

Impact @ Impax

Environmental Impact Report 2018

For professional investors only



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1. INTRODUCTION

Founded in 1998, Impax is a specialist asset manager investing in the opportunities arising from the transition to a more sustainable global economy. We believe that:

- Capital markets will be shaped profoundly by global sustainability challenges, including climate change, pollution, and essential investments in human capital, infrastructure, and resource efficiency.
- Trends will drive growth for well-positioned companies and create risks for those unable or unwilling to adapt.

Whilst the primary objective of our strategies is to deliver strong risk-adjusted returns for investors, the style of our environmental markets also results in quantifiable environmental benefits.

In this, our fourth year of reporting on Environmental Impact, we expand the scope to include Impax's Asia-Pacific strategy alongside our global Leaders and Specialists strategies. In response to the specific

environmental challenges in the Asia-Pacific region we have introduced metrics related to avoidance of urban air pollution, a significant health risk for citizens of growing Asian cities (p5). We have also included the Impax Renewable Energy Infrastructure strategy which has developed a total of 550 MW of renewable electricity capacity in Europe since 2013 (p6).

Alongside environmental benefits, asset owners are increasingly interested in CO₂ intensity in the context of future climate change scenarios. On page 7 the CO₂ intensity of Impax's strategies are compared against today's economy as well as an economy operating within the scope of the Paris Climate Agreement. The target to limit global atmospheric warming to 2°C above pre-industrial levels is an ambitious goal. Following updated scientific advice this may be tightened to 1.5°C. In 2017 all of our strategies showed markedly lower CO₂ intensity than both the current economy and a theoretical 2°C aligned scenario.

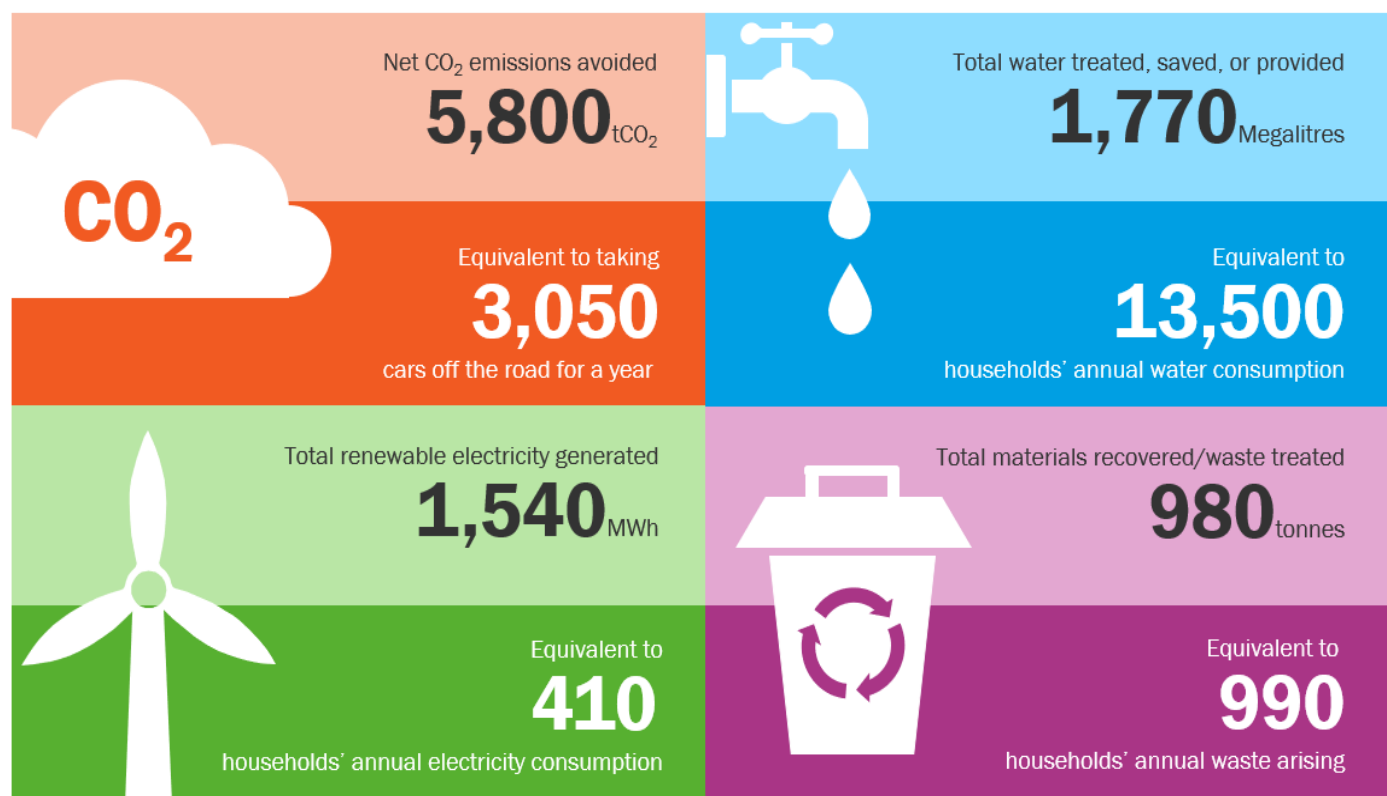
Impact measurement continues to evolve across asset classes and we appreciate ongoing feedback and engagement from the investment community and companies on our work to report in this area.

2. IMPAX SPECIALISTS STRATEGY

The Impax Specialists strategy invests globally in “pure play” companies providing solutions to resource scarcity and environmental pollution through their products or services. Investee companies must have more than 50% of their underlying revenue generated by sales of environmental products or services in the energy efficiency, renewable energy, water, waste or

sustainable food markets. In practice, this weighted average revenue exposure across the portfolio is significantly higher (approximately 77%¹). The impact metrics vary each year in relation to the portfolio positioning, which is designed to optimise financial return within the investable universe.

IN 2017, A US\$10 MILLION INVESTMENT IN THE IMPAX SPECIALISTS STRATEGY PRODUCED²:



During 2017 the portfolio managers reduced exposure to the water treatment sector in favour of a larger exposure to companies within the materials recovery and recycling value chain. As a result, the water treated metric has fallen compared with the previous year while the waste recovered or treated metric has risen.

The renewable electricity generated metric has fallen following the exit of a Chinese wind developer and a reduced exposure to a geothermal energy company. Despite this, the net CO₂ emissions avoided for the portfolio remained quite similar between the two years due to the emissions avoided in the waste treatment value chain.

	2016 ²	2017 ²
Net CO ₂ emissions avoided:	6,260 tCO ₂	5,800 tCO ₂
Total water treated, saved, or provided:	2,450 Megalitres	1,770 Megalitres
Total renewable electricity generated:	2,370 MWh	1,540 MWh
Total materials recovered/waste treated:	630 tonnes	980 tonnes

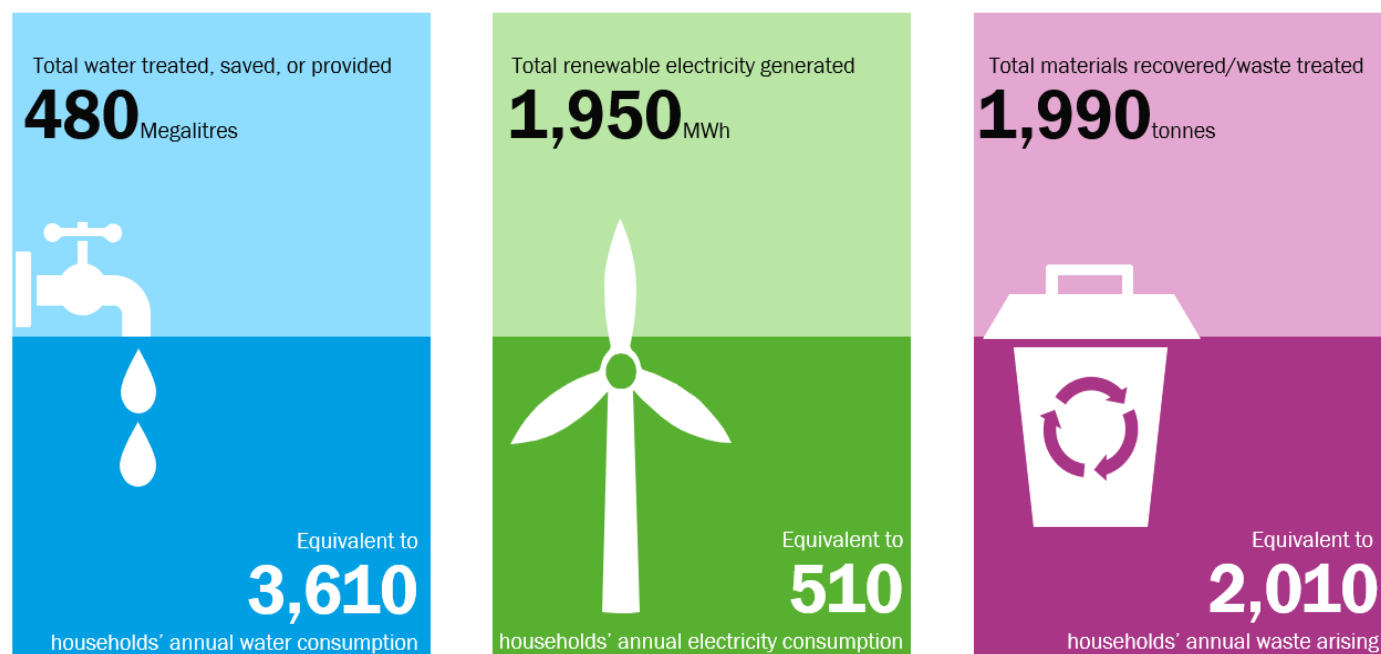
¹As at 30 September 2018. ²Source: Impax Asset Management. Impact of US\$10m invested in the strategy for one year. Based on most recently reported annual environmental data for holdings in the Impax Specialists strategy as at 31 December 2017. Impax's impact methodology is based on equity value.

3. IMPAX LEADERS STRATEGY

To be eligible for investment by the Impax Leaders strategy, investee companies must generate more than 20% of their underlying revenue from sales of environmental products or services. This results in a mid/large cap portfolio providing a lower risk

approach to investing in global environmental opportunities. The weighted average environmental revenue exposure of the portfolio is much higher than the threshold (approximately 56%³).

IN 2017, A US\$10 MILLION INVESTMENT IN THE IMPAX LEADERS STRATEGY PRODUCED⁴:



The strategy's addition of a renewable energy developer in China has resulted in an increase in renewable electricity generated in comparison to the previous year. The CO₂ emissions directly attributable

to utility companies, and a smaller exposure to pure water treatment companies, has resulted in decreases in the CO₂ emissions avoided and water treated metrics.

	2016 ⁴	2017 ⁴
Net CO ₂ emissions avoided:	280 tCO ₂	120 tCO ₂
Total water treated, saved, or provided:	2,160 Megalitres	480 Megalitres
Total renewable electricity generated:	1,790 MWh	1,950 MWh
Total materials recovered/waste treated:	2,000 tonnes	1,990 tonnes

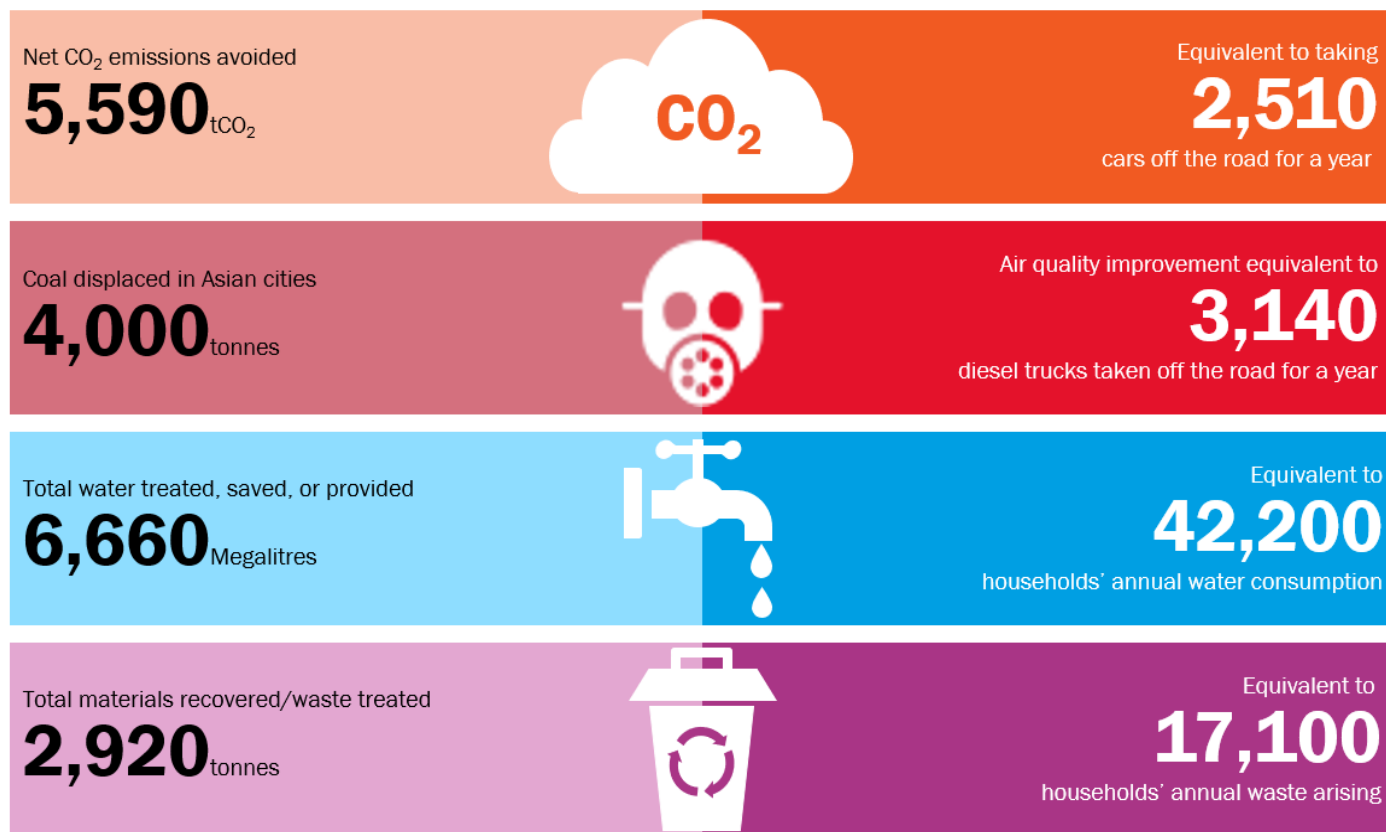
³As at 30 September 2018. ⁴Source: Impax Asset Management. Impact of US\$10m invested in the strategy for one year. Based on most recently reported annual environmental data for holdings in the Impax Leaders strategy as at 31 December 2017. Impax's impact methodology is based on equity value.

4. IMPAX ASIA-PACIFIC STRATEGY

The Impax Asia-Pacific strategy aims to achieve sustainable, above market returns over the longer term by investing regionally in Asia-Pacific companies active in the rapidly growing Resource Efficiency and Environmental Markets.

Investee companies must generate more than 20% of their underlying revenue from sales of environmental products or services. In practice, this weighted average revenue exposure is much higher (approximately 70%⁵).

IN 2017, A US\$10 MILLION INVESTMENT IN THE IMPAX ASIA-PACIFIC STRATEGY PRODUCED⁶:



Tackling urban pollution is a common theme within our global strategies, and a particular focus in our Asia-Pacific strategy. The fast pace of economic development in recent decades, effective at raising income levels and standards of living, has resulted in significant local air, water and soil pollution and an infrastructure deficit in areas such as water treatment and waste management.

The impact metrics we have chosen for the Asia-Pacific strategy reflect this local context, in considering coal displaced and its impact on urban

air quality, alongside water and waste treatment outcomes.

In comparison with the Leaders and Specialists strategies the Asia-Pacific impact metrics indicate a material environmental outcome, particularly in the water and waste metrics. The fossil fuel intensity of Chinese and Indian power generation (primarily coal) result in a more polluting baseline comparison for the improvements delivered by the portfolios versus our global strategies.

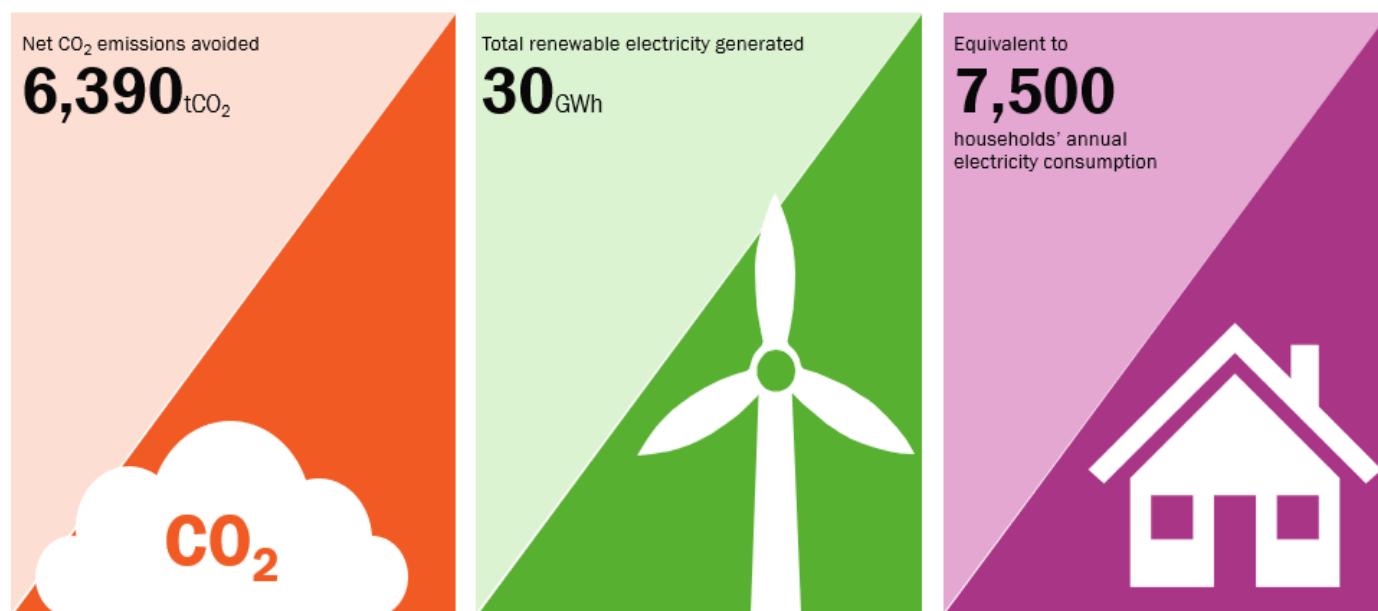
⁵As at 30 September 2018. ⁶Source: Impax Asset Management. Impact of US\$10m invested in the strategy for one year. Based on most recently reported annual environmental data for holdings in the Impax Asia-Pacific strategy as at 31 December 2017. Impax's impact methodology is based on equity value.

5. IMPAX RENEWABLE ENERGY INFRASTRUCTURE STRATEGY

The Impax Renewable Energy Infrastructure strategy develops wind, photovoltaic and hydro electricity generation projects in Europe. By adding power generation capacity based on renewable energy rather than fossil fuels, the strategy is contributing to

the reduction of CO₂ intensity within the local power network. The Impax Renewable Energy Infrastructure strategy has developed 550 MW⁷ of renewable electricity capacity since 2013.

IN 2017, A US\$10 MILLION INVESTMENT IN THE IMPAX RENEWABLE ENERGY INFRASTRUCTURE STRATEGY PRODUCED⁸:



Since 2013 the strategy has developed sites in six European countries with accumulative CO₂ avoidance of 1,080,000 tCO₂⁷. This environmental benefit continues once a project is completed and sold to a new operating asset owner, and is therefore included in our metrics to the end of life of the fund.

CARBON EMISSIONS AVOIDED BY THE IMPAX RENEWABLE ENERGY INFRASTRUCTURE STRATEGY⁹:



⁷Source: Impax Asset Management, data as at 2018. ⁸Source: Impax Asset Management. Impact of US\$10m invested in the strategy for one year. Based on most recently reported annual environmental data for holdings in the Impax Renewable Energy Infrastructure strategy as at 31 December 2017. Impax's impact methodology is based on equity value. Notes: calculation based on carbon avoided relative to country-specific grid electricity generation. For realised "exited" assets, annual carbon avoided is calculated using the P50 annual electricity production values based on our most recent yield studies. ⁹Source: IPCC/Impax attribution analysis.

6. IMPAX STRATEGIES VERSUS A 2°C SCENARIO

The global economy is currently producing an unsustainable level of CO₂ emissions. However, 181 countries have ratified the Paris Climate Agreement with the objective to limit the global temperature rise to 2°C above pre-industrial levels.

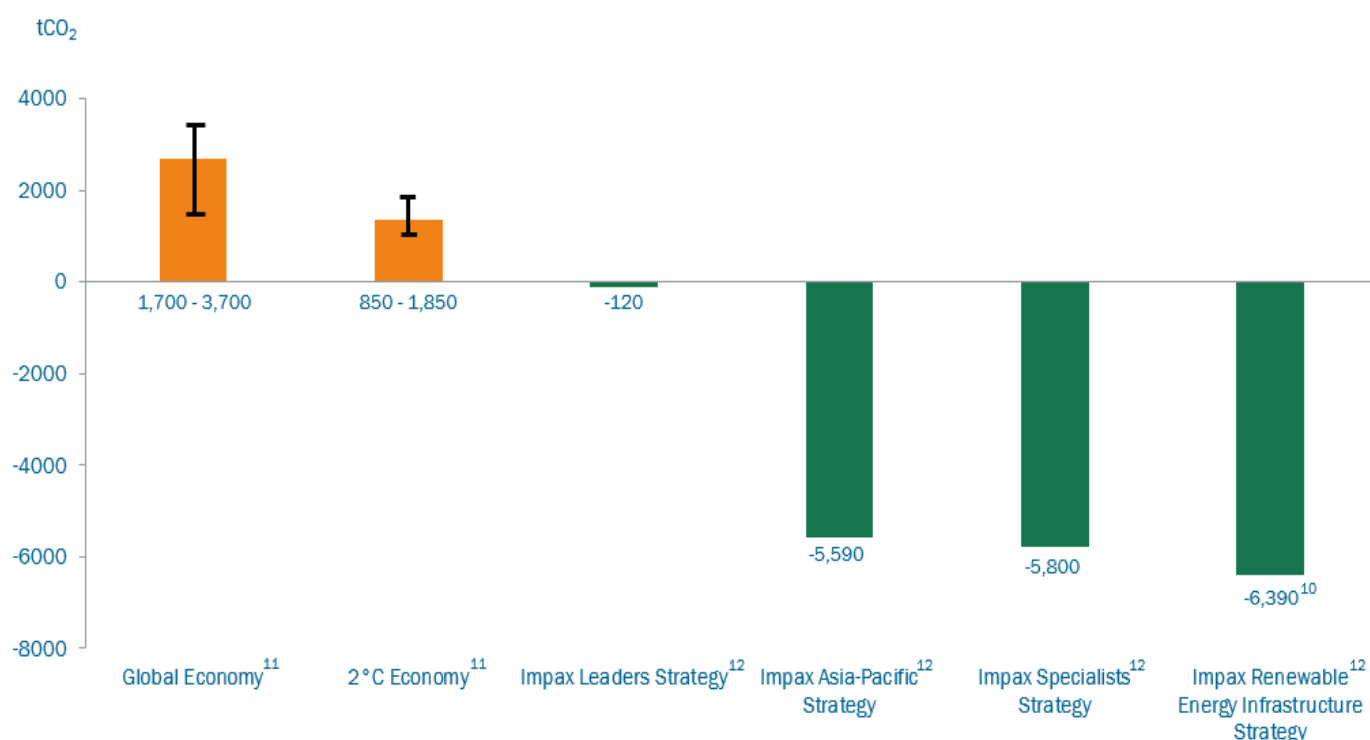
In the column chart we have compared the CO₂ outcome of US\$10m invested in the global economy as it is today, with the lower carbon economy we will need if we are to achieve the 2°C target. The four columns on the right represent the impact of a US\$10m investment in each of four of our strategies.

A “2°C economy” still emits CO₂, but at a significantly lower level than we produce today. A huge change in our energy use and substantial investment in new

environmental technologies are required if we are to meet these goals. However, this shift is already well underway, driven by the rising adoption of energy efficiency, renewable energy and waste management, as well as changes in land use and farming practices around the world.

Impax’s Leaders, Specialists, Asia-Pacific and Renewable Energy Infrastructure strategies have significant exposure to these low carbon “transition technologies”. Comparing the portfolios’ net CO₂ avoidance with the CO₂ emitted by the current economy is helpful in order to understand the significance of this positive impact.

NET CO₂ IMPACT PER US\$10 MILLION INVESTED:



¹⁰Project-related direct or indirect GHG emissions are not included in the calculation in 2017 due to their low materiality to the emissions outcome.

¹¹Source: United Nations Framework Convention on Climate Change (UNFCCC), 2016. Aggregate effect of the intended nationally determined contributions: an update – synthesis report by the secretariat, McKinsey Global Institute, Haver, BIS, Deutsche Bank estimates, 2014, and IMF, National Central Banks and Statistical Offices, Thomson Reuters, 2014. Black bars reflect the range of estimates of value invested. ¹²Impax Asset Management, 2018. Impax’s impact methodology is based on equity value.

7. THE IMPACT METHODOLOGY

The relevant environmental metrics for all portfolio companies were measured where data was available or could be estimated. The analysis included all companies in which the strategies were invested as at 31 December 2017. At the time of preparation, we aimed to obtain the most recently available environmental data from our investee companies. For approximately 90% of companies this was from 2017 reported information and for the remainder of companies this was from previously reported information.

The percentage owned in each underlying company (calculated based on the proportion of shares owned) as at 31 December 2017 was applied to measure the environmental benefit attributable to the strategies.

We started by identifying the metrics against which we would measure the impact of the companies.

These included:

- Greenhouse gas (“GHG”) emissions: net impact from GHG emitted less GHG avoided (tonnes of CO₂ equivalent).
- Renewable electricity generated.
- Water treated, saved or provided.
- Materials recovered/waste treated.
- Coal displaced in Asian cities.

The relevance of each metric was also assessed for each company based on their business activities:

- We created a heat map (p9) which provided a qualitative indication for the positive impact of each company.
- We collected relevant data from company disclosures, including sources such as annual reports, CDP and sustainability reports. Where information was not available, we contacted companies to request additional disclosure, which in some cases produced additional relevant data.
- However, some companies could not/did not provide information on several metrics. We therefore created estimates for these data points based on relevant peer groups of companies which do disclose this information. We have been conservative with all our estimates to ensure that we don’t overstate the positive impact, or in the case of carbon dioxide emissions, the net emissions avoided.

The table on page 10 summarises the proportion of data that was available and estimated.

The environmental impact of our investments will always depend on the mix of underlying holdings and are thus subject to change.

AN ILLUSTRATIVE INDICATION OF ENVIRONMENTAL IMPACT FOR EACH COMPANY IN THE SPECIALISTS STRATEGY

Company	CO ₂ emitted (tonnes)	CO ₂ avoided (tonnes)	Renewable electricity generated (MWh)	Water treated, saved or provided (megalitres)	Materials recovered/ waste treated (tonnes)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Negative impact

Positive impact

DATA AVAILABILITY BY COMPANY

KPI's Estimated/Disclosed	Companies for which the KPI is relevant	Companies for which the KPI was available	Companies for which the KPI was estimated	KPI was not available and could not be estimated
Specialists strategy environmental impact				
CO ₂ emitted	64	36	28	0
CO ₂ avoided	48	17	19	12
Renewable electricity generated	5	4	1	0
Water treated, saved or provided	18	9	3	6
Materials recovered/waste treated	8	7	1	0
Leaders strategy environmental impact				
CO ₂ emitted	59	47	12	0
CO ₂ avoided	51	26	13	12
Renewable electricity generated	6	5	1	0
Water treated, saved or provided	20	12	1	7
Materials recovered/waste treated	10	9	0	1
Asia-Pacific strategy environmental impact				
CO ₂ emitted	45	18	27	0
CO ₂ avoided	35	8	18	9
Renewable electricity generated (from which 'coal displaced' metrics calculated)	10	7	3	0
Water treated, saved or provided	12	6	2	4
Materials recovered/waste treated	12	6	1	5
Renewable Energy Infrastructure strategy environmental impact¹³				
CO ₂ avoided	19	19	19	0
Renewable electricity generated	19	19	19	0

Source: Impax Asset Management. ¹³Project-related direct or indirect GHG emissions are not included in the calculation in 2017 due to their low materiality to the emissions outcome.

8. EXCLUSIONS AND LIMITATIONS

Although we have made investments in companies in relation to their air pollution mitigation technologies (e.g. SO_x and NO_x), we have so far been unable to quantify their environmental outcome. This also applies to some energy efficiency investments.

Direct GHG emissions (Scope 1) and indirect GHG emissions (Scope 2) were included in our analysis. Where available, other indirect (Scope 3, e.g. air travel and waste) emissions were also included. GHG emissions were measured in CO₂ equivalents (CO₂-e),

which includes GHG emissions from methane and nitrous oxide, or CO₂ depending on data availability.

We found that US companies tend to disclose less environmental data (against all metrics), while several companies (particularly in the water sector) claimed that the positive impact of their products largely depends on the way in which end-users utilise them and therefore could not provide any impact information.

9. THIRD PARTY REVIEW OF IMPACT DATA

The Environmental Impact data for the aggregate Specialists, Leaders and Asia-Pacific strategies was prepared by the investment teams of Impax Asset Management, who are responsible for the collection and presentation of the information. The supporting data and calculations have been evaluated by a third party. This covered the following scope and approach:

Scope

- Greenhouse gas (GHG) emissions: net impact from GHG emitted less GHG avoided (tonnes of CO₂).
- Renewable electricity generated (MWh).
- Water treated, saved or provided (Megalitres).
- Materials recovered/waste treated (tonnes).

Approach

- Testing the accuracy and completeness of a sample of data for the environmental metrics

against which we measured the impact of the companies;

- Reviewing the sources of our assumptions, application of factors and our approach to estimates;
- Testing the accuracy of our data aggregation processes, including the application of our percentage ownership in each company; and
- Reviewing the appropriate presentation of the data, including the discussion of limitations and assumptions.

Limitations

- The work did not include an assessment of the current value of individual holdings or Impax's reported percentage holdings.

DISCLAIMER

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We would be delighted to hear from investors and companies with comments or suggestions to help us develop our impact report.

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