

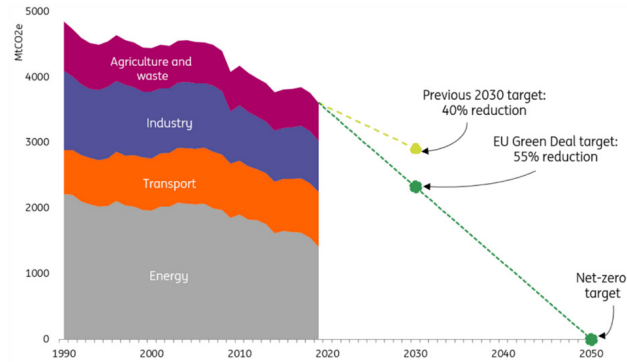


# CARBON FOOTPRINT IN THE PRINTING INDUSTRY

INTERGRAF



*The European Green Deal set the ambitious objective of transforming Europe into “the world’s first climate-neutral continent” by 2050 and now stands as a guiding light of environmental ambition worldwide. At its core lies the commitment to mitigating climate change through comprehensive policy initiatives and collaborative efforts.*



*One of the pivotal steps taken to materialise this objective was the unveiling of the Fit for 55 package by the European Commission in 2021, including the mid-term target of 55% reduction in greenhouse gas emissions by 2030 compared to 1990 levels.*

*All sectors are called upon to contribute to the collective effort of reducing emissions. From energy and transportation to agriculture and manufacturing, every facet of the economy is expected to undergo transformational changes to align with the overarching climate goals. Moreover, the trajectory towards a carbon-neutral future is expected to be supported by a shift in regulatory frameworks. Both at European and national level, legislation is anticipated to increasingly mandate the assessment of carbon footprints for products and processes. This move towards carbon transparency aims to empower consumers with the information needed to make environmentally conscious choices. Alongside regulatory requirements, a growing demand from customers for products with robust carbon credentials emerges as a notable trend.*

*The Intergraf approach to carbon footprint aims at providing the printing industry with a solid and credible tool to reply to the global challenge of reducing carbon emissions.*

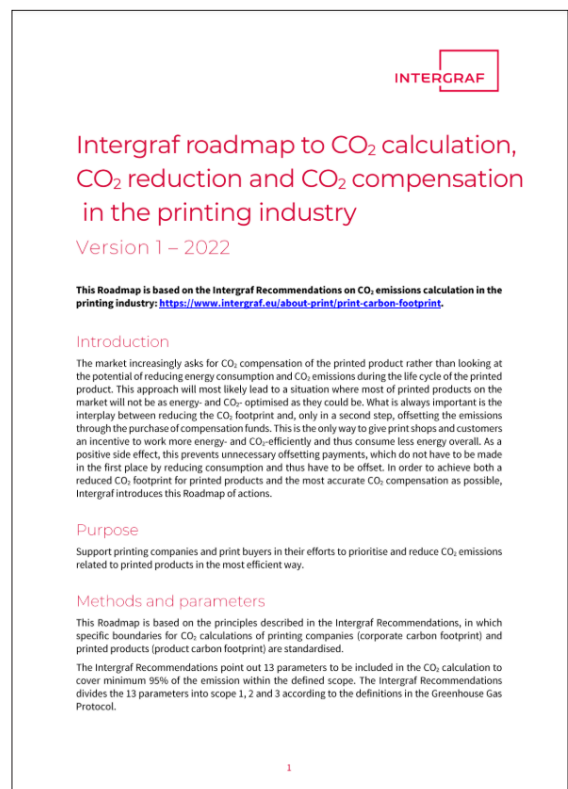
Beatrice Klose  
Intergraf Secretary General

There are numerous tools available on the market to calculate the carbon footprint of a product or a company. However, the approach adopted by Intergraf is the only one which has been developed by printing industry experts for the printing industry and their products.



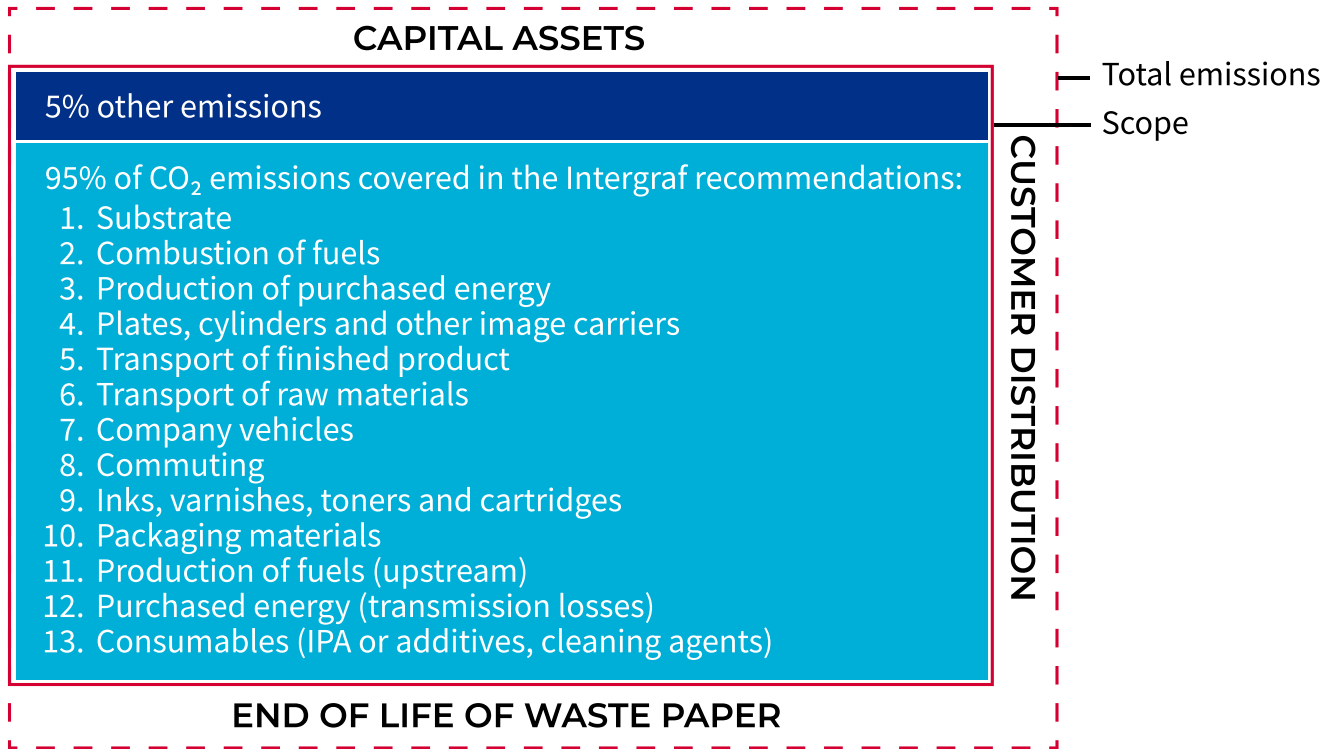
The European printing sector is equipped with a solid and harmonised tool to assess the carbon footprint of print products and print processes: *Intergraf **Recommendations** on CO<sub>2</sub> emissions calculation in the printing industry.*

The Intergraf approach also provides printers as well as print buyers with a concrete procedure to categorise parameters that influence carbon emissions and to prioritise reduction measures of carbon emissions in the industry: *Intergraf **Roadmap** to CO<sub>2</sub> calculation, CO<sub>2</sub> reduction and CO<sub>2</sub> compensation in the printing industry.*



# INTERGRAF RECOMMENDATIONS ON CO<sub>2</sub> EMISSIONS CALCULATION IN THE PRINTING INDUSTRY.

The Intergraf Recommendations, first published in 2013 and reviewed in 2021, identify **13 parameters covering 95% of all carbon emissions of a print process or product.**

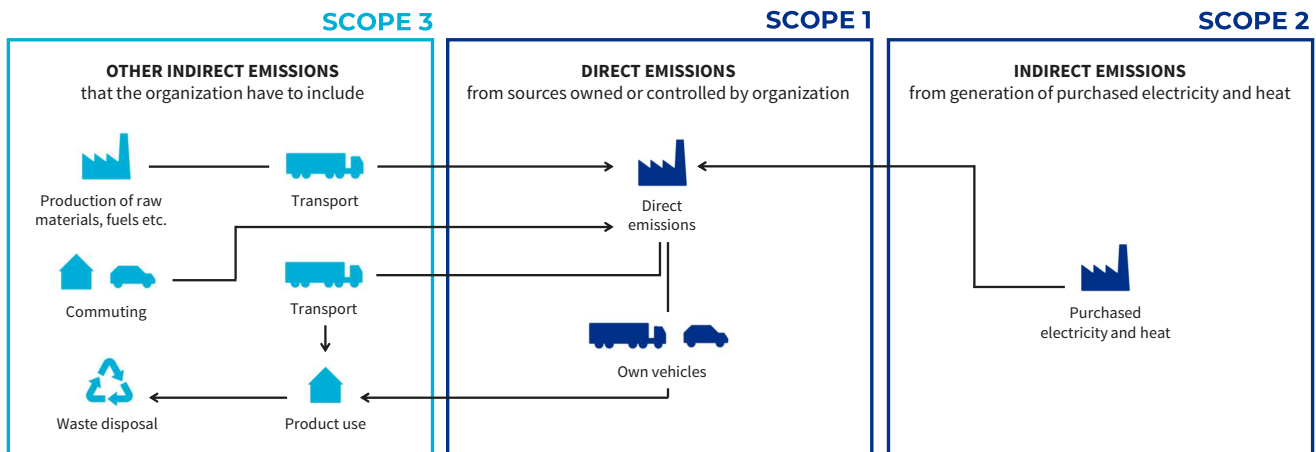


The Intergraf Recommendations have received international recognition with their inclusion in the *ISO 16759:2013 standard on the quantification and communication for calculating the carbon footprint of print media products.*

In the *Publishing 2030 Accelerator – CO<sub>2</sub>e emissions calculation for printed books*, the International Publishers Association (IPA) also recognises the Intergraf Recommendations as the approach to use for the assessment of the printing part of the carbon footprint of a printed book.

In addition to being industry-specific, the Intergraf Recommendations represent a neutral and credible approach as they **cover the 3 scopes of the Greenhouse Gas Protocol**.

**Scope 1** covers all direct emissions, **scope 2** covers the indirect emissions related to energy consumption and **scope 3** covers all other indirect emissions from the supply chain. **Scope 3** is a key element for the carbon footprint calculation in the printing industry as over 70% belong to it, with the production of substrate being the main element.



Based on the Intergraf Recommendations, **2 practical calculation tools** have been developed by industry experts. The carbon calculators are tailored to the industry and both tools provide users with the possibility to work on reducing their emissions as well as on improving their energy efficiency. Moreover both tools can provide the calculations for the entire company or for a specific print product.



[www.climatecalc.eu](http://www.climatecalc.eu)



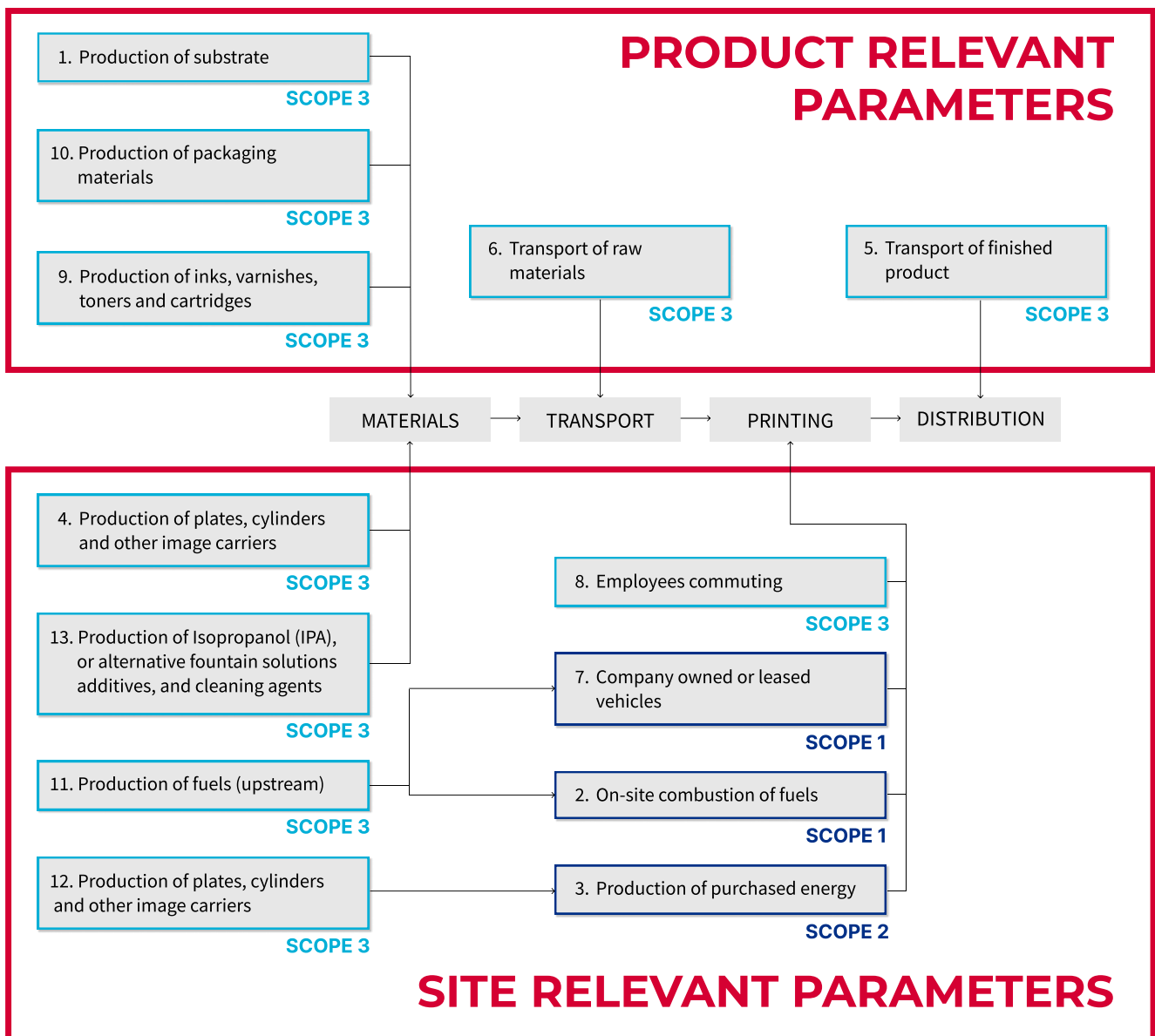
Climate Initiative  
of the German  
Printing and Media  
Industries Federation

[www.klima-druck.de](http://www.klima-druck.de)

# INTERGRAF ROADMAP TO CO<sub>2</sub> CALCULATION, CO<sub>2</sub> REDUCTION AND CO<sub>2</sub> COMPENSATION IN THE PRINTING INDUSTRY.

The market increasingly asks for low carbon emissions which can be achieved through compensation or through reduction of CO<sub>2</sub> emissions and energy consumption. The Intergraf Roadmap presents a procedure **to categorise parameters** that influence carbon emissions and **to prioritise reduction measures** of CO<sub>2</sub> emissions.

The categorisation into parameters related to the printing company and the design of the printed product is essential for the prioritisation of the activities for the reduction and compensation in the life cycle of the printed product.



The Roadmap concludes that the two main ways to reduce the carbon footprint in the printing sector is **to implement energy efficiency measures** and **optimise the substrate**.

The Roadmap demonstrates that **both printers and print buyers both influence the carbon reduction strategy in the printing industry**. While the printer has the full control on the site-relevant parameters (energy consumption reduction), the customer is controlling the product-specific parameters (choice of the substrate). The print buyer sets the specifications for the design of the product and therefore is the decision maker on the choice of the substrate. Reduction of emissions in this area can therefore only be done in a dialogue between the printer and print buyer.

<b>DATA AND CARBON ACCOUNT.</b>															
<b>C.1</b>	Mapping data on CO <sub>2</sub> emission of the printing company and the printed product according to the 13 parameters defined in the Intergraf Recommendations.														
<b>C.2</b>	Presentation of carbon account for the company and the printed products dividing the parameters into scope 1, 2 and 3 emissions according to the Greenhouse Gas Protocol and site relevant and product relevant parameters according to the Intergraf Recommendations.														
<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;"><b>PARAMETERS RELATED TO THE PRINTING COMPANY.</b></th> <th style="width: 50%;"><b>PARAMETERS RELATED TO THE PRODUCT.</b></th> </tr> </thead> <tbody> <tr> <td> <p>The company related emissions are primarily related to the consumption of energy in the company (<b>scope 1 and 2</b>). The printing company has a significant influence on the consumption of energy and the energy efficiency improvements. It is recommended that the reduction activities are prioritised as described below by the printing company.</p> </td> <td> <p>The product related emissions are primarily related to the production and transport of the substrate in the printed product (<b>scope 3</b>). Since the print buyer is responsible for the final design of the printed product and thereby for the final choice of substrates in the printed product, it is recommended that the print buyer takes the reduction of the carbon emissions related to scope 3 into consideration. This should be done in a close cooperation between the print buyer and the printing company. The reduction activities are recommended to be prioritised as described below.</p> </td> </tr> <tr> <td><b>S.1</b></td> <td><b>P.1</b></td> </tr> <tr> <td><b>S.2</b></td> <td><b>P.2</b></td> </tr> <tr> <td><b>S.3</b></td> <td><b>P.3</b></td> </tr> <tr> <td><b>S.4</b></td> <td><b>P.4</b></td> </tr> <tr> <td><b>S.5</b></td> <td><b>P.5</b></td> </tr> </tbody> </table>		<b>PARAMETERS RELATED TO THE PRINTING COMPANY.</b>	<b>PARAMETERS RELATED TO THE PRODUCT.</b>	<p>The company related emissions are primarily related to the consumption of energy in the company (<b>scope 1 and 2</b>). The printing company has a significant influence on the consumption of energy and the energy efficiency improvements. It is recommended that the reduction activities are prioritised as described below by the printing company.</p>	<p>The product related emissions are primarily related to the production and transport of the substrate in the printed product (<b>scope 3</b>). Since the print buyer is responsible for the final design of the printed product and thereby for the final choice of substrates in the printed product, it is recommended that the print buyer takes the reduction of the carbon emissions related to scope 3 into consideration. This should be done in a close cooperation between the print buyer and the printing company. The reduction activities are recommended to be prioritised as described below.</p>	<b>S.1</b>	<b>P.1</b>	<b>S.2</b>	<b>P.2</b>	<b>S.3</b>	<b>P.3</b>	<b>S.4</b>	<b>P.4</b>	<b>S.5</b>	<b>P.5</b>
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<b>S.1</b>	Defining KPI's for energy efficiency of the printing company related to <b>scope 1 and 2</b> .	<b>P.1</b>	Setting targets for substrates with the lowest CO <sub>2</sub> emissions suitable for the printed product. The optimisation must happen in close cooperation between the customer and the printing company.												
<b>S.2</b>	Setting targets for energy reduction activities in the printing company.	<b>P.2</b>	Implementation of the optimised substrate in the printed products.												
<b>S.3</b>	Implementation of energy reduction activities in the printing company.	<b>P.3</b>	Setting targets for reduction of other product related parameters in <b>scope 3</b> in cooperation between the print buyer and the printing company.												
<b>S.4</b>	Purchasing of green energy for the printing company.	<b>P.4</b>	Implementation of other reduction activities related to the printed products.												
<b>S.5</b>	Compensation of remaining emissions in <b>scope 1 and 2</b> .	<b>P.5</b>	Compensation of remaining emissions in <b>scope 3</b> .												

Link to the Intergraf's approach to carbon footprint:  
<https://www.intergraf.eu/policy/environment/carbon-footprint>



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