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Unilever's climate bill: € 268 billion

A leader in washing clean and 'green'

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About this report

This report has been commissioned by Milieudefensie.

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Summary

For the period 2016-2050, Unilever is creating a climate damage liability of € 268 billion. These estimates are for a Base scenario which includes Unilever's updated emission targets for 2030 and 2039 in its new Climate Transition Action Plan (CTAP) of early 2024. The implicit 30% CO_2e emissions reduction target for 2030 (covering Scope 1,2,3 excluding Scope 3 indirect[a] consumer use) is below the required 43% reduction (versus 2019) to achieve a 1.5 pathway based on the Paris 2015 Agreements. Unilever is a fast-moving consumer goods company with 65% of its 2023 revenues in non-food activities: home, personal, and beauty care. The rest is in food activities, mainly ice cream, meal solutions and sauces. An estimated 80% of Unilever's CO_2e (or greenhouse gas, GHG) emissions, including indirect consumer emissions, are in its non-food activities, and 20% in food activities. Unilever updated its emission targets for 2030 in March 2024. These new targets have been applied to calculate the climate damage in a Base scenario. The CO_2e reduction targets for 2030 are now 100% for Scope 1&2, and 29% in 'direct' Scope 3 emissions, in total a reduction of 30% for all direct emissions (versus 2021). The new CTAP has deleted the emission reduction targets for Scope 3 indirect consumer use, which include energy needed to use and apply the Unilever products (washing, cooking).

The new CTAP leads to a € 80.7 billion higher climate bill than the 'Abandoned' scenario based on the CTAP 2021. In the previous, 2021, CTAP scenario, the total climate damage would be € 187 billion. This 'Abandoned' scenario calculates the climate cost outcomes based on the targets that Unilever skipped early 2024: a 50% reduction in direct CO_2e emissions per consumer use, which still included the indirect consumer use emissions from energy, for washing, showering and cooking, needed for Unilever's products. The Profundo climate damage calculation assumes no growth in 'consumer use', in line with recent years' low volume growth of Unilever's sales. The new 2024 CTAP target excludes the indirect consumer use emissions, which were included in the 2021 CTAP. The effect on the total emissions of this change dwarfs the impact of the positive decision to delete the 'per consumer use' in the new reduction target. **However, it needs to be considered that the 'per consumer use' phrase in the 'Abandoned' CTAP included a major risk: total annual emissions could have continued to grow if sold volumes (to existing and new consumers) would have accelerated or Unilever would have developed new products categories.**

More realistic is an even worse 'Deceleration' scenario as the 2024 CTAP targets might be too challenging for the company. There is a high-chance that suppliers in the home, personal, and beauty care chains are not able to achieve Unilever's ambitions. Currently, these suppliers indicate a 16% reduction in CO_2e emissions, leading to a gap of 13%-point with Unilever's new 2030 ambitions and targets on direct Scope 1, 2 and 3 emissions. The total climate damage, including Scope 3 indirect consumer use emissions, could be € 326 billion.

In recent years, climate emission reporting at Unilever faced material changes due to new methodologies for measurement and a larger scope. In the 2022 and 2023 annual reports, these refinements led to dramatic restatements of total emissions registered for earlier years. Between 2017 and 2023, CO_2e emissions moved up from 61 million tons to 99.9 million, for a large part due to methodology changes. Material increases were accounted for in the 'Ingredients and packaging' emissions, 'End of life' emissions, and the 'Indirect consumer use' emissions.

Unilever calculated that in 2023 it had 99.9 million tons CO_2e emissions in Scope 1, 2 and 3. This was a material decline versus the upward restated 2022 number (111.2 million), largely due to a decline in Scope 3 emissions from indirect consumer use. 'Indirect consumer use' is the part on which Unilever, as it claims, has limited influence. The Scope 1&2 emissions were 0.7% of the 2023

[a] 'Direct' emissions consist of Scope 1&2 emissions + 'direct Scope 3' emissions. In this report, the term 'direct Scope 3' emissions is used to distinguish these emissions from 'indirect consumer use' Scope 3 emissions, which refer to how consumers use the products through showering, washing, and cooking. The Greenhouse Gas (GHG) Protocol uses the term 'indirect' for all upstream and downstream emissions (see Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, page 5.

total, and direct Scope 3 emissions 52.2%. Scope 3 indirect consumer use emissions, including the use of energy for shampoo and washing, accounted for 47.1% of total emissions. Of direct Scope 3 emissions, purchased raw materials and ingredients had the largest contribution (27.6%-point), indirect procurement 8.3%-point, and packaging 5.6%-point. From 2016 to 2023 the underlying decline in these direct Scope 3 emissions was only 7%.

Crucial gaps in emission reporting and target setting uncover the risk of not achieving 2030 CO_2e reduction targets. This report found out that Unilever still needs to do a lot of work on 1) the transparency of reporting on plastic emission, 2) the division of emissions between food and home, personal, and beauty care, 3) emissions from indirect procurement and third-party contract manufacturers, and 4) the indirect consumer use emissions. In total, Unilever's 2030 CO_2e reduction target, which was recently changed from 50% (intensity per consumer) to 30% (absolute, and for direct Scope 1, 2 and 3 versus 2021), still seems very challenging.

Plastic emissions in 2023 are estimated to be only 9% down versus 2018/19, with a 31.5% implicit 2025 reduction target of Unilever. The data on plastic sourcing suggest that the target to reduce virgin plastic for 2025 is very challenging, with 2023 plastic-linked emission reduction of 9% versus 2018/19. The real problem seems to be a lack of reduction in total plastic sourcing, virgin plus recycled.

More worrisome are the low CO_2e reduction ambitions of crucial suppliers in the home, personal, and beauty care activities. Unilever's key suppliers have an average CO_2e emission reduction target of 16% in their books for 2030 (versus various baselines between 2015 and 2020), which would make Unilever's direct Scope 3 emission reduction target of 29% in 2030, and thus the 30% reduction for direct Scope 1, 2 and 3 emissions (vs 2021), very challenging. This direct Scope 3 'supplier' emission problem comes on top of the Scope 3 indirect consumer use emissions from home, personal, and beauty care products: Unilever will need to re-formulate products, educate consumers about shorter showering and washing, and contribute to renewable energy grid transition to lower its total emissions. As a highly profitable company (€ 10 billion in operating profits annualy) its capacities to have influence are significant.

Unilever calculates and reports on its Scope 3 emissions largely in line with GHG Protocol, CDP requirements, and SBTi guidelines. Product categories selected by Unilever for reporting its indirect consumer use emissions largely correspond with the top categories by revenue. Geographically, until 2021, the company reported emissions for its 14 key countries only (jointly accounting for 60-70% of sales), while from 2022 the entire value chain emissions are reported. However, even though Unilever describes the calculations methodology and key assumptions, it does so in a generic way.

Contrary to the GHG Protocol requirements, Unilever publishes only limited information regarding the description of the methodologies, allocation methods, and assumptions used to calculate emissions for each of the 15 scope 3 categories. Thus, for category 11 (Use of sold products), it does not report information on average use profiles, assumed product lifetimes and other data which was presumably used for the calculations. This means that the important information is unavailable for the stakeholders, and makes the entire calculation process appear as a **black box**.

In the new CTAP released in March 2024, Unilever declared that it would renounce any relative targets, and will focus on absolute CO_2e reduction. This is an improvement versus its former 2021 CTAP, in which Unilever committed to a medium-term target to reduce its Scope 3 emissions along the entire value chain (including indirect consumer use emissions resulting from electricity / gas consumption for its detergents and personal hygiene products) by 50% per consumer use basis by 2030 versus a 2010 baseline. That former target was set in relative terms ('per consumer use'), which meant that Unilever could have even increased its absolute emissions if the production or sales volumes grew faster than emissions per consumer used decreased**.**

The new 2024 CTAP, in line with SBTi, separates Forest, Land and Agriculture (FLAG) emissions and Energy & Industrial (E&I) emission reduction targets. Unilever's newly established FLAG goal is a 30.3% reduction by 2030 vs a 2021 baseline. Presumably, the target is based on the SBTi-

recommended global average target, which has been also recently adopted by several other FMCG and retail companies.

SBTi sector-specific guidance, including for the FLAG sector, are criticised by stakeholders for the insufficient CSO (civil society organisation) engagement and peer review, and for being overly techno-optimistic. It should be also noted that SBTi only requires that corporate targets must cover at least 67% of FLAG-related Scope 3 emissions, while for many actors in agriculture, food processing, FMCG, and retail, Scope 3 makes up a vast share of their total footprint. The current version of the FLAG Guidance envisage net reduction targets that include removals, which also questions its robustness and ambitiousness. In addition, sectoral pathways assume global coordination between sectors, but this does not exist and there are no indications that this will happen; every sector will have to contribute equally, otherwise companies will 'shop' in the sector targets that fit them best. The result will be that the necessary average emission reduction will not be achieved; distinction of sector goals might even lead to injustice, for instance coal-dependent developing markets might suffer more than gas-dependent rich countries.

In the direct Scope 3 CO_2e emissions, Unilever categorises 27%, or 15 million tons CO_2e, as 'out of scope of near-term CO_2e targets'. This has a huge impact on worsening its implicit 2030 CO_2e reduction target for direct Scope 3 emissions to 29% (versus 2021 baseline). Including the 100% reduction target for Scope 1&2, the implicit Scope 1, 2 and 3 CO_2e reduction target for direct emissions is therefore reduced to 30% in the new 2024 CTAP, from a 50% relative reduction 'per consumer use' in the 2021 CTAP (for Scope 3; -100% Scope 1&2, leading to -50% for total Scope 1&2&3 if no 'per consumer' growth).

The new 2024 CTAP does not set any targets on indirect consumer use emissions. This is a deterioration of the company's own previous commitment. Currently, Scope 3 indirect consumer use emissions, accounting for 47% (2023) of total CO_2e emissions, are not addressed in the company's climate targets at all. Even though this is in line with GHG Protocol and SBTi guidelines (indirect consumer use emissions targets are optional), completely dropping indirect consumer use goals appears to be a setback compared to Unilever's earlier plans. **It needs to be considered that home and personal care emissions are for a material part in the Scope 3 indirect consumer use emissions (hot water, shower), and therefore, as Unilever claims, also dependent on societal behaviour and transition to renewable energy. Unilever might need to lobby, push and invest much more in societal change and renewable energy; and Unilever might need to educate consumers much more to shower shorter, and re-formulate these products completely so that for instance conditioners work much faster. Otherwise, material CO_2e reductions are not possible.**

In total, Unilever has no targets on 79.9 millions tons or 65.9% of its 2021 baseline CO2e emissions (121 million tons) after the target-exclusions of 64.9 million tons Scope 3 indirect consumer use emissions, and the 15 million "out of scope of the 2030 Scope 3 CO2e reduction targets" emissions.

Unilever's sourcing of forest-risk commodities and animal products was connected to estimated emissions of 9.5 million tons in 2022. The sourcing of palm oil, timber, soy, and cocoa caused 6.2 million tons of CO_2e emissions. Moreover, estimates for Unilever's use of animal products contributed an additional 3.3 million tons of CO_2e emissions from dairy and eggs. The resulting emissions estimate of 9.5 million tons equalled around 6% of the total CO_2e volume emitted by the Netherlands. The expected decrease in Unilever's emissions after the announced sale of its ice cream business will in turn have to be accounted for by the new entity. Selling of assets needs to be accounted for in line with the GHG Protocol. The 2021 baseline needs to be recalculated, and environmentally and socially responsible disengagement should occur in line with international guidelines.

Unilever has implemented several actions to achieve deforestation-free supply chains; however, it remains exposed to potential forest loss and degradation. Actions to achieve deforestation-free supply chains include disclosure requirements for suppliers, preferred sourcing from areas with lower deforestation risk, and the implementation of independently monitored verification protocols

for selected commodities. Against its 2023 goal of deforestation-free supply chains, Unilever reports that it achieved 97.5% for its palm oil, paper and board, tea, soy, and cocoa volumes in that year but no detailed breakdown was available yet at the time of writing. Data for 2022 suggests that almost 160,000 ha linked to its commodity supply chains was not covered by adequate due diligence for deforestation risk, including when relying on commodity certification schemes as a proxy for own due diligence obligations.

Several Unilever suppliers have been implicated in environmental and human rights breaches across various regions, which raises questions about the rigorousness of its supply chain monitoring. Cargill Agricola faced allegations of land grabbing and encroachment on Indigenous lands in Brazil, resulting in displacement and conflicts with local communities. Golden Veloreum Liberia (GVL) was accused of acquiring large tracts of land in Liberia without obtaining Free, Prior, and Informed Consent (FPIC) from Indigenous and local communities, leading to loss of livelihoods and was linked to around 1000 hectares of deforestation they were ordered to restore after a complaints process. Agro Astra Lestari (AAL) subsidiaries, including PT ANA and PT LTT, are implicated in land grabbing activities in Indonesia, forcibly seizing land from local farmers and Indigenous peoples without proper consultation or compensation. Additionally, labour rights and human rights abuses, such as poor working conditions, exploitation of labour, and intimidation of workers, were documented across all suppliers' operations. Despite these allegations, CSR responses from the companies were criticised as inadequate, prompting demands for more transparency and accountability. Local communities and civil society organisations have actively resisted these operations through protests, legal actions, and advocacy campaigns, demanding justice and accountability for affected communities.

Moreover, the soy and palm oil suppliers of Unilever in 2022 have a track record of deforestation, which contravenes the company’s climate goals. Cargill Agricola's palm oil operations in Brazil and GVL's operations in Liberia were associated with extensive deforestation, soil degradation, and environmental pollution, including contamination of water sources and destruction of biodiversity-rich ecosystems. Operational breaches and permit violations by AAL were also reported, with allegations of operating without proper permits, violating environmental regulations, and conducting operations in protected areas.

Abbreviations

AAL	Agro Astra Lestari
AR	Annual Report
CDP	Carbon Disclosure Project
CO_2e	Carbon Dioxide Equivalent = GHG
CTAP	Climate Transition Action Plan
E&I	Energy & Industrial
Enterprise value	Equity value + gross debt - cash
Equity value	Number of shares outstanding x share price
EUDR	EU Deforestation Regulation
FLAG	Forest, Land, and Agriculture
FMCGs	Fast-Moving Consumer Goods companies
GHG	Greenhouse Gas = CO_2e
GVL	Golden Veroleum Liberia
HPC	Home and Personal Care
LUC	Land Use Change
NA	Not available
Net debt	Gross debt minus cash
Operating profit	Revenues minus operating expenses
SBTi	Science-Based Targets Initiative
UNGPs	United Nations Guiding Principles on Business and Human RIghts

Introduction

Unilever is a global leader in personal care and home care products, which generated 65% of its 2023 revenues. Food generated 35% of revenues. Total revenues amounted to € 59.6 billion and underlying operating profit was € 10.0 billion. In 2023, Unilever calculated total CO_2e emissions of 99.9 million tons, or 0.2% of all the emissions worldwide. Unilever's global emissions equal half of the emissions of the Netherlands in 2022/23. Of the 99.9 million tons, 52% is considered in its emission reduction targets as they are 'in scope' or direct[b]. The other 48% of the emissions consist of indirect consumer emissions related to energy use for washing and cooking. In March 2024, Unilever updated its 2021 Climate Transition Action Plan (CTAP) with new reduction targets for direct Scope 3 emissions. The company skipped the reduction targets for indirect consumer use.

Milieudefensie has been campaigning against 30 large polluters since early 2022, asking them to bring their activities including their whole value chain in line with minimising global warming in line with the 1.5 degrees pathway of Paris. Milieudefensie believes large companies should have a climate plan which is in line with the 2015 Paris agreement. One of these 30 companies is Unilever. In the Climate Crisis Index 2022, an independent assessment of the climate plans of these companies[1], it became clear that Unilever has a complex climate plan that is not in line with the Paris Agreement. It also revealed that Unilever has no intention of making its climate plan Paris-proof. Furthermore, it is interesting to understand whether Unilever has omissions or crucial gaps in its emission reporting in the context of the GHG Protocol. Finally, the question is whether Unilever will be able to achieve a 1.5 degree-proof target, considering it is a company highly dependent on fossil oil-based ingredients in its home, personal, and beauty care activities and in its plastic packaging.

In addition, Unilever is the world's largest consumer of palm oil. This makes Unilever a major driver of deforestation. Unilever has included ambitions in its climate plan to have a deforestation-free value chain by the end of 2023 for, amongst others, its palm oil supply chain. The current report will elaborate on the sources of deforestation, the emissions from deforestation, and the number of deforested hectares to which Unilever can be linked in the period 2016-2023.

Furthermore, despite complaints and campaigns by Milieudefensie and Friends of the Earth partners, Unilever continues to do business with Astra Agro Lestari (AAL), a large palm oil plantation company that has been linked to human rights violations and (illegal) deforestation. Therefore, this study aims to identify several case studies which elaborate on how Unilever's climate plan and associated climate damage relate to the company's deforestation and human rights ambitions and practices.

[b] 'Direct' emissions consist of Scope 1&2 emissions + 'direct Scope 3' emissions. In this report, the term 'direct Scope 3' emissions is used to distinguish these emissions from 'indirect consumer use' Scope 3 emissions, which refer to how consumers use the products through showering, washing, and cooking. The Greenhouse Gas (GHG) Protocol uses the term 'indirect' for all upstream and downstream emissions (see Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, page 5.

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Unilever's size of CO_2e emissions

This report calculates Unilever's total climate damage from 2016 to 2050. For this purpose, Profundo analyses Unilever's own climate plan and applies new CO_2e prices in its methodology. This section analyses the development of CO_2e emission reporting since 2016.

1.1 Introduction

The CO_2e emissions and climate damage for the period 2016-2050 are relevant as 2015 was the year of the Paris Climate Agreement. Since then, companies and governments have been aware that a climate plan had to be established, containing a route to net-zero. While Unilever has a target to be net-zero in 2039 (in direct emissions), the period to 2050 is relevant for the calculation of climate damage related to emissions in Scope 3 'indirect consumer use' as these are linked to global energy transition plans.

In this section the CO_2e emissions and climate damage reporting of Unilever is investigated. This analysis will reveal how Unilever has stepped up its reporting methodologies, how the total CO_2e emissions have increased, how the company approaches the 'climate damage' it creates with its products, and whether the company calculates a damage itself. From the available data in this section, added with an analysis in Chapter 2 of the gaps and omissions in Unilever's reporting, Profundo will calculate Unilever's climate damage value/liability for the period 2016-2050. A climate damage value is a relevant number for financers of Unilever (shareholders, bondholders, creditors) and NGOs to start engagement with Unilever's management about its accountability in climate change damage and its contribution in reducing global emissions.

Unilever belongs to a list of 30 companies with large emissions, and with material activities in the Netherlands.[2]

1.2 Unilever's reporting on CO_2e emissions

Within the fast-moving consumer goods (FMCG) industry, a large part of emissions is in Scope 3. While Scope 1 & 2 emissions are about the operations including their energy use, Scope 3 emissions calculate emissions in the supply chain of the products and services sourced by FMCGs and the use of these products by consumers. As a large part of the cost of goods sold by FMCGs consists of products produced by other companies, Scope 3 accounts for a relatively high percentage.

1.2.1 Unilever: large changes in reporting climate emissions in 2015-2023

Since 2015, Unilever has regularly changed its reporting on CO_2e (greenhouse gas) emissions. In the first few years the impact on the total emissions were minor. **In the annual report 2020,** Unilever announced the following changes which had a larger impact on total reported emissions:

- A revision of its estimates about the amount of hot water used by consumers when using their products, such as shower gels, shampoos and washing up liquid.
- The inclusion of the CO_2e emissions from the biodegradation of fossil-fuel-derived ingredients at the end of a product's life in its Home Care and Beauty & Personal Care portfolio.
- Errors in the CO_2e emissions from certain Savoury products.[3]

Due to new reporting, the changes between Unilever-calculated emissions between 2020 reporting and 2019 reporting in the total Scope 1, 2 and 3 went up by 2.86 and 2.52 million tons, respectively. The largest part comes from indirect consumer use (2018 and 2019, respectively 2.38 and 2.01 tons) and a minor part from Ingredients and packaging (0.38 and 0.41).

In the 2021 annual report, no major changes were made, and total Scope 1, 2 and 3 emissions were nearly equal to what was reported in the 2020 annual report.

In the annual reports of 2022 and 2023, Unilever changed reporting, leading to dramatic increases in total CO_2e emissions.

In the 2022 annual report, the total emissions shot up dramatically by more than 50%. Material changes were visible in the 'ingredients and packaging' emissions (+9.61 and +9.09 million tons for 2020 and 2021, respectively), in the 'direct consumer use' and 'end of life' emissions (new: +4.21 and +4.31 million tons), and in the 'Indirect consumer use' emissions (+23.67 and +21.68 million tons).

The 'Ingredient' change was explained as follows:

- Improved emissions data: the improvements in the data are due to the use of supplier data, rather than industry averages, for the production of soda ash (used in many of Unilever's Home Care products), and the use of more accurate data for the specific types of chocolate and soy Unilever uses in its Nutrition and Ice Cream businesses.
- As emissions of ingredients/raw materials are outside the direct control of Unilever, the company announced, in 2021, the Unilever Supplier Climate Programme to accelerate the decarbonisation of the shares supplied chains in ingredients/raw materials and in packaging. The company targets 300 priority suppliers, and in 2022, a pilot with 35 was executed.
- In the annual report 2022 (page 35) Unilever admits that its business relies on chemicals derived from fossil fuels. Unilever indicates that, therefore, the focus would be on a joint venture with Genomatica to commercialise and scale low-carbon plant-based feedstock ingredients. These alternatives could *"deliver GHG emission reductions in the medium to long-term"* (AR22).
- Further action is on investments in the Unilever Oleochemical facility in North Sumatra to simplify the supply chain and allow it to process oil from independent mills and smallholder farms.
- In the US, Unilever uses HFC (hydrofluorocarbon) propellants (2% of its CO_2e due to a 120 times higher Global Warming Potential than CO_2) in its aerosol products like hair sprays, body sprays, and deodorant sprays. This is because in the USA, the use of the alternative, hydrocarbon propellants, is restricted by regulation.

Product end life:

- This makes up 11% of CO_2e emissions in 2022.
- Therefore, Unilever targets on 100% biodegradable ingredients in 2030, which do not leave a physical trace in the environment.
- An example: coconut oil in hair care products instead of silicone.

Other changes in 2022 related to Scope 3 are:

- Though a pilot in 2022, in the Partnership for Carbon Transparency (PACT), hosted by the World Business Council for Sustainable Development, Unilever has exchanged emissions data with several partners. Through this, Unilever expects a standardisation in measurement and reporting.

The 2023 annual report showed a revision of total emissions for 2022 by +19.1 million tons, or +21%. The new change was mainly in Scope 3's direct emissions, and primary in 'Ingredients and packaging'. The main change was as follows:

- Unilever has implemented a new measurement system for its most significant Scope 3 emission categories, focusing on emissions from procured goods and services.

- This system combines data and real volumes of procured raw materials/packaging and services with standard emissions factors for these materials, while adhering to the latest guidance on emissions factors (IPCC AR6) and the draft GHG Protocol Land Sector guidance.

In 2023, Unilever calculated that it had 99.9 million tons CO_2e emissions in Scope 1, 2 and 3. This was a 10% decline versus 2022, largely due to a decline in Scope 3 from indirect consumer use. This is the part on which Unilever, as it claims, has limited[c] influence. Scope 3 indirect consumer use emissions were 47.1 million tons of CO_2e, or 47% of the total. Unilever might need to lobby, push and invest much more in societal change and renewable energy; and Unilever might need to educate consumers much more to shower shorter, and re-formulate these products completely so that for instance conditioners work much faster.

Its direct emissions, on which it exercises more control, were 1.4% lower at 52.9 million tons CO_2e emissions. In 2023, the direct emissions represented 53% of the total, of which 99% from direct Scope 3 emissions.[d] (see also footnote e).

Between 2017 and 2023, the reported direct emissions have increased by 157%, from 20.6 million to 52.9 million tons, due to improved data collection. For the years before 2017, no data on Scope 3 emissions is available.

Table 1 Unilever's reporting on emissions in 2016-2023

Category/ Mln tons CO2e	2016	2017	2018	2019	2020	2021	2022	2023
Scope 1 + 2								
AR23						0.9	0.8	0.7
AR22-21				1.1	0.8	0.7	0.6	
AR20			1.7	1.1	0.8			
AR18-19		1.7	1.6	1.0				
AR16-17	1.7	1.7						
Scope 3 direct[e]								
Raw materials and ingredients – FLAG* (AR23)						13.1	12.3	12.2
Raw materials and ingredients E&I* (AR23)						16.9	15.7	15.4
Raw materials and ingredients (AR22)					19.3	19.4	20.2	
Packaging materials (AR23)						6.1	5.8	5.6
Packaging materials (AR22)					4.5	4.6	4.5	
Indirect procurement (AR23)						7.3	7.3	8.3
Ingredients and packaging (AR20-21)			15.4	14.9	14.2	14.9		
Ingredients and packaging (AR18-19)		15.0	15.0	14.5				
Upstream transport / distribution (AR23)						1.9	1.8	1.6
Logistics and distribution (AR22)					2.8	1.0	1.0	

[c] CTAP 2021

[d] 'Direct', or 'in scope', is a category of emissions on which FMCGs and Unilever claim to have more influence, while Scope 3, 'indirect consumer emissions' is a category in which companies claim to have limited influence. See further in the GHG Protocol analysis in section 2.4.

[e] 'Direct' emissions consist of Scope 1&2 emissions + 'direct Scope 3' emissions. In this report, the term 'direct Scope 3' emissions is used to distinguish these emissions from 'indirect consumer use' Scope 3 emissions, which refer to how consumers use the products through showering, washing, and cooking. The Greenhouse Gas (GHG) Protocol uses the term 'indirect' for all upstream and downstream emissions (see Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, page 5.

Category/ Mln tons CO2e	2016	2017	2018	2019	2020	2021	2022	2023
Ice cream cabinets (AR23)						3.1	2.9	2.3
Retail ice cream freezers (AR22)					4.0	3.8	3.6	
Distribution and retail (AR18-19-20-21)		3.9	4.4	4.4	4.1	3.0		
Direct consumer use (AR23)						1.2	1.5	1.5
Direct consumer use (AR22)					0.8	0.7	0.8	
Product end of life (AR23)						3.5	3.3	3.3
Product end of life (AR22)					3.4	3.6	3.6	
Others						2.2	2.2	2.1
Total Scope 3 direct								
AR23						55.3	52.8	52.1
AR22					34.9	33.0	33.7	
AR20			21.4	20.4	19.1			
AR18-19		20.6	20.9	19.9				
AR16-17	NA							
Scope 1 + 2 + 3 direct								
AR23						56.3	53.6	52.9
AR22					35.7	34.0	34.5	
AR20			21.4	20.4	19.1			
AR18-19		20.6	20.9	19.9				
Scope 3 indirect consumer use								
AR23						64.9	57.5	47.1
AR22					65.8	64.9	57.5	
AR20-21			42.3	41.7	42.1	43.2		
AR18-19		38.7	39.9	39.7				
Total Scope 3 direct + indirect								
AR23						120.2	110.4	99.2
AR22					100.6	97.9	91.2	
AR20-21			62.0	61.0	60.4	61.0		
AR18-19		59.3	59.3	58.6				
Total Scope 1 + 2 + 3								
AR23						121.1	111.2	99.9
AR22					101.4	98.8	92.0	
AR21				62.2	61.2	61.9		
AR20			63.7	62.1	61.2			
AR19		61.0	60.8	59.6				

Profundo based on Unilever's annual reports in 2016-2023; *) FLAG = Forest Land Agriculture, E&I is Energy & Industrial.

The following table highlights the major changes between the various annual reports.

Table 2 Unilever: changes in emissions between annual reports in 2016-2023

Mln ton	2018	2019	2020	2021	2022
AR20 vs AR19 - Total	2.86	2.52			
AR20 vs AR19 - Indirect consumer use	2.38	2.01			
AR22 vs AR21 - Total			40.22	36.9	
AR22 vs AR21 - Ingredients and packaging			9.61	9.09	
AR22 vs AR21 - Distribution and retail			2.73	1.81	
AR22 vs AR21 - Direct consumer use + product end of life			4.21	4.31	
AR22 vs AR21 - Indirect consumer use			23.67	21.68	
AR23 vs AR22 - Total				22.3	19.1
AR23 vs AR22 - Ingredients and packaging				19.5	16.4

Profundo based on Unilever's annual reports in 2016-2023.

Summarising, in 2023 Unilever's Scope 1 and 2 emissions made up 0.7% of the total, and direct Scope 3 emissions 52.2% of the total. Scope 3 indirect consumer use emissions, including the use of energy for showering with Unilever shampoo and using the washing machine with Unilever's detergents, accounted for 47.1% of total emissions. In direct Scope 3, purchased raw materials and ingredients had the largest contribution (27.6% = 12.2% + 15.4%), and indirect procurement (see source Table 3) the second largest (8.3%).

Table 3 Unilever: summary of 2023 CO_2e emissions and % division

		CO_2e (million tons)	%
Scope 1 + 2	A	0.7	0.7%
Raw materials and ingredients Forest & Agriculture (FLAG)		12.2	12.2%
Raw materials and ingredients Energy & Industrial (E&I)		15.4	15.4%
Packaging materials		5.6	5.6%
Indirect procurement*		8.3	8.3%
Logistics and distribution		1.6	1.6%
Ice cream cabinets		2.3	2.3%
Direct consumer use		1.5	1.5%
Product end of life		3.3	3.3%
Other		2.1	2.1%
Scope 3, direct	B	52.2	52.2%
Scope 1 + 2 + 3 emissions, direct	C = A + B	52.9	52.9%
Scope 3 indirect consumer use	D	47.1	47.1%
Total Scope 1 + 2 + 3	C + D	99.9	100.0%

Profundo based on Unilever's annual report 2023; *) Indirect procurement covers the purchasing of other goods and services that do not directly go into Unilever products. The largest category of spend here is advertising and media spend.

1.3 Unilever: reporting on climate damage and climate liability

1.3.1 Financial accounts – no data available on climate damage

Unilever's financial accounts, including profit & loss account and its balance sheet, contain no item related to carbon costs or carbon liability. This is not unexpected, as in the UK (the company's home base), as well as in the EU and globally, none of the carbon emission trading systems currently in operation are focused on FMCGs, but rather on energy-intensive industries.[4] FMCGs are not considered as energy-intensive. Therefore, Unilever reports no climate or CO_2e emissions costs in its financial accounts.

1.3.2 Non-financial sections – a large impact through climate impacts on the company

In its 2023 annual report, Unilever included a calculation of the impact of climate change on its operations in a policy environment focused on a 1.5 degree scenario. The company distinguishes a calculation based on a proactive route (quick measures from now on), and of a reactive route (dramatic acceleration of regulation after 2030).

The proactive route includes:

- Aggressive and persistent regulation from 2023.
- Dramatic changes in lifestyle from today.
- Reliance on available and proven technologies.
- Lower reliance on carbon removal technologies.

The reactive route:

- Gradual regulation until 2030, very aggressive post-2030.
- Continuation of historical consumption trends until 2030, then rapid change.
- Major reliance on technologies that are not yet proven to scale.
- Higher reliance on carbon removal technologies.

The company distinguished six categories: 1) carbon tax and voluntary carbon removal costs, 2) land use regulation on the food crop output, 3) rising energy prices, 4) water scarcity impact on crop yields, 5) extreme weather (temperature) impact on crop yields, and 6) growth in plant-based foods. The next table focuses on the first five elements:

Table 4 Unilever: Financial quantification of risks and opportunities

€ billion	2030	2039	2050
Carbon tax and voluntary carbon removal costs			
Proactive	-5.4	-10.4	-1.8
Reactive	-3.5	-9.3	-1.8
Land use regulation impact on food crop output			
Proactive	-0.8	-2.1	-5.1
Reactive	-0.3	-0.7	-1.7
Impact of rising energy prices for suppliers and in manufacturing			
Proactive	-0.6	-1.5	-3.4
Reactive	-0.6	-1.5	-3.4
Impact water scarcity + extreme temperature on crop yields			
Proactive	-0.5	-1.3	-3.1
Reactive	-0.7	-1.8	-4.5

Source: Unilever's annual report 2023, page 54-55.

Versus operating profit, these developments would have an impact of -73.3% in 2030 (assuming 2023 operating profit is the base) in a proactive route and -51.2% in a reactive route. These estimates includes assumptions on passing on these higher costs to customers and the impact on disposable incomes and purchasing power.

Table 5 Impact of Unilever's quantification of risks on operating profit

€ billion	2023	2030 impact proactive	2030 impact reactive
Turnover	59.6		
Underlying operating profit	10.0	-7.3	-5.1
% impact on operating profit		-73.3%	-51.2%

Source: Profundo, based on Unilever's annual report 2023, page 54-55. The impacts are added together by Profundo.

These estimates indicate how the company might be affected by changing regulation and consumption through climate change. **It needs to be considered that these assessments, based on data from Unilever, do not indicate the value of climate damage it is generating to the planet nor the climate damage liability it is building up until 2050. Instead, it calculates the financial impact the company expects on its own financial achievements regardless of the costs for the society as a whole.**

1.4 Synthesis of data used for calculation of climate damage 2016-2050

In Chapter 3, climate damage costs are calculated for a Base scenario and for two alternative scenarios: the 'Abandoned' scenario (in the 2022 annual report, Unilever still focused on a 50% CO_2e reduction per consumer use) and a 'Deceleration' scenario.

In the calculations for the value of climate damage, the 2017-2023 data provided by Unilever is applied in all scenarios. For the year 2016, Scope 3 outcomes from 2017 are used due to a lack of data by Unilever for 2016 (see Table 1).

For the future estimates (2024-2050) in the Base scenario, the targets of Unilever, updated in 2024, have been included as much as possible. Additional assumptions have been added by Profundo due to lack of data from Unilever:

- Scope 1 and 2: a decline to net zero emissions in 2030.
- Scope 3, direct: -28.6% for 2030 versus 2021; net zero in 2039. The -28.6% for 2030 is based on the target of 1) -30.3% in Forest & Agriculture emissions; 2) 42% reduction in Energy & Industrial; 3) 0% in other 'out of scope of near-term CO_2e reduction targets', which forms a part of direct Scope 3 emissions (see 0) but on which Unilever has no insight or worked-out plans to reduce emissions (including indirect procurement and third-part contract manufacturers). Especially this ad 3) has a huge impact on mitigating the total reduction target.
- Scope 3 indirect consumer use: an equal reduction as the direct emissions (Scope 3), assuming consumer behaviour and grid/renewable energy development is in line with Unilever's 'direct' decline. For 2039, the assumption is a development in line with the 1.5-degree scenario of the IPCC[5]. Profundo used an 80% CO_2e reduction versus an average of 2020-2022. This covers the 'desired' energy transition world-wide. 2050 is assumed at a level of net-zero emissions.

Table 6 FLAG and E&I emissions 2021 baseline and targets

	mln tons	Unilever's reduction target 2030 (%)	2030 mln tons
Scope 1, 2	0.9	100.0%	0.0
Forest & Agriculture	11	30.3%	7.7
Energy & Industrial	29	42.0%	16.8
Out of scope' of near-term CO_2e reduction targets	15	NA	15.0
Total direct Scope 3 emissions	55.3	28.6%	39.5
Total direct emissions	56.3	29.8%	39.5
Scope 3 indirect consumer use	64.9	NA	35.2
Total emissions	**121.1**	**38.4%**	**74.6**

Source: Profundo based on Unilever's Climate Transition Action Plan 2024.

This results in the following CO_2e emissions for the Base scenario 2016-2050:

Table 7 Unilever: CO2e Emissions and targets by Unilever

mln tons	2016	'17	'18	'19	'20	'21	'22	'23	'30	'39	'50
Scope 1, 2	1.7	1.7	1.7	1.1	0.8	0.9	0.8	0.7	0.0	0.0	0.0
Scope 3 direct	20.6	20.6	21.4	20.4	34.9	55.3	52.8	52.1	39.5	0.0	0.0
Total Scope 1, 2, 3 direct	22.3	22.3	23.0	21.5	35.7	56.3	53.6	52.9	39.5	0.0	0.0
Scope 3 - indirect consumer use*	38.7	38.7	42.3	41.7	65.8	64.9	57.5	47.1	35.2	12.5	0.0
Total Scope 1, 2, 3 emissions	61.0	61.0	65.3	63.2	101	121	111	99.9	74.6	12.5	0.0

Source: Profundo based on Unilever's annual reports in 2016-2023; for Scope 3 indirect consumer use, the assumption is a 80% reduction in 2039 versus the 2020-2022 average, based on the 1.5 degree scenario for CO2 reductions in 2040 (see page 21 of IPCC "Climate change 2023, Synthesis report.

The changes in the crucial emissions totals of Scope 1, 2, and 3 differ substantially between 'direct' and 'including indirect consumer use emissions'**. Unilever's total CO_2e reduction in 2023 to 99.9 million ton is largely due to a 10.4 million decline in Scope 3 indirect consumer use emissions. The direct Scope 3 emissions were only 1.4% lower compared to 2022.** For 2030, Unilever's targets point at a 25% reduction pathway of direct Scope 1, 2, and 3 versus 2023 (see Table 8). Versus 2019 (often used as a baseline year by others, like IPCC) no reduction calculation can be made as no comparable numbers are available[f]. Versus 2021, a year with comparable numbers as 2030, the direct Scope 1, 2, and 3 emission reduction is calculated at 30% in 2030 and 38% on total emissions ((including indirect consumer use). **This is a significant gap versus a 43% CO_2e (and 48% CO_2; both IPCC-based[6]) reduction (versus 2019) for a 1.5D scenario.**

Between 2030 and 2039, Unilever targets 'direct' emission reduction by 100%, while its total reduction including 'indirect consumer use' would be 83% in 2039 versus 2030. This is all based on an interpretation of Unilever's targets and the assumptions mentioned.

[f] Underlying, based on changes per year and adjusted for reporting changes, the change between 2017 and 2023 can be calculated at 3.8 million tons, or 7% compared to a level of 55 million tons.

Table 8 Unilever: Reduction in emissions* (% change)

%	2016	'17	'18	'19	'20	'21	'22	'23	'30	'39	'50
Total Scope 1, 2, 3 direct	-0.3%	-0.1%	3.4%	-6.8%	66%	58%	-4.7%	-1.4%	-25%	-100%	NA
Scope 3-indirect consumer use	0.0%	0.0%	9.3%	-1.3%	58%	-1.4%	-11.3%	-18%	-25%	-64%	-100%
Total Scope 1, 2, 3 emissions	-0.1%	0.0%	7.1%	-3.2%	60%	19%	-8.2%	-10%	-25%	-83%	-100%

Source: Profundo based Table 7: *) Versus year or previous column, and interpretations of targets.

2

Omissions in Scope 3 reduction targets

This section focuses on gaps in targets for reduction of Scope 3 emissions by Unilever at the time of this research. Unilever faces four material risks in its Scope 3 reporting and emission reduction:

1) **Unilever's emissions related to single-use and virgin plastics; these plastics are an important packaging material;**
2) **Scope 3 emissions from home care, personal care, and beauty care products: with a high sourcing of fossil fuel-based ingredients, how does a conglomerate like Unilever (65% of revenues is in these products) report on this and on CO_2e reduction targets; and do suppliers have sufficient reduction plans;**
3) **Scope 3 emissions linked to indirect consumer use and the intentions of the GHG Protocol;**
4) **The new 2024 CTAP, and 15 million tons direct CO_2e emissions lacking reduction targets.**

2.1 Introduction

This section elaborates on three crucial themes which are potential important gaps in Unilever's climate reporting and plans to take responsibility in line with the 1.5 degrees of the Paris Agreement to mitigate global warming:

- **Single-use plastics and Scope 3:** a material part of Unilever's Scope 3 emissions is from packaging materials (>10% of direct Scope 3), including (single-use) plastics.
- **Scope 3 emissions from ingredients home/personal/beauty care.** Unilever is exposed to emissions related to using fossil-based material in home care and personal care products (65% of its activities in 2023). The question is whether Unilever's plan to eliminate the fossil oil-based ingredients (silicone etc) in cleaning products by 2030[7] is realistic.
- **Emissions lacking reduction targets:** a) the direct Scope 3 emissions for which the company has no plans (15 million tons CO2e of the 55 million direct Scope 3 – 2021 basis), and b) Scope 3 emissions linked to indirect consumer use, although Unilever correctly indicates that this is in line with the GHG Protocol.[8] This section contains an analysis of what Unilever includes in this 'indirect consumer use' category, what they are really reporting, and how this compares and contrasts with (the intentions) of the GHG Protocol and the methodology used by Carbon Disclosure Project (CDP).

2.2 Plastics: virgin, recycled, and other

This section contains an analysis of Unilever's plastic emission footprint, the consistency of its reduction plans, and the reduction in relation to its Scope 3 targets.

Emissions related to packaging materials amounted make up 5.6% of Unilever's CO_2e emission (2023; see Table 3), or 5.6 million CO_2e. This includes plastic, paper and others.

Unilever's plastic packaging footprint in 2019 was around 0.7 million tons[9] annually. The company developed the following targets:

- Reduce by 50% virgin plastic packaging by 2025 (2022: -13% versus 2019, page 63 annual report 2022, 2023 -18%), with one-third (more than 100,000 tons) coming from absolute plastic reduction. This means at most 350,000 tons of virgin plastic packaging in 2025.
- 25% recycled plastic by 2025 (2023: 22%).
- Collect and process more plastic than it sells in 2025.
- 100% reusable, recyclable or compostable plastic packaging by 2025 (2022: 55%).
- Halve plastic waste in its operations by 2025 (2022: -17% versus 2019).

2.2.1 Total plastic sourcing has not declined materially

Unilever targets to reduce absolute plastic sourcing by 100,000 tons in 2025, therefore the total plastic volume (virgin plus recycled) should be reduced from 700,000 in 2018/19 to 600,000 tons in 2025.

- With a 50% reduction target in virgin plastic use, this means an outcome of 350,000 tons virgin plastic in 2025. In 2023, there was an 18% reduction in virgin plastic sourcing versus 2019, thus still 554,190 tons were used. This still leaves more than 200,000 tons virgin plastic that needs to be eliminated in the supply chain to achieve the target of 350,000 tons in 2025.
- The recycled plastic sourcing has increased from a base of 76,000 tons to 145,000 tons in 2023. To reach the 150,000 tons, the challenge to grow by 10,000 tons seems not so difficult.
- Unilever does not publish volumes of bio-based plastics with low CO_2e emissions.

Unilever's crucial problem is that the total plastic sourcing (virgin + recycled) seem still close to 700,000 tons. This leaves an enormous gap to 600,000 tons and might have an impact on the packaging's contribution to achieve the emission reduction target.

2.2.2 Plastic emissions

For the CO_2e reporting on plastics, the UK Government conversion factors for 2023 have been applied.[10] For compostable and bioplastics, a broad study on bioplastic production has been used[11] as well as a report commissioned by COMET[12] (Coalition On Materials Emissions Transparency).

Packaging is a material contributor to emissions for Unilever, with 5.6% of total Scope 1, 2, 3 emissions, including indirect consumer use. Plastics are estimated to contribute nearly half of this (2023: 1.98 million tons CO_2e of the 5.6 million tons CO_2e in packaging). **Combining the assumptions by Profundo and the emission data, the shift in plastic packaging composition according to Unilever's targets in virgin/recyclable would lead to a 31.5% reduction in plastic emissions from 2018/19 to 2025 (see last column 0) and this would contribute to Unilever's implicit target of CO_2e reduction in 2030 of 30% in direct emissions (versus baseline 2021). However, in 2023 the reduction in CO_2e emissions linked to plastic sourcing was only 8.8% lower than the base period. This is in line with the 8.2% decline in Unilever's reported packaging emissions between 2021 and 2023.**

Table 9 Unilever's plastic sourcing and CO_2e emissions

	2018/19/20	2021	2022	2023	2025 target	% change 2018-2023	% change 2018-2025**
Use and targets (tons)							
Plastic packaging*	713,000	690,000	699,190	669,667	600,000	-6.1%	-15.8%
Of which:							
Virgin plastic	637,000	586,040	554,190	522,340	318,500	-18.0%	-50.0%
Recycled plastic*	76,000	125,000	145,000	147,327	150,000		
Other plastic*	0	0	0	0	131,500		
Collect and process plastic	0	NA	NA	NA	600,000		
% virgin plastic	89%	82%	79%	78%	75%		
% recycled plastic	0%	18%	21%	22%	25%		
% reusable, recyclable, compostable plastic					100%		
CO_2e emission per ton plastic, Scope 3, ton							
Material use							
Average plastic (ton)	3.10	3.10	3.10	3.10	3.10		
Recycled plastic (ton)	2.32	2.32	2.32	2.32	2.32		
Other plastic/compostable	1.03	1.03	1.03	1.03	1.03		
Waste disposal	0.02	0.02	0.02	0.02	0.02		
Total CO_2e emissions (mln ton)							
Average plastic (virgin)	1.99	1.83	1.73	1.63	0.99		
Recycled plastic	0.18	0.29	0.34	0.34	0.35		
Other plastic/compostable	0.00	0.00	0.00	0.00	0.14		
Total emissions (mln ton)	2.17	2.12	2.07	1.98	1.48	-8.8%	-31.5%
Unilever packaging emissions	NA	6.10	5.80	5.60	NA	-8.2%	
of which plastic (estimates)	2.17	2.12	2.07	1.98	1.48	-8.8%	-31.5%
of which other	NA	3.98	3.73	3.62	NA		

Source: Profundo, based on Unilever's annual report 2022; Unilever (2019, 7 October), "ambitious new commitments for a waste-free world", online: https://www.unilever.com/news/press-and-media/press-releases/2019/unilever-announces-ambitious-new-commitments-for-a-waste-free-world/; emission data for plastic; UK.GOVET, and COMET; *) gaps for 2023 or target 2025 (virgin) have been calculated by Profundo based on available data/% targets: **) implicit target by Unilever based on its assumption of plastic use and recyclable share.

Meanwhile, the large increase in global ethylene production capacity (ethylene is used for shampoo bottles, for instance) has widened the gap with recycled plastics. Recycled plastics were cheaper before 2019, but since then, virgin plastic has been much cheaper (42% end of 2023).[13] This development does not make a switch easier for companies.

2.3 Scope 3 emissions from home care, personal care and beauty products

In 2023, 65% of Unilever's activities were in Beauty & Wellbeing, Personal Care, and Home Care (only 35% in Nutrition and Ice Cream). The question is whether Unilever's plan to eliminate the

fossil oil-based ingredients (silicone etc) in cleaning products by 2030[14] is realistic. Unilever does not explicitly split its emission data between food and non-food activities. This section's goals is to have more insight in the relevance of Unilever's non-food activities emissions.

2.3.1 Data from Procter & Gamble and Nestlé

To understand the relevance of Unilever's non-food activities and its related emissions, this section uses Procter & Gamble (P&G) and L'Oréal on the one side, and Nestlé on the other side as proxies for respectively Unilever's non-food and food activities. In particular P&G and Nestlé are mass market companies, like Unilever. They have, partially, the same supply chains. For instance, Unilever and P&G are large customers of ingredient suppliers for home, personal and beauty care.

In 2021/22, Procter & Gamble (P&G) started to granulate its reporting on CO_2e emissions in Scope 1 + 2, and 3. P&G is a good proxy of Unilever's Home, Personal and Beauty Care activities as both companies are active in the mass segment of laundry, shampoo, toothpaste, and other products in these categories. P&G reported Scope 3 indirect consumer use emissions of 163 million tons of CO_2e.[15]

Table 10 Procter & Gamble's CO_2e emissions

Million tons CO2e	2022	% of total
Scope 1, 2	2.32	1.2%
Scope 3	FY 2021/22	
Purchased goods and services	16.70	8.6%
Upstream transportation & distribution	3.90	2.0%
End of life	7.10	3.7%
Business travel	0.04	0.0%
Scope 3 direct	27.74	14.4%
Scope 1, 2, 3 direct	30.06	15.6%
Scope 3 indirect consumer use	163.10	84.4%
Total	193.16	100.0%
Net sales (US$ bln) in Home, Personal and Beauty care	80.20	

Source: Profundo based on Procter & Gamble data.

Nestlé has milk products and coffee products, and chocolate (cocoa) which have a high deforestation/land use change footprint. However, Unilever's ice cream business also uses dairy and chocolate as important ingredients, while Unilever is also a large palm oil sourcing company. These commodities can also be linked to deforestation/land use change. Nestlé's reporting and data[16] appear to be a bit inconsistent (see 0), but minimum data are available to have an impression of food activities' CO_2e footprint distribution. The Scope 3 indirect consumer use is much smaller than at P&G (cooking of Nestlé's products requires relatively less energy than P&G's shampoo and detergent).

Table 11 Nestlé's CO_2e emissions

Million tons CO2e	2022	% of total
Scope 1, 2	4.0	3.5%
Scope 3, direct in SBTI aligned target	89.3	79.1%
Scope 1, 2, 3 direct	93.3	82.6%
Scope 3 other, including consumer use	19.6	17.4%
Scope 3 reported	108.9	96.5%
Total emissions	112.9	100.0%
Group sales (€ bln)	99.4	

Source: Profundo based on Nestlé data.

2.3.2 Unilever's emissions versus Procter & Gamble, Nestlé and L'Oréal

Consider that this section's analysis is based on annual reports published in 2023 on data for the year 2022. At the moment of the analysis in this section, not all annual reports 2023 were available. In 2024, Unilever improved the quality of its emission data and increased its total CO_2e emission estimate by 19.1 million tons.

A transitory step is to show the differences between Unilever, P&G and Nestlé, based on emission footprint per million Euros of revenues/sales. Also, L'Oréal has been checked as a reference. However, emissions of L'Oréal deviate materially from Unilever and P&G. Its emissions per revenue are much lower as the company has no laundry and relatively much fewer shampoos, and its products are less mass market and have a higher price setting/point (leading to less emissions per Euro revenue).

Compared to P&G and Nestlé, Unilever's emissions outcomes for 2022 did not show much deviation considering that Unilever is primarily a home, personal, and beauty care company, while its food activities form a minority of revenues.

The Scope 3 emissions for all companies are between 96.5% and 99.3% of their total emissions. The division is very different, with P&G having a relatively high contribution from Scope 3 indirect consumer use emissions (84.4%; use of energy by consumers for washing, for instance). Nestlé, as a food company, has only a 17.4% contribution of these emissions. Unilever is in-between with 62.5% (based on data from annual report 2022, as for all companies). In Scope 1, 2, and 3 emissions per million Euro revenues, Unilever has a much higher direct emission outcome than P&G (42.3% higher) but a much lower total emissions outcome (40.7% lower). Versus Nestlé the outcomes are exactly the other way around. Thus, Unilever has a position in-between, which seems consistent with its activities in the mass consumer markets compared to P&G and Nestlé.

As indicated above, a comparison with L'Oréal is less relevant. L'Oréal's emissions per million Euros are substantially lower than Unilever or P&G: 81% lower versus Unilever, and 89% lower than P&G. A large difference is that L'Oréal has no cleaning products which use hot water and electricity.

The conclusion is that Unilever (a one-third food and two-third non-food company) has a position in-between P&G and Nestlé. Unilever has lower Scope 1, 2, and 3 emissions per revenue (direct) than Nestlé (-39%) but higher than P&G (42%). However, Scope 3 indirect consumer use emissions per revenue are much lower than at P&G (56%) and much higher than at Nestlé (385%).

Table 12 Unilever versus P&G, Nestlé and L'Oréal emissions 2022

	Unilever	P&G	Nestlé	L'Oréal	Unilever vs P&G	Unilever vs Nestlé
					% difference	% difference
Scope 1, 2, 3 in-scope per unit turnover (mln/€ mln)	0.00057	0.00040	0.0009	0.00019	42.3%	-39%
Scope 3 indirect (mln/€ mln)	0.00096	0.00218	0.00020	0.00011	-56.0%	385%
Scope 1, 2, 3 total per unit turnover (mln/€ mln)	0.00153	0.00258	0.0011	0.00029	-40.7%	35%
					%-point difference	%-point difference
Scope 1, 2 as % of total	0.7%	1.2%	3.5%	0.2%	-0.5%	-2.9%
Scope 3 direct/in-scope as % of total	36.7%	14.4%	79.1%	63.3%	22.3%	-42.4%
Scope 3 indirect consumer use as % of total	62.5%	84.4%	17.4%	36.4%	-21.8%	45.3%
Scope 3 total as % of total	99.3%	98.8%	96.5%	99.7%	0.5%	2.9%

Source: Profundo, based on annual reports 2022 (not 2023) and sustainability reports.

2.3.3 Unilever's pro-forma emissions are above its closest peers

The next step is to apply the emissions per sales unit of P&G and Nestlé to respectively Unilever's Home, Personal, and Beauty Care sales and Unilever's food sales. The Scope 1, 2, 3 direct emissions reported by Unilever (34.5 million tons in its annual report 2022) appear in line with the proxy data from P&G and Nestlé (35.8 million tons).

From this, an important conclusion is that Scope 1, 2, 3 direct emissions from HPC are estimated to be approximately 15.4 million tons of CO_2e (see 0). This is an important outcome to start calculations on whether Unilever will be able to reach net-zero in 2039 in these non-food activities and a decline of 30% (see 0) in 2030.

Unilever's pro forma Scope 3 indirect consumer use emissions (calculated with P&G and Nestlé ratios) are much higher than reported by Unilever, 87.6 million tons versus 61.2 million tons (analysis is based on reporting in 2023 for the year 2022). As Scope 3 indirect food emissions seem low (4.3 million tons when Nestlé ratios are applied), the Scope 3 Home, Personal, and Beauty Care indirect emissions are the major part of Unilever's Scope 3 indirect consumer use emissions. **The big gap between 87.6 million tons and Unilever's own reporting of 61.2 million tons raises the question of whether Unilever is not under-reporting its Scope 3 indirect emissions, in particular in Home, Personal, and Beauty Care.**

Table 13 Unilever pro forma emissions based on P&G and Nestlé

	HPC revenues (€ bln)	Food revenues (€ bln)	Scope 3 indirect (mln/€ mln)	CO_2e mln tons 2021/22
Calculation	A	A	B	A x B
Scope 1, 2, 3 direct				
Scope 1, 2, 3 direct in line with P&G – HPC	38.3		0.00040	15.4
Scope 1, 2, 3 direct in line with Nestlé – Food		21.8	0.00094	20.5
Unilever pro-forma				35.8
Unilever's own reporting (HPC + Food)				34.3
Difference pro-forma vs Unilever reporting				1.5
Scope 3 indirect				
Scope 3 indirect in line with P&G – HPC	38.3		0.00218	83.3
Scope 3 indirect in line with Nestlé - Food		21.8	0.00020	4.3
Unilever pro-forma				87.6
Unilever's own reporting (HPC + Food)*				61.2
Difference pro-forma vs Unilever reporting				26.4

Source: Profundo based on company data and preceding tables. *) average of 2021 and 2022 based on reporting in the annual report 2022.

An interesting conclusion is that in a pro forma calculation and based on competitors' emissions, Unilever's total emissions in 2022 are generated for 80% in its non-food activities, and 20% in its food activities, when including indirect consumer use emissions. Consider that this is based on data in the annual reports 2022. In 2024, Unilever changed its methodology with the introduction of FLAG (Forest, Land, and Agriculture), E&I (Energy & Industrial) and other emissions (out of scope of near-term GHG reduction targets) in direct Scope 3. As the company made no division between its food and non-food activities in this new approach, this report continues with the conclusions based on 2022 accounting.

Table 14 Unilever pro forma emissions based on P&G and Nestlé

Million tons and %	Direct scope 1,2,3 emissions	% division (direct)	Scope 3 indirect consumer use	Total emissions	% Total
Unilever non-Food	15.4	42.9%	83.3	98.7	79.9%
Unilever Food	20.5	57.1%	4.3	24.8	20.1%
Total	35.8	100%	87.6	123.5	100.0%

Source: Profundo based on company data, analysis of competitors (see preceding tables).

2.3.4 Data from literature – a worrying picture

The literature on emissions from home and personal care products is limited, while the US$ 400 billion cosmetics and beauty industries contributes to many environmental problems[17]:

- They contain many hazardous chemicals and microplastics.
- The sector applies testing on animals.
- The sourcing of palm oil with risk of deforestation.
- The use and waste of water.
- Transportation.
- Air pollution from deforestation and transportation, and from atmosphere pollution from volatile organic compounds (VOCs) from fragrances, hairsprays and deodorants. VOCs react with nitrogen oxides and other compounds to form ozone and particulate matter, like PM2.5.[18] In this context, while consumer products, including bath products, ink and paints, only use 4% of the sources releasing VOCs (4%), they contribute 38% to smog-forming emissions.[19] These conclusions come from a base report, which says that the use of volatile chemical products (VCPs)—including pesticides, coatings, printing inks, adhesives, cleaning agents, and personal care products—now constitutes half of the fossil fuel VOC emissions in industrialised cities.[20]
- Plastic pollution: the disposal of containers/packaging accounts for 70% of the industry's carbon emissions.

2.3.5 Suppliers' emission reduction targets will not help Unilever

Suppliers of Unilever's Home, Personal, and Beauty Care activities are BASF, Dow Chemical and Givaudan[21], and probably also companies like Solvay, Clariant, and Evonik.

Dow Chemical has a 2030 target to reduce net annual CO_2e emissions (Scope 1&2) by 5 million tons versus its 2020 baseline, which is a 15% reduction from 2020 (35 CO_2e million tons. In 2022, 31.48 million tons). However, on top of that, Dow had 80.55 million tons of CO_2e Scope 3 emissions in 2022[22], for which it has no 2030 target. BASF has only Scope 1&2 reduction targets.[23] Evonik, one of the most sustainable suppliers in the industry, has a target of 11% Scope 3 emissions reduction in 2030, and -25% for Scope 1&2.[24] BASF and Evonik indicated in 2023 that CO_2e reduction, with a major part in Scope 3, is a challenge. Finally, Givaudan targets a 70% reduction (status 2022: -35%) in Scope 1&2 emissions by 2030 (baseline 2015) and Scope 3 -20% (status 2022: -1%). For all four companies, scope 3 emissions form the majority of total emissions.

On average, Scope 1, 2, and 3 emissions targets of leading home, personal, and beauty care suppliers are 'only' 16%, with two unknowns (Table 15). The Scope 1 and 2 reduction target is, on average, 34%. The data on this small selection of companies shows the mismatch between Unilever's implicit ambitions (-29% Scope 1, 2, 3 'direct' in 2030 versus 2021, see 0) and the reality of its suppliers in Unilever's Home, Personal, and Beauty Care activities.

As 0 indicates that Unilever's Home, Personal, and Beauty Care's Scope 1, 2, and 3 direct emissions are estimated at 15.4 million, or approximately 43% of its total direct emissions. **This means that its new 2030 implicit target of a 29% reduction (direct Scope 3, versus baseline 2021) will face a gap of 13%-point with the average decline targeted by its suppliers in Home, Personal, and Beauty Care (Table 15). In Scope 1, 2, and 3, Unilever targets an implicit 30% reduction in 2030 (baseline 2021) and thus the 16% reduction of crucial suppliers in non-food are also far away of the 43% CO_2e reduction in 2030 needed for a 1.5D scenario in line with the Paris Agreements.**

As Unilever changed its CO_2e reporting in 2023, leading to higher direct Scope 1, 2 and 3 emissions, Profundo applied the new 2021 56.3 million CO_2e emission number as a basis of calculation of the gap in CO_2e reduction.

Compared to Unilever's total 2021 CO_2e emissions (direct Scope 1, 2, 3) of 56.3 million tons CO_2e, including Food activities, this means that 9%-point of its implicit 29% reduction target for direct Scope 3 in 2030 versus baseline 2021 cannot be fulfilled or has to be compensated by

reductions in the CO_2e emissions in the Food activities (2021: 32.1 million tons pro forma, re-calculated based on new CO_2e emissions in annual report 2023).

Table 15 Suppliers' 2030 CO_2e reduction targets versus Unilever 2030

	CO_2e tons 2021	Scope 1&2 target 2030	Scope 1,2,3 target 2030	Base year
BASF		-25%	Na	2018
Dow Chemical		-15%	Na	2020
Evonik		-25%	-11%	2018
Givaudan		-70%	-20%	2015
Average		-34%	-16%	
Unilever targets		-100%	-29%	2021
Gap Suppliers versus Unilever (%-points)			-13%	
Unilever Scope 1, 2, 3 direct Home, Personal, Beauty (mln ton CO_2e)*	24.1			
Gap in mln ton CO_2e in Home, personal, Beauty Care			3.2	
Assumption for Unilever 2030 (mln tons CO_2e)				
Food activities -50% CO_2e Scope 3 direct*	32.1		22.6	2021
HPC activities: in line with suppliers	24.1		20.4	2021
Food + HPC total Scope 1, 2, 3 direct			42.9	
Unilever's own target 2030			39.5	
Gap (%) of calculated outcome vs Unilever's plan 2030			9%	

Source: Profundo, company annual reports and sustainability reports; *) re-calculated to 2021 CO_2e emissions levels based on the CO_2e restatements in annual report 2023.

2.3.6 Natural alternatives have a deforestation risk

Unilever and its suppliers' solution direction is to find alternatives for fossil fuel-based ingredients. One direction that Unilever is mentioning is to apply more palm oil. This could have the risk of additional deforestation. This risk is emphasised by others. Already in 2016, Bill Booth[25] underlined the problem that personal care products and cosmetics have the dilemma of using fossil fuels-based ingredients or the next best candidate, palm oil, which has a high risk of deforestation. On top of this, there is a risk of damaged ecosystems and loss of livelihoods.

The conclusion is that while Unilever's suppliers in Home, Personal, and Beauty Care are materially behind Unilever's wishes for a 29% reduction in emissions in 2030 (vs baseline 2021), using palm oil as an alternative ingredient could lead to deforestation risk. Intrinsically, the non-Food activities of Unilever are a major risk for its climate goals.

2.3.7 Conclusion: Unilever faces many dilemmas in Home, Personal, and Beauty Care

While Home and Personal Care products form an essential product range to raise hygienic levels globally, the current products, including Unilever's product portfolio, do face various dilemmas:

- Scope 3 emissions of indirect consumer use are high and contribute materially to climate change. These emissions are mainly due to using hot water.

- Direct Scope 3 emissions are high due to the purchased material as well as the packaging. The suppliers of ingredients as well as packaging are only at the start of finding alternatives for fossil fuel-based materials. Their CO_2e reduction targets for 2030 do not comply with Unilever's targets.
- The route to reduce emissions to switching from fossil fuel-based to natural alternatives, faces the risk of increasing deforestation and thus additional emissions, as well as damaged ecosystems and loss of livelihoods. Note that petrochemical products/ingredients are a no-go for the long-term 1.5D climate targets.
- The plastic packaging of many Home, Personal, and Beauty Care products not only leads to CO_2e emissions but also to other pollution like waste and air pollution.

2.4 New CTAP, indirect consumer use emissions, and lacking targets

This section follows Unilever's journey in changing its practices versus recognised standards' requirements and recommendations, like the GHG Protocol, SBTi, and CDP. The section highlights how in 2024 Unilever has 'deteriorated' its reduction targets on indirect consumer use and on direct Scope 3 emissions.

2.4.1 The 2021 climate targets against GHG Protocol, CDP, and SBTi expectations

In March 2024, Unilever introduced its new CTAP. Until then, the company had the following climate targets:

- Short-term Emissions Reduction Target: to reduce in absolute terms the operational (Scope 1 & 2) emissions by 70% by 2025 against a 2015 baseline;
- Medium-term Emissions Reduction Target: to reduce in absolute terms the operational emissions (Scope 1 & 2) by 100% by 2030 against a 2015 baseline; and
- Long-term Net Zero Value Chain Target: to achieve net zero emissions covering Scope 1, 2 and 3 emissions by 2039[g].
- In addition, Unilever had a medium-term Value Chain Emissions Reduction Target: to halve the full value chain emissions of its products on a 'per consumer use' basis by 2030 against a 2010 baseline. This Medium-term Value Chain Emissions Reduction Target had its origins in the Unilever Sustainable Living Plan – its strategy from 2010–2020. Unlike the other three targets, it is an intensity target, not an absolute target. Unilever says the fourth target helps '*to guide innovation and monitor (its) annual performance.*' [26]

[g] * Unilever has defined [its] net-zero target with reference to the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. [Its] target covers upstream Scope 3 emissions, Scope 1 & 2 emissions and mandatory downstream Scope 3 emissions. Mandatory downstream emissions include direct emissions from aerosol propellants and the biodegradation of chemicals in the disposal phase but exclude indirect use-phase emissions (indirect consumer use emissions), such as emissions associated with the hot water used with its products.

Table 16 GHG Protocol, CDP, and SBTi requirements against Unilever's actual reporting

	GHG Protocol	CDP	SBTi	Unilever
Scope 3 – Indirect consumer use – definition & coverage	Category 11 – "11. Use of sold products". End use of goods and services sold by the reporting company in the reporting year [include] the direct use-phase emissions of sold products over their expected lifetime (i.e., the scope 1 and scope 2 emissions of end users that occur from the use of: products that directly consume energy (fuels or electricity) during use; fuels and feedstocks; and CO_2e's and products that contain or form CO_2e's that are emitted during use) **Optional: The indirect use-phase emissions of sold products over their expected lifetime (i.e., emissions from the use of products that indirectly consume energy (fuels or electricity) during use)**	Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain. This includes the emissions linked to downstream companies where sourced commodities are being produced from forest-risk products through the Agriculture, Forestry and Other Land Use (AFOLU) sector (GHG Protocol).	Indirect use-phase emissions are generated by products that only consume energy indirectly during use over their expected lifetime. Examples of such emissions include the washing and dyeing of apparel and the cooking and refrigeration of food products. **If companies have significant indirect use phase emissions, they *may* estimate these emissions and take actions to reduce these emissions.**	Unilever has defined its Net Zero target with reference to the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Its target covers upstream Scope 3 emissions, Scope 1 & 2 emissions and mandatory downstream Scope 3 emissions. Mandatory downstream emissions include direct emissions from aerosol propellants and the biodegradation of chemicals in the disposal phase but **exclude indirect use-phase emissions, such as emissions associated with the hot water used with the products.**

Source: GHG Protocol, Carbon Disclosure Project, Science-based Targets Initiative.

Key takeaways for the situation until early 2024:

- Indirect consumer-use phase emissions, which accounted for 2/3 (until the revisions in AR23) of the total emissions ("Around two-thirds of our products' full value chain CO_2e emissions come from their use by consumers (indirect consumer use" – AR22), were only part of the 'additional' medium-term target which was (a) not net-zero, but rather aimed at a 50% reduction and (b) was an intensity target, which meant that absolute emissions might still increase if sales grew faster than CO_2e emissions per unit were reduced.
- At the same time, Scope 3 indirect consumer use emissions were at the time (and still are) optional under the GHG Protocol, and it was not required to include them in the net-zero goal (and even to report on them at all). In this respect, Unilever has been in line with SBTi.

2.4.2 Reported emissions and how they are calculated

According to Unilever's 2023 Annual Report, its Scope 3 CO_2e emissions –indirect consumer use – made up 47.07 million tons in 2023[27] against 57.54 million tons in 2022, 64.87 in 2021 and 65.76 in 2020[28]. In the 2022 report, the company said that '*[its] missions were recalculated in 2020 to include*

biodegradability of organic materials. [Unilever] also recalculated consumer use to include disposal, and ingredients and packaging to include inbound transport of raw materials'[29]. Until 2022, Unilever reported the calculated Scope 3 emissions of the 14 key countries only. For 2022, the company has reported the total estimated full value chain Scope 3 CO_2e emissions. This explains the difference with the 2021 report, where Scope 3 CO_2e emissions – indirect consumer use – were 42.09 for 2020 and 43.19 for 2021.

In its 2023 Annual Report, Unilever explained that in that year '*indirect consumer use emissions decreased by 18% from 2022, as a result of reductions in product volumes for the period measured (1 October 2022 to 30 September 2023) and ongoing grid energy decarbonisation in the US, UK and European Union. In the run-up to COP28, [Unilever] advocated for greater investment in renewable electricity generation to triple current capacity by the end of the decade*'.[30]

To calculate its value chain emissions, Unilever accounts for:

- 14 key countries: Brazil, China, France, Germany, India, Indonesia, Italy, Mexico, Netherlands, Russia, South Africa, Turkey, UK, and USA.
- 12 categories: Beverages, Deodorants, Dressings, Fabric Sensations, Fabric Solutions, Hair Care, Home & Hygiene, Ice Cream, Oral Care, Savoury, Skin Care, and Skin Cleansing.
- 9 phases of the life cycle: primary packaging, secondary packaging, ingredients, inbound transport, manufacturing, distribution, storage at retail (product refrigeration including point-of-sale cabinets), consumer use, and disposal[31.]

Unilever also discloses the methodological approaches and the key steps it takes to calculate its value chain emissions:

'*Scope 3 GHG emissions are estimated by measuring the emissions of a representative sample of approximately 3,000 products across 12 categories and 14 countries through a detailed footprinting exercise. For each representative product, internal and external data sources are used to represent various lifecycle activities and inputs (for example, specification of product, energy for site of manufacture and consumer use data). The GHG emissions impact of ingredients and packaging are obtained from external databases (based on industry averages) or internal expert studies. [Unilever] then extrapolate[s] the results at a country level across the unsampled products to obtain the estimated GHG emissions for each of the 14 countries. These 14 countries account for 60-70% of [the company's] total sales volumes. [Unilever] estimate[s] global full value chain GHG emissions figure by a simple extrapolation of the calculated GHG emissions from the 14 countries. As set out in [its] CTAP, and in line with the SBTi's approach, the GHG emissions included in the scope of [Unilever's] net zero target ('our GHG emissions') exclude the indirect consumer use emissions associated with [its] products*'. [32]

Under GHG Protocol, '*companies should report assumptions underlying reported emissions for each of the 15 scope 3 categories. For example, for category 11 (Use of sold products), companies should report information on average use profiles, assumed product lifetimes and other underlying assumptions*'[33]. The primary data recommended by GHG Protocol include specific data collected from consumers, as well as estimated energy used based on national average statistics on product use as the secondary sources.

According to its 2022 Annual Report, '*8 categories (2021: 10; 2020: 10) individually accounted for 5% or more of our revenue in one or more of the last three years*'.[34] These categories in 2022 included fabric, ice cream, hair care, scratch cooking aids, skin cleansing, deodorant, skin care, dressings, home & hygiene, tea, and other.

Table 17 Unilever's key product categories by revenue vs the categories covered by Scope 3 emissions reporting

Scope 3 categories	Top revenue categories	2022	2021	2020
Fabric Sensations & Fabric Solutions	Fabric	15%	14%	14%
Ice Cream	Ice Cream	13%	13%	13%
Hair Care	Hair Care	11%	11%	11%
-	Scratch Cooking Aids	10%	10%	10%
Skin Cleansing	Skin Cleansing	10%	11%	12%
Deodorants	Deodorant	8%	7%	8%
Skin Care	Skin Care	7%	7%	7%
Dressings	Dressings	6%	6%	6%
Home & Hygiene	Home & Hygiene	4%	5%	5%
-	Tea	3%	5%	6%
-	Other	13%	11%	8%
Savoury	-	-	-	-
Oral Care	-	-	-	-
Beverages	-	-	-	-
Total Row		**100%**	**100%**	**100%**

Source: Unilever Annual Report (2022) and Basis of Preparation (2021).

Assuming that Fabric Sensations & Fabric Solutions are reported as a single category as 'fabric' for revenue purposes, the revenue categories accounting for 84% of revenue in 2022 (also 84% in 2021 and 86 in 2020) are also part of the indirect Scope 3 reporting. Presumably, Savoury, Oral Care, and Beverages accounted for in the emissions reporting may constitute a part of the 'Other' revenue categories, so in reality the overlap may be even more significant. At the same time, Scratch Cooking Aids, Unilever's largest nutrition sub-category[35] accounting for 10% of its revenues, is not covered by its scope 3 reporting.

Key takeaways:

- Product categories selected by Unilever's for reporting its indirect consumer use emissions largely corresponded with the top categories by revenue.
- Geographically, until 2021, the company reported emissions for its 14 key countries only (jointly accounting for 60-70% of sales), while from 2022 the entire value chain emissions are reported.
- Even though Unilever describes the calculations methodology and key assumptions, it does so in a generic way, without reporting the actual information on average use profiles, assumed product lifetimes, etc., as required by GHG Protocol.

2.4.3 Unilever's new 2024 CTAP: main changes – improvements and deteriorations

In its new CTAP, Unilever separated FLAG from E&I (energy & industrial) emissions, and excluded Scope 3 indirect consumer use from reduction targets. The company also skipped the 'per consumer use' in its emission reduction target. Last but not least, the company introduced a category, next to FLAG and E&I, for which it is not able to set a reduction target.

In March 2024, Unilever issued an updated CTAP[36], which differs from the previous CTAP in a number of important aspects. According to the new plan, the company has set the following CO_2e reduction targets:

Long-term goal:

- Achieve net zero CO_2e emissions covering Scope 1, 2 & 3 (excluding indirect consumer use emissions) by 2039.

Near-term CO_2e reduction targets:

Own operations (Scope 1 & 2)

- Reduce in absolute terms the operational emissions (Scope 1 & 2) by 100% by 2030, against a 2015 baseline (SBTi validated as 1.5°C-aligned).
- Reduce in absolute terms its operational emissions (Scope 1 & 2) by 70% by 2025, against a 2015 baseline.

Value chain (Scope 3)

- Reduce 'absolute' Scope 3 E&I CO_2e emissions from purchased goods and services (associated with ingredients, packaging), upstream transport and distribution, energy and fuel-related activities, direct emissions from use of sold products (associated with HFC propellants), end of life treatment of sold products, and downstream leased assets (associated with ice cream retail cabinets) by 42% by 2030, from a 2021 baseline (submitted to SBTi for validation as 1.5°C-aligned in November 2023).
- Reduce absolute Scope 3 FLAG CO_2e emissions from purchased goods and services (associated with ingredients) by 30.3% by 2030, from a 2021 baseline (submitted to SBTi for validation as 1.5°C-aligned in November 2023).
- Emissions "out of scope of the 2030 Scope 3 CO_2e reduction targets". These are relevant to the net-zero 2039 ambition, but are currently defined as 'out of scope' concerning targets in the upstream supply chain. These consist of indirect procurement, and third-party contract manufacturing. For these two categories, supplier-specific data is not easily available, Unilever claims. In indirect procurement, the largest category is advertisement spend. **In this 'out of scope of reduction targets' Scope 3 category, a huge 15 million ton CO_2e (see Figure 1) is included, or 27% of total direct Scope 3 emissions and 12% of total Scope 1, 2 and 3 emissions. However, these 15 million tons do belong to Unilever's 2039 net-zero target.**
- **Thus, Unilever has no targets on 79.9 millions tons or 65.9% of its 2021 baseline CO2e emissions (121 million tons) after the target-exclusion of 64.9 million tons Scope 3 indirect consumer use emissions, and the 15 million "out of scope of the 2030 Scope 3 CO2e reduction targets" emissions.**

The key differences between the previous CTAP (March 2021) and the one released in March 2024 include:

- **Replacing relative (per consumer use) value change targets with absolute ones.**
- **Removing Scope 3 indirect consumer use mid-term target.**
- **Splitting the FLAG and energy-related emissions targets.**
- **Distinction of a category 'emissions out of scope of our near-term Scope 3 CO_2e reduction targets'.**

Unilever explains that *'[u]nder the GHG Protocol, indirect consumer use-phase emissions are an optional part of a company's Scope 3 emissions. While the Science Based Targets initiative (SBTi) encourages companies to consider them, they are also clear that they are not required to be included in a company's Scope 3 emissions and that their inclusion is above and beyond a company's Scope 3 targets. [Unilever's] GHG emissions in scope of [its] Net Zero by 2039 ambition do not include these optional indirect emissions sources […].'*[37]

The changes made by Unilever in 2024 show improvements and deteriorations:

- **An improvement is the move from relative emissions reduction targets (per consumer use, versus a 2010 baseline) for the value chain to the absolute ones.** Relative per-consumer use goals would have allowed Unilever to even increase its total emissions if the production or sales volumes increased faster than emissions per use decreased.
- **A considerable step back is that the 2024 Scope 3 emission reduction targets do no longer include indirect consumer use emissions.** These compose 65 million out of the 121 million tons (or about 54%, in 2021) of the total emissions.
- **A negative is that the FLAG and E&I reduction targets and the 15 million "out of scope of the 2030 Scope 3 CO2e reduction targets" face ample criticism about reduction target-setting ambitions.** See also section 2.4.4.

Unilever and other FMCGs are in a position to contribute to a reduction in indirect consumer use emissions:

- This can come from a reformulation of products so that less energy is required to heat water for washing clothes and personal hygiene (low-carbon innovations), and by educating customers about shorter washing and shower times.
- Concerning the decarbonisation of national energy grids, there is still a long way to go and there is room for all supply chain actors, including FMCG companies and Unilever, to contribute to it, in various geographical areas.

The observation up to now is that Unilever is leaning on decarbonisation of electricity grids by others, and not by its own actions. In December 2023, Austria, Belgium, France, Germany, Luxemburg, The Netherlands and Switzerland '*announced a joint ambition to decarbonize their interconnected electricity system by 2035*'.[38] It is also expected that by around 2040, the EU electricity grid will be nearly decarbonised. With about 10 years to go, European countries will have to accelerate their efforts in energy transition, as currently (as of 2022), the average share of renewable electricity across EU-27 is just above 22%[39].

India, the US, and UK, the three other major markets for Unilever, also use renewable energy, making up 20.5%, 22.4%, and 41.4% of their total electricity grid, respectively[40]. These figures also include large hydropower, whose actual sustainability and life cycle emissions is often debatable. With the exception of the UK, other important Unilever's markets receive only just above 1/5 of their electricity from renewables.

Material contributions by Unilever to national energy transitions, or crucial product reformulations are not visible or transparent.

2.4.4 The reason behind uncoupling emissions: FLAG and E&I by SBTi

Splitting FLAG and energy and fuel-related emissions reduction targets is required under the FOREST, Land And Agriculture Science-based Target-Setting Guidance (Version 1.1) published by SBTi in December 2023. The SBTi requires companies that meet either of the following two criteria to set a FLAG specific target separate from their target(s) for other emissions:

- Companies from the following SBTi-designated sectors are required to set a FLAG target: forest and paper products (forestry, timber, pulp and paper, rubber); food production (agricultural production); food production (animal source); food and beverage processing; food and staples retailing; and tobacco.
- Companies in any other sector with FLAG-related emissions that total more than 20% of overall emissions across scopes 1, 2, and 3. The 20% threshold should be accounted for as gross emissions, not net emissions (gross minus removals)[41].

Depending on their business model, the nature of their operations, and exposure to specific deforestation-risk commodities, companies may opt for a sector path or commodity path (for beef, chicken, dairy, leather, maize, palm oil, pork, rice, soy, wheat, and timber & wood fibre), or a combination of both.

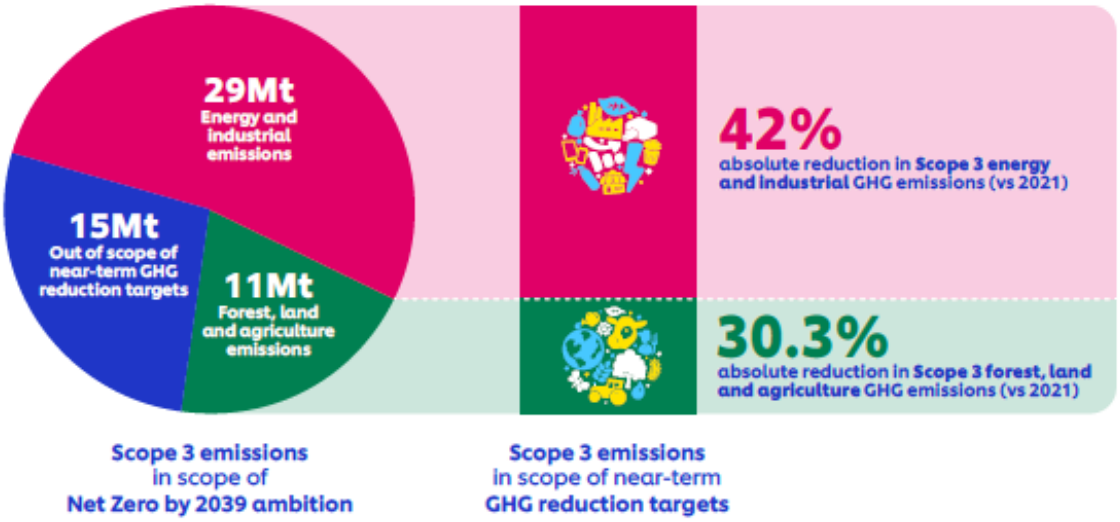
In line with these recommendations, Unilever has split its Scope 3 energy and industrial CO_2e emissions targets and the targets for absolute reduction in Scope 3 forest, land and agriculture CO_2e emissions. Unilever seems to have opted for the sector path and has set a FLAG target of 30.3% reduction against the 2021 baseline. This target may be likely based on the global FLAG reduction target of 30.3% between 2020 and 2030. According to SBTi, this target '*is based on the best available literature (see Roe et al 2019 for a thorough review of the academic literature and integrated assessment models on which the FLAG pathway is built). While as a global average, emissions must be halved by 2030, some sectors are expected to decarbonize faster or slower than others, which is why not all sectors have a 50% target by 2030 rate of reduction. In particular, significant agricultural emissions of nitrous oxide and methane are expected to continue*'. [42]At the same time, SBTi FLAG guidelines only require that corporate target must cover at least 67% of FLAG-related scope 3 emissions[43], while for many actors in agriculture, food processing, FMCG, and retail Scope 3 constitutes up to a half – and often more – of their total footprint, and the remaining 33% not currently covered by SBTi may constitute a sizeable share of their emissions.

In addition, some experts criticize the SBTi sector pathways and its overall approach to target-setting. Thus, a recent research from the Breda University of Applied Science (BUAS) concludes that '*SBTi standards are not grounded in a scientific validation or peer-review process and as such cannot be labelled 'scientific'. Some of the resources used to define targets are from science, but with many corporate values involved, particularly regarding technology (techno-optimistic) and volume growth*'.[44] Other criticism:

- **Sectoral pathways assume global coordination between sectors, but this does not exist and there are no indications that this will happen.**
- **Every sector will have to contribute equally, otherwise companies will 'shop' in the sector targets that fit them best. The result will be that the necessary average emission reduction will not be achieved.**
- **Distinction of sector goals might even lead to injustice, for instance coal-dependent developing markets might suffer more than gas-dependent rich countries.[45]**

The new target to reduce absolute Scope 3 forest, land and agriculture (FLAG) CO_2e emissions from purchased goods and services (associated with ingredients) includes both FLAG emissions and FLAG removals. According to SBTi, '*FLAG targets are net reduction targets that include removals. However, companies are still required to report emission reductions and removals separately. Reporting removals is optional*'.[46]

Figure 1 Unilever's new specific FLAG and energy emissions reduction targets



Source: Unilever (2024), the updated CTAP.

Other companies in the FMCG and retail sectors, for example, Ahold Delhaize and Danone, have come up with exactly the same FLAG targets 30.3%. Presumably, these companies, as well as Unilever, have adopted the global target.

As stated above, SBTi requires that companies may opt for either of the two approaches while selecting FLAG targets:

- FLAG sector approach for companies with diversified FLAG emissions and removals potential (sector-specific absolute reduction).
- Commodity-based approach with 11 commodity pathways: beef, chicken, dairy, leather, maize, palm oil, pork, rice, soy, wheat, and timber & wood fibre (sector-specific intensity convergence).

SBTi also states that companies may combine multiple commodity pathways and the sector pathway as appropriate for target setting.

Based on our analysis of the new CTAP, it is unclear if Unilever has opted for the sector pathway, or a combination of the sector and commodity pathway.

SBTi also requires that '*companies setting a FLAG target for multiple commodity categories or using a combination of the sector pathway and the commodity pathways can use the FLAG target aggregator to aggregate results for a single GHG reduction target (FLAG-R5). However, for transparency in the target validation process, companies must report on sub-targets and provide the calculation details separately for each pathway included in target development*.'[47]

The new CTAP does not seem to provide such level of detail, and in this respect, Unilever is not fully in line with the SBTi requirements.

2.4.5 Conclusions on the new 2024 CTAP

- Unilever's reports its Scope 3 indirect consumer use emissions, even though it is not obligatory under GHG Protocol, CDP, and SBTi recommendations.
- Until March 2024, Unilever included full lifecycle emissions (including indirect emissions from consumer use, for example, energy required for washing machines where its detergents are used) in its climate targets. However, the target that concerned these emissions ('to halve the full value chain emissions of our products on a per consumer use basis by 2030 against a 2010 baseline') was communicated as 'additional' and was also expressed in a relative (per consumer use) reduction. This means that this target was not robust, and Unilever might still increase its overall emissions if its production or sales went up faster than emissions per consumer use went down.

- Unilever includes the key categories by revenue in calculating its indirect consumer use emissions and takes into account its key markets (3,000 products across 12 categories and 14 countries). These data is then extrapolated over its entire product and geographic portfolio. Based on this, it appears that the company accounts for the vast majority of its indirect consumer emissions.
- It is only in the 2021 'Basis of preparation' report (a document intended to help an external auditor to produce limited assurance of the company's reporting) that Unilever disclosed the key product categories and key markets which are used as the key data points for collecting the data required for calculating Scope 3 indirect consumer use emissions. This makes it difficult to find the relevant information, and makes the reporting process less transparent.
- Contrary to the GHG Protocol requirements, Unilever publishes only limited information regarding the description of the methodologies, allocation methods, and assumptions used to calculate emissions for each of the 15 scope 3 categories. Thus, for category 11 (Use of sold products), it does not report information on average use profiles, assumed product lifetimes and other data which was presumably used for the calculations. This means that the important information is unavailable for the stakeholders, and make the entire calculation process appear as a black box.
- In its updated CTAP (published in March, 2024) Unilever renounced relative (per consumer use) climate change targets in favour of the absolute ones, completely removed its Scope 3 indirect consumer use mid-term target (-50% along the entire value chain by 2030 per consumer use versus baseline 2010), and split the FLAG and energy-related emissions targets.
- Uncoupling FLAG and E&I emissions targets is in line with the latest SBTi guidelines. The 30.3% FLAG reduction adopted by Unilever appears to be based on the global SBTi-advocated FLAG target (which is also used by other FMCG as well as retail companies). However, it is unclear from the CTAP whether Unilever has opted for the sector or commodity pathway, or a combination of both. It is also not specified what are its sub-targets per pathway, and their calculation details. This appears to contradict SBTi recommendations and stakeholder expectations.
- Introduction of an 'in scope' Scope 3 emission category, labelled 'emissions out of scope of near-term Scope 3 CO_2e reduction targets but relevant to net zero by 2039 ambition'. This is a huge 15 million ton CO_2e, or 27% of direct Scope 3 CO_2e emissions and 12% of total emissions (2021) without 2030 target as Unilever has no insight or worked-out plans for this.
- Dropping the indirect consumer use target, which according to the new CTAP accounted for 54% of Unilever's overall carbon footprint in 2021, appears to be setback against the company's own earlier commitments.
- Unilever has no emission reduction targets on 79.9 millions tons or 65.9% of its 2021 baseline CO2e emissions (121 million tons) after the exclusion of 64.9 million tons Scope 3 indirect consumer use emissions, and the 15 million "out of scope of the 2030 Scope 3 CO2e reduction targets" emissions.

2.5 Planet Tracker's Climate Transition analysis

In 2023, Planet Tracker concluded that Unilever was on a path of missing crucial targets set by SBTi for total CO_2e emissions in a 1.5-degree pathway.[48]

To achieve a 1.5-degree pathway, Planet Tracker argues that Unilever's total CO_2e emissions should decline from 110.6 million in 2020 to 60.6 million in 2030, or -45%. Extrapolated trends from 2022 would lead to 66.2 million to be achieved by Unilever. The gap of 5.6 million ton CO_2e were mainly driven by upstream Scope 3 emissions. Excluding the optional Scope 3 indirect emissions (according to GHG Protocol and encouraged to include by SBTi), the extrapolated emissions would be 32.7 million in 2030, **only a 5% decline versus 2022. This Planet Tracker analysis is supportive to the analysis in the current report that Unilever has huge challenges in reaching targets for a 1.5-degree pathway.**

2.6 Conclusions on the omissions in Unilever's emission reduction targets

- **Plastics:** while 'packaging' is a material contributor to emissions for Unilever (5.6% of total Scope 1, 2, 3 emissions in 2023, including indirect consumer use), the data presented are not completely transparent, and very ambitious compared to current achievements.
- **Home, personal, and beauty care:** These activities generate 65% of Unilever's revenues and 80% of total CO_2e emissions (including indirect consumer use). Unilever faces serious dilemmas in reducing CO_2e emissions in these activities. 1) these products need hot water and are thus very dependent on how consumers use the products and the renewable energy status of key economies; 2) the Scope 3 emissions are due to the purchased ingredients as well as the packaging. The suppliers of ingredients as well as packaging are only at the start of finding alternatives for fossil fuel-based materials. Their CO_2e targets for 2030 (-16%) are far off Unilever's implicit target Scope 3 (-29% vs baseline 2021); 3) the route to reduce emissions by switching from fossil fuel-based ingredients to natural alternatives, faces the risk of increasing deforestation and thus additional emissions; 4) the plastic packaging of many Home, Personal, and Beauty Care products not only leads to CO_2e emissions but also to other pollution like waste and air pollution.
- **GHG Protocol:** relative targets of Scope 3 emissions for indirect consumer use which had been set under the 2021 CTAP were not robust as the 'per consumer use' was the basis. Also, the reporting process for categories and countries was – and still is – not fully transparent. Additionally, the methodologies for calculating Scope 3 indirect emissions are not transparent, and consequently, the calculations appear as a black box. In the 2023 AR, Unilever is still reporting on this category, however, it is unclear if it continues to do so from 2024 inwards, as the new CTAP excludes indirect consumer use targets.
- **New CTAP:** uncoupling FLAG and E&I emissions targets is in line with the latest SBTi guidelines. The 30.3% FLAG target is likely based on the global SBTi-advocated target. It is yet unclear if Unilever has opted for the sector or commodity pathway, or a combination of both. It is also not specified what are its sub-targets per pathway, and their calculation details. This appears to contradict SBTi recommendations and stakeholder expectations.
- **A new category 'out of scope of near-term GHG reduction targets':** 27% of the direct Scope 3 emissions, under control of Unilever, and 12% of total emissions (2021 basis), are not yet covered as Unilever has no insight or worked-out plans for this.
- **Completely abandoning indirect consumer use target:** Dropping the mid-term goal to reduce by 50% the entire value chain emissions (including indirect consumer use, which according to the new CTAP accounted for 54% of Unilever's overall carbon footprint in 2021), appears to be setback against the company's own earlier commitments.
- **Planet Tracker:** the analysis shows that current trends in Unilever's CO_2e reductions make it difficult to achieve a 1.5-degree pathway for its in-scope emissions (-5% between 2022 and 2030).

This list of omissions shows the huge challenges for Unilever to achieve its own targets. This makes it even more relevant to calculate Unilever's climate damage costs and liability not only based on its own targets but also on much more headwind from its suppliers in its dominant HPC activities (see section 3). The section 4 and section 5 emphasise the deforestation and human rights risks Unilever is facing.

3

The value of Unilever's climate damage

This section calculates the climate damage of Unilever in the period 2016-2050. The year 2016 follows the Conference of Parties (COP) 21 in Paris 2015, where global and national targets were set for the reduction of CO_2e emissions to mitigate global warming to 1.5 degrees. Unilever's CO_2e emissions targets 2030 and 2050 are applied for a base case scenario. Next to this, this report calculates the climate damage in case of a 'deceleration' scenario. This is realistic in view of the analysis in Chapter 2. The calculations for an 'abandoned' scenario refer to the path which Unilever followed until it published the new CTAP in 2024.This CTAP brought a lower target of CO_2e reduction assuming no change in per consumer use.

3.1 Climate damage valuation via carbon pricing: the methodology

3.1.1 Development in methodology

The development of methodologies to value climate damage is still in process. There is no internationally accepted standard yet. The International Monetary Fund (IMF) has adopted the approach that carbon pricing per ton is a good proxy to value the climate damage or the Social Costs of Carbon (SCC). The IMF states that based on the development of literature, the SCC is a measure that is conditional on the level of CO_2 in the atmosphere. The higher that level, the more powerful the greenhouse effect and, therefore, the higher the expected physical damages. For simplicity reasons, a constant SCC (or carbon price) per ton was assumed in their analysis, as the real growth in costs every year (3%) would be more or less 'neutralised' by the need to use a discount rate to calculate a present value of future costs.[49] This approach is followed in the current report.

Financers and NGOs/civil society have started to see the need to integrate climate accounting into balance sheets. Climate change and regulation to de-carbonise will fundamentally change the balance sheet. Today, companies have an unrecognised carbon liability. Even if a company is not subject to a carbon levy, the company should anticipate that more countries will introduce a carbon tax, and will likely apply the tax to a wider range of industries in the next 5-10 years[50] leading to increased costs. This approach is followed in the current report.

Currently, most jurisdictions where Unilever is active do not charge their carbon costs to FMCGs for their scope 1, 2 & 3 emissions. The EU is moving forward with Scope 1 emissions rights and pricing for various industries (linked to the operations), but most Scope 2, as well as all Scope 3 emissions, are still not considered. Many parts of the world are neglecting to price a major part of emissions, in particular the Scope 3 emissions.

In the meantime, the EU ETS (Emission Trading System) price per ton CO_2e 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).[51] 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.

The use of social or societal costs of carbon 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 well above the EU ETS price and recent calculations for economic damage have increased further due to the inclusion of higher damages in the Global South.[52] These latest societal costs of carbon dioxide have a more forward-looking component, based on the projected cost to society of releasing an additional ton of CO_2, 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_2.[53]

3.1.2 The carbon price in this report

For this research Profundo has chosen to work with a CO_2e 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 advices 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[54]. On February 12, 2024, PBL increased the price to € 149 per ton due to a correction for inflation.[55] This number, now applied by Profundo, is relatively conservative (see section 3.1.1).

3.2 Period 2016-2050 most relevant for accumulated emissions

For a certain period, the (accumulated) CO_2e emissions can be calculated and priced versus the annual carbon price in specific jurisdictions. The choice of the period and the starting date depends on a company's recognition that climate change is a major issue. In the fossil fuel sector, one could decide for the 1992 Rio Summit, when authorities and companies recognised that burning fossil fuels had a negative impact on the environment and led to (air) pollution.[56] The negative impact of the meat industry was already recognised in 2006, when the FAO released an in-depth report "*[…] to help raise the attention of both the technical and the general public to the very substantial contribution of animal agriculture to climate change and air pollution, to land, soil and water degradation and to the reduction of biodiversity*."[57]

For Unilever, the starting date 2016 is taken. During the COP21 in Paris 2015, global and national targets were set for the reduction of CO_2e emissions (versus 2010)[58] and multinational companies were from then on aware and in theory ready to start setting their own goals and reduction pathways in line with Paris. The calculation of Unilever's climate damage costs ends in the year for which Unilever has indicated to have achieved a net-zero CO_2e position. The commitment by Unilever is to reach net-zero carbon emissions across all operations by 2030 (Scope 1&2), and direct Scope 3 emissions in 2039. The assumption is that Scope 3 indirect consumer use will decline in line with Unilever's targets until 2030, with a gradual decline to 2050 in line with global commitments of 2050 net-zero. Since the 2024 CTAP, Unilever lacks a reduction target on Scope 3 indirect consumer use emissions.

3.3 Calculation of climate damage costs for Unilever

For Unilever, the following assumptions and scenarios are applied for calculating climate damage:

- The CO_2e price is € 149 per ton. For the whole period 2016-2050, one price is applied. Then the value comparison between the various periods' contributions can be better analysed.
- A discount rate for the value is not applied. At the same time, no annual growth in the carbon price is applied. By applying this methodology, a 'nullifying' mechanism is introduced.
- For the Base scenario, Unilever's targets are applied. For 2016-2023, emission data from Unilever is used. For the years after 2023, a linear reduction is assumed towards the specific target dates set by the company.

In the Base scenario (see Table 8), and excluding the Scope 3 indirect consumer use emissions, the 2016-2050 climate damage is valued at € 117.5 billion (Table 18), with large contributions from the periods 2016-2023 (36.5%) and 2024-2030 (41.0%).

Including Scope 3 indirect consumer use emissions, in the period 2016-2050 the total climate damage would be valued at € 267.9 billion. In the period 2016-2023, 38.1% of the total damage costs have been realised. The period 2024-2030 would still contribute 36.3% of the total climate damage, 2031-2039 21.8%, and 2040-2050 3.8%.

While Scope 1&2 emissions contribute only 0.7% to climate costs in 2016-2050 (see last column, Table 18), direct Scope 3 emissions contributes 43.2% and Scope 3 indirect consumer use 56.1%.

Table 18 Base scenario: CO_2e emissions until 2050 and climate damage cost

	2016-2023	2024-2030	2031-2039	2040-2050	Total	% of total
Scope 1 & 2 accumulated per period (mln ton)	9.4	2.6	0.0	0	12.0	0.7%
Scope 3 direct, accumulated (mln ton)	278.1	320.7	177.7	0	776.4	43.3%
Total direct Scope 1, 2, 3 accumulated (mln ton)	287.5	323.2	177.7	0	788.4	
Carbon costs per ton (€)	149	149	149	149	149	
Total climate damage costs (€ mln), excl Scope 3 indirect consumer use	42,840	48,159	26,476	0	117,475	
% of total	36.5%	41.0%	22.5%	0.0%	100.0%	
Scope 3, indirect consumer use (mln ton)	396.7	328.9	214.7	69.0	1,009.3	56.1%
Total Scope 1, 2, 3 (mln ton)	684.2	652.1	392.4	69.0	1,797.7	100.0%
Total climate damage costs (€ mln)	101,943	97,169	58,463	10,280	267,856	
% of total	38.1%	36.3%	21.8%	3.8%	100.0%	

Source: Profundo, based on Unilever.

3.4 Climate damage liability versus current market value of Unilever

Depending on excluding or including Scope 3 indirect consumer use emissions, the accumulated climate damage cost or liability in 2016-2050 is € 117.5 billion to € 267.9 billion. This is 104% to 237% versus the current market capitalisation (or equity value) of Unilever (Table 19). Versus the enterprise value, which includes the financing of shareholders, bondholders, and creditors (banks), the climate damage cost in 2016-2050 is 84% to 192%.

Thus, including Scope 3 indirect emissions, the accumulated climate damage exceeds the equity value as well as the larger enterprise value.

Table 19 Base scenario: climate damage costs versus equity and enterprise value

€ million	Scope 1, 2, 3 excluding indirect	Scope 1, 2, 3 including indirect
Total carbon/climate damage costs	117,475	267,856
Equity value (5 March 2024)	113,177	113,177
Net-debt, and other	26,422	26,422
Enterprise value (5 March 2024)	139,599	139,599
Climate damage costs as % versus equity value	103.8%	236.7%
Climate damage costs as % versus enterprise value	84.2%	191.9%
Climate damage costs not covered by current equity value	4,298	154,679
Remaining climate damage costs as % of net-debt	16%	585%

Source: Profundo, preceding tables, Bloomberg.

When the climate damage costs are annualised, they are 69% and 140% of operating profit in 2024-2030 for respectively excluding and including Scope 3 indirect consumer emissions. For 2031-2039, these numbers are 30% to 65% (2023 is taken as a reference year; Table 20).

Table 20 also contains a calculation of the annual climate damage costs in each period versus net revenues (2023 is taken as the reference year). Climate damage costs as a percentage of net revenues are in the range of 0.0% to 23.3% for various periods and Scope 3 scenarios. **This means that if Unilever would increase the price level of its products (versus the planned price increases excluding climate costs) by this range, the profit could be kept intact, assuming customers will remain loyal**.

Table 20 Base scenario: annual climate damage versus 2023 profits and revenues

€ million	2016-2023	2024-2030	2031-2039	2040-2050
Operating profit, adjusted, 2023	9,931	9,931	9,931	9,931
Net revenues 2023	59,604	59,604	59,604	59,604
Excluding Scope 3 indirect emissions				
Annual climate damage costs	5,355	6,880	2,942	0
Climate damage costs as % versus operating profit 2023	53.9%	69.3%	29.6%	0.0%
Climate damage costs as % versus net revenues 2023	9.0%	11.5%	4.9%	0.0%
Including Scope 3 indirect emissions				
Annual climate damage costs	12,743	13,881	6,496	935
Climate damage costs as % versus operating profit 2023	128.3%	139.8%	65.4%	9.4%
Climate damage costs as % versus net revenues 2023	21.4%	23.3%	10.9%	1.6%

Source: Profundo, based on Unilever annual reports and preceding tables.

3.5 'Abandoned' and 'Acceleration' scenarios in CO_2e emission reduction

'Abandoned' scenario

If Unilever would accelerate its direct Scope 1, 2, and 3 emission reduction towards 2030 (-50% instead of the implicit -29% for 2030 in Scope 1+2+3 versus baseline 2021) and reach net-zero in 2039, the Scope 3 emissions would be adjusted to the path outlined in Table 21.

For the Scope 3 indirect consumer use emissions, the assumption is that these reductions will develop as fast as Unilever's Scope 3 direct emissions. In its CTAP 2021, Unilever still included indirect consumer use emissions in its Scope 3 reduction target.

As a disclaimer, consider that the assumption is that the 'consumer use' is constant until 2050. In the last 5-year period, the average quarterly volume growth, which we can see as a proxy for 'consumer use', has been 0.52%.[59] If 0.52% would have been applied as annual growth of 'consumer use', the impact would have been small on the numbers (indicated in the source line of every table). However, if volume growth/consumer use would accelerate in the coming years, the calculations of this 'Abandoned' scenario would not be relevant as then the emissions would become much higher. This is the crucial risk of applying 'per consumer use' in emission targets.

'Deceleration' scenario

However, there is also a serious risk that Unilever will have problems reaching its targets. A material part of its emissions depends on suppliers that are still in the early phases of CO_2e reductions. This 'deceleration' scenario is calculated in Table 21. This 'deceleration' scenario is based on the analysis in section 2.3.5.

- Until 2030, there is a large gap between Unilever's target in direct Scope 1,2,3 emissions (minus 29% vs baseline 2021) and the reduction target by leading suppliers of home, personal, and beauty care products (-16%). The assumptions of Table 15 are followed.
- The assumption for the food activities' emissions for 2030 is -29%, in line with Unilever's implicit targets. For the food ingredient supplies, the reductions of CO_2e emissions in the supply chain might be achieved by switching to suppliers with a low deforestation risk, while in non-food Unilever lacks alternatives.
- This means Unilever's direct emissions in 2030 will be 42.9 million CO_2e.
- For the period after 2030, the deceleration scenario assumes a trend in line with global targets.

Table 21 Scope 1, 2 + 3 emission reduction - all scenarios

mln tons	2016	2023	2030	2039	2050
Excluding Scope 3 indirect emissions					
Base scenario (Unilever's targets)	22.3	52.9	39.5	0.0	0.0
Abandoned scenario (-50% in 2030)	22.3	52.9	28.1*	0.0	0.0
Deceleration due to HPC suppliers	22.3	52.9	42.9	21.5	0.0
Including Scope 3 indirect emissions					
Base scenario (Unilever's targets)	61.0	99.9	74.6	12.5	0.0
Abandoned scenario (-50% in 2030)	61.0	99.9	27.8*	0.0	0.0
Deceleration due to HPC suppliers	61.0	99.9	89.0	44.5	0.0

Source: Profundo, based on Unilever data 2016-2023. For 2030 and 2039, alternatives have been applied; *) These numbers would have been respectively 29.2 and 28.8 if annual 'consumer use' growth would have been 0.52%.

In the 'abandoned' scenario, Unilever would be able to reach a more mitigated outcome for the climate liability than the base scenario (the scenario based on its new targets). The total direct

emissions in 2016-2039 would be 698 million tons (versus 788 million in the existing plan), and the climate damage liability would be € 104 billion (versus € 117 billion in the planned reduction schedule, Table 18).
In a 'deceleration' scenario, the direct emissions in 2016-2039 would shoot up to 1,031 million tons, and the climate damage costs would rise to € 154 billion.

Including Scope 3 indirect consumer use, the difference between an 'Abandoned' scenario and a deceleration scenario are significant with emissions ranging from 1,256 million (Abandoned) to 2,191 million tons (Deceleration), and the climate bill from € 187 billion (Abandoned) to € 326 billion (Deceleration).

The annual climate damage costs can also be evaluated versus net revenues (Table 20 and Table 22) and a conclusion can be drawn on other level of sales price increase needed to 'compensate' for climate costs and keep the impact on profits limited. **For both excluding and including Scope 3 indirect emissions, an acceleration of CO_2e reduction would limit the price increases significantly and keep Unilever's products more affordable to consumers.**

Table 22 Climate costs in abandoned and deceleration scenarios

	2016-2023	2024-2030	2031-2039	2040-2050	Total
Excluding Scope 3 indirect emissions					
Abandoned scenario					
Total Scope 1, 2, 3 accumulated (mln ton CO_2e)	288	283	127	0	698*
Carbon costs per ton (€)	149	149	149	149	
Carbon/climate damage costs (€ mln)	42,840	42,236	18,861	0	103,938*
% of total emissions and costs	41.2%	40.6%	18.1%	0.0%	100.0%
Sales price increase to pay climate costs	10.3%	8.9%	3.5%	0.0%	
Deceleration					
Total Scope 1, 2, 3 accumulated (mln ton CO_2e)	288	335	290	118	1,031
Carbon costs per ton (€)	149	149	149	149	
Carbon/climate damage costs (€ mln)	42,840	49,955	43,178	17,591	153,566
% of total	27.9%	32.5%	28.1%	11.5%	100.0%
Sales price increase to pay climate costs	10.3%	10.5%	8.0%	2.7%	
Including Scope 3 indirect emissions					
Abandoned scenario					
Total Scope 1, 2, 3 accumulated (mln ton CO_2e)	684	447	125	0	1,256*
Carbon costs per ton (€)	149	149	149	149	
Carbon/climate damage costs (€ mln)	101,943	66,607	18,635	0	187,185*
% of total	54.5%	35.6%	10.0%	0.0%	100.0%
Sales price increase to pay climate costs	24.4%	14.0%	3.5%	0.0%	
Deceleration					

	2016-2023	2024-2030	2031-2039	2040-2050	Total
Total Scope 1, 2, 3 accumulated (mln ton CO_2e)	684	661	601	245	2,191
Carbon costs per ton (€)	149	149	149	149	
Carbon/climate damage costs (€ mln)	101,943	98,524	89,505	36,465	326,436
% of total	31.2%	30.2%	27.4%	11.2%	100.0%
Sales price increase to pay climate costs	24.4%	20.7%	16.7%	5.6%	

Source: Profundo, based on Unilever data 2016-2023 and preceding tables; *) These CO_2e emissions would have been 8 million ton higher if annual 'consumer use' growth would have been 0.52% and the climate costs € 1.2 billion higher.

3.6 Summary

When the Scope 3 indirect emissions are included, the deceleration scenario would lead to 22% higher emissions than the base scenario and 22% higher climate damage. The costs would be nearly three times the current market capitalisation of Unilever and more than twice the enterprise value. For large institutional investors this would mean that the financial risks are enormous and the complete equity and debt would be worth zero, or wiped out, if the current share prices does not yet discount for any climate cost. Even if Unilever would focus its communication heavily on achievement in the Scope 3 emissions from indirect consumer use due to larger use of renewable energy globally, the total costs in its full supply chain should worry all its stakeholders.

Comparing the outcomes for the three scenarios excluding indirect consumer use, the outcomes for the deceleration scenario mean 31% higher emissions and a 31% higher climate damage outcome than the base scenario, which is already leading to a major liability for emissions of € 117 billion (excluding Scope 3 indirect consumer use emissions). The deceleration scenario would cover 136% of the current equity value, and 110% of the enterprise value. For large institutional investors this would mean that the financial risks are enormous and the complete equity and debt would be worth zero, or wiped out, if the current share prices does not yet discount for any climate cost. While the Unilever's new CTAP focuses its achievements strongly on direct emissions, financial risks remain severe.

Table 23 Summary of scenarios

	CO_2e 2016-2050 (mln ton)	Climate damage (€ mln)	As % vs equity value	As % vs enterprise value	Value (€ mln)
Equity value					113,177
Enterprise value					139,599
Excluding Scope 3 indirect consumer use					
Base scenario (Unilever's targets)	788	117,475	104%	84%	
Abandoned scenario	698	103,938	92%	74%	
Deceleration scenario	1,031	153,566	136%	110%	
Versus base scenario (%)					
Abandoned scenario	-12%	-12%			
Deceleration scenario	31%	31%			
Including Scope 3 indirect consumer use					

	CO_2e 2016-2050 (mln ton)	Climate damage (€ mln)	As % vs equity value	As % vs enterprise value	Value (€ mln)
Base scenario (Unilever's targets)	1,798	267,856	237%	192%	
Abandoned scenario	1,256	187,185	165%	134%	
Deceleration scenario	2,191	326,436	288%	234%	
Versus base scenario (%)					
Abandoned scenario	-30%	-30%			
Deceleration scenario	22%	22%			

Source: Profundo, based on Unilever data 2016-2023 and preceding tables.

4

Unilever's Scope 3 emissions: forest-risk commodities and animal products

As a consumer goods company, Unilever is exposed to various commodities that are at risk of being connected to deforestation and forest degradation and related emissions. The main forest-risk commodities in the company's supply chains are palm oil, paper & board, soy, cocoa, and tea. Emissions from animal products are mostly linked to dairy. This section provides an overview of volumes, origins and CO_2e emissions connected to the sourcing and use of these commodities by Unilever.

4.1 Forest-risk supply chains

Unilever committed in 2020 to achieve a deforestation-free supply chain for the main forest-risk commodities in its supply chains - palm oil, paper & board, tea, soy, and cocoa - by the end of 2023. The company reports that these commodities contribute more than 65% of its total impact on land while also often being linked to deforestation of natural ecosystems. Under the commitment, commodities entering the company's direct supply chain[h] should not be associated with deforestation or conversion of land for farming after the cut-off date of December 31, 2015.[i,60]

Unilever aims to achieve this goal with the help of three specific actions:[j]

- Simplified sourcing, i.e., prioritising suppliers and creating longer-term relationships;
- Clear requirements for key suppliers of soy and palm oil, including disclosure of primary and secondary processing facilities in its supply chain;[k]
- Prioritising sourcing from areas with low deforestation risk.[61]

Verification protocols for cocoa, palm oil, and soy consider the main commodity-specific natural ecosystem conversion issues. For tea and pulp & paper suppliers, the company considers the commodity-specific deforestation risks to be covered by its mandatory certification requirements.[62]

In its updated CTAP published in March 2024, Unilever reports that the CO_2e emissions from the production of its key forest-risk commodities "*[…] arise from land use change (e.g. deforestation), agricultural practices and downstream processing*." In relation to the 2023 goal of deforestation-free supply chains, it states that "*[…] 97.5% of our palm oil, paper and board, tea, soy and cocoa order volumes were deforestation-free by the end of 2023, based on Unilever's deforestation-free*

[h] That is, not covering indirect supply chain exposure, e.g. linked to embedded soy or palm oil in animal products.

[i] Where deforestation is defined as "*[l]oss of natural forest as a result of: i) conversion to agriculture or other non-forest land use; ii) conversion to a tree plantation; or iii) severe and sustained degradation*", and conversion as "*[a] change of a natural ecosystem to another land use or profound change in a natural ecosystem's species composition, structure, or function*", with conversion including deforestation and severe degradation.

[j] In its 2019 CDP Forests disclosure, Unilever had stated that it was targeting "*100% sustainably sourced agricultural raw materials […] by 2020*." (Unilever CDP Forests Questionnaire 2020, p. 88).

[k] It is not further defined how much of its sourcing is accounted for by the 'key suppliers'.

requirements."[63] However, the findings related to social and environmental issues discussed in Chapter 5 raise questions about the rigorousness of the supply chain monitoring.

At the time of writing, Unilever has published updated emission numbers for 2023 but detailed data is only available for 2022. Unilever discloses the volumes and origins of a selection of main natural ingredients in its supply chain. It states that 98% of its forest-risk commodity exposure is related to the combined volumes of timber, soy, and palm oil. Its limited use of coffee is not included in the reporting (0.39% of total procurement volume). Similarly, the sale of the major part of its tea business, Ekaterra, in July 2022 as part of a strategic portfolio review, only left tea activities in India, Nepal, and Indonesia as well as its interest in the ready-to-drink joint venture, Pepsi Lipton.[64] These remaining tea markets are not considered in detail in its climate and forest reporting.

4.1.1 Emissions from forest-risk commodities and animal products

It cannot be fully retraced which factors are used as the basis of Unilever's scope 3 calculations. Therefore, Table 24 shows average factors based on the total reported volumes. The company states that "*[f]or scope 3 product life cycle emissions we measure the full GHG footprint of our product portfolio and annual sales using an LCA method compliant with the ISO 14040 standard*".[65] It refers to external databases based on industry averages and internal expert studies in relation to CO_2e emissions impact of ingredients and packaging but does not provide further details on these sources.[66]

In addition to Unilever's disclosure on forest-risk commodities, estimates of scope 3 emissions linked to animal products that form part of the company's supply chain have been added to 0. The company estimates that it is indirectly exposed to 98,000 tons of soybean equivalents (SBE) annually from dairy and eggs in its supply chain, but it does not disclose details on the related volume of animal products. Dairy use by Unilever is mostly linked to its role as a leading ice cream manufacturer,[67] while eggs are used predominantly in mayonnaise. In addition to the risk of land use change associated with the embedded soybean meal in animal feed, dairy and eggs are linked to additional emissions, including the highly potent methane arising from enteric fermentation in ruminants as well as emissions from other feed, manure, and energy use.

Based on the reported use of 331 million eggs in Hellmann's mayonnaise sold in the US in 2017, it is estimated that globally around 1 billion eggs or 55,000 tons are sourced by the company annually.[68] Using estimates for the average SBE embedded in eggs, around 35,000 tons of the reported SBE volume is accounted for by Unilever's egg utilization. Based on the remaining 63,000 tons SBE, applying an average SBE factor per litre of milk results in an estimated milk volume of 1.6 million tons processed by Unilever. Average CO_2e emission factors for these product volumes suggest 3.2 million tons CO_2e emissions linked to dairy, and 132,000 tons linked to eggs.

These considerations lead to total estimated CO_2e emissions from forest-risk commodities and animal products of 9.5 million tons in 2022, or around 6% of the CO_2e emissions of the Netherlands in 2022.[69] These emissions account for 47.3% of scope 3 emissions linked to raw materials and ingredients reported by Unilever for 2022 (Table 1).

Table 24 CO2e emissions linked to forest-risk commodities and animal products, 2022

Commodity	Main usage	Commodity-dependent revenue share (%)	Volume sourced (tons)	Emissions (tons CO_2e)	Underlying average CO_2e factor (ton/ton)
Palm oil	Food, home care, personal care	51-60%	778,419	3,894,606	5.00
Palm oil (indirect)	Animal feed for dairy, eggs	*6-10%*	30,000	*incl. in eggs/dairy*	*n/a*
Timber	Packaging	91-99%	1,043,614	1,513,240	1.45
Cocoa	Ice cream	6-10%	66,348	145,302	2.19
Soybean oil	Mayonnaise	6-10%	312,038	680,242	2.18
Soybean meal (SBE) (indirect)	Animal feed for dairy, eggs	6-10%	98,000	*incl. in eggs/dairy*	*n/a*
Eggs**	Mayonnaise	*6-10%*	*55,000*	*132,000*	2.40
Dairy**	Ice cream	*6-10%*	*1,575,000*	*3,165,750*	2.01
Total				**9,531,140**	
Share in total Scope 3 emissions raw materials & ingredients 2022				**47.3%**	

Note: own estimates in italics; *SBE=soybean equivalents, the volume of soybeans required to obtain soybean oil (20% of crush result); **based on an estimated use of 1 billion eggs per year (1 egg=55g); average soy use per egg/litre milk based on Profundo estimates for WWF (2022); CO_2e factors for eggs and dairy from FAO GLEAM v3.0.

Source: Unilever (2023), *CDP Climate and Forests Questionnaires*; Unilever (2023), *Forest-risk Commodities Reporting: 2022*; Unilever, (2017, January 23), "Hellmann's mayonnaise and mayonnaise dressings now use 100% cage-free eggs in the U.S.*, three years ahead of schedule"; Kuepper B. and M. Stravens (2022), Mapping the European Soy Supply Chain, Report commissioned by WWF European Policy Office; FAO (n.d.), "GLEAM 3 dashboard".

4.1.2 Announced ice cream divestment

It is noteworthy that Unilever announced in March 2024 its intention to separate ice cream into a standalone business as part of its Growth Action Plan (GAP). Ice cream is described as having different characteristics than the company's other operating businesses, notably due to its seasonality and requirement of a frozen goods supply chain down.[70] Such a separation will mean that the company's exposure to cocoa and embedded soy in dairy and eggs will drastically decrease, therefore leading to a decrease in emissions linked to forest-risk and animal products (Table 24) by around one-third. Animal product-related emissions will be largely limited to eggs then.

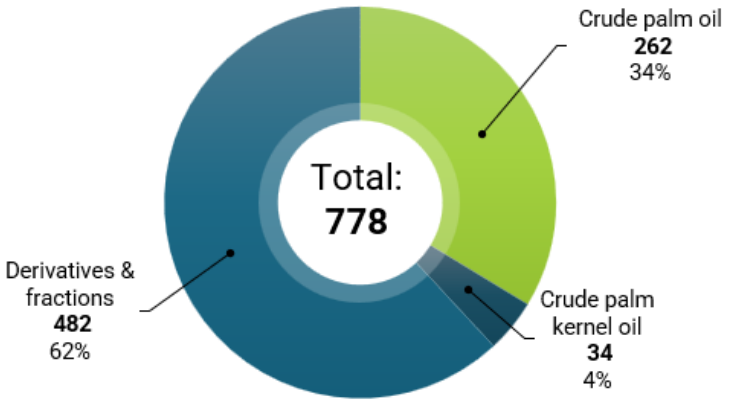
In line with international guidelines, namely the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct, such a divestment should be done in a responsible way, where potential social or environmental adverse impacts of the sale should be prevented or mitigated. Unilever will have to take into account what the consequences of the sale will be for human and labour rights and the environment, including the new entity's emission reduction targets. Moreover, selling of assets needs to be accounted for in line with the GHG Protocol and the 2021 baseline needs to be recalculated.

4.2 Palm oil

Palm oil is a key ingredient in Unilever's Beauty & Personal Care, Home Care and Food & Refreshments segments. Due to the broad variety of applications, the company estimates that around 51-60% of its revenue are dependent on palm oil.[71] Unilever's palm oil sourcing consists of crude palm oil, crude palm kernel oil, and derivatives and fractions of the two products (Figure 2). It

sourced a total of around 780,000 tons of palm oil in 2022, down from around 900,000 tons in 2021. Due to their relevance as ingredients in care products, the share of derivatives and fractions is high with 62%.[72] Not disclosed are volumes of palm fatty acid distillates (PFAD) and tail ingredients,[73] which are co-products from the refining process and used in oleochemical products.

Figure 2 Unilever palm oil volume, 2022 (1,000 tons)



Source: Unilever (2023), *RSPO Annual Communication of Progress 2022*.

Indonesia and Malaysia as the world's leading palm oil producers are also the main sourcing regions for Unilever, accounting for respectively 59% and 23% of the total in 2022 (Table 25), and an even higher share in the preceding year. Traceability to mill was reported at a level of 98% in 2022.[74] This compares to 90% in 2019.[75]

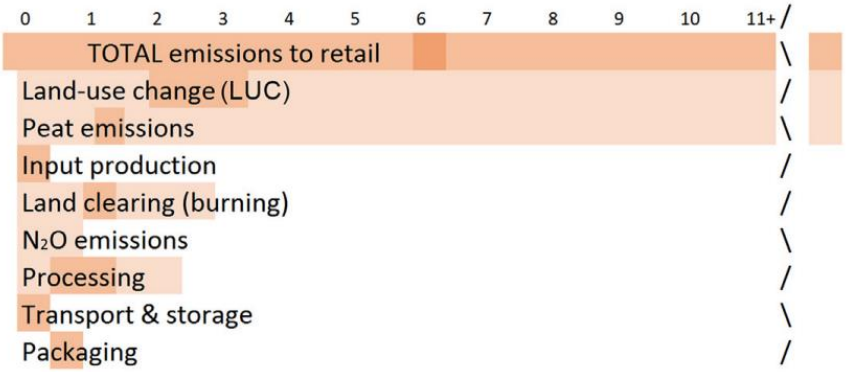
Table 25 Unilever sourcing of palm oil, 2022

Sourcing country	Volume (tons)	Share (%)	Estimated emissions (tons CO_2e)
Indonesia	459,656	59.1%	2,299,765
Malaysia	178,180	22.9%	891,475
Colombia	24,832	3.2%	124,238
Thailand	15,958	2.1%	79,839
Papua New Guinea	6,539	0.8%	32,715
Any other countries/areas	93,255	12.0%	466,574
Total	**778,419**		**3,894,606**

Source: Unilever (2023), *Climate and Forests Questionnaires*.

Considering the total emissions from palm oil of 3.89 million tons reported by Unilever for 2022, at least 3.19 million tons were linked to sourcing from the two Southeast Asian countries. The average emission factor of 5.0 tons CO_2e per ton palm oil applied by Unilever is in line with other sources. CO_2e emissions linked to palm oil can vary significantly, influenced particularly by the impact of land use change (LUC) and the type of soil (peat soil is connected to higher emissions) (Figure 3). Due to the large impact of LUC, the palm oil-linked emissions in a FMCG supply chain are heavily affected by the rigorousness of implementing measures to exclude deforestation and forest degradation in supplies. Patel et al. (2022) calculated average CO_2e emissions of 6 tons, varying between 7-10 tons in Indonesia, 3-7.5 tons in Malaysia or around 5 tons in Colombia.[76]

Figure 3 Factors influencing palm oil CO_2e emissions (ton CO_2e/ton crude palm oil)



Note: Darker orange highlights the typical range.
Source: Patel, S.S. et al. (2022, September 19), *Measuring and Mitigating GHGs: Palm Oil*, The Markets Institute at WWF, p. 10

In 2022, Unilever sourced almost 800,000 tons[l] of palm oil from 26 countries, of which 90% was sourced from areas at "*lower deforestation risk*" (not equivalent to deforestation-free). At the same time, the company reports that 74% of its volumes was reported as "*deforestation free*" by its suppliers, based on "*[…] a method that aligns with our protocols for independent verification*". Unilever states to have engaged 100% of its palm oil suppliers to embed deforestation- and conversion-free obligations in longer term commercial contracts and progress reports. Verification is done through audits conducted by third parties, formally kicked off in 2022 and expanded in 2023.[77]

In 2022, 93.68% of the palm oil was certified under the Roundtable for Sustainable Palm Oil (RSPO), consisting of a combination of RSPO Mass Balance (86%) and RSPO Independent Smallholder credits (7.68%).[78] In the Mass Balance system, certified and uncertified palm oil are mixed. Unilever considers palm oil certified as RSPO identify preserved or segregated to "*partly cover*" its requirements for deforestation and/or conversion (including cut-off date), segregation, traceability, and audits.[79]

In comparison, the company reported for 2019 that 95.1% of its volume of 876,000 tons of palm oil was RSPO-certified, and that 50% of the mills in its supply chain were identified as having a low deforestation risk.[80]

Due to a lack of data granularity in relation to Unilever's product portfolio, it is not possible to break down the reported palm oil volume by segment or product type.

4.3 Timber products

Paper & board are crucial materials for Unilever's products, owing to their role in packaging.[m] The company estimates that more than 90% of its revenue is dependent on the commodity. Its sourcing in 2022 consisted of a mix of virgin fiber (34.1%) and recycled fiber (64.8%), depending on the use.[n] Virgin fibers are mostly applied in the Nutrition and Ice Cream segments.

The company sourced a total of 1.04 million tons of paper & board in 2022,[81] of which 95.58% were reported as 'deforestation-free', based on sourcing from recycled fiber or forests certified under Forests Stewardship Council (FSC) (84.9%) or Programme for the Endorsement of Forest Certification (PEFC) (10.7%). The remaining 4.4% consisted of uncertified recycled board (2.3%) or was not certified (2.2%).[82] For virgin fiber, the volume shares of 11 forest-risk origins are disclosed, accounting for 17.4% of the total volume (Table 26). Traceability to mill was reported at 77.5% for

[l] An additional 30,000 tons of embedded palm oil consumption from dairy was reported.

[m] The reporting on timber products includes wood-fibre-derived paper and board packaging, and ice cream sticks.

[n] The remaining 1.1% were not assessed.

2022.[83] In comparison, Unilever reported the use of 850,000 tons of timber products in 2019, of which 98% were made from recycled fibre or FSC or PEFC certified.[84]

As mentioned in section 4.6, Unilever considers FSC and PEFC certification to sufficiently cover its Verification Protocol Requirements. However, both schemes have been repeatedly faced with criticism by civil society in recent years due to flaws in their approach, preventing them from effectively protecting intact forest landscapes (IFLs) and human rights.[85] Among other controversial issues, many certified wood products carry a 'FSC Mix' label, where uncertified, so-called "controlled wood" is mixed with certified products. However, this wood is in fact not fully controlled, and its risk assessment approach only addresses a limited number of topics under varying national implementation approaches.[86]

Based on an average CO_2e value of 1.45 tons CO_2e per ton product, the total volume was reported as being linked to 1.5 million tons of CO_2e emissions in 2022.[87] CO_2e emissions linked to pulp & paper are heavily influenced by the raw material origin and processing grade.

Among the countries that are considered as low-risk origins for timber products are several countries that have received criticism for their unsustainable forestry practices. Examples include Romania, where widespread illegal logging is threatening ancient forests with unique biodiversity,[88] or Sweden, where the intensive forestry practices of monoculture and clear-cutting raise concerns around their damaging impact on climate and biodiversity.[89]

Table 26 Unilever sourcing of timber products, 2022

Sourcing country	Volume 2022 (tons)	Share 2022 (%)	Estimated emissions 2022 (tons CO_2e)
Brazil	68,252	6.5%	98,966
Indonesia	27,760	2.7%	40,252
Vietnam	24,942	2.4%	36,166
India	20,977	2.0%	30,416
Argentina	15,550	1.5%	22,547
Philippines	14,611	1.4%	21,185
Colombia	4,905	0.5%	7,112
Other risk countries (<0.4% each)	4,488	0.4%	6,507
Any other countries (low risk)	310,266	29.7%	449,886
Recycled/mixed materials	476,932	45.7%	691,551
Certified w/o primary origin	51,033	4.9%	73,997
Unknown origin	23,481	2.3%	34,048
Total	**1,043,614**		**1,513,240**

Source: Unilever (2023), *CDP Climate and Forests Questionnaires*.

4.4 Soybean oil

Unilever reports details on its direct use of soybean oil in products like Hellmann's mayonnaise and other condiments, which reached 312,000 tons in 2022, or the equivalent of around 1.6 million tons of soybeans.[o] The much larger amount of soybean meal resulting from crushing this soybean volume is used in animal feed. Traceability to mill was reported at 93.8% in 2022.[90] In comparison, for 2019, Unilever reported a total volume of 280,000 tons of soybean oil, of which the country of

[o] The average crush ratio of soybeans (resulting in soybean oil and soybean meal) used by Unilever is based on around 0.2 tons of soybean oil pressed from 1 ton of soybeans.

origin was known for 93%.[91] The company estimated the use of embedded soybean meal, especially in dairy products and eggs, at a volume equalling 98,000 tons of soybeans for 2022,[92] but did not include this volume in the reporting on origins. The related CO_2e emissions are covered in the overall CO_2e emissions linked to dairy and eggs in Table 24.

By end of 2022, 95% of Unilever's directly sourced soybean oil volumes originated from places with "*lower risk of deforestation"*, such as the US.[93] For 2022, Unilever's direct soy suppliers reported "*[…] a deforestation free percentage of 92.4% using a methodology that aligns with our protocols of independent verification,*" as verified by a third party (3Keel).[94] Out of these 92.4%, 82.2% came from areas with what was described as negligible risk, while 17.8% were reported as 'deforestation-free' through independent verification. Moreover, the company reported 100% coverage by Proterra, ISCC, and both physical RTRS certification and RTRS credits. Unilever points to the ongoing reputational risk of using credits instead of physical streams of certified product, at lack of sufficient physical certified supplies.[95] However, even if adequate physical streams were available, various groups as well the EU Deforestation Regulation (EUDR) point out that certification schemes may be useful tools in the risk assessment procedure but cannot substitute the due diligence obligations of the buyer.[96]

In comparison, Unilever reported for 2019 a share of 80% of its soybean oil sourced under mass balance or credits of a third-party certification programmes.[97]

The average emission factor applied to soybean oil in Unilever's reporting is 2.18 tons CO_2e per ton of soybean oil. This factor is in the lower range of estimates for the CO_2e footprint of soybean oil, which is heavily dependent on the geographic origin. Generally, soybean oil sourced from the US, Europe or China is considered to be connected to much lower emissions than oil sourced from South America.[98]

For 2022, Unilever reported that 22.2% of its soybean oil was sourced from Brazil (69,000 tons), a negligible volume from Argentina (<100 tons) and the remaining 77.8% from what is considered to be low risk origins like the US, Europe and China.[99] However, in this context it is often being overlooked that also in places with lower risk of forest loss, highly valuable ecosystems are being converted into farmland. For example, North America has for many years seen a rapid conversion of biodiverse and carbon-rich grasslands for agricultural use, including soy cultivation.[100]

4.5 Cocoa

Unilever sources cocoa mainly for its ice cream business, including brands like Ben & Jerry's, Magnum and Wall's. In 2022, this use amounted to a total of 66,348 tons of cocoa. As mentioned above, the ice cream segment will be divested in the near future. In 2022, cocoa was sourced from the main production countries globally, Côte d'Ivoire (90%) and Ghana (5%), and from Indonesia (5%).[101] No data on traceability of cocoa products is provided for 2022 and reporting under the company's own verification protocol only seems to be planned for 2023 data. According to the company, 62% of its total cocoa volume was certified as Rainforest Alliance Segregated. More than 99% of its cocoa was either Rainforest Alliance or FairTrade certified. Moreover, it referred to its engagement in the Cocoa and Forests Initiative (CFI) and stated its intent to move its cocoa sourcing to areas with a "*[…] lower risk for deforestation."*[102] In comparison, in 2019, Unilever had sourced 72,600 tons of cocoa, 89% of which were certified under a third-party scheme.[103]

In May 2023, Kalischek et al. reported that in both Côte d'Ivoire and Ghana, "*[…] precise maps of the area planted with cocoa are missing, hindering accurate quantification of expansion in protected areas, production and yields and limiting information available for improved sustainability governance […] cocoa cultivation is an underlying driver of over 37% of forest loss in protected areas in Côte d'Ivoire and over 13% in Ghana, […] official reports substantially underestimate the planted area (up to 40% in Ghana)*."[104]

Unilever estimated the CO_2e emissions linked to its cocoa sourcing at around 145,000 tons CO_2e, or an average emission factor of 2.19 tons CO_2e per ton of cocoa.[105] Deforestation is a major contributor to these emissions. However, emissions linked to cocoa production are also heavily

influenced by the production system, where according to Vervuurt et al. (2022) old fields with shade trees are connected to lower average emissions than cocoa produced under current standards for good agricultural practices (GAP), despite higher yields and an assumption of no deforestation under GAP.[p] Estimates for emissions associated to cocoa production from that study range between 1.47-2.29 tons CO_2e per ton cocoa,[106] placing Unilever's factor at the higher end.

4.6 Deforestation risk in commodity supply chains

As mentioned above, the data in its updated CTAP suggests that the share of what Unilever considers to qualify as 'deforestation-free' will exceed the 2022 values used in this report, at a total of 97.5% across five key commodities. However, Unilever's approach does not comply with best practices when relying on certification schemes. As stressed in the EUDR, voluntary certification schemes cannot replace the companies' own responsibility to conduct due diligence on deforestation and rights violations in their supply chains.

Unilever discloses data on its known or estimated deforestation and/or conversion footprint for palm oil and soy. For timber and cocoa, it refers to issues related to data consensus and methodology and difficulties with attribution.[107] This may be connected to the difficulty of identifying and attributing forest degradation, which has been identified as a significant but often underestimated source of emissions.[108] Considering the important role of the four disclosed commodities as drivers of the conversion and degradation of natural forests and ecosystems, estimates can be used to obtain approximates for sourcing areas linked to its 2022 production that may have been exposed to an increased risk of deforestation or degradation as they were not covered by comprehensive verification processes. These estimates do not allow conclusions on actual deforestation areas in Unilever's supply chain though.

- 74% of palm oil was reported as 'deforestation free' under Unilever's own verification criteria. Therefore, around 202,000 tons of palm oil, cultivated on around 58,700 ha at an average productivity of 3.44 tons per ha in Indonesia,[109] have not been verified as deforestation-free in 2022. Unilever's own monitoring found a known or estimated deforestation footprint of 6,453 ha in its palm oil supply chain between 2016-2022.[110]
- To manage the risks in its timber supply chain, Unilever relies on mandatory certification under FSC or PEFC, which have been shown to insufficiently mitigate risks of deforestation and degradation. For the 355,000 tons of virgin fiber the company sourced in 2022, an assumed productivity[111] of 33 m^3 per ha and year and a density[112] of 0.59 tons per m^3 results in an estimated sourcing area of 18,200 ha of forest which has not undergone adequate due diligence per the EUDR requirements.
- Unilever sourced 92.4% of soy from areas with low risk or covered by independent verification. Therefore, around 7.6% or 121,500 tons of SBE required for Unilever's direct soy sourcing, or around 35,000 ha based on an average productivity of 3.5 tons per ha,[113] may still have been linked to higher deforestation risk. However, it must be noted that other market actors used the larger volume of soybean meal resulting from the crushed SBE volume. Unilever's analysis of digital tools, third-party services and public data revealed a known or estimated deforestation footprint linked to soy of 180 ha between 2016-2022.[114]
- Unilever reported 62% segregated sourcing of cocoa but no own verification for 2022 was mentioned yet. When considering the remaining 38% of cocoa and applying an average productivity factor of 0.53 tons per ha,[115] this suggests an estimated 47,500 ha of sourcing area with inadequate due diligence for deforestation risk.

[p] GAP are associated with higher use of fertilizer and inputs, more shade trees in the first years, and higher yields. However, most shade trees are removed after the first years, leading to less carbon accumulation in biomass. Moreover, replanting starts earlier than in traditional plantations.

5

Climate plan vs deforestation and human right violations on the ground

This section focuses on how Unilever's climate plan and associated climate damage relate to the company's deforestation and human rights ambitions and practices. Departing from an analysis of Unilever's policies, this chapter delves into documented environmental and human rights violations of four companies in Indonesia, Liberia, Nigeria and Brazil that supplied palm oil and soy to Unilever in 2022.

5.1 Unilever's policies

5.1.1 2022 Responsible Partner Policy

The 2022 Responsible Partner Policy (RPP) represents Unilever's latest framework for fostering responsible collaboration with its business partners. Unilever's praises itself for its unwavering commitment to responsible, transparent, and sustainable business practices, claiming that its RPP aligns closely with the Unilever Compass sustainable business strategy. According to the company, a key feature of the RPP is its departure from a mere compliance-focused approach to one centred on continuous improvement, acknowledging the evolving nature of third-party relationships and value chains. Unilever's stated overarching goal with the RPP is to cultivate resilient businesses while simultaneously driving positive social and environmental impacts. [116] The RPP applies to suppliers, creative and media agencies, distributors, and customers. In it, Unilever underscores a shared commitment to the Fundamental Principles articulated within the policy framework, which are embedded in its Business Integrity & Ethics, Human Rights, and Environmental Sustainability.[117] Within the RPP, thematic areas are delineated into three main sections: Mandatory Requirements, Mandatory Management Systems, and Future Mandatory Requirements. Moreover, the policy document elucidates leading practices, offering exemplars for companies to aspire to as they pursue ongoing enhancement and refinement in their business practices.[118]

5.1.2 Unilever's no-deforestation and no-conversion claims against the actual on-the-ground effects

Unilever is an important global consumer of a number of commodities which pose high risks of deforestation and ecosystem conversion, including palm oil, soy (both direct and imbedded consumption through milk and eggs), cocoa, and timber-derived products (paper, cardboard, etc.). Understanding and aiming to mitigate these risks, Unilever has set several targets:

- Deforestation-free supply chain in palm oil, paper and board, tea, soy, and cocoa by 2023
- Help protect and regenerate 1.5 million hectares of land, forests, and oceans by 2030
- 100% sustainable sourcing of our key agricultural crops
- Empower farmers and smallholders to protect and regenerate farm environments.[119]

That is, by the end of 2023, Unilever was supposed to ensure that its sourcing of palm oil, paper and board, soy, and cocoa were not contributing to deforestation by requiring that its suppliers undergo an independent verification of their deforestation and conversion free claims. In 2023, the company reported (accounting for its 2022 results) that 92.4% of the consumed soy oil, 74% of

palm oil, 62% of cocoa, and 95.6% of timber-based products were verified as deforestation- and/or conversion-free[120]. The sections below aim to critically review Unilever's targets and reporting is not effective for deforestation free supply chains and Unilever continues to drive agriculture and timber-driven deforestation in the tropics. Also, the sheer volume of Unilever's consumption of forest risk commodities is a structural market issue that directly and indirectly drives exploitation and deforestation. Multinationals continue to source cheap resources from sectors with large environmental and societal costs, that are not included in the price. The continuous expansion of industrial logging and monoculture plantations is directly linked to increasing market demand, packaging and overconsumption.

Moreover, despite Unilever's commitments to no-deforestation, there is a considerable body of evidence that certification schemes and similar voluntary initiatives have not prevented deforestation at all – an assertion that has also been made in April 2020 by Uniliever's chief supply chain officer, Marc Engel.[121] Moreover, relying on certification is often used by global traders and downstream buyers to outsource their due diligence responsibilities. Moreover, according to Rainforest Action Network, these approaches have the risk of delaying real progress and amount to massive corporate greenwash in lieu of the effective fulfilment of time-bound targets to truly end deforestation and degradation of forests and natural ecosystems in their supply chains.[122] The following sections show how, despite its commitments (as stated in its policies) and its reliance on sustainability schemes, Unilever is still linked to several human rights and environmental breaches, including deforestation.

5.2 Agro Astra Lestari - Indonesia

PT Astra Agro Lestari (AAL) is the second largest palm oil-producing company in Indonesia, controlling around 287 thousand hectares (ha) of plantations across 41 palm oil subsidiaries.[123] PT AAL has been supplying palm oil to consumer brands like Unilever and Procter & Gamble, with the most recent public record of such supply chain links dated 2022.[124] Civil society organisations (CSOs), including Wahana Lingkungan Hidup Indonesia (Friends of the Earth Indonesia, WALHI), have raised concerns about human rights violations perpetrated by the subsidiaries of AAL. Through their work supporting local communities, they have documented grave violations, including land grabbing, intimidation, criminal persecution of human rights defenders, and breach of Indonesian labour laws.[125] Despite the fact that these violations contravene Unilever's social and environmental responsibility policies, Unilever has announced it will not stop sourcing from AAL, citing a pending investigation and its ongoing engagement with the company with the objective to support an independent mediation process that finds solutions to all parties involved.[126]

5.2.1 Operational breaches

Oil palm plantations in Indonesia require several permits intended to ensure that forests are not illegally cleared and that the rights of local communities are not violated. The following are the six main permits which must be issued sequentially:[127]

- Location Permit (*Izin Lokasi*);
- Environmental Permit (*Izin Lingkungan*);
- Plantation Business Permit (Izin Usaha Perkebunan, IUP);
- State Forest Release Letter (SK Pelepasan Kawasan Hutan);
- Right to Cultivate Land (Hak Guna Usaha, HGU); and
- Timber Utilisation Permit (Izin Pemanfaatan Kayu, IPK).

A location permit, provided by the district administration, defines an area in which the company can negotiate with existing landowners and conduct an environmental impact assessment. The findings of the impact assessment, including dialogues with relevant stakeholders and rightsholders, need to be approved by a panel of academics, NGOs, and community representatives. When the environmental permit is approved, the company applies for an IUP. In some cases, district administrations expedite the permit process and cut corners with the environmental impact assessment.[128]

A report by Friends of the Earth (FoE) US and WALHI found that three of the PT AAL subsidiaries, PT Agro Nusa Abadi (ANA), PT Mamuang, and PT Lestari Tani Teladan (LTT), lack the permits necessary to operate. Table 27 provides a summary of the licensing violations by PT AAL. The subsidiaries have also not obtained Free, Prior, and Informed Consent (FPIC) from Indigenous peoples and local communities.[129] CSOs and rightsholders hold district and regional governments responsible for the many human rights violations due to their poor enforcement of regulations.[130] This could also potentially explain the lack of compliance with FPIC.

PT AAL's dereliction to obtain FPIC is in contradiction of Unilever's policy on land rights, which includes a mandatory requirement for business partners to seek and document the effective implementation of FPIC actively. It additionally expects individuals involved in the land acquisition process to receive periodic training on FPIC so that they may identify and assess the impact of the acquisition or land-use change.[131]

Table 27 Permit violations by PT Astra Agro Lestari subsidiaries

Name of Permit	PT Mamuang	PT Lestari Tani Teladan	PT Agro Nusa Abadi
Location Permit (*Izin Lokasi*)	Unknown	Unknown	Yes
Environmental Permit (*Izin Lingkungan*)	Unknown	Unknown	Yes
Plantation Business Permit (Izin Usaha Perkebunan, IUP)	Yes	Yes	Yes
State Forest Release Letter (SK Pelepasan Kawasan Hutan)	Yes	Yes	Not needed
Right to Cultivate Land (Hak Guna Usaha, HGU)	Yes	Yes	Never
Timber Utilization Permit (Izin Pemanfaatan Kayu, IPK)	Unknown	Unknown	Yes

Source: *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 4.

Likewise, PT ANA stands accused of operating without the necessary land use permits (HGU) which allows them to cultivate the land. PT ANA is working in violation of regional laws that cause losses to the state exchequer as the companies are not paying the appropriate taxes.[132] As per the Provincial Government of Central Sulawesi, among the 61 palm oil companies operating in the region, 43 of them do not have the necessary cultivation rights (HGU permits), and these companies control around 411,000 ha of land. State losses due to the absence of HGUs, which allow companies to not adhere to their financial obligations towards the state, are estimated to be around IDR 400 billion (US$ 25.7 million) per year.133 The database of Central Sulawesi government shows that an additional three PT AAL subsidiaries lack HGU, namely PT Rimbunan Alam Sentosa, PT Cipta Agro Nusantara, and PT Sawit Jaya Abadi.

An analysis of the requisite permits obtained by PT ANA raises multiple concerns. For instance, the company received its Plantation Business Permit (IUP) a full year before receiving the Environmental Permit. Not only is this in contravention of Indonesian laws but may have also contributed to the ongoing land conflict. The environmental permit process requires an environmental impact assessment which includes consultations with local communities and other potentially affected parties. By obtaining the IUP before the environmental permit, the concerns of the local inhabitants, including their land claims, were not addressed.[134]

Furthermore, the area for which PT ANA has obtained a Location Permit and an IUP has reduced by a third from 19,675 ha (2006) to 7,244 ha (2014), raising concerns about the legality of the operations. The Ombudsman of the Republic of Indonesia has characterised this irregularity as a form of maladministration carried out by the district officials.[135]

Unilever's Responsible Partner Policy dictates that suppliers must operate with current and valid permit(s). By sourcing from PT ANA, a mill with a track record of multiple operational breaches, and the other plantation areas that lack the necessary permits, Unilever is disregarding its own policy and due diligence obligations.[136]

5.2.2 Land grabbing allegations

PT AAL has historically been engaged in gross violations of human rights, including recurring instances of land-grabbing, perpetrated through different subsidiaries. In 2000, after protesting and subsequent mediation with PT LTT, community members from Rio Mukti village got back their land and began cultivation; however, PT Mamuang soon claimed the land without consultation or compensation to the villagers and destroyed their crops.[137] It is unclear whether these subsidiaries were suppliers to Unilever, as it only started publicly disclosing its palm oil supplier lists in 2018.[138] Nonetheless, the role of PT AAL as a parent company involved in multiple human rights violations through various subsidiaries cannot be ignored. These actions clearly violate the zero-tolerance approach that Unilever requires for its suppliers towards any form of land-grabbing.[139]

PT LTT is accused of illegitimately claiming 1,505 ha of community land in its land use permits (HGU) from 1994 to 2006.[140] The company is also operating on 321 ha outside its HGU-permitted concession area and is suspected of taking over transmigration land. Landowners in the community state that they have not been compensated for many of the plots taken over by the company. In 2004, the subsidiary forcefully seized land using violence, intimidation, indiscriminate shooting, and kidnapping. These activities were assisted by a paramilitary unit of the Indonesian National Police.[141]

In the North Morowali Regency of Central Sulawesi, PT ANA, a supplier of Unilever, forcibly seized land from local farmers since 2006. Despite documentation to prove community ownership, the company has allegedly taken over land covering between 5,000 and 7,000 ha in the East Petasia subdistrict. In 2019, the Ombudsman of the Republic of Indonesia recommended a review of PT ANA's concession allotment due to overlap with a transmigration site and private lands.[142] PT Pasankayu is another PT AAL subsidiary with 20 ha of their concession in a protected forest area.[143]

Affected Indigenous peoples from the Pasangkayu Regency (the administrative area where PT Pasangkayu is located) also highlighted the human rights violations carried out by another subsidiary of PT AAL, PT Mamuang. The allegations against the group include land-grabbing, deforestation, and the desecration of ancestral graves.[144] As of 2022, the company is involved in the illegal occupation of 255 ha of protected forest zone. There is also no evidence that the subsidiary ever obtained the necessary location or environmental permits for its operations.[145]

AAL has responded to the allegations above by commissioning an eight-month investigation to PT Eco Nusantara Lestari in 2023 (an allegedly independent consultancy firm). The investigation focused on proving that communities lacked legal permits over the lands, and the ensuing report concluded that AAL had not breached community land rights.[146] FoE groups have denounced the illegitimacy of the report, as investigators had not considered inputs from civil society, thus rendering the report one-sided. Moreover, by demanding that communities show documentation for their land claims, while not requiring the same level of proof from AAL, the investigation ignored power asymmetries between AAL and local communities.[147]

5.2.3 Environmental pollution

PT ANA is responsible for environmental degradation along the Mintai River. Embankments along the river increase water levels in community plantations and consequently prevent farmers from harvesting their crops. The wastewater pipes in the PT ANA are dumping poorly processed oil mill waste into the river and contaminating the water. There are also reports of agrochemical contamination from fertilizer use and causing seaweed crop failure.[148]

PT LTT operations have caused environmental pollution in Towiora, Central Sulewasi. Laboratory tests conducted in November 2020 indicate the presence of dangerous substances such as nitrate, total coliform, and faecal coliform. The levels of the contaminants exceed the standard quality threshold set by the regulatory authority.[149] A field visit conducted during September-October 2023 found no improvements in the water quality. The promises made by the company to build wells have not materialised, forcing the community to rely on polluted river water.[150]

The actions of these suppliers are not aligned with Unilever's policy on the protection and regeneration of nature. The policy dictates that suppliers must implement an environmental management system to address water management and wastewater discharge issues. The policy also requires the implementation of environmental management policies.[151]

5.2.4 Deforestation

An analysis by Genesis Bengkulu found that 15 subsidiaries of PT AAL have carried out land clearance of 12,970 ha in state forest areas from 2015 to 2023. The subsidiaries include known Unilever suppliers such as PT Pasangkayu (1,402 ha), PT Letawa (219 ha) and PT Agro Nusa Abadi (46 ha).[152] Furthermore the mapping research shows PT AAL subsidiaries planted 1100 hectares of oil palm illegally in their concessions overlapping with forest estate off-limits for conversion. The suppliers have continued to convert these forests after the Unilever cut-off date of 31st December 2015. This implies that the materials purchased from these suppliers may not be deforestation and conversion-free, which is a mandatory requirement as per Unilever's policies.[153]

5.2.5 Criminalisation and intimidation

In May 2021, two villagers from the North Morowali regency of Central Sulawesi, were accused by PT ANA of stealing palm fruit from the company. The land from which the alleged theft took place is a contested area that has been controlled, managed, and owned by the family of the two villagers. In June 2022, the two villagers were found guilty and sentenced to 2.6 years in prison.[154] Likewise, in March 2022, five indigenous farmers of the Kailo Tado people were arrested in Pasangkayu, West Sulawesi after being accused by PT Mamuang for holding a protest in the offices denouncing land grabbing and damages to the local environment.[155]

Most victims of such criminalisation tactics do not report to the authorities. Their experiences indicate that companies are more likely to receive positive outcomes in the Indonesian legal system.[156] Unilever's policy clearly indicates a mandatory grievance mechanism in line with the UN Guiding Principles on Business and Human Rights (UNGPs), that is open to workers. The policy also states that the mechanisms must be widely communicated and accessible to local communities. However, this is framed as a "leading practice" or good practice that suppliers should work towards for continuous improvement. This raises concerns about whether these mechanisms are feasible channels for affected individuals to report suppliers.[157]

In December 2023, PT AAL staff and security agents visited two women in Rio Mukti village in Central Sulawesi, insisting they sign a letter stating that there was no land conflict between the community and one of the company's subsidiaries, PT LTT. Two days prior to this visit, the two women had spoken about the adverse impacts of PT AAL's operations on their communities and called for a return of these communities' lands.[158] By continuing to source from AAL, Unilever is contravening its own Responsible Partner Policy, which dictates that business partners must recognise and respect women's right to land ownership.[159] By the same token, by turning a blind eye on the intimidation of environmental and human rights defenders inflicted by one of its suppliers, Unilever is disregarding its own principles in Support of Human Rights Defenders and its zero-tolerance policy on intimidation and threats against human rights defenders.[160]

In November 2022, the local community from North Morowali sent an open letter to Unilever informing them of the illegal operations of PT ANA and how the land-grabbing had affected their only source of livelihood. They demanded the immediate closure of activities in the Petasia Timur region of the regency and also demanded that the parent company, PT AAL, take responsibility for

the losses endured. Further, the letter also requests Unilever to terminate the supplier relationship with PT AAL.[161]

Apart from holding companies responsible for environmental and human rights breaches, rightsholders and local civil society organisations also attribute accountability to district and regional governments for the inadequate enforcement of existing laws. There are also accusations that the violent land-grabbing is abetted by Indonesian security forces. In 2004, the Mobile Brigade Corps (BRIMOB), a paramilitary unit of the Indonesian National Police, helped the PT ANA subsidiary, PT LTT, to seize land by force. The altercation also led to three residents being sent to prison for four months.[162] Reports indicate that it is more common for officials to take a softer approach towards companies rather than using their jurisdictional powers to enforce regulation. This softer approach usually involves mediation and encouraging companies to comply with their legal obligations. There seems to be a general consensus that revoking permits is a harsh measure.[163]

5.3 Golden Veroleum Liberia

Golden Veroleum Liberia (GVL) is owned by the Verdant Fund based in the Cayman Islands, with Golden Agri-Resources (GAR) as its primary investor. GAR, a Singaporean agribusiness firm, holds a substantial interest in GVL through various holding companies. This set-up establishes a legal barrier between GVL and GAR, even though they share a strong financial and operational connection.[164]

GVL started discussions with the Liberian government about opening concessions in 2009. They effectively started their operations in Liberia's South-Eastern counties in 2010 after agreeing with the government and allegedly consulting the local communities in Sinoe, Grand Kru and Maryland counties. The concession agreement was signed for 65 years, encompassing 220,000 ha of land for the Concession Area and an additional 40,000 ha of land for the Outgrowers' Program, which deals with community resources and cooperative development. In the concession agreement, the Liberian government included obligations towards employees regarding protection, occupational safety and health, medical care, education, employment and training, as well as environmental measures, enforcing GVL to comply with the environmental standards set by Environmental Protection Agency (EPA) and the Roundtable on Sustainable Palm Oil (RSPO).[165] Presently GVL has planted around 18,000 ha of oil palm both in Sinoe and Grand Kru Counties, and says it is employing approximately 3,300 Liberians.[166] However, GVL might be underreporting the number of staff. Given the level of expansion, the number of workers in each community, and the fact that the palm oil industry worldwide relies on large numbers of seasonal workers (many of which are migrant) and casual workers,[167] a strategy that is used to keep salaries low and deters workers from unionising.[168]

As a significant player in the palm oil industry, GVL has come under intense scrutiny for its operations in Sinoe County, Liberia. GVL's presence in the region has raised concerns regarding environmental sustainability, community well-being, and adherence to human and labour rights standards. GVL is cited as one of Unilever's suppliers in 2022.[169] This case study seeks to unravel the multifaceted impact of GVL's activities, offering a detailed exploration of the complex interplay between the company, the environment, and local communities.

5.3.1 Failure to engage in Free, Prior and Informed Consent with local communities

Since its establishment in 2010, GVL has faced persistent allegations of human rights violations, environmental degradation, and a perceived disregard for the rights of the communities in which it operates. The company's journey has been marked by documented complaints filed with the RSPO, indicating the contentious nature of its practices.[170]

For example, in July 2022, tensions erupted in Bellehful, a community adjacent to GVL concession area in Sinoe County, Liberia, when GVL accused residents of palm theft. Subsequently, GVL personnel, accompanied by local authorities, conducted forceful actions within Bellehful, including looting, property destruction, gunfire, and arbitrary arrests. The heavy-handed approach instilled a

pervasive atmosphere of fear and intimidation among Bellehful's residents, leading to a reluctance to resume local palm oil production and development activities. This incident in Bellehful underscores the power imbalances inherent in the palm oil industry, where communities like Bellehful often find themselves at odds with corporate interests. The disproportionate response by GVL not only violated the rights of Bellehful's residents but also highlighted the broader challenges faced by communities in asserting their autonomy and protecting their livelihoods amidst industrial expansion.[171]

Recent evidence reveals a troubling pattern of non-compliance by GVL with the commitments outlined in the MoUs signed with involved communities back in 2014. Based on these MoUs, various communities in Sinoe County, such as the Numopoh[172], Nitrian[173], and Tartweh-Drapoh,[174] granted GVL permission to utilise their traditional lands for oil palm plantation development. In exchange, the agreements outlined that the communities would access employment opportunities, training, education, healthcare, environmental sustainability, and support for the development of their own agricultural endeavours.[175] However, ten years on, GVL has failed to deliver on its promises.[176] Instead, GVL has acquired land at minimum cost, exploited both workers and communities, and continued deforestation activities unabated. Compounding this issue is the absence of governmental intervention, which has left affected communities feeling abandoned and without recourse for seeking justice or redress for their grievances.[177] Unilever's policy emphasises the necessity of accessing grievance mechanisms and remedies. As a supplier of palm oil to Unilever, GVL's practices contradict Unilever Code of Conduct, underscoring the importance of ensuring that all workers have access to transparent, fair, and confidential procedures for swift resolution of labour disputes.[178]

By continuing to source from a company engaged in practices that contradict Unilever's own policies, such as disregarding FPIC processes, Unilever is neglecting its own corporate responsibilities and due diligence obligations, as stated in its Land Rights Policy in its Code of Conduct. This undermines the integrity of Unilever's commitments regarding land acquisition, land-use planning, change, or development that may affect the legitimate land tenure rights of local communities or collective land tenure areas.[179]

5.3.2 Labour rights

GVL has been consistently breaching labour rights since at least the past decade. In February 2024, despite efforts led by the Grand Kru County Legislative Caucus, GVL employees in that same County refused to sign a resolution to end a protest they had been holding to demand immediate action from GVL's management, particularly regarding insurance policies and healthcare facility improvements. The dialogue aimed to address grievances, including dissatisfaction with insurance policies, healthcare services, and housing allowances. GVL committed to addressing urgent concerns, but workers declined to sign until they saw tangible responses from management, signalling ongoing tensions between the company and its workforce.[180]

Notwithstanding, that is not an isolated case, but the most recent of a series of events that show a pattern of repeated labour rights abuses. Concerning its employment practices, more specifically, GVL fired 444 workers in Butaw, Sinoe County, in May 2021, three years after being employed by the company. GVL attributed the layoffs to the impacts of the coronavirus pandemic and a decline in palm oil prices globally. The layoffs affected several communities in Sinoe and Grand Kru counties, breaching the terms outlined in the MoUs signed between GVL and the communities, in which GVL committed to employing one person per six hectares of land. This and other breaches of labour rights were highlighted in a 2017 report by the RSPO, leading to reprimands and orders of negotiation with affected communities. The failure to address these issues has sparked outrage and raised concerns about potential conflicts. Past clashes between GVL and communities have resulted in violence, underscoring the gravity of the situation.[181]

In a similar case, sixteen GVL workers were terminated without compensation following their alleged involvement in a riot in Butaw in 2015. These workers received their severance benefits after nearly two years of legal battles in 2021. The payment ceremony, overseen by legal

representatives and supported by the Sustainable Development , was celebrated as a victory for justice. Despite GVL's initial rejection of the ruling, labour authorities intervened, finding the company guilty of unfair labour practices. However, concerns persist over GVL's operations, including allegations of land grabs and deforestation, prompting continued scrutiny from communities affected by the company's activities.[182]

GVL has also been breaching labour and public safety standards. In June 2022, an oil palm fruit transport truck belonging to GVL was driving at high speed in Wedabo Geneden, in Grand Kru County, when it hit and killed Alexander Fertieh and Jacqueline Sarplah. The truck driver fled the scene, fearing retaliation.[183] Unfortunately, this was not the first evidence of GVL truck operators' reckless driving and transportation issues, with workers often transported in overcrowded trucks or tractors.[184] By the same token, workers in the Numopoh area in Sinoe County cited inadequate on-site job training, lack of proper safety gear replacement, and concerns over occupational safety and health protocols, including reports of workers being deemed "fit to work" despite being ill or seeking medical attention.[185]

With regards to living wages, discrepancies have been reported between GVL's wage policy and structure and the actual wages workers paid to workers, which, according to workers, ranged between US$ 100–130 after deductions and penalties for failing to meet daily production quotas. These wages appear to be below the national minimum wage and the World Bank's poverty line benchmark, which is at US$ 3.65 a day (or US$ 108.60 a month).[186] Ambassador Rufus Neufville, Executive Director of the People Action Network in Liberia, has been advocating for a national minimum wage of US$ 150 for private sector workers. Neufville argues that many private sector workers currently earn less than this minimum wage, which he deems unacceptable, this being the case for GVL's workers.[187] While GVL disputes these findings, emphasising its commitment to fair labour practices, the stark contrast between GVL's claims and workers' testimonies underscores the necessity for a comprehensive, independent labour audit. Such an audit would not only assess working conditions but also address material, reputational, and compliance risks for GVL and GAR's stakeholders, including customers, creditors, and investors.[188] Unilever also has a policy on Fair Wages. Its mandatory requirements state that wages should meet or exceed the legal minimum standards, as well as be paid on time, regularly, and in full. It also requires that insurance has to be provided to cover workers for work-related injuries, accidents, illness, invalidity, and death, meeting local worker compensation laws at a minimum.[189]

Further, despite GVL's membership in the RSPO, allegations of environmental degradation and human rights abuses persist. In 2021, SDI and Milieudefensie conducted an analysis revealing that GVL had not fully met its obligations, with only half of the commitments being fulfilled and another 20% only partially fulfilled. These organisations emphasised the need for the Liberian government to enforce regulations to halt deforestation and rights violations by agribusinesses. SDI and Milieudefensie urged the Liberian government to ensure royalties are paid to affected communities and to promote agriculture development that respects rights and improves livelihoods. They emphasised the importance of promoting community-centred agriculture and forest management for food sovereignty and environmental sustainability.[190]

5.3.3 Environmental impacts

Liberia hosts significant biodiversity, including the largest section of the remaining Upper Guinean Forest, making it a conservation priority globally. However, the expansion of palm oil plantations poses a direct threat to forests and wildlife in Liberia. To address this, companies like GVL and GAR, have adopted environmental sustainability policies, including commitments to conserve High Carbon Stock (HCS) forests (i.e., forests with high concentrations of carbon contained in the vegetation and soils and whose protection is prioritised) and High Conservation Values (HCV) areas (i.e., areas of biological, ecological, social or cultural values of outstanding significance). Compliance with forest conservation standards is not only a Liberian legal requirement but also crucial for mitigating CO2 emissions from deforestation and minimising biodiversity loss and water source degradation. These sustainability policies not only guide the companies' operations

but also serve to mitigate risks for their customers and financial backers, ensuring that activities do not expose them to deforestation-related risks or social conflicts. However, the implementation of these policies at scale is essential to realise their full potential in protecting Liberia's forests and biodiversity while promoting sustainable palm oil production.[191]

Despite its obligations, GVL has not complied with these standards and policies. An RSPO Verification Mission in April 2017 found that GVL had cleared 29,072 ha of land in Sinoe County, a figure disputed by GVL. GVL had reported 15,005 ha of planting and construction and 14,067 ha of future planting by 2016. A subsequent analysis conducted between September 2017 to April 2018 in Tartweh-Kabada-Nitrian area of interest, Kpanyan district, Sinoe County, revealed that within a 1,180-ha sample area, 380 ha of HCS forest patches had been cleared by GVL, with additional clearing ongoing. The analysis also identified 320 ha of HCV areas cleared by GVL in the same sample area. Of the 380 ha cleared by GVL, 268 ha were in high-priority protection patches, 66 ha were in connected patches crucial for landscape-scale connectivity, and 46 ha may have been cleared in exchange for restoration elsewhere, although assessments for such exchanges were not publicly available for review.[192] The High Carbon Stock Approach (a provider of tools for commercial plantations, farmers, and their downstream buyers to eliminate deforestation from their supply chains, HCSA) investigated this case and released a grievance report in February 2021, where they found around 1,000 ha's of deforestation.[193]

Analysis of deforestation maps from the Global Forest Watch reveals alarming rates of deforestation surrounding the GVL Tarjuowon Mill in Sinoe County. This region plays a pivotal role as a supplier to Unilever. By cross-referencing the coordinates provided for GVL on Unilever's supplier list with the Global Forest Watch map, it becomes evident that continuous deforestation and forest depletion are widespread within and adjacent to GVL's plantations.[194] Additionally, the interactive charts from Global Forest Watch depicting Butaw District, Sinoe County, illustrate a loss of 7,440 ha of humid primary forest from 2010 to 2022. Concurrently, Butaw District experienced a loss of 1,370 ha of tree cover, resulting in approximately 7.11 million tons of CO_2 emissions. It is important to note that this deforestation data timeline coincides with the opening of GVL's concession in the region in 2010.[195]

The findings above align with the findings of an independent investigation by the HCSA, which revealed that the GVL had cleared over 1,000 ha of HCS forest, likely leading to the destruction of additional HCV forests. The issues of deforestation and forest degradation may not be given significant priority within the environmental policies and commitments of GVL and GAR. Notably, in February 2023, GAR (and therefore GVL) withdrew from the HCSA. This decision came after the findings that GVL had cleared forests with high carbon stock, adversely affecting local communities and their habitats. GAR justified its withdrawal with its preoccupation that HCSA's focus had shifted and was overlapping with RSPO.[196] GAR's withdrawal from the HCSA has drawn criticism from environmental justice organisations, who view it as an attempt to avoid sustainability commitments. SDI Liberia has condemned GAR's action, emphasising its detrimental impact on affected communities and the environment.[197] Since leaving HCSA, GVL has delayed the implementation of the HCSA decision to restore the HCS forest and comply with social obligations. It has not followed multiple elements from the decision, for example to have community consultations and an oversight committee for the forest restoration. More than five years after filing the complaint, not a single hectare has been restored, and other than providing HSCA information for its decision,[198] RSPO has not taken any action towards their member either.[199] Finally, this goes against Unilever's People & Nature Policy Guidelines that commit to no deforestation and conversion of natural ecosystems in its own supply chain.[200]

These findings add to a series of negative environmental impacts by GVL. In 2017, significant instances of riparian buffer zone degradation were uncovered, revealing grave environmental threats, such as erosion-induced contamination of drinking water and chemical run-off from plantations.[201] Moreover, this degradation contributes to the drying up of streams and the loss of aquatic biodiversity, actions that run counter to the principles and criteria established by RSPO and contradict the policies outlined by both GVL and GAR.[202]

5.4 Wilmar Calaro (PZ Wilmar) - Nigeria

PZ Wilmar is a Joint Venture formed in 2010 between Wilmar International Limited (Wilmar) and PZ Cussons. The company operates approximately 26,500 ha of palm oil plantations in Cross River State, which is located in the south-eastern part of Nigeria and hosts one of the country's last remaining forests in Cross River National Park. These plantations are distributed in various areas, including Calaro Estate, Calaro Extension, Ibiae, Ibad, Kwa Falls, and Oban, with sizes ranging from 2,014 to 7,805 ha. Additionally, PZ Cussons has established two palm oil processing plants within the Calaro Estate.[203] The company began an outgrowers scheme in 2017, where participants are required to sell their produce at prices set by the company through contractors.[204] Wilmar Calaro is also cited as one of Unilever's palm oil suppliers in 2022,[205] but it is not an RSPO member.

Calaro and Biase plantations are located in the territories of the Mbarakom and Ibogo peoples (with Calaro extending to the Akamkpa local government area, one of the 18 administrative units of Cross River State).[206] Initially leased by the government from several local communities in 1962, the land was abandoned by the 1970s. In 2012, amidst Nigeria's drive to expand palm oil production, the land was transferred to Wilmar, a move vehemently opposed by locals. Ten years on, local communities argue that the expansion of oil palm plantations is hastening deforestation, while residents allege encroachment on their farms and contamination of watercourses by wastewater from the plantation.[207] These adverse impacts contravene several of Unilever's policies and are explored in the following sections.

5.4.1 Environmental impacts

The Calaro plantation, along with the Biase and Ibiae plantations, contains extensive areas of natural, primary, and secondary forest, as well as land used for subsistence cultivation. In December 2013, Wilmar communicated to the RSPO that several hundred hectares of land within the Ibiae and Biase concessions were identified as having HCV, with additional areas potentially considered HCS Forests (for an explanation of HCV and HCS, please refer to section 5.3.3). Notably, HCVs encompass not only natural forests but also land claimed by communities for livelihood and cultural purposes. Community farmland falls under HCV 5, crucial for satisfying the basic needs of local communities or indigenous peoples. According to this assessment, developing oil palm plantations in these areas would result in significant forest destruction and jeopardise vital resources essential for community livelihoods.[208] According to satellite data, in 2010, Akamkpa had 481,000 ha of tree cover, extending over 89% of its land area. By 2022, it had lost 6,000 ha of tree cover, equivalent to 3.46 Mt of CO_2 emissions.[209] This assertion is further corroborated by Palmoil.io, which exposed a noticeable rise in annual tree cover loss rates within the operational areas of PZ Wilmar, an increase that can be attributed to the clearance of former plantations but also to the surrounding forests that have experienced significant deforestation and degradation during this period.[210] This contravenes Unilever's People & Nature Policy Guidelines that commit to no deforestation and conversion of natural ecosystems in its supply chains.[211]

Against this background, Mbarakom communities have denounced the conversion of forests into plantations, which has resulted in the loss of primary forests, leaving behind only secondary forests. This deforestation contributes to habitat loss, biodiversity decline, and ecological imbalance, further exacerbating environmental degradation.[212] Moreover, deforestation especially affects local women, whose livelihoods are considerably dependent on the forest. For example, women rely on medicinal plants to complement biomedical treatments of their family members under their care. Likewise, women harvest forest fruits and other edible plants to complement their diets or their income (sometimes, they sell their harvest of wild plants in local markets). However, deforestation is making some plants more difficult to be found, thus adding to the load of women's unpaid productive and reproductive work.[213]

Moreover, testimonies from impacted Mbarakom communities suggest that the use of agrochemicals by Wilmar's oil palm plantation company has adverse impacts on water bodies and forests. This poses risks to the environment and the health of local communities.[214] Likewise, Ibogo community members report that streams flowing through and around the oil palm

plantations are polluted. Both community members with farms near the plantations and workers employed by Wilmar PZ are said to drink water from these streams, risking exposure to contaminants from agricultural run-off.[215] The actions are in violation of Unilever's policy on the protection and regeneration of nature, which requires that suppliers implement an environmental management system to address water management and wastewater discharge issues. This policy also requires the implementation of environmental management policies.[216]

5.4.2 Human rights impacts

Wilmar claims to have community development and support programmes, including a school development and scholarship program, partnerships with oil palm outgrowers and smallholders, health clinics, provision of potable water access, and sports festivals. As of May 2018, they assert to have invested over US$ 1.3 million in school projects and provided 155 scholarships for studies at Nigerian tertiary institutions. Additionally, they state that they have constructed 19 boreholes to ensure access to clean drinking water for their 20 host communities.[217] However, community leaders allege that the company has not fulfilled its commitments to the Mbarakom and Igbo communities. In this context, community members have expressed dissatisfaction with the compensation received and lamented the discontinuation of scholarships initially awarded to them. According to informants, this discontinuation has likely affected the educational opportunities and future livelihood prospects of the community's youth.[218]

In 2014, Wilmar was yet to sign a Memorandum of Understanding with any of the 20 host communities in the area, where thousands of smallholder farmers faced losing their ancestral land. Additionally, there was no Environmental Impact Assessment (EIA) on any of the concessions granted to Wilmar. Despite this, Wilmar had already deforested and bulldozed several thousand hectares of land, which contradicted the law governing Nigeria's Environmental Impact Assessment (EIA Act CAP E12).[219] By 2024, communities continue to denounce the absence of a formal MoU between the Mbarakom communities and Wilmar, which raises concerns about communication, transparency and accountability in their relationship.[220] These actions contravene Unilever's zero-tolerance approach required for its suppliers towards any form of land-grabbing.[221]

In late 2012, the Rainforest Resource & Development Centre (RRDC) filed a complaint with the Roundtable on Sustainable Palm Oil (RSPO) on behalf of affected communities, challenging Wilmar's acquisition of the land. RRDC questioned the legality of the state's rights to the land due to the government's failure to pay rent as outlined in the 1962 lease. Additionally, RRDC accused Wilmar of altering estate boundaries and encroaching on farmers' land and community forests. However, the appeal was unsuccessful, as the RSPO ruled that the plantation transfer complied with local law.[222] However, complaints continue to arise in 2024 regarding the forceful acquisition of land by the company without proper compensation or consent in the Ibogo community. Some community members have reported receiving minimal compensation for their valuable agricultural land, ranging from N 6,000 (US$ 4.25) to N 154,000 (US$ 109.15).[223]

In 2020, PZ Wilmar reportedly erected a barrier measuring approximately 15 metres deep and 12 metres wide to obstruct the community's access to the plantations. This barrier has led to water overflow during the rainy season, posing a flooding risk to the community. Additionally, it exposes people and animals to the danger of falling into the barrier.[224] Wilmar has denied these and other allegations in an open letter, arguing that those claims were unsubstantiated and stating that the company has a robust grievance mechanism in place to address any wrongdoing.[225] However, despite the multiple reports by NGOs and local media outlets, no grievances related to PZ Wilmar have been published on Wilmar's grievance tracker.[226]

Four years on, Mbarakom communities continue to denounce Wilmar's blocking of access roads to farmlands and breaking bridges, hindering local residents' ability to access their land and livelihoods. This action not only violates the rights of landowners but also disrupts local economies and livelihoods.[227] Likewise, Ibogo community members lament that access to a reserve at the end of the plantation has been denied to them. This restriction not only deprives

them of potential resources but also limits their ability to engage in traditional practices or access areas of cultural significance.[228]

5.4.3 Violations of labour rights

In 2020, employees of PZ Wilmar came forward with allegations of labour exploitation, low wages, workplace harassment, lack of contracts, and the deaths of 50 pregnant women caused by the hard workload and other workers since the company's arrival in Akamkpa in 2012. These allegations added to grievances filed by local community members in October 2019, including the lack of maternity leave, inadequate transportation of workers to and from the plantation, as well as the lack of MoUs between the plantation and communities, the destruction of farmlands, and the failure of Wilmar to supply potable water from its boreholes.[229]

With regards to the inadequate occupational safety and health measures by Wilmar Calro, Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN) documented several casualties in 2018 including Iquo Ekpe Ekpo, Mary Joseph Edet, Iquo Obi Owai, Emem Oscar, Agnes Sunday Johnson, and Emem Eshiet. These people were workers commuting to the plantation in an overloaded tractor provided by the company. In a similar incident in 2019, Ms. Ikwo Manson Okon, who was pregnant, developed complications and died a few months later, leaving two children behind. The father of the victim stated that Wilmar quickly released the sum of N 120,000 (US$ 84.98) for her burial without providing major compensation to the family to care for the deceased's children.[230]

The National Union of Agriculture and Allied Workers (NUAAW) refuted these allegations, asserting that there have been no recorded deaths of pregnant women in Wilmar's plantations. However, NUAAW's statement comes amidst a dispute regarding the absence of unions in Wilmar PZ's plantations. Workers contend that they lack representation, while NUAAW claims to be their representative.[231] In light of this dispute, it is possible that the conflict between the workers and NUAAW may indicate the presence of a yellow union.

5.5 Cargill Agrícola

Established in Brazil in 1956, Cargill Agrícola is a network of subsidiaries of Cargill,[232] an international commodity trader operating across the food, agriculture, finance, and industrial sectors and member of the RTRS.[233] Cargill Agrícola functions as an agricultural company involved in trading, purchasing, and distributing grain and other agricultural products. Additionally, the company engages in livestock raising and food ingredient production and offers financial services and risk management to clients worldwide.[234] [235] Operating in all stages of the soy supply chain except production, Cargill Agrícola provides financing and inputs such as seeds, fertilizers, and machinery to soy farmers.[236] Moreover, it offers services such as storage, loading, and transportation for its own soy and that of other traders and producers.[237] Cargill Agrícola conducts its soy operations in six of the 27 federative units of Brazil, namely the states of Mato Grosso, Mato Grosso do Sul, Goiás, Paraná, Bahía, and Minas Gerais.[238] These states host three ecosystems of global importance in terms of biodiversity and ecosystem services such as carbon sequestration: the Cerrado (the world’s largest tropical savanna), the Amazon (the world’s largest tropical rainforest), and the Atlantic forest (one of the planet’s oldest forests).[239]

Cargill Agrícola, alongside its parent company, Cargill and other major agro-industrial conglomerates like AMD, Bunge, and Dreyfus Louis (collectively known as ABCD), has played a significant role in transforming Brazil into the world’s largest soy producer and exporter. However, this expansion has also contributed to Brazil becoming the largest tropical deforestation hotspot worldwide and to perpetuating systematic human rights violations. Despite widely documented breaches to the environment and human rights within its soy supply in Brazil, Unilever has sourced Brazilian soy from Cargill Agrícola since at least 2020.[240] This section delves into the environmental and human rights violations associated with Cargill Agrícola’s soy supply chain.

5.5.1 Deforestation

Cargill Agrícola is a signatory to the Soy Moratorium, which bans purchases of soy produced in areas deforested after 2008 in the Amazon but has opposed the 2017 Cerrado Manifesto, which seeks to catalyse action to stop deforestation in the Cerrado. According to environmental activists and journalists, the reason for Cargill Agricola's opposition to the Cerrado Manifesto but not the Amazon Soy Moratorium is that under the latter, producers moved their operations out of the Amazon and into the Cerrado. Thus, the Cerrado Manifesto would prevent the further expansion of soy in the biome, thus curbing Cargill's production.[241] In a company statement of 2020, Cargill argues that deforestation in the Cerrado cannot be tackled by excluding soy farmers, but by involving them in the implementation of the Brazilian Forest Code.[242]

Following its abstention from endorsing a soy moratorium for the Cerrado, the company is now broadening its operations to exploit the Brazilian Amazon and the Cerrado further. In this context, it is estimated that 10.19% of the 12,881,489 tons of soy exported by Cargill Agrícola in 2020 originated in the Amazon biome, 47.66% from the Cerrado biome, 30.51% from the Mata Atlantica biome, and another 11.62% is of unknown origin.[243] And, while deforestation rates in the Amazon saw a decrease of 42% during the initial seven months of 2023 compared to the same period in 2022, the Cerrado experienced a notable surge,[244] predominantly driven by the expansion of land speculation and agribusiness.[245] The expansion of the soy frontier in the Cerrado driven by Cargill Agrícola and the other ABCD traders matters not least because this ecosystem is exceptionally vulnerable to disturbances and is pivotal in stabilising the climate and regulating water cycles within the region.[246]

Cargill Agrícola has praised itself for the high percentage of deforestation-free soy it purchases in Brazil (in fact, the company claimed to have sourced more than 95% of its soy from deforestation-free sources in the 2018-2019 crop year).[247] Yet, there are numerous reports of the company buying soy from farms producing in areas under embargo due to irregular fires or deforestation. In this context, Repórter Brasil and other investigative journalists have confronted Cargill Agrícola about such purchases occurring between 2018 and 2021. The company has consistently stated that those producers had not been included in any restrictive list at the time of the purchase. Repórter Brasil has demonstrated that while the company (and other soy traders in the country) adopts procedures to reduce the risk of purchasing grain that does not comply with the soy moratorium, is not properly monitoring the vast quantities of soy it trades and, therefore, its efforts remain ineffective in detecting 'grain laundering' (the practice of mixing batches of irregular and legal soy).[248] This implies that the soy Unilever buys from Cargill Agrícola may not be deforestation and conversion-free, which is in violation of Unilever's policies.[249]

But soy production not only directly drives deforestation of forests and the savanna. In fact, the production of soy indirectly drives deforestation as it expands into former cattle pastures, which in turn pushes cattle ranching further into the forests.[250] Moreover, the development of infrastructure for agribusiness also contributes to deforestation. In this context, agribusiness infrastructure in Brazil has been developing for decades, with roads, ports, and railways cutting through the Amazon and the Cerrado, causing further deforestation.[251] A notable work of soy infrastructure is the Ferrogrão railway project, which was conceived to reduce the costs of transportation of soy between the states of Pará and Mato Grosso. It is estimated that, if built, the Ferrogrão would lead to the clearance of 200,000 ha of rainforest, and the boundaries of Jamanxim National Park in Pará state are being moved to make way for the project.[252] The railway line has garnered support from Cargill Agricola, Bunge, and Louis Dreyfus even though it is expected to affect six indigenous lands, 17 conservation units and three isolated tribes.[253]

However, projects related to agricultural development and, in particular, soy production in Brazil do not only have a negative effect on the environment. The expansion of soy also comes with breaches of human rights, as demonstrated by the Ferrogrão railway project. In the following section, Cargill Agricola's human rights violations are explored.

5.5.2 Human rights impacts

In 2017, Cargill Agrícola announced plans for a river port in Abaetetuba, Pará, along the Amazon River.[254] This has sparked opposition from environmental and human rights groups due to potential harm to the river ecosystem and local fishing communities.[255] In 2023, the company also came under investigation for irregularities in acquiring the land for the port,[256] which had been allocated for an agrarian reform settlement in 2005.[257] The port, if built, is projected to handle 9 million tonnes of soy and grains annually from several states, potentially encouraging further soy expansion, as indicated by the 2018 Environmental Impact Assessment.[258]

Cargill operates two ports in the Amazon region, located in Santarém and Itaituba within the state of Pará. Both ports have had significant impacts on people and the environment. Brazilian human rights organisation Terra de Direitos has found that Cargill has not complied with socio-environmental regulations for these ports. Among other issues, Cargill failed to consult Indigenous Peoples and local communities during the development of these ports, violating their right to provide or withhold Free, Prior, and Informed Consent (FPIC) on matters affecting their lives and territories.[259] This violates Unilever's zero-tolerance policy towards land-grabbing.[260]

These are just two of countless examples of Cargill Agrícola's breaches of human rights, with reports dating back as early as 1999.[261] In fact, Cargill's soy supply chains and operations in Brazil have been implicated in violating the rights of Afro-Brazilians, indigenous peoples, and other local communities. These violations encompass forced displacement, violence against land defenders, environmental destruction leading to the loss of traditional lifestyles and land interaction, as well as health issues stemming from pesticide contamination.[262]

An investigation conducted by Repórter Brasil and O Joio e o Trigo in May 2023 revealed that Cargill, along with other industry traders, bought soy from farmers fined for planting on embargoed indigenous land in Mato Grosso. These farmers were fined by the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) for planting in the Pareci, Utiariti, and Rio Formoso Indigenous Lands, all owned by the Paresí people. The soy was traded in 2018 and 2019, during which time the areas were under embargo. Invoices accessed by Repórter Brasil did not specify the farms within the indigenous lands as places of production, which would be illegal as purchasing from embargoed areas is against the corporate policies of major traders in the industry. Instead, the documents indicated other agricultural properties, often adjacent to indigenous lands, were owned by the same fined producers.[263]

5.5.3 Gendered impacts

According to a study published by Earthsight and De Olho nos Ruralistas in 2022, Cargill is obtaining soy from Brasilia Do Sul, a 9,300-ha farm in Takuara, Mato Grosso do Sul, which operates on the traditional territory of the Guarani Kaiowá Indigenous group. [264] According to Earthsight, Takuara qualifies as traditionally occupied indigenous land, as defined in Article 231, Paragraph 1 of the Federal Constitution, which states that such lands are those permanently inhabited by indigenous peoples and used for their productive activities, necessary for their well-being and cultural preservation, according to their customs and traditions.[265] Despite their legitimate ownership of the land, the Kaiowá of Takuara have been engaged in a prolonged struggle against violence and coerced displacement over the past few decades.[266]

According to De Olho nos Ruralistas, the community's resistance is conformed by women mostly. This is because many men migrate to Santa Catalina and other neighbouring states as seasonal farm workers, leaving women, children, and the elderly behind. The Kaiowá women of Takuara are routinely submitted to gender-based violence, including sexual assault and rape, perpetrated by the gunmen who are hired by the Brasilia Do Sul.[267] The militias employed by the farms, with the intent of instilling fear, intimidate the Kaiowá people by firing shots into the air and actively chasing community members. They even resort to deliberately running over individuals with their vehicles when encountering them walking along the numerous roads in the area.[268] Valdelice Veron, who assumed leadership of Takuara following the murder of her father Chief Marcos Veron and 289

other tribe members in 2003, remains under constant threat and attack. These threats primarily target her family members and the community's territory.[269]

Likewise, the lack of economic prospects for the Kaiowá community in Takuara, exacerbated by the depletion of the area's natural resources as well as the racism indigenous communities face in accessing employment, renders young community members vulnerable to organised crime. Takuara is on the route of arms and drug traffic (as organised crime groups use agricultural infrastructure for their activities), and youngsters are in constant peril of becoming the fatal victims of criminals or being coerced into joining criminal groups. Not surprisingly, the rate of depression and suicide among indigenous youth is notably above the national average.[270]

According to Earthsight, there are also reports by Kaiowá women of aeroplanes spraying pesticides on the community's homes and vegetable gardens. This affects women, especially because they refuse to feed their families the fruits and vegetables covered with agrochemicals, which puts more stains on their already stretched resources as they must travel far to obtain food for their families within a tight budget. Additionally, there are reports of children falling ill due to poisoning by agrochemicals. Caring for ill family members adds to their already heavy load of unpaid care work.[271] The actions constitute a breach of Unilever's policy on the protection and regeneration of nature, which requires that suppliers to address water management and wastewater discharge issues and to implement environmental management policies.[272]

5.6 Conclusion

As stated in section 5.1.2, in 2022, Unilever claimed that 74% of its palm, 95% of paper and board, and 92% of soy suppliers were confirmed deforestation-free. The evidence presented in the previous sections casts serious doubts on these claims, echoing the concerns of civil society. In this context, Rainforest Action Network has questioned Unilever's claims, pointing out that the company has not disclosed its verification protocol or methodologies yet.[273] Moreover, this study showed that despite its commitments to human rights, Unilever's suppliers still perpetrate grave violations including land grabbing, persecution and intimidation of environmental and human rights defenders, pollution of water sources and soil, in addition to the numerous accounts of labour rights breaches and violence against women. As demonstrated by Unilever's response letter of 23 March 2024 to Milieudefensie in relation to the allegations against Agro Astra Lestari in Indonesia (in which Unilever states it will maintain its trade links with this supplier pending investigation of the allegations), the company's zero-tolerance policies remain a set of stated commitments with so far limited implementation.

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References

1 See https://milieudefensie.nl/actueel/onderzoek-naar-de-klimaatplannen-van-29-grote-vervuilers and https://milieudefensie.nl/klimaatcrisis/info/factsheet-over-de-klimaatcrisis-index

2 Mooldijk, S., Hans, F., Marquardt, M. et al. (2022, July), *Evaluating Corporate Target Setting in the Netherlands*, Cologne, Germany: New Climate Institute.

3 Unilever, *Annual Report and Accounts 2020*.

4 European Commission (n.d.), "EU Emissions Trading System (EU ETS)", online: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en#sectors-and-gases-covered, viewed in October 2022.

5 IPCC (2023), *Climate Change 2023, Synthesis Report*.

6 IPCC (2023), *Climate Change 2023, Synthesis Report*.

7 See https://www.unilever.com/news/press-and-media/press-releases/2020/unilever-to-invest-1-billion-to-eliminate-fossil-fuels-in-cleaning-products-by-2030/

8 In 2022, these contributed 62% of total Scope 1, 2 and 3 emissions (92 million tons CO_2e). Unilever's zero-emission targets only apply to the 38% of emissions the company can manage itself.

9 Unilever (2019, 7 October), "Unilever Announces Ambitious New Commitments for a Waste-free World", online: https://www.unilever.com/news/press-and-media/press-releases/2019/unilever-announces-ambitious-new-commitments-for-a-waste-free-world/, viewed in January 2024.

10 UK Department for Energy Security and Net Zero (2023, 7 June), "Greenhouse Gas Reporting: Conversion Factors 2023", online: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023, viewed March 2024.

11 Ali, S.S. et al. (2023, February 19), *Bioplastic Production in Terms of Life Cycle Assessment: A State-of-the-Art Review*, online: https://www.ncbi.nlm.nih.gov/pmc/about/disclaimer/, viewed in March 2023.

12 Rubio-Domingo G. and A. Halevi (2022, February), *Making Plastics Emissions Transparent*, COMET.

13 Speed, M. and L. Mnyanda (2024, 15 January), "Petrochemical Glut Makes New Plastic Cheaper than Recycled", Financial Times, online: https://www.ft.com/content/6b3f4405-a994-4fb1-b667-1f49c5357db8?shareType=nongift, viewed in January 2024.

14 See https://www.unilever.com/news/press-and-media/press-releases/2020/unilever-to-invest-1-billion-to-eliminate-fossil-fuels-in-cleaning-products-by-2030/

15 Procter & Gamble, "Environmental – Climate", online: https://www.pginvestor.com/esg/environmental/climate/default.aspx#climate_scope_1_2, viewed in January 2024.

16 Nestlé (2023), *Creating Shared Value and Sustainability Report 2022*.

17 Young, O. (2022, 28 June), "*The Environmental Impact of Cosmetics is* Tremendous—Here's How They're Harmful, Treehugger", online: https://www.treehugger.com/environmental-impact-of-cosmetics-5207672#citation-30, viewed in January 2024.

18 *ScienceDaily* (2018, April 30), *Personal Care Products Contribute to a Pollution 'Rush Hour',* University of Colorado at Boulder, online: https://www.sciencedaily.com/releases/2018/04/180430131828.htm, viewed in January 2024.

19 Hamers, L. (2018, February 15), *Household Products Make Surprisingly Large Contributions to Air Pollution, ScienceNews*, online: https://www.sciencenews.org/article/household-products-make-surprisingly-large-contributions-air-pollution, viewed in January 2024.

20 McDonald, B.C. et al. (2018, February 16), "Volatile Chemical Products Emerging as Largest Petrochemical Source of Urban Organic Emissions", *Science*, online: https://www.science.org/doi/10.1126/science.aaq0524, viewed in January 2024.

21 Unilever (2012, May 4), "Long Term Supplier Partnerships Key to Unilever Sustainable Growth Strategy", online: https://www.360quadrants.com/chemicals/personal-care-ingredients-market#:~:text=This%20market%20is%20dominated%20by%20major%20Personal%20Care,30%25%20shares%20of%20the%20personal%20care%20ingredients%20market, viewed in January 2024.

22 Dow, (2023), *Intersections, 2022 Progress Report*.

23 BASF (2023), *Report 2022 - Integrated Corporate Report on Economic, Environmental and Social Performance*.

24 Evonik (2023), *Financial Report 2022*.

25 Booth, B. (2016, November 3), *Climate Change and Cosmetics: It's Going to Get Ugly",* online: https://d3.harvard.edu/platform-rctom/submission/climate-change-and-cosmetics-its-going-to-get-ugly/, viewed in January 2024.

26 Unilever (2021), *Climate Transition Action* Plan (CTAP), p. 7.

27 Unilever (2024), Annual Report and Accounts 2023

28 Unilever (2023), *Annual Report and Accounts 2022*.

29 Unilever (2023), *Unilever Sustainability Performance Data – Climate.*

30 Unilever (2024), Annual Report and Accounts 2023

31 Unilever (2022), *Unilever Basis of Preparation 2021 for Sustainability Metrics Selected for Independent Assurance*.

32 Unilever (2023), *Annual Report and Accounts 2022*.

33 GHG Protocol (n.d.), *Technical Guidance for Calculating Scope 3 Emissions, Category 11: Use of Sold Products*.

34 Unilever (2023), *Annual Report and Accounts 2022*.

35 Unilever (2023, February 3), "What's Driving Unilever's Strong Full-Year Results?", online: https://www.unilever.com/news/news-search/2023/whats-driving-unilevers-strong-fullyear-results/, viewed in January, 2024.

36 Unilever (2024, March), "Climate Transition Action Plan – Updated 2024", online: https://www.unilever.com/planet-and-society/climate-action/, viewed in March, 2024.

37 Unilever (2024, March), "Climate Transition Action Plan – Updated 2024", online: https://www.unilever.com/planet-and-society/climate-action/, viewed in March, 2024.

38 Government of the Netherlands (2023, December 18), "Group of European countries aim to decarbonize their electricity system by 2035", online: https://www.government.nl/latest/news/2023/12/18/group-of-european-countries-aim-to-decarbonize-their-electricity-system-by-2035, viewed in March, 2024.

39 European Environment Agency (2022), "Share of energy from renewable sources, by country", online: https://www.eea.europa.eu/data-and-maps/daviz/countries-breakdown-actual-res-progress-14#tab-googlechartid_chart_21, viewed in March 2024.

40 Ember - Yearly Electricity Data (2023); Ember – *European Electricity Review (2022);* Energy Institute - *Statistical Review of World Energy (2023)* – with major processing by Our World in Data

41 Anderson, CM., Bicalho, T., Wallace, E., Letts, T., and Stevenson, M. 2023. *Forest, Land and Agriculture Science-Based Target-Setting Guidance.* World Wildlife Fund, Washington, DC.

42 SBTi (2023), SBTi Forest, Land And Agriculture (FLAG) Project FAQs Version 4.0 July 2023, online: https://sciencebasedtargets.org/resources/files/FLAG-FAQ.pdf, viewed in March, 2024.

43 Anderson, C.M., Bicalho, T., Wallace, E., Letts, T., and M. Stevenson, (2022). Forest, Land and Agriculture Science-Based Target-Setting Guidance. World Wildlife Fund, Washington, DC.

44 Breda University of Applied Science (2023), Peeters, P., Buijtendijk, H., and & E Eijgelaar, KLM, science-based targets, and the Paris Agreement – Expert Report, online: https://pure.buas.nl/ws/portalfiles/portal/32555525/Peeters_Buijtendijk_Eijgelaar_ExpertReport_v4_Final.pdf, viewed in April, 2024.

45 UN Environmental Programme, *Broken Record, Emission Gap Report 2023,* section 5.4, page 36/37.

46 SBTi (2023), SBTi Forest, Land And Agriculture (FLAG) Project FAQs Version 4.0 July 2023, online: https://sciencebasedtargets.org/resources/files/FLAG-FAQ.pdf, viewed in March, 2024.

47 Anderson, CM., Bicalho, T., Wallace, E., Letts, T., and M. Stevenson, 2022. Forest, Land and Agriculture Science-Based Target-Setting Guidance. World Wildlife Fund, Washington, DC.

48 Planet Tracker (2023), *Unilever PLC, Climate Transition Analysis*.

49 IMF (2022, June 1), *The Great Carbon Arbitrage,* online: https://www.imf.org/en/Publications/WP/Issues/2022/05/31/The-Great-Carbon-Arbitrage-518464, viewed in July 2022.

50 Nielsen, J. (2022), “Why CFOs Must Lead Company Efforts to Achieve Net Zero”, *Financial Times*, online: https://bcg.ft.com/article/cfos-must-lead-efforts-to-net-zero?utm_source=FT&utm_medium=Premium_Native_Amplification, viewed in September 2022.

51 Trading Economics (n.d.), “Carbon”, online: https://tradingeconomics.com/commodity/carbon, viewed in March 2024.

52 Kikstra, J.S., P. Waidelich, J. Rising, D. Yumashev, C. Hope and C.M. Brierley (2021, September 6), *The Social Cost of Carbon Dioxide Under Climate-Economy Feedbacks and Temperature Variability*, *Environmental Research Letters*, 16: 094037.

53 UCL News (2021, September 6), “Economic Cost of Climate Change Could Be Six Times Higher than Previously Thought”, online: https://www.ucl.ac.uk/news/2021/sep/economic-cost-climate-change-could-be-six-times-higher-previously-thought, viewed in December 2023.

54 Brink, C., A. Trinks, H. Vollebergh, P. Zwaneveld (2023, October), *Afschaffing fossiele-energiesubsidies: Eerder een hersenkraker dan een no-brainer*, Planbureau voor de Leefomgeving.

55 Corjan Brink en Herman Vollebergh, Planbureau voor de Leefomgeving (2024, February), *Klimaatverandering in de Prijzen in 2022 met een Doorkijk naar 2030*, online: https://www.pbl.nl/system/files/document/2024-02/PBL-2024_Klimaatverandering-in-de-prijzen-in-2022-met-een-doorkijk-naar-2030_5446.pdf, viewed February 2024.

56 Pham Van, L. and G. Rijk (2022, April), *European Big Oil – Big Liability in Carbon, Pollution and Health Care Costs*, Amsterdam, Netherlands: Profundo, a report commissioned by Transport & Environment.

57 FAO (2006), *Livestock’s Long Shadow*.

58 United Nation Climate Change, “The Katowice Climate Package: Making the Paris Agreement Work for All”, online: https://unfccc.int/process-and-meetings/the-paris-agreement/katowice-climate-package, viewed in December 2023.

59 Calculation is based on CSV download of ‘underlying volume growth (UVG)’, online: https://www.unilever.com/investors/results-presentations/overview-full-year-2023/

60 Unilever (2023, June), *Unilever Deforestation-free and Conversion-free Verification Protocol Scheme Rules VDF 2023*, p. 4.

61 Unilever (n.d.), “Deforestation-free Supply Chain”, online: https://www.unilever.com/planet-and-society/protect-and-regenerate-nature/deforestation-free-supply-chain/, viewed in March 2024.

62 Unilever (2023, June), *Unilever Deforestation-free and Conversion-free Verification Protocol Scheme Rules VDF 2023*, p. 9.

63 Unilever (2024), *Climate Transition Action Plan*, p. 21.

64 Unilever (2022, July 1), “Unilever Announces Completion of the Sale of its Tea Business, Ekaterra, to CVC Capital Partners Fund VIII”, online: https://www.unilever.com/news/press-and-media/press-releases/2022/unilever-announces-completion-of-the-sale-of-its-tea-business-ekaterra/, viewed in March 2024.

65 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*, p. 138.

66 Unilever (2023), *Unilever plc CDP Climate Change Questionnaire 2023,* p. 144.

67 Mordor Intelligence (n.d.), “Ice cream market size & share analysis – Growth trends & forecasts up to 2029”, online: https://www.mordorintelligence.com/industry-reports/ice-cream-market, viewed in April 2024.

68 Unilever, (2017, January 23), “Hellmann’s mayonnaise and mayonnaise dressings now use 100% cage-free eggs in the U.S.*, three years ahead of schedule”, online: https://www.unileverusa.com/news/press-releases/2017/hellmanns-mayonnaise-and-dressings-now-use-100-percent-cage-free-eggs/, viewed in April 2024.

69 RIVM (2024, April 15), “Greenhouse gas emissions in the Netherlands 1990-2022. National inventory report”, online: https://www.rivm.nl/publicaties/greenhouse-gas-emissions-in-netherlands-1990-2022, viewed in April 2024.

70 Unilever (2024, March 19), “Unilever to accelerate Growth Action Plan through separation of Ice Cream and launch of productivity programme”, online: https://www.unilever.com/news/press-and-media/press-releases/2024/unilever-to-accelerate-growth-action-plan-through-separation-of-ice-cream-and-launch-of-productivity-programme/, viewed in March 2024.

71 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*, p. 138.

72 Unilever (2023), *RSPO Annual Communication of Progress 2022*.

73 Unilever (n.d.), "Sustainable and deforestation-free palm oil", online: https://www.unilever.com/planet-and-society/protect-and-regenerate-nature/sustainable-palm-oil/#footnote-PdGlBTAKZsv8, viewed in March 2024.

74 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*, p. 189.

75 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020*, p. 117.

76 Patel, S.S., A. Intveld, E. Seeyave, E. Moberg and V. Barreiro (2022, September 19), *Measuring and Mitigating GHGs: Palm Oil*, The Markets Institute at WWF, p. 10.

77 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*, pp. 221-222.

78 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*, p. 194.

79 Unilever (2023, June), *Unilever Deforestation-free and Conversion-free Verification Protocol Scheme Rules VDF 2023*, p. 18.

80 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020*, pp. 6, 9-10, 37.

81 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023,* p. 13.

82 Unilever (2023, September), *Forest Risk Commodities Reporting: 2022*, pp. 12-13.

83 Unilever (2023, September), *Forest Risk Commodities Reporting: 2022*, p. 190.

84 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020*, pp. 9, 93

85 Coalition of NGOs and civil soecity groups (2021, October 25), "Open letter: FSC is no longer fit for purpose and must urgently reform", online: https://www.earthsight.org.uk/news/blog-open-letter-fsc-no-longer-fit-for-purpose-and-must-urgently-reform, viewed in April 2024;
Alecci, S. (2023, March 1), "Environmental auditors approve green labels for products linked to deforestation and authoritarian regimes", *ICIJ*, online: https://www.icij.org/investigations/deforestation-inc/auditors-green-labels-sustainability-environmental-harm/, viewed in April 2024.

86 Greenpeace International (2021), *Destruction: Certified*, p. 85;
Ruiz, I. and A. Castro (2022, January 30), "The cracks of the world's largest timber certification company impact the Amazon", *Ojo Público*, online: https://ojo-publico.com/3280/cracks-fsc-certification-impact-amazon, viewed in April 2024.

87 Unilever (2023), *Unilever plc CDP Climate Change Questionnaire 2023*, p. 155.

88 Bondici, M. (2022, May 31), "How illegal logging is threatening Romania's unique virgin forests", *Euronews*, online: https://www.euronews.com/2022/05/31/how-illegal-logging-is-threatening-romania-s-unique-virgin-forests, viewedin March 2024.

89 Hivert, A.-F. (2023, January 6), "Sweden's intensive forestry model is being called into question", *Le Monde*, online: https://www.lemonde.fr/en/europe/article/2023/01/06/sweden-s-intensive-forestry-model-is-being-called-into-question_6010507_143.html, viewed in March 2024.

90 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023,* pp. 15, 191.

91 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020*, pp. 10, 39, 61.

92 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023,* p. 12.

93 Unilever (2023), *Forest Risk Commodities Reporting: 2022*, p. 18.

94 Unilever (2023), *Forest Risk Commodities Reporting: 2022*, p. 18.

95 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023,* p. 130.

96 European Parliament and European Council (2023, May 31), "Regulation (EU) 2023/1115 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010", *Official Journal of the European Union*, L150/206.

97 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020*, pp. 61-62, 66.

98 Alcock, T.D., D.E. Salt, P. Wilson and S.J. Ramsden (2022, July 10), More sustainable vegetable oil: Balancing productivity with carbon storage opportunities", *Science of the Total Environment*, Vol. 829:154539.

99 Unilever (2023), *Forest Risk Commodities Reporting: 2022*, p. 18.

100 WWF US (2023), "Plowprint report", online: https://www.worldwildlife.org/projects/plowprint-report, viewed in March 2024.

101 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023,* pp. 102-103

102 Unilever (2023), *Unilever plc CDP Forests Questionnaire 2023,* pp. 16, 102, 116, 191.

103 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020,* p. 40.

104 Kalischek, N., Lang, N., Renier, C. et al. (2023), "Cocoa plantations are associated with deforestation in Côte d'Ivoire and Ghana", *Nat Food,* 4, 384–393.

105 Unilever (2023), *Unilever plc CDP Climate Change Questionnaire 2023*, pp. 155-156.

106 Vervuurt, W., M.A. Slingerland, A.A. Pronk and L.G.J. van Bussel (2022, January), "Modelling greenhouse gas emissions of cacao production in the Republic of Côte d'Ivoire", *Agroforestry Systems*, Vol. 96: 417-434.

107 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020,* pp. 105-109.

108 Pearson, T.R.H., S. Brown, L. Murray and G. Sidman (2017, February), "Greenhouse gas emissions from tropical forest degradation: an underestimated source", *Carbon Balance and Management*, Vol. 12(4);
Kruid, S., M.N. Macedo, S.R. Gorelik et al. (2021, July), "Beyond Deforestation: Carbon Emissions From Land Grabbing and Forest Degradation in the Brazilian Amazon", *Frontiers in Forests and Global Change*, Vol. 4.

109 USDA Foreign Agriculture Service (2024), "PSDonline", online: https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery, viewed in March 2024.

110 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020,* pp. 106-107.

111 Gomes da Cunha, T.Q. et al. (2021, January), "*Eucalyptus* expansion in Brazil: Energy yields in new forest areas", *Biomass and Bioenergy*, Vol. 144: 105900.

112 Iejavs, J. et al. (2021), "Some physical and mechanical properties of wood of fast-growing tree species eucalyptus (Eucalyptus grandis) and radiata pine (Pinus radiata D.Don)", *Agronomy Research*, Vol. 19(2): 434-443.

113 USDA Foreign Agriculture Service (2024), "PSDonline", online: https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery, viewed in March 2024.

114 Unilever (2020, August), *Unilever plc CDP Forests Questionnaire 2020,* pp. 106-107.

115 FAOstat (2024), "Crops and livestock products", online: https://www.fao.org/faostat/en/#data/QCL, viewed in March 2024.

116 Unilever (2022), *Responsible Partner Policy*, p. 3.

117 Unilever (2022), *Responsible Partner Policy*, p. 8.

118 Unilever (2022), *Responsible Partner Policy*, p. 4.

119 Unilever (2023), *Forest Risk Commodities Reporting: 2022*.

120 Unilever (2023, July), *Unilever plc CDP Forests Questionnaire 2023*.

121 Greenpeace International (2021, April), *Destruction: Certified*, p. 2.

122 Rainforest Action Network (2023), *Keep Forests Standing Scorecard 2023*, p. 14.

123 PT Astra Agro Lestari (n.d.), "Company Profile", online: https://www.astra-agro.co.id/en/milestone/, viewed in February 2024;

PT Astra Agro Lestari (n.d.), "Subsidiaries", online: https://www.astra-agro.co.id/en/subsidiaries/, viewed in February 2024

124 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 3;

Unilever (2022), *2022 Palm Oil Mills*, p. 2.

125 Wilmar International (2020, Oct 15), "Fact sheet of violations committed by PT Astra Agro Lestari", online: https://www.wilmar-international.com/docs/default-source/default-document-library/sustainability/grievance/grievance-case-report/surat-untuk-pg-letter_walhi_public.pdf?sfvrsn=fc262385_2, viewed in February 2024.

126 Unilever (2024, March), *Official correspondence with Friends of the Earth*.

127 Friends of the Earth (2022), *Analysis of compliance with key social and environmental licensing regulations by three Astra Agro Lestari oil palm plantations in West and Central Sulawesi Provinces, Indonesia: PT Mamuang, PT Lestari Tani Teladan and PT Agro Nusa Abadi*, FoE US, p. 9

128 Friends of the Earth (2022), Analysis of compliance with key social and environmental licensing regulations by three Astra Agro Lestari oil palm plantations in West and Central Sulawesi Provinces, Indonesia: PT Mamuang, PT Lestari Tani Teladan and PT Agro Nusa Abadi, FoE US, p. 12.

129 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 3-4.

130 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 9.

131 Unilever (2022), *Responsible partner policy*, p. 28.

132 Wilmar International (2020, Oct 15), "Fact sheet of violations committed by PT Astra Agro Lestari", online: https://www.wilmar-international.com/docs/default-source/default-document-library/sustainability/grievance/grievance-case-report/surat-untuk-pg-letter_walhi_public.pdf?sfvrsn=fc262385_2, viewed in February 2024.

133 Media Alkhairaat (2023, January 10), "43 Perusahaan Sawit di Sulteng Tidak Miliki HGU, Kerugian Negara Ditaksir Rp400 Miliar Per Tahun", online: https://media.alkhairaat.id/43-perusahaan-sawit-di-sulteng-tidak-miliki-hgu-kerugian-negara-ditaksir-rp400-miliar-per-tahun/, viewed in February 2024.

134 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 4, 10;

Friends of the Earth (2022), Analysis of compliance with key social and environmental licensing regulations by three Astra Agro Lestari oil palm plantations in West and Central Sulawesi Provinces, Indonesia: PT Mamuang, PT Lestari Tani Teladan and PT Agro Nusa Abadi, FoE US, p. 12.

135 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 4, 10;

Friends of the Earth (2022), Analysis of compliance with key social and environmental licensing regulations by three Astra Agro Lestari oil palm plantations in West and Central Sulawesi Provinces, Indonesia: PT Mamuang, PT Lestari Tani Teladan and PT Agro Nusa Abadi, FoE US, p. 11.

136 Unilever (2022), *Responsible partner policy*, pp. 31-32.

137 Friends of the Earth (2023), *Report Sulawesi Milieudefensie – WALHI visit Sept-Oct 2023*, Indonesia: Milieudefensie and WALHI.

138 Food Navigator Europe (2018, February 20), "Unilever publicly discloses palm oil supply chain: 'You can't outsource your responsibilities,' says Polman", online: https://www.foodnavigator.com/Article/2018/02/20/Unilever-publicly-discloses-palm-oil-supply-chain-You-can-t-outsource-your-responsibilities-says-Polman, viewed in March 2024.

139 Unilever (2022), *Responsible partner policy*, p. 28.

140 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 11.

141 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 3, 11;

WALHI, Milieudefensie, and Friends of the Earth United States (2022, October 19), *Letter to Chairperson of the UN Working Group on Business and Human rights, UN Special Rapporteur on Human Rights Defenders, and UN Special Rapporteur on The Right to Food.*

142 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 10;

Ombudsman Republik Indonesia (2019, July 25), "Ombudsman: Country Losses Billions of Rupiah", online: https://ombudsman.go.id/perwakilan/news/r/pwk--ombudsman-negara-dirugikan-miliaran-rupiah, viewed in March 2024.

143 Friends of the Earth (2023), *Report Sulawesi Milieudefensie – WALHI visit Sept-Oct 2023*, Indonesia: Milieudefensie and WALHI.

144 Milieudefensie (2022), "Open letter from indigenous peoples November 2022", online: https://en.milieudefensie.nl/news/indigenous-people-urge-multinationals-to-drop-aal/@@download/file/Milieudefensie%20OPM%20flyers%2010-J594%20LR.PDF, viewed in February 2024.

145 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 3.

146 PT Eco Nusantara Lestari (2023), *Verification of Complaints Against PT Mamuang, PT Lestari Tani Teladan and PT Agro Nusa Abadi, Raised by Friends of the Earth-US (FoE-US) and Walhi*, Bogor, Indonesia: PT Eco Nusantara Lestari.

147 Friends of the Earth (2023, November 26), "Friends of the Earth groups reject inadequate, inaccurate Astra Agro Lestari report on environmental and human rights violations in Indonesia", online: https://foe.org/news/groups-reject-aal-report/, viewed in March 2024.

148 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 10.

149 Friends of the Earth (2022), "Fact Sheet: Bad Management Oil Palm Plantations PT. Lestari Tani Teladan In Rio Pakava District, Kab. Donggala", online: https://foe.org/wp-content/uploads/2022/02/WALHIInvestigation-Fact-Sheet.PT_.LTT_.pdf, viewed in February 2024.

150 Friends of the Earth (2023), *Report Sulawesi Milieudefensie – WALHI visit Sept-Oct 2023*, Indonesia: Milieudefensie and WALHI.

151 Unilever (2022), *Responsible partner policy*, pp. 31-32.

152 Milieudefensie (2024, February), *Astra Agro Lestari Penetrates Indonesia's Forests*, p. 3-4.

Unilever (2022), *2022 Palm Oil Mills*, p. 1, 11, 14.

153 Unilever (2022), *Responsible partner policy*, pp. 31-32;

Unilever (2020, December), *People & Nature Policy*, p. 4.

154 WALHI, Milieudefensie, and Friends of the Earth United States (2022, October 19), *Letter to Chairperson of the UN Working Group on Business and Human rights, UN Special Rapporteur on Human Rights Defenders, and UN Special Rapporteur on The Right to Food.*

155 International Federation for Human Rights (2022, September 21), "Astra Agro Lestari in Indonesia: Ongoing crimalisation, human rights abuses and land grabbing", online: https://www.fidh.org/en/region/asia/indonesia/indonesia-criminalisation-human-rights-land-grabbing, viewed in March 2024.

156 WALHI, Milieudefensie, and Friends of the Earth United States (2022, October 19), *Letter to Chairperson of the UN Working Group on Business and Human rights, UN Special Rapporteur on Human Rights Defenders, and UN Special Rapporteur on The Right to Food*

157 Unilever (2022), *Responsible partner policy*, p. 27.

158 Friends of the Earth (2023, December 8), "Friends of the Earth groups denounce recent case of intimidation by Astra Agro Lestari, call for immediate de-escalation", online: https://foe.org/news/intimidation-astra-agro-lestari/, viewed in February 2024.

159 Unilever (2022), *Responsible partner policy*, p. 28.

160 Unilever (2023, September), *Unilever Principles in Support of Human Rights Defenders and implementation guidance for existing commitments and requirements*;

Unilever (2022), *Responsible partner policy*, p. 18.

161 Milieudefensie (2022, November 25), "Letter from community in Nort Morowali To: Unilever", online: https://en.milieudefensie.nl/news/02317-opm-letter-b-02-1.pdf, viewed in February 2024.

162 Conant, J., and G. Madan (2022), *No Consent: Astra Agro Lestari's land grab in Central and West Sulawesi, Indonesia*, United States: Friends of the Earth and WALHI, p. 3, 9, 11.

163 Mongabay (2022, May 23), "'The promise was a lie': How Indonesian villagers lost their cut of the palm oil boom", online: https://news.mongabay.com/2022/05/the-promise-was-a-lie-how-indonesian-villagers-lost-their-cut-of-the-palm-oil-boom/, viewed in March 2024.

164 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 32.

165 Ministry of Foreign Affairs (2010, September 1), *An act to ratify the concession agreement between the Republic of Liberia and Golden Veroleum (Liberia) Inc.*

166 Golden Veroleum Liberia (n.d.), "Frequently Asked Questions", online: https://goldenveroleumliberia.com/frequently-asked-questions/, viewed in March 2024.

167 Solidaridad (2022), *Palm Oil Barometer 2022*, Utrecht, the Netherlands: Solidaridad.

168 Castellanos-Navarrete, A., Tobar-Tomás, W. V., López-Monzón, C. E. (2019), "Development without change: Oil palm labour regimes, development narratives, and disputed moral economies in Mesoamerica", *Journal of Rural Studies, 71*: 169-180.

169 Unilever (2022), 2022 Palm Oil Mills, p.7.

170 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, pp. 5-8.

171 Milieudefensie Friends of the Earth Netherlands and Sustainable Development Institute (2023, January 30), *Letter to GVL on violence.*

172 Golden Veroleum Liberia (2014, April 28), *Provisional Memorandum of Understanding Incorporating Social Agreement Between Numopoh Community and Golden Veroleum (Liberia)*.

173 Golden Veroleum Liberia (2014, September 30), *Provisional Memorandum of Understanding Incorporating Social Agreement Between Nitrian Community and Golden Veroleum Liberia*.

174 Golden Veroleum Liberia (2014, October 11), *Provisional Memorandum of Understanding Incorporating Social Agreement Between Tartweh-Drapoh Chiefdoms and Golden Veroleum Liberia*.

175 Milieudefensie and Sustainable development institute (2021, August), *Golden Veroleum Liberia's track record: broken promises and continued deforestation*.

176 Landportal (2021, August 12), "Golden Veroleum Liberia Comes under Spotlight Again for not Living Up to MOU", online: https://landportal.org/news/2021/09/golden-veroleum-liberia-comes-under-spotlight-again-not-living-mou, viewed in March 2024.

177 Milieudefensie Friends of the Earth Netherlands and Sustainable development institute (2021, August 12), *Palm oil company Golden Veroleum Liberia fails to fulfil benefits to communities and protect forests.*

178 Unilever (2022), *Responsible partner policy*, p. 27.

179 Unilever (2022), *Responsible partner policy*, p. 28.

180 Mensah, P. N. (2024, February 21), "Aggrieved GVL employees protest", The New Dawn, online: https://thenewdawnliberia.com/aggrieved-gvl-employees-protest/, viewed in March 2024.

181 Dodoo, L. (2021, May 26), "Liberia: Hundreds of Sacked GVL Employees Still Waiting for Jobs; Company Blames the Pandemic", Front Page Africa, online: https://frontpageafricaonline.com/news/liberia-hundreds-of-sacked-gvl-employees-still-waiting-for-jobs-company-blames-the-pandemic/, viewed in March 2024.

182 Brooks, C. (2021, October 24), "Former GVL workers receive settlement over illegal dismissal", Farmlandgrab, online: https://www.farmlandgrab.org/post/30566-former-gvl-workers-receive-settlement-over-illegal-dismissal, viewed in March 2024.

183 Gippley, T. (2022, June 11), "GVL Liberia Palm Truck Kills Two, Man And Woman", GNN Liberia, online: https://gnnliberia.com/gvl-liberia-palm-truck-kills-two-man-and-woman/, viewed in March 2024.

184 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 27.

185 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 27.

186 The World Bank (n.d.), "Poverty and Inequality", online: https://datatopics.worldbank.org/world-development-indicators/themes/poverty-and-inequality.html, viewed I March 2024.

187 GNN Liberia (2023, February 2), "LIBERIA: Extend Minimum Wage Of US$ 150 Promise To private Sector – Amb. Neville Appeal To President Weah,.", GNN Liberia, online: https://gnnliberia.com/liberia-extends-minimum-wage-of-us-150-promise-to-private-sector-amb-neville-appeal-to-president-weah/, viewed in March 2024.

189 Unilever (2022), *Responsible partner policy*, pp. 21-22.

190 Landportal (2021, August 12), "Golden Veroleum Liberia Comes under Spotlight Again for not Living Up to MOU", online: https://www.landportal.org/node/100633, viewed in March 2024.

191 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 17.

192 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 18.

193 High Carbon Stock Approach (2021, February 4), *Independent Grievance Panel - Final Grievance Report*.

194 Global Forest Watch (n.d.), "Deforestation Alerts", online: https://www.globalforestwatch.org/, viewed in March 2024.

195 Global Forest Watch (n.d.), "Dashboard – Liberia – Sinoe - Butaw", online: https://www.globalforestwatch.org/dashboards/country/LBR/15/1/?map=eyJjYW5Cb3VuZCI6dHJ1ZX0%3D, viewed in March 2024.

196 GAR (2023, January 27), "GAR resigns from the HCSA membership while continuing its commitment to abide by the HCSA Toolkit", online: https://www.goldenagri.com.sg/gar-resigns-from-the-hcsa-membership-while-continuing-its-commitment-to-abide-by-the-hcsa-toolkit/, viewed in April 2024.

197 Dixon, G. M. (2023), "Liberia: GVL's Owner Quits Global Forest Initiative in Blow to Communities and Campaigners", Daily Observer, online: https://www.liberianobserver.com/liberia-gvls-owner-quits-global-forest-initiative-blow-communities-and-campaigners, viewed in March 2024.

198 HSCA (n.d.), "Grievance Case HCSA-GM-2018-01", online: https://highcarbonstock.org/grievance_mechanism/hcsa-gm-2018-01/, viewed in April, 2024.

199 Milieudefensie (2024, April 5), *Personal communication with D. Quiroz of Profundo*.

200 Unilever (2020, December), *People & Nature Policy*, p. 4.

201 Front Page Africa (2018, July 3), "Liberia: Another SDI report finds GVL in Sinoe land grab, deforestation", Farmlandgrab, online: https://www.farmlandgrab.org/post/28268-liberia-another-sdi-report-finds-gvl-in-sinoe-land-grab-deforestation, viewed in March 2024.

202 Sustainable Development Institute, Milieudefensie Friends of the Earth Netherlands and Friends of the Earth (2018), *High risk in the Rainforest – Golden Agri-Resources and Golden Veroleum's Palm Oil Project in Liberia*, p. 20.

203 PZ Wilmar (2020, October 17), "Why Nigeria must protect PZ Wilmar, Okomu, Presco's investments", online: https://pzwilmar.com/why-nigeria-must-protect-pz-wilmar-okomu-prescos-investments/, viewed in March 2024.

204 African People's Tribunal on Industrial Plantations (2020, November 20), *Nigeria. Technical Form for the Presentation of a Case*, p. 3.

205 Unilever (2023), *2022 Palm Oil Mills*, p. 5.

206 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 3.

207 Sunday, O. (2023, September 22), "10 years after land grab, local Nigerian farmers continue to fight against palm oil producer", online: 10 years after land grab, local Nigerian farmers continue fight against palm oil producer (mongabay.com), viewed in March 2024.

208 Friends of the Earth, Environmental Rights Action (2015), *Exploitation and Empty Promises. Wilmar's Nigerian Land Grab*, p. 26.

209 Global Forest Watch (n.d.), "Dashboard – Nigeria – Cross River – Akamkpa", online: https://www.globalforestwatch.org/dashboards/country/NGA/9/2/?map=eyJjYW5Cb3VuZCI6dHJ1ZX0%3D, viewed in March 2024.

210 Palmoil.io (2022, May 3), "Palmoil.io Newsletter - May 2022", online: https://blog.palmoil.io/palmoil-io-newsletter-may-2022/, viewed in April 2024.

211 Unilever (2020, December), *People & Nature Policy*, p. 4.

212 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 13.

213 R. Uwaka (2024, April 5), *Interview with D. Quiroz of Profundo*.

214 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 13.

215 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 18.

216 Unilever (2022), *Responsible partner policy*, pp. 31-32.

217 Wilmar (2018, May), *Rebuilding the Nigerian palm oil industry through partnerships*, p. 5.

218 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 13.

219 Friends of the Earth Europe (2014, May), *Continuing to exploit and deforest. Wilmar's ongoing abuses*, p. 2.

220 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 13.

221 Unilever (2022), *Responsible partner policy*, p. 28.

222 Friends of the Earth, Environmental Rights Action (2015), *Exploitation and Empty Promises. Wilmar's Nigerian Land Grab*, p. 32.

223 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 19.

224 African People's Tribunal on Industrial Plantations (2020, November 20), *Nigeria. Technical Form for the Presentation of a Case*, p. 3.

225 Wilmar (2020, December 14), *Justice Not Served. Wilmar's Response to the African People's Tribunal*.

226 Wilmar (n.d.), "Grievance Procedure", online: https://www.wilmar-international.com/sustainability/grievance-procedure, viewed in March 2024.

227 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 13.

228 Friends of the Earth Nigeria (2024, February), *Environmental evaluation study of two Wilmar Oil Palm Plantations at Mbarakom and Ibogo Communities*, p. 18.

229 Akpan, A. (2020, January 19), "Host communities accuse Wilmar PZ of high-handedness, slave labour", online: https://guardian.ng/sunday-magazine/host-communities-accuse-wilmar-pz-of-high-handedness-slave-labour/, viewed in March 2024.

230 African People's Tribunal on Industrial Plantations (2020, November 20), *Nigeria. Technical Form for the Presentation of a Case*, p. 3.

231 The Guardian (2020, February 3), "Workers union denounces allegations against PZ Wilmar plantations", online: Workers union denounces allegations against PZ Wilmar plantations | The Guardian Nigeria News - Nigeria and World News — News — The Guardian Nigeria News – Nigeria and World News, viewed in March 2024.

232 Cargill (n.d.), "About Cargill", online: https://www.cargill.com.br/en/about-cargill#:~:text=Cargill%20in%20Brazil&text=Cargill%20is%20one%20of%20the,and%20offices%20in%20147%20municipalities., viewed in March 2024.

233 Cargill (n.d.), "Cargill at a glance", online: https://www.cargill.com/about/cargill-at-a-glance, viewed in March 2024.

234 Bloomberg (n.d.), "Cargill Agricola SA", online: https://www.bloomberg.com/profile/company/7595315Z:BZ, viewed in March 2024.

235 Cargill, "Deforestation- and Conversion-free Soy Products", online: https://www.cargill.com/sustainability/sustainable-soy/deforestation-free-and-conversion-free-soy-products, viewed April 2024.

236 Cargill (2019), *Brazil Annual Report 2018-2019*, p. 21.

237 Cargill (2019), *Brazil Annual Report 2018-2019*, pp. 12-13.

238 Cargill (2019), *Brazil Annual Report 2018-2019*, pp. 12-13.

239 Overbeck, G.E., Vélez-Martin, E., Da Silva Menezes, L, Anand, M., Baeza, S., Carlucci, M. B., Dechoum, M. S., Durigan, G., Fidelis, A., Guido, A., Freire Moro, M., Rodrigues Munhoz, C. B., Reginato, M., Schütz Rodrigues, R., Rosenfield, M. F., Sampaio, A. B., Barbosa da Silva, F. H., Silveira, F. A. O., Egon Sosinski, E., Staude, I. R., Temperton, V. M., Turchetto, C., Veldman, J. W., Viana, P. L., Zappi, D. C., Müller, S. C. (2022), "Placing Brazil's grasslands and

savannas on the map of science and conservation*", Perspectives in Plant Ecology, Evolution and Systematics*, 56: 125687.

240 Unilever (2021, July 30), *2020 Soybean Suppliers Disclosure*, p. 1;

Unilever (2023, June), *Unilever's Soy Suppliers 2022*, p. 1.

241 Sax (2019, July 10), "Cargill rejects Cerrado soy moratorium, pledges $30 million search for ideas", online: https://news.mongabay.com/2019/07/cargill-rejects-cerrado-soy-moratorium-pledges-30-million-search-for-ideas/, viewed in March 2024.

242 Cargill (2020, November 25), "Addressing deforestation in the Brazilian Cerrado", online: https://www.cargill.com/story/addressing-deforestation-in-the-brazilian-cerrado, viewed in March 2024.

243 Trase (n.d.), "Brazil soy supply chain", online: https://trase.earth/explore/supply-chain/brazil/soy?chartType=sankey&year=2020&indicator=volume&dimension=biome&dimension=region_production_1&dimension=exporter_group&dimension=importer_group&dimension=country_of_import&exporter_group=CARGILL, viewed in March 2024.

244 Brown, S. (2023, August 23), "A tale of two biomes as deforestation surges in Cerrado but wanes in Amazon", online: https://news.mongabay.com/2023/08/a-tale-of-two-biomes-as-deforestation-surges-in-cerrado-but-wanes-in-amazon/, viewed in March 2024.

245 Pitta, F., Paris, T., Mendonça, M. L., Madan, G. (2023, September), *Land Grabbing and Ecocide: How Bunge, TIAA, and Harvard Fuel the Destruction of the Brazilian Cerrado*, Washington D.C.: Friends of the Earth US.

246 Prager, A., Milhorance, F. (2018, March 19), "Cerrado: Agribusiness may be killing Brazil's 'birthplace of waters'", online: https://news.mongabay.com/2018/03/cerrado-agribusiness-may-be-killing-brazils-birthplace-of-waters/#:~:text=Eight%20of%2012%20of%20Brazil%27s,the%20%E2%80%9Cbirthplace%20of%20water.%E2%80%9D, viewed in March 2024.

247 Cargill (2020, November 25), "Addressing deforestation in the Brazilian Cerrado", online: https://www.cargill.com/story/addressing-deforestation-in-the-brazilian-cerrado, viewed in March 2024.

248 Repórter Brasil (2024, March), *Chain of Responsibilities. With operations ranging from farming to processing, giant corporation Cargill is linked to deforestation, slave labour and other human and environmental rights violations*, Monitor 21, p. 9.

249 Unilever (2022), *Responsible partner policy*, pp. 31-32;

Unilever (2020, December), *People & Nature Policy*, p. 4.

250 B. Stankevicius Bassi (2024, March 19), *Interview with D. Quiroz and M. Very of Profundo*.

251 Branford, S. (2019, February 12), "Amazon at risk: Brazil plans rapid road and rail infrastructure expansion", online: https://news.mongabay.com/2019/02/amazon-at-risk-brazil-plans-rapid-road-and-rail-infrastructure-expansion/, viewed in March 2024.

252 Banktrack (2023, February 23), "Ferrogrão EF-170 Railway Brazil", online: https://www.banktrack.org/project/ef170_ferrograo_railway, viewed in March 2024.

253 Melito, L. (n.d.), "Ferrogrão railway line will affect at least six indigenous lands, 17 conservation units and three isolated tribes", online: https://burninglegacy.org/evidence/ferrograo-railway-line-will-affect-at-least-six-indigenous-lands-17-conservation-units-and-three-isolated-tribes/, viewed in March 2024.

254 Cargill (n.d.), "O mais novo projeto da Cargill no Brasil", online: https://www.cargill.com.br/pt_BR/abaetetuba, viewed in March 2024.

255 Fabio, A. C. (2023, November 26), "In Brazil's Amazon, Cargill grain ports meet local resistance", online: https://www.context.news/nature/in-brazils-amazon-cargill-grain-ports-meet-local-resistance, viewed in March 2024.

256 Mano, A. (2023, October 3), "Cargill faces Brazil criminal probe over Amazon port project", online: https://www.reuters.com/markets/commodities/cargill-faces-brazil-criminal-probe-over-amazon-port-project-2023-10-03/, viewed in March 2024.

257 Harari (2023, October 2), "Cargill wants to expand its destruction in the Amazon", online: https://insustentaveis.sumauma.com/en/cargill-wants-to-expand-its-destruction-in-the-amazon/, viewed in March 2024.

258 Cargill, Ambientare (2018), *Capítulo 6. Avalição De Impactos*, in: Cargill, Ambientare Estudo De Impacto Ambiental. Terminal Portuário de Uso Privado – TUP Abaetetuba, p. 23.

259 Terra de Direitos (2021, June), “Sem Licença Para Destruição”, online: https://semlicencaparacargill.org.br/, viewed in March 2024.

260 Unilever (2022), *Responsible partner policy*, p. 28.

261 Terra de Direitos (2021, June), “Sem Licença Para Destruição”, online: https://semlicencaparacargill.org.br/, viewed in March 2024.

262 The Guardian (2023, May 4), “Grain trader Cargill faces legal challenge in US over Brazilian soya supply chain”, online: https://www.theguardian.com/environment/2023/may/04/cargill-faces-legal-challenge-us-over-brazilian-soya-supply-chain-deforestation, viewed in March 2024.

263 Repórter Brasil (2024, March), *Chain of Responsibilities. With operations ranging from farming to processing, giant corporation Cargill is linked to deforestation, slave labour and other human and environmental rights violations*, Monitor 21, p. 11.

264 Earthsight, De Olho nos Ruralistas (2022, May), *There Will Be Blood. The Ugly Truth Behind Cheap Chicken*, London, United Kingdom: Earthsight.

265 Marques Pereira, L. (2005, December), *Resumo do relatório circunstanciado de identificação e delimitação da terra indígena taquara-ms*, p. 5.

266 Earthsight, De Olho nos Ruralistas (2022, May), *There Will Be Blood. The Ugly Truth Behind Cheap Chicken*, London, United Kingdom: Earthsight.

267 B. Stankevicius Bassi (2024, March 19), *Interview with D. Quiroz and M. Very of Profundo.*

268 Veron, V. (2018), *Tekombo’e kunhakoty: Modo de viver da mulher Kaiowa*, p. 19.

269 Veron, V. (2018), *Tekombo’e kunhakoty: Modo de viver da mulher Kaiowa*, p. 13.

270 B. Stankevicius Bassi (2024, March 19), *Interview with D. Quiroz and M. Very of Profundo.*

271 R. Carvalho (2024, March 20), *Interview with D. Quiroz and M. Very of Profundo.*

272 Unilever (2022), *Responsible partner policy*, pp. 31-32.

273 Rainforest Action Network (2023), *Keep Forests Standing Scorecard 2023*,) p. 6.

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