Introduction

The paper aims to describe a variety of identified needs and expectations towards urban logistics policies, which are both just under preparation or already redefined by local authorities, business stakeholders and inhabitants in the selected European countries. The main findings in the paper are based on the results of the European project ENCLOSE (ENergy efficiency in City LOgistics Services for small and mid-sized European Historic Towns), which was funded by the European Commission under the Programme Intelligent Energy – Europe (IEE). The main objective of ENCLOSE was to raise awareness about the challenges of energy efficient and sustainable urban logistics in European small and middle historic towns. The project aimed at defining and analysing concrete opportunities to achieve highly significant improvements and benefits by implementing and operating suitable and effective measures, schemes, framework and solutions specifically targeted to demanding urban environments [1].

Urban Logistics Policy Objectives and Solutions

Local authorities in European towns have identified strategic objectives covering a range of areas including in particular improving air quality and quality of life, and achieving energy savings. Urban logistics policies have been developed to achieve these objectives with policy options covering both regulatory and encouragement instruments/solutions for the logistics sector to improve their operations and reduce adverse environmental impacts. Implemented policies offer also differentiated incentives to stakeholders and citizens to make positive use of the measures and logistics services.

Urban logistics policy changes aim to, among other objectives, reduce the amount of pollutants emitted, minimize the interference between passenger and freight transport during over-lapping peak hours, guarantee high livability standards within the urban environment, satisfy the structural import needs of goods characterizing the normal city functioning and development [2].

To meet the planned objectives of urban logistics policies, European towns have a broad set of possible solutions. They can be divided into different groups depending on their types:

- Solutions according to their scope:
  - Solutions related to public infrastructure
  - Solutions related to land use management
  - Solutions related to access conditions
  - Solutions related to traffic management
  - Solutions related to enforcement and promotion

- Solutions according to the implementing group of stakeholders
  - Carriers/logistic operators – companies delivering goods to destinations inside the city
  - Receivers – companies (usually local businesses or commercial premises) that receive goods delivered by carriers
  - Local authorities – responsible for establishing regulations regarding traffic and transport in the city [3].

Main Objectives of the Selected Cities

Most European capitals and major cities have already implemented their urban logistics policies. The situation is distinctly different in small and mid-size towns, particularly those with historic centres. That cities are lagging behind, as they have to face and overcome several barriers (related to shortage of resources, competences, organisational structures, institutional background, etc.) to be able to effectively embrace innovation, adopt and implement appropriate plans and measures towards sustainable city logistics. They also have additional constraints and challenges related to their specific territorial, social and economic characteristics (difficult mobility and freight distribution, higher impacts of environmental pollution on citizens and quality of life, etc.) and yet respond to increasing demand for effective measures as well as large potentials for improvements in the energy efficiency and sustainability of city logistics operations [1].

1 Reviewed paper.
Particularly difficult situation within the scope of urban mobility is observed in developing countries as they face a number of problems, primarily as a consequence of two key developments: urbanisation and motorisation. Many developing countries are experiencing more than 6 per cent urban population growth per year and within a generation more than half of the population in the developing world is expected to live in cities [4]. The problems relating to urban transport are many, multidimensional, and interlinked (see Picture 1).

For instance, pollution is a problem mainly along the dimensions of the environment and health, but it is also linked to congestion (as congestion aggravates pollution) and social exclusion (as people from the most disadvantaged groups tend to be disproportionately exposed to pollutants from transport) [5].

Within the scope of ENCLOSE project’s implementation, the questionnaire on urban logistics policy objectives was carried out for the three forerunner towns (Lucca, ’s-Hertogenbosch and Trondheim), all of the follower towns and three other partners (AustriaTech, ES and ILIM). The responses were made primarily with reference to the respective municipalities of Alba Iulia (Romania), Almada (Portugal), Balchik (Bulgaria), Burgos (Spain), Dundee (United Kingdom),’s-Hertogenbosch (Netherlands), Lucca (Italy) and Serres (Greece). Trondheim (Norway) response was for Posten Norge with reference also to Trondheim Municipality. The AustriaTech response covered cities in Austria as a whole, while ES responded regarding the Växjö Municipality (Sweden) and ILIM responded regarding Poznań Municipality (Poland).

The identified urban logistics policies address a wide range of objectives. The cities participating in the conducted questionnaire specified a list of objectives and unique targets for their urban freight logistics [1]:

**Alba Iulia** – has an objective to increase the use of cargobikes as well as to improve the efficiency of logistics in order to reduce air pollution, traffic noise and improve the safety and comfort of pedestrians.

**Almada** – urban logistics policies are intended to help organize public space, mitigate illegal parking, reduce inconvenience to citizens’ quality of life, organize city logistics, reduce air pollution, traffic noise, greenhouse gas emissions and energy consumption as well as improve traffic flow.

**Austria** – within Austria urban logistics policies are generally not high on the political agenda. From the Austrian cities point of view hardly any problems occur caused by logistics and goods transport. Small cities in particular do not see any need for action. In the medium and large cities urban logistics creates some problems which need to be addressed:
- high traffic
- noise and emissions
- loading zones
- empty running due to disparate SME-traffic flows
- congestion during peak commuting periods
- incorrect routing/inappropriate traffic systems.

**Balchik** – urban logistics policies are intended to address the reduction of the air pollution and traffic congestion.

**Burgos** – the Decreto del Sistema de Control de Accesos de Vehículos al Centro Histórico de Burgos seeks to harmonize the tourist trade with the tasks of loading and unloading of goods, preserving the historic core areas from traffic and providing preference for pedestrians, ensuring the safety of residents and visitors.

**Dundee** – the Local Transport Strategy outlines Key Aims to be considered for the city which include:
- investigating methods for rail freight to play a full part in sustainable distribution
• encourage distribution development in connection with sea and inland waterways
• maintain the road network in a manner which enables wide accessibility to freight vehicles whilst ensuring that such vehicles use the most acceptable routes through the urban area, thus reducing noise & disturbance to Dundee’s communities
• encourage and develop the role of Dundee Airport in expanding air freight opportunities
• encourage methods to improve efficiency in the freight distribution system.

‘s-Hertogenbosch – the urban logistics policy objectives are to create a safe and attractive city centre/shopping area, improve safety, increase load factors/efficiency and to reduce air pollution and noise.

Lucca – urban logistics policies are intended to reduce the impacts of freight transport in the historic city centre such as traffic congestion, noise pollution, pedestrian safety, better efficiency and cost-effectiveness of freight transport, risk of damage to historic buildings, externalities including both social and economic costs, and overall improvement of the quality of life for city users. These goals will be achieved by:
• reduced total number of vehicles
• improved distribution schemes: load optimisation (consolidation) and improvement of delivery routes
• development of added-value innovative services
• eco-friendly delivery vehicles.

Lucca Municipality also aims to improve broader public awareness of the impacts of transport and to build a strong local consensus among stakeholders and user categories. The Municipality is discussing and developing a more comprehensive infrastructural plan and policies to achieve the planned objectives and further extend them. The activities currently carried out include the establishment of specific policies for logistics (e.g. limited traffic zone regulation, implementation of an access control system for mobility management).

Poznań – the objectives of the urban freight policy system are:
• to establish a logistics system offering freight carriage, door-to-door delivery, warehousing/storage and related services, such as goods sorting, distribution, inspection, sanitary control and documentation
• to organize combined freight transport system encompassing rail and road transport or road and river transport
• to offer express, door-to-door services with guaranteed delivery times and specialist vehicles for different types of goods
• to improve the quality of freight transport, including reducing lorry movements into the city and, in particular, the city centre
• the city should support investments in the transport infrastructure through locating logistics centres in Poznań or its vicinity
• when defining the location of strategic park & ride car parks, the needs of lorry drivers should be taken into account by providing parking space in intermediate zones; lorry parking in residential areas should be avoided.

Other objectives regarding freight transport include:
• objectives for the extension and modernization of the road network – to free residential areas from through traffic, in particular freight and the carriage of hazardous goods

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<th>CO₂ reduction</th>
<th>Traffic noise reduction</th>
<th>Visual nuisance</th>
<th>Preserving heritage areas</th>
<th>Organise public space</th>
<th>Pedestrian comfort</th>
<th>Create safe and attractive city centre</th>
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Tab. 1. Objectives for urban logistics policies in selected European countries [1]
• objectives for railway transport development – to create conditions for combined (multi-modal) freight transport; and to eliminate freight transport and the carriage of hazardous goods across urban areas, in particular densely populated residential areas.

Serres – urban logistics policies aim mainly to contribute to better environmental conditions (reduced air pollution, visual nuisance and traffic noise) and to smooth urban freight flows. A better environment and commercial performance offer the promise of social prosperity and quality of life. A major issue to be addressed is illegal parking obstructing logistics operations.

Trondheim – the municipality has policies to reduce CO₂ emissions by 30% from 1990 to 2020 and goods distribution in the city by 25%.

Växjö – the municipality’s transportation strategy aims to reduce CO₂ emissions and the use of fossil fuels for freight transport [1].

Conclusion

The respective national and local governments set the broad policy context for urban logistics policies in most of the presented towns, though Bulgaria has no national or regional freight policies. In detail, these tend to address issues of sustainability including promoting the use of electric vehicles and addressing air quality issues locally. These are complemented in a number of countries by regional freight policies and support.

At the urban level responsibility for developing and implementing urban logistics policies lies with municipalities or metropolitan authorities covering larger urban areas. Policies affecting urban logistics can be covered by different plans, appearing in plans relating to sustainability, climate or air quality, as well as more general urban transport plans and strategies. The most commonly cited objectives in the study are low emissions/local air quality and traffic noise reduction, though objectives cover also other environmental aspects, safety and improving the quality or efficiency of urban logistics [1].

It can be clearly noticed, that the main aspect of any possible preparation and implementation of the local urban logistics policy is the recognised need to change the current situation within the city, and, which is also of significant importance, the available fundings and skills of development. At the local level, it is particularly important to build stable and permanet consensus among various stakeholders and to overcome private sector reluctance to change as well as to spread funding costs beyond the public sector.

Abstract

The paper presents the national and local urban logistics policies’ objectives identified and analyzed within the questionnaire conducted for the partners of ENCLOSE Project. The involved cities and organizations specified a list of needs and unique targets for their urban logistics plans among which the most common were low emissions/local air quality and traffic noise reduction. At the same time, the objectives covering environmental aspects, improving the quality, efficiency and safety of urban logistics are also significantly important.

Streszczenie

Artykuł przedstawia cele krajowych i lokalnych miejskich polityk transportowych, które zostały zidentyfikowane podczas badań przeprowadzonych wśród partnerów projektu ENCLOSE. Zaangażowane miasta i organizacje wyszczególniły szereg potrzeb i specyficznych celów, które powinny być uwzględnione w tworzonych dla nich miejskich politykach transportowych. Najważniejsze z nich to obniżenie emisji gazów, poprawa jakości powietrza i obniżenie poziomu hałasu. Jednocześnie, wskazywano, iż aspekty środowiskowe zmierzające do poprawy jakości, wydajności i bezpieczeństwa logistyki miejskiej są również niezmiernie istotne.

REFERENCES