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**IMPROVING THE EFFICIENCY OF CONTAINER AND TRAILER
TRANSPORTATION IN UKRAINE THROUGH THE USE OF “GREEN”
LOGISTICS**

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Railway transport is one of the important participants in the international network. Its significant advantages include relatively low cost of transportation, simple shipment procedures and the distance of transportation. Modern areas of development of logistic approaches should focus on the increase of level of environmental protection and social responsibility of the carrier, which are required by the modern market of transport services.

Using container and trailer trains is one of the ways to improve the freight transportation technology in international and domestic routes. This is due to the fact that the delivery of goods by certain modes of transport has a greater negative impact on the environment. Thus, the introduction of “green” or, in other words, environmental logistics is currently a very important problem, the solution of which will preserve the climate on the planet.

The main task of “green” logistics is the integration of different modes of transport to minimize the involvement of road vehicles. Such logistics is focused on reducing the costs associated with environmental pollution, climate change, noise exposure. The purpose of “green” logistics is to ensure a balance between economic, environmental and social indicators. Container and trailer transportation play a significant role in the development of this logistics. It should also be noted that the importance of “green” logistics is supported by the national policy aimed at reducing greenhouse gas emissions.

At the moment, the main cargo carriers are rail, road and water transport. The reason of sustainability of these modes of transport in the transportation market is certain advantages of each of them. However, none of them is universal. Profitability and environmental friendliness of a particular mode of transport depends on the characteristics of shipment. For example, large shipments over long distances are cost-effective for rail and water transport, while transportation of small consignments of goods over short distances is cost-effective for road transport. However, road transport is significantly inferior in terms of environmental friendliness.

Effective measures for the development of container and trailer transportation in Ukraine can include the renewal of specialized rolling stock, the adoption of relevant

laws to create national regulations, the separation of freight and passenger trains in areas with heavy traffic, the use of multimodal technologies for cargo delivery in certain periods of the year, financial and economic support from the government, special tariffs that take into account the environmental component, the formation of groups of specialists in the organization of combined transportation, and the development of technical means and technologies of these transportations.

The main advantages of multimodal transport include maneuverability, efficiency, speed performance, productivity, safety, greater environmental friendliness, possibility to reduce harmful emissions through the use of energy-optimal options of train schedules when trains leave stations, saving fuel and energy resources, longer operational life of roads, fewer vehicles loaded above the rate, reduction of downtime of road trains at border crossings, which has a positive impact on the environment.

To control the negative impact on the environment within the multimodal “green” logistics, it is advisable to provide for the use of environmentally friendly packaging materials, the development of package return technology, and the disposal of packaging and goods that can no longer be used for their intended purpose.

The concept of “green” logistics is implemented by such well-known international companies as Deutsche Bahn Schenker Rail (Germany), Green Cargo Road & Logistics AB (Sweden), DHL (Germany), UPS Air Cargo (express delivery operator, USA), Toyota (Japan) and other.

An environmental criterion can be introduced to evaluate the damage which is caused to the environment by the operation of railway transport. This criterion can be represented by the sum of the magnitude of damage to flora and fauna and damage associated with air pollution, water pollution, land pollution and degradation, placement of harmful substances in the territories.

Today, the reduction of harmful emissions is more characteristic for railway transport, because it uses a significant share of electricity.

The development and construction of new multimodal hubs, the use of specialized warehouse technologies, optimization in accordance with the minimum harmful emission criterion of freight transport routes, development of transport infrastructure facilities, reduction of unimodal road transport due to the more intense use of rail, sea and river transport, minimization of emission of combustion products during storage and load handling operations, waste recycling, reducing tariffs for package and residual package disposal, as well as development of container transportation with the minimum use of packaging are required for the effective development of “green” logistic technologies, including the use of container and trailer transportation.

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[2] Environmental management systems – Requirements and guidelines for use. (2016). DSTU ISO 14001:2015 from 01 July 2016. Kyiv: Ukrainian Research and Training Center of Standardization, Certification and Quality [in Ukrainian].