efpia

European Federation of Pharmaceutical Industries and Associations

EFPIA survey on climate change

In 2022, EFPIA surveyed its members represented in its expert group on Environment, Health, safety and Sustainability (EHSEG). The survey consisted of a set of questions aimed at giving a clearer understanding of where there has been positive movement in industry with reference to mitigating climate change. The outcomes of the survey are detailed below in the form of a Q&A.

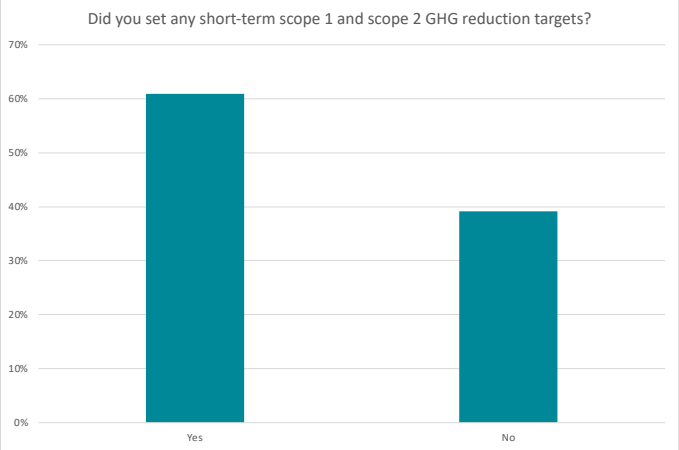
Which companies actively participated in this survey?

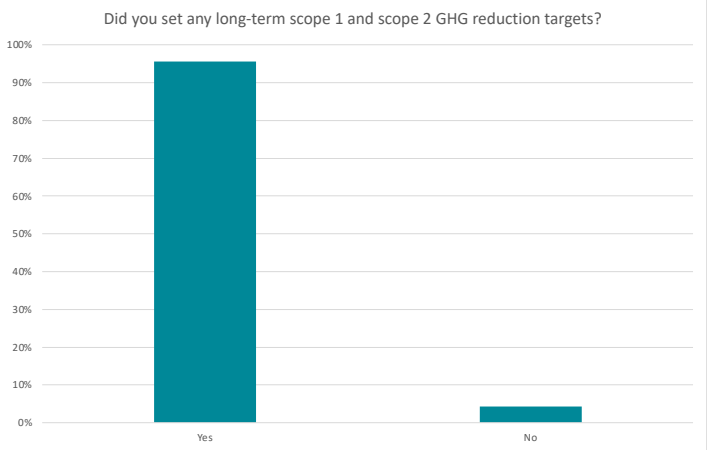
AbbVie
Amgen
AstraZeneca
Bayer
Bristol Myers Squibb
Boehringer Ingelheim
Chiesi
GSK
Ipsen
J&J
LeoPharma
Lilly
Lundbeck
Merck KGaA
MSD
Novo Nordisk
Novartis
Pfizer
Roche
Sanofi
Servier
Takeda
UCB

1. Is going Climate-Neutral in Scope 1 and 2 ambitious enough?

Scope 1 greenhouse gas (GHG) emissions refer to emissions generated directly through the company's activities, whilst scope 2 emissions[1] occur through the generation of energy consumed by the company. Reductions of Scope 1 and 2 emissions are important, as these are in the direct control of our companies. (See also greenhouse gas (GHG) emissions, CO_2 or better CO_2-e emissions). Furthermore, all national and international emission recordings of different sectors is based on this approach.

Nearly all EFPIA member companies have set clear long-term targets and the majority have also specified short-term targets. In our former survey (2020), the figure for long-term targets was only at 55%, so the increase is significant. The number for short-term targets remains more or less stable at 55%.



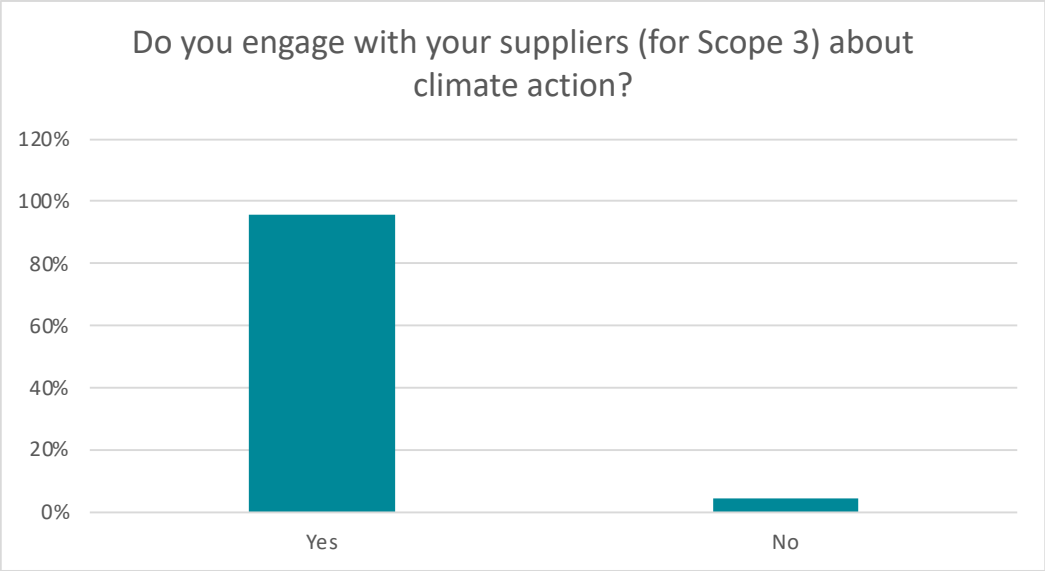


1 Definition of Scope 1 + 2 emission https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf The GHG Protocol Corporate Standard classifies a company's GHG emissions into three 'scopes'. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy.

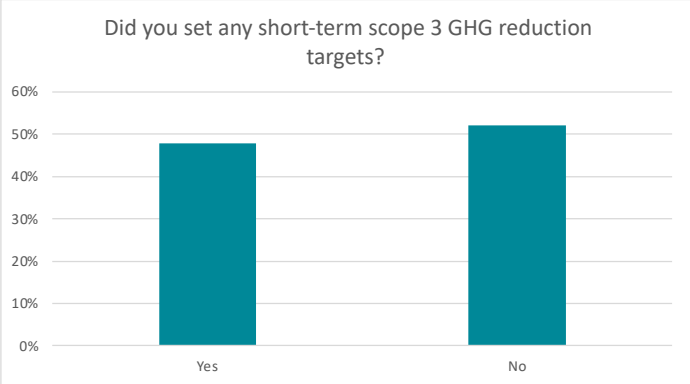
It is known across all industries that scope 3 GHG emissions are significantly higher than the companies' direct emissions (scope 1+2) as scope 3 includes the entire up and downstream value chain related emissions.

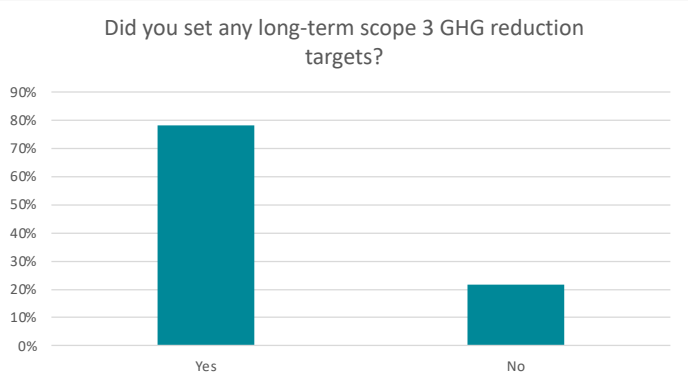
GHG emissions[2] from most EFPIA members can be broken down as follows:

- 10% to 20% scope 1+2 emission (emissions directly related to companies own operations).
- 80%+ are scope 3 emissions[3] (up and downstream value chain related emissions). The most significant part of the greenhouse gas (GHG) emissions from our companies are in the upstream supply chain. This underlines the necessity for companies to engage with their suppliers on climate action (95% of the surveyed companies).



More than 70% of our companies have long-term targets for reducing scope 3 GHG emissions. About 45% have even specified measurable short-term targets for this challenging metric. This target includes upstream emissions - purchased goods and services, product distribution, capital goods and downstream emissions - product use and end of life.





2 GHG Emission = Green House Gas Emission is used as equivalent to CO_2e (CO_2e represents CO_2 Emissions + other Emissions causing global warming)

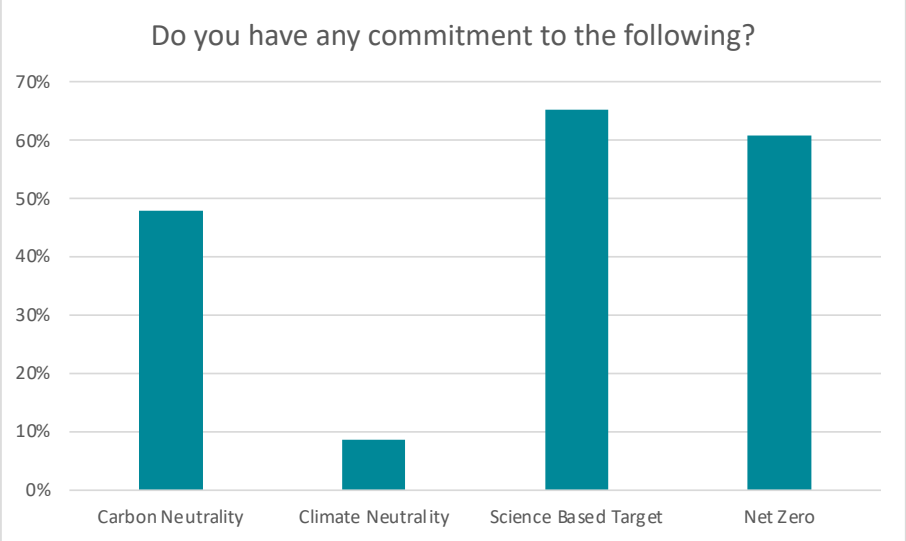
3 Definition of Scope 3 emission https://ghgprotocol.org/sites/default/files/standards_supporting/FAQ.pdf. Scope 3 emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Conclusion

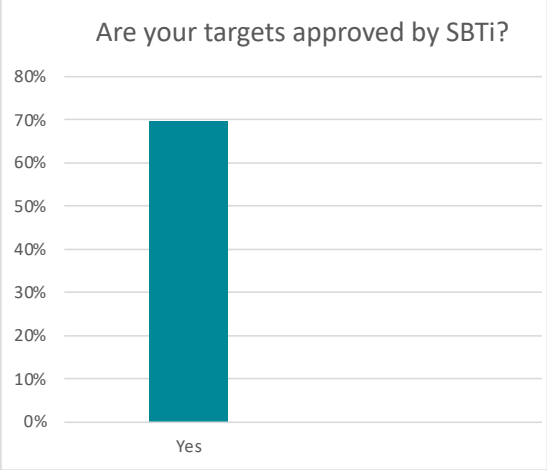
Focus on scope 1 and 2 emissions have been the priority of companies as these are directly controlled by the companies and can be determined with a high level of confidence. However, the majority of emissions within the health sector are coming from scope 3 emissions, it is therefore paramount to address and reduce these. Based on the survey, it is evident that scope 3 emissions are being addressed by most of our companies and ambitious targets are being set in collaboration with suppliers.

2. Which climate commitment is used by our companies:

More than 60% of our member companies' commitments are made based on the "Science Based Targets" initiative (SBTi). Most companies are also committed to carbon neutrality (48%) and net-zero (60%), and climate neutrality as well within set timelines. Be aware that carbon neutrality and net-zero terminology was historically used interchangeably (further details in point 3 that follows). Climate neutrality was a term used previously, and for the purpose of this questionnaire the answers were merged with the ones for carbon neutrality.



The response to the question: "Is your target approved by SBTi?" is impressively high.



3. What is the difference between Carbon Neutrality and Net-Zero:

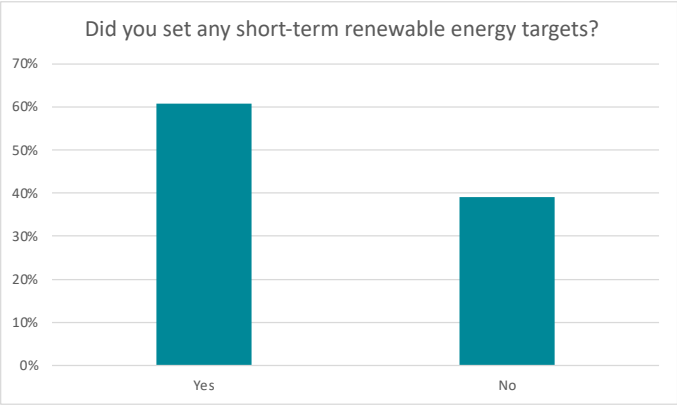
Carbon neutrality and net-zero were often used interchangeably. However, they refer to two very different states of carbon emissions. Carbon neutrality refers to compensating emitted CO_2 through carbon reduction measures and carbon offsets. Net-zero refers to the status of reducing GHG emissions throughout the value chain by at least 90% and counterbalancing the remaining through permanent removal and storage of carbon from the atmosphere by no later than 2050. The Science Based Targets initiative[4] released an update of the net-zero standard in April 2023 that defined the criteria described here.

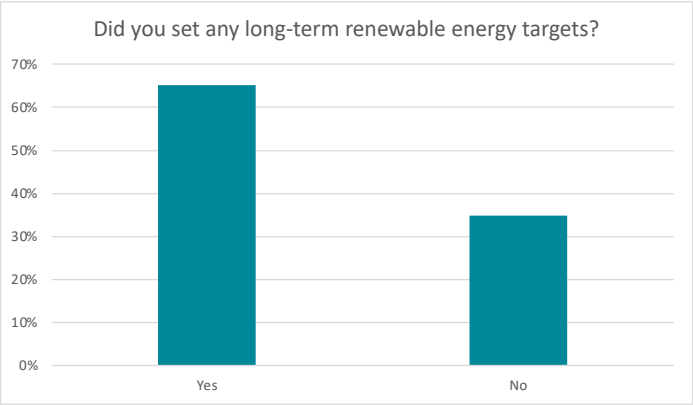
- **Carbon Neutrality**: Carbon neutrality is achieved when anthropogenic CO_2 emissions are reduced, and the remaining emissions are balanced by anthropogenic CO_2 offsets or removals over a specified period.
- **Net-Zero Emissions**: Net-zero emissions are achieved when anthropogenic emissions of greenhouse gases are reduced by at least 95% (scope 1&2) and 90% (scope 3) and the remaining emissions are counterbalanced through permanent removal and storage of atmospheric carbon. This status must be achieved no later than 2050.

Where multiple greenhouse gases are involved, the quantification of net-zero emissions depends on the climate metric chosen to quantify the CO_2eq of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon). The recommendation is to use the factors and guidance used by the latest IPCC report[5].

4. Our companies are committed to the use of renewable energy targets:

The primary ambition is to reduce energy consumption and enhance energy efficiency measures. Further, the majority of companies have clear short-term and/or long-term targets for renewable power and/or energy usage. This was further stated and elaborated in the open questions. Such as in the question: "Which initiatives/projects contributed the most to achieving your targets?" and also "Which opportunities has your company identified related to climate change?" where certain case studies referred to renewable energy projects. Several renewable energy targets referenced to global programs to use electricity from renewable sources.





4 https://sciencebasedtargets.org/

5 https://www.ipcc.ch/reports/

5. What are the CO_2 emissions of the pharma Industry:

Companies have set ambitious targets for their direct operations to achieve scope 1 and scope 2 emission reductions. Energy efficiency measures and transition to renewable power is widely implemented and these actions have led to solid decarbonization results. Many companies are also addressing worldwide programs to electrify their vehicle fleet.

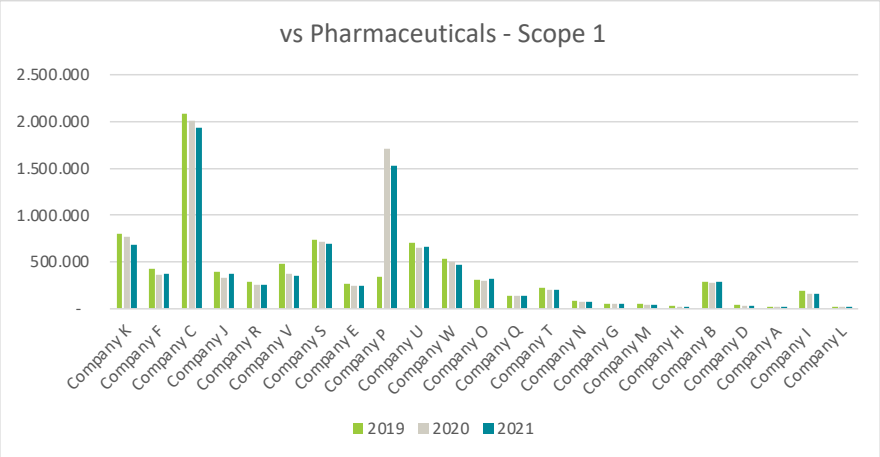
Total emissions from companies can vary significantly, due to sector but also size. Companies can be compared either by absolute emission, or by emission intensity, where the latter would also take size or revenue of the companies into account.

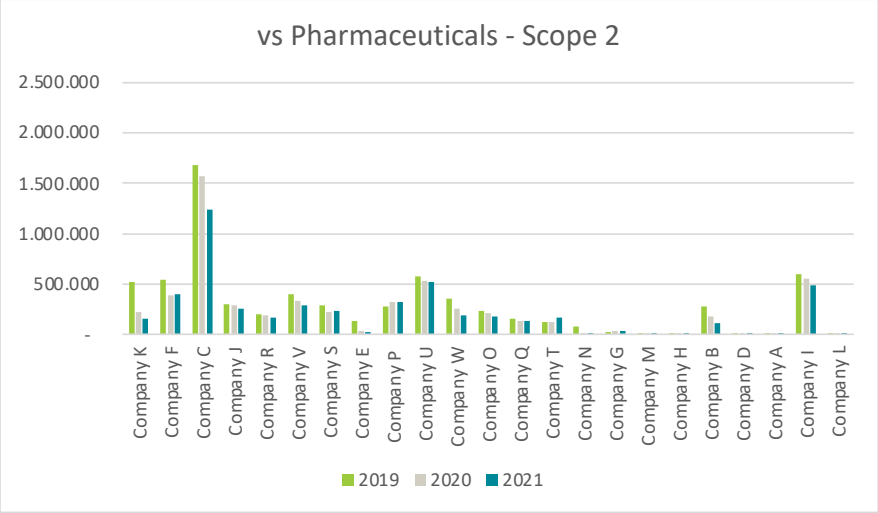
As only scope 1 and 2 emissions are in the direct control of our companies, we focus on this data:

5.1 We evaluated the absolute global CO_2e emissions for our companies and trends from previous surveys in 2019 to 2021:

Total emissions are the key number from a climate change perspective, and some stakeholders or experts require absolute emission data.

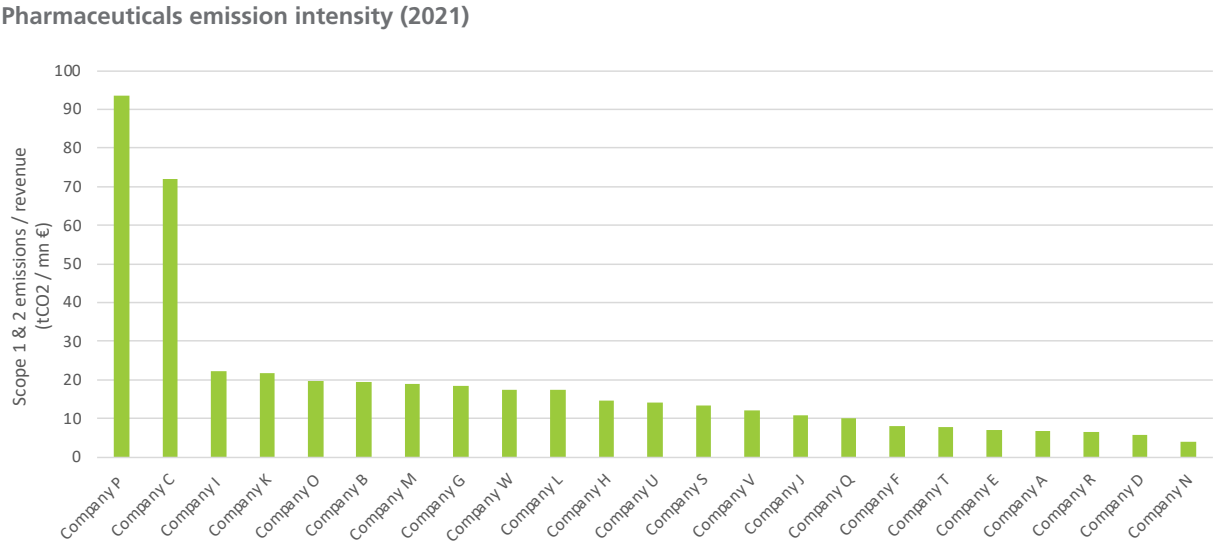
Overall, the companies were able to demonstrate a reduction of scope 1 and scope 2 emissions at approx. 1.5 million tons of CO_2e which amounts to a reduction of more than 10% over a 3-year period (net sales increased significantly over the same time period).





5.2 Emission intensity by companies (Scope 1 and 2 combined):

EFPIA also evaluated the CO_2 emission intensity of the participating EFPIA member companies and found an average value of 19.1 tCO_2-e/€m (compared to 24 tCO_2-e/€m in 2019).



Data source: EFPIA Survey performed 2022 for reference year 2021

Analysis of the survey results indicated that it is more relevant that the average value of the emission intensity is taken into consideration when comparing within our sector, but also with other sectors. At a first glance it seems that there is a large variation between the data from companies. However, this relatively wide-spread variation of intensities can easily be explained - A more in-depth evaluation shows that the high intensity of a few companies is caused by them having activities in other sectors as part of their business, for example chemical production. These activities are associated with significantly higher emission intensities.

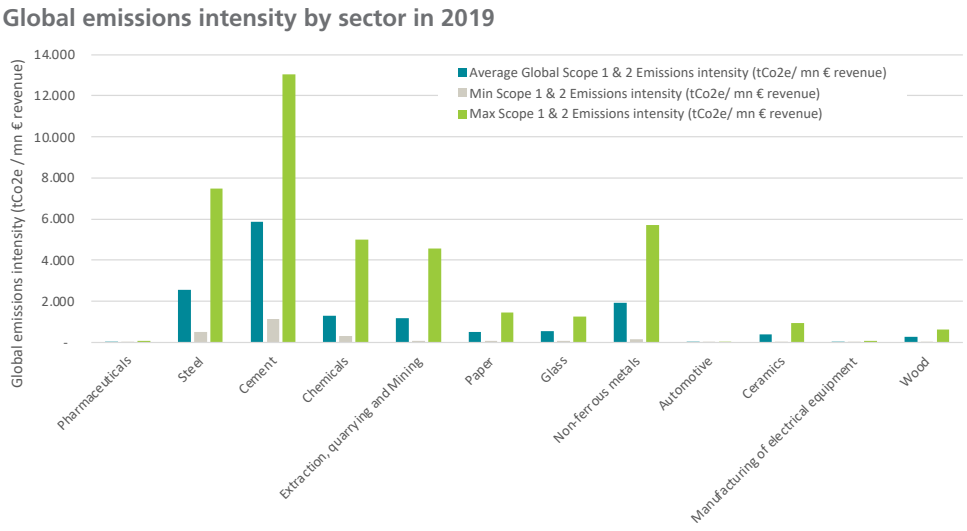
5.3 Emission intensity by other industry sectors in comparison to pharmaceutical companies represented by EFPIA (Scope 1 and 2 combined):

Emission intensity data become even more important when comparing different sectors with very different profiles of energy use with each other. The most important reason is that this data is very reliable and can be relatively easy accessed via company annual reports and public disclosures. The typical approach, that was also applied here, is to analyze the data from the biggest companies of the sector. In this case the ten biggest companies from each sector where considered. In the case of pharma/EFPIA company data, we had the survey data available for all 23 participating companies and we used all 23 data sets.[6,7,8]

6 Global Emissions of EFPIA Members, research driven pharmaceutical companies including Big Pharma were evaluated during the survey 2022 for the last years. (Scope 1, Scope 2, Scope 3)

7 Intensity data were based on Scope 1 + 2 emissions of the ten biggest internationally operating companies in the sector (as reported in their annual reports), for EFPIA data all 23 reporting companies in the survey were used.

8 Data is based on the EFPIA survey 2022 and comparing with the 10 biggest companies of the respective sector.



Therefore, when we compare the scope 1 and 2 emission intensity of other sectors with the pharmaceutical sector, it is evident that our intensity average of only 24 tCO_2-e/€m (in 2019) is very low compared to energy intensive sectors. The best available dataset for other sector comparisons was from 2019, which is why we used that data for our companies although we also had the 2021 data available (see above).

Comparing intensity data of the EFPIA member companies clearly demonstrates that intensity data for high intensity sectors are much higher; the chemical industry for example has an emission intensity of about 1300 tCO_2e/€m and about 2500 tCO_2e/€m for the steel industry.

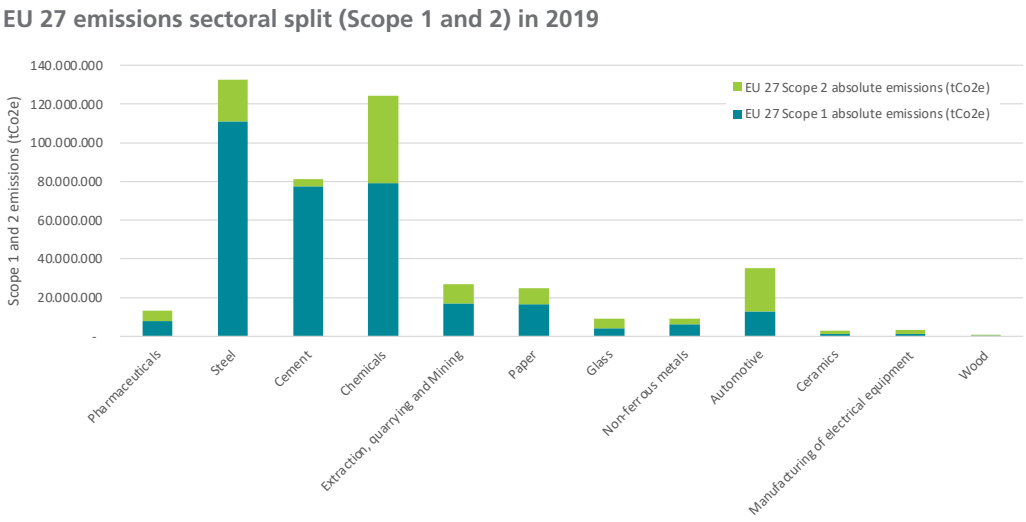
5.4 The absolute emissions of the different sectors (scope 1 and 2 combined) (Note: this data set has a much higher uncertainty):

The pharmaceutical industry, which includes the research-driven pharmaceutical companies represented in EFPIA are considered a medium - or even low GHG emissions impact sector (FTSE4Good). This was confirmed through a comparison of our EFPIA survey data to absolute emissions of other sectors.

However, these absolute numbers from some of the other sectors have high uncertainties, due to the lack of complete data sets, the general use of the UNFCCC dataset and the need for upscaling emissions from some sectors due to the lack of availability of data for Annex[9] I countries.

It is important to note that we use the 2019 data as it is the most recent year with a complete data set.

As a conclusion it can be said that both the intensity data and absolute emissions from EFPIA member companies[6] are lower compared to other notable sectors.



Scope 1 and 2 emissions splits taken from the top 10 companies in each sector globally (for pharmaceutical sector, the 23 respondents to the EFPIA survey were analysed).

9 https://unfccc.int/parties-observers

The Healthcare Sector in total are estimated to constitute app. 5% of global greenhouse gas emissions. The pharmaceutical industry itself is contributing about 20% of this 5%.

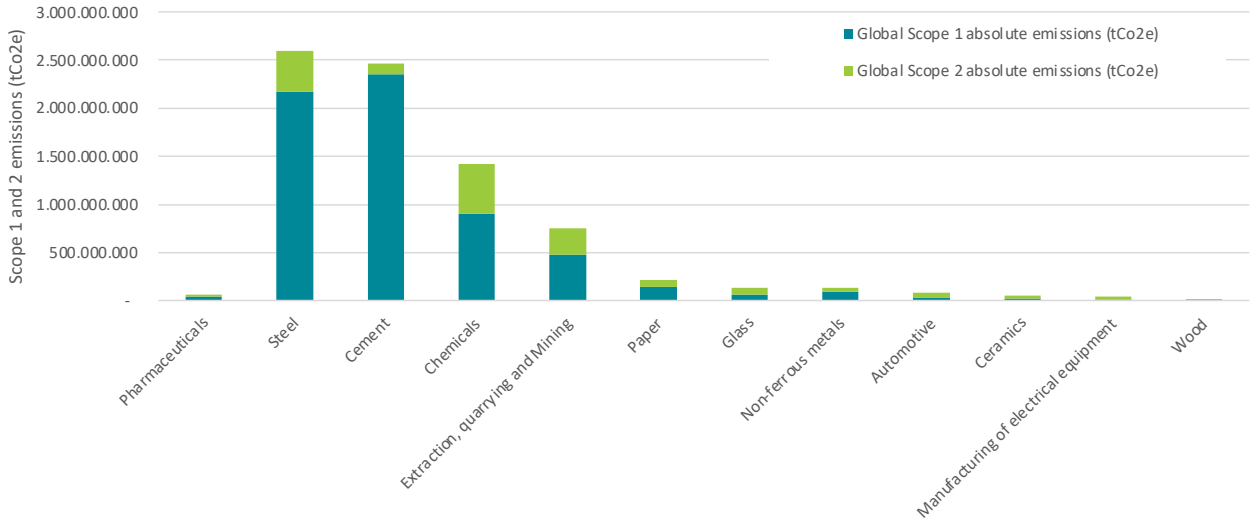
Based on publicly available data of EU27 below graph indicates a comparison of the sectoral split in absolute terms of scope 1 and 2 emission data.

For comparison the estimated global emissions by sectoral split can be considered, however it is to be noted that the EU 27 data are more standardized and reliable.

The Pharmaceutical sector is an important sector and plays an important role for innovation. However, from a GHG emissions perspective, it is a medium or low impact sector comparing with other energy intensive sectors.

We acknowledge that the sources of the absolute emissions scope 1 and 2 data of the other sectors[10,11,12,13,14] data for 2019 has uncertainties. However, we are convinced, that the data provides a first realistic view of the impact of the companies represented by EFPIA in comparison with other sectors).

Global emissions sectoral split (Scope 1 and 2) in 2019



Scope 1 and 2 emissions splits taken from the top 10 companies in each sector globally (for pharmaceutical sector, the 23 respondents to the EFPIA survey were analysed).

6. Is the pharma sector already addressing Scope 3 emissions (downstream and upstream value chain emissions)?

More than 70% of companies that responded to the survey have long-term targets for reducing scope 3 GHG emissions. About 45% even have specified measurable short-term targets for this challenging metric. This target needs the full involvement of the supply chain with purchased goods and services but also others, for example product distribution and capital goods. To this end, 95% of companies engage their suppliers to advance climate action.

As in most sectors these emissions are significantly higher than the companies' own emissions. 80%+ of GHG emissions from most EFPIA members stems from up- and downstream value chain emission (Scope 3 emissions).

The downstream emissions of the pharmaceutical industry are related to product distribution, and most products do not have additional significant emissions associated through use of sold products (e.g. tablets). Our assessment showed that upstream emissions are by far the main contributor in our sector.

10 As a basis for all global emissions the UNFCCC dataset was used, upscale was necessary due to fact that all sectors in focus data was only fully available for Annex I countries, last dataset available for 2019

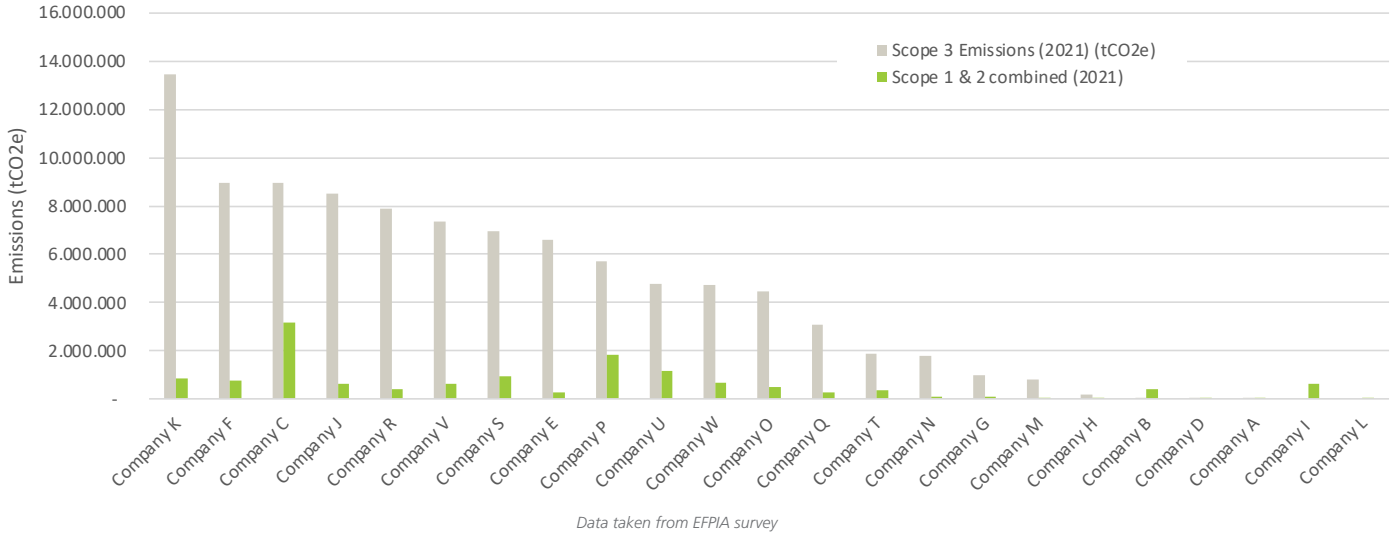
11 https://www.iea.org/reports/iron-and-steel-technology-roadmap

12 https://iopscience.iop.org/article/10.1088/1748-9326/ac48b5/pdf

13 https://cefic.org/a-pillar-of-the-european-economy/facts-and-figures-of-the-european-chemical-industry/profile/

14 https://www.era-min.eu/sites/default/files/docs/et0320656enn.en_.pdf

Pharmaceuticals sector deep dive (2021 data)



Data taken from EFPIA survey

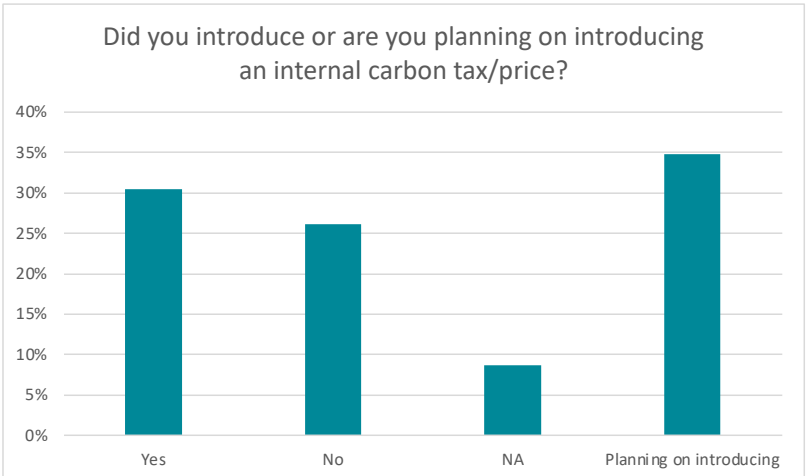
In comparison with most other industries the pharmaceutical industry's absolute scope 3 emissions are relatively low. Sectors as the steel and chemicals or even more extreme automotive and aviation have much higher absolute emissions.

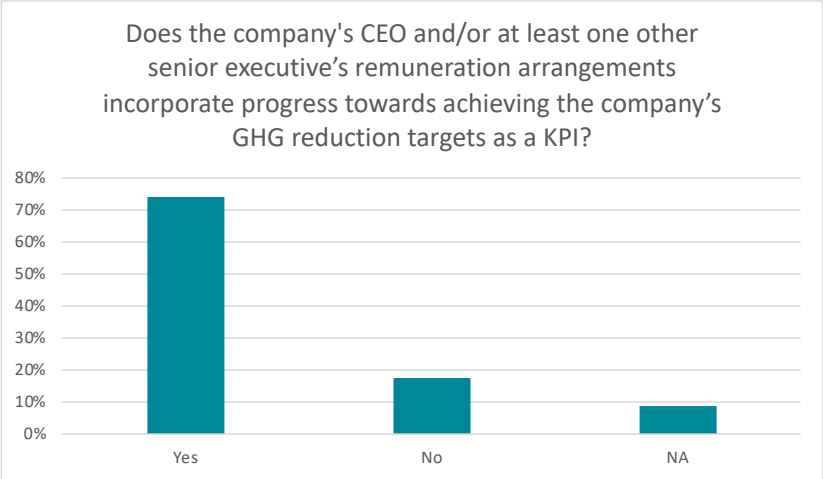
7. Advancements since previous survey (2020):

It is striking that nearly all companies have improved and updated their climate targets and strategy since the previous survey. This shows a strong commitment to actively contribute to reach the climate targets and shows the ambition of the sector to support the Green Deal.

One of the biggest changes noted is that 30% of our companies have already introduced an internal carbon tax/price as a mechanism to reduce significantly carbon emissions and to ensure future driven investments with less CO_2 impact. An additional 35% of our companies are planning to do so.

Most of the companies' CEOs and/or at least one other senior executive's remuneration arrangements incorporate KPIs to ensure progress towards achieving the company's GHG reduction targets.





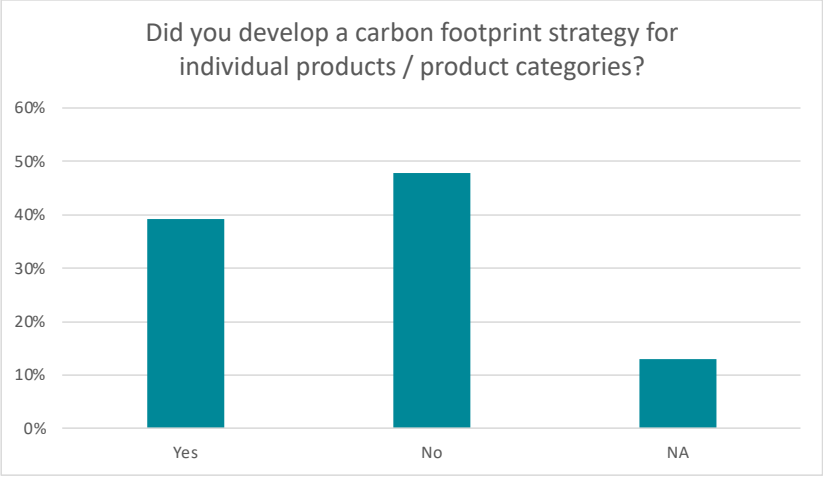
8. Biodiversity impact of pharma on nature and impact of loss of biodiversity:

The pharmaceuticals' sectors direct impact on biodiversity through their operations is a very local and complex topic. The sector is working with stakeholders on assessing the impacts and minimizing them, however this was not part of the current assessment.

There is also an indirect impact on biodiversity from the pharmaceutical/healthcare sector through contributing to GHG emissions leading to climate change, which in turn is linked to biodiversity loss. This aspect was also not covered in the current assessment.

9. Challenges regarding products and product categories:

There is increased emphasis on developing product carbon footprint strategies. There are some life cycle assessment (LCA) frameworks and methodologies available to do this at the product level (e.g. Sustainable Healthcare Coalition Pharmaceutical and Medical Device Carbon Footprinting Standard), however these remain relatively complex and resource-intensive to apply.



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