

EFFECTIVE MANAGEMENT OF TRANSPORTS PART OF GREEN LOGISTICS

Elena Sima, Assoc. Prof., PhD, Romanian-German University of Sibiu

Abstract: Green Logistics encompasses all actions to measure and minimize its harmful effects on the environment. The demand for action from green logistics action requires the creation of an optimal situation between economy, environment and society.

Promoting green transport will have a positive impact in the development of green logistics.

Among the ways to achieve "Making transport green", there can be mentioned: the purchase of environmentally friendly vehicles or at least of low emissions vehicles, the use of alternative fuels and not least practicing an economic leadership style of means of transport, which will lead to lower fuel consumption and prolong their life. The adoption of multimodal transport solutions is beneficial in this regard.

Green logistics is supported by representatives of the European Bank for Reconstruction and Development (EBRD) which wishes to help companies in Eastern Europe to promote sustainable development, considering that the transport sector is a key element in economic growth. In this context it is worth noting that EBRD financed in 2014 a total of 24 projects worth 1,2 billion Euros in 14 countries.

The growing interest in green logistics and therefore in green transport is justified by the fact that statistically, it was demonstrated that 28000 megatons of carbon dioxide are generated every year by logistics and unless measures are taken to reduce them in the coming years, there will be registered growths in that value, increasing environmental degradation.

Key words: *green logistics, transport, green vehicles*

1. Overview

Environment or the surroundings means all natural and artificial elements and phenomena from outside the planet Earth, which determines life in general and the life of man implicitly. The European Union defines this concept as a set of elements which, in the complexity of the relations established between them, represents the framework, the means and the living conditions of man, either felt or not.

Economic market players need to structure strategies that take into account the environment and where there are prerequisites for sustainable development imposed by the European Union, consumers and the many associations for environmental protection.

Inevitably these conditions will force businesses to analyze their activities, beginning with the design phase, to form a sustainable and green thinking, to form an ethical behaviour and to seek not only to maximize profit regardless of the ways in which this would be obtained.

The effects of economic growth on the environment can be expressed by:

- Pollution, resulting in an increase in the number of patients with respiratory diseases, especially asthma and a growing number of cities where air quality is below the limits recommended by the European Union and the World Health Organization. Road transport is the main responsible for this

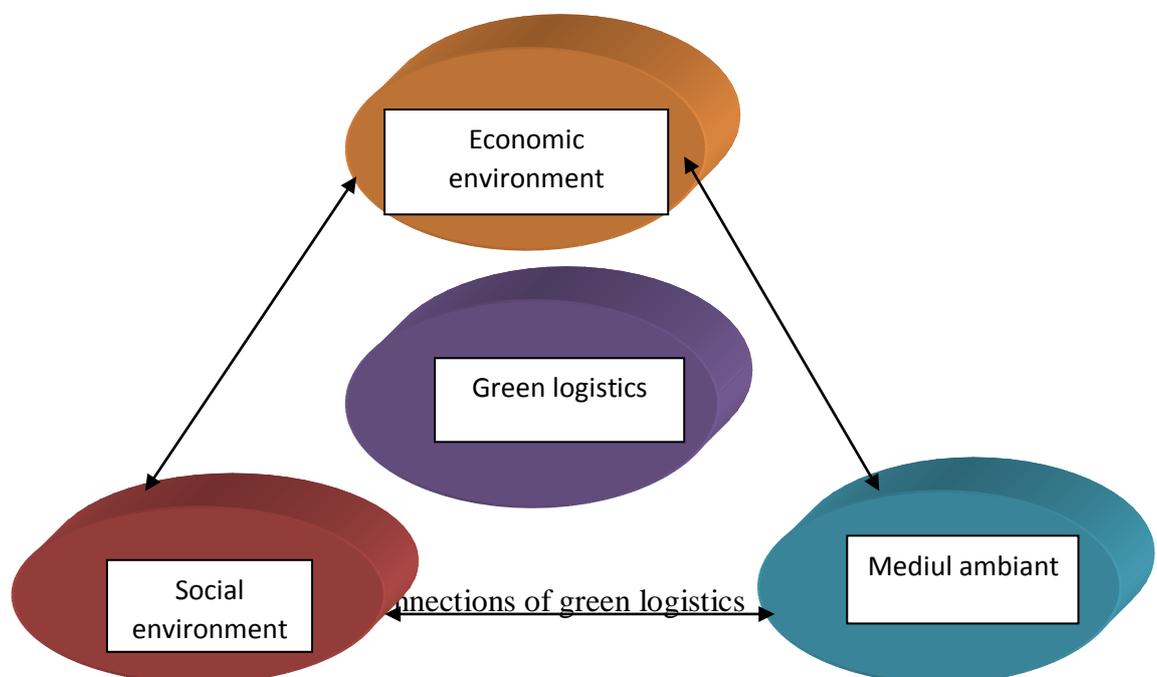
because it contributes most to air pollution and the destruction of the ozone layer;

- Damage to the ozone layer. Researchers have shown that the emission of pollutants such as carbon dioxide, sodium or sulphur dioxide is the cause of the heating effect of the earth and leads to increases in the number of skin cancer patients both in Europe and elsewhere;
- Change of seasons that lead to large temperature differences with negative effects on physical and mental health of the people and not only. Global warming melts the ice cap, a process that is observed today. The implications of this phenomenon are visible in European coastal regions which in time will have to be abandoned because of rising sea levels.

There are strong interactions between logistics, environment and natural resources. In addition, logistics approaches are interdisciplinary, holistic and cross and therefore any company is constrained to achieve their objectives in synergy with other strategic and/or financial objectives. This is the basis of approaching these new logistics problems arising from these challenges. (Hoessle, 2013)

The concept of „green logistics” originated in mid-1980 and it characterized the systems and approaches using advanced technology and equipment to minimize environmental damage during logistics operations. (Zhang, Gu Ning, LV Xinxiang, Wang Xibo, 2010).

Green Logistics has the mission of creating a balance between economic, social environments and the surroundings.



The economic environment under current conditions aims at economic growth, efficiency, competitiveness and the possibility of multiple choices due to the dynamics of this field.

The environment is currently targeting climate change, air quality, noise, soil, flora and fauna quality in terms of biodiversity.

Social environment requires among other things access to healthcare, public safety, population's poor health, low agricultural production.

2. Transports' „greening”, a premise of green logistics

If in the past by „logistics cost” the business world targeted only the financial aspect that this cost is currently completed by external costs aimed at global warming, air pollution, water, soil, noise, waste, vibrations and accidents in the ecosystem.

Green logistics can reduce these external costs, will lead to competitive advantage and thus would be beneficial to the economic, social environment as well as the ambient, leading to sustainable development.

Of logistics activities by far the guiltiest of adverse actions to the environment is road transport.

It has been shown that approximately 2800 megatons of carbon dioxide are generated annually from the logistics sector, and significant increases are expected in the future.

Any transport system includes the road, vehicles and human factor that drive these vehicles. Acting on any component, especially on the relations established between them, beneficial effects can be obtained on that transport system.

The problem has been studied and there has been found alternatives of „greening” of transport in general and of road transport in particular.

Of these, the purchase of green vehicles has become a constant concern for companies and individuals.

Concerns for the realization of road vehicles to operate on unconventional, non-polluting or very low polluting fuels, is quite old and although such vehicles were built in the past they have been removed shortly after, although they were effective; undoubtedly, the world of oil that would have been strongly affected is responsible for these restrain actions.

Today things have changed.

Directive U.E. no. 33/2009 requires all public authorities and public transport operators that for the purchase of road vehicles they should take into account fuel consumption, emissions of carbon dioxide and harmful local emissions throughout their life.

European Bank for Reconstruction and Development (EBRD) in partnership with ARILOG and GREENFREIGHT stated at the Conference „Opportunities for Green Logistics in Eastern Europe” in Bucharest that they will support the transport sector and therefore the logistics to implement the environment's protection strategies.

In this context EBRD financed the previous year (2014) 24 projects in transport, worth 1.2 billion euro in 14 countries. (Ziua, Cargo, March 2015).

EBRD sustainable transport specialist mentioned that there are viable opportunities that will reduce carbon emission of 1400 megatons of carbon dioxide in the medium term and that they are willing to fund both large and small projects that promote sustainable development.

Public road transport and multimodal, intermodal and combined transport are also more environmentally friendly and cheaper solutions.

Economic driving can also offer reductions in fuel consumption, thus contributing to the efficient management of resources.

Among the recommendations of experts to increase efficiency of the management of road vehicles, there can be mentioned:

- Maintaining a good condition of the vehicle; faulty brakes and incorrect tire pressure will lead to fuel consumption increases;
- The economic speed should not be exceeded because although time savings will be obtained, fuel consumption but also the stress and fatigue of the driver will increase;
- Useless accelerations, unnecessary speed changes, especially uphill, walking close to the car in front cause consumption increases;
- Use of inertia is particularly important and in this regard it is recommended not to increase the speed uphill, and downhill it is recommended to put the vehicle out of autopilot option;
- It is not suitable for the engine to run idle. Manufacturers' recommendation is to leave immediately and, if there are longer traffic lights or barrier, they should stop the engine, except the situation in which a hillside is being climbed. In such a case it is recommended to wait for 5 minutes before stopping the engine.

Obviously, cost optimization in transport companies is one of the major concerns that involve teamwork, requiring equally both drivers and fleet managers and the general manager. Currently, major car manufacturers manage ProfiDrive courses and even contests to designate Eco drivers to boost the implementation of this knowledge and benefit from the advantages supplied.

Raceway or its quality has a decisive contribution to „greening” road transport. Unfortunately, in Romania road quality leaves much to be desired; kilometres of highway are hardly built, with costs much above the European average and of questionable quality. The result is manifested by excessive consumption of fuel and spare parts, traffic congestion, difficult driving leading a lot of stress for vehicle drivers.

3. Conclusions

In recent years the logistics sector has seen a remarkable development.

In the context of sustainable development and EU policy a central focus is currently on „green logistics”. Given that the transport sector has developed much recently, concerns for its „greening” occur due to the impact they have in reducing costs, achieving competitive advantage and not least for sustainable development.

The European Union is willing to help in this regard by funding projects of varying sizes but which prove to promote environmental protection strategies.

Although solving these problems is agreed by people, there are however a number of barriers that arise either due to lack of local funding for those who would like to adopt these measures earlier than the rest of the market, or because of inadequate policies, discouraging fiscal measures, absence of monitoring and implementation systems, the infrastructure gap and not least the lack of specialists in „green logistics” or „green transport”.

The success of logistics processes requires the art and science of correlating the information with existing technical equipment and human resources. The competitive advantage today is not only closely correlated with the price of services. Information today have an important role in business success because, by selecting the relevant ones, processing and transformation in database used in conducting daily activities, opportunities offered by the external environment can be exploited.

EU interest in „green logistics” is an opportunity that should be turned to advantage by any company in the field.

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