

Sustainable Development Goals (SDGs) in the postal sector

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Abstract

The subject of the research is the practice of postal operators in the integration of Sustainable Development Goals (SDGs) into business strategy. The postal sector represents a key pillar in the achievement of sustainable development goals at different levels (local and global). This paper provides an overview of the experiences of how postal operators have focused their long-term efforts on achieving the SDGs, particularly focusing on SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Production and Consumption) and SDG 13 (Climate Actions). Through the analysis of the specific activities of postal operators, we highlight their contribution to sustainable development and identify opportunities for further improvement. We also consider the challenges the sector faces in achieving these goals.

Keywords: Sustainable Development Goals, postal sector sustainability, environmental sustainability goals

1 Introduction

The Sustainable Development Goals (SDGs) were established by the international community in 2015 as part of the UN's 2030 Agenda for Sustainable Development, by which the countries of the world collectively committed to eradicating poverty, finding solutions for sustainable and inclusive development, ensuring everyone's human rights and generally ensuring so that no one is left behind by 2030.

The 17 SDGs have been defined, with 169 related goals, to be achieved by 2030. They deal with global challenges facing the world and deal with all dimensions of sustainable development, in a balanced and integrated way.

As a member of the UN, the Universal Postal Union (UPU) is also committed to work towards the achievement of the 2030 Sustainable Development Agenda.

Postal operators have focused their long-term efforts on achieving the SDGs, particularly

focusing on SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Production and Consumption) and SDG 13 (Responsible climate change).

Sustainable development is an essential element of postal operations. It contributes to improved business efficiency and resilience, strengthened customer relationships, and the development of new markets. In addition, responsible operations allow postal operators to create attractive and safe working places, build trust with the communities in which they operate, and leverage their networks for the involvement and benefit of the general public.

2 Sustainable Development Goals

The 2030 Agenda for Sustainable Development, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its focus are the 17 Sustainable Development Goals (SDGs) (Figure

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1), which are an urgent call for action by all countries - developed and developing - in a global partnership.



Fig. 1. Sustainable Development Goals

(Source: [1])

Sustainable Development Goals are describing in Table 1 [2].

Table 1. Sustainable Development Goals

Goal	Description
G1	End poverty in all its forms everywhere.
G2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
G3	Ensure healthy lives and promote well-being for all at all ages
G4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
G5	Achieve gender equality and empower all women and girls
G6	Ensure availability and sustainable management of water and sanitation for all
G7	Ensure access to affordable, reliable, sustainable and modern energy for all
G8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
G9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
G10	Reduce inequality within and among countries
G11	Make cities and human settlements inclusive, safe, resilient and sustainable
G12	Ensure sustainable consumption and production patterns
G13	Take urgent action to combat climate change and its impacts*
G14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
G15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
G16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
G17	Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Every year, the UN Secretary General presents an annual SDG Progress report, which is developed in cooperation with the UN System, and based on the global indicator framework and data produced by national statistical systems and information collected at the regional level.

Progress assessment for the 17 Goals based on assessed targets, 2023 or latest data (percentage) show in Figure 2.

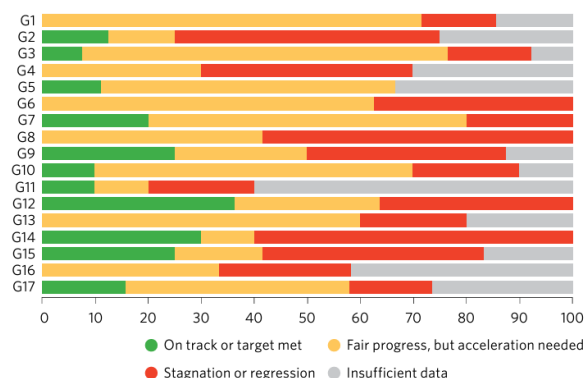


Fig. 2. Progress assessment for the 17 Goals

(Source: [3])

The IPC (International Post Corporation (IPC)) Sustainability Measurement and Management System (SMMS) was launched in 2019 to address the sustainability objectives of the postal sector for the next ten years, aligned with the UN SDGs. The programme focusses on reducing carbon emissions and measures performance in the seven sustainability focus areas most relevant for the postal sector [4]:

1. Health and safety.
2. Learning and development.
3. Resource efficiency.
4. Climate change.
5. Air quality.
6. Circular economy.
7. Sustainable procurement.

UN SDG 8 – ‘Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.’

In an internal survey of participants conducted by IPC in 2018, the Sustainability Measurement and Management System (SMMS) group identified job creation and higher levels of economic productivity (SDG targets 8.2, 8.3, and 8.6) as priorities for the postal sector [4].

UN SDG 9 – ‘Industry, innovation and infrastructure.’ In an internal survey by IPC in 2018, SMMS participants identified target 9.4, ‘upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies’ as a priority for the postal sector. The group also identified ‘the sustainable management and efficient use of

natural resources' (target 12.2) as a priority. IPC encourages posts to recognise opportunities to encourage the efficient use of resources throughout the value chain [4].

UN SDG 12 – Ensure sustainable consumption and production patterns. In an internal survey by IPC in 2018, SMMS participants identified UN SDG target 12.7, which promotes 'procurement practices that are sustainable' as a priority for the postal sector. With roots in the public sector, the postal industry is well versed in the benefits of sustainable procurement. The return on investment can include reduced costs and waste, and improved visibility of supply chains. An integrated, effective strategy improves risk management along the value chain by working with higher risk suppliers [4].

UN SDG 13 seeks to achieve a climate-neutral world by mid-century and to limit global warming to well below 2°C — with an aim of 1.5°C — compared with pre-industrial times. It aims to strengthen countries' climate resilience and adaptive capacity, with a special focus on supporting least-developed countries [4].

3 Sustainable Development Goals in the postal sector

The 17 SDGs and 169 targets adopted by the United Nations in September 2015 serve as a roadmap for the international community to build a sustainable future and foster social advancement and human well-being. Their implementation calls for active and collaborative partnerships between all countries and stakeholders.

The postal sector plays a key role in the attainment of the SDGs nationally, regionally and internationally. The diverse network and presence of Posts make them a potentially strategic driver of the SDG agenda.

According to UPU research, in Table 2 are some of the areas where postal activities have already made contributions to achieving the SDGs [2].

Table 2. SDGs postal activities

(Source: [1])

Goal	Description activities
G1	Bangladesh - Bangladesh Post Office has been contributing to the country's Vision 2021 to lift millions of Bangladeshis out to poverty. It has issued over 11 million mobile money order, worth 70 million USD, and has launched the postal Cash Card service.
G2	Korea (Rep.) - In Korea, postal ICT services for e-marketplace help local communities distribute their products nationally and abroad.
G3	Japan - Japan Post Group, IBM and Apple collaborated and first-of-its-kind initiative aimed at improving quality of life for millions Japanese senior citizens.
G4	United Kingdom - Royal Mail provides teachers with educational resource packs (55000 resources have been downloaded, and 98% of the schools that took part during course of the year requested future program packs).
G5	Australia - Australia Post, since 2010, has supported a broad range of gender development programs and events.
G8	Iran - Iran Post provides Bazaar Post a cutting-edge-e-commerce technology solution allowing businesses to scale their business across the country while providing a highly localized and customer-centric shopping experience
G9	Botswana - The development of Internet access and the provision of various communication service in post office through knowledge centers, has increased the revenue of connected post offices by an average of 25% and provided local communities with a full range of e-services.
G10	Armenia - HayPost using modern e-commerce technologies to create a strong social inclusion tool. "Shop in America", is a new platform that makes world-class shopping accessible in the remote regions of Armenia. HeyPost created an online network of more than 700 post office, installing 2900 new computers in Yerevan and the regions.
G11	Chile - Alongside government units, the Post played a crucial role in the recovery phase by educating the population on the matter of preparedness on earthquake.
G13	Switzerland - Swiss Post's E-Post Office allows mail to be sent and received digitally. Once the service is activated, all items from a particular sender will be delivered automatically in digital format. Recipients can also subscribe to a scanning service that automatically scans mail and makes it available to view, edit and archive digitally.
G16	Morocco - In 2011, the Moroccan Post launched Barid eSign to satisfy the need for a certification platform that ensures the safety, integrity and probative value of all electronic exchanges.
G17	Brazil - In Brazil, postal ICT services boost the country's exports in Paraguay the Post's e-money service helps the poor to receive money transfer.

4 Sustainable Development Goals in the EU postal sector

On the European level, the Postal Services Directive (PSD) [5] and the Cross-Border Parcel Regulation [6] form the main regulatory framework. The Cross-Border Parcel Regulation does not contain provisions regarding environmental sustainability. In the PSD, there is one reference to this issue. According to Article 5, first subparagraph, first indent of the PSD:

“Each Member State shall take steps to ensure that universal service provision meets the following requirements:

- it shall offer a service guaranteeing compliance with the essential requirements”, The term “essential requirements” has been defined in article 2 (19) in the PSD as (emphasis added):

“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.

Other than the provision in the PSD, sustainable development is also mentioned in Article 7 of the UPU Convention. This article prescribes:

“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.”

In its conclusions of 20-21 June 2019, the European Council called for more efforts to combat climate change and called on the Commission to continue working to make the EU climate-neutral, in line with its international commitments under the Paris Agreement.

On 11 December 2019, the Commission published its Communication on a European Green Deal, being endorsed, alongside with the EU's 2050 climate neutrality target, by the European Council in December 2019.

In December 2020, EU leaders have endorsed a new binding target for the EU: to achieve a net reduction in GHG within the EU of at least 55% by 2030 compared to 1990 levels. This is much

higher than the target approved in 2014 of reducing emissions by 40% by 2030.

The Universal Postal Union (UPU) had its fourth Extraordinary Congress, held in Riyadh, Saudi Arabia, from 1 to 5 October 2023. An unprecedented “green package” was approved during the Congress, outlining voluntary climate action targets for the postal sector. These targets are aimed at reducing the global greenhouse gas emissions of the postal sector and building capacity for climate action.

The package also establishes a framework for climate action, focusing on mitigation, adaptation and climate finance, supported by a dedicated climate facility. Germany and the United Arab Emirates have pledged part of the financial support for this initiative.

There is a rapidly evolving EU legislative framework on environmental sustainability encouraging operators to adopt further measures in their path towards enhanced sustainability. Presented below are some of the most important that are estimated to have an impact on the postal sector. However, it is important to also recognize that the presented legislation is not sector specific but is or will be applicable across sectors [7]:

Corporate Sustainability Reporting Directive (CSRD)

The CSRD entered into force on 5 January 2023. One of the main objectives of the CSRD is to broaden the reporting requirements to be applicable to a wider circle of companies than the current legislation (the Non-Financial Reporting Directive, NFRD), which is applicable only to certain large companies (about 11,000 companies). Another objective of the CSRD is to make reported information relevant, comparable and easy to access and use. Therefore, companies subject to reporting will have to report according to European Sustainability Reporting Standards (ESRS), which are a new set of reporting standards that are required to be adopted by the Commission.

Corporate Sustainability Due Diligence Directive

The directive is applicable to large EU limited liability companies and other limited liability companies operating in “high impact sectors” in terms of the effect they have on the environment (the sectors mentioned are textiles, agriculture and extraction of minerals).

Directive on Empowering Consumers for the Green Transition and Proposal for a Green Claims Directive

The mentioned directives are initiatives of the European New Consumer Agenda and the European Circular Economy Action Plan, aiming to enhance consumer rights and enable consumers to take informed purchasing decisions and thereby contributing to more environmentally sustainable consumption.

5 Experiences of sustainability action

There is abundant literature regarding sustainability actions performed in the postal sector:

- IPC, Postal sector sustainability results, 2023.
- KE-Consult GbR (Study to assess and analyze the impact of e-commerce driven transport and parcel delivery on air pollution and CO2 emissions)
- Copenhagen Economics ("Postal Services in the EU").
- WIK ("Technology and change in postal services – impacts on consumers", 2016) etc.

ISO 14083:2023 Greenhouse gases Quantification and reporting of greenhouse gas emissions arising from transport chain operations.

EN 17837:2023 'Postal Services - Parcel Delivery Environmental Footprint - Methodology for calculation and declaration of GHG emissions and air pollutants of parcel logistics delivery services' describes how to quantify and report greenhouse gas and air pollutant emissions from parcel delivery services

Life-cycle assessment (LCA) methodology evaluates environmental impacts associated with all the stages of the life cycle of a commercial product, process, or service. LCA considers impacts such as fresh water use, energy and GHG emissions generated or used at each stage of delivering a service.

There are comprehensive studies that aim to use LCA, notably the work in Denmark, has been extended to model Europe-wide estimates that form the basis for PostEurop members' Greenhouse Gas Reduction Programme [8]. Building on the Danish model, the Aspen Institute has divided the life cycle of letter mail into six stages:

1) mail design, e.g., planning, data collection, copy writing, design, and pre-production;

2) manufacturing the writing paper and envelopes, e.g., harvesting the wood, pulp and paper production, and envelopes production;

3) production of the letters, e.g., the type of paper used, ink, writing and printing, the number of inserts, franking, et.

4) distribution of the letters, which is the primarily the responsibility of the Posts to sort and deliver mail to the customer;

5) use (this phase does not represent an environmental impact); and,

6) disposal of the letters, which includes recycling, incinerating, or disposing into a landfill.

The first three stages of the above life cycle involve the "upstream creation of the mail piece" in the letter value chain. The Postal Service Providers are typically directly responsible for stage 4. This is the area where most Postal Service Providers concentrate their measurements when starting to develop a carbon footprint of letter mail. Stages 5 and 6 are part of the "downstream (use and disposal) processes" in the LCA of letter mail. All six of these stages should be included and measured in a "cradle-to-cradle" LCA of letter mail [7].

This review of existing data provides good examples for the NRAs and postal operators to identify necessary actions that should be taken to minimize the resources used and hence the environmental impact.

Special attention should be paid to training and the promotion of eco-driving, which can further contribute to reducing CO2 emissions. An ecological image of the traffic network of the whole city, at different periods of time (within 24 hours), could be used when creating appropriate routes [9]-[10].

The Figure 3 shows percentage of countries where USPs and other operators have clear environmental sustainability goals.

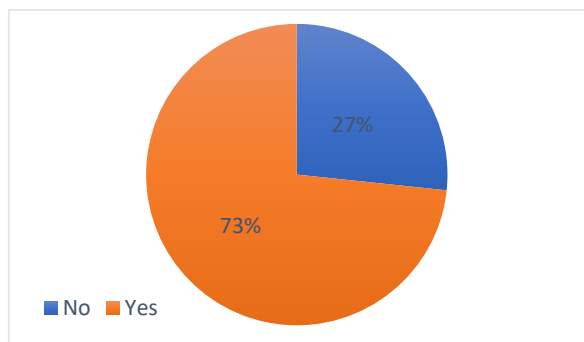


Fig 3. Percentage of countries where operators have clear environmental sustainability goals.

(Source: [11]).

The Table 3 presents an overall view of the measures that postal operators have taken towards sustainability.

Table 3. An overall view of the measures that postal operators have taken towards sustainability.

(Source: [11]).

	Green Fleet	Green Buildings	Waste Management	Other
Austria	*	*	*	*
Belgium	*	*	*	
Bulgaria	*	*		*
Croatia	*			
Cyprus	*	*		*
Czech Republic	*		*	
Denmark	*		*	
Estonia	*	*		
France	*	*	*	*
Germany	*	*	*	*
Greece	*			*
Hungary	*	*	*	
Ireland	*	*	*	*
Italy	*	*	*	
Latvia	*			*
Lithuania	*			
Luxembourg	*	*	*	*
Malta	*			*
Netherlands	*	*		*
Norway	*	*	*	*
Poland	*	*		
Portugal	*	*	*	*
Romania	*	*	*	*
Republic of Serbia	*			
Slovak Republic	*	*		
Slovenia	*			*
Spain	*	*	*	*
Sweden	*			*
Switzerland	*	*	*	*
Turkey	*			

The aim of the IPC Sustainability Measurement and Management System (SMMS) is to continually measure the performance of the participants on an annual basis. As well as giving recommendations based on their position amongst

the group and their adherence with the seven focus areas. The seven sustainability focus areas were decided upon following a two-year process involving research, consultation with internal and external stakeholders and multiple iterations.

In the Sustainability Performance Indicators (SPI) element of the SMMS, the quantitative impact of posts' sustainability management is assessed. Participants submit data on carbon emissions, energy use, vehicle fleets, and destination of waste. Emissions are calculated using internationally recognized greenhouse gas accounting standards, such as the World Resources Institute Greenhouse Gas (GHG) Protocol [4]. We refer to the Protocol's direct and indirect emissions using the following terminology:

- Scope 1 - All direct GHG emissions from operations that are owned or controlled by the company, including those from buildings and transport.
- Scope 2 - Indirect GHG emissions from the generation of purchased electricity, heat, steam, or cooling consumed by the company.
- Scope 3 - Other indirect emissions from sources within the company's value chain, including transport-related activities by vehicles not owned or controlled by the reporting entity, business travel and employee commuting, outsourced activities, etc.

Calculation of CO₂ emissions from Scope 1, Scope 2, and Scope 3 outsourced transport sources per letter mail and per parcel. Letter mail and parcel CO₂ emissions expressed in grams are divided by the total number of letter mail and of parcel items processed, respectively.

The Table 4 below provides details of the methodologies used by SMMS participants to calculate and allocate their emissions to letter mail and parcel categories.

Table 4. Details of Emission Calculation and Allocation Methodologies for Letter Mail and Parcel Categories by SMMS Participants (Source: [4])

Posts	Items	Building emission	Transport emission	Subcontractor emission
Croatia n Post	Actual	Allocation of emissions is based on the headcount working at each business unit. A percentage is then derived from the employees per post category.	Volumes (items and kg) used to allocate emissions.	Volumes (items and kg) used to allocate emissions.
DHL Group	Actual	The emission data is allocated based on the business units in the mail and parcel business.	The emission data is allocated based on the business units in the mail and parcel business.	Kilometer data forms the basis for the allocation of subcontracted road emissions (adjusted for the specific truck types). Emissions for domestic air travel are calculated using fuel data from the airline partner. Emissions for international air travel are calculated on an individual trip level taking into consideration specific routing, aircraft type and load utilization. All emissions allocated to letter mail, as letter mail and parcel operates as one division.
Poste Italiane	Actual	Allocation is based on revenue split.	Allocation is based on revenue split.	Allocation is based on revenue split.
Royal Mail Group Ltd	Actual	Allocation is based on revenue split.	Allocation is based on revenue split.	Allocation is based on revenue split.
Le Groupe La Poste	Actual	Letter mail and parcel have their own delivery organization and process.	Letter mail and parcel have their own delivery organization and process. Allocation for air transportation is based on freight rates (weight and number of items). For international air or maritime transportation, the allocation is based on the split in carrying weight.	Letter mail and parcel have their own delivery organization and process. Allocation for air transportation is based on freight rates (weight and number of items). For international air or maritime transportation, the allocation is based on the split in carrying weight.

The Tables 5 contain group level results.

Table 5. Sustainability Reports (Source: [4])

Indicator	2020	2021	2022
Scope 1: Transport* (vehicles, aviation, rail)	3,114,000	3,247,000	3,130,000
Scope 1: Buildings (gas, heating, fuel, oil, steam)	685,000	699,000	698,000
Other Scope 1*	11,000	10,000	9,000
Scope 2: Electricity* (including electric vehicles)	1,809,000	1,699,000	1,717,000
Scope 2: Building* (as district heating)	86,000	111,000	52,000
Other Scope 2*	5,000	5,000	0
Sub-total: Scope 1 and 2*	5,710,000	5,770,000	5,608,000
Scope 3a: Outsourced road and air transport*	9,749,000	8,533,000	8,813,000
Sub-total: Scope 1, 2 and 3a*	15,459,000	14,303,000	14,421,000
Scope 3b: Employee commuting and business travel*	2,592,000	3,072,000	3,060,000
TOTAL Scope 1,2 and 3	18,051,000	17,376,000	17,509,000
Percentage of renewable electricity used in buildings	33%	34%	38%
Percentage of alternative-fuel vehicles in fleet	22%	24%	26%
Percentage of electric vehicles in fleet	16%	17%	20%

*In tons CO2 NB: All figures rounded to nearest thousand.

6 Conclusion

The global postal system stands as the backbone of worldwide connectivity, facilitating communication, commerce, and essential services to communities across the globe. Its unparalleled reach and impact underscore its crucial role in promoting social and economic well-being. This research sheds light on the pivotal role of postal services in advancing specific Sustainable Development Goals (SDGs), notably SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Production and Consumption), and SDG 13 (Climate Action).

By examining the diverse array of postal services tailored to these SDGs, this paper reveals the transformative potential of the postal sector in driving progress towards sustainable development. The findings not only raise awareness but also inspire confidence among postal operators to further innovate and diversify their offerings. With a clearer understanding of their role in advancing economic growth, innovation, infrastructure development, responsible consumption, and climate action, postal services are empowered to actively contribute to addressing global challenges.

By fostering a culture of innovation and continuous improvement, postal operators can harness their collective expertise and resources to maximize their positive impact on society and the environment.

The global postal system emerges as a linchpin for sustainable development, uniquely positioned

to drive progress across multiple fronts. Through concerted efforts and collaboration, postal services have the potential to shape a more inclusive, resilient, and sustainable future for generations to come.

References

- [1] <https://sdgs.un.org/goals>
- [2] United Nations, “The Sustainable Development Goals Report Special edition”, 2023. <https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf>
- [3] Universal Postal Union, International Bureau, “Postal social services improving citizens’ quality of life”, 3000 Berne, Switzerland, 2021. <https://www.upu.int/en/Home>
- [4] IPC, “Postal sector sustainability results Pdf compilation of online report, November, 2023.
- [5] <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A124166>
- [6] Regulation (EU) 2018/644 of the European Parliament and of the Council of 18 April 2018 on cross-border parcel delivery services.
- [7] T. Šulentić, E. Rakić, K. Mostarac, “ESG management - the main factors of sustainable business in the postal logistics sector”, International Conference on Advances in Traffic and Communication Technologies (ATCT), Sarajevo, BiH, 2022.
- [8] PostEurope, “Delivering a Sustainable European Post 2019-2024”, 2024.
- [9] <https://www.mdpi.com/2071-1050/12/2/456/pdf>
- [10] Ž. Barlović, E. Rakić, C. Kovač, “Trening eko-vožnje”, M&S 11 (2016). chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.european-safety-engineer.org/MS2014/MS-2016_Proceedings.pdf
- [11] ERGP, “Report on Green Deal and the postal sector”, 2021.