### Chapter 12

# Green Transformation in Logistics Within the Scope of the European Green Deal

#### Mehri Banu Erdem

https://orcid.org/0000-0002-9763-3271

Kahramanmaraş Sütçü İmam University, Turkey

#### Nuri Özgür Doğan

https://orcid.org/0000-0002-7892-1550 Nevşehir Hacı Bektaş Veli University, Turkey

#### **ABSTRACT**

Problems such as global warming, climate change, and depletion of resources have arisen due to the increase in consumption around the world, the use of resources as if they are endless, and the creation of environmental pollution. This put the future of all living things in danger. For this reason, the European Union took action and led the world in this regard by issuing the European Green Deal in December 2019. The European Green Deal directly or indirectly concerns the entire sector. Therefore, businesses should integrate their activities with greening through planning and R&D studies in this regard. At this point, one of the most affected industries is logistics. Sustainable logistics is part of the European Green Deal. In this chapter, the issue of sustainable logistics has been evaluated within the scope of the European Green Deal.

#### INTRODUCTION

With the increase in population and the change in consumption habits, waste production also increases and the need for new management models arises. Taking the necessary steps by businesses on these issues has revealed the understanding of sustainability. Sustainability is an issue that should be considered in the business as a whole and applied in all business lines and units. For this reason, the recent increase in

DOI: 10.4018/978-1-6684-5876-1.ch012

the logistics activities of enterprises necessitates the evaluation of sustainability among strategic issues in these areas as well.

The most concrete steps in the axis of green theory in international relations have been taken under the leadership of the EU, which has a concrete sense of the effects of environmental pollution and climate change. Standing out with its green new order and green economy policies in the 21st century, the EU has developed the 2020 Strategy and the 2030 Climate and Energy Framework for sustainable and comprehensive growth in the fight against climate change. With these strategies, in order to protect the natural balance of the environment and reduce the speed of climate change, it has set targets that will reduce the greenhouse gas emissions of the member countries, limit the use of fossil fuels and increase energy efficiency compared to the previous data. On a global scale, the EU has also taken a leading role in initiatives based on a total fight against global warming and climate change, such as the Kyoto Protocol and the Paris Climate Agreement, under the leadership of the EU (Kakışım, 2022).

Environmental issues examined within the scope of sustainability approach are seen in direct relation with green understanding. The studies to be done in order to minimize the damages caused by the enterprises to the environment are carried out with a green understanding. Green understanding is a concept that is used for studies that will cause less damage to the environment and are made with environmental protection awareness. This understanding has become synonymous with some important practices. Reducing carbon emissions has an important place in the work of green-minded businesses in connection with their sustainability goals. In addition, it is possible to manage the business with a more environmentally friendly green approach, thanks to the attention to the use of natural resources and the innovations made (Chopra & Meindl, 2017).

The EU has put forward a new strategy that has social, economic, cultural, technological and foreign policy dimensions, which is more advanced, modern, transformative, inclusive and in some areas legally binding for member states. Under the leadership of the European Commission, it has published the European Green Deal, which basically aims to eliminate carbon (greenhouse gas) emissions (creating a carbon neutral climate) in Europe by 2050. The EU is preparing for a green transformation that will transform the ecosystem and production infrastructure of the third countries that trade with the EU, as well as the member states, support climate and environmental security, and in a way enable the European Green Deal (EGD) to have a global impact (Kakışım, 2022)

#### **EUROPEAN GREEN DEAL**

The European Union (EU) plays an important role in policies to combat climate change and has been a pioneer in this regard for a long time. It adopted a strategy for climate change in 1992, and in 1996 it set the target to limit global warming to more than 2 degrees Celsius above pre-industrial levels. In 2001, the EU cemented its reputation as an international leader in tackling climate change for the Kyoto Protocol to come into force despite the US withdrawal (Siddi, 2020).

In December 2015, with the Paris Climate Agreement, the EU also took a leading role in initiatives such as emission reduction, renewable energy and energy efficiency, which are based on a total fight against global warming and climate change (Siddi, 2020). However, the inadequacy of both the EU-wide strategies determined by the EU and international initiatives in combating global warming and climate change, and the inability to reduce greenhouse gas emissions and global warming to the desired levels have forced the EU to develop a new strategy (Kakışım, 2022).

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/green-transformation-in-logistics-within-the-scope-of-the-european-green-deal/309568

#### Related Content

#### Blockchain-Based Secure Transactions

Kawsalya M., Senthil Kumar A. V., Akash V., M. Villanueva Lolit, Shadi Rasheed Masadehand Anamika Rawat (2023). *Handbook of Research on Blockchain Technology and the Digitalization of the Supply Chain (pp. 86-112).* 

www.irma-international.org/chapter/blockchain-based-secure-transactions/324626

#### Analysis of the Cargo Service Dynamics in East Asian Airports

Joyce M.W Low, Loon Ching Tangand Xue-Ming Yuan (2010). *International Journal of Applied Logistics* (pp. 1-22).

www.irma-international.org/article/analysis-cargo-service-dynamics-east/43587

Methodology for Environmental Sustainability Evaluation Of Airport Development Alternatives Jean-Christophe Fannand Jasenka Rakas (2013). *International Journal of Applied Logistics (pp. 8-31)*. <a href="https://www.irma-international.org/article/methodology-for-environmental-sustainability-evaluation-of-airport-development-alternatives/108516">https://www.irma-international.org/article/methodology-for-environmental-sustainability-evaluation-of-airport-development-alternatives/108516</a>

#### Constrained Optimization of JIT Manufacturing Systems with Hybrid Genetic Algorithm

Alexandros Xanthopoulosand Dimitrios E. Koulouriotis (2011). Supply Chain Optimization, Design, and Management: Advances and Intelligent Methods (pp. 212-231).

www.irma-international.org/chapter/constrained-optimization-jit-manufacturing-systems/50687

## Do Supply Chain Management Practices Influence Firm Performance?: A Meta-Analytical Approach

Catia Duarte Silva, Paulo S.A. Sousa, Maria R.A. Moreiraand Graça Maciel Amaro (2020). *International Journal of Information Systems and Supply Chain Management (pp. 1-22).* 

www.irma-international.org/article/do-supply-chain-management-practices-influence-firm-performance/252816