

## **SUSTAINABLE DEVELOPMENT CONNECTIONS WITH TRANSPORT LOGISTICS MANAGEMENT**

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### **INTRODUCTION**

Nowadays, the trend in force is so called sustainable development of economies. It is (according to the definition of the Act on Environmental Protection) the socio-economic development, in which there takes place the process of integration of political, economic and social activities maintaining the balance of nature and durability of basic natural processes to guarantee the opportunity of satisfying basic needs of individual communities or citizens of both the contemporary and future generations [5].

This concept implies the necessity of integration of activities in three areas – the protection of natural resources, economic growth and equitable distribution of benefits [16]. To implement this idea, it must be subjected all branches of the economy and social life, including the transport logistics sector. The aim of the paper is to recall theoretical premises of sustainable development and refer them to the areas of the transport logistics sector, particularly taking into account the economic, social and environmental value in the core of transport logistics management, selected modernization activities of the logistics area and the motives crucial for the implementation of sustainable development in the enterprise.

### **PREMISES OF SUSTAINABLE DEVELOPMENT**

Hereafter the concept of sustainable development arises. According to S. Cohen [4] sustainable development applies to the fulfillment of the expectations of the whole of stakeholders by increasingly effective production of socially desirable goods and services with simultaneous reduction in the use of natural resources and respect for the policy of the environmental protection. It is an approach that creates added value by embracing opportunities and managing risks deriving from economic, environmental and social developments [14].

Along with a variety of attempts concerning sustainable development, one of the mainly identified is the balance based on three dimensions: the economic, social and environmental ones [11]. The sustainability is pursuing to make decisions based on the categories of environmental integrity, social equity and economic prosperity [2].

On the foundation of the economic dimension, the idea of sustainable development reflects on the potential of the capital as assets and flows, not constrained to the financial resources, but furthermore conceives other categories of property, such as the ecological or natural, human or social assets, considering

growth of the areas of the economy and the society, jointly with its aspects such as ecological economy or environmental matters of management [12].

As about environmental dimension of sustainable development, it contains the privilege of natural resources, protection and restoring the ecological systems for future generations, conservation of natural resources and reduction of negative impacts on eco-systems [6].

The social dimension is heavily constrained to the concept of social responsibility of the enterprises as the consequence of the interconnections and the linkage among partners and by achievement of the goals of the enterprise through realization of the support for the sustainable development in the society, the maintenance of the environmental and cultural assets for the future generations, the appreciation for the differences and the promotion of the lessening of social discrimination [1].

The primary objective in creating the integrated order of three dimensions is the adopted balance and harmonization of structural changes [13]. They are to gradually reduce and eliminate disproportion and deformation developed so far. While interacting, they also develop the systems minimizing functional, ecological and social conflicts, and also the ones providing an increasingly high quality of life and effectiveness of management.

## THE INTERACTION BETWEEN THE SUSTAINABLE DEVELOPMENT AND TRANSPORT LOGISTICS MANAGEMENT

The management area of the complex nature of links with the economy, humans and the natural environment is transport logistics [15]. Logistics fields, among others transport logistics, enables the development of social, ecological and spatial order since, in the environmentally oriented logistics system, the environmental and economic goals are treated equally. According to T. Borys [3] sustainable transport logistics is not simply the fulfillment of expectations and requirements obligatory, among others, due to the EU directives, but, most of all, a natural direction of development of every enterprise, which wants to compete on the local or world market in a responsible and perspective way.

The most important areas which specify the concept of sustainable development as including the economic, social and environmental value in the core of transport logistics are presented in Figure 1.

The interaction between the sustainable development and transport logistics management establishes specially critical stage of the operations on the environment. Sustainable transport logistics is the area which does not cause a danger to human being or environment and assemble the desires of the movement of people and goods in reference to the attitudes of the utilize of renewable and non-renewable resources before their regeneration aptitudes [9]. Transport logistics is the sector whose development significantly affects the prospects of sustainable economic development of both the European Union and Poland, both on account of the fact that, nowadays, it is the significant source of greenhouse gas emissions but,

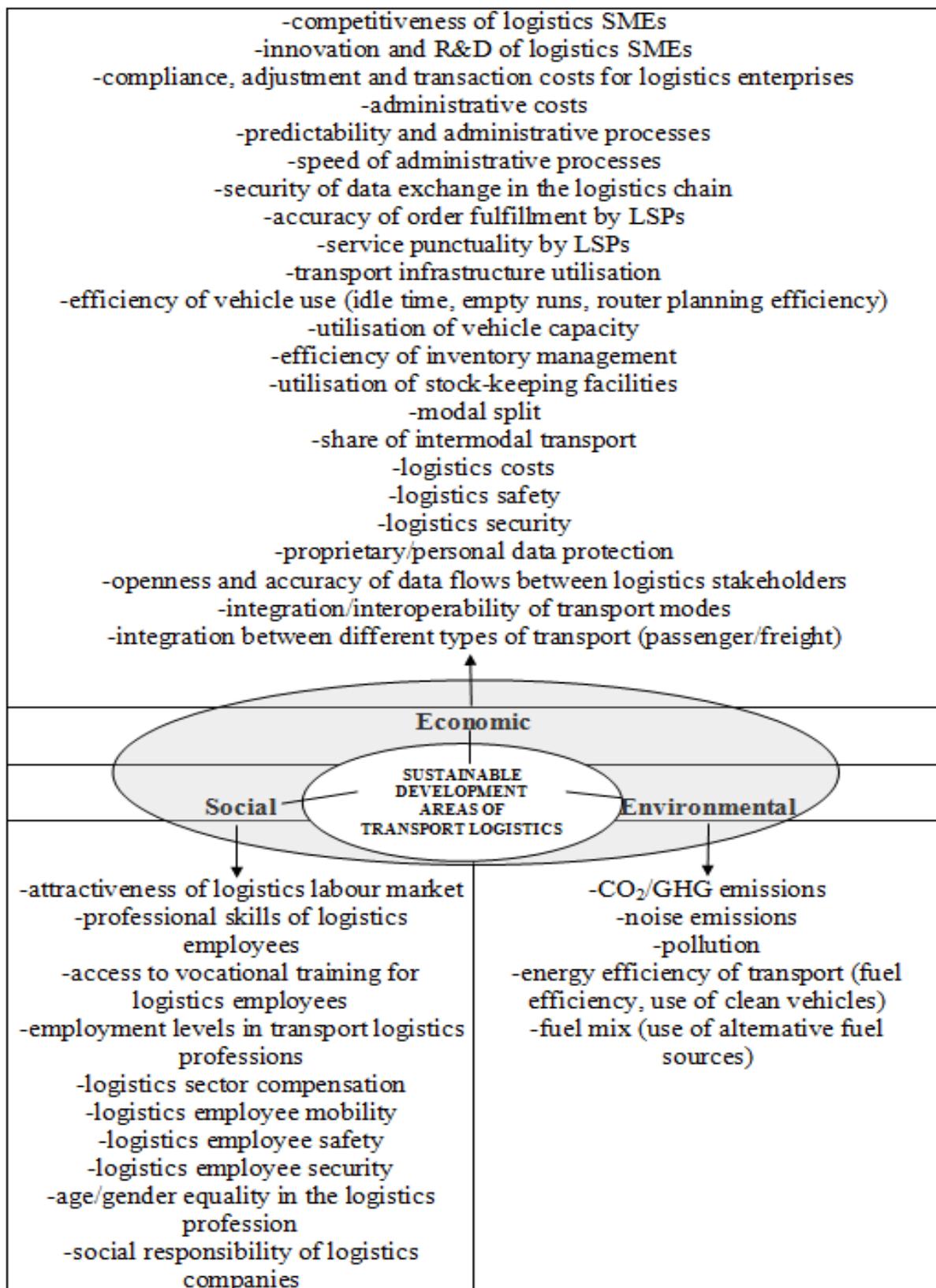


Fig. 1.

Areas of sustainable development including economic, social and environmental value in the core of transport logistics

Source: Own elaboration on the basement of: [7]

most of all, because of a strong trend towards an increase in emissions observed in the last two decades. The reversal of this negative trend is one of the most difficult challenges of the transformation of the environmental area of transport logistics, simultaneously being the most critical area of sustainable development. Therefore, with reference to this and other issues of the environmental area of transport logistics management, there will be necessary far-reaching changes: beginning with the way of spatial planning, through the development of appropriate consumers' behavior, ending with changes in the applied transport technologies and modes of transporting passengers and goods. Taking most of these actions is urgent although individual tools require improvements in the medium and long term. The most urgent modernization activities of transport logistics management refer to environmental issues indicated in Figure 1 and, along with the resulting benefits, are presented in Figure 2.

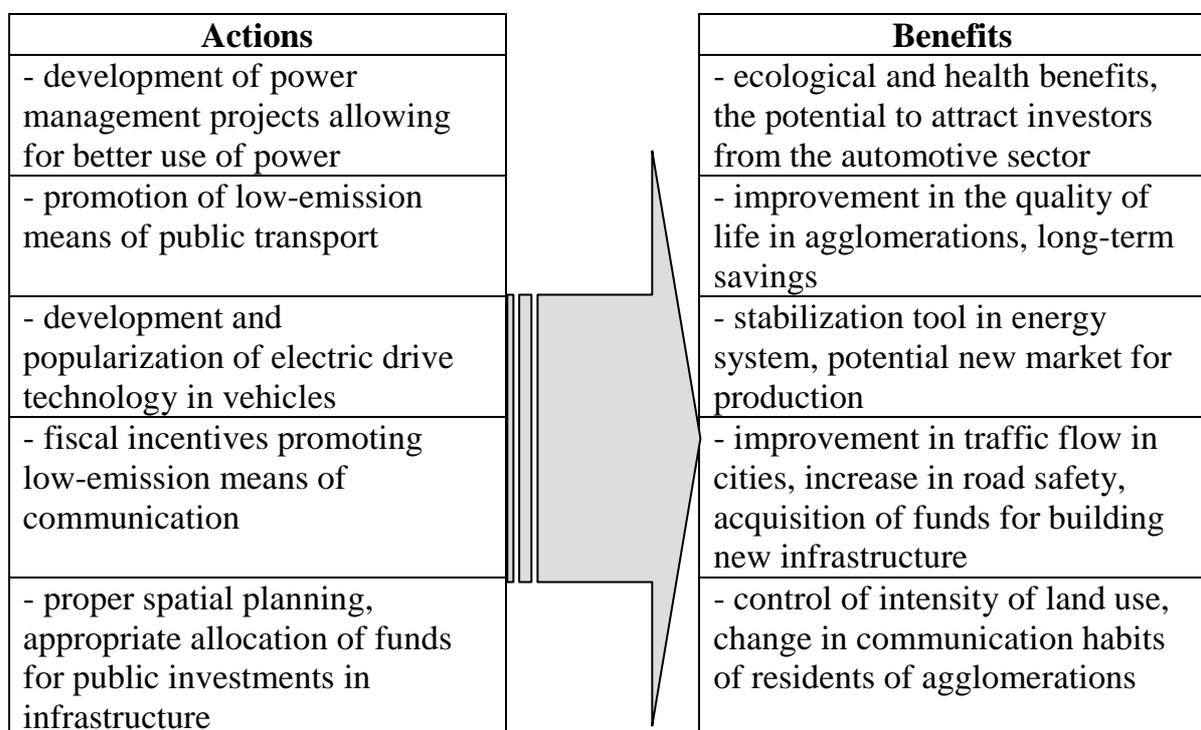


Fig. 2.  
Modernization activities of transport logistics management with the resulting benefits

Source: Own elaboration on the basement of: [8].

## MOTIVES CRUCIAL TO IMPLEMENT SUSTAINABLE DEVELOPMENT IN THE ENTERPRISE'S MANAGEMENT

The perception of modernization activities being the indication towards the implementation of the assumptions of sustainable development in terms of benefits by entrepreneurs is a separate and uneasy issue. In the 21st century entrepreneurs are aware of what the implementation of sustainable development in their business activity brings about. These are certain constraints and expenses that must be

incurred by everyone to be included in the framework of corporate social responsibility [10]. However, in spite of expenditures that must be incurred in connection with the implementation of the strategy of sustainable development, it should bring about measurable benefits not only for the external environment but also economic benefits for the enterprise itself. Figure 3 presents the reasons determining the implementation of sustainable development in enterprises. The research was conducted in 150 entities conducting their activities in the SME sector, including the companies of the transport logistics sector.

The conducted studies indicate that most factors are economic factors which create value added for enterprises. The highest score was obtained by the motives associated with savings of energy and raw materials for production (45%), which is associated with direct reduction in variable costs incurred by the enterprise. Another reason for the implementation of the strategy of sustainable development is concern for the natural environment (37%), which indicates that there is great awareness of impact on external resources. Moreover, legislative changes require the adjustment to the current legal standards which are developing towards sustainable development – e.g. the EU standards and directives (35%). Another point is closely related to building the brand and awareness among consumers and business partners (30%). The improvement in the brand image is associated with demonstrating financial and non-financial results outside the enterprise. Furthermore - 26% of the respondents associate sustainable development with effective resource management, 20% - with improvement in competitiveness and 17% - with granting from the EU funds (Figure 3).

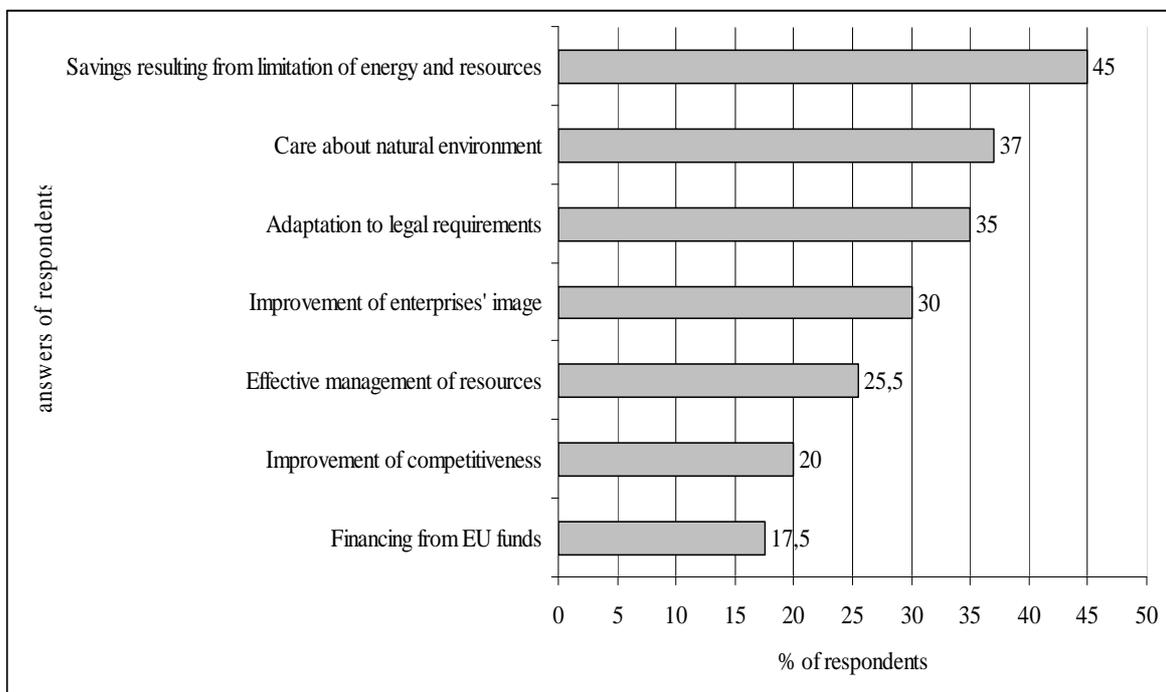


Fig. 3.

Motives deciding about implementation of sustainable development in the enterprises

Source: [17].

## CONCLUSIONS

The idea of sustainable development is nowadays considered as the leading direction in the development of the EU countries and many others in the world. According to the concept of sustainable development, there is a compromise solution between further economic development and preserving the environment in the best possible condition. This concept is focused on and proposes the existence of interdependence of economic, social and environmental development. Each of these three dimensions can be specified for different sectors, including the transport logistics sector with the value in the core of transport logistics management. The environmental dimension is particularly important from the perspective of sustainable development with reference to the transport logistics sector. It implies the possibility of maintaining the existing environmental qualities, reducing pollution or degradation of the natural environment which in recent times has been devastated by the man. The most urgent modernization activities of transport logistics management referring to the environmental issues of the concept of sustainable development are the time requirement and their implementation indicates responsibility for future generations. However, from the perspective of the expected economic benefits, they may constitute the motives crucial for the implementation of sustainable development in the enterprise.

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