

ESG management - the main factors of sustainable business in the postal logistics sector

Tomislav Šulentić,¹ Estera Rakić¹, Katarina Mostarac² Zvonko Kavran²,

¹"Hrvatska pošta d.d. Jurišićeva 13, 10000 Zagreb, Republika Hrvatska"

²"Fakultet prometnih znanosti, Vukelićeva 4, 10000 Zagreb, Republika Hrvatska"

Abstract

Sustainability, along with globalization, e-commerce, and digitalization, is one of the main trends in business development, and is based on three main factors: **Environment** - the "Green" business; **Social** - Socially responsible business; **Governance** - Corporate management (**ESG**). ESG, with its guidelines, transforms the business into "smart" business for a sustainable future. In other words, it is a series of activities carried out by the companies, to achieve sustainable results for the welfare of the environment and the community in general. The implementation of the ESG management system, represents an organization of the company's business aimed at opening the new growth potentials, increasing competitiveness, contributing to the economy, employees and the customers. Given the significant impact postal service providers have on the environment and society in general, the paper analyzes the trends in the implementation of the ESG management system. It also contributes to the identification of the major activities carried out in the green business segment to contribute the carbon neutrality by 2050.

Keywords: Carbon neutrality; Postal service providers; ESG, Environment Social Governance

1 Introduction

Climate change is one of the key issues of the modern policies and strategic planning. To address key climate change issues, the European Union (EU) has adopted a European Green Deal [1]. The European Green Plan covers all economic sectors, in particular the transport, energy, agriculture, maintenance, building construction and industries such as production of steel, cement, textile, and chemicals, containing a framework plan to stop the climate change. Environmental issues are a key guideline for both the postal and delivery sectors. Postal service providers are therefore under pressure to reduce the environmental impact of their business, including, the level of greenhouse gas emissions.

The European Commission's Directorate for the Environment [2], identifies transport as a key area for environmental action. Transport accounts for almost a quarter of Europe's greenhouse gas emissions and is a major cause of air pollution in the cities. Road transport accounts for 70% of all emissions from the transport sector. Although postal and delivery service providers are likely to account for only a part of transport emissions, various policies and

regulatory measures will probably maintain a pressure on postal service providers to reduce their carbon footprint in this area.

With the adoption of the European Climate Law Regulation [3], the EU's policy ambition to achieve climate neutrality by 2050 has become a legal obligation. By passing this law, the EU and its Member states have committed themselves to reducing the net greenhouse gas emissions in the EU, for at least 55% by 2030, compared to the 1990 levels. This objective is legally binding and is based on an impact assessment carried out by the European Commission. To become a society and economy with zero net emissions by 2050, our mobility sector needs to become more sustainable and smarter. It is estimated that emissions from the transport sector will have to be reduced by 90% by 2050, for the EU to achieve climate neutrality.

2 Current legal framework of the postal logistics sector

Neither the Postal Services Directive (PSD) [4] nor the Cross-Border parcel Regulation [5]

have any specific provisions on environmental sustainability. However, Article 5 of the PSD, deals with essential requirements that could cover sustainability issues. The term essential requirements is defined in Article 2 (19) of the PSD as:

general non-economic reasons which can induce a Member State to impose conditions on the supply of postal services. These reasons are the confidentiality of correspondence, security of the network as regards the transport of dangerous goods... and where justified, data protection, environmental protection, and regional planning.

Some regulators have stated that environmental protection is implemented in general national laws, but not necessarily in sector-specific regulations.

In addition, sustainable development is mentioned in Article 7 of the (Universal Postal Union) UPU Convention [6]:

Member countries and/or their designated operators shall adopt and implement a proactive sustainable development strategy focusing on environmental, social, and economic action at all levels of postal operations and promote sustainable development awareness.

Nine postal regulators that have been surveyed by (European Regulators Group for Postal Services) ERGP [7], stated that the UPU convention has been implemented in their national law postal services law.

Generally, and perhaps due to the lack of specific sustainability references in the postal legal framework, most of postal regulators stated that they have only limited experience with the sustainability issues of the delivery sector.

It should also be noted that the UPU during its 2021 Congress, adopted a resolution aimed at taking greater action and further cooperation in the mutual fight against climate change [8].

With the resolution, UPU made a commitment to investigate the setting of possible emission reduction targets for the postal sector and to introduce the carbon-neutral cross-border services. The resolution also boosted the exchange of knowledge on emission reduction strategies and climate adaptation of postal service providers.

An additional regulatory obligation arises from the Regulation (EU) 2020/852 [9], on

establishing a framework to facilitate sustainable investments, introducing a general framework to determine whether an economic activity can be considered environmentally sustainable to determine the extent to which the investment is environmentally sustainable. The regulation defines six environmental objectives: climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection of biodiversity and ecosystem restoration.

3 The environment impact of the postal logistics sector

Postal and other delivery networks consume energy and water while producing excess waste. All these activities have an impact on the environment. Besides that, rapidly growing parcel volumes now require significantly more logistics and transportation capacity. As a result, postal and delivery service providers are facing the challenge of reducing the environmental impact of their business. To monitor the impact of the postal sector on climate change, in 2016 UPU launched the Online Solution for Carbon Analysis and Reporting (OSCAR) project [10]. This project provides a procedure for reporting of emissions from postal service providers and monitoring their performance in reducing such emissions. In parallel, the International Postal Corporation (IPC) in cooperation with 20 EU postal service providers and building on its previous Environmental Measurement and Monitoring system [11] (EMMS), in 2019 launched its Sustainability Measurement and Management System [12] (SMMS).

Many organizations, including postal service providers, are adopting the Greenhouse Gas Protocol (GHGP) standards for measuring and managing the greenhouse gas emissions. In particular, the GHGP [13] approach, divides the emissions into three scopes:

scope 1: direct emissions produced by the organization, ie from sources owned and controlled by the organization;

scope 2: indirect emissions from purchased energy consumption; and

scope 3: indirect emissions from the upstream and downstream organization activities, ie the

value chain emissions that the organization does not generate directly, e.g. from purchased goods and services

The SMMS also has a broader sustainability program, aligned with the UN's global sustainable development goals, most relevant to the postal sector, including learning and development, economic growth, responsible consumption, and production, aligned with appropriate climate actions. The latest SMMS report [14] presented the results of work for 2021 and measured the progress in each of the focus areas. The report indicates that the result of greenhouse gas emissions:

- for 2020, in scope 1 and scope 2, amounted to a total of 5.6 MT CO₂ and a common target for 2030 was set at 2.9 MT CO₂;
- for 2020, the energy used from renewable sources accounted for 33% of the total energy used, and the target of 75% for 2030 was set;
- it plans to increase the number of electric vehicles, from a 16% of the total fleet in 2020 with an increase of 25% of the total fleet in 2030.

The IPC further analyzed the data collected from postal service providers through SMMS, by comparing CO₂ emissions in relation to item volumes, ie their effect on the delivery of letters and parcels. The results at the level of the IPC member group are shown in Table 1.

Table 1: Delivery-related CO₂ emissions overview, Source: [14]

Delivery efficiency	2013	2014	2015	2016	2017	2018	2019	2020
Letter mail (grams CO ₂ per item)	35.6	36.1	36.5	36.4	35.7	36.3	37.6	40.8
Parcel (grams CO ₂ per item)	540.9	501.3	487.8	478.3	466.3	474.1	508.7	513.8

The measurement shows that CO₂ emissions per letter items are increasing, which is partly due to a decrease in their number (the average number of items per deliverer is decreasing) and in 2020 it has been determined on average, of 40.8 g CO₂ per letter item and 513.8 g per parcel. This represents an increase of 8% in grams of CO₂ per letter-post items and an increase of 1% for parcels, compared to 2019. However, if we look at the results throughout the period, from 2013, this is equivalent to an increase of 15% for letter-post items, but an average decrease of 5% per parcel. The decrease of 5% per parcel, is a consequence of alternative ways of parcel delivery introduction, but also of the increase in

the average number of parcels per vehicle and per deliverer.

There are multiple ways to compare the postal service providers in terms of CO₂ emissions intensity, ie the volume of their carbon emissions in relation to a common business metric. For the postal sector, the most appropriate business metric for comparison, would probably be transferred postal items, but since not all countries publish detailed information on volumes, another metric that could be used is revenue (Figure 1).

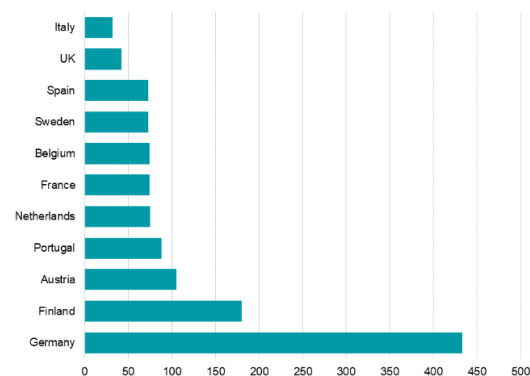


Fig. 1. Carbon intensity levels (CO_{2e} per €) among postal service providers, Source: [15]

Figure 1 shows the relation between providers total emissions and revenue (t CO_{2e} per 1M €).

4 Activites of postal services providers

Despite not being present in the national regulatory framework, most universal postal service providers (USPs) have already adopted and implemented a proactive sustainable development strategy with clear environmental objectives (Figure 2) [16].

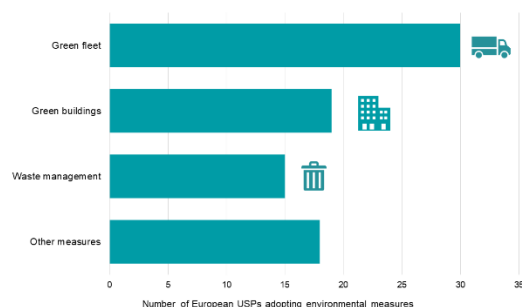


Fig. 2. USPs adopted environmental measures (Cullen International), Source: [16]

The USPs have replaced parts of their fleet with electric vehicles, some using renewable energy to supply energy to at least some real estate portfolio, while others have planned to

include waste management and other general environmental protection measures.

Table 2: % share of vehicles on alternative fuels,
Source: [14]

	2012	2019	2020
Total vehicles	524 000	591 000	601 000
Total alternative-fuel vehicles	65 000	131 000	134 000
% of alternative fuel vehicles	12,4%	22,2%	22,3%

Table 2 shows the share of alternative fuel vehicles within the IPC SMMS member's fleet. According to the study Assessment and analysis of the impact of transport and delivery of e-commerce parcels on air pollution and CO₂ emissions, possible factors on the impact of reducing greenhouse gas emissions are shown in Table 3.

Table 3: Impact of trends on GHG emission reductions, Source: [17]

Category	Case study	Impact (default)	Impact (alternative)
Urban solutions: bundling	Increased density of pick-up points	-61%	positive
	White label city logistics hubs	-34%	marginal
Urban solutions: last mile reorganisation	Micro-hubs with delivery to consumer's home	-70%	marginal
	Micro-hubs with delivery to retail store	-63%	marginal
Rural solutions	Pick-up points at social hubs with fixed delivery dates	-73%	positive
	Virtual shopping as a new shopping concept	-70%	positive
Consumer decisions	Flexible consumer (office delivery and acceptance of delayed delivery)	-40%	positive
	Green consumer (choosing EU goods and self pick-up by e-bike)	-25%	very positive
Long distance legs	Modal shift from air to rail and sourcing more goods from EU	-28%	very positive
	Modal shift from air to rail	-1%	extremely positive

For each of the proposed assumptions, the impact of greenhouse gas emissions in relation to current trends was assessed, as well as an estimate of the reduction of greenhouse gas emissions by 2030, if the delivery processes to e-commerce users were carried out in accordance with the proposed alternatives.

For each of the assumptions, an assessment of its impact has been made, depending on:

- choice of means of transport
- distance travelled,
- number of stops
- package load per vehicle.

The most significant impact in the implemented assumptions can be achieved by the decisions of users who choose more flexible delivery and are ready to pick up their item on their own, in one place, using e-vehicles or walking. However, a much greater impact can be achieved by the mode of items transport over

long distances (cross-border delivery), in a way that the railway is used as much as possible, instead of air transport. The research showed that if transport of goods over long distances, would transfer from air to rail, according to current trends, would have an impact of reducing CO₂ by only 1% by 2030. More significant impact could be achieved by an interventions in this area, which would enable the reduction of the emissions in this segment of the supply chain by about 98%. This indicates that the length of transport has less impact on greenhouse gas emissions compared to the mode of transport (the choice of means of transport). This option is also related to the flexibility of users, who would need to accept a slightly longer delivery times of international postal items.

5 Croatian post strategy – growing green and sustainable

The Croatian Post in the Pošta2022 Development Strategy [18], intensively conducts digital business transformation, which is closely related to increasing energy efficiency and reducing greenhouse gas emissions through three key business segments, shown on Figure 3.



Fig. 3. Main factors of sustainable business,
Source: [19]

The reduction and the elimination of greenhouse gas emissions in the Croatian Post is focused on national and international goals, which are based on: the Paris Agreement, the EU Green Deal, and the National Development Strategy of the Republic of Croatia. Therefore, in April 2021, the Sustainability Management Strategy Growing Green and Sustainable [20] has been adopted, which includes segments shown on Figure 3.

5.1 Green business

The main goals of the Croatian Post green business are:

- Reduction of energy consumption and GHG emissions
- Expansion of the electric vehicles fleet
- Environmental protection through systematic waste management

- Encouraging the users to use alternative delivery channels such as parcel lockers

According to the stated goals, the current main sustainability projects are implemented are related to the continued procurement of electric vehicles and increasing the energy efficiency.

5.2 Corporate social responsibility

Corporate social responsibility is one of the development philosophies highlighted in the Pošta2022 Strategy, and corporate social responsibility is an integral part of Croatian Post's business.

- Humanitarian work
- Workers
- Scholarships and internships
- Community support
- Environmental Protection

6 Corporate management

HP - Croatian Post Inc applies:

- The Codex of corporate management with trade companies of the Government of the Republic of Croatia
- The Codex of corporate management of HP-Croatian Post Inc with the aim of improving the high standards of corporate governance and transparency of the company's business



Fig. 4. The Croatian Post's main goals of sustainable development, Source: [19]

To achieve the adopted Strategy, there are more than 200 electric vehicles in the Croatian Post fleet, of which 40 of them are electric four-wheelers and almost 30 are electric mopeds; three charging stations for electric vehicles were organized: Velika Gorica, Zadar and Osijek - the basis for further expansion of the electric vehicles fleet. Also, parcel lockers have been

installed throughout the whole territory of the Republic of Croatia as a new delivery channel, which increases the percentage of delivery in the first attempt. With this kind of the organization of delivery, the mileage that vehicles cover while delivering has been reduced, which significantly reduces the emission of harmful gases.

It can be concluded that the main goals of Croatian Post sustainable development are:

1. **ECONOMY** – 500 million HRK per year contribution to the economy, more than 95% of the items delivered within three days and more than 85% of the items delivered within one day.
2. **ENVIRONMENT** – the reduction of CO₂ emissions by 300.000 kilograms per year, 10% share of e-vehicles in the total delivery fleet, 6 locations for installation of solar panels, development of e-charging stations network.
3. **SOCIETY** – keeping the number of post offices at more than 700, development of a network of parcel lockers at 300 locations in the Republic of Croatia, more than 500 children ensured through the Vaša pošta Foundation.

7 Conclusion

ESG management, as the main factor of sustainable business in the postal logistics sector, represents the future in defining the development strategies of postal and delivery service providers. A key element in defining development strategies is the balance between ESG management and financially sustainable management. Investing in the economy that will maintain jobs and create new workplaces, investing in society that will use the reduction of the GHG emission to ensure a healthier environment as well as the socially responsible businesses, are the key tasks of postal service providers and primarily the national postal service providers who are the key players in the market of the postal logistics sector. Mutual coherence of all market stakeholders (service providers, users, as well as the state/regulators) is the only way to achieve the goal of reducing the GHG emissions by 55% by 2030, ie to achieve the goal of climate neutrality without emissions by 2050.

References

- [1] European Green Deal > <https://ec.europa.eu>
- [2] European Commission's Directorate for the Environment > <https://ec.europa.eu>
- [3] European Climate Law > <https://eur-lex.europa.eu>
- [4] Postal Services Directive > <https://eur-lex.europa.eu>
- [5] Cross-Border parcel Regulation > <https://eur-lex.europa.eu>
- [6] Universal Postal Union Convention > <https://www.upu.int>
- [7] ERGP Report on Green Deal and the postal sector > <https://ec.europa.eu>
- [8] UPU Resolution C17 > <https://www.upu.int>
- [9] Regulation (EU) 2020/852 > <https://eur-lex.europa.eu>
- [10] OSCAR > <https://www.upu.int>
- [11] IPC EMMS > <https://www.ipc.be>
- [12] IPC SMMS > <https://www.ipc.be>
- [13] Greenhouse Gas Protocol > <https://ghgprotocol.org>
- [14] IPC Postal Sector Sustainability Results > <https://www.ipc.be>
- [15] Environmental measures in the postal sector > <https://www.cullen-international.com>
- [16] Environmental impact of the postal sector > <https://www.cullen-international.com>
- [17] Study on environmental impacts of e-commerce > <https://www.cullen-international.com>
- [18] Strategija Pošta 2022 > <https://www.posta.hr>
- [19] „Pošta“ > travanj 2022, No 60 ISSN 2459-9360
- [20] Strategija upravljanja održivošću > <https://www.posta.hr>