

For investment professionals, institutional
investors and professional investors only



**Halfway to 2030:
The urgent need to get back on track**
The SDG Reckoner



2023
Fourth edition

Contents

| | |
|---|----|
| Introduction..... | 3 |
| SDGs progress since last year..... | 5 |
| SDG progress tracker..... | 14 |
| A deep dive into selected SDGs..... | 17 |
| – Climate and nature..... | 18 |
| – Tackling waste and shifting to a circular economy..... | 23 |
| – Improving gender equality..... | 29 |
| Voices from the team..... | 34 |
| Methodology..... | 36 |
| SDG scorecard and metric sources..... | 37 |



Introduction – A moment of truth and reckoning



Ben Constable-Maxwell
Head of Impact Strategy,
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The Sustainable Development Goals (SDGs) are a call to action to tackle the world's major sustainability and development challenges. Agreed in 2015 by all 193 of the UN's member states, with 2030 set as the ambitious deadline to achieve the 17 goals and their 169 underlying targets, we are now at the midway point through that timeline.

The clear message from our fourth SDG Reckoner report is that the world's ambition is not being met by its actions. Our analysis continues to show that we are significantly behind the level of progress required to deliver on the goals. For the sake of simplicity and focus, the M&G analysis concentrates on one metric per SDG that we consider representative of the overall goal in question.

In this year's report, while we have seen the score for two SDGs improve, two have moved backwards and the rest have remained stubbornly unchanged at levels that are already problematically low.

Encouragingly, the proportion of the global population living in extreme poverty is falling (SDG1) as economies and populations emerge from the worst effects of the COVID-19 pandemic. Meanwhile, the mobilisation of climate finance towards developing economies (SDG13) is finally reaching globally agreed targets as the stark evidence of climate change in real time becomes evident.

But progress is stalling on two critical and societally urgent issues: the pollution and waste crisis is deepening (SDG12) with insufficient will or infrastructure to tackle the problem effectively; and as corruption remains a pernicious issue, global peace and diplomacy are facing the most challenging environment in decades (SDG16).

The UN's own annual SDG Progress Report which covers all 169 of the SDG targets paints a similar picture, highlighting that progress on more than 50% of the SDG's targets is 'weak and insufficient' and on 30% it has 'stalled or gone into reverse'. Funding for the SDGs overall is also behind where it needs to be. The commitment by rich countries to provide Overseas Development Assistance (ODA) has ticked up, but hovers around half the agreed global level of 0.7% of GDP. And, as mentioned, reaching the goal of \$100bn of climate finance to lower-income countries is a milestone, but it is a fraction of the climate finance required to build a sustainable and climate-positive economy.



So, as the world took stock at the UN's SDG Summit in New York in September, the Secretary General highlighted the need to revitalise the drive towards achieving the global goals:

“ We are at a moment of truth and reckoning. But together, we can make this a moment of hope. ”

António Guterres,
UN Secretary-General

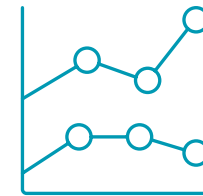
Please note that, while we support the UN SDGs, we are not associated with the UN and our funds are not endorsed by them.

This year's report focuses on three SDG-related topics where the challenge seems greatest but where hope – and action – are exactly what is required. These are areas where investors have an opportunity to drive real positive change: the role of the circular economy in tackling the intensifying global waste and pollution crisis; gender equality as a driver towards better outcomes for both people and the planet; and the intersecting challenges of climate and nature, which sit right at the heart of the SDG programme to ensure a sustainable and prosperous future for all.

COP28, the global climate summit in the UAE, is an opportunity for world leaders to act on several urgent priorities.

We need to increase the availability of climate finance to less developed countries in the Global South, enabled by innovative and risk-sharing mechanisms such as blended finance. We need in particular to ramp-up funding for 'adaptation and resilience' to prepare for the inevitable effects of climate change. And we need some of this finance to be allocated to nature-based solutions that can protect coastal regions and marine eco-systems from further damage. Which again highlights the fundamental interconnection, now rising up the global agenda, between climate and nature.

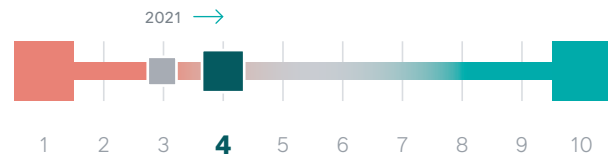
And finally, in a world seemingly divided by conflict and discord, diplomatic convenings such as the annual UN climate talks provide an opportunity to coalesce around the spirit of SDG17 (Partnership for the goals). We need to seize this opportunity for unity, collaboration and collective action to get the SDGs back on track.



SDGs
progress since
last year

SDG1:

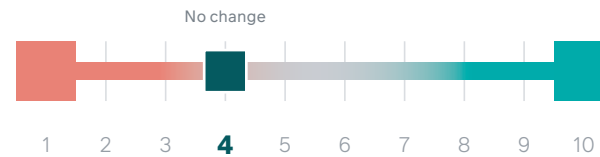
No poverty



There has been a marginal improvement in this indicator, which reflects the number of people living in extreme poverty, but this remains a huge and intractable challenge, exacerbated by the ongoing effects of COVID-19. While communities in the Global South are most exposed, living standards among low-income populations in developed economies continue to deteriorate due to rising costs and strained public services.

SDG2:

Zero hunger



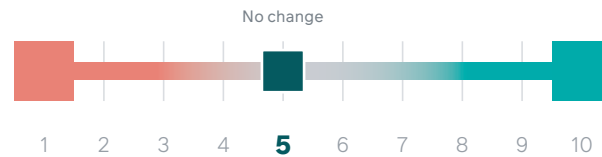
This indicator reflecting child malnutrition continues to see marginal improvements over time, but remains emblematic of an intractable global development challenge. Closely linked to other Goals (especially SDG1 No poverty and SDG3 Good health and well-being), hunger is a broad indicator of poverty, where low incomes and rising costs are having a clear negative impact on nutritional outcomes for children.





SDG3:

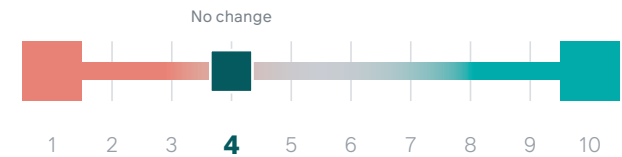
Good health and well-being



We continue to see improvements in tackling malaria, one of the developing world's defining health challenges. Rising temperatures and other climatic factors (eg, rainfall, flooding) are creating conditions supportive to the spread of malaria, but recent advances in vaccine development are providing renewed hope. In other areas of health, breakthroughs in genetic sequencing and biologic drugs are transforming the treatment and diagnosis of life-threatening diseases.

SDG4:

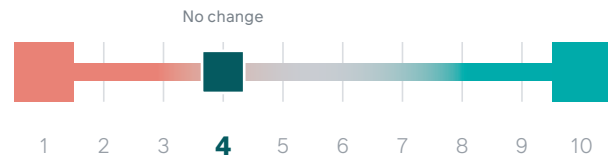
Quality education



The global youth literacy rate has remained broadly unchanged, reflecting a balance between, on the one hand, disrupted educational progress following the COVID-19 lockdown and, on the other, improvements in global access to education. Technology is playing an increasingly important role in bringing education to marginalised groups and hard-to-reach places.

SDG5:

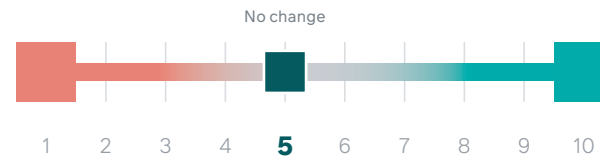
Gender equality



Gender equality, assessed via female relative to male participation in the economy, remains relatively weak. The pandemic disruption has had a major negative impact on equality of opportunity, setting back previously encouraging progress. In spite of global regulations looking to tackle this intractable issue, especially in developed economies, improvements remain too slow.

SDG6:

Clean water and sanitation



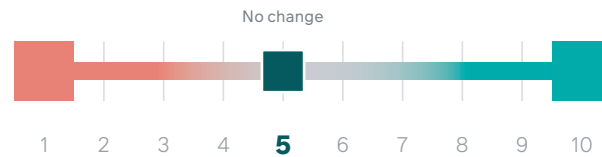
This year's indicator moved marginally higher, but not significantly enough to improve the overall score. Lack of access to clean water is a major sustainability challenge, which disproportionately affects lower-income countries and individuals, and an issue that is exacerbated by the effects of climate change (eg, droughts and flooding). A big priority for sustainable and impact investment.





SDG7:

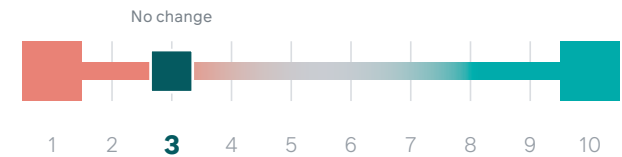
Affordable and clean energy



The share of renewable energy in global electricity moved marginally higher towards 30%, reflecting ongoing expansion and falling costs; but to meet the Goals of the Paris Agreement and the 2030 SDG Agenda, we are well behind the necessary emissions reduction levels (c.45% by 2030), with the latest projections that emissions will continue increasing this decade. There is an urgent need for accelerated action to decarbonise and electrify the global economy.

SDG8:

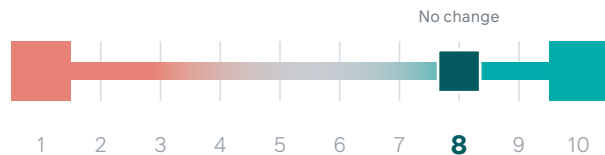
Decent work and economic growth



SDG8 is an especially broad SDG covering multiple economic and labour-related targets, but our selected metric of promoting youth employment has seen a slight improvement this year. Nevertheless, concerns are mounting over the possibility of an economic downturn, with much further progress needed on protecting labour rights and promoting safe work.

SDG9:

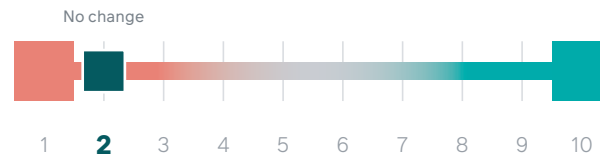
Industry, innovation and infrastructure



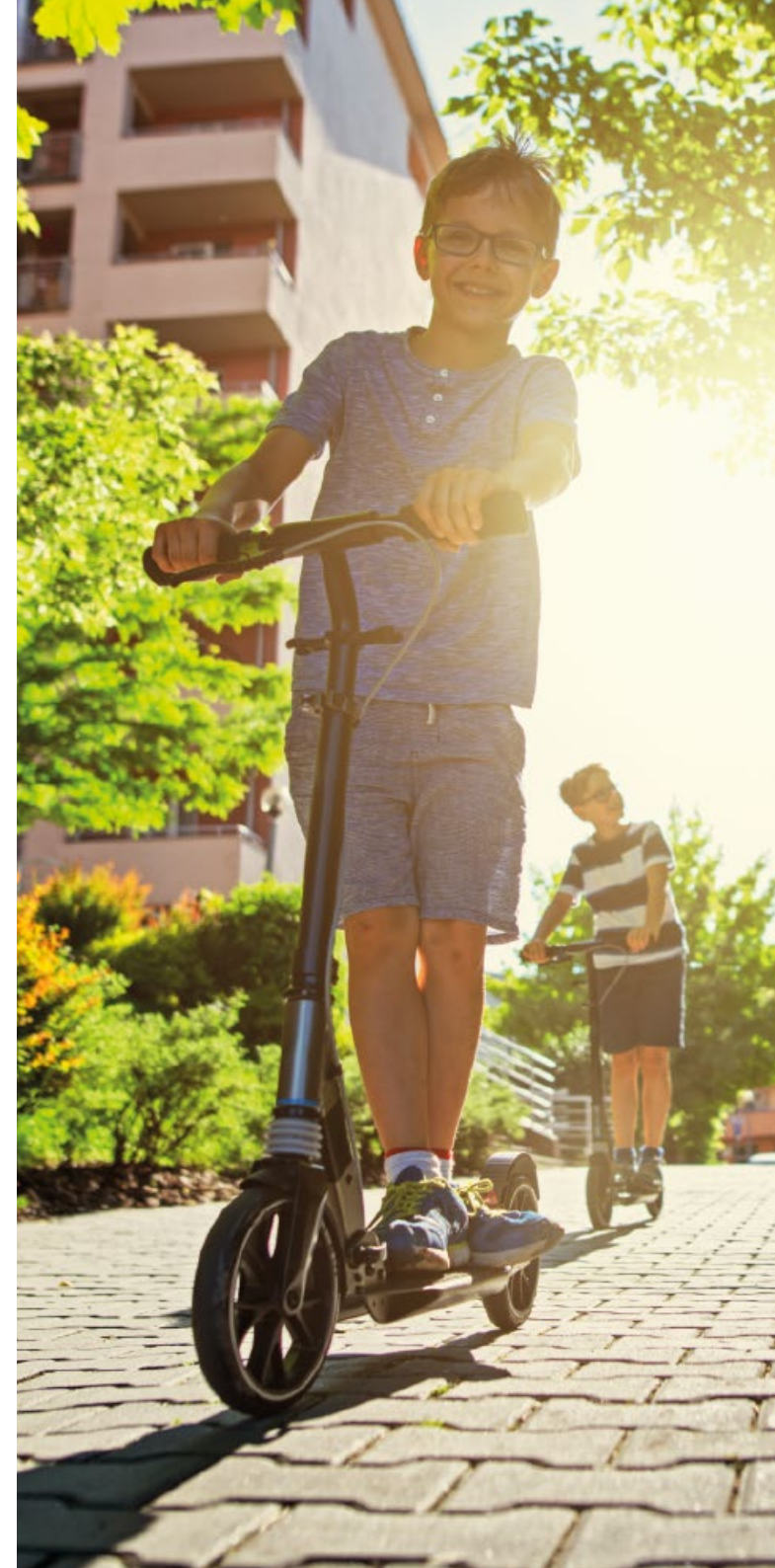
We saw ongoing positive momentum in this indicator, which reflects the role of digital access in driving broad-based economic empowerment. Nevertheless, significant parts of the global population are still without access to the internet, highlighting the role of impact investors in supporting the build-out of the required infrastructure.

SDG10:

Reduced inequalities



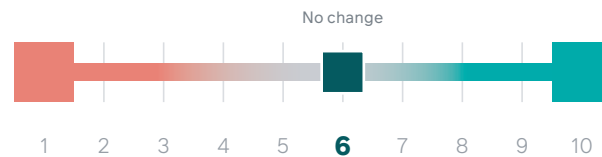
There has been a marginal improvement in this year's indicator for the equitable distribution of wealth globally, but the general picture has not improved much. One key factor has been the impact of COVID-19, which hit the most vulnerable hardest while leaving the wealthiest relatively unscathed. These imbalances are also reflected between countries where developing countries are often burdened by high and rising debt levels which hamper investment in their economies.





SDG11:

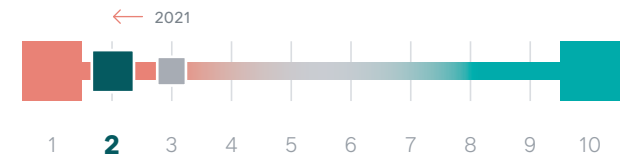
Sustainable cities and communities



Our chosen data point is improving, with China cleaning up its urban air quality to meet health and social objectives. This has been matched by significant progress globally. However, there is some concern that pollution is simply being shifted along the chain to lower-income countries, as highlighted by deteriorating pollution in a number of cities in India.

SDG12:

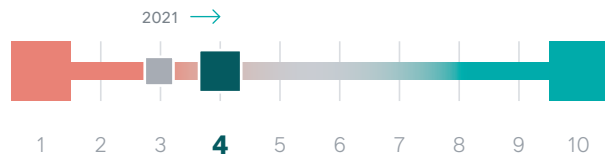
Responsible consumption and production



Circularity continues to decline; the pandemic shutdown played a role with its health-related pressure for single use, as did the lack of policy action to ensure sufficient circular infrastructure. Companies have set ambitious targets to use recycled materials, increasingly supported by regulation, but the reality as evidenced by ocean plastic waste and growing global landfills is starkly different.

SDG13:

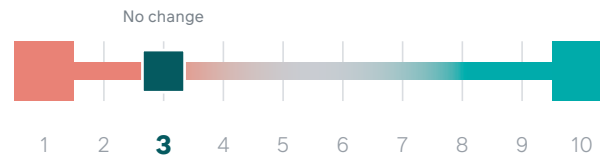
Climate action



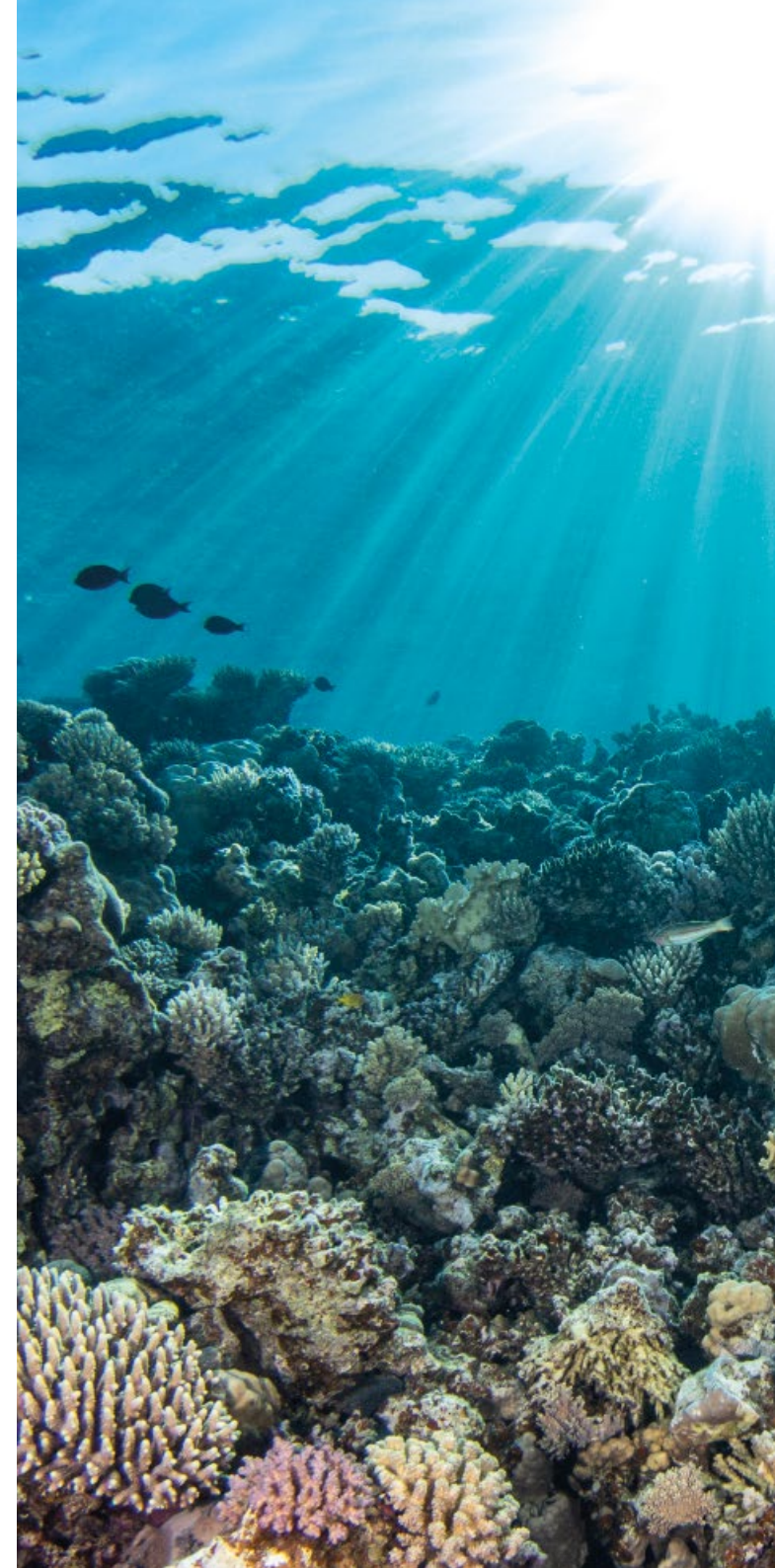
Evidence now suggests that we have (belatedly) achieved the \$100bn target, but this has come well behind the intended 2020 deadline. While this is a positive development, it is still a fraction of the climate finance needed to meet the broader SDG Agenda, and is mitigated by concerns that insufficient finance is going towards climate change adaptation for lower-income countries in the Global South.

SDG14:

Life below water

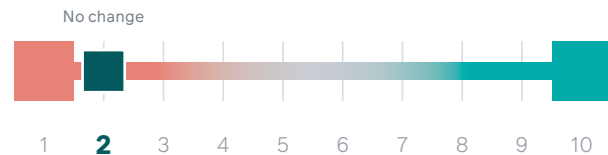


The long-awaited UN Global Biodiversity Framework, agreed in 2022, was a major diplomatic achievement, setting much-needed goals for marine protection. But overfishing, pollution and warming oceans remain clear and present risks to the resiliency of this critical ecosystem, highlighting the mounting urgency of protecting Life below Water.



SDG15:

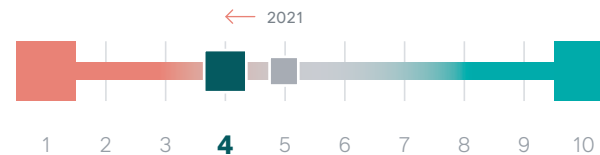
Life on land



The protection of terrestrial ecosystems remains an issue of critical importance and limited action. The UN Global Biodiversity Framework and investor initiatives like TNFD point to progress. However, biodiversity indicators such as deforested land and species extinction are deteriorating at an alarming pace, as pressure for scarce resources heats up.

SDG16:

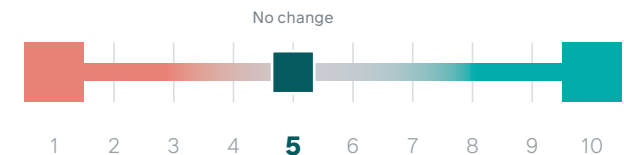
Peace, justice and strong institutions



Corruption levels have remained broadly stable. But global prospects for peace (whether in Europe, the Middle East or Africa) have deteriorated and stand at a perilous juncture, increasing the risks to the geopolitical and institutional stability that is so important to the achievement of the SDGs.

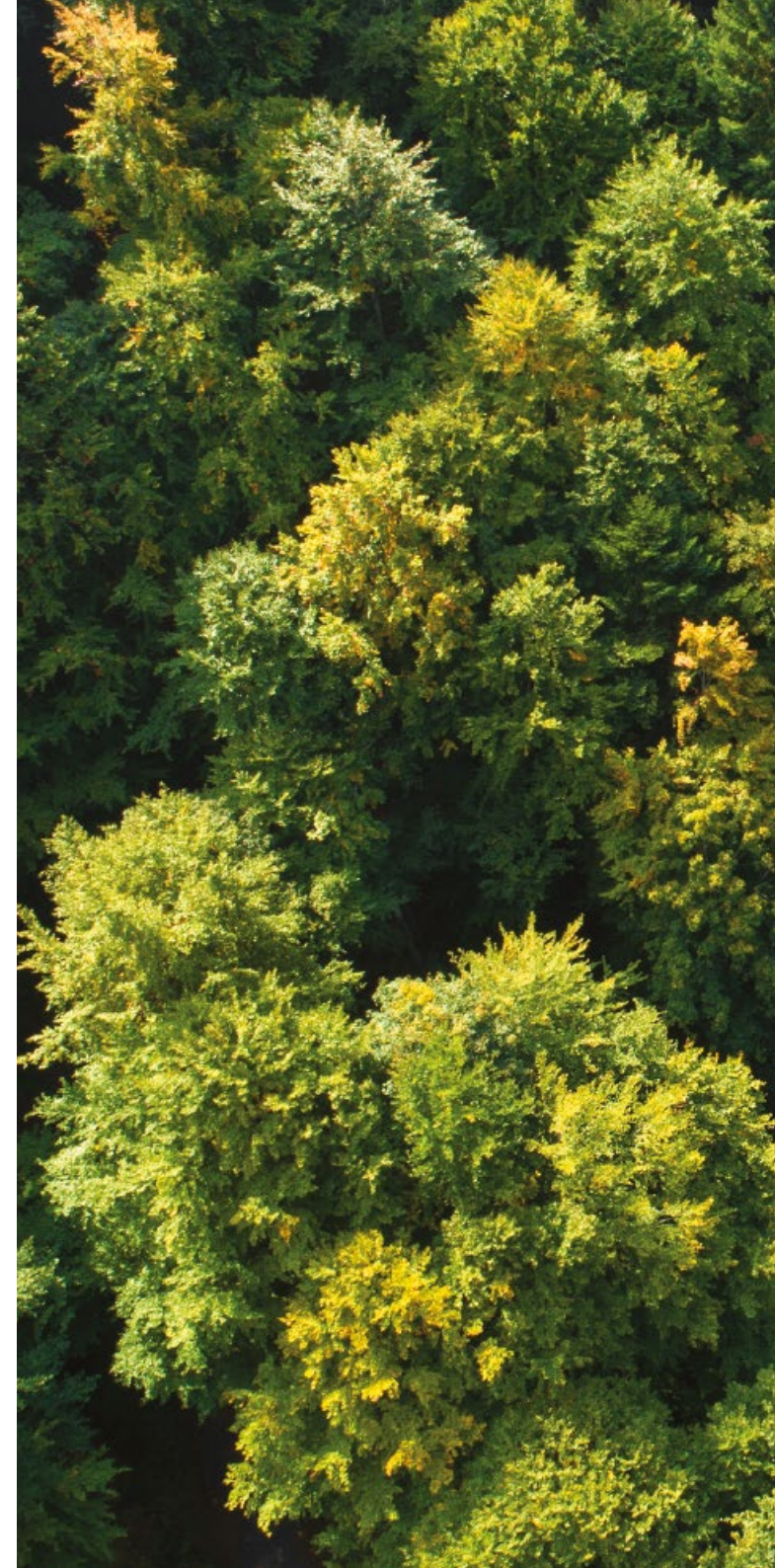
SDG17:

Partnership for the goals



The various crises affecting the world have raised tensions and pushed us toward a more precarious position. There are nevertheless encouraging responses to the allocation of aid and assistance to those who most need it and these are supported by some major diplomatic achievements such as the 2022 Global Biodiversity Framework. We need continued momentum at this year's COP28.

SDG progress tracker

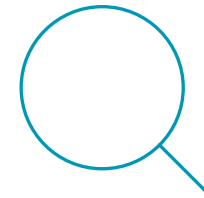






This year we will be taking a slightly different, more focused approach to our analysis than previous years. We have continued with our assessment of specific indicators that we consider to be representative of the 17 individual goals, alongside brief comments on how and why the indicator has developed over the past year. But, rather than setting aside a full page for each SDG, we have shifted our view and sharpened our focus onto three individual topics that sit at the heart of the 2030 Agenda and which we see as critical to the fulfilment of the SDGs.

The topics are the developing nexus of climate and nature, a twin crisis for which we consider there are combined solutions that can support low-carbon, nature-positive outcomes; the role of the circular economy in tackling both waste and exploitation of scarce resources, therefore playing a role in tackling both climate and nature; and the cross-cutting issue of gender equality and the role it needs to play in driving positive outcomes not just for women but for society and the economy.



A deep dive into selected SDGs

Climate and nature



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Michael Rae
Fund Manager M&G
Climate Solutions Strategy,
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The past year has been an extraordinary one for the climate. Europe and Africa broke temperature records, while the former was also battered by unprecedented rainfall and catastrophic flooding. Antarctica set a sea-ice melt record, the world's oceans suffered extreme marine heatwaves, and intense heat persisted across much of the United States and Latin America. All of this occurred as global average temperatures registered their highest ever recorded anomaly of 1.9 degrees above pre-industrial levels and as scientists confirmed 2023 as 'virtually certain' to be the hottest year in 125,000 years¹.

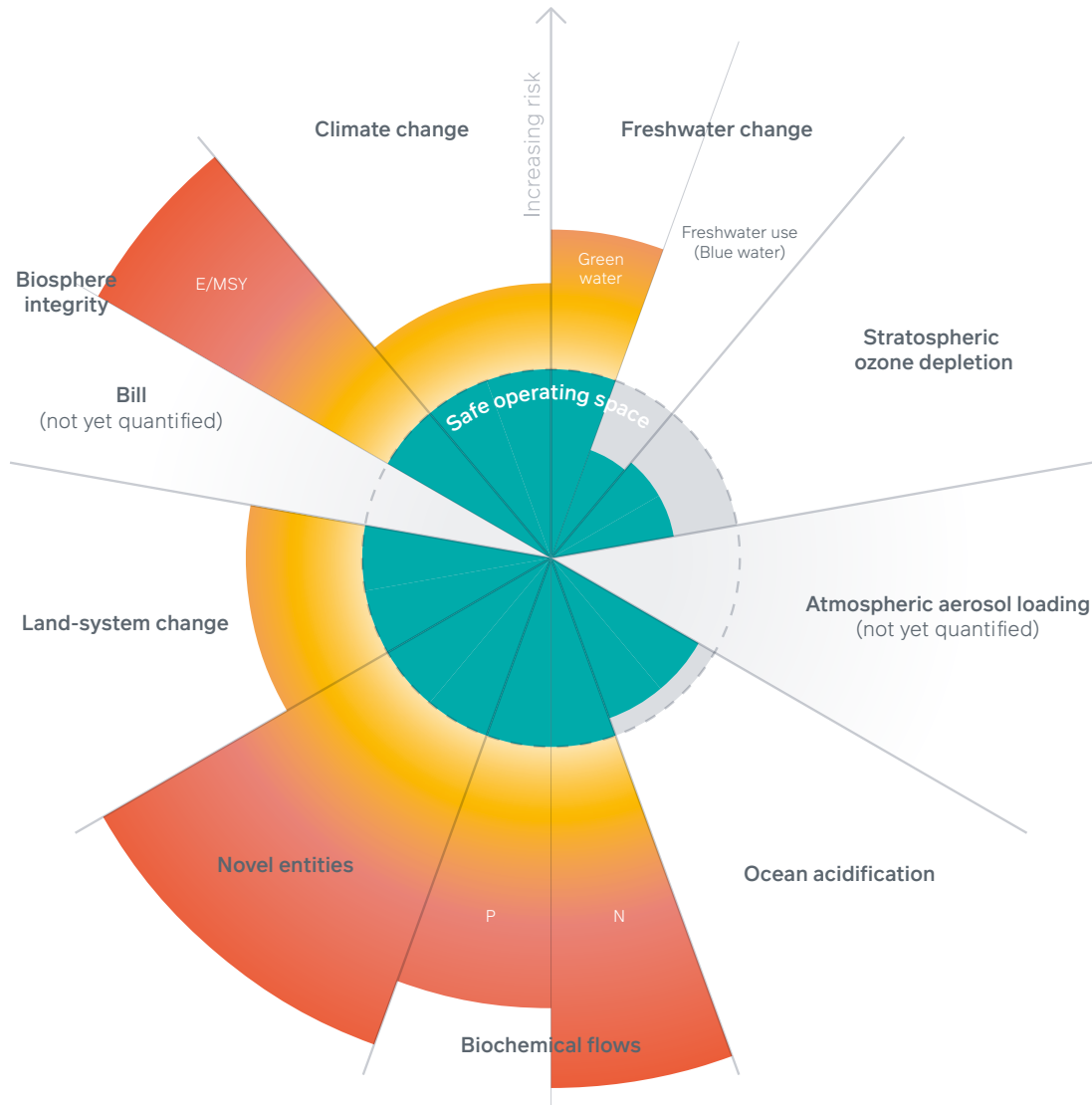
What is becoming clear is that extreme weather from climate change is just one of the urgent sustainability challenges we face. Just as problematic are the accelerating degradation of nature and the harmful impacts of unrestricted pollution, which contribute to the mounting risks to earth's natural ecosystems.

¹ Reuters, 'This year 'virtually certain' to be warmest in 125,000 years, EU scientists say', (reuters.com), November 2023.

The concept of 'Planetary Boundaries', devised by Johan Rockström and peers at the Stockholm Resilience Centre, is being embraced as a scientific framework to reflect both the complexity and the interconnected nature of the various planetary systems that enable a habitable and thriving planet earth.

The Centre's most recent analysis suggests we are pushing through numerous thresholds required to keep within an equitable, sustainable and habitable planet. The boundaries include 'climate change' and 'biosphere integrity' (effectively, biodiversity) but also constitute ozone depletion, land system change, freshwater use and pollution by 'novel entities' such as plastic waste. It provides a valuable – and science-based – frame for understanding humanity's combined impacts on the climate and nature, and is a useful indicator of the levers required to prevent further deterioration and importantly to pull us back within the boundaries. Our own SDG Reckoning analysis counts SDG7 (Clean energy), SDG14 (Life below water) and SDG15 (Life on land) as making some of the weakest progress among all the 17 Global Goals.

The Planetary Boundaries framework



Source: Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023

Climate and nature – what’s at stake?

The impacts of climate change are well-documented and becoming increasingly evident. However, what is less understood is that we have already transgressed earth’s planetary boundary for climate change, beyond which, there is an increasing likelihood of extreme and irreversible impacts. This is evidenced on a number of fronts. We have reached a point at which the loss of summer polar sea-ice is almost certainly irreversible. Breaching this threshold means that rapid physical feedback mechanisms can drive the earth system into a much warmer state with sea levels metres higher than present. The weakening or reversal of terrestrial carbon sinks, through the ongoing destruction of the world’s rainforests, is another potential tipping point, where climate-carbon cycle feedbacks accelerate earth’s warming.

Biodiversity describes the diversity within species, between species and of ecosystems. It is ‘an essential characteristic of nature that enables assets to be productive, resilient and able to adapt to change’. Maintaining and promoting biodiversity is, therefore, core to the continued provision of benefits from nature to society.

However, the Millennium Ecosystem Assessment of 2005 concluded that changes to ecosystems due to human activities were more rapid in the past 50 years than at any time in human history, increasing the risks of abrupt and irreversible changes². The main drivers of change are the demand for food, water, and natural resources, causing severe biodiversity loss and leading to deterioration in ecosystem services. These drivers are either steady, showing no evidence of declining over time, or are increasing in intensity.

Interconnecting planetary crises

These two interconnecting ‘planetary crises’ – climate change and nature loss – are combining to threaten human well-being, the stability of the global economy and the sustainable functioning of the planet. There is mounting evidence that aiming to tackle one without addressing the other will result in a failure to achieve the desired outcomes for both.

Climate change is a major driver of biodiversity loss. At the same time, the degradation of nature also accelerates climate change, due to damage to the crucial role played by natural ecosystems in sequestering CO₂ and managing atmospheric heat. Consider, for example, the different ways in which heat is absorbed and reflected by concrete rather than tree canopy. These twin and compounding crises are causing irreversible damage to nature’s ability to provide the ‘ecosystem services’ on which humanity depends for food, drinkable water and clean air.

It is largely the same human activities that are causing both crises, while a number of the solutions to tackle climate change can also support nature and biodiversity. Damage to forests, mangroves and other natural ecosystems – driven by industry and agriculture – has harmed wildlife populations but also released huge volumes of greenhouse gases into the atmosphere. In turn, rising temperatures and extreme weather are increasingly damaging biodiversity.

“ Humanity has a global responsibility to address these two challenges and the interactions between them. ”

UNESCO

²Millennium Ecosystem Assessment, ‘Current State & Trends Assessment’, (millenniumassessment.org), 2005.

While the concept of an imbalance between society's extraction of value from nature, and its negative feedback into it, is not new, the idea that it is becoming a limiting factor on global economic growth is only just being explored. In 2021's 'The Economics of Biodiversity: The Dasgupta Review', the authors explore the tipping point reached in the past few decades at which humankind's ecological footprint began to exceed the biosphere's ability to regenerate valuable material, such as timber, clean water, and minerals. 'Efficient interaction with nature' is key to the ongoing health of the planet and it is also an increasingly important input into sustaining economic growth. This is a wholly new dynamic and underlines the imperative for directing more capital to solutions providers across the nature and climate space.

“ It is a fundamental misconception of economists that we can continue to rely on models of growth and development in which our impact on the biosphere is of second-order importance. ”

The Dasgupta Review, February 2021

Investing in solutions

Significant capacity lies with sustainable investors to tackle both the climate and nature crises in mainstream portfolios, via, for example, identifying areas of exposure to the risks of biodiversity loss and employing engagement strategies to mitigate these risks. Risk mitigation strategies such as these have been given a boost by initiatives such as the Task Force for Nature-related Disclosures (TNFD) and the incipient Nature Action 100 engagement programme, both of which follow in the footsteps of their climate equivalent and set out to tackle biodiversity loss via investor stewardship and improved financial disclosures.

However, these are likely to be long-term and possibly slow-moving initiatives. Impact investing has an important and complementary role to play,

stepping into the gap to develop and scale the transformative solutions needed to address these challenges. Engaging with the laggards without supporting pioneering solution-providers will only do part of the job needed.

The solutions are broad ranging and can be targeted to tackle both climate and nature. Often, they will do both, which we believe enhances both their societal importance and their long-term value. Examples include agricultural innovations to improve the efficiency of farming practices, which reduces the use of fertilisers, lowers greenhouse gas emissions and improves soil biodiversity; pioneering recycling infrastructure that can limit the carbon-intensive extraction of primary raw materials while also tackling marine plastic pollution; cold-storage solutions which reduce greenhouse gas (GHG) emissions from food waste while alleviating the pressure to farm so-far unexploited land; and techniques to manage sustainable forestry more effectively, sequestering carbon and enhancing biodiversity.

An investment approach that explicitly targets both climate and nature holds important and differentiating characteristics compared to climate-only approaches. For example, in tackling climate change, we need to ensure that we are not inadvertently aggravating biodiversity, such as by creating monoculture forestry plantations that can act as valuable carbon sinks, but are devoid of biodiversity, as well as being more vulnerable to the effects of extreme weather.

This focus on the net-positive impact, which is characteristic of impact investment strategies, can provide opportunities for engagement with investees. Engagement is area of high priority for impact investors, reflected in the FCA's recent guidance for a 'sustainability impact' label in the UK, which highlights 'investor contribution' as a crucial aspect alongside the impact generated by the underlying company.

Some holdings will balance the issues of climate and nature without the need for engagement, but there will be instances where the 'Nature footprint' of companies that are primarily providing climate solutions will benefit from active engagement. Examples include engaging with utilities providers on the biodiversity impacts of offshore wind and hydropower generation;

managing and mitigating GHG and non-GHG emissions from the manufacture of climate-friendly insulation materials; and wastewater management improvements at recycling facilities for sustainable packaging materials.

The SDGs provide investors with a useful supplementary framework for evaluating the impact of companies on societal climate and nature-related goals. In particular, SDG14 (Life below water) and SDG15 (Life on land) focus directly on the conservation and preservation of nature and biodiversity. However, many other environmental SDGs, including SDG7 (Clean and affordable energy), SDG9 (Industry, innovation and infrastructure), SDG11 (Sustainable cities and communities), SDG12 (Responsible consumption and production), and SDG13 (Climate action), all explicitly cover climate and nature-related targets and metrics.

“ Ecosystem services and nature-based solutions, which depend on healthy biodiversity, make essential contributions to climate change mitigation and adaptation, and are effective vehicles for transformational change. ”



Example:

Improved forest management

An example of investors promoting positive climate and nature action is by funding improved forest management (IFM) projects. Under such projects, carbon stocks are increased relative to 'business as usual' forestry, in areas that would otherwise be at risk of conversion or aggressive harvesting. This could be achieved through actions such as enrichment planting, the management of competing vegetation, and reduced timber harvesting, all while preventing deforestation. IFM not only sequesters atmospheric carbon dioxide, it also helps to improve biodiversity and promote tree growth.



Tackling waste and shifting to a circular economy



Rana Modarres
Impact Director,
Catalyst

The world's current model of production and consumption has been shown to be unsustainable across a number of metrics. Here, we review the consequences of our current linear economic model, particularly in the rapidly growing area of e-waste, and consider the need to shift to a circular economy, in our efforts to achieve SDG12: Responsible consumption and production.

Unsustainable production and consumption habits

There are currently eight billion people on planet earth, and this is expected to increase to 9.7 billion by 2050, and could peak at 10.4 billion at the end of the century³. At the same time, growing prosperity in emerging economies will lead to better quality of living, but also increased consumption – currently, the material footprint per capita in high-income countries is 10 times the level of low-income countries⁴.

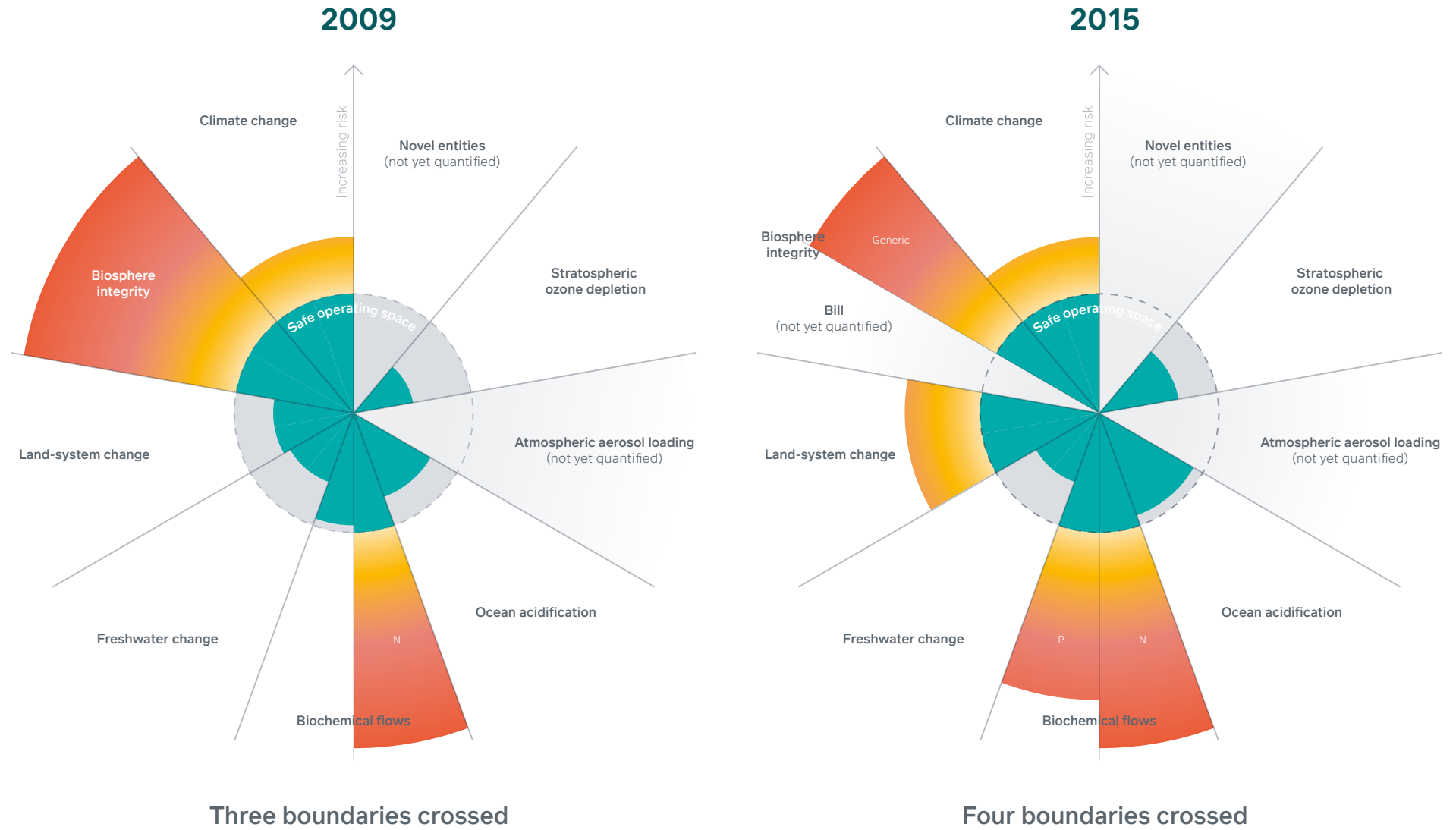
As demand continues to increase, the world is running out of natural resources. Earth Overshoot Day, the point in a given year when humanity's demand for ecological resources exceeds what the planet can generate in that year, has fallen progressively earlier since the 1970s. In 2023, Earth Overshoot Day was 2 August. Similarly, we have already breached six of the nine 'planetary boundaries', which together define a safe, healthy planet across land, sea and air⁵. These are climate change, biosphere integrity, land system change, freshwater change, biogeochemical flows, and novel entities.

³ UN, 'World Population Prospects 2022', (un.org), 2022.

⁴ UN Statistics Division, 'Responsible consumption and production', (unstats.un.org), 2023.

⁵ Stockholm Resilience Centre, 'All planetary boundaries mapped out for the first time, six of nine crossed', (stockholmresilience.org), September 2023.

Figure 1: Six of nine planetary boundaries have already been breached



Source: Azote for Stockholm Resilience Centre, Stockholm University. Based on Richardson et al. 2023, Steffen et al. 2015, and Rockström et al. 2009.



Earth Overshoot Day

Earth Overshoot Day marks the point in a given year when humanity's demand for ecological resources exceeds what the planet can generate in that year. Alongside the findings that six planetary boundaries have now been breached, the forward shift of Earth Overshoot Day in the calendar since its creation in the 1970s is a further indication that the earth's store of precious natural capital is being used up at an alarming rate.

- In **2009**, Earth Overshoot Day was reached on **23 August**
- In **2015**, Earth Overshoot Day was reached on **7 August**
- In **2023**, Earth Overshoot Day was reached on **2 August**

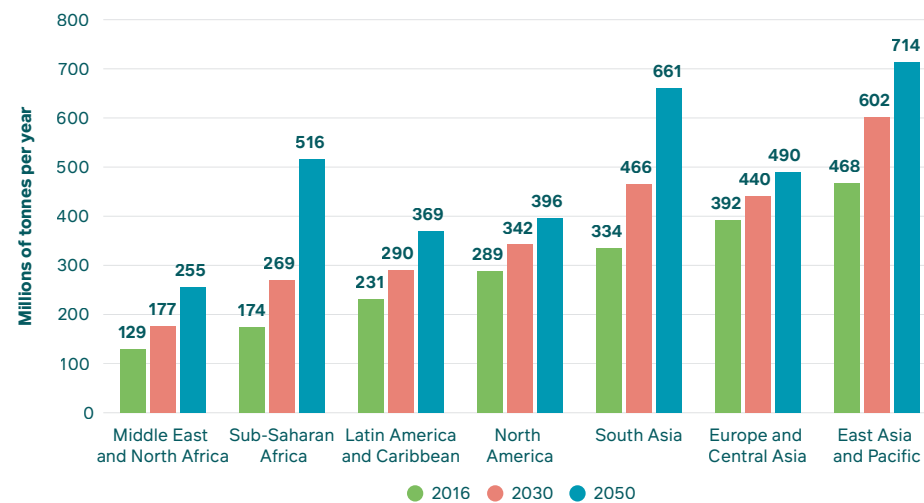
The mountain of waste

Another by-product of our unsustainable consumption patterns is that of excess waste. We currently produce two billion tonnes of municipal solid waste every year, at least 33% of which is not managed in an environmentally friendly way⁶. Again, we can expect these annual waste numbers to increase in the near future, in line with growing populations and income levels – the World Bank estimates that annual waste production will top a staggering 3.4 billion tonnes by 2050⁷.

The environmental impacts are clear. Mismanaged waste is filling landfill sites and finding its way into oceans, or leeching into nearby soils and groundwater, destroying local ecosystems. Decomposing waste also produces methane, a potent greenhouse gas. There are clear consequences for humans – not least, from contaminated local water sources or crops. Further in this article, we explore one particularly concerning type of waste – electronic waste (or e-waste).

^{6,7} World Bank, 'What a Waste 2.0 report', (worldbank.org), September 2018.

Figure 2: Solid waste generation is projected to rise across all regions



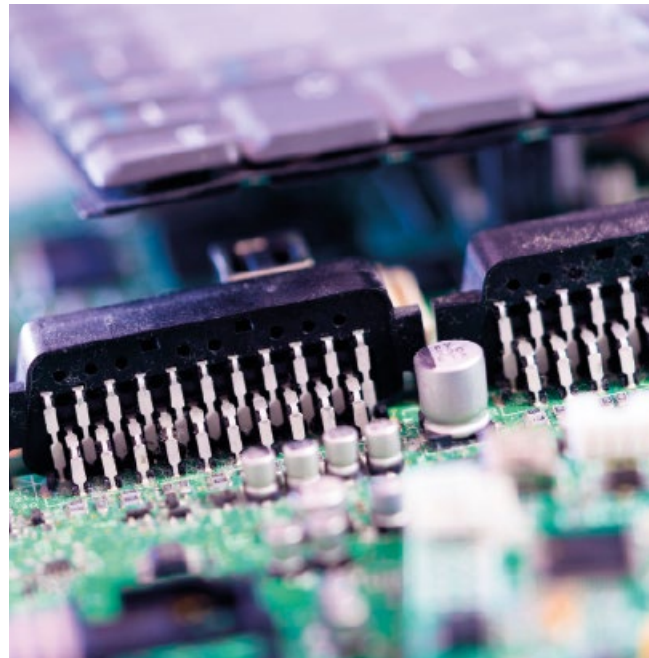
Source: World Bank, What a Waste 2.0 report, September 2018.



The shift to a circular economy

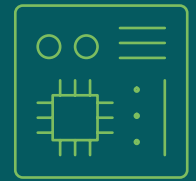
The global economy is currently only 7.2% circular, down from 8.2% in 2020, and 9.1% in 2018⁸, driven by rising material extraction and use. This means that only 7.2% of all materials used across the global economy have been recycled – or, 93% of resources are wasted, lost or otherwise remain unavailable for reuse at the end of their useful life.

Tackling the issue of unsustainable production and consumption requires a shift away from our current 'take-make-waste' model, and the embracing of a circular economy, where economic growth is decoupled from natural resource use. A circular economy involves reducing, reusing and recycling waste wherever possible – cutting the need for virgin materials, while reducing the amount of waste that is mismanaged or ends up in landfill. Research suggests that moving to such an economic model could fulfil people's needs with 70% of the materials we currently use, while remaining within the planet's safe limits⁹.



This shift would go a long way to achieving the aims of SDG12: Ensure sustainable consumption and production patterns, and specifically, a number of its sub-targets, such as 12.2 (by 2030, achieve the sustainable management and efficient use of natural resources) and 12.5 (by 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse).

^{8,9} CGRI, 'Global Circularity Gap Report 2023', (circularity-gap.world), January 2023.



E-waste – the challenge and the solutions

The fast-growing area of electronic waste (or e-waste) is a significant issue. E-waste includes the likes of old mobile phones, household appliances and computers. On average, we generate more than 7kg of e-waste per person every year, of which only 1.7kg is managed in an environmentally sound way¹⁰. Collection rates vary between countries, but is especially low in low- and middle-income countries, where there is not yet sufficient infrastructure to manage e-waste.

E-waste contains both hazardous and valuable materials, meaning that there are huge potential benefits from the shift towards a circular model. With proper waste management and recycling, not only will toxic materials be prevented from leeching into soil and water, but valuable resources such as gold, silver, copper and platinum can be recovered.

¹⁰ UN Statistics Division, 'Responsible consumption and production', (unstats.un.org), 2022.

The solutions in practice

Encouragingly, investors can play a part in addressing the circular economy challenge, by supporting the wide variety of innovative companies providing solutions to reduce waste and reuse materials across industries. Examples of such companies can be found all the way along the waste collection and recycling process.

Investors can support companies facilitating the efficient collection of waste, especially in lower-income economies where collection rates are lower. Companies can also partner with others to reuse this waste. For example, a US-based waste collection company has partnered with a global soft drinks brand, to collect and recycle plastic waste. This reduces the amount of mismanaged waste, and will aid the drinks company in hitting its targets for the minimum recycled content of its packaging. Another impactful company in this area pioneered 'reverse vending machines'. Found in many European supermarkets, these allow consumers to return used plastic containers, such as drink bottles, in a convenient location. These machines play an essential role in the growing area of deposit return schemes, where consumers exchange the container for the return of a deposit (included in the original purchase cost of the drink).

There are also opportunities in the sorting of waste, by supporting companies providing the technology to efficiently separate waste into different materials. The company behind the reverse vending machines also produces advanced scanning technologies, which can identify types of plastic, shapes and colours, the presence of contaminants and specific hazardous or valuable materials, as a stream of mixed waste moves along a conveyor belt. Mechanical levers or jets of compressed air are then used to separate the materials, after which they can be recycled. While this technology can make the recycling of all materials more efficient, there are particular benefits when it comes to e-waste. These include ensuring that hazardous materials, such as brominated flame retardants, are disposed of correctly, instead of being buried in landfill, while valuable materials such as gold, copper and lithium are recovered.

Finally, investors can support innovative technologies allowing the reuse waste. For example, one impactful company collects mixed solid waste that would otherwise have been incinerated or sent to landfill. Through a chemical process, the organic matter in the waste is broken down into its component parts, which combine with residual plastics to form a composite thermoplastic material. This material can be substituted for oil-based resins in the manufacturing of a huge range of plastic products, not only helping to prevent plastic waste going to landfill, but also reducing the reliance on fossil fuels for new plastic materials.



Improving gender equality



Paul Hailey
Head of Impact & ESG,
responsAbility

Investing where capital is scarce, usually in developing markets, contributes to tackling the most pressing issues of our time. Gender is a cross-cutting issue – progress in this area is intertwined with all other sustainable development outcomes. Investors can and do play a role in driving greater gender equality in developing markets via three investment themes: financial inclusion, sustainable agriculture and access to energy.

Interconnected nature

Arguably, there is not a single challenge in the world of sustainable development – ranging from financial inclusion to climate change risk – where outcomes are not worse for women. By their nature, the SDGs are intertwined, with progress in one area requiring advances in others. And while SDG5 calls for gender equality specifically, gender as a theme runs through all the goals. Therefore, we cannot hope to achieve the SDGs without systematically tackling gender inequality.

The current state of play

While there has been progress, we are still a long way from achieving global gender equality. Currently, we are on track to achieve only 15.4% of indicators for SDG5: Gender equality by 2030, while 23.1% are considered to be far or very far off track¹¹. In fact, at the current rate of progress, closing the global gender gap is projected to take another 131 years¹².

The current state of play varies widely across regions, with Europe leading the race to achieve gender parity. There is more to be done in much of the developing world – the Middle East and North Africa, followed by South Asia, have made the least progress¹³.

There are also noticeable differences when we consider different aspects of gender equality. For example, equality in the field of educational attainment has been trending upwards in recent decades. Globally, 91% of girls go to primary school, compared to 93% of boys. By the time children reach upper secondary school, girls have edged ahead of boys (54% versus 52%)¹⁴. Health outcomes have also improved, with global development agencies more able to directly intervene and provide support.

However, further progress is much needed when it comes to women's economic empowerment. Globally, less than half of working-age women participate in the labour force – but again, there are regional differences, ranging from 60.9% in Sub-Saharan Africa to 18.8% in North Africa and the Middle East¹⁵.

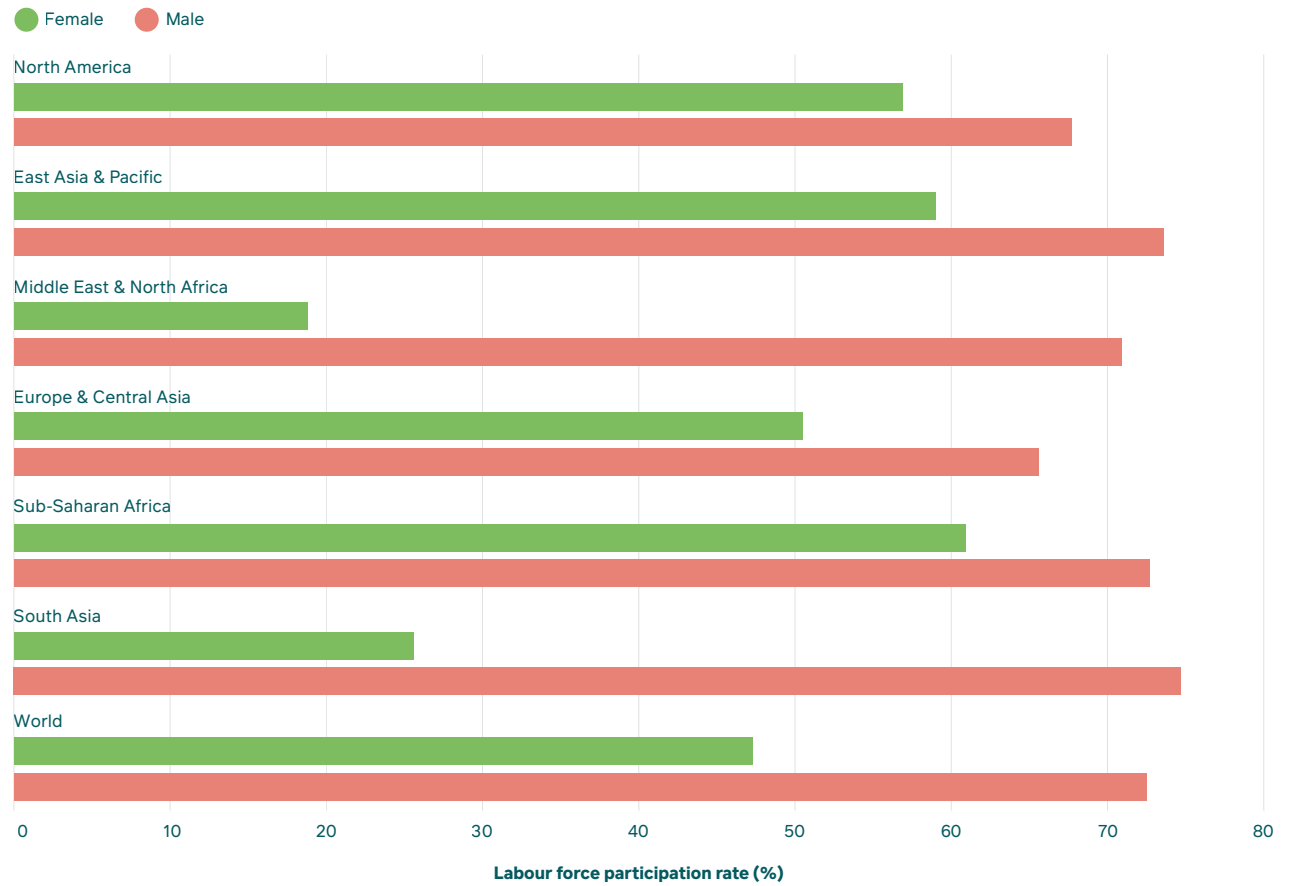
^{11,12,13} World Economic Forum, 'Global Gender Gap Report 2023', (weforum.org), June 2023

¹⁴ UNICEF Education Pathway Analysis database, (data.unicef.org) 2021.

¹⁵ World Bank Gender Data Portal, (worldbank.org), November 2023.



Figure 1: Female labour force participation varies across the world



Source: International Labour Organization (ILO). Data retrieved from World Bank Gender Data Portal (SL.TLF.ACTI.ZS), as at November 2023.

The opportunity for investors

Tackling gender inequality offers many opportunities to both encourage sustainable development outcomes, and generate financial returns. With advances in education, there is currently an unprecedented number of young, educated women – with disposable income – ready to enter the workforce. Research from Moody's suggests that eradicating the gender gap in the workplace could add \$7 trillion to global GDP annually¹⁶. Companies with strong female representation are also 25% more likely to outperform financially than their less diverse counterparts¹⁷.

While some aspects of the gender challenge necessitate cultural and political shifts, investors can nonetheless play a significant role in driving improved outcomes. For example, by supporting business models that directly provide solutions towards women's empowerment, particularly around access to key services.

Another approach is to engage with investee companies – whether or not they are targeting a particular gender-related outcome – to ensure they have put in place adequate policies and procedures. For example, in areas such as anti-harassment, parental leave and fair promotions.

While investors can usually rely on local regulations in the developed world, it is often necessary to go above and beyond in the developing world, where gender inequality is particularly stark. In such cases, investors can work with the company to create a plan with specific, actionable steps, while taking into account the company's starting point and wider cultural environment.

Financing for female business owners

In developing markets, one option for investors looking to level the gender playing field is to support companies offering financing for female entrepreneurs and business owners, as well as reducing gender gaps in financial inclusion overall. Cultural or even legal barriers mean that levels of formal employment are considerably lower for women in many developing markets. Meanwhile women that start their own business often struggle to access credit to a greater degree than male entrepreneurs, in part because women often lack collateral, such as land ownership. Under the 'classic' microfinance model, financial institutions aim to overcome this issue by facilitating the practice of 'group lending'.

¹⁶ Moody's Analytics, 'Close the Gender Gap to Unlock Productivity Gains', (moodyanalytics.com), March 2023.

¹⁷ McKinsey & Company, 'Diversity wins: How inclusion matters', (mckinsey.com), May 2020



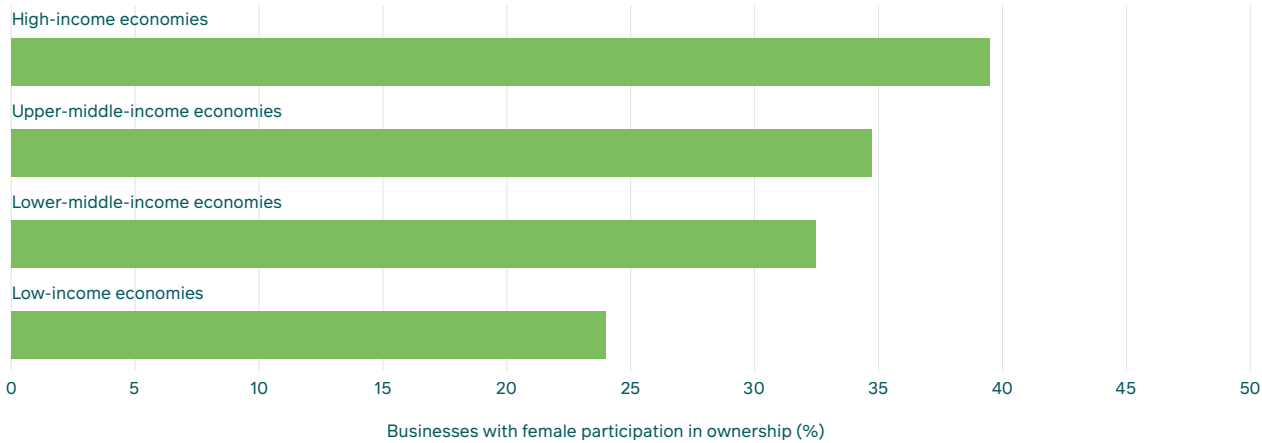
What is group lending?

Group lending involves lending money to a group of people, such as female entrepreneurs in a rural village.

Physical collateral is replaced with 'social collateral' – members of the group are self-selecting and mutually responsible for each other's payments, thereby encouraging timely repayment.

Women are therefore given the opportunity to overcome cultural barriers and secure funding to start or expand a business.

Figure 2: Fewer women are business owners in developing markets



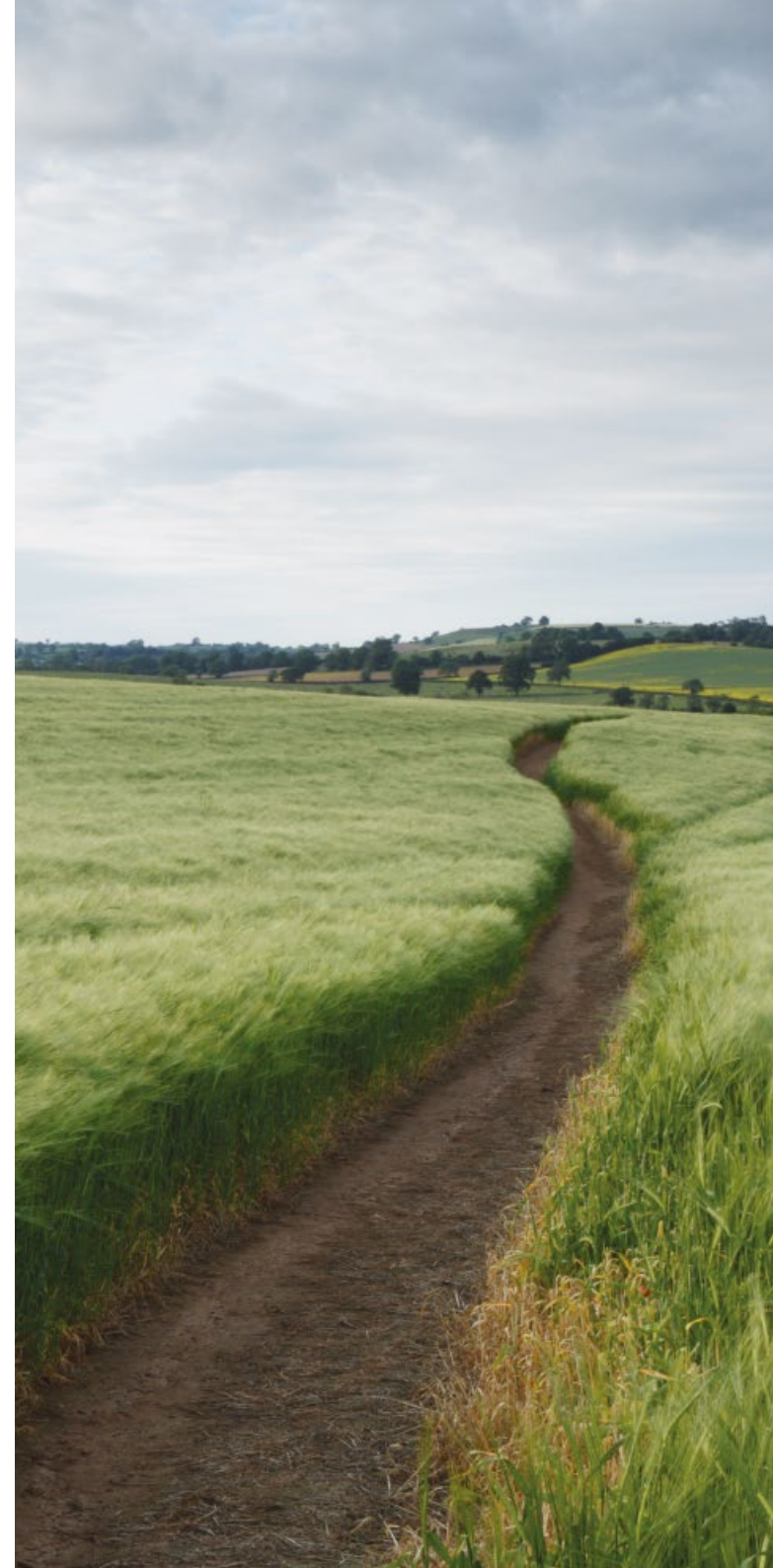
Source: World Bank Enterprise Surveys, as at November 2023.

Opportunities in agriculture

Rural women make up almost half of the global agricultural workforce, while accounting for less than 20% of agricultural landholders¹⁸. They are often prevented from owning land as a result of insufficient credit, unequal pay, low levels of decision-making, gender-based violence, or unequal inheritance rules for males and females. Those that do own farmland are disproportionately blocked from accessing financing and crucial inputs, such as fertiliser and pesticides.

However, investors can encourage positive change by supporting female-led smallholder farms in a variety of ways. These include providing direct funding for farmers, delivering training and educational services, enabling them with technology, or supporting companies promoting fair pay for farmers.

¹⁸ United Nations, 'Securing Women's Land Rights for Increased Gender Equality, Food Security and Economic Empowerment', (un.org), June 2023.





Access to energy

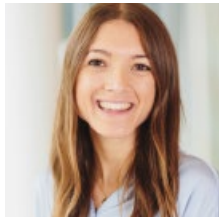
A lack of reliable grid infrastructure means that an estimated 52% of the global rural population rely on polluting technologies, such as kerosene lamps and fossil-fuel generators, for their domestic lighting and power needs¹⁹. The indoor air pollution released by these devices is responsible for 3.2 million premature deaths, and the loss of 86 million healthy life years annually²⁰, with the largest burden suffered by women and girls, as they spend more time in and around the home.

Without sufficient policy action, 1.9 billion people will still lack access to clean fuels and technologies in 2030, 60% of which will reside in Sub-Saharan Africa²¹. However, investors can make a positive impact in this area by supporting companies providing off-grid residential solar power systems, which replace fossil fuel generators and lamps. The systems consist of a rooftop solar panel, which connects to lighting and a plug socket, and is often sold to homeowners on multi-year finance for greater affordability.

The benefits of such systems are vast. First and foremost, women and children can avoid the health issues associated with indoor air pollution. With access to clean, reliable energy – and less time spent collecting and preparing fuels – there are also greater opportunities for health and personal development activities, such as studying in the evening or starting a business to generate an income.

^{19, 20, 21} World Health Organisation, 'Household air pollution and health', (who.int), November 2022.

Voices from the team



Alexia Savva
Infracapital

A pillar of our investment process is mapping each of our investments to the UN Sustainable Development Goals. As a long-term infrastructure investor, Goal 9: Industry, innovation and infrastructure, is at the heart of our investment strategy as we seek to develop essential and resilient infrastructure with the corporate governance frameworks that support the management of opportunities and risks associated with building a sustainable future.

The focus on climate change and the critical need to accelerate the transition to a low-carbon economy, the focus on energy security and independence, the increased focus on sustainability and the critical need to modify industrial practices, the advancement of technology and the digitalisation of infrastructure assets and the mobility transition are all driving our pipeline of opportunities.

Our commitment to invest in, build and manage essential infrastructure across Europe means our investment activities are often highly impactful to broader societal goals and play their own role in supporting many of the SDGs. Our investments in the electric vehicle charging operator, Gridserve, owner of e-buses and owner/operator of associated EV charging points and connected batteries-on-buses, Zenobe, and thermal battery storage solutions provider, EnergyNest, are examples of delivery toward SDG7: Affordable and clean energy and SDG11: Sustainable cities and communities.

Additionally, as we deploy capital to construct assets and scale businesses, such creates permanent and temporary jobs and a significant multiplier effect feeding into SDG8: Decent work and economic growth.



Aditi Rao
Private & Illiquid Debt

The focused nature of private debt investments means that we usually invest in smaller, more niche companies and projects than those in the public markets where revenue streams are more diversified. This means that we can direct our capital towards funding projects or companies which have a demonstrable positive social and economic impact, aligning us well with the 17 SDGs.

We see many environment or nature-focused investment opportunities that broadly promote SDG13 (Climate action). Specific examples would be investments related to circular economy principles which strongly promote SDG12 (Responsible consumption and production), renewable energy projects (SDG7; Affordable and clean energy), green buildings (SDG11; Sustainable cities and communities) and even sometimes in sustainable agriculture which links to elements of SDG6 (Clean water and sanitation) and SDG15 (Life on land).



Anish Majmudar
M&G Impact & Private Equity

On the social side, we've seen an increase in investments relating to healthcare products and services which primarily promotes SDG3 (Good health and well-being) but also promotes many others on a case-by-case basis by developing innovative solutions or by improving access and affordability.

We are also able to target some of the less 'straightforward' SDGs like SDG5 (Gender equality) and SDG10 (Reduced inequalities), through targeted, structured financings, such as blended finance transactions in conjunction with development banks.

Our Alternatives strategies invest in the equity of private businesses and projects both directly and indirectly through specialist funds. Private businesses are often the source of new technologies and business models; these new ideas are crucial in our ability to support the achievement of the SDGs. Through the direct control and influence shareholders in private companies have, there is a strong ability to align Investors' sustainability objectives with company outcomes.

Our Private Equity Impact investments seek to make a positive contribution to a broad range of SDGs including those related to climate, education and healthcare. Examples of investments include a leading provider of eating-disorder treatment and care; digital ed-tech solutions for students with dyslexia and other cognitive needs; and a Building Management Systems (BMS) company facilitating improved energy efficiency.

Our Real Assets Impact investments seek to make a positive difference to SDGs through investments in infrastructure, agriculture and natural capital. We focus on three core themes: the energy transition, responsible consumption, and social and economic inclusion. Our investments are broad, and include a range of renewable energy projects in developed and developing markets; grid infrastructure such as batteries and other forms of energy storage; businesses rolling out fibre broadband to rural communities; and sustainable agriculture production.

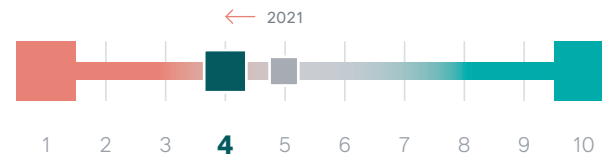
As well a growing opportunity set for investments supporting affordable and clean energy, clean water and sanitation, responsible production and consumption, and climate action, we are excited by the growing opportunity to invest in real solutions that support life on land. Examples include natural capital through both regenerative agriculture and the protection of forests to support biodiversity and sequester carbon.

Methodology

Our SDG scorecard assesses global, year-on-year progress, from a general perspective and through an impact investing lens, towards achieving the UN's 17 SDGs.

Our assessment is based on one key representative indicator per goal. For example, to measure progress across SDG14 (Life below water), we use the 'clean waters' sub-goal of the Ocean Health Index as our primary metric to determine the score for this goal. We also provide a brief summary alongside each score reflecting notable drivers and developments to put our evaluation in context and to help explain our view of what is worldwide to achieve the UN's 2030 Agenda. Please see the following tables for more information on the metrics we have chosen for each SDG.











On a scale of 1-10, we have allocated a number to each SDG, indicating whether the world is on target, behind schedule or ahead of schedule in terms of progress. An SDG with a score of five out of 10, for example, means that we think the world is on track towards delivering that goal.








On our slider, the highlighted square indicates the latest (2022) score, while the faded square shows 2021 score, demonstrating how much (or how little) progress has been made in a year, based on our analysis. The nature of the varied sources of data means that some datapoints will either be estimated or adjusted by the underlying source based on new information.

While we support the UN SDGs, we are not associated with the UN and our funds are not endorsed by them.

SDG scorecard and metric sources

| SDG description | SDG number | Metric | Metric 2020 | Metric 2021 | Metric 2022 | 2020 score | 2021 score | 2022 score | YOY change | Metric source |
|---|------------|--|---------------------|-------------------|---------------------|------------|------------|------------|------------|---|
| No poverty | SDG1 | Extreme poverty headcount ratio at US\$2.15 a day | 9.1% (estimated) | 9% (estimated) | 8.5% (estimated) | 3 | 3 | 4 | 1 |  |
| Zero hunger | SDG2 | Prevalence of stunting in children under the age of 5 | 22.7% | 22.5% | 22.3% | 4 | 4 | 4 | 0 |  |
| Good health and well-being | SDG3 | Countries and territories certified malaria-free by WHO | 39 | 41 | 41 | 4 | 5 | 5 | 0 |  |
| Quality education | SDG4 | Literacy rate, youth total (% of people aged 15-24) | 92.5% | 92.6% | 92.7% | 4 | 4 | 4 | 0 |  |
| Gender equality | SDG5 | Ratio of female to male participation rate | 0.65 | 0.65 | 0.66 | 4 | 4 | 4 | 0 |  |
| Clean water and sanitation | SDG6 | Population using safely managed drinking water services | 72.25% | 72.49% | 72.93% | 5 | 5 | 5 | 0 |  |
| Affordable and clean energy | SDG7 | Share of renewables in electricity production | 28.00% | 28.10% | 29.80% | 6 | 5 | 5 | 0 |  |
| Decent work and economic growth | SDG8 | Share of young people who are not in employment, education or training | 24.90% | 23.80% | 23.50% | 3 | 3 | 3 | 0 |  |
| Industry, innovation and infrastructure | SDG9 | Access to the internet globally | 60.0% | 61.8% | 64% | 7 | 8 | 8 | 0 |  |
| Reduced inequalities | SDG10 | Distribution of wealth (ie wealth share of the global top 1%) | 45.80% | 45.60% | 44.50% | 3 | 3 | 3 | 0 |  |

| SDG description | SDG number | Metric | Metric 2020 | Metric 2021 | Metric 2022 | 2020 score | 2021 score | 2022 score | YOY change | Metric source |
|--|------------|--|--|--|---------------------------|------------|------------|------------|------------|---|
| Sustainable cities and communities | SDG11 | Annual concentration of particle matter of less than two microns in diameter in China | 34.7 | 32.6 | 30.6 | 6 | 6 | 6 | 0 |  |
| Responsible consumption and production | SDG12 | Circularity gap (ie, % of the global economy assessed as being circular) | 8.6% | 8.6% | 7.2% | 3 | 3 | 2 | -1 |  |
| Climate action | SDG13 | Annual contribution towards mobilizing at least US\$100 billion per year by 2020, including the Green Climate Fund | US\$83.3bn | US\$89.6bn | US\$100bn (OECD estimate) | 3 | 3 | 4 | 1 |  |
| Life below water | SDG14 | Ocean Health Index – The clean waters subgoal of the Ocean Health Index measures to what degree marine waters under | 69.2 (updated from previous assessment) | 70.2 (updated from previous assessment) | 70.1 | 3 | 3 | 3 | 0 |  |
| Life on land | SDG15 | Terrestrial and inland waters protected area coverage (%) | 16.70% | 16.87% | 16.05% | 2 | 2 | 2 | 0 |  |
| Peace, justice and strong institutions | SDG16 | Global Corruption Perception Index Average Country Score | 43/100 | 43/100 | 43/100 | 5 | 5 | 4 | -1 |  |
| Partnerships for the goals | SDG17 | The amount of official development assistance (ODA) as a share of gross national income (GNI) for DAC (Development Assistance Committee) Countries | 0.32 | 0.33 | 0.36 | 5 | 5 | 5 | 0 |  |



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