for active recreational use; however, since recreational infrastructure such as arenas and other sports facilities are considered active recreational activities, it is likely that some of the existing green space will be intensively developed, diminishing the natural and functional (air quality improvement and passive recreational) value of individual parcels of green space. The total area of city green space will be reduced in practical terms, but because rezoning for this form of land use change is not required, the incremental impact of this type of activity will not be reflected in statistics as a decrease in the total area of city green space.
The preservation of biological diversity is a policy of the development plans for only Jurmala and Jelgava. The creation of green corridors, including specific measures for the preservation of biological diversity, is proposed only in the plan for Jelgava. The development plan for Riga proposes the integration of the "green and blue" structure in a unified system, but it does not present specific measures that should be implemented to achieve this goal.
One of the unique aspects of green space in the cities of Latvia is the relative large land area devoted to family garden plots. For example, family gardens in the Riga of 1995 accounted for almost 11% of green space or 5% of total area of the city [Riga 1995:36]. For the least affluent segment of urban residents the family gardens are an important source of produce for personal consumption and are also supplementary sources of income for some. Furthermore, as is stated in the development plan of Riga, these family gardens serve a social and recreational function, especially for the large percentage of city dwellers that live in multi-storey apartment complexes, by providing a place for them to spend leisure time. For others, especially children, family gardens offer a valuable opportunity for nature appreciation [Riga 1995:36].
Family gardens are a component of the green space of all the cities analysed. Characteristic of all the plans is that no policies exist for the creation of new family garden areas within the city jurisdictions. Only Jurmala has reserved space for family gardens outside of the city boundaries. In Riga, family gardens are designated as a temporary form of land use, thus opening the door for rezoning and the transformation of green space.

Assessment of Urban Sustainability and Implementation of Development Plans

Legislative Compliance

The "Law on Territory Development Planning (1998)" requires that municipal governments prepare and publish a report on the implementation of development plans every year. Of the four cities analysed, only Jurmala has regularly prepared and published development plan implementation reviews as required by law. The assessment reports prepared by the city of Jurmala briefly (1-2 pages in length) highlight the main features of the implementation of development plan policy. Development trends are described qualitatively; they are not generally quantified.

Indicators to Assess Urban Sustainability

Indicators are pieces of information that highlight what is happening in a large system. They are small windows that provide a glimpse of the "big picture". Indicators should simplify complex phenomena into quantifiable measures that can be readily communicated [Delft van 1998]. To create indicators, data must be collected as part of a monitoring process in which repetitive measurements of coherent parameters yield information on changes in time. The data must be collected by comparable methods, according to previously set time schedules and places [Dobbelsteen and Porton 1992]. Sustainability indicators combine environmental, economic, and social indicators, as well as their mutual relationships [Abolina and Klavins 2000].

In order to determine what opportunities exist to monitor and assess implementation of urban sustainability and development plans in the context of sustainability, relevant statistical bulletins were reviewed regarding available indicators on the themes of transportation and green space. The statistical sources consulted included: Latvia's Regions in Figures [CSBL 2000a]; Environmental Indicators in Latvia 1999 [CSBL 2000c]; Macroeconomic Portrait of Latvia's regions [CSBL 2000d]; Statistical Yearbook of Latvia 2000 [CSBL 2000e]; Riga in Figures 1999 [CSBL 2000f]; Latvian State of the Environment Report '98 [Ministry 2000]. Additionally, relevant municipal departments in each of the four cities were consulted regarding the availability of indicators on transportation and green space. Table 3 summarizes the indicators compiled in statistical publications and municipal departments.

The review of published indicators relevant to sustainability issues and development plans reveals a significant imbalance in the distribution of indicators. Because transportation is directly related to economic activity, it can be more readily expressed quantitatively. It is not surprising that there are a greater number of transportation related indicators. For green space issues, only indicators on the issues of green space area and the conservation of biological diversity were identified.

Indicators available or regularly tabulated in municipal departments are largely those appearing in statistical bulletins. This indicates that to a degree the driving force behind data and indicator collection at the municipal level is the legislative requirement to annually report on certain aspects of municipal development to the Central Statistical Bureau of Latvia. Additional indicators collected by municipalities are mainly related to the issues of public transportation, green space area and biodiversity.

The indicators available in municipal planning departments and statistical bulletins do not permit an evaluation to be made of the impact or efficacy over time of municipal development policies in general, and more specifically in the context of sustainability. The available indicators are so narrow and specific in definition that together they are little more than unrelated items in an inventory list of municipal assets and municipal services offered and used by city residents. None of the indicators in the statistical bulletins and municipal departments show performance; that is they don't illustrate development trends over and against set policies or standards. Furthermore, the units of measure used are often not meaningful in communicating the development trends in the city. No aspect of city development policy or theme of sustainability is in general adequately illuminated by the available indicators.

From the available indicators on transportation, it is not possible to draw a meaningful conclusion regarding modal split—the means by which residents of the city travel (e.g. private automobile, public transportation, bicycle, by foot). The trend of modal split is one of the most important indicators for the assessment of the sustainability of transportation policies and measures. Similarly, knowledge of the number of automobile parking spaces is important for the development of a sustainable urban transportation policy, since the number of automobile parking spaces impacts on the intensity of urban automobile traffic and influences public transportation rider-ship. Taken together, the available indicators on transportation issues illuminate only separate aspects of urban mobility and access, from which it is not possible to gain a clear insight into the overall situation and the main problems and their evolution over time.

With respect to urban green space, the available indicators do not reflect the most visible problems associated with urban development: the reduction of the area of green space; the cutting down of individual trees and tree clusters; reduction in biological diversity; as well as a qualitative change in the green structure, for example parks and squares that are transformed to underground parking lots with potted shrubs and flowers planted overtop. Changes in the area of green space are in practice difficult to assess because of the broad definition of green space and the small scale at which zoning maps are prepared. For instance, for the period 1998-1999 in Riga, a number of

previously grassy areas and small squares have been transformed to parking lots, but the available data indicate an unchanging total area of green space.

The biological diversity is very pertinent to the assessment of sustainability because it shows the impact of human economic activity on the natural environment and is thus close to one of the roots of environmental problems. The available indicators do not however reflect other causes for the reduction of biological diversity, such as the reduction in the area of individual green areas (an indicator showing the average size of green areas would reflect this) and the cutting of individual trees. The Greenery Inspection Unit of the City of Riga Environment Department does not record the number of trees cut down annually in the city. Even though tree-cutting projects are approved on the basis of the specific number of trees to be removed, the number of cubic metres of wood harvested is recorded, not the total number of trees cut.

Table 3

Available indicators for analysed issues

Pieejamie ilgtspējīgās attīstības rādītāji

Issue	Indicators of Municipal Institutions (collected at least once every two years)	Relevant Indicators in Regularly Published Bulletins
Sustainable development as a goal or main principle	Not available	Not available
Improvement of conditions for pedestrians	Not available	Persons killed or injured in road traffic accidents by status of participation in traffic Road traffic accidents by locality
Promotion of bicycle use	Not available	Persons killed or injured in road traffic accidents by status of participation in traffic
Development of public transportation	***Jurmala*** Monthly public transportation rider-ship Number of public transportation routes Length of public transportation routes Public transportation route timetables Public transportation tariffs ***Rezekne*** Number of public transportation routes (buses, taxis, route taxis): Number of route trips planned; Number of route trips completed; Rider-ship; Number of kilometres driven; Fees collected from passengers; Funding by the municipality of public transportation Number of route buses Cost of one trip with public transportation Number of routes Total length of routes km ***Riga*** Public transportation rider-ship	Passenger turnover Passenger carried by tram and trolley-bus Length of trolley-bus lines, number of trolley-buses and their utilisation Length of tramlines, number of tramcars and their utilisation Passenger traffic: urban bus lines
Building of by-passes to reduce transit	***Riga*** Road surface type register Road technical pass	Not available

Issue	Indicators of Municipal Institutions (collected at least once every two years)	Relevant Indicators in Regularly Published Bulletins
Building of new roads, bridges	***Rezekne*** Road length, width and type of surface ***Riga*** Road surface type register Road technical pass	Total length of streets, tunnels and embankments Of which hard surfaced
New parking lots in the centre of city	***Rezekne*** Area of the municipal land covered by automobile parking facilities	Not available
	Jelgava Implementation of the Traffic Strategy (whether individual tasks are implemented/not implemented) ***Riga*** Traffic flow measurements (prior to repairs and other circumstances) Implementation of the Traffic Strategy (whether individual tasks are imple-mented/not implemented and why not)	Not available
Amount of green area	***Jurmala*** Area of forests Area of forests rezoned ***Rezekne*** Area of green space ***Riga*** Transformed forest land m^2	Urban land – total area, of which: Greenery and woodland area Public gardens, parks and greenery Area cut and stock volume by cities and districts in 1999
Family gardens	Not available	Not available
Green corridors	Not available	Not available
Increase of biological diversity	***Jelgava*** Number of heritage trees ***Jurmala*** **Forests** - Volume cut in forests m^3 (main harvest and thinning) - Reforested land m^2 - Supplementary planting ha - Area burned by forest fires m^2 Greenery - Number of cut trees (by species) ***Riga*** Area of protected territories **Forests** - Volume cut in forests m^3 (main harvest and thinning) - Reforested land m^2 - Supplementary planting ha - Area burned by forest fires m^2 Greenery - Volume cut from greenery m^3 - Other data that is not regularly compiled	Structure of current expenditures on environmental protection by cities and districts in 1999 Of which for - Land recultivation - Forest regeneration Hazardous substances emitted into atmosphere from stationary sources on average per ha of urban land, by selected towns and cities in 1999 Hazardous substances neutralised or emitted into atmosphere from stationary air pollution sources by cities and districts in 1999 Hazardous substances neutralised or emitted into atmosphere from stationary air pollution sources by selected towns and cities in 1999 Emissions from stationary air pollution sources by cities and districts and by polluting substances in 1999 Emissions from boiler-houses into atmosphere by cities and districts in 1999 Air quality in 1999 (data available for Riga) Ozone in 1999 (data available for Riga) Precipitation acidity in 1999(data available for Riga) Water discharge into surface waters by cities and districts in 1999 Permanent water pollution by cities and districts in 1999
	Jelgava Finances allocated to the up-keep of greenery Other data that is not regularly compiled ***Jurmala*** Other data that is not regularly compiled ***Rezekne*** Finances allocated to the up-keep of greenery	

Discussion and Conclusions

An analysis of the development plans prepared by four of the largest cities of Latvia indicates that sustainability may be embodied as one of the guiding principles, explicitly or implicitly, but a comparison of development policies on the themes of transportation and green space over and against specific urban sustainability issues reveals a great deal of ambiguity and contradiction. More significantly, many recently implemented development projects, particularly in Riga, are at odds with urban sustainability.

Based on the review of published statistical bulletins and consultations with relevant municipal departments, available development indicators in the transportation and green space sectors are not adequate to monitor the sustainability of urban development. On the basis of the undertaken analysis, it can be concluded that decision-makers, planners, and the broad public have few and inadequate indicators with which to gauge the sustainability of urban development. As decision-makers, urban planners and the broad public in Latvia have limited exposure to urban sustainability issues through the mass media, it is even more critical that relevant indicators, which shed light on the trends in urban development and the impacts of development over time, be regularly compiled and made public.

A major short-coming of the development planning process is the lack of an open and transparent follow-up procedure regarding planning decisions, in essence whether the long term goals of development plans and the principles of sustainable development are being addressed. As a consequence, urban planners and the broad public are unable to quantitatively assess for themselves the process of urban development in their cities in relation to existing development plan policies, thus limiting transparency in urban development decision-making. The current situation in Latvia does not encourage decision-makers to be consequent in their decision-making against the backdrop of sustainability and development plan policies. In the long-term, opportunities to create a more sustainable cities are hindered.

Regardless of whether cities define sustainability as a policy goal of development or not, it is essential that sustainability indicators that reflect the new reality of urban development be compiled. The indicators selected should address the fundamental principles and concerns of sustainable development and should in a simple and clear manner inform decision-makers, planners, and the broad public regarding the sustainability of urban development. Typically, one of the criteria used for defining indicators is data availability. When developing indicators, high priority should be given to the establishment of a data collection programme in which data that most accurately portray essential aspects of sustainability are regularly gathered.

Assessment and public reporting of actual development trends is important in development planning in general and even more so in the complex decision-making associated with sustainable development, where a balance need be struck between the different aspects of development (economic, social, and environmental). The sustainability of a city and the effectiveness of planning policies and measures can be gauged through an on-going assessment of urban development trends and impacts, using sustainability indicators. Because sustainability indicators contribute to transparency in decision-making and involve a process of permanent learning, they can be the practical management tools to implement urban sustainable development.

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Kopsavilkums

Līdzsvarotas attīstības koncepcija kā jauns sabiedrības domāšanas veids pieprasa dzīvesveida pamatā likt citu skatījumu uz pasauli un attiecībām tajā, kā arī lēmumu pieņemšanas procesā balstīties uz jaunu vērtību sistēmu. Ilgtspējīgas attīstības izaicinājums ir tas, ka nav vienkārša veida,

kā paredzēt cilvēku, sabiedrības un dabisku sistēmu mijiedarbības rezultātu, tāpat nav iespējamas precīzas prognozes. Tādēļ politiku ilgtspējīgas attīstības veicināšanai nevar balstīt uz konkrētu modeli - politikai jābūt elastīgai divos virzienos - telpā un laikā. Galvenās F. Strati un R.Šleihera-Tapezera atziņas, kas izriet no elastības nepieciešamības, ir:

1) ilgtspējība ir galvenā ideja, kuru jāpiemēro konkrētajiem apstākļiem;
2) ilgtspējību nevar sasniegt ar pavēles - kontroles pieeju;
3) ilgtspējību var veidot ar praktisku pārvaldes procesu palīdzību, kas ietver sevī nepārtrauktu mācīšanos.

Šajā pētījumā apskatītas Latvijas pilsētu plānotāju un plašākas sabiedrības iespējas novērot, novērtēt un mācīties no pilsētu attīstības gaitas, izmantojot ilgtspējības rādītājus.

Pilsētas kā pētījuma objekts izvēlētas tā iemesla dēļ, ka, izejot no subsidiaritātes principa (atrisinājums zemākajā iespējamā līmenī), kā arī no principa "domā globāli, rīkojies lokāli", ilgtspējīgas attīstības iedzīvināšana noteikti ir vietējo pašvaldību atbildība. Tomēr pilsētu un vietējo pašvaldību līmenī plānotājiem ir "sasietas rokas", un sarežģītu plānošanas jautājumu risināšanā nav vērojama pasaules labākās pieredzes izmantošana. Kā galvenos iemeslus var minēt, ka speciālistiem nav izdevīgi iet pretēji politiskajām tendencēm, vai arī politiskie lēmumi tiek pieņemti pretēji apstiprinātajai ilglaicīgai politikai vai ekspertu ieteikumiem. Šajā situācijā Latvijā pilsētu attīstībā bieži tiek pieņemti lēmumi un izvēlēti risinājumi, kuri rūpnieciski attīstītajās valstīs sevi pierādījuši kā neefektīvi ilgākā laika posmā.

Saskaņā ar Rio Deklarācijas 28. pantu katras valsts vietējām pašvaldībām konsultatīvā procesā ar iedzīvotājiem ir jāpanāk vienošanās par ilgtspējīgas attīstības rīcības plānu 21. gadsimtam (Vietējā Agenda 21), kas nosaka vietējā līmeņa darbību ilgtspējīgas attīstības nodrošināšanai. Sekojoši vietējo pašvaldību programmas, politikas, likumus un normatīvus jāpārvērtē un jāpielāgo ilgtspējīgas attīstības kontekstam. Lai arī Latvija ir parakstījusi un ratificējusi Rio Deklarāciju, tomēr ilgtspējīgas attīstības rīcības plāns 21.gadsimtam nav pieņemts nevienā Latvijas republikas nozīmes pilsētā.

Latvijas pilsētās viena no raksturīgām iezīmēm ir ilgtspējīgas attīstības rīcības plāna vietā veidot vides aizsardzības rīcības plānus, kurā cenšas ietvert arī ilgtspējīgas attīstības aspektu. "Aizvietojums" varētu būt skaidrojams ar to, ka vides aizsardzības speciālistiem, kuri parasti ir ilgtspējīgas attīstības rīcības plāna veidošanas iniciatori, kopējo risinājumu meklējumos pagaidām neizdodas sekmīgi iesaistīt pārējo sektoru speciālistus, un īpaši politiķus.

Pētījumā uzmanība ir pievērsta pilsētu attīstības plāniem, jo tie atšķirībā no vietējiem vides aizsardzības rīcības plāniem atspoguļo visu ar pilsētas teritorijas attīstību saistīto sektoru attīstības virzienus. Šajā darbā ir analizēti Jelgavas, Jūrmalas, Rēzeknes un Rīgas attīstības plāni, jo Liepājā un Ventspilī pilsētas attīstības plāni tiek izstrādāti, bet Daugavpilī plāns vēl taps.

Katras pilsētas ilgtspējīgas attīstības aspekts ir analizēts, apskatot divus jautājumu blokus. Transporta sektorā, pirmkārt, aplūkojoti šādi jautājumi, kas galvenokārt veicina ilgtspējīgu attīstību:

- apstākļu uzlabošana gājējiem,
- velotransporta attīstīšana,
- sabiedriskā transporta attīstīšana,
- satiksmes apvedceļi.

Otrkārt, aplūkota izvēlētā politika attiecībā uz

- jaunu ielu un tiltu būvniecību,
- jaunu autostāvvietu radīšanu pilsētas centrā, kas parasti noved pie neilgtspējīgas attīstības.

Otrs jautājumu loks, pēc kura pilsētu attīstības plānos ir spriests par ilgtspējības nodrošināšanu, ir zaļās zonas un bioloģiskās daudzveidības saglabāšana un attīstība, apskatot:

- paredzētās izmaiņas zaļās zonas platībā,
- zaļās zonas savienošana vienotā sistēmā (zaļo koridoru veidošana),
- bioloģiskās daudzveidības palielināšana,
- paredzētā politika attiecībā uz ģimenes dārziņiem.

Jelgavas, Jūrmalas un Rīgas plānos ilgtspējīga attīstība minēta kā viens no pilsētas attīstības pamatprincipiem. Kā var spriest no plāniem, analizēto pilsētu ilgtspējība transporta jautājumos

atkarīga no lēmumu pieņēmēju izvēles – cik konsekventi tiks ievērotas prioritātes, kā arī no tā, kuri risinājumi būs izvēlēti no plānos paredzēto pasākumu klāsta.

Salīdzinot ar transportu, situācija zaļās zonas attīstības un bioloģiskās daudzveidības saglabāšanas jomā, ir sliktāka, jo Jelgavas un Jūrmalas plānos paredzēts samazināt zaļās zonas platību, bet par Rīgā un Rēzeknē par paredzētajām izmaiņām, balstoties uz plāniem, neko nevar spriest. Citos apskatītajos jautājumos Jelgavā paredzēta "viszaļākā" politika, pārējās pilsētās politiku attiecībā uz zaļo zonu par ilgtspējīgu var uzskatīt tikai nosacīti, īpaši ņemot vērā, ka ar nelieliem izņēmumiem tālāk par formulētu mērķi līdz orientējošām rīcībām konkrētās pilsētas vietās nav tikts.

Darbā ir raksturotas iespējas, kā novērtēt attīstības plānu īstenošanu, analizējot attīstības plānu realizācijas pārskatus, apkopojot statistikas gadagrāmatās un biļetenos pieejamos atbilstošos rādītājus, kā arī pašvaldību struktūrvienībās lietojamos indikatorus.

Attiecībā uz plāna īstenošanas pārskatiem jāsaka, ka tikai Jūrmala atbilstoši Latvijas likumdošanai regulāri publicē pārskatu par attīstības plāna realizācijas gaitu, pārējās pilsētās nepastāv regulārs atskaitīšanās veids par attīstības plānā izvirzīto mērķu izpildi.

Statistikas biļetenos transporta un zaļās zonas attīstības jautājumiem ilgtspējības kontekstā atbilstošu rādītāju pieejamībā vērojama ievērojama atšķirība. Katram plānā apskatītajam transporta jautājumam ir iespējams atrast piemērotu rādītāju, bet par zaļo zonu rādītāji ir tikai par zaļās zonas platību un bioloģisko daudzveidību. Pašvaldību struktūrvienībās pārsvarā pieejami tie paši rādītāji, kas parādās statistikas biļetenos. Tas saistīts ar likuma prasību apkopot un iesniegt Valsts Statistikas pārvaldei noteiktus rādītājus. Papildus rādītāji pilsētas vajadzībām praktiski nav, jo esošie dati netiek apkopoti. Kā pozitīvu iezīmi var minēt Satiksmes koncepcijas īstenošanas analīzi Jelgavā un Rīgā.

Aplūkojot pieejamo rādītāju kvalitatīvo atbilstību – spēju raksturot attiecīgo transporta vai zaļās zonas jautājumu, secinām, ka atbilstība visbiežāk ir ļoti vienpusēja. Respektīvi, no pieejamajiem rādītājiem nav iespējams secināt par ilgtspējīgai attīstībai svarīgo transporta un zaļās zonas jautājumu problēmām un attīstības dinamiku. Rādītāji neatspoguļo pilsētās notiekošos procesus, kas svarīgi pilsētas transporta vai zaļās zonas attīstībai. Pieejamie rādītāji ir tikai kā atsevišķas detaļas pilsētas īpašumu un pakalpojumu inventarizācijas sarakstā, ar tiem nevar veikt pilsētas attīstības politikas efektivitātes vai ietekmes novērtējumu par laika gaitā, it īpaši attiecībā uz ilgtspējīgu attīstību. Tas zināmā mērā mazina nepieciešamību ievērot attīstības plānus.

Neskatoties uz to, vai pilsēta ilgtspējību ir vai nav izvirzījusi par attīstības pamatprincipu, nepieciešams apkopot ilgtspējīgas attīstības rādītājus, kas parādītu mūsdienu aktuālo realitāti pilsētas procesos. Piemērotiem rādītājiem vajadzētu aizvietot līdzšinējo atskaiti galvenokārt par ekonomisko izaugsmi un patēriņa pieaugumu – "dzīves līmeni", rādītājiem jāatspoguļo ilgtspējīgas attīstības pamatjautājumus, vienkāršā un atklātā veidā jāinformē lēmumu pieņēmējus, plānotājus un plašāku sabiedrību par pilsētas attīstību, tajā skaitā par dzīves kvalitātes jautājumiem.