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RIGA CITY - ON THE WAY TO SUSTAINABLE DEVELOPMENT

**Case-study prepared by Ms. Inara Marana, Ms. Kristine Abolina,
Mr. Andis Zilans, Ms. Sniedzite Sprukta, Ms. Marita Nikmane
City of Riga, Latvia**

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KEY FACTS ABOUT RIGA AND LATVIA

Riga, the capital of the Republic of Latvia, situated on the Baltic Sea south of the Riga Gulf. In 2001 Riga will celebrate its 800th anniversary. The independent Republic of Latvia was established first in 1918, but in 1940 it fell under the Soviet power. In 1991 Latvia regained its independence. Riga is the biggest City in the Baltic States with 815.8 thousand inhabitants. At the beginning of 1997 one third of the population of Latvia lived in Riga and this was almost half of the Latvia's urban population. The total population of Latvia is 2.5 mln., 1.03 mln. of them living in the Riga Region. Population density – is in Riga 2,658 inhabitants per sq.km , in Latvia 36,.8. The City's territory covers 307 sq. km. As much as 54.2% of the City's territory is open space, 36.6% green space, 41.5%. built up areas.

INTRODUCTION

Riga's municipal government plays a key role in the economic development process of the City heading towards the creation of the best possible living and working conditions for people, at the same time protecting environment and national heritage, and providing equal opportunity for individual development. Our present society is becoming increasingly a consumer society using more and more resources, so that the balance between nature and human activity is spoiled. Therefore, Riga also has to put emphasis on careful utilization of resources, protective attitude to nature and changing residents' behavioural model of attitudes to resource consumption.

The Riga Case Study evaluates the Riga City local initiatives to change people's behaviour and attitudes to consumption based on best examples in Riga's planning, nature protection, housing, waste management, transport, water and energy sectors, at the same time showing obstacles and problems in these areas and outlining possible ways by which the objectives of sustainable development at the local level could be achieved.

The evaluation of local initiatives as the task of the Riga Case Study is not an easy one in the times of economic and social transition when suffering from lack of data, analytical studies and research on subject. Moreover, the situation of public behaviour and attitudes to consumption is not studied at all. The time we are living in, planning, developing and arranging various urban structures is to be taken into consideration when evaluating local initiatives. Therefore, evaluation of local initiatives out of the context cannot give a sufficiently accurate view of what is going on in Riga. Public behaviour model of changing attitudes to consumption is in process, and Riga is facing the need to make the necessary choices.

1. CURRENT SITUATION AND DEVELOPMENT TRENDS

At present Riga is undergoing a process of metamorphosis. Every conceivable aspect of City life - the economy, the Government's system, the society - is in the process of rapid and indeterminate change.

DEMOGRAPHIC SITUATION. The population of Riga has decreased by up to 97 thousand since 1990 reaching 815.8 thousand in 1997. Migration has been the main cause of the decrease, but it is also related to the mortality rate which is much higher than that of birth throughout the period in concern. According to the demographic forecast, the population of Riga will continue decreasing, and most probably it will be around 790.000 in 2003.

At the beginning of 1997 Riga had 17.1% population under the labor age, 63.1% of labor age and over 27.7% of retirement age. Demographers are predicting that the retired population could increase by the turn of the century. Riga's population's ethnic composition also has changed considerably from 70% of Latvians in 1940 to 38.6% in 1997 (the average number of Latvians in Latvia in 1997 is 52.6%).

ECONOMIC SITUATION. The economic forces forming the economic basis of Riga and ensuring its development during the last 50 years have disappeared, as new forces are arising instead. Riga's economy is in transition.

The economy of Riga accounts for 52% of GDP of Latvia. The main three sectors of the national economy, also in Riga, are services, transport and industry. Both the service and transportation sectors are still growing and will still be the economic backbone of Latvia and Riga in the future. Manufacture is decreasing, but its rate of decline is slowing down. It will not have a dominant role in the future, but it is changing its features significantly. Within the last years Riga has become the largest financial center in the Baltic Region.

The small business and service sectors are developing in Riga, private capital prevailing and increasing its share rapidly, and giving residents additional employment, which explains the quite moderate level of unemployment, at least what is registered officially. The official statistics shows that 3,6 % of the economically active residents were unemployed in Riga in 1996 matching half the unemployment rate of Latvia (7.2%). However, the real unemployment, which includes the hidden unemployment, is much higher in Riga. Economically active people live mostly in Riga. The number of active residents employed was 491.2 thousand in the middle of 1997.

Land reform is going on for several years in Riga as one of the most difficult processes in the reorganization of land ownership towards market economy. Various enterprises are being privatized. Conflicts of interests arise in the course of privatization and creation of land market, economical considerations often prevailing environmental protection. Reconstruction of old buildings for diverse institutional and commercial needs is also promoting economical activities in the City, though this activity is low for the time being. Particular attention was paid last year to modernization and reconstruction of urban infrastructure, playing a key role in the economical development.

It should be noted that educational aspirations of Latvian people are increasing.

SOCIAL SITUATION. The social problems have become more pronounced. Social structures are changing currently, as residents are stratified by income levels. The sudden inflation after regaining independence shocked the public. The increasing wages still do not keep up with the inflation, thus decreasing the buying power of population leading to the feeling of insecurity among citizens. As much as 27.7% of the Riga's population are pensioners whose pensions are indexed at a rate less than the inflation rate, making even moderate inflation a most painful experience. This is naturally leading to the fact that environmental concerns come after existential problems of the public: sustenance, communal payments and rent.

URBAN DEVELOPMENT TRENDS. Residents of Riga had up to now good opportunities for employment, education, cultural and social requirements. Therefore, the residents of the former Soviet Union often choose the capital of Latvia for their residence. Riga was also chosen as an industrial growth center by the central planning powers in Moscow. The population of Riga has grown disproportionately for these reasons, compared to other Latvian cities. One third of Latvia's population lived in Riga at the beginning of 1997, and this was almost half of all Latvian urban population.

The recent commercial activities in Riga are promoting occupation of new areas within the City and in the suburbs. New development is currently being extended beyond the City's borders. Intense use of Riga surroundings for housing construction, business and mixed industry takes place developing those areas along highways and railroad lines.

2. NEW PLANNING PRACTICE AND INITIATIVES

PRESENT SITUATION. After restoration of Latvia's independence different legislation initiatives on environment and development planning have taken place in Latvia. The Territorial Planning Regulations were adopted in 1994 designed to be a management tool for governance after independence of Latvia. Legislative system keeps on changing: new Territorial Planning Regulations, Development Law, and Guidelines for Preparing Development Strategy are currently under preparation. The National Environmental Protection Policy Plan containing policy goals and principles, description and analyses of priority environmental problems, as well as survey of political instruments and recommendations for their application was accepted by the Cabinet of Ministers of Latvia in 1995. In 1997 the National Environmental Action Program was accepted. The Ministry of Environmental Protection and Regional Development in cooperation with the Sweden Agency of Environmental Protection is working at the Project on "Harmonization of Environmental Legislation in Latvia".

During the last few years various plans have been worked out in Riga accordingly adopted laws. The Riga Development Strategy was prepared at the end of 1995; the Riga City Council adopted the Official Plan of Riga. The Riga Region Development Strategy was initiated by the Riga City Development Department at the end of 1996. Different

initiatives have also been promoted in different sectors of the Riga City. All these initiatives are very important for targeted development, environmental protection, nature conservation, national heritage management, and dealing with common problems by different stakeholders in the City. Each plan being developed by law in Latvia must undergo the State Ecological Expertise to evaluate the policy and adopted solutions pursued by the plan in accordance to the requirements of environmental protection.

RIGA CITY OFFICIAL PLAN - POLICY FOR THE FURTHER DEVELOPMENT OF THE CITY. In the opinion of many experts the most important achievement of planning in the last years was the adoption of the Riga Official Plan.

The basic task of the Official Plan was to determine the City's land use and building regulations. The Official Plan of Riga contains the policy for further development of the City, that is based on the principle of sustainable development - environmental, economic and social coordination in the physical development of Riga. The idea of sustainable urban future is included in the vision within the plan.

This Official Plan is the first such plan for the City of Riga since Latvia independence. It differs from the earlier plans in several aspects:

Development process - The plan has been worked out with public participation respecting the rights of the inhabitants and the land owners of the City.

Responsibility - The plan is legally the policy document of the Riga City Council discussed and adopted in an open debate.

Transparency - The plan is open for public.

Riga is one of the first cities in Latvia, that has adopted the Official Plan based on sustainable development principles where great attention is paid to the preservation of nature and cultural heritage. This is radically different from the previous era when the economic development of the City came first both in theory and in practice and people had not the vote in taking decisions, environment issues were disregarded, and the cultural heritage was deliberately suppressed. The Riga Official Plan was developed by participation of different stakeholders, including City councilors, top administration, municipality staff, representatives of the different ministries, general public etc.

At present the Riga Official Plan is at its implementation stage. The different detailed projects under the Territorial Planning Regulations are being developed with quite a broad discussion involving public and interest groups. The cooperation with other specialists, especially those of transportation and environmental protection is close.

ENVIRONMENTAL QUALITY AND NATURE CONSERVATION ISSUES. Of Riga's total area, 54.2% is open space, 36.6% is green space; there are 211 sq.m of green territories per resident in the City.

Much attention in the Riga Official Plan is paid to the environmental quality and nature conservation issues. One of the City's main long term development goals is to create a sound environment and to give special priority to the conservation of nature,

renewal of degraded environment and its re-cultivation. Riga is a green-blue city, and the green-blue structure of Riga is formed by six different, but interconnected nature elements – forests, meadows, greenery, natural water pooling areas and watercourses with their banks, allotment gardens and undeveloped areas. In the Official Plan each element of green lands has a definite function, use and status.

INITIATIVES. Some proceedings in the field of environmental protection should be emphasized when implementing the Development Plan. The idea of the green and blue Riga, protection, conservation and care of it, has steadfastly entwined in the Development Plan. The issues of protected areas are covered in the most explicit way. Though no means were allotted for this purpose by the Riga Council from the budgets for 1996 and 1997, environmentalists as well as citizens are taking care of these areas on their own. Even if not specialist, they understand that the Riga City is unique because of the five protected nature areas with the total area of 742.7 ha., such as:

Daugavgriva	- 113 hectares
Jaunciems	- 320.7 hectares
Kremeri	- 15 hectares
Vecdaugava	- 236 hectares
Vakarbuli	- 58 hectares

What is so unique in these areas? For example, more than 25 species of protected plants are found there, 10 orchids out of the 32 occurring in Latvia. Two of the protected nature areas in Riga – Vecdaugava and Daugavgriva – are important habitats for European migrating birds. Protection by law has been laid upon the most valuable nature areas as the first step of its implementation. Part of the land has been returned as private property to the former land owners under the process of land privatization. As former ownership is being restored now, the issue of protection of these areas is growing increasingly on environmental protection topical. Thus, management plans for Jaunciems and Vakarbuli are being prepared by environmentalists. In the plan for the Jaunciems Protected Area is to found the right strategy for administration and management of the protected nature areas; it will be a working document for civil servants at the Riga municipality and for environmental protection and management projects under development.

Facts about public awareness and environmental education are included for the first time in such a plan. This was achieved by the professional approach and by understanding the significance of nature conservation by those conceiving the Plan. The following items concerning public awareness and education are included: increase of public interest, education level and environmental awareness, increase of practical support by public institutions for dealing with environmental problems, access to information about environmental protection and protected areas. The Plan also indicates the necessity to develop a coordinated informative program about the Jaunciems Protected Area.

A positive sign is that environmentalists have developed close links with urban planners from the very beginning of development of the Official Plan. A public participation meeting also will take place in cooperation with urban planners when preparing the Jaunciems Environmental Protection Plan, because the green space of Riga is common for different parts of the City. Raising awareness can be noted at least in this aspect.

Although environmental issues have priority in the Official Plan at present, there is a lack of financial resources to implement this program.

THE RIGA DEVELOPMENT STRATEGY - A FRAMEWORK FOR CITY DEVELOPMENT. The Riga Development Strategy is the umbrella policy for the City, for many plans and programs of the City administration, like the Riga Waste Management Plan, Riga Official Plan etc.

The Strategy can be summarized to have a two level approach. One level consists of a concentrated effort to improve City management, economic strategy, transportation planning, data base, and Official Plan. The other level consists of selected capital-intensive projects in transportation and hard infrastructure. The City in its today's activities has already placed a high priority on upgrading of the basic services - drinking water supply, sewerage, and waste management.

The City is working closely with the Latvian Government and a number of international agencies to finance municipal projects of national importance. At the moment, agreements have been made to finance 3 large scale projects in the most heavily affected infrastructure areas. These projects are receiving funding from various sources. Besides the municipality, the Latvian and foreign governments as well as international financial organizations are involved such as the World Bank. The projects are the following: the Riga Water and Environmental Project (project costs: LVL 54.8 mln.), the City's Public Transportation Development Project (project costs: USD 18.5 mln.), the City's Energy Management Reconstruction Project (project in the application stage).

FIRST STEPS TOWARDS THE RIGA REGION DEVELOPMENT STRATEGY. The Riga Region Development Strategy is being currently developed. The Riga Official Plan has been worked out within the borders of Riga's administrative territory. Riga has no legal rights to get involved in processes outside these borders, because other municipalities are responsible for these areas and they are working out their own development plans. And yet, Riga and the adjacent municipalities are interconnected as elements of a common system in their development.

To reach mutually beneficial and sustainable development municipalities have understood that they have to cooperate at all levels and in all areas, and especially in planning. This is a new approach towards planning. Riga has taken the initiative in working out its Official Plan and the Riga City and Riga Region development strategy, inviting Jurmala, Riga County, the Ministry of the Environment Protection and Regional Development, the Ministry of Transportation and the neighbouring townships to solve the

increasing problems together. Till the end of 1997 the first version of the Riga Region Development Strategy will be prepared.

CONCLUSIONS. The most important achievement in the last years is adoption of the Riga Official Plan and the Riga Development Strategy, in which, visions on sustainable urban future are included. Procedures developed in the Riga Official Plan and Riga Development Strategy are good examples for other municipalities at some extent. A new approach that was used when developing them was the significant role assigned to cooperation, public participation, and transparency. Experts dealing with the Plan did much more than they should according to the legislation of Latvia in force that time.

The specialists of the Riga City Development Department, regularly participate in different training programs and lectures. They share their experience, gained while preparing the above documents on different subjects - territorial planning, strategic planning, public participation, cultural heritage etc. (in the framework of training programs organized by the Ministry of Environmental Protection and Regional Development, the Municipal Training Center, the University of Latvia etc.).

At the same time it is necessary to recognize that there is quite often a lack of necessary data for the planning process which allows to consider the full extent of environmental demands. Also, no environmental assessment has been made recently in Riga. Though a scope of environmental activities are going on currently, no initiatives to develop an environmental policy plan for Riga have been forged so far. However, the fact that environmentalists and experts in other sectors are seeking for involvement in the activities under the Local agenda 21 Forum is welcomed.

Cooperation level between the State and municipalities when developing and discussing laws is insufficient. Informative and educational materials on environmental protection available to the Riga public at broad are lacking at present, too. Little attention is paid to environmental problems by mass media. TV and radio present very few programs on this theme. Large number of City residents have no awareness of sustainable development, as not perceiving environmental problems personally.

The fact that residents lack a real interest in getting involved in discussions about various environmental projects is an impediment to raising public self-confidence on environmental problems. At the moment people even working in the environmental protection field have insufficient experience in preparing and carrying out environmental projects.

2. HOUSING PROVISION AND POLICY

PRESENT SITUATION. In Riga up to 41.5% of city territory is built up. At the beginning of 1996 the housing stock of Riga was 16.2 million sq. m. with the average total floor space per capita 19.7 sq.m. This is a little higher than in pre-war period (in 1940 the total floor space per capita was 19.2 sq.m.) and now is lower than in the cities of

other European countries. About 5% of flats are in an extremely bad state of depreciation and need to be replaced.

Major changes occurring in the housing sector Riga are characterized by the following: decrease of the volume of construction, increase of construction costs, decrease of the solvency of the inhabitants, the inability of a great part of the population to pay for their rent and public services, change in the demand for housing, denationalization, privatization of state and municipality owned housing stock etc.

In the period from 1945 to 1990 the State granted accommodation subsidies. Rents for flats were low; municipality took care of housing repairs and upgrading of surrounding areas. This fact also created, in most residents an attitude of consumerism, but no feeling of responsibility for housing maintenance. Since 1992 no financial resources have been allocated for housing in the state budget. In the state investment program for 1995 - 1997 too, there was no money allocated for housing construction.

On the national level the building strategy and housing policy are under preparation. The quality of environment and building are emphasized, shifting from the former multistory to few story building, including renovation of the existing housing estates, and energy efficiency. Also a system for providing housing credits are being developed.

Housing problems are neither a priority for the Riga City, nor its residents. The Riga Official Plan within the City's policy provides indications in the area of housing and land use in general, allocating areas in the City for new construction and housing renewal. However, there is little activity so far in the area of housing in general:

(a) New construction - the present land provision for housing construction in Riga is approximately 1,000 hectares, as established in the Official Plan. These territories are allotted mainly for few storey building up. It has to be indicated that the low building activity is a general feature of Latvia's and Riga's building sector at present. Nevertheless, there are already signs that family cottages are being built mainly just outside of Riga's borders.

(b) Housing renewal – improvement, intensification, rehabilitation and reconstruction. In some residential areas it is necessary to increase the density of residential districts by building there various types of residential and service buildings, but preserving or improving the particular character of these districts. Some historical districts of Riga, as far as permitted by their status of national heritage, have to be rehabilitated by increasing density, improving their environmental quality, providing insulation, increasing green areas, and restoring old buildings. In Riga there is a great number of architecture objects from the middle ages, excellent examples of architecture of *art nouveau* buildings. The central section of Riga is recommended for the UNESCO World Heritage List as urban heritage units of European standards. At the present time reconstruction of individual buildings, or groups of buildings – Jacob's Barracks,

commercial center “Dole”, Hotel “Konventa Seta” etc. is performed by help of foreign investments.

Nevertheless at present the most difficult housing problem is the improvement of the concrete panel housing stock. Majority of residents of the City (up to 60%) now live in houses that were built after 1960s. From former times Riga has inherited huge residential areas with poor outdoor environmental quality, poorly developed services, insufficient green and recreational areas, low technical standards, poor building insulation (very high loss of heat energy) etc. At present in the new residential districts infrastructure construction is not taking place, nor are the new green territories being developed. The residents of these districts do not participate in maintenance of the outside areas.

To improve this housing stock enormous resources from the residents as well as the City will be required. Also public attitude towards housing and its improvement should change which means shifting from consumer’s attitude to active participation in improvement of housing conditions and the surrounding environment.

INITIATIVES. A step in this directions could be considered to be the preparation process for projects to cover the City which are to be reviewed comprehensively for improvement from technical, social and management viewpoint. In the implementation process of City projects residents should also be involved so that they have the opportunity to learn about ideas and possibilities for improving and managing the housing stock. Unfortunately, only small pilot projects with Danish and Swedish specialists on improving housing are under implementation or in preparation phase. Some project ideas: repair of facades in combination with energy saving improvements, use of environmental friendly and resource conserving, reconstruction, modernization of installations, introducing to people involved to new ways of managing housing, search for financial resources for implementing projects.

As a positive example in housing improvement, the Riga City Council’s Municipal Services Committee’s initiative in developing heating supply, should be mentioned, which affected the Riga’s housing stock’s heating supply including the payment system depending on the amount of heat consumed, establishment of heating monitors in residential buildings, etc.

CONCLUSIONS. At present very little is done in the area of intensification and rehabilitation. Still with the improvement of the economic situation gradually was reconstruction of individual buildings and district reconstruction will grow.

At present time the initiative for housing maintenance is low. There is lack of communication, lack of information as well as an exchange of information and cooperation between residents in buildings and neighbourhoods, between residents and local authorities, between local housing authorities and municipality. The reasons for the

low level of public participation in improving housing are the different interests, no knowledge of collective housing actions, no support from local housing authorities etc.

Residents' attitude to housing improvement could be changed with participation in various pilot projects. During the implementation of these projects positive experience could be gained.

3. POLITICAL AND ADMINISTRATIVE STRUCTURE AND COMMUNITY INVOLVEMENT

THE PRESENT SITUATION. The new government of Riga is just 6 years old. Not until 1991 was the City Council placed in a position to be responsible for running the City. Riga and other municipalities in Latvia became self-governing entities in 1991. They had to prepare their own budgets and manage their own finances, they had to pass by laws and carry out their own planning. The responsibility for making decisions on all of these issues were vested in the elected Council. The Riga City Council consisting of 60 deputies, elected every 3 years, on the basis of party factions.

Public involvement in planning proceedings is established by the Laws on State Ecological Expertise and on Territorial Planning regulations. The Regulations on Territorial Planning were amended to grant a the key role to the regulating of public involvement in the preparation of different plans. The Guidelines for Strategic Development Planning are currently under preparation, and great attention is paid to public involvement. The guidelines for public involvement in the Territorial Planning are also under preparation involving specialists of the Riga City in these planning initiatives in general.

INITIATIVES. In Riga, along with Latvia on the whole, participation has to overcome five decades of enforced non-participatory behavior, as the population has been diverted from any form of real participation for 50 years. Much has been done in Riga in the last years of developing democratic traditions with particular regard to involving public in the processes of planning and decision making. Moreover, the experts dealing with public involvement have paid much more attention to the issue than it would be implied by the current legislation.

The public involvement in the Riga Official Plan preparation process (1993 - 1995) was one of the first examples of such kind in the country where no democratic participation tradition has been established so far. Public involvement in the Riga City Official Plan preparation process was carried out by two quite broad public participation programs. The program with open houses in each of the 6 boroughs of the City ran for 2 months for both phases. Each of the locations was chosen to provide convenient approach for local communities and usually held in places like administrative centers, community cultural centers, shopping centers etc.

The exhibits to be attended by planners responsible for the plan lasted for about a week at each location. The locations were announced on radio and TV, and published in the newspapers; posters were put up on site and in the neighbourhood. Next to announcing open houses to the general public, special interest groups were invited to discuss both the overall plan and the particular businesses of such groups as transport providers, financial institutions, business associations, environmental activists, tourist associations, housing providers, educators etc.

There were also meetings with the city residents, administration leaders and staff, governmental ministries, Academy of Sciences, neighbouring municipalities etc.

During the Riga Official Plan preparation process, close touch was kept with mass media. The objectives were to:

1. Spread the information about the Official Plan at the utmost extent possible;
2. Involve the public of Riga on discussions on the key development issues;
3. Obtain the public opinion on key issues;
4. Help the civic government to perform its role on public education.

Different detailed plans were developed after adoption of the Riga Official Plan. Special public participation programs were prepared for each project to involve different stakeholder groups.

The Riga City Development Strategy also was carried out by involving the top management and councilors of the City, representatives from the neighboring Jurmala Town, the County of Riga, and the Ministry of Environment and Regional Development, as well as a wide spectrum of professionals from Riga and surroundings. There has also been some input by the general public and interest groups.

Initiatives from inhabitants in the last years should also be taken into account. A good example was the establishment of the Mezaparks Community Association. Mezaparks is a residential district consisting of about 400 cottages located about 8 km to the northeast of the center of Riga. The residents founded the Community Association in August, 1997, to improve the quality of life in Mezaparks from the standpoint of development, social care, culture, and environment.

It is too early to talk about particular results, but the general feeling amongst residents is that there is now a dialogue with the municipal government to discuss various development proposals in order to influence the direction of development in their community.

CONCLUSIONS. Different stakeholders became familiar with the democratic planning and participation tradition when taking part in the planning process. Although some results have been reached in changing people's attitudes, the present level of participation is still low, and the tendency of general public is to avoid participation in

planning and decision making if the plans do not touch the interests of the particular community directly.

TOWARDS SUSTAINABLE URBAN TRANSPORT

PRESENT SITUATION. The City of Riga is located along the river Daugava and has approximately a diameter of 15 km. The river running from South to North divides the city in two parts. 70% of the population is located on the East side and so is the city centre (including the historical centre), which inside the railway - ring contains approximately 55% of all workplaces and provides 60% of the public services to the residents of the city. Public administration, service and retail is dominantly located on the East side, while other work facilities are more evenly distributed on both sides.

The city structure is causing a high level of commuting and other purpose traffic across the river, which is spanned by three road - bridges with a large volume of car and truck-traffic as well as public transport.

As a consequence of missing ring-roads, long-distance traffic also has to pass through the city centre and over one of the three bridges.

In total it is estimated that river Daugava is passed by ca. 375.000 persons a day of which 50% are travelling by public transport.

The number of cars have after a relatively slow increase up to 1989 experienced an explosive development. 1989-93 the increase was ca 57% or 10-12% per year average growth. In 1989 there were 109 cars/1000 inhabitants, today it is 163 cars/1000 inhabitants. Car-traffic grows 4-5% a year, while truck-traffic has decreased by 57% since 1989 (or 19% a year). Also the public transport vehicle traffic is decreasing (40% since 1989 or ca 10% a year). But total traffic in the city is growing rapidly.

In general the street network is of adequate standard, but the traffic speeds in the central area are low (20-30 km/h) and many intersections are congested. Lack of off-street parking facilities give an increasing curb-side parking and a rising problem by reducing street capacity. Another problem is short cutting traffic on local streets through residential areas.

But the number of vehicles in service, the km. offered have dropped 1989-1995 with 13% for trams, 12% for trolleybuses and 42% for autobuses. For all vehicles the decrease is 24%. Since 1989 almost no renovation of transportation units have taken place. They are run down and 72% of the trams, 45% of the trolleybuses and 30% of autobuses are 10 years old or older. The intensity of public transport service in the central part of the city has decreased by ca 40% since 1989.

According to the Riga Official Plan the new plan of development has been designed based on principles of sustainability. The following transportation policy has been formulated:

1. Every inhabitant and visitor of Riga should be given a maximum number of choices of transportation modes when travelling to destinations in the city.
2. The pedestrians and the electrified modes of public transport (railways, trams and trolleybuses) need to be given priority. They have to be combined as much as possible.
3. Cars are considered to be supplemental to public transportation, giving some services and promoting the economical activities in the city.
4. The transportation network has to be developed and maintained economising the public and private finances.

In the late 1980s, to limit the flow of traffic in the old town of Riga, a permit system was implemented. However, because of the proliferation of automobiles and ability of drivers to pay the permit fee, the streets of the Old Town are as crowded with parked cars as all parts of the centre of Riga. This makes it difficult for pedestrians to get around the narrow winding streets of the Old town. Money collected for permits go into the cities revenue therefore the city is not interested in reducing its income.

Before independence, several pedestrian streets were created in the Old Town - Kalku and Valnu streets.

In the Official Plan two other streets in the centre of Riga are to be converted to pedestrian streets, but that has not yet been implemented. The Official Plan has identified the first phase for a bicycle path, however, most of locations are in the green zones or recreation areas. No steps have been made to connect suburb residential areas with the centre of the city with bicycles paths, to give residents of Riga an alternative means of travelling to do business in the centre of the City. When roads are being repaired or improved even the first phase sections of the bicycle pathway are not being constructed, which would not influence in any major way to the overall expenditures.

Riga has a modern air monitoring system. Monitoring results indicate that transport in the center of Riga creates Nox emissions 4 times the permissible levels. However, the project coordinator of the air monitoring program does not believe that there is much sense in lobbying the Riga City Council to reduce parking places for automobiles in the centre of Riga. The attitude is that the automobile is a status, a convenience as well as symbol. Therefore Riga City Council will be not interested in taking this unpopular position. The program has been developed accepting the trends in transportation in Riga.

INITIATIVES. The increase in the price of a permit to drive into Old Riga with an automobile which was implemented by Riga City Council in the summer of 1997 has not reduced the number of entering vehicles.

A number of initiatives have been introduced in order to maintain the existing level of services offered by the public transportation system, including:

Several million dollars has been borrowed from the World Bank to finance upgrades to the existing rolling stock and to buy reserve parts.

New approaches are being investigated to more effectively collect riders fees.

CONCLUSIONS. Although many policies exist that recommend actions to make transportation in Riga more sustainable, implementation of appropriate measures is hampered by the fact that the automobile is an object of desire, a status symbol, which is promoted by the existing perception of the quality of life in the West.

As increasingly more space in the centre of Riga is allocated to automobile parking and the through-flow capacity of the streets is being increased, it is becoming less likely that Riga will take advantage of the opportunity to go directly from an existing, quite favourable, starting point, towards sustainable development without repeating the mistakes of many Western cities.

The described situation will have an immediate negative effect on public transport:
the decreasing population, the stagnating number of workplaces and the increasing car ownership will reduce the demand for public transport; further a higher car-ownership will increase congestion in the city centre, which will result in lower public transport operational speed and a decrease in quality of service; lower density in dwelling areas will reduce the number of potential public transport customers per km route-length and so make a proper service more expensive; the scattering of the population, workplaces and other town-functions even into the region outside the City of Riga will increase the average travel-length and time-consumption per trip and make it difficult and expensive to create a competitive public transport system; continuously ageing vehicles reduce the comfort-level of the public transport and reduce its ability to compete with the car; the financial constraints will make it difficult to renew and build up a public transport system which can meet the tremendous challenge to the described development.

There is a big risk, that public transport will be continuously declining ending up as a low status means of transport only for people who for one reason or another can't buy or drive a car.

A need clearly exists for the development of transportation action plan or strategy to move Riga to in a more sustainable direction in the transportation sector.

WASTE AND CONSUMERS

PRESENT SITUATION. Transfer from a planned waste management system financed by the Government to market-forces based management were the producer of waste paying for his waste is currently going on in Latvia. These changes have also brought about alteration in people's behavior and attitudes in relation to waste management.

The Riga City is the largest waste producer in Latvia accounting for about one half of the national industrial and building waste. The waste amount produced per inhabitant annually is 1.3 m³. During the last five years the amount of municipal waste has changed in Riga. The trends in the waste management sector in Latvia and Riga in particular are generally the same as in the rest of the world. The waste amount is growing due to the packaging of the imported products and goods, as well as due to local goods with updated packaging.

Any municipal waste management policy depends a lot on the national environmental policy, legislation and the administrative structure of environmental management. The national waste management concept has not been worked out yet in Latvia. A few laws and regulations in waste management area have been worked out conceptually in the last years to correspond with the strategy for sustainable development, but some areas are not covered by a legislative framework yet.

Much is being done in the waste management sector in Riga. The existing situation is examined, waste management policy developed, and much effort put onto waste management policy taking in account the new social and economic situation. Therefore, perhaps, less time, at least for the moment, is devoted to other directions of waste management.

The Waste Management Concept was developed and adopted recently as a part of the Project of Waste Management Plan for the Riga City from 1994 to 2005. Waste management improvement occupied an important place in the Official Plan of Riga City. Also, several decisions and regulations of the Riga City in waste management were adopted. All the steps above were targeted towards organizing waste management and introducing the principles of sustainable development.

The Riga Council is fulfilling the environmental policy in Riga towards the reduction of the amount of waste, and recycling etc. To this end 6 goals were established. Also, the registration system of all waste producers - individual households, cooperative houses, housing managements, companies, institutions, hospitals etc. - should be developed for this purpose. This question has to be solved by the municipality represented by the Environmental Protection Board at the Riga City Council in cooperation with other institutions of the City.

INITIATIVES. What has been done to implement the goals of the Waste Management Concept of the Riga City?

Reduction of the waste amount by reducing packaging amount. As mentioned above, the packaging waste amount has the tendency to increase. The Cooperation Treaty among Ministry of Environmental Protection and Regional Development, Riga Environmental Protection Board, and Latvia Waste Management Association was signed in May, 1997, to pursue the objective of improving legislative framework on packaging and the waste derived thereof as one of the basic ideas.

Reduction of the waste production in households and companies. In order to reduce the amount of waste produced by households a discount fee is envisaged for residents of individual households who are composting the organic waste in their own gardens. This financial encouragement is being implemented under the Decision on Organization of Work and Cost of the Riga City Waste Management in 1996 by the Riga City Council.

Implementation of separate waste collection. Much has been done by the Riga City Environmental Protection Board to achieve the goal of separate waste collection in 1994 and 1995. The Danish Environmental Protection agency has given financial support to the implementation of this project. Separate waste collection was tried in three different types of residential areas: the densely populated Old Town, the private residential area of the Vidzeme Borough, and the multistory building area of the Kurzeme Borough. The result of the pilot project was the basis for beginning separate waste collection in some Riga districts, which was started by the waste management company "Hoetica – ATU".

The Regulation on Amendments of Municipal Waste Collection, Transportation, Sorting, Recycling, and Disposal Regulations in the Riga City confirmed by the Riga Council in 1995 has legally confirmed the resolution by the Riga City Council to separate waste.

There are many things to be done in order to improve the possibilities of recycling and to enlarge the market of reusable materials in Riga and its vicinity. The largest part of separated cardboard and paper is being exported abroad currently. Private companies collect the non-ferrous metal waste and sell it abroad for recycling, but the profit from this is not invested in environmental protection.

The Riga City Council's municipal enterprise "Gardens and Parks" makes a welcome contribution to reducing amount of disposed waste as carrying out composting of garden waste from all green areas of the Riga City.

Creation of an aim-oriented financial system. An important step in the creation of an aim-oriented financial system was the Decision by the Riga City Council on establishing Fee for the Riga City Waste Management in 1997. It uses a uniform waste collection rate to give a part of the necessary finance to the administration of waste management. An essential fault in this financial arrangement is the fact that the fee

reaches waste collectors first. Thus, the finance for waste management improvement and development is not passed on.

Creation and maintenance of hygienic and environmentally friendly waste management. The first step in implementing this goal is to determine legal responsibility of every landlord and tenant and to involve all waste producers in waste handling. It was done by the Decision on Municipal Waste Collection, Transportation, Sorting, Recycling, and Disposal Regulations in the Riga City in 1995. In order to create the competition and to eliminate monopoly in waste management, SIA “NEHLSSEN – RIGA” started to collect and convey waste from the Kurzeme district in 1995.

Reduction of environmental pollution from waste management. The Riga City is working on the creation of a new updated municipal waste landfill. More than 6 years of two-phased research and investigation of new possible landfill sites have been spent without any results.

During the previous Riga City Council the reconstruction possibilities of the existing City landfill in Getlini were analyzed. A master plan was prepared and the Pre-feasibility Study and Preliminary Design of Continued Operation of Getlini Disposal Site was finished in 1997. This project has undergone EIA, too. A business plan for further activities in the Getlini Landfill has been worked out. All this work was guided by the Riga City Environmental Protection Board.

CONCLUSIONS. Although the waste problem in the Environmental Policy Plan for Latvia is mentioned as one of the priorities, the issue has still not been completely understood and researched at various management and social levels – government, municipalities, private sector, non-governmental organizations, and individuals. Links between increasing environmental pollution and excessive waste amounts, and wrong waste management was only realized in 1980s. However, no direct parallels are still drawn to the date between behavior of the consumer and waste producer, and the amount of waste produced.

The problem of waste management in Riga as a whole has not been studied in detail. At present no serious evaluation of waste management can take place because there is not enough information about waste control – creation of waste, collection, transportation, processing, and disposal in sanitary landfills. Using the existing data collection system it is impossible to get known how specific laws, regulations, and the implementation of these, affect waste producer. Relying on the existing data even less can be known about resident’s attitudes and behavioral changes. Nevertheless, some research on waste has been triggered, as waste can actually strongly affect the environment.

Although there are several laws touching waste management the legal system and the implementation of the laws on waste management are just being developed. Preparation of the Law on Household Waste was only started in 1997.

None of the institutions in waste management coordinate public education measures. Therefore, there is a lack of information for City residents about avoiding waste production and on how to handle waste more environmentally friendly way. Coverage of these issues in newspapers, radio, and TV is poor too. Therefore, more attention must be drawn on the problems of public information and education.

There are only a few specialists in Latvia and Riga understanding what is environmentally safe waste management at present, but the expertise of those working in waste management is gradually increasing. Professional education in Riga is mainly performed by rising proficiency of waste management specialists. Preparation of Masters of Science in environmental sciences and management, as well as environmental pedagogy, is being carried out by the Center of Environmental Science and Management Studies for four years. The Center of Environmental Science and Management Studies is the initiator of different educational programs, gaining knowledge and information from foreign specialists. The knowledge received in the course of these studies is delivered down the line to educate youth and children. Protective attitude towards environment is learned by the future waste handlers and producers. Educating people involved in waste management is carried out by the Latvian Waste Management Association organizing seminars for municipal specialists and waste managers. The Association has also prepared a textbook on waste management.

6. DOMESTIC ENERGY AND WATER CONSUMPTION

HEATING AND HOT WATER SUPPLY

PRESENT SITUATION. The district heating system provides steam for heating and hot water for consumption to most part of Riga. The consumption of heating-related energy will decline by 40% in the next few years, as compared with the maximum in late 1980s. Only after 2010 will consumption levels increase to those of the late 1980s. The above trends can be explained by the large decline in industrial production, increase in the price of heating energy, and the reduced and irregular service provided to customers. With regard to heating and hot water supply issue, the Riga City Council has adopted the following policies (Riga Development Plan, 1995).

- (a) Developing an effective energy savings program for the City, and lending support to private sector initiatives to this end.
- (b) Developing a heating services program for the City up to 2010 indicating the optimum configuration for the centralized and decentralized heat supply systems.
- (c) Recognizing the Latvia's heavy reliance on imported energy resources and the associated high costs, cogeneration of heat and electricity should be undertaken.

Most of the heating and hot water supply in Riga is district heating, supplied by *s/c Rigas Siltums* (a joint shareholders' enterprise, 49 % owned by the City of Riga) in cooperation with the municipal *s/c Latvenergo* (state managed shareholders' enterprise

subject to privatization). About 21 district heating plants supply heating and hot water to about 95 % of the City. Two of the heating plants are cogeneration facilities or thermo-electrification plants producing 55 % of the total heat. The two thermo-electrification facilities produce 25 - 30 % of the total electricity consumption in Latvia. It should be noted that Latvia is importing 50 - 60 % of its electricity.

Most of the data in the following section were taken from the report "Conceptual issues regarding the development of the heating supply for Riga" prepared by *s/c Rigas Siltums*. The data and arguments presented in the report are unsubstantiated and not traceable. Generally, the report is intended as a political document to persuade the Riga City Council to adopt a policy whereby district heating would be mandatory in certain sections of the City where the heating density is greater than 0,6 Gcal.hour/hectare. This means that residents would not be permitted to install independent heating systems and refuse heating from *s/c Rigas Siltums*. Many apartments and buildings under renovation in the center of Riga are being equipped with autonomous heating systems and hot water boilers to ensure reliable year-round service and save money. Heating is provided by *s/c Rigas Siltums* starting from quite late in the autumn and turned off early in the spring. The system is functioning inefficiently with extensive loss of heat at the customer end due to technological deficiencies and the age of the district heating system, thus increasing costs too.

S/c Rigas Siltums argues that district heating is more environmentally friendly and eventually more cost effective *via* application of the following measures:

householders upgrading the heating installations in their premises, including installation of shut-off valves for individual radiators;
installation of meters in buildings and apartments to record heat and hot water consumption;
technical reconstruction of the heating supply system in buildings;
insulation of buildings on the whole;
reconstruction of the heating plants and supply network.

INITIATIVES. The Riga Municipal Services Department has formulated a Heating Development Plan reviewed at the end of September, 1997. The Plan supports the existing centralized heating system, though reorganized. In order to continue its operation it must be upgraded to increase its efficiency and decrease costs for consumers. Based on recommendations in the Plan, the following actions are being implemented:

- A New Customer Accounting System is required which is transparent and easy for consumers to understand. A new uniform billing form is being implemented in buildings owned by the municipality and also recommended in privately owned buildings.

- All municipally owned buildings are required to have heating meters from the upcoming heating season on. One resident in each building will be responsible for reading the meter and submitting the filled-in billing form to the Housing Authority. This idea was advocated in a PHARE project developed in 1992 and 1993.

CONCLUSIONS. The main factors to influence choices a consumer makes regarding heating are price and quality of service. Many consumers choose alternative heating systems due to the high prices and poor quality of service provided by central heating. The next few years will show whether the reforms under implementation now are bringing about improvements in the central heating supply. For the time being, environmental concerns have low priority compared to that of the price of heating. Consumers are interested just in paying as little as possible for heating. It is also not surprising that residents of buildings where heating meters are installed show most interest in investing in building insulation.

The main obstacles for reforms and initiatives are:

1. The slow pace of implementing new policies and improvements.
2. The existing lack of coordination and organization being financially beneficial to many management structures wishing, as the consequence, to preserve the *status quo*.
3. The Riga City Council owning 49% of interest in *s/c Rīgas Siltums* is excluded from most management decisional aspects, except setting tariffs.

The policy advocated by *s/c Rīgas Siltums* recommends introduction of energy saving measures, but no incentives to do so really exist for consumers, because no real savings are actually expected, as the cost of renovating the existing system will be too high.

WATER SUPPLY

PRESENT SITUATION. The Riga Official Plan indicates that the water supply and sewerage system will be owned and managed by the City. Proposed upgrades to the Riga water supply and sewerage system were documented in a 1994 feasibility study by RUST VA-PROJEKT AB.

The following actions to lower water consumption have been proposed:

1. Installation of water meters. At least one water meter per subscriber and for housing blocks one metering point (cold and hot water) for each staircase;
2. Increased tariffs will have a saving effect on water consumption;
3. A plan for and the use of modern leak detection equipment will make it possible to locate leakages much earlier, not only in the block house areas, but also in the main distribution net of RUK (*Riga Waterpipe and Sewer*);
4. Education and information about the costs imposed by leaking taps toilets, and on the extent of distributing the savings to households, in order to increase the result from items 1 and 2.

The saving effect from a fully introduced water metering installation program as described above is estimated to be 15 % or approximately 30 000 m³/d.

INITIATIVES. Recently, the Riga City Council has indicated that all residential buildings within the next few years will be required to install water consumption meters. Presently, residents of buildings not equipped with consumption meters do not feel the need to save water because everyone pays the same tariff based on an average water consumption figure. There are buildings already equipped with water meters, but the residents of those can ignore the meter readings and pay the average water consumption tariff even if their consumption is actually higher. Only those residents who have water meters and use less than the average water consumption amount are interested in saving water.

CONCLUSIONS. The existing water consumption tariff based on an average water consumption by one person during a 24 hour period encourages many consumers to install water meters at their own expenses before the mandatory date because of the inherent savings. Fundamentally, aside from technological repairs and upgrades and water metering no information programs, incentives, measures or technologies have been introduced to encourage and bring about reductions in water consumption. Public information programs regarding water saving measures and available technologies would bolster efforts to achieve a more sustainable water supply.

8. CONCLUSIONS

GENERAL EVALUATION. To get an accurate picture of resident's attitude change to consumption a large and qualitative information background is necessary to show the present situation and follow its changes. No such data are available at present, but measures have been taken towards it. Some data have not been generalized, other have not been included in statistical records. Evaluation of the actual situation is not possible because of the scarce analytical material which would enable to picture the existing situation in each area, and there is a lack of definite laws, regulations, etc. to affect public behaviours. There is also very little material describing gained experience and best examples of local initiatives.

At present examination of values in Latvia are reconsidered as social and individual values are re-esteemed. This process is slow and difficult, when old stereotypes and ways of thinking have to be changed. On the other hand it is difficult for those who make laws and for those who implement them as well.

Situation analyses indicate that in the area of consumption the situation is worsening. At present various social groups of communities are choosing their behaviour models, but it is difficult to tell what it will be in the future, because of the possible changes of public behavior in relation to consumerism development that have not been analyzed.

ACHIEVEMENTS, DIRECT AND INDIRECT RESULTS. In many areas described in the Case Study actual results have been obtained. At the present time the National Environmental Policy Plan and National Environmental Action Program has

been worked out, which is intertwined with the idea of sustainable development. On the national level laws on environmental protection, waste management, transportation, spatial planning etc. are being worked out. In the Riga City intense planning is taking place – the Riga Official Plan with the sustainable development idea is deeply embedded and adopted. The Riga Development Strategy has been adopted, the Riga Region Development Strategy is being worked out by active collaboration of various stakeholders in solving common problems including environmental issues.

In various sectors of the City's life concepts, management plans, regulations (Waste Management Concept, Central Heating Concept, Environmental Protection Management Plans, etc.) have been developed or are in development stage, sustainable development ideas of conservation of nature areas and careful use of natural resources are deeply embedded. In all spheres the present situation is being examined, that is the first necessary step towards order and improvement.

The specialists of the Riga City Development Department regularly participate in different training programs as lecturers and share their experience gained from the preparation process of plans on different subjects - territorial planning, strategic planning, public participation, cultural heritage etc.

Beside the results to be estimated quantitatively also indirect results exist, the effect of which will appear in some time only. Most difficult is to evaluate changes in perception and attitudes. Perception, which has been developing for more than fifty years, cannot be changed in a short time. Past habits, people's skepticism and apathy has to be overcome because these impede each person's will to participate and ability to influence legislation. Due to the efforts of City's employees, public view of participation in planning and legislation has changed, but not enough. Slowly is the cooperation tradition emerging. The level of environmental awareness is growing.

WEAKNESSES AND PROBLEMS. Even though there are achievements, a number of problems which are barriers to sustainable development have to be mentioned. The main problems in different areas are similar and are as follows:

There is not a proper information data base of sufficient quality.

Legislative acts, regulations are in the development stage, some important areas have not been covered yet. Development of instruments for enforcement of laws has not received insufficient attention.

There is a discrepancy between adopted concepts, tasks and then implementation because, of lack of economic, administrative and other resources.

Although environmental problems are established as a priority in the Riga Official Plan, at present Riga does not have an Environment Action Program.

There is a lack of coordination and collaboration between municipality and state, various municipal departments, interest groups.

There is insufficient public education and level of environmental awareness.

There is a shortage of public information about environmental situation.

There is insufficient involvement of public or interest groups in solving environmental problems and is reflected in the legislative process. The present level of participation is low and the tendency of general public is not to participate in planning and decision making.

There is insufficient support for best initiative projects, including those directed to change public attitude to consumption.

There is limited experience in management, preparation of various projects especially environmental projects and in obtaining local financial resources and support for their implementation.

There is shortage of regular targeted information about natural environment and need for changing public behaviour concerning consumption through mass media. TV and radio have very few programs on this theme. Lack of efficient publicity to environmental issues. The advertising supported by papers, radio, and TV currently is contributing to the contrary effect creating more of a consumers' society.

Not always decision makers have clear understanding of what the sustainable development is and what a sustainability-based development strategy should include. Environmental understanding of the level of sustainable development is lacking in all sectors of society; hence no significant initiatives have been started to encourage more sustainable living and consumption patterns.

Passivity and lack of interest of one part of administrators in environmental protection and economy of resources.

SUGGESTIONS FOR IMPROVEMENT. To create an environmentally friendly public attitude in a comprehensive manner, has to take place using various means and methods.

Greater attention has to be paid to the development of information system, which could be achieved by separate, even small pilot projects. Based on results of analyses done in the Riga Case Study can be seen that it is important to involve municipal institutions in different projects for a sustainable community. This would lead municipalities to understanding what urban sustainability is, why is it necessary to carry out such projects and develop indicators to monitor the development.

To get more involved in preparation of laws and legislation, collaborating with state and municipal institutions in preparing legal acts, regulations etc. in developing implementation mechanisms embedding the responsibility for implementation.

To this end educational materials and financial resources should be provided by the City. The kind of information materials and training programs targeted for different kind of audiences and which topics have to be tackled by State and municipality together. More close coordination should be established not only between the Government and municipalities, but also between different municipal services, community, and public organizations.

A handbook for policy-makers describing in general terms what is the possible range of sustainable measures/solutions that could be applied to address certain issues should be prepared. This is intended as an educational tool.

To take into consideration that the stakeholder involvement is an important first step in any sustainable development effort. It is necessary to pay much attention to the involvement of the media to ensure purposeful messages and useful information.

The City administration should particularly support more those projects and initiatives (though small) that address change in resource consumption and similar matters. The understanding by administration, politicians, and specialists about the importance of such projects should be raised.

Proficiency and knowledge of specialists has to be raised.

It is necessary to become involved in international projects and programs dealing with development of environmentally friendly behavioural models. In this way, more experience could be gained in submission, preparation and financial resource finding of various environmental projects.

It is necessary to work out the Environmental Policy Plan and Action Program for the City.

Improved decision making is the key issue in moving towards sustainable development in Riga, as well as Latvia in the whole. Performance measurement and integrated sustainable development reporting could be essential tools to help designing and evaluating policies. In order to work out this objective both top-down and bottom-up approaches have to be applied accordingly.

Environmental and social-economic surveys and monitoring results in the form of published reports must be combined with community visioning and sustainable indicator selection process. This can ensure wide public interest in understanding sustainable development principles and integration into practice, and provide motivation for public involvement in the policy design and evaluation, as well as changing of life styles.