Vontobel

Act ESG

Asset Management

Impact report 2019

Expansion of our climate and environmental reporting

Vontobel Fund - Clean Technology

October 2019

Additional impact indicators to complement our potential avoided emissions approach
In our previous reports for the Vontobel Fund - Clean Technology, we elaborated on the concept of "***Potential Avoided Emissions***" (PAE). This method is based on an estimate for carbon emissions over the entire lifecycle of the products marketed by our portfolio companies, a more holistic and forward-looking approach than the carbon footprint method. While the PAE calculation, which we developed in cooperation with the consultancy ISS ESG, will remain an important part of our reporting, we have now started to collect additional impact data. Thereby we aim to become more transparent and provide useful information on the positive impact of the portfolio holdings, e.g. how much waste water was treated or how many tons of coal was left in the ground by switching to renewable energy generation. From now on, these additional indicators will complement our PAE reporting and will form an integral part of our annual Vontobel Fund - Clean Technology impact report.

Introduction

Through the Vontobel Fund - Clean Technology fund, we aim to capture investment opportunities arising from environmental and social challenges, proactively manage risks related to climate change, encourage invested companies to improve disclosure of relevant information, integrate financially material environmental, social and corporate governance (ESG) factors into our investment process, actively engage with companies and use our voting rights. We strive to continuously increase the transparency and improve our reporting. Our previous reports for the Vontobel Fund - Clean Technology highlighted the concept of "Potential Avoided Emissions" (PAE), a carbon measurement methodology gaining traction in investment circles. However, we also see growing interest from investors, to learn more about our portfolio's environmental strategy. We believe it is therefore a good time to launch additional impact indicators such as the amount of wastewater treated or renewable energy produced, to our reporting. To better illustrate the results, we have also launched a web-based calculator, which computes the amount of carbon emissions avoided, as well as the other indicators related to an investment in the Vontobel Fund - Clean Technology. In addition, we also elaborate on how the portfolio holdings are aligned with the United Nations' Sustainable Development Goals (SDGs) and show what portion of their revenues reflects the fund's overall objective.

That said, the PAE methodology remains the cornerstone of our impact investing approach as we consider it an important and suitable metric to underline the positive impact on climate change of the fund holdings. Together with our cooperation partner ISS ESG, we developed and refined this measure, using a considerable amount of in-house as well as external research. PAE differs from the widely used carbon footprint method, which measures the carbon emissions during the manufacturing phase of a product. In contrast, the PAE methodology focuses on the products' operating life. Is a product particularly energy efficient or optimises processes, enabling others to reduce energy consumption, it avoids emissions, which otherwise would have occurred; as such, PAE is a more comprehensive measure. The distinction is important as the UN clearly states that the 1.5 degree target can only be achieved with innovative products emitting less CO_2 or even avoiding carbon emissions during their use phase.

For the holdings of the Vontobel Fund - Clean Technology, the amount of carbon emissions saved during their product's use often exceeds the amount of carbon emissions caused during its production, i.e. the net carbon emissions of such a product is negative. A simplistic example: The manufacturing of a conventional light bulb causes fewer carbon emissions than a LED lamp (carbon footprint method). However, when comparing these two products over their entire operating lives, the LED lamp consumes a fraction of the electricity the conventional light bulb would need, and hence avoids a substantial amount of carbon emissions.

Given the overall urgency to tackle climate change, we believe fund offerings such as the Vontobel Fund - Clean Technology will become more relevant for investors. With our approach, we believe we provide investors with the opportunity to shift from a focus on mitigating ESG risks, to positive impact considerations. This solution-oriented approach can clearly help fulfil an active societal role in addition to achieve defined financial return objectives. We are convinced that impact investing is not only about avoiding risks, but also about capitalizing on the investment opportunities that climate change and the transition to a low carbon economy can offer.

How our investment themes unfold in the portfolio

Thematic funds typically try to capture the opportunities arising from long-term megatrends such as growing population, increasing urbanization and rising income. In order to address these trends, the Vontobel Fund - Clean Technology focuses on six core themes that are listed below. However, we note that these six themes are not mutually exclusive and consequently, companies can sometimes fall into more than one category. We target companies with products and services along the whole "ESG value chain", which can offer a way out of today's pressing problems of resource scarcity and pollution.

Clean energy – replace fossil fuels with renewables
Clean energy represents a significant component of a low impact to human intervention on the environment. The overall focus lies on emission reduction, renewable energies, and technologies enabling a stronger, smarter and greener grid.

Building technology – build sky-high with an eye on efficiency
Housing and residential applications account for 36%[2] of global energy consumption. Companies related to this theme provide technologies and materials to lower the environmental impact over the lifecycle of a building, from site selection through design and materials choices, construction, operation, maintenance, building upgrades and demolition. The trend towards zero-emission or low-energy houses presents opportunities for investors.

Resource-efficient industry – make processes simpler and cleaner
Efficient industries play a vital role in a move towards a more environmentally friendly world. Clean and efficient production processes will reduce energy and materials consumption while increasing the output needed to cope with rising demand. Importantly, digital transformation is paving the way for new approaches to product development, production and the entire logistics.

Clean water – let the right kind of liquidity flow
Rising water consumption as well as pollution has become a global problem. Challenges include not just the delivery or treatment of drinking water in arid regions, but also the maintenance of the existing infrastructure in industrialized countries. We focus on companies providing technological solutions for efficient water usage, proper wastewater treatment, purification and desalination.

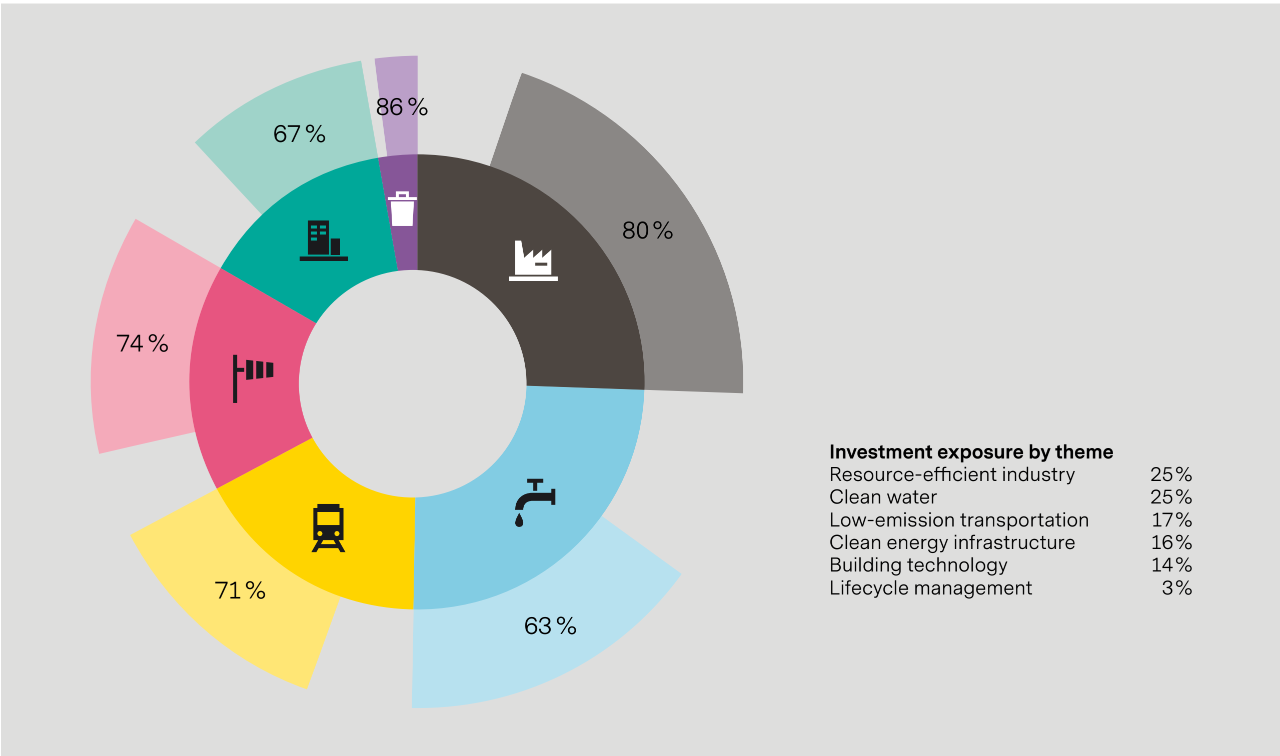
Low-emission transportation – travel without shame
The logistics and transportation sectors are large contributors to global emission and pollution. They are responsible for 24% of direct CO_2 emission from fuel combustion.[3] Companies need to offer innovative solutions and technologies to better connect a global and converging world through improved logistics as well as low-emission transportation that also saves time and resources. We concentrate on companies that develop key technologies for the future of mobility.

Lifecycle management – think of disposal before production
Reusing resources and reducing waste is increasingly important, not the least because today's global plastic concerns. Advanced manufacturing companies integrate product lifecycle concepts including aspects such as disposal, waste management and recycling technologies into product design and manufacturing processes. For the time being, the number of investable stocks in this area is limited, but is expect to rise.

[2] www.iea.org/topics/energyefficiency/buildings/
[3] www.iea.org/tcep/transport/

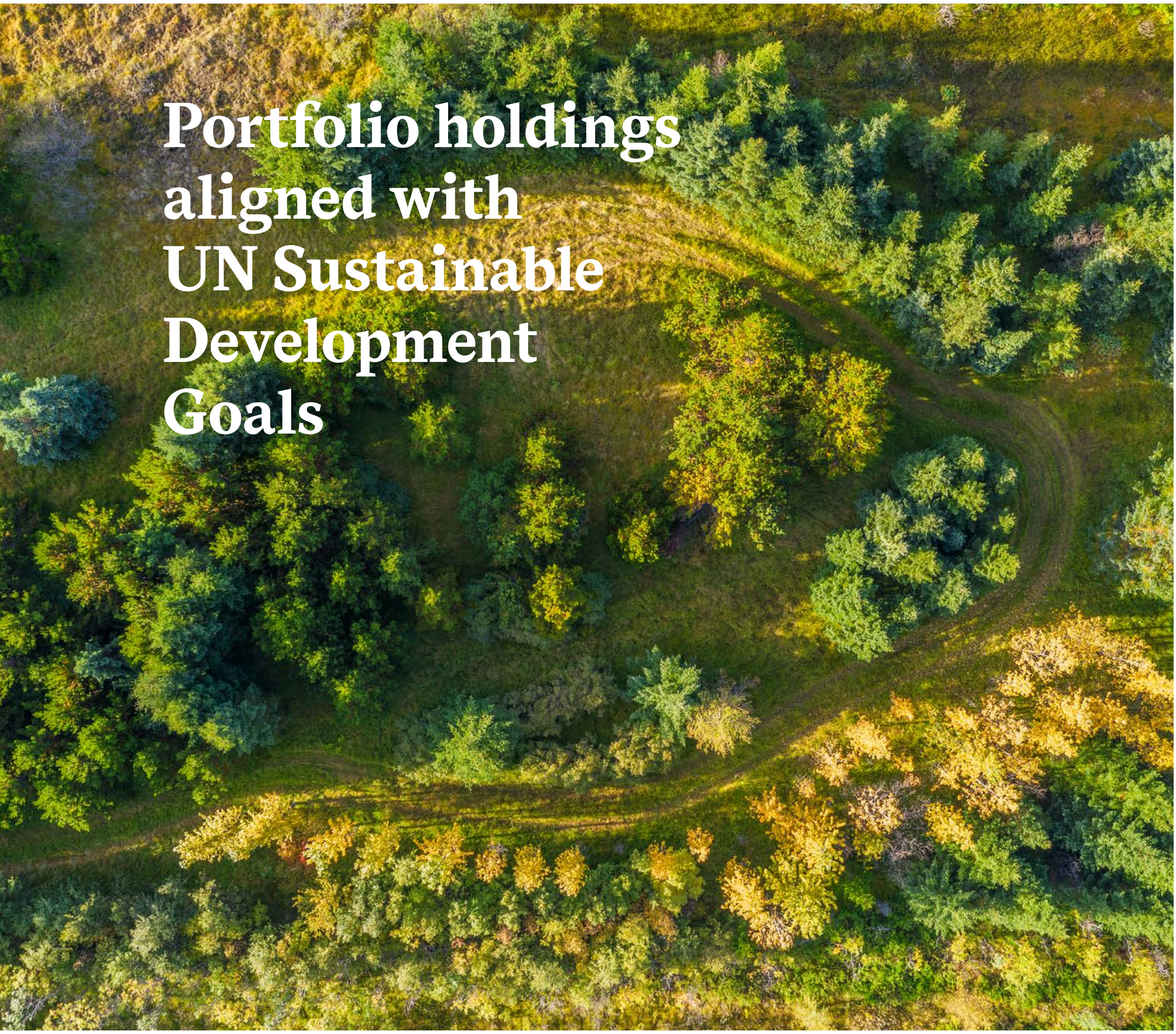
A purity factor of 72% across all themes
Investors often want to know how we construct our themes into a portfolio and how we ensure that we don't stray from the thematic fund's defined course. Consequently, we regularly analyze the revenue mix of each company in the portfolio and identify the theme-relevant shares. The inner circle of figure 1 shows the portfolio's allocation to the six clean tech themes, while the outer circle represents the percentage of theme-relevant revenues within each theme.[4]

Figure 1: The fund offers a high "purity level", 72% of revenues are theme-relevant



Source: Vontobel Asset Management. Data as of June 30, 2019, all 61 holdings surveyed.

[4] For companies with activities (revenue) in several themes, all relevant revenue shares are allocated to the main theme.



Portfolio holdings aligned with UN Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) were adopted by all United Nations member states in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The UN estimates that approximately five to seven trillion US dollars are needed annually to achieve these goals. The individual goals are defined in a list of 169 targets with progress towards these targets being tracked by 232 unique indicators. ***The Sustainable Development Goals Report 2019*** has identified climate change as the most urgent and highest-impact area for action. However, given the lack of available data, it is currently impossible for us to track the progress towards the SDG targets on a portfolio holding level. Nevertheless, to put our offering into perspective, we can at least link the individual activities of the portfolio holdings to the different goals. Based on our assessment, each of the companies in the portfolio was supporting at least one of the SDGs as shown in figure 2.

In addition, we can also identify a minor contribution from some companies to SDG 3 “Health and Well-Being” (2 companies) and SDG 12 “Responsible Consumption and Production”(3). The remaining ten SDGs are broader societal goals that are beyond the scope of our technology-orientated offering. Nevertheless, since the individual goals are often intertwined, we believe the companies in the fund often provide a positive impact on these broader societal goals as well.

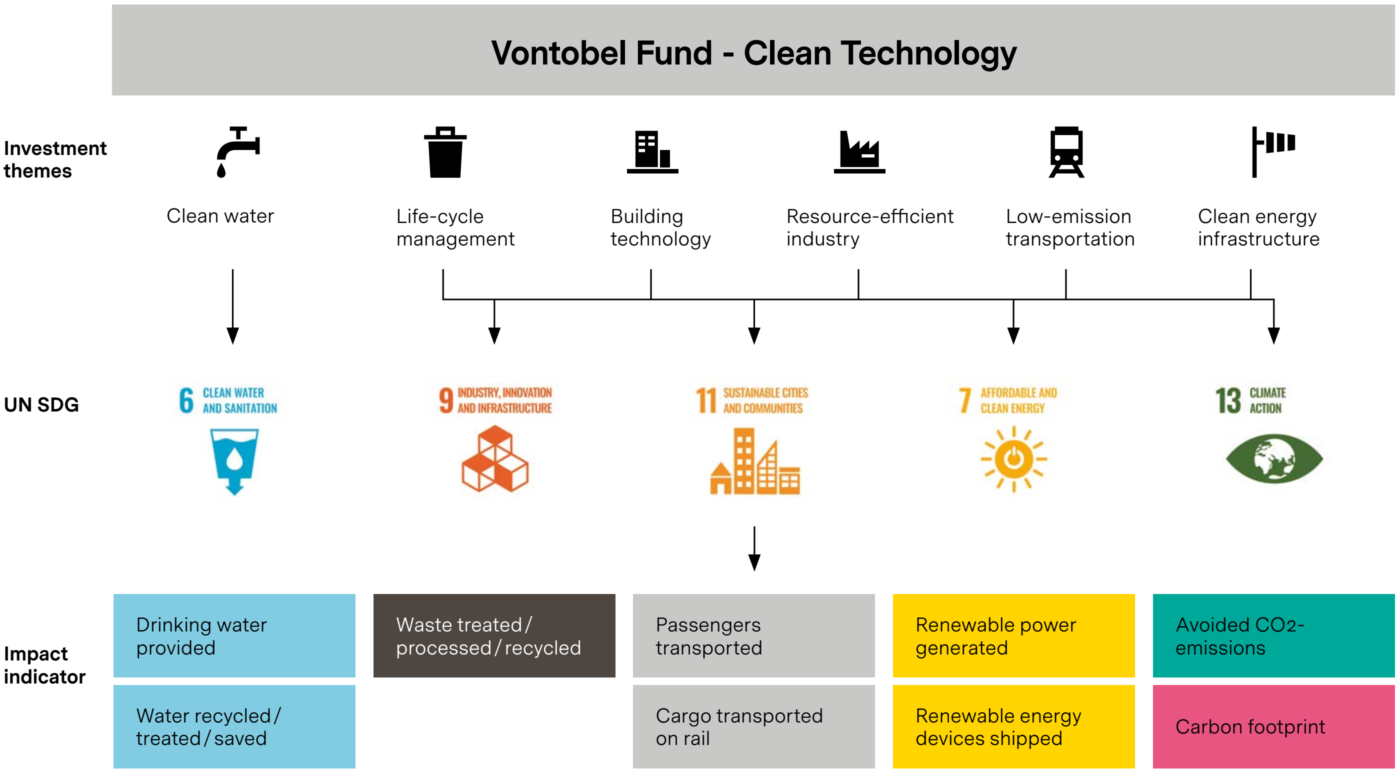
Figure 2: Number of fund holdings with material contribution to UN SDGs

Source: United Nations; Vontobel Asset Management.
Data as of June 30, 2019, all 61 holdings surveyed Companies can contribute to one or more SDG.

Adding seven indicators to our PAE and carbon footprint reporting

Depending on the economic cycle and corresponding investment opportunities, the thematic allocation of the fund – and thus the contribution to the SDGs – may vary over time. To better reflect these fluctuations, we decided to introduce four additional clusters of indicators related to water, waste, transportation and energy linked to the products or services that a company supplies. For example, the positive impact of companies in the fund theme "clean energy infrastructure" is measured in gigawatt hours (GWh) of renewable energy generated. In addition, the impact of wind and solar equipment companies is reflected by the capacity in megawatts (MW) of wind turbines and solar modules shipped within a year. At the core of the water impact indicator is the amount of liters of drinking water provided, and liters of water recycled, treated, or saved. For the "low-emission transportation" theme, we use the amount of passenger-kilometers travelled by train and ton-kilometers of cargo transported by rail as impact indicators. We also evaluate how much our portfolio holdings' products and services reduce or avoid carbon emissions. From now on, the new indicators will complement our reporting on carbon emissions (PAE and carbon footprint methodology).

Figure 3: From fund themes to new impact indicators, via UN development goals



Source: United Nations, Vontobel Asset Management; for illustrative purposes only

We have compiled and calculated our new impact indicators for all holdings of the Vontobel Fund - Clean Technology portfolio as of June 30, 2019. The data points have been taken from various communication channels of the investee companies such as annual reports, sustainability reports and websites. The ***companies overall*** were associated with a positive impact over a year equivalent to:

125,097 GWh	renewable energy generated
28,545 MW	annual renewable capacity shipped
12,773 million m^3	drinking water provided
12,624 million m^3	water recycled, treated or saved
157,227 million	passenger km transported by train
326,603 million t	cargo km transported by railroad
68 million t	waste treated, processed or recycled
130 million t	CO_2e emitted (carbon footprint, scope 1&2)
2,634 million t	CO_2e avoided (PAE)

To make the indicators less abstract and more meaningful, we tried to visualize the impact an investment of one million euros in the Vontobel Fund - Clean Technology would have in terms of the new indicator types, applying the ownership structure as of June 30, 2019 (see figure 4). For further details on sources, calculation of individual indicators please see the appendix.

Figure 4: Investment-to-benefit effect of investing 1 million euros in the Vontobel Fund - Clean Technology

Generation of renewable energy:
187,120 kWh

Providing clean energy to
119 people
for one year

Shipment of renewable energy devices:
91 kW

Replacing
279 tons
of annual coal consumption

Eco-friendly passenger transport:
61,135 pass. km

Avoiding
122
short distance flights per year

Provision of drinking water:
24,990 m³

Supplying water to
475 people
for one year

Water recycled, treated or saved:
21,202 m³

Treating waste water of
403 people
for one year

Rail cargo transport:
116,671 t km

Taking
55 trucks
off the Gotthard route per year

Waste treated or recycled:
141 tons

Treating waste of
289 people
for one year

Carbon footprint (scope 1&2):
118 t CO2e*

Causing emissions equiv. to
71 cars
on the road

Avoided carbon emissions (PAE):
4,710 t CO2e**

Avoiding emissions equiv. to taking
2,850 cars
off the road

* GHG emissions in terms of CO_2 equivalent caused under carbon footprint method (scope 1&2)
** GHG emissions in terms of CO_2 equivalent avoided under PAE method

Source: Vontobel Asset Management. Portfolio as of June 30, 2019.

Some details on carbon related indicators
Despite this year's focus on new indicators, we will maintain carbon emissions as our key indicator focussing on the climate impact. A significant proportion of the Vontobel Fund - Clean Technology is invested in companies that manufacture and sell products and services that help to reduce greenhouse gas (GHG) emissions. Potential avoided emissions (PAE) are "emissions that would have been released if a particular action or intervention had not taken place". For further details on the PAE methodology please refer to the appendix.

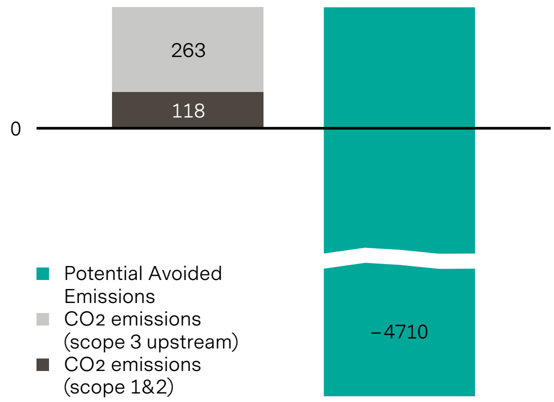
To calculate the PAE, each company within the fund has been contacted to provide data relative to a comparable baseline. The calculation is based on the individual products sold and services provided during 2018. On a positive note, we saw that the portfolio companies have become more responsive to our queries and the quality of reported data has generally improved compared to the previous years. We attribute this to an overall growing demand for climate related data from investors. In addition, the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)[5] are also becoming more relevant for a growing number of companies.

The investment of one million euros in the Vontobel Fund - Clean Technology corresponds to PAE of 4,710 t CO_2e. The three biggest contributors to avoided emissions are Saint-Gobain, Canadian Solar and Andritz at 31 %, 23 % and 20 % of the fund's total avoided emissions respectively. Overall, we can show that the Vontobel Fund - Clean Technology has a large positive impact in terms of CO_2 emission reductions across all investment themes and that the portfolio holdings avoid significantly more CO_2 than they emit (see figures 5 and 6).

Estimating PAE in addition to the traditional CO_2 footprint assessment helps understanding a company's relationship to climate change. Tightening regulatory measures to curb emissions and a potential price on carbon emissions, be it via tax or through a trading platform, will shift demand towards energy efficient products, processes and related services. Companies offering high PAE could enjoy better financial performance in such a transition period.

Figure 5 and 6: Portfolio holdings avoid more CO_2 than they emit
t CO_2e per EURm invested

DATA PER 1 EURm INVESTED	t CO_2e EMISSIONS (SCOPE 1&2)[6]	t CO_2e EMISSIONS (SCOPE 3 UPSTREAM, ESTIMATE)[7]	PAE t CO_2e
Total fund	**118**	**263**	**4,710**
Clean Energy Infrastructure	23	44	1,844
Building Technology	20	54	1,777
Efficient Industry	18	29	977
Clean Water	22	34	52
Low Emission Transportation	9	31	42
Lifecycle Management	26	71	18



Source: Vontobel Asset Management, calculations and estimates in cooperation with ISS ESG. Portfolio as of June 30, 2019.

[5] The TCFD, a section of the Financial Stability Board, in June 2017 published specific recommendations on the voluntary reporting of the financial impact of climate risks. The focus is on the four areas governance, strategy, risks, as we as Metrics and Targets. The climate risks are divided into transition risks and physical risks.
[6] Scope 1&2: Carbon emissions generated during a company's manufacturing process
[7] Scope 3: Carbon emissions of suppliers to a manufacturing company (upstream, estimate)

Carbon emissions in a global context

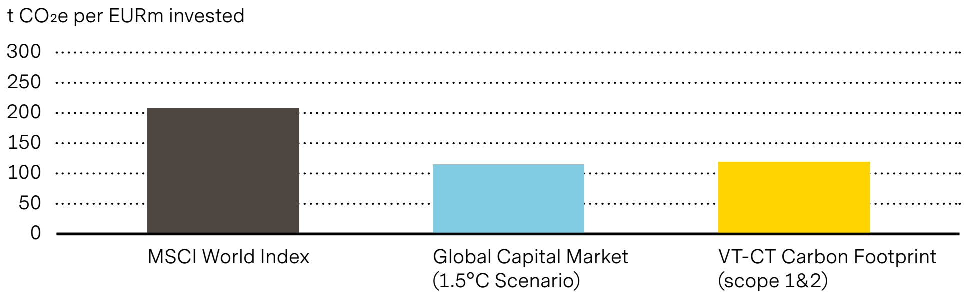
At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal global climate deal. The so-called Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping the rise in global temperature "well below" 2 degrees (or even 1.5 degrees) Celsius this century versus pre-industrial levels. Additionally, the agreement aims to strengthen the ability of countries to deal with climate change.

To put our calculation of potential avoided emissions into this broader context, we compare the results of the Vontobel Fund - Clean Technology to relevant third-party carbon data. A critical question is whether the level of avoided carbon emissions is sufficient to limit global warming as defined by the Paris Agreement.[6] Figure 7 shows the approximate level of carbon emissions (scope 1&2) that is associated with an investment of 1 million euros into today's economy, illustrated by the carbon footprint of the MSCI World Index (black column). The blue column shows the level of emissions corresponding to warming of 1.5 degrees Celsius. This number is based on scientific models requiring the economy to reduce 2017 levels of global greenhouse gas emissions by 55% until 2030.[7] The yellow column shows that the carbon footprint of the Vontobel Fund - Clean Technology is already today broadly aligned with the 1.5 degree Celsius objective. Our contribution in times of climate change reporting

The ongoing discussion on climate change since the Paris Agreement, the climate strikes initiated by Greta Thunberg and the rising opposition by the young generation, have helped to accelerate the transition towards a low carbon society. Over 2,450 investors that are signatories to the UN Principles for Responsible Investment (UNPRI), are required to comply with the Task Force on Climate-Related Financial Disclosures (TCFD) by 2020. We see TCFD as a catalyst to drive increased disclosure on climate strategy and growing investment in climate friendly solutions. According to a Bank of America Merrill Lynch estimate, climate action regarding renewables, storage and infrastructure protection is likely to require investments of around 10 – 14 trillion US dollars.[8]

Companies are therefore called upon to take the matter in their own hands. The finance industry can contribute in various ways. One possibility is to make carbon emissions and climate risk measurement a vital part of their risk assessment. We focus on a suitable metric to underline the positive impact on climate change of the fund holdings, namely, carbon emissions avoided through innovative products and services. With our approach for the Vontobel Fund - Clean Technology we give investors the opportunity to shift from the current focus on mitigating ESG risks to positive impact considerations.

Figure 7: Vontobel Fund - Clean Technology is broadly aligned with the + 1.5 degree Celsius limit

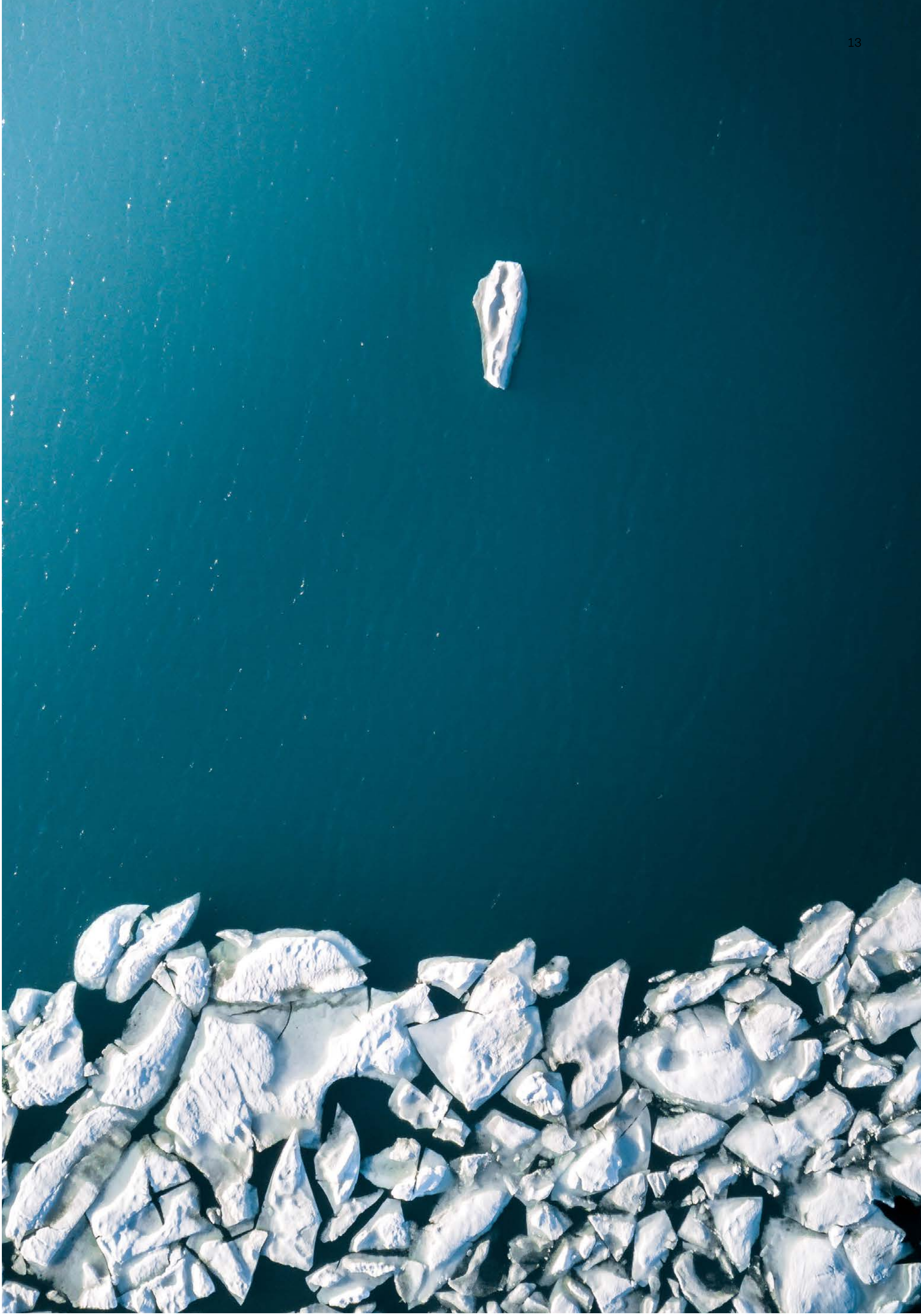


Source: YourSRI, ISS ESG and Vontobel Asset Management

[6] The effort to limit global warming to 1.5 or 2 degrees Celcius versus pre-industrial levels, a non-binding United Nations goal, subscribed to by 174 nations and the European Union, effective since November 2016

[7] UNEP: Emissions Gap Report 2018, November 2018; www.unenvironment.org/emissionsgap

[8] Bank of America Merrill Lynch, Climate-geddon in reporting – a primer on TCFD, August 2019



Appendix

ESG at Vontobel
As a globally operating financial expert with Swiss roots, we specialize in wealth management, active asset management and investment solutions. Vontobel has been committed to value-oriented and far-sighted investment for generations. As a pioneer in the field, we have offered a wide range of sustainable investment solutions since the 1990s.

Vontobel is part of the United Nations (UN) Global Compact – a strategic initiative for companies that pledge to align their operations and strategies with universal principles in the areas of human rights, labor, environment and anti-corruption. In addition, Vontobel is a climate neutral company according to Scope 1, 2 & 3 and a signatory to the Principles for Responsible Investment. We adopt a broad commitment to culture and society through, for example, our membership of the ICRC Corporate Support Group.

Leading ESG rating agencies class Vontobel as "sustainable" and the Corporate Disclosure Project (CDP) rank us as one of the top ten climate friendly financial services providers in Germany, Austria and Switzerland.[9]

Voting & Engagement
As managers of the Vontobel Fund - Clean Technology, we consider active ownership as very important for the development of sustainable economies, societies and the environment. Material ESG issues can impact the future success of a company and therefore its investment potential. Consequently, we put a strong emphasis on direct engagement with our portfolio holdings, particularly on environmental issues and the related opportunities and risk. We deem this an integral part of our research activities. The ***Voting & Engagement Guidelines*** for this fund are based on the Vontobel Voting & Engagement guidelines and were updated and further specified in summer 2019. They also describe the key objectives of our engagement, which we believe are relevant for the investment themes of the Vontobel Fund - Clean Technology.

Impact indicators – data procurement, calculation and data quality
Wherever possible, we rely on reported data from the portfolio holdings. This could include annual reports, sustainability reports, websites or other investor information. Requesting this data and motivating companies to measure and disclose the required data and indicators publicly is part of our engagement work.

The relevant environmental metrics for the portfolio companies were measured where data was available or could be estimated. The analysis included all companies in which the Vontobel Fund - Clean Technology was invested in as of June 30, 2019. We aimed to obtain the most recently available environmental data from the invested companies; for over 90%, the data is from company's fiscal year 2018 or ending March 2019. The percentage owned of each invested company (the calculation is based on the proportion of shares owned) was applied to measure the environmental benefit attributable to the fund.

Figure 8: Data availability by companies

IMPACT INDICATORS	NO OF RELEVANT COMPANIES	DISCLOSED	ESTIMATED
CO_2e emitted (carbon footprint)	61	43	18
CO_2e avoided (PAE)	46	23	23
Renewable energy generated	15	15	
Renewable energy devices shipped	4	4	
Drinking water provided	4	4	
Water recycled / treated or saved	19	19	
Eco-friendly passenger transport	2	2	
Cargo transported on rail	1	1	
Waste treated or recycled	4	4	

[9] www.vontobel.com/en-ch/about-vontobel/responsibility/sustainable-investing/

Sources for the calculation of the individual impact indicator comparison in figure 4:

- Renewable energy generated: Eurostat: Electricity consumption per capita in the households sector in the EU-28 in 2017 was 1,579 kWh per capita. Source: https://ec.europa.eu/eurostat
- Renewable energy devices shipped, own estimate: Wind and solar power – average capacity 30%. Coal power plant needs on average 1.2 kg thermal coal for the production of one kWh electricity.
- Drinking water provided: European environment agency: On average, 144 litres of water per person per day is supplied to households in Europe. (2017: per year: 144 l × 365 days = 52,560 l or 52.56 m^3). www.eea.europa.eu
- Water recycled/treated or saved: assumed that all drinking water is treated/recycled
- Waste treated or recycled: Eurostat waste statistics 2017: EU average of 487 kg waste per capita and year. Source: https://ec.europa.eu/eurostat
- Passenger transport eco-friendly: Short distance flight of 500 km on average
- Rail cargo: payload of a 40-ton truck is about 27 tons: we assumed a road distance on Switzerland's Gotthard route from Erstfeld to Biasca (78 km) for illustration purposes for rail cargo kilometres.
- Carbon footprint: Cars: average annual distance in Germany 2018: 13,727 km; average CO_2 emission of EU cars in 2018: 120.4 g/km → 1.65 t CO_2/year. Source: www.kba.de; Kraftfahrtbundesamt
- Avoided carbon emissions: see carbon footprint

Figure 9: Allocation of impact indicators to the Clean Technology themes

THEME	ANNUAL RENEWABLE ENERGY GENERATED	RENEWABLE ENERGY DEVICES SHIPPED	DRINKING WATER PROVIDED	WATER RECYCLED / TREATED / SAVED	ECO-FRIENDLY PASSENGER TRANSPORT	CARGO TRANSPORTED ON RAIL	WASTE TREATED / RECYCLED	CARBON FOOTPRINT (SCOPE 1& 2)	AVOIDED CARBON EMISSIONS
	GWh	MW	million m^3	million m^3	million passenger-km	million ton-km	tons	tons CO_2e	tons CO_2e
TOTAL	**46.4**	**22.5**	**6.2**	**6.2**	**15.2**	**28.9**	**35,000**	**29,236**	**1,168,043**
Clean Energy Infrastructure	36.3	22.5	–	–	–	–	–	5,715	457,435
Building Technology	0.1	–	–	0.10	–	–	–	5,001	440,478
Clean Water	3.7	–	6.2	4.33	–	–	27,000	5,369	12,925
Efficient Industry	0.1	–	–	–	–	–	–	4,409	242,372
Low Emission Transportation	–	–	–	–	15.2	28.9	–	2,184	10,313
Lifecycle Management	6.2	–	–	0.82	–	–	8,000	6,558	4,521

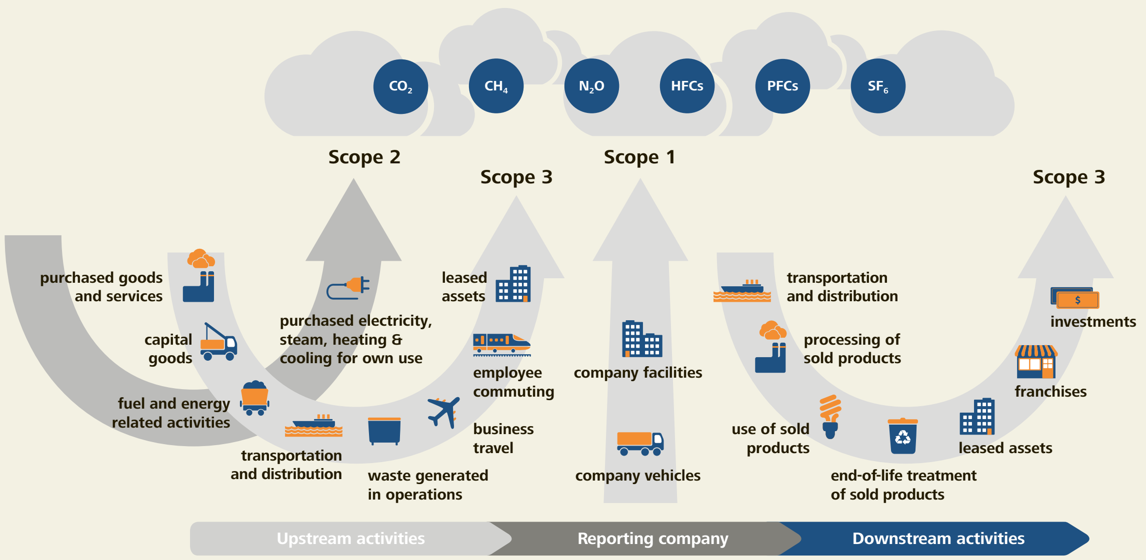
Source: Vontobel Asset Management. Portfolio as of June 30, 2019. Asset under Management: 248 EURm.

Potential Avoided Emissions (PAE)
Avoided emissions are "emissions that would have been released if a particular action or intervention had not taken place".[10] Avoided emissions can appear in Scope 1, 2 and / or 3, depending on the type of product or service offered and how it affects the third parties[12] value chain.

Methodology
This is the fourth time we have conducted such an analysis. No significant methodological changes have been implemented since the previous year's analysis.

[10] CDP, Technical note: Glossary terms

Figure 10: The GHG Protocol's division of greenhouse gas emissions into Scopes



Source: GHG Protocol

The emissions occurring during the use of a product, falling into the producing entities Scope 3 emissions, can be much larger than the emissions from the product's production. Hence, the assessment of Scope 3 emissions are of utmost importance. The emissions avoided by using a more efficient product or service are often conditional to either consumer or market behaviour although this analysis does not make absolute predictions about behavior or market developments. Consequently, ISS ESG has chosen the term "potential avoided emissions" (PAE) to underline that the avoided emissions presented in this report are not assured or verified by a third party and are dependent on certain behaviours. Furthermore, the companies included in this report provide popular services with a proven market demand, sometimes using infrastructure that has been in place for over a century. It is therefore difficult to establish additionality. For instance, if one company were to cease operation, it is likely that a company with a similar offering would take its place in the market.

Baseline

To quantify an amount of potential avoided emissions, a baseline has to be established. The baseline describes what would have occurred if the product or service had not been made available. The PAE are calculated by taking the difference in GHG emissions between the baseline level and the scenario where the product or service is made available.

Calculations
Each underlying company was contacted and asked to provide data on avoided emissions. If a holding company was able to provide their own avoided emissions calculations, either via direct communication or publicly available information, their calculations were reviewed and used. In some cases, if the companies' calculations were deemed imprecise, the calculations were amended. If no data was provided, a variety of methods would be applied, such as an analysis of climate friendly product lines, or an extrapolation based on key figures from projects or companies in the same sector. The choice of assumptions and emission factors has followed a conservative approach. In other words, when choosing data points, the value generating the lower amount of PAE has been selected.

For companies providing products or services where the PAE is expected to occur over a longer period, such as via an energy efficient battery or renewable energy technologies, an exante approach considering the lifetime of the product or service has been applied.

If a holding company failed to provide data, and the products and services provided were difficult to define from an environmental perspective, the holding would be given the rating 'No Potential Avoided Emissions' (No PAE).

The data request concerned 2018. If data from 2018 was unavailable, the latest available data was used instead.

Double counting
From an opportunity perspective, a company providing PAE benefits is contributing to building a solution to the challenges posed by climate change. In a complex environment with multiple value chains, it is nearly impossible to completely exclude double counting. Some companies can provide interlinking services, each reporting how their service helps third parties avoid emissions. To illustrate, our cooperation partner ISS ESG can use the example of a wind farm. A wind turbine producer will report the avoided emissions from installed capacity. Engineering consultants may do the same after having assisted the wind farm developer with turbines installation. A transport company can subsequently use this energy to lower the emissions generated by travel. As part of the same value chain, all parties might report avoided emissions from the same source. This does not pose a problem on a company level, but the possibility of double counting on a portfolio level can be quite high. However, a portfolio analysis gives the stakeholder an overview of the holdings' priorities and overall climate strategies, and creates a mapping of positive impact.

Explanatory power and limitations
The primary limitation of this exercise has been the availability of relevant data. The process of analyzing the activities of a company is time consuming and presents several challenges, including the interpretation of unstandardized reports and a lack of available information. The results are therefore always dependent on the quality of the available data. Many results presented in this report are thus based on approximations and assumptions. The data used in this report is derived from a couple of sources. For companies that were not able to provide data but whose offering enable PAEs, generic data has been used.

Allocation rules – ownership principle
The emissions and PAE are proportionally allocated 'per share' to the investor. If an investor owns 0.1 % of a company, 0.1 % of that company's emissions or PAE's have been apportioned to that investor. On a fund level, these PAEs and emissions are being aggregated based on the respective ownership of each holding.

Intensity metrics
In this study, we present the results based on an investment of 1 million euros. This provides an estimate how many tons of CO_2 emitted or avoided an investor would finance in relation to the respective ownership in a certain company or portfolio. The metric describes the emissions or PAE intensity of an investment amount. A company's share of PAE is determined by the value of shares held / the company's market capitalization.

Figure 11: PAE data of all holdings as of June 30, 2019

THEME / SUBTHEME	HOLDINGS	TOTAL PAEs (tCO2e)	PAE PER EURm INVESTED	% OF OWNERSHIP	PAE PER OWNERSHIP
Building			**80,449**		**440,478**
Building Materials & Insulation			74,125		415,253
	COMPAGNIE DE SAINT GOBAIN	1,200,000,000	63,358	0.03%	366,768
	FERGUSON	91,897,916	6,347	0.03%	29,546
	KINGSPAN GROUP	38,150,000	4,419	0.05%	18,939
Building Technologies			4,710		23,797
	INGERSOLL-RAND	4,300,000	160	0.02%	988
	JOHNSON CONTROLS	12,556,177	384	0.01%	1,883
	REGAL BELOIT	12,831,082	4,166	0.16%	20,926
Smart Lighting			1,614		1,428
	OSRAM LICHT	4,495,000	1,602	0.03%	1,392
	UNIVERSAL DISPLAY	90,061	12	0.04%	36
Clean Energy Infrastructure			**154,886**		**457,435**
Alternative Energy			146,956		426,745
	CANADIAN SOLAR	107,851,701	94,418	0.25%	264,696
	FIRST SOLAR	44,118,927	7,242	0.05%	23,010
	HUANENG RENEWABLES	17,082,079	6,671	0.12%	19,792
	ORSTED	5,779,871	181	0.01%	522
	SIEMENS GAMESA RENEWABLE ENERGY	227,549,856	22,850	0.03%	69,786
	VESTAS WIND SYSTEMS	235,610,270	15,593	0.02%	48,938
Electric Utility			295		1,292
	IBERDROLA	16,122,652	295	0.01%	1,292
Power Equipment			5,002		20,284
	MASTEC	0	0		0
	PRYSMIAN	20,356,164	4,183	0.08%	17,026
	QUANTA SERVICES	0	0		0
	SIEMENS	73,000,000	820	0.00%	3,258
Smart Grid			2,632		9,113
	ITRON	5,705,860	2,632	0.16%	9,113
Industry			**91,709**		**242,372**
Industrial Engineering			1,254		6,854
	AIR PRODUCTS	55,000,000	1,254	0.01%	6,854
	NVENT ELECTRIC	0	0		0
Industrial Equipment			87,631		230,918
	ANDRITZ	301,430,423	87,564	0.08%	230,641
	CHROMA ATE	0	0		0
	OMRON	659,000	67	0.04%	277
	ZEBRA TECHNOLOGIES	0	0		0
IT & Software			2,824		4,600
	APPLIED MATERIALS	1,245,852	34	0.02%	246
	ASML HOLDING	0	0		0
	EQUINIX	0	0		0
	INFINEON TECHNOLOGIES	54,000,000	2,784	0.01%	4,329
	KEYSIGHT TECHNOLOGIES	0	0		0
	NVIDIA	0	0		0
	NXP SEMICONDUCTORS	177,071	6	0.01%	26
	SYNOPSYS	0	0		0

THEME / SUBTHEME	HOLDINGS	TOTAL PAEs (tCO2e)	PAE PER EURm INVESTED	% OF OWNERSHIP	PAE PER OWNERSHIP
Lifecycle Mgmt.			**1,410**		**4,521**
Waste Mgmt. & Recycling			1,410		4,521
	CHINA EVERBRIGHT	6,546,992	1,312	0.06%	4,216
	LKQ	725,088	99	0.04%	305
Low Emission Transportation			**3,258**		**10,313**
Auto Supplier			1,508		4,053
	BORGWARNER	8,247,588	1,077	0.03%	2,779
	CONTINENTAL	3,079,726	120	0.01%	340
	DENSO	2,749,955	94	0.01%	286
	NIDEC	7,740,999	216	0.01%	649
	VEONEER	0	0		0
eMobility & Alt. Fuels			902		3,247
	KION GROUP	2,172,201	333	0.06%	1,200
	MURATA MANUFACTURING	0	0		0
	SAMSUNG SDI	7,033,734	569	0.03%	2,047
Rail Infrastructure			93		343
	CRRC	1,960,787	69	0.01%	228
	ZHUZHOU CRRC TIMES ELECTRIC	132,351	24	0.09%	115
Rail Operator			756		2,670
	CSX	11,632,072	211	0.01%	1,031
	EAST JAPAN RAILWAY	16,102,539	513	0.01%	1,504
	MTR	1,159,048	32	0.01%	135
Water			**2,944**		**12,925**
Water Analysis & Chemicals			252		953
	HENKEL	9,132,000	252	0.01%	953
	THERMO FISHER SCIENTIFIC	0	0	0.00%	0
Water Equipment			1,415		7,095
	AALBERTS INDUSTRIES	81,756	21	0.09%	77
	GEBERIT	2,905,600	191	0.02%	549
	PENTAIR	752,397	134	0.05%	403
	ROPER TECHNOLOGIES	72,959	2	0.02%	13
	A.O. SMITH	3,068,656	442	0.06%	1,831
	XYLEM	8,277,687	625	0.05%	4,222
Water Infrastructure			9		50
	TETRA TECH	34,852	9	0.14%	50
Water Supplier & Disposer			1,268		4,828
	AMERICAN WATER WORKS	0	0	0.00%	0
	GUANGDONG INVEST	0	0	0.00%	0
	SUEZ	10,000,000	1,268	0.05%	4,828

Figure 12: Major findings on company specific changes in the PAE reported from our cooperation partner ISS ESG

COMPANY	CHANGE	COMMENT
Henkel	↑	Increase in reported PAE
Samsung SDI	↑	Increase in reported PAE
Andritz	↑	Improvement due to more concise information. Our ongoing engagement improved their data delivery
NXP Semiconductors	↑	Company showed an increase due to a considerable growth of the EV market
China Everbright	↑	Company had a significant increase in reported renewable energy generation
Borg Warner	↑	Results increased due to better revenue and growing backlog of hybrid and EV related products
Pentair	↑	Company disclosed substantial growth in energy systems revenues. Change of corporate structure, selling off non-water related products and services
Huaneng Renewables	↑	Increased renewable energy generation
Osram Licht	↓	Numbers disclosed in Sustainability report are lower than those communicated in email correspondence last year
Nidec	↓	Calculation based on sales figures. Lower sales in the latest reporting year

Third-party verification of this Impact Report

ISS ESG
ethix • climate • oekom

VERIFICATION STATEMENT

Impact indicators for the Vontobel Fund - Clean Technology Portfolio
30.09.2019

Review summary

ISS ESG has reviewed the KPI's reported by the Thematic Equities Team of the Sustainable Equities Boutique at Vontobel Asset Management.

- *The data points have been taken from various communication channels of the investee companies such as annual reports, sustainability reports and websites.*
- *ISS ESG reviewed a self-selected sample of 2-3 data points per type of metric.*
- *The information reviewed corresponds to that communicated by the investee companies and reflects the positive impact of the holdings in the Vontobel Fund - Clean Technology.*

ISS ESG provides corporate and country ESG research and ratings that enables its clients to identify material social and environmental risks and opportunities, including through advisory services.

Contact us

We would welcome feedback or suggestions from investors and companies to help us further develop our impact report.

For companies

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