

A photograph of an industrial facility, likely a refinery or chemical plant, with several large ships docked at a pier. The facility features numerous tall chimneys emitting white smoke into a cloudy sky. The ships are dark-colored with yellow and red accents. The water in the foreground is calm.

# Large GHG emitters: € 761 billion climate damage in one year

20 companies with Dutch activities

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## About this report

This report has been commissioned by Milieudefensie/Friend of the Earth Netherlands.

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## Authorship

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## Summary

**This report calculates the value of climate damage, generated by 20 companies in the year 2022.**

These companies were selected by Milieudefensie and belong to a list<sup>1</sup> of large greenhouse gas (GHG) emitters with activities in the Netherlands. Originally, the list consisted of 29 companies. However, 20 companies were eventually selected based on the criteria that they are publicly listed.

The group of companies is a mixture of financial institutions, transport and logistic companies, retail and food companies, oil & gas companies, and other industrial and construction companies.

**The total, global, Scope 1, 2 and 3 emissions of the 20 companies amounted to 5,109 million tons of CO<sub>2</sub>e.** Two companies accounted for 72% of all emissions: British Petroleum (BP) and ExxonMobil. In total, the 20 companies' GHG emissions were for 90.95% in Scope 3 and 9.05% in Scope 1 + 2. The oil & gas companies, the financial institutions, Ahold Delhaize, Unilever, BAM, and Stellantis contributed to the high percentage of Scope 3. Of the 20 companies, 12 have Scope 3 emissions that account to more than 90% of their total emissions.

**Climate damage was € 761 billion in 2022.** Based on the external cost approach of Planbureau voor de Leefomgeving (PBL), the price per ton CO<sub>2</sub>e was set at € 149 per ton. At this price, the global climate damage generated by the 20 companies was € 761 billion based on 2022 emissions. The two oil & gas companies BP and ExxonMobil contributed 72% of the total, Stellantis contributed 9%.

It needs to be considered that the real damage was probably much higher, as companies are still developing methodologies to account better for the emissions in their whole supply chain, in particular the Scope 3 emissions. The accounting of emissions from purchased goods and services, packaging, logistics, end-of-life and waste (in-scope) and emissions from indirect consumer use (out of scope), still needs a lot of improvement.

**In the period 2016-2022, the average annual net profit of the group of 20 companies was € 46.30 billion. Of this, 92% was returned to shareholders.** The payout in dividends amounted to an annual average of € 33.48 billion. Additionally, € 9.04 billion (annual average) was distributed by buying back own shares on the stock market. Thus, 72% of net profit was distributed to shareholders through dividends, and 20% through (net) share buybacks. These payout levels (72% + 20%) are relatively high in equity markets and could be considered unsustainable.

**While the climate damage is high and all climate plans to reduce emissions fall short, the companies in focus returned nearly all their profits to shareholders.** The group of 20 companies distributed 92% of their average annual net profit in 2016-2022 to shareholders through dividends and through share buybacks. They did this while the climate damage (2022) was 16.4 times higher than their net profit (or 1644% of net profit).

## Abbreviations

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<b>CO<sub>2</sub></b>	Carbon dioxide
<b>CO<sub>2</sub>e</b>	CO <sub>2</sub> -equivalent
<b>GHG</b>	Greenhouse gas
<b>SBB</b>	Share buyback

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## Introduction

This report calculates the value of climate damage, generated by 20 companies. These companies were selected by Milieudefensie and belong to a list<sup>2</sup> of large greenhouse gas (GHG) emitters with activities in the Netherlands. Originally, the list consisted of 29 companies. Of this list, 20 companies were selected based on the important criteria that they are publicly listed and part of Milieudefensie's campaign for climate plans.

In this new report, the Scope 1, 2 and 3 emissions of the 20 companies have been collected. The year 2022 has been chosen as for this year most companies have relevant data. When collecting data, 2023 annual reports were not published for all companies. Subsequently, the value of the climate damage has been calculated for each company and for the total. Finally, this climate damage has been confronted with the money given back to shareholders through dividends and (net) share buybacks.

# 1

## Emission data and value of damage

**This section shows the data that is available about each company's Scope 1, 2 and 3 CO<sub>2</sub>e emissions.**

### 1.1 Data gathering, sources, and omissions

Many companies publish their global emissions GHG emissions in annual reports and/or in sustainability reports. Data is at the 'global' level. There is no data on geographical division of emissions available. GHG emissions have an impact on 'global' climate change. Climate change does not stop at the borders of one country.

The focus in this report was on the value of climate damage in 2022. When collecting data, most companies had not yet released their 2023 annual reports, nor sustainability reports, nor ESG data.

The group of companies is a mixture of financial institutions, transport and logistic companies, retail and food companies, oil & gas companies, and industrial and construction companies. Due to differences in their activities, these groups have their own focus on, and way of publishing, specific emissions. In Scope 3 emissions, financial institutions focus on 'financed emissions', Ahold Delhaize on emissions from 'purchased products and services', and oil & gas companies on the consumer use of their products (including burning). In Scope 2 emissions, the current report had no preference for market-based (including renewable energy certificates<sup>3</sup>) or location-based data (excluding), and followed the choices made by the companies when calculating their total emissions. The different impacts between market-based and location-based data on the size of total emissions is limited.

Readers need to consider that many companies are still in the process of accounting for their emissions, in particular in the Scope 3 categories. The Scope 3 emissions can be divided between 1) 'in scope' emissions, including purchasing, packaging, end-of-life, waste and logistics, and 2) indirect consumer emissions (also called out of scope), like emissions from home cooking and washing with detergents. While companies did a lot of work on Scope 1 and 2 emissions, the impact on the climate from purchased goods and services, packaging, end-of-life and waste, logistics, and Scope 3 indirect consumer use emissions are often not adequately accounted for, or methodologies, coverage/scope, and application are still in process. Vopak is an example, as it does not account for the emissions of the fossil fuels in its storage. Therefore, GHG emissions by the 20 investigated companies are probably much higher than published in their accounts. On the other hand, according to New Climate Institute, Unilever's 'over-reporting' of indirect consumer use emissions could distract from action to reduce its upstream scope 3 emissions Unilever.<sup>4</sup>

### 1.2 The available data

The total Scope 1, 2 and 3 emissions of the 20 companies amounted to 5,109 million tons of CO<sub>2</sub>e. Two companies accounted for 72% of all emissions: British Petroleum (BP) and ExxonMobil.

**Table 1 Available Scope 1, 2, and 3 emission data 20 companies**

2022, million tons	Scope 1,2 mb*	Scope 1,2 lb**	Scope 3	Financed emissions	Total GHG
ABN Amro <sup>5</sup>	0.006	NA	0.04	22.59	22.64
AEGON <sup>6</sup>	NA	0.017	0.01	10.17	10.19
Ahold Delhaize <sup>7</sup>	2.84	2.68	62.97****	NA	65.81
Air France KLM <sup>8</sup>	22.59	22.63	5.73	NA	28.38
Akzo Nobel <sup>9</sup>	0.20	0.20	13.20	NA	13.40
BAM Groep <sup>10</sup>	0.09	NA	7.82	NA	7.91
BP <sup>11</sup>	31.90	NA	1,640.70	NA	1,672.60
Dow <sup>12</sup>	31.48	NA	80.55	NA	112.03
DSM <sup>13</sup>	1.05	NA	9.90	NA	10.95
Exxon Mobil <sup>14</sup>	100.00	NA	1,900.00	NA	2,000.00
ING Groep <sup>15</sup>	0.017	NA	0.01	56.09	56.12
LyondellBasell <sup>16</sup>	22.10	21.70	101.10	NA	122.80
NN Group <sup>17</sup>	NA	0.01	0.00	5.67	5.67
RWE <sup>18</sup>	NA	92.40	22.10	NA	114.50
Stellantis <sup>19</sup>	3.40	NA	447.20	NA	450.60
Tata Steel Ltd <sup>20</sup>	80.70	NA	13.10	NA	93.80
Unilever <sup>21</sup>	0.81	NA	110.34***	NA	111.15
Uniper <sup>22</sup>	56.50	NA	90.00	NA	146.50
Vopak <sup>23</sup>	0.52	NA	0.39	NA	0.91
Yara International <sup>24</sup>	15.90	NA	46.80	NA	62.70
<b>Total***</b>					<b>5,108.66</b>

Source: Annual reports, sustainability reports, or websites of the 20 companies; \*) mb = market-based; \*\*) lb = location-based; \*\*\*) of which 3.15 mln tons scope 3 indirect consumer use at Ahold Delhaize and 57.54 mln tons at Unilever; NA = Not available; \*\*\*\*) The 'Total' can contain some double-counting, but this is not essential in calculating the climate damage value based on prevention costs.

### 1.3 Division of Scope 1+2 versus Scope 3 emissions

In total, the 20 companies emitted 90.95% of their GHG in the category of Scope 3, and 9.05% in Scope 1 + 2. The oil & gas companies, the financial institutions, Ahold Delhaize, Unilever, BAM, and Stellantis contributed to the high percentage in Scope 3. Of the 20 companies, 12 have Scope 3 emissions that account for more than 90% of their total emissions.



**Table 2 Division of Scope 1+2 and Scope 3 emissions**

2022, million tons	Scope 1+2	Scope 3	Total	% Scope 1+2	% Scope 3*
ABN Amro	0.01	22.63	22.64	0.02%	99.98%
AEGON	0.02	10.18	10.19	0.17%	99.83%
Ahold Delhaize	2.84	62.97	65.81	4.31%	95.69%
Air France KLM	22.65	5.73	28.38	79.80%	20.20%
Akzo Nobel	0.20	13.20	13.40	1.49%	98.51%
BAM Groep	0.09	7.82	7.91	1.09%	98.91%
BP	31.90	1,640.70	1,672.60	1.91%	98.09%
Dow	31.48	80.55	112.03	28.10%	71.90%
DSM	1.05	9.90	10.95	9.59%	90.41%
Exxon Mobil	100.00	1,900.00	2,000.00	5.00%	95.00%
ING Groep	0.02	56.10	56.12	0.03%	99.97%
LyondellBasell	21.70	101.10	122.80	17.67%	82.33%
NN Group	0.01	5.67	5.67	0.12%	99.88%
RWE	92.40	22.10	114.50	80.70%	19.30%
Stellantis	3.40	447.20	450.60	0.75%	99.25%
Tata Steel Ltd	80.70	13.10	93.80	86.03%	13.97%
Unilever	0.81	110.34	111.15	0.73%	99.27%
Uniper	56.50	90.00	146.50	38.57%	61.43%
Vopak	0.52	0.39	0.91	57.40%	42.60%
Yara International	15.90	46.80	62.70	25.36%	74.64%
<b>Total</b>	<b>462.18</b>	<b>4,646.48</b>	<b>5,108.66</b>	<b>9.05%</b>	<b>90.95%</b>

Source: Profundo based on annual reports, sustainability reports, or websites of the 20 companies: \*) including financed emissions.

## 1.4 The value of damage

### 1.4.1 Price of CO<sub>2e</sub> per ton

For this research Profundo has chosen to work with a CO<sub>2e</sub> price of € 149 per ton. This is based on a conservative external cost approach of Planbureau voor de Leefomgeving (PBL). This method is used because PBL is the research institute that advises the Dutch government on environmental policy. However, it is important to note that this methodology does not cover the actual damage caused, but only prevention costs. Initially, this bureau calculated the value at € 130 per ton in November 2023<sup>25</sup>. On February 12, 2024, PBL increased the price to € 149 per ton due to a correction for inflation.<sup>26</sup> This number, now applied by Profundo, is relatively conservative (see next paragraph).

The approach is in line with the use of the concept of social or societal costs of carbon. This concept is linked to the impact of extreme events like droughts, fires, heatwaves, and storms. These are likely to cause long-term economic harm because of their impact on health, savings, labour productivity, agriculture, and social disruption. Expert groups of economists and climate scientists calculated values of respectively US\$ 171 and US\$ 310 per ton. Recent calculations for economic damage have increased further due to the inclusion of higher damages in the Global South.<sup>27</sup> These latest societal costs of carbon dioxide (SCCO<sub>2</sub>) have a more forward-looking component, based on the projected cost to society of releasing an additional ton of CO<sub>2</sub>, including climate damage costs and economic damages (economic feedback). One study shows that by 2100, global GDP could be 37% lower than it would be without the impacts of global warming when taking the effects of climate change on economic growth into account (without accounting for lasting damages - excluded from most estimates - GDP would be around 6% lower). This means that in a 'wider' societal cost concept, the impacts on growth may increase the economic costs of climate change by a factor of six. When taking more robust climate science and updated models into account, one study suggests that the economic damage could in fact be over US\$ 3,000 per ton of CO<sub>2</sub>.<sup>28</sup>

In some studies the EU ETS (Emission Trading System) price has been used. This EU ETS price per ton CO<sub>2</sub>e has shown an upward-moving trend since 2017, although in recent quarters, the price has declined because of less economic activity and less use of coal and gas. On 8 March 2024, the EU ETS price was € 61 per ton after € 104.8 one year ago (6 March 2023).<sup>29</sup> This ETS price mechanism is a trading platform for coping with Scope 1 and 2 emission rights for certain energy-intensive industries. The EU system does not yet consider Scope 3 emissions and is not applied to food producers, for instance.

#### 1.4.2 The total value

Based on this price per ton, the annual global climate damage by the 20 companies amounts to € 761 billion, based on 2022 emissions. Two oil & gas companies accounted for 72% of this annual € 761 billion, Stellantis accounted for 9%. In contrast, Vopak's contribution is minor, although this company does not account for the Scope 3 emissions of the oil & gas stored in its tanks.

Because of the existing omissions in reporting by many companies, the real damage per year might be significantly higher.

**Table 3 Climate damage value (2022) and % contribution per company**

Company	Total GHG (mln tons)	CO2e price/ton (€)	Climate damage 2022 (€ mln)	% of total
ABN Amro	22.64	149	3,373	0.4%
AEGON	10.19	149	1,519	0.2%
Ahold Delhaize	65.81	149	9,806	1.3%
Air France KLM	28.38	149	4,229	0.6%
Akzo Nobel	13.40	149	1,997	0.3%
BAM Groep	7.91	149	1,178	0.2%
BP	1,672.60	149	249,217	32.7%
Dow	112.03	149	16,692	2.2%
DSM	10.95	149	1,632	0.2%

Company	Total GHG (mln tons)	CO2e price/ton (€)	Climate damage 2022 (€ mln)	% of total
Exxon Mobil	2,000.00	149	298,000	39.1%
ING Groep	56.12	149	8,361	1.1%
LyondellBasel	122.80	149	18,297	2.4%
NN Group	5.67	149	845	0.1%
RWE	114.50	149	17,061	2.2%
Stellantis	450.60	149	67,139	8.8%
Tata Steel Ltd	93.80	149	13,976	1.8%
Unilever	111.15	149	16,561	2.2%
Uniper	146.50	149	21,829	2.9%
Vopak	0.91	149	135	0.02%
Yara International	62.70	149	9,342	1.2%
<b>Total</b>		<b>149</b>	<b>761,190*</b>	<b>100.0%</b>

Source: Profundo based on annual reports, sustainability reports, or websites of the 20 companies, Planbureau voor de Leefomgeving (PBL): \*) The total emissions (including Scope 3) of these 20 companies have not been added together in this table because by definition this would result in double-counting. The climate damage per company are prevention costs per company that are necessary to prevent emissions and can therefore be added up.

# 2

## Climate damage versus profits, dividends, and share buybacks

**This section confronts the climate damage per company, in 2022, with the money handed back to shareholders via dividends and share buybacks.**

### 2.1 Data gathering, sources, and methodology

For this section on net profit, dividends and share buybacks, Milieudefensie provided the dataset for 2016-2022. This was collected by SOMO. Profundo used this dataset to calculate average annual net profit, average dividends, and average (net) share buybacks.

Profundo proposed this section, as it might be helpful for readers to confront the value of climate change damage with the size of money handed back to shareholders, in the context of the net profit generated. Profundo calculated the 2022 climate damage (an annual number). The data of SOMO for 2016-2022 showed a very volatile development per year for several companies. This was the reason to apply an annual average for the period 2016-2022.

A dividend payout ratio of 30-50% is considered as healthy, while anything over 50% could not be sustainable.<sup>30</sup> A share buyback differs from a dividend payment as a company buys its own shares on the market, resulting in a decline in the number of outstanding shares. The future net profits and dividends will be divided by a smaller shareholders' base, leading to higher earnings per share and dividends. Therefore, a share buyback tends to be beneficial to the share price. As money flows to existing shareholders, a share buyback can be added to the dividend total and compared to the net profit. Reasons to choose a share buyback instead of a higher dividend might be 1) improved shareholder value, 2) a boost in share prices, 3) tax benefits, and 4) utilize excess cash.<sup>31</sup>

### 2.2 Average annual net profit, dividend, and share buybacks in 2016-2022

The group of 20 generated a total annual net profit of € 46.30 billion in the period 2016-2022 (on average). Consider that this is an average annual number. The payout in dividends amounted to an annual average of € 33.48 billion. Additionally, € 9.04 billion was distributed by buying back own shares on the stock market.

This means that 72.3% of the net profit was distributed to shareholders through dividends (33.48/46.30), and 19.5% through share buybacks (9.04/46.30).

The following companies have deviating patterns and need further explanation:

- Air France KLM generated an average annual loss and, on balance, issued shares instead of buying back shares.
- BP's average net profit was relatively low, based on unadjusted numbers.<sup>32</sup> Despite the reported negative net profit, BP paid € 7.1 billion in dividends and share buybacks (annual average) to shareholders, while its climate damage for 2022 was € 249 billion.
- Uniper showed a net loss of € 3.8 billion (annual average), and it had a negative net share buyback number due to emissions of new shares.
- RWE also showed, on average, a negative net share buyback number.

**Table 4 Climate damage value 2022 versus average net profit, dividends, and share buybacks in 2016-2022**

€ million	Climate damage 2022	Net profit	Dividend	Share buyback (net)
ABN Amro	3,373	1,713	853	71
AEGON	1,519	626	227	263
Ahold Delhaize	9,806	1,769	840	998
Air France KLM	4,229	-1,143	0	-106
Akzo Nobel	1,997	1,547	674	1,006
BAM Groep	1,178	21	6	8
BP	249,217	126	4,980	2,116
Dow*	16,692	2,697	1,468	574
DSM	1,632	1,068	244	255
Exxon Mobil	298,000	15,411	12,494	2,501
ING Groep	8,361	4,282	2,248	471
LyondellBasell	18,297	3,501	1,531	1,306
NN Group	845	1,578	412	629
RWE	17,061	1,359	617	-1,480
Stellantis	67,139	6,650	1,519	91
Tata Steel Ltd	13,976	1,318	259	-247
Unilever	16,561	6,500	4,127	2,418
Uniper	21,829	-3,774	280	-1,955
Vopak	135	277	142	17
Yara International	9,342	772	563	99
<b>Total</b>	<b>761,190</b>	<b>46,297</b>	<b>33,482</b>	<b>9,035</b>

Source: Profundo based Climate Damage Table 3 and on data provided by SOMO. Milieudefensie commissioned SOMO to calculate and analyse the net profits, dividends, and net share buybacks of the 20 companies for the period 2016-2022: \*) Only data 2018-22.

### 2.3 Climate damage in perspective

The group of 20 companies distributed 92% of their average annual net profit in 2016-2022 to shareholders through dividends and through share buybacks. They did this while the climate damage (2022) was 1644% of their average net profit, or 16.4 times higher than their average annual net profit (see Table 5). Even worse, they did this in 2016-2022 and continue to do this while all their climate plans to reduce their emissions fall short.<sup>33</sup>

Various companies see themselves as leaders in the climate transition, like Unilever. However, the combination of the distribution of a lot of money to shareholders (Unilever on average 101% of its net profit) while the costs of their climate damage are very high (Unilever: 2.55 times the level of the average net profit) could give a feel of green-washing.

**Table 5 Climate damage value 2022 in perspective**

%	Dividend+SBB/net profit	Climate damage/net profit
ABN Amro	54%	197%
AEGON	78%	243%
Ahold Delhaize	104%	554%
Air France KLM	NR	NR
Akzo Nobel	109%	129%
BAM Groep	65%	5703%
BP	5651%	198467%
Dow	76%	619%
DSM	47%	153%
Exxon Mobil	97%	1934%
ING Groep	63%	195%
LyondellBasell	81%	523%
NN Group	66%	54%
RWE	NR	1256%
Stellantis	24%	1010%
Tata Steel Ltd	1%	1060%
Unilever	101%	255%
Uniper	NR	NR
Vopak	57%	49%
Yara International	86%	1210%
Total	92%	1644%

Source: Profundo, based on Table 4, which was partly based on data provided by SOMO. Milieudefensie commissioned SOMO to calculate and analyse the net profits, dividends, and net share buybacks of the 20 companies for the period 2016-2022.

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