

Global Impact Equity Fund

Annual Report 2022





Introduction





It's difficult to put a positive spin on 2022 for most sustainable, ESG focused or impact funds. And our year was no different. While equity market optimism was shattered as fears of inflation took hold and bond yields started to increase, human tragedy began to unfold with the Russian invasion of Ukraine. We certainly entered 2022 more cautiously than 2021, but we could not have predicted the devastation the war in Ukraine would cause.

The human cost of the war in Ukraine horrified the world. It also had very real economic impacts. Food, fuel, and fertilizer prices all surged following the invasion. The higher prices were disproportionately felt in emerging economies that depend on Ukrainian and Russian exports. Combined with rising mortgage rates in developed market we saw a cost-of-living crisis start to take root. The United Nations estimates that rising inflation and the impacts of war in Ukraine will further derail progress made on tackling poverty with the number of people living in extreme poverty projected to increase.

These factors sent the equity market down 20% over the year while the energy sector was up 30%, In response we saw renewed questions over whether impact investing, or other sustainable styles, should be mainstream. In the US, environmental, social and governance (ESG) factors rapidly politicised with some states drafting 'anti-ESG' bills. The misconception that ESG is a drag to investors returns goes completely against what we believe, which is that that unmet needs are untapped sources of unmet demand and represent attractive opportunities for companies with the right products and services to deliver meaningful impact and superior long-term returns.

Helping improve education, deliver better healthcare, fairer employment, affordable energy and many other key issues requires innovative and impactful solutions. But the debate does strike at the heart of the issue. This year, perhaps more than previously, we saw social needs compete with environmental ones. The immediate need for security and stability of energy trumped the equally immediate need for clean energy.

We have repeatedly said that unmet needs are not one dimensional. The solution to every social issue will have environmental considerations and consequences and vice versa. Companies need to balance both, and moreover regulators and legislators need to create an environment where both social and environmental issues can be considered.

Impact investing must include a focus on these negative externalities and should not pursue a goal at all costs. abrdn has eight impact pillars: four environmental and four social, but all eight consider ESG risks across a company and its operating environment

During 2022 we significantly reduced exposure to the two largest environmental pillars – Sustainable Energy and Sustainable Real Estate & Infrastructure. This was a combination of individual stock decisions as well as continued pressure from supply chain cost inflation & constraints and the impact of rapidly rising interest rates.

The reduction in our environmental weight was balanced by an increase in exposure to our two largest social pillars – Financial Inclusion and Health & Social Care. The impact case for these pillars aligns well with a focus on cost of living and social inequalities, with the added financial benefit of lower volatility and adding more stability to the overall portfolio.

As 2023 progresses we retain hope. The US passed the Inflation Reduction Act (IRA) with focus on energy security climate change, and healthcare costs. And Europe is on the brink of a legislative response designed to similarly support its clean energy space. We don't know how the increasing global competition around cleantech will end. But we are optimistic that clean energy remains firmly on country and legislative agendas with the threat of climate change looming.

We've said before that the investment community needs to allocate capital need to allocate capital to companies who are positively impacting the world's biggest problems. Time is running out to find solutions, but we're cautiously optimistic the regulatory backdrop is more favourable as we start to see concrete concrete evidence of policy changes.

Dominic Byrne, Deputy Head of Developed Markets, and Sarah Norris, Investment Director

Pillar headline impacts

Pillar headline impacts delivered by companies in the fund



Circular Economy:

over five million tonnes of material recycled



Education & Employment:

97 million registered learners



Food & Agriculture:

feed additive developed that can reduce methane emissions from dairy cows by 30%



Financial Inclusion:

over 272 million underserved individuals provided with basic financial services



Health & Social Care:

over 600 million patients with access and affordability programmes



Sustainable Energy:

over 672 million metric tonnes CO2e emissions avoided



Sustainable Real Estate & Infrastructure:

over 300 million daily passengers transported on clean mobility solutions



Water & Sanitation:

over 328 billion gallons of water saved

Portfolio impact



How do we define impact?

We use the UN's 2030 Sustainable Development Agenda and its 17 Sustainable Development Goals (SDGs) to help us define positive impact and target the most pressing global issues. Ultimately, we're looking for companies providing local solutions to three major global problems: climate change, unsustainable consumption and production, and social inequality.

What are our impact objectives?

We've identified eight 'pillars of impact' that address these broad challenges. They also align with the UN's overarching goal of creating a more peaceful and prosperous society and environment. We aim to invest in companies with products or services in each of the pillars, and measure how they help countries achieve the UN's Agenda.

How do we identify opportunities and assess our investments?

We use a 'theory of change' approach called 'impact maturity' to help us identify impact investments. We examine a company's inputs, activities, outputs, outcomes, and impacts in three 'impact maturity' stages: intentionality, implementation, and impact.

These figures include the investment and development of new technologies and sales of products that aim to increase the energy efficiency of data centres; support renewable energy storage and distribution; expand education opportunities to rural and low-income students; improve access to priority health concerns; conserve natural resources; and expand access to nutrition.

How do we monitor company progress in achieving impact?

Company self-disclosure is a crucial part of our approach to impact investing. We believe that if a company intends to deliver a product to address a specific environmental or social need, it must report the impact. To gauge results, we therefore rely heavily on company engagement and our conversations with supervisory boards, executive management teams, and divisional heads.

The following pages summarise the impact companies in the portfolio have delivered this year. We agree with the Global Impact Investing Network's stance that "context is critical to interpreting impact results in a robust and reliable way."1 In addition to case studies and pillar-level data, we also analyse the impact companies delivered according to country and region. And we compare this to international sources, most frequently the World Bank databank, to understand how the impact delivered compares to the underlying country-specific issues and needs. Above all, we aim to view our investee companies' local impacts through the lens of the global issues our portfolio targets.

Impact Maturity Following a "theory of change"

Input	Activity	Output	Outcome	Impact
Intentionality	Implementation	Impact	Impact reporting	
Nearly \$2 trillion invested by companies in the Fund to develop products or services targeting positive butcomes. While this looks like a big number, in the context of the \$5 trillion annual investment the UN estimates is required to meet the SDGs, it falls significantly short.	Over \$11 trillion of revenue generated by companies in the Fund from products or services aligned to one of our pillars	Company reporting on our targeted KPIs	Case SI Aggregated Impact Fo	Pillar Data

Companies whose products and services enable our other pillars as part of a wider value/supply chain



Doing more and better with less

Every year, we dump over 2.24 billion tonnes of waste on the planet. If we put all this waste in trucks, the resultant line would go **24 times around the world**² Consumption patterns are causing international agencies to predict an over 70% increase in annual waste generation by 2050, to **3.88 billion tonnes**. ³

The concept of a Circular Economy is to move from a 'make, use, dispose' model to one that enhances and extends the lifespan of products and materials, diverting

waste away from landfills. Our Circular Economy pillar targets companies that offer 'closed-loop solutions', which keep resources in use for as long as possible.

These products are designed to reduce pressure on natural resources and expand recycling services. This is extremely important given that at least 33% of global waste is not managed in an environmentally safe manner.⁴





Positive outputs from companies held

5_{bn}

92.5m 20k

1.4k

Over five billion tonnes of waste diverted from landfill - 850 times as heavy as the Great Pyramid of Giza

92.5 million gallons of renewable diesel produced, enough to fill 150 Olympic swimming pools

Over 20 thousand electric vehicle batteries recycled

Over 1400 tonnes of waste composted, equivalent to the weight of 250 elephants





Darling Ingredients

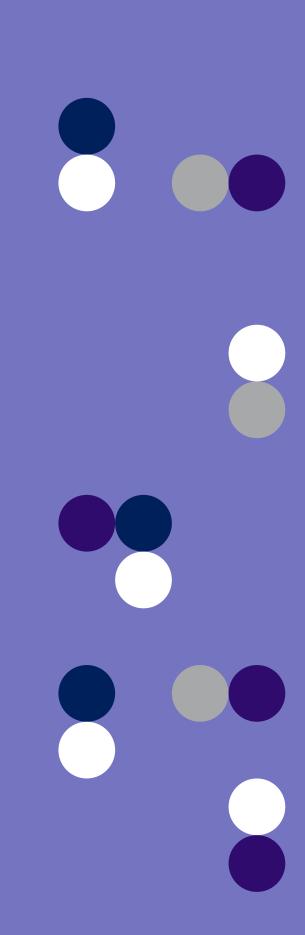
Unmet need: globally, around 14% of food produced is lost between harvest and retail, while an estimated **17% of total global food production is wasted**. Within this, households account for 64% of wastage, with food service and retail making up the remaining 36%.⁵

Intentionality: Darling Ingredients turns food by-products and waste into ingredients and renewable energy. The business's strategic investments focus on identifying waste streams and materials it can repurpose. Last year, it also investigated the use of insect proteins as an alternative source for animal nutrition, cosmetics, and other products.

Implementation: Darling's business focuses on repurposing food waste into other ingredients. It creates specialty food ingredients used to make gelatine capsules for medicines, thickeners for foods, and collagen peptides. The company also sells ingredients to businesses that make feed for pets and livestock like swine, cattle, poultry, and fish. And if the material cannot be fed to a human or an animal, Darling uses what's left to make green energy.

Impact: Darling converted about 11 million metric tonnes of food waste into unique ingredients and produced 372 million gallons of renewable diesel. The business is the largest renewable diesel producer in North America and recently announced plans to produce sustainable aviation fuel.

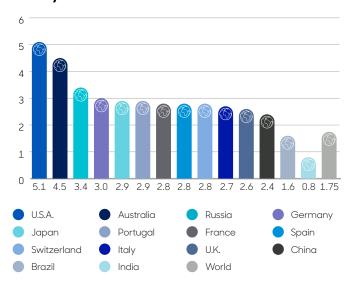








How many Earths would we need if everyone lived like U.S.A. residents?



Contributions to positive outcomes

International agencies are sounding the alarm. Among its projects, real-time data firm the World Counts measures tonnes of waste dumped globally.⁶ At the time of writing, the figure stood at over 300 million tonnes for 2023.

The world has finite resources, and we're already consuming at a rate that requires the resources of 1.8 earths a year, according to Earth Overshoot Day. Wasting this amount puts further strain on the world's resources.

Poor waste management sites can also impact air quality, and contaminate surface and groundwater. Waste pollutes land and aquatic environments with litter, and generally spoils the environment. Lack of solid-waste collection services can also have a serious impact on health, particularly for children. Without proper management, waste is often burned, which creates toxic emissions that are dangerous to both animals and humans. And accumulated waste can block drains and lead to cholera, dengue fever and other infectious diseases.⁷

Waste generation patterns remain correlated with income levels and regions. Residents of countries with higher levels of prosperity generally produce more waste. According to most recent data, high-income countries generated close to double the waste per person per day of upper-middle-income countries and over three times as much as lower-income countries.⁸

Companies held in the Fund in the Fund diverted over five million metric tonnes of waste. While encouraging, this pales in comparison when we compare it to projected waste generation in 2020, 2030, 2040 and 2050. In 2016, North America diverted around four million tonnes of waste, which is only 1.4% of the year's total, and 1% of total waste generation expected in 2050. The companies we hold with exposure to China make even less of a dent, with total waste recycled less than 0.05% of the last-reported total waste generation. The same is true for Africa, where the Fund has minimal exposure to recycling efforts or safe waste management services.







Projected waste generation per region

Region	Total waste diverted by companies in the Fund (metric tonnes)	As a proportion of 2016 waste generation	As a proportion of expected 2030 waste generation	As a proportion of expected 2050 waste generation
Europe, Middle East & Africa (EMEA)	1442291	0.28%	0.23%	0.19%
Asia Pacific	495208	0.06%	0.05%	0.04%
North America	3986840	1.38%	1.17%	1.01%
Central & South America	414238	0.14%	0.14%	0.11%
Africa	33	nil	nil	nil

Data from: Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development, Washington, DC: World Bank.

Key ESG risks

Closed-loop solutions often rely on natural capital, e.g. the shift away from plastic towards paper. Our key considerations are the impact on biodiversity and understanding how forestry assets are managed and certified. Meanwhile, recycling efforts come with their own emissions and environmental impact. We therefore evaluate the efficiency of recycling operations and what happens to waste that cannot be recycled.



Education & Employment

Creating opportunities for marginalised or vulnerable people

Full and productive employment and 'decent work for all' require businesses to invest in and support the development of their employees. Global efforts to reduce social inequalities and 'build back fairer' after Covid-19 must have education and employment at their core.

However, it's an uphill battle. The pandemic and consequent school closures meant the current generation of children could potentially lose a combined \$17 trillion in lifetime earnings (in present values). And while we've seen a partial recovery, new waves of Covid, rising inflation, supply chain disruptions and the war in Ukraine have left global unemployment above pre-pandemic levels, with worker productivity lagging in developed countries.

In education services, we target companies that directly expand access to affordable, quality education. We also look for those that recognise the importance of prioritising diversity and reaching all socioeconomic groups. In defining 'fair' employment opportunities, we place a premium on wage growth and education opportunities, as well as employee safety and equality. Additionally, we seek to include companies that protect against discrimination and give a voice to the marginalised.





Positive outputs from companies held

92m

50k+

18m

92 million students and professionals reached with education services - enough people holding hands to go almost fourtimes around the equator Over 50 thousand scientific and medical journals or e-books published 18 million monthly visits to scientific research journals, equivalent to roughly 7% of monthly Microsoft Teams active users



Case Study

Coursera

Unmet need: technological advancements, Covid-19, and the green transition are rapidly changing the working environment. Estimates suggest 1.1 billion jobs will likely face 'radical transformation', resulting in a skills mismatch. Yet only 0.5% of global GDP is invested in adult lifelong learning, representing a funding shortfall in the skills gap.¹¹

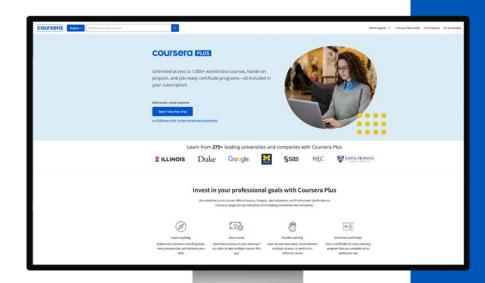
Intentionality: Coursera is a global education platform. Its mission is to provide universal access to learning so that anyone, anywhere has the power to transform their lives through learning.

Implementation: Coursera has three key segments: Consumer, Enterprise and Degrees. Consumer covers free and pay-for course certificates or subscriptions for individuals. Enterprise includes catalogues for institutions to offer to their employees. Degrees includes online degrees offered in partnership with universities.

Impact: there are currently 97 million registered learners. Coursera offers tiered pricing to ensure products are affordable. Tracking outcomes is more difficult, but 71% of global learners report career benefits. This number rising to 81% in emerging market learners. Meanwhile, 64% of learners without a bachelor's degree report career benefits.

Key ESG risks

When we evaluate the positive impact of education and education solutions, we look at quality indicators like graduation rates, affordability, wage growth, and training programmes. Key risks to these outcomes include data privacy due to the amount of online training; regulatory adherence and compliance with education standards; treatment of the workforce; and other adverse indicators. We actively engage with companies to better understand how they manage some of these ESG risks.



Top 10 countries with the most learners



Learners from around the world come to Coursera to build critical skills.









Top 10 countries by learner growth



Emerging economies reported the highest rate of new learner growth



Paraguay
98%
110k Learners



6 Kenya 61%

303k Learners



Lebanon 97% 158k Learners



Ethiopia
60%
103k Learners



Philippines 85% 1.3m Learners



Rwanda 57% 50k Learners

8



4 Guyana 74% 60k Learners



9 Vietnam 55% 718k Learners



5 Indonesia 69% 789k Learners



10 Kazakhstan 54% 323k Learners







Financial Inclusion

Tackle poverty in all its dimensions

Underserved groups are often marginalised or excluded from financial systems, which negatively impacts many other areas of their lives. Financial services act as a gateway to improving access to basic necessities like electricity, water, healthcare, housing and education. But there are still some 1.7 billion adults – more than a third of the global adult population – that don't have access to financial products or services. About half of these adults are women, poor households in rural areas, or those out of the workforce. 12

Covid-19 led to the **first rise in extreme poverty in a generation**, while the Ukraine war further derailed progress. The UN is now projecting a 16% increase in the number of people living in extreme poverty. Furthermore, disaster-related deaths rose six-fold last year. Our pillar identifies companies operating in countries and regions where there is low penetration of basic financial services for individuals, as well as for micro firms, and small and medium-sized enterprises (MSMEs).





Positive outputs from companies held

52k

270m 11trn 3.2m

Over 52 thousand bank branches operated in underserved areas

More than 270 million underserved customers and micro businesses provided with access to basic financial services

More than US\$11 trillion loaned to underserved customers, the bulk in Indonesia

3.2 million SMEs supported in Kenya



Case Study

Gentera

Unmet need: access to banking in Latin America, notably in Mexico and Peru, is significantly restricted compared to the Organisation for Economic Co-operation and Development (OECD) averages. Most recent data show that 37% of adults in Mexico and 43% in Peru have an account with a financial institution or a mobile-money provider. This compares to an average of 55% in Latin America and 95% in OECD member countries.

Intentionality: Gentera is a Mexican micro-finance lender focused on Mexico and Peru. It seeks to provide basic financial services to those excluded by the traditional banking system. To ensure affordability and access, Gentera has seven 'Client Protection Principles' that aim to develop clients' financial capabilities and inform their decision-making. Non-performing loans are stable, with Gentera offering extensive interest relief for borrowers during Covid-19.

Implementation: Gentera focuses on different underserved areas. These include credit for working capital, savings and insurance to microentrepreneurs in Mexico and Peru; banking services in Mexican communities where infrastructure is limited or non-existent; microinsurance in Mexico and Peru; and digital credit operations in Mexico.

Impact: Gentera provides clear metrics, including the total number of clients (male and female), total amount of money disbursed, and number of clients/households benefiting from its services. It also disclose client retention information, interest rates, non-performing loans, and customer churn rates.



Key ESG risks

need around basic financial services, we are mindful of predatory lending or products good by pushing people back into extreme poverty. We therefore focus on lending programmes, and interestfair pricing of products. This financial institutions work to tailor transactional, payment, offerings to specific customer needs. Furthermore, we monitor default rates, nonother things) to ensure that hand in hand with financial awareness.



Contributions to positive outcomes

In 2022, 76% of the global population held an account at a financial intuition or with a mobile-money service provider. This rises for OECD members where penetration is 97.19%. The Fund continued to invest in companies whose technology platforms supported mobile wallets for individuals outside the traditional banking ecosystem. We also invest in businesses that provided mortgages for first-time home buyers. We even hold a company that uses a riverboat to sail the Amazon to reach underserved communities.

The contribution of companies to tangible solutions is obvious in countries like Indonesia, where 50% of the population doesn't have access to a basic financial account. Companies in the Fund provided nearly 11 million underserved and unbanked individuals and SMEs with basic accounts and loans. This equates to about 11% of people in Indonesia, which is no surprise given government efforts to drive SME lending.

Account penetration in underserved areas

	Account ownership at a financial institution or with a mobile money-service provider, secondary education or more (% of	New accounts/products opened by underserved demographics with companies held in the Fund	New accounts/products for underserved demographics provided by companies in the Fund as a percentage of the
Brazil	population ages 15+) 85.56%	18,779,000	population without access
India	77.53%	8,400,000	5%
Indonesia	51.76%	10,920,000*	10.5%
Kenya	79.20%	3,200,000*	47.11%
Mexico	36.93%	1,042,300	1.1%
Peru	57.50	264,400	1.06%

^{*}includes MSMEs

Source: Global Findex Database, World Bank (https://www.worldbank.org/en/publication/globalfindex) Last updated 22 December 2022

As with last year, the Fund retained a high exposure to companies addressing Asia's 'insurance protection gap'. This refers to the prevalence of under- and non-insured individuals in emerging markets. We can see the risks of this gap in the crippling effects of out-of-pocket expenses from unexpected illnesses or the impact of extreme weather events on agriculture-based livelihoods.

In Thailand, recent World Bank data showed that social insurance programmes covered less than 5% of the population, but the adequacy of the insurance programmes in place was over 86% (see below). Companies in the Fund offered insurance services that covered 4.5 million people.

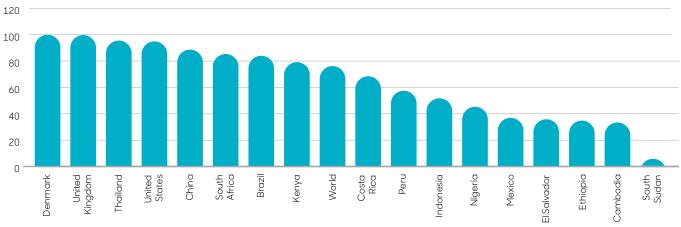


Asian insurance protection gap¹

	Coverage of social insurance programmes (% population)	Adequacy of social insurance programmes (% of total welfare of beneficiary households)	New insurance policies provided by companies in the Fund as a percentage of the population without social insurance programme coverage
China	35.6%	55.3%	0.5%
Malaysia	8.5%	31.5%	6.62%
Thailand	3.5%	86.5%	6.37%

Source: ASPIRE: The Atlas of Social Protection - Indicators of Resilience and Equity, The World Bank. Data are based on national representative household surveys. (datatopics.worldbank.org/aspire/) Last updated 22 December 2022

Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+) in 2021



Footnote: Account denotes the percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution or report personally using a mobile money service in the past 12 months (% age 15+).

Source: Global Findex Database, World Bank (https://www.worldbank.org/en/publication/globalfindex).

¹ The adequacy of social insurance programs is measured by the total transfer amount received by the population participating in social insurance programs as a share of their total welfare. Welfare is defined as the total income or total expenditure of beneficiary households. Social insurance programmes include old age contributory pensions (including survivors and disability) and social security and health insurance benefits (including occupational injury benefits, paid sick leave, maternity and other social insurance). Estimates include both direct and indirect beneficiaries. (World Bank 2021)



Providing quality food, and preventing land degradation

According to the UN, the world's **population** will reach **9.8 billion** in 2050 and 11.2 billion in 2100, amplifying the demands we place on earth's natural resources. The resources required to feed the global population are already putting unsustainable demands on land, oceans forests, and biodiversity. **Ten million** hectares of forest are destroyed every year. Within this, **almost 90%** of global deforestation is due to agricultural deforestation.¹⁴

Globally, an estimated one in **10 people worldwide suffer from hunger**. The Covid-19 pandemic exacerbated an already deteriorating situation. In 2021, nearly one in three

people (a staggering 2.3 billion) moderately or severely lacked regular access to adequate food (i.e. were food insecure). This represents an increase of almost 350 million people since the beginning of the pandemic.

Our Food & Agriculture pillar covers both social and environmental concerns. We have a twin focus on addressing hunger and nutrition, while also promoting the sustainable use of the world's resources. We therefore look at access to nutrition, improved nutrition and services for farmers, as well as how food is produced and the impact of farming practices on the land, water, and biodiversity.





Spotlight Engagement

DSM

DSM was a case study in last year's annual report. A Dutch ingredient business, it focuses on 'creating brighter lives for all', primarily through human and animal nutrition.

In 2022, DSM announced a merger with Firmenich, another ingredients business with significant exposure in perfumery ingredients. This exposure doesn't align with how we define impact within our Food & Agriculture pillar. We therefore engaged with DSM to understand how the merger might alter its exposure to green agriculture solutions.

DSM's CEO was emphatic the deal would not derail the business's overall focus on science-driven sustainability solutions. The company focuses on solutions for sustainable farming across six platforms, which together make up around a third of the combined business.

- **1.** Improve the **lifetime performance** of farm animals by enhancing animal health and welfare at every stage of the lifecycle.
- 2. Improve the quality of meat, milk, fish and eggs, and help to reduce food loss and waste.

- a. Optimum Vitamin Nutrition™ (OVN)™ DSM can help reduce food loss and waste in animal protein value chains.
- **3. Reduce emissions from livestock** (greenhouse gases (GHG), including CO2 and methane, nitrogen, ammonia, and phosphorous).
- a. Bovaer® acts on rumen microbes, reducing enteric methane emissions (a major source of global GHG) in dairy, beef and sheep by approximately 30%.
- b. Vevovitall® a key eubiotic, increases feed efficiency by >2.5%, increases weight gain by >5%, and reduces ammonia (nitrogen) emissions by up to 20% in swine.
- c. Protease® feed enzymes improve feed efficiency, increasing protein digestibility, reducing the amount of protein needed in feed and reducing nitrogen emissions by up to 17% in broilers (poultry).
- d. Phytase® feed enzymes improve phosphorus digestibility from feed ingredients, reducing the amount of phosphate needed in feed and reducing phosphorus emission to the environment.



Spotlight Engagement

- **4. Make efficient use of natural resources** to prevent deforestation and protect biodiversity by enabling animals to extract more nutrients from their feed.
- a. Protease Proact® improves feed digestibility, allows more diverse use of local raw materials for feed, and decreases pressure on land use and deforestation.
 DSM estimates using ProAct® globally in broilers would save nine million tons of soy and lower deforestation pressure of three million hectares per year (an area the size of Belgium).
- b. Erber is a leading pioneer in detecting and combatting almost 400 different types of mycotoxins, which can be hazardous to animals and cost the global livestock and agri-industries billions a year.
- **5. Reduce reliance on marine resources** and protect life in the ocean.
- a. Veramaris® (a joint venture between DSM and Evonik) works to reduce reliance on marine resources. 1kg Veramaris oil is equivalent to 60kg wild catch. Veramaris can produce high-quality omega-3 (EPA/DHA), equivalent to 1.2 million tons of wild-catch fish (more than the annual catch from the Mediterranean Sea).
- 6. Develop novel nutritional solutions that increase the resilience of animals to stress and pathogens, thereby limiting antibiotic use. DSM Eubiotics and enzymes are developing safe, innovative feed additives that support gut health and growth in farm animals.

- a. Balancius™ enzyme supports gastrointestinal functionality in broilers. It improves feed conversion by 3% and increases weight gain by 4-6%.
- b. Crina® eubiotic increases feed efficiency at ruminants by >2.5%, helping maintain milk production.
- c. Vevovitall@ eubiotic increases feed efficiency at piglets by >2.5%, increases weight gain by >5% and lowers ammonia (nitrogen) emissions by up to 20% in swine.

As DSM goes through the merger, it will remain a priority engagement for the Fund as we seek to understand the company's future strategic investment and development.

Key ESG risks

Key risks centre on avoiding genetic modification and antibiotic resistance in crops. Instead, we want to see improved biodiversity and reduced desertification. We also aim to avoid deforestation and marine 'dead zones'. Finally, we're hyperaware of working conditions and human rights within supply chains for food companies.

Health & Social Care

Ensuring access to quality, affordable essential care and enhancing care outcomes

Health and social care standards vary dramatically, with each country facing unique issues. The UN focused its 2030 Agenda on reproductive, maternal, newborn and child health; specific infectious and non-communicable diseases; mental health and environmental risks; as well as health systems and funding. But because of the pandemic, decades of progress in reproductive health, maternal health and child health has stalled or reversed. Specifically, the UN has highlighted decreasing global life expectancy; falling immunisation coverage; heightened anxiety and depression; and rising deaths from tuberculosis and malaria¹⁵

All healthcare services are essential to those receiving them. We use the UN's objectives and the World Health Organisation's top-10 causes of death to define our healthcare priorities. We look for companies focusing on drug discovery for priority diseases and preventative medicine; improving accessibility and affordability of treatment; availability of doctors and nurses; and system funding.





Positive outputs from companies held

600m 250k 750m 13k+

Over 600 million patients reached through access programmes

Some 250 thousand doses of medicine provided under tiered pricing/ affordability schemes

Over 750 million vaccine doses delivered

More than 13.000 doctors and nurses trained and supported in underserved



Engagement Update

Insulet

Last year, we highlighted Insulet as a case study for our Health & Social Care pillar. Insulet is a US-based healthcare equipment manufacturer, disrupting the insulin delivery sector. As an alternative to multiple daily injections, Insulet offers diabetes patients a wearable pump delivery system connected to a continuous glucose monitor. Using a personal monitoring device, patients benefit from ondemand insulin delivery, helping them live more active lifestyles. Children in particular benefit, with parents able to monitor and adjust insulin levels on the go.

A relatively young company, we've focused on Insulet's disclosure, both on operational sustainability and how it measures the impact of its products. We regularly engage with the company and, while we think its operational reporting is strong, we have set milestones on areas for improvement. Specifically, we've focused on carbon emission targets, gender data reporting, governance and its classified board.

As a regulated medical device company, Insulet's product-level reporting on real-world positive impact is strong. A recent 12-month study showed significantly improved glycaemic outcomes in young children with type-1 diabetes. Studies in adults show similar robust results, including a reduction in the required daily insulin dosage. It also resulted in fewer hypoglycaemia episodes, from an average of three weekly to 1.6.

Thanks to its new product, Omnipod 5, Insulet should have access to better real-world data. We therefore encouraged better integration of any findings in its reports. Where possible, we want to see an improved bridging of clinical outcomes and trail data to real-world use.

We also discussed key risks around accessibility and pricing. It's clear Insulet is investigating different avenues to drive wider adoption across demographics. This is an area we will pay close attention to in future reporting and it will be a key topic for further engagement.



Key Risks

Drug development without affordability programmes and equitable pricing structures limits a product's ultimate impact. Other key considerations in our risk analysis include animal husbandry policies and approaches; product safety; appropriate marketing practices; and bribery and corruption policies.



Contributions to positive outcomes

According to the World Health Organisation (WHO), more than half of all deaths each year are due to \$^{10}\$ causes, seven of which are noncommunicable diseases (NCDs). NCDs like heart disease, diabetes and kidney disease accounted for 44% of all deaths globally.\$^{16}\$ In lower-middle-income countries, malaria, HIV/AIDS, road injury, and cirrhosis of the liver are also leading causes of death.\$^{17}\$

Companies held in the Fund developed, manufactured and distributed a range of medications and vaccinations targeting NDCs and viruses, as well as priority healthcare concerns.

Reach of access programmes

Covid-19: there have been over 750 million confirmed cases of Covid-19, including six million deaths. But global vaccine efforts helped distribute 13 trillion vaccine doses. Companies in the Fund provided 247 million Covid-19 vaccines to GAVI-eligible countries.

Diabetes: according to the most recent WHO data, 422 million people have diabetes.¹⁹ Companies in the Fund provided 34.6 million patients with diabetes treatments.

HIV: over 38 million people around the world are living with HIV. Companies in the Fund had licensing agreements with 17 generic manufacturers to provide 21.3 million patients

access to treatments across 119 low- and middle-income countries. This is at least 87% of people living with HIV on antiretrovirals in low- and middle-income countries²⁰

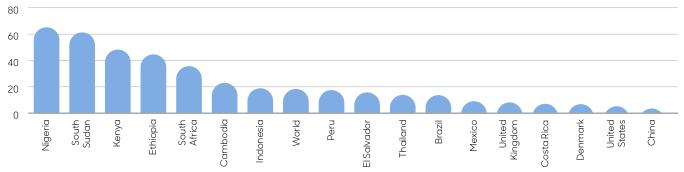
Pneumococcal vaccine: respiratory diseases are a key cause of death globally. Companies in the Fund provided pneumococcal vaccines to seven GAVI-eligible countries, supplying 39 million doses and reaching 12 million children.

Polio: while not a disease specifically mentioned in the SDGs, polio is a highly infectious viral disease that largely affects children under the age of five. It invades the nervous system and can cause paralysis. Efforts to end preventable deaths of new-borns and children under the age of five include a focus on containing polio. Companies in the Fund supplied 80 million doses of oral polio vaccines to UNICEF, reaching 133 million people²¹

Rotavirus: rotaviruses are the leading cause of severe, dehydrating diarrhoea in children aged less than five years old globally. Each year, it's estimated that more than 25 million outpatient visits and over two million hospitalisations are attributable to rotavirus infections. Companies in the Fund reached 23 million children across 32 GAVI-eligible countries and four former GAVI countries with vaccines.

Additionally, companies in the Fund closed 110 million 'gaps in care', addressing the discrepancy between clinically recommended care and actual care. The Fund also achieved US\$700 in average drug savings per prescription for immunosuppressive drugs.

Cause of death, by communicable diseases and maternal, prenatal and nutrition conditions (% of total) in 2019



Footnote: Cause of death refers to the share of all deaths for all ages by underlying causes. Communicable diseases and maternal, prenatal and nutrition conditions include infectious and parasitic diseases, respiratory infections, and nutritional deficiencies such as underweight and stunting.

Source: Derived based on the data from Global Health Estimates 2020: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2019. Geneva, World Health Organization; 2020. Link: https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death
- GAVI is an international organisation created in 2000 to improve access to new and underused vaccines for children living in the world's poorest countries (www.garvi.org).



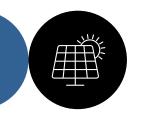
Increasing renewables, decreasing emissions and improving access

Energy is central to almost every environmental and social issue the world faces. It touches most aspects of daily life – fuels for cooking, heating, mobility, communication, and education. The impressive progress in electrification has slowed due to the challenge of accessing those hardest to reach. An estimated 733 million people lack access to electricity and over 2.4 billion people still use dangerous

and inefficient cooking systems.²² And while we've seen laudable global commitments on climate change, further action is needed on modern renewable energy.

Our Sustainable Energy pillar considers three areas of energy: clean energy solutions, initiatives that promote energy efficiency, and services to expand access to energy.





Sustainable **Energy**

Positive outputs from companies held

350k+ 4.5k

85k

100k+

Over 350,000 photovoltaic inverters sold to support solar power generation

Nearly 4,500 wind turbines sold to support wind generation

More than 85,000 MW of renewable energy capacity installed, roughly equal to the total renewable energy capacity in Canada or 2.77% of the world's installed renewable capacity²⁸

Over 100.000 GWh of clean energy generated

670m+

More than 670 million metric tonnes of CO2e emissions avoided - the equivalent to over 130 million return flights between London and Sydney



Shoals

Unmet need: renewable energy accounts for only 12% of total US energy consumption, with petroleum, natural gas and coal the key sources. The development of additional renewable energy capacity is needed to reduce US greenhouse gas emissions by 50-52% below 2005 levels in 2030 and to achieve 100% carbon pollution-free electricity by 2035.

Intentionality: Shoals Technologies makes electric balance of system (EBOS) solutions for solar and energy storage projects. It's also expanding into electric vehicle charging infrastructure. EBOS components cover all the parts of a solar project, except for the solar panels themselves.

Implementation: 100% of revenue comes from EBOS solutions.

Impact: US solar projects shipped in the last year that use Shoals products will offset an estimated 110 tonnes of CO2e annually.

Contributions to positive outcomes

Despite strong commitments globally to tackle emissions and increase renewable energy capacity and improve access to affordable clean energy, fossil fuels still dominate consumption. However, companies held in the Fund made strong contributions to renewable global capacity expansion via regional investments, as seen in our table.







Installed renewable energy capacity

	Total renewable capacity (MW)	Installed/operated renewable capacity by companies in the Fund (MW)	Installed/operated renewable capacity as a percent of total renewable capacity
Bolivia	1233	29	2.35%
Brazil	159943	1892	1.18%
Chile	14890	314	2.11%
Denmark	10340	3296	31.88%
Faroe Islands	59	11	18.64%
Finland	9629	838	8.70%
France	59546	668	1.12%
Germany	138151	1944	1.14%
India	147122	5750	3.91%
Jordan	2171	38	1.75%
Netherlands	22954	1140	4.97%
Puerto Rico	721	11	1.53%
Saudi Arabia	443	245	55.30%
South Africa	10193	330	3.24%
United Kingdom	50293	8168	16.24%
USA	325391	46719	14.36%

Source: IRENA~(2022), Renewable~capacity~statistics~2022~International~Renewable~Energy~Agency.~Available~at~http://www.irena.org/Statistics/Download-Data~A

Furthermore, companies in the Fund sold products (including the renewable energy generation above) that avoided an estimated 672 million tonnes of CO2e. While that looks like a big number, this is just 1.32% of the estimated 51 billion tonnes of CO2e we emit annually.

Avoided emissions

	Estimated annual emissions (mt)	Estimated avoided emissions from products sold by companies in the Fund (mt)	Fund contribution as a % of total annual emissions
USA	6,001,210,000	45,268,200	0.75%
United Kingdom	440,100,000	6,750,700	1.53%
Denmark	43,200,000	4,394,100	10.17%
Germany	749,710,000	1,676,100	0.22%
Netherlands	172,230,000	1,132,500	0.66%
India	3,394,870,000	3,330,000	0.10%
China	12,705,100,000	63,070,300	0.5%

 $Source: World Bank: Climate Watch.\ 2020.\ GHG\ Emissions.\ Washington,\ DC:\ World\ Resources\ Institute.\ Available\ at:\ https://www.climatewatchdata.org/ghg-emissions.$





Sustainable Real Estate & Infrastructure

Providing affordable and eco-friendly buildings and improving connectivity

The global population is growing and people are increasingly moving to urban areas. The built environment therefore has a key role to play in supporting social and environmental goals. The buildings and construction sector accounts for over a third of global energy use and produced 39% of global CO2 emissions.²³

Despite progress, **one billion people still reside in slums**, principally across Asia and Africa. Alarmingly, **99% of the world's urban population** breathe polluted air.²⁴

Our Sustainable Real Estate & Infrastructure pillar focuses on a variety of key issues facing industry, infrastructure and sustainable cities and communities. This includes the provision of affordable housing; efficient building practices; environmentally friendly construction materials and solutions; and increased internet and telecom connectivity. These are all global priorities, and we use the World Bank Database to understand the different types of unmet real estate and infrastructure needs in different regions and countries.





Sustainable Real Estate & Infrastructure

Positive outputs from companies held

937k

30m

214m 850m

937,000 MWh of renewable energy used to power data centres

30 million passengers transported daily using clean mobility

Over 214 million metric tonnes of CO2e emissions reduced/avoided, equivalent to the emissions from 64 coal-fired power plants in one year

More than 850 million MWh reduction in building energy consumption - the same amount of energy that over 75 million homes would use in a year



Case Study

Prologis

Unmet need: the transport and logistics sector contributes about a quarter of global CO2 emissions. Within this, about 13% come from warehouse buildings.²⁵

Intentionality: Prologis builds and operates global warehouses. It acquires and develops these assets with the aim of improving environmental standards and delivering greener, more efficient warehouses for its customers.

Implementation: Prologis manages one billion square feet of space across 19 countries, catering to 5,800 B2B and retail customers around the world.

Impact: 57% of the area across Prologis' portfolio has full LED lighting, up from 42%. Prologis has also installed 325MW of solar at its sites. Furthermore, certification is sought for all new developments and re-developments as Prologis targets carbon-neutral construction by 2025. The current portfolio includes more than 550 buildings, with certifications from leading real estate authorities.²

ESG risks

We are cognisant of key ESG concerns within these areas. These include issues related to connectivity solutions, such as privacy rights, online abuse, the digital divide, land rights & community relations, network shutdowns, and bribery and corruption. We also examine risks from construction and building safety; supply chain oversight; life-cycle analysis and circular designs; biodiversity; and climate change.



² LEED, BREEAM, WELL, CASBEE, DGNB, HQE

Water & Sanitation

Establishing access to safe, clean and sustainable facilities

Water supports all life and is a precious and finite resource. However, data suggests progress on establishing universal access to basic sanitation and encouraging both the protection and responsible use of ocean resources is woefully lagging.

We're degrading the world's water-related ecosystems at an alarming rate. Over the past 300 years, over 85% of the planet's wetlands have been lost. Meanwhile, 733 million people live in countries with high and critical levels of water stress.²⁶

With a growing global population and the increasing prevalence of extreme weather events, more efficient use and management of water are critical to meeting increased demand and managing risks from droughts and flooding.

Our Water & Sanitation pillar looks for companies whose products and services improve access to clean water and sanitation, as well as those that enhance efficiencies in existing infrastructure.





Case Study

Tetra Tech

Last year, we highlighted Tetra Tech in our Water & Sanitation pillar. Meeting drinking water, sanitation and hygiene targets by 2030 requires a four-fold increase in the pace of progress. At current rates, by 2030 1.6 billion people will lack safely managed drinking water and a further 2.8 billion people will lack safely managed sanitation. Tetra Tech is a leading resource management consultant in the US, specialising in water services. The company is constantly expanding its solutions for clients in regions affected by water scarcity.

We believe Tetra Tech has a clear intention to have a positive impact, with evidence for its successes based on the amount of water it's helping to conserve and clean globally. Last year, however, Tetra Tech was named in a lawsuit alleging mismanagement of the clean-up at a decommissioned nuclear training site on Treasure Island, San Francisco. Tetra Tech was a consultant at the time and, while the suit focuses on the developers, Tetra Tech is flagged for allegedly not providing proper advice to the parties involved.

Environmental consultants can have a hugely positive impact, helping clients manage climate, water and other environmental risks. Nonetheless, problems flare-up if the company isn't thorough enough or if it fails to identify issues that later arise. How companies address these risks and their overall business ethics are a key focus of our engagement. We'll also follow up on these factors with Tetra Tech throughout the year.

People management is another of our key focus areas with Tetra Tech. It leads peers in efforts to mitigate health & safety risks. However, we want more information on how management retains talent and ensures company stability.

In the coming year, we will also focus on Tetra Tech's governance. This will relate to management oversight, as well as the adequacy of the board's checks and balances given the length of some of the directors' tenures.

We want our engagement roadmap to be transparent. All companies have operational risks, and our engagement focus is to better understand how businesses manage these risks. This includes how they minimise any negative operational outcomes that might offset the positive impacts of their products and services. We're also focused on potential negative externalities and the full lifecycle of products and services. Our goal is to understand the risks of the company's plans not coming to fruition.

ESG risks We focus on pricing for services to ensure access is fair and affordable, the resilience of infrastructure to climate change, as well as water quality and the materials used in water infrastructure. We also consider social issues around migration and wider government policies when assessing how a company's products and services tackle water and sanitation needs. Global Impact Equity Fund Annual Report 2022

Conclusion



Despite much progress, there remains a clear shortfall in financing and the products available to address the greatest global issues. As the UN's own Sustainability Report states: "As the world faces cascading and interlinked global crises and conflicts, the aspirations set out in the 2030 Agenda for Sustainable Development are in jeopardy".²⁷

However, progress is being made. We've held Kenya telecommunications business Safaricom since the Fund's launch. The company offers a mobile wallet, M-PESA, which bypasses traditional bricks and mortar banks. Before the introduction of M-PESA, only 26% of Kenya's population had access to formal financial services. On top of that, only 32% had access to informal financial services. The latter includes money lenders, which often charge extreme and unaffordable interest rates. Since 2006, M-PESA has helped expand access to formal financial services. Now, over 80% of Kenya's population has an account at a financial institution or with a mobile-money service provider, above the world average of 76%.

Our process starts with identifying unmet needs. To understand local or regional issues, we often use World Bank data on a country and compare it to global or OECD averages. Based on this analysis, we concluded that the lack of access to basic financial services we originally identified in Kenya is no longer severe, thanks in large part to Safaricom. The UN and World Bank share our conclusion, highlighting M-PESA as the type of product that can empower those excluded from traditional financial systems and transform access in a country.

We would never want to claim a problem has been solved, and Safaricom continues to develop and deliver meaningful solutions. However, Kenya no longer meets our criteria for identifying countries with underserved financial service needs. Therefore, we decided to exit the position, holding up Safaricom as a success story. We want to highlight Safaricom's achievement with M-PESA, which helps to provide evidence that public companies can and do have a measurable, lasting positive impact.

The case of Safaricom reaffirms our belief that public markets can have a lasting positive impact. There are other pockets of progress as the world works to deliver on the UN's Agenda. That said, the world needs more companies like Safaricom. We believe they're out there – our goal as impact investors is to find them.

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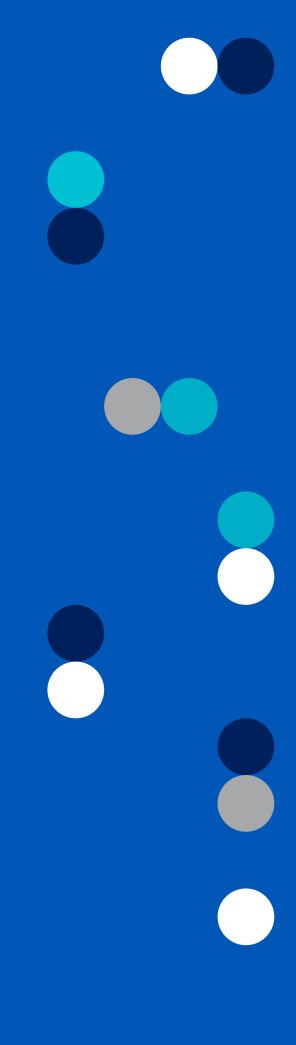
A word of thanks

We've had significant contributions from our regional equity teams over the year. They regularly join our discussions and contribute ideas for the Fund. We're grateful for their support and look forward to continuing to work together.

In the previous pages, we aggregated company data by impact pillar to illustrate the positive social and environmental contributions. Where possible, we also analysed the data collected from companies to datasets from international organisations, including the Access to Medicine Index, the International Energy Agency, the World Bank and the World Health Organisation.

We take a conservative view in our reporting, with companies only appearing in one pillar. This approach focuses the portfolio on purposeful impacts and avoids double-counting. Additionally, when mapping the outcomes from companies held, we only include only include companies that have reported the data, with revenue breakdown sometimes used as a proxy for regions. The impact data collected is prorated to match the holding period in the model to the nearest month.

This report covers the impact strategy, which includes multiple funds. The data used is based on the strategy model rather than a specific fund. Holding periods used to pro-rata the data may therefore vary slightly.



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