

IMPACT REPORT



April 2024

**BIODIVERSITY
FUNDS AT A GLANCE**

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If you are a fund investor

and would like to have a live demo of the Phenix Capital Impact Database, please visit www.phenixcapitalgroup.com/impact-database and register your interest.

If you are an impact fund manager

and would like to be considered for listing on the Phenix Capital Impact Database please email sales@phenixcapitalgroup.com. Listing is free of charge.



ABOUT PHENIX CAPITAL

CATALYSING INSTITUTIONAL CAPITAL TOWARDS THE SDGS

Phenix Capital Group is an impact investment consultant that enables institutional investors to make impact investments.

We assist asset owners and asset managers in aligning their investments with their values, financial objectives, and the Sustainable Development Goals.

www.phenixcapitalgroup.com

Our Vision

We envision a world in which institutional capital helps to end poverty, protect the planet and ensure prosperity for all

Our Mission

Our mission is to enable and catalyse institutional investments that realise financial, social and environmental returns

What we do

To achieve our mission, we enable institutional investors to allocate capital to impact investments through our Events & Webinars, Impact Databases, Impact Fund Assessment and Placement Services

Signatory of:



ABOUT IMPACT DATABASE

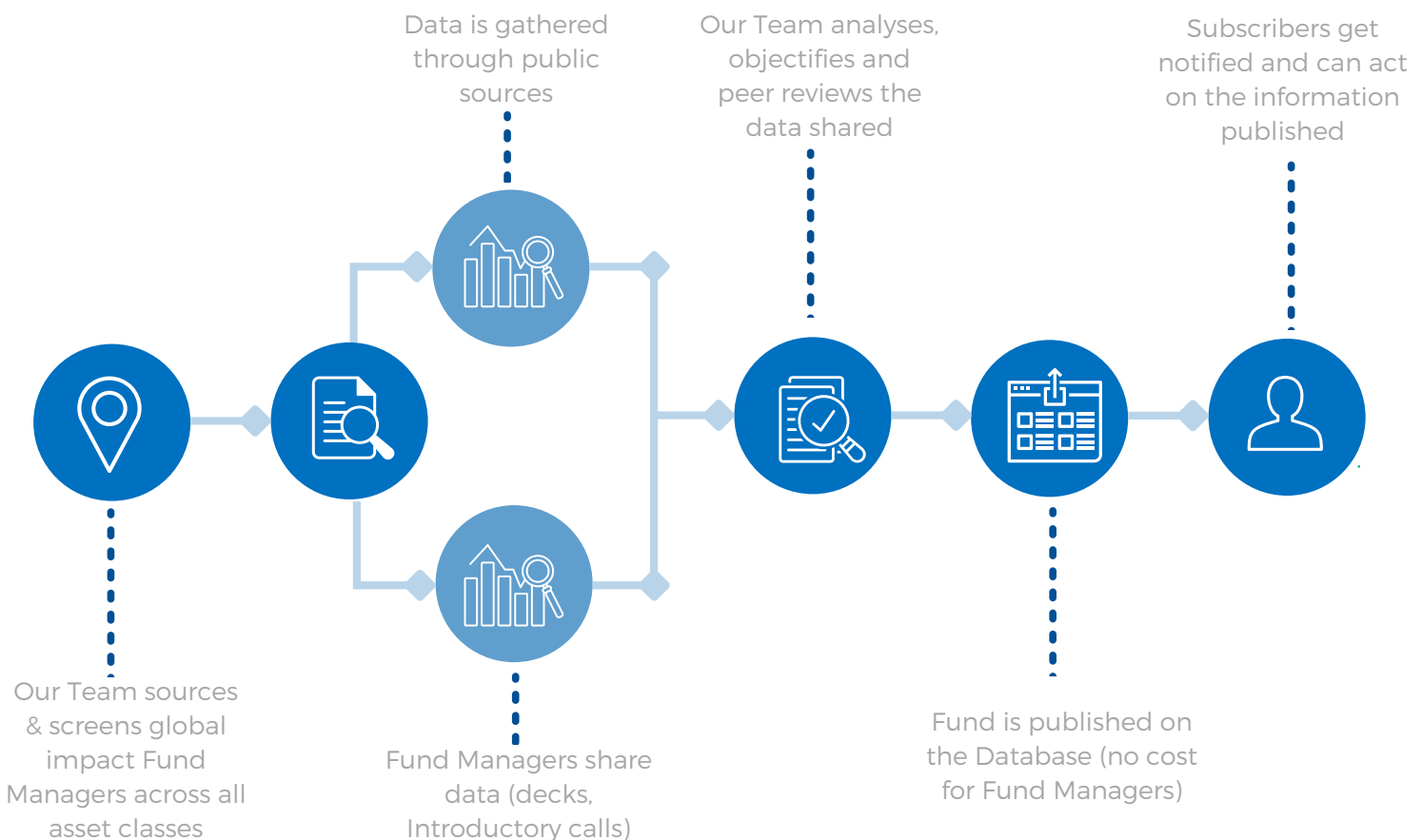
Phenix Capital's mission is to enable the allocation of capital from institutional investors towards social and environmental solutions while supporting the 2030 Sustainable Development Goals (SDGs). With the Impact Database, Phenix Capital aims to provide investors with access to and intelligence on the impact fund market opportunities available to them.

Three main variables have been central to construct, monitor and update the database: **funds considered have an impact proposition, institutional scale, and target market-rate returns.**

Impact Investing goes beyond negative screening and using Environmental, Social and Governance (ESG) integration to reduce harm or avoid risks, to generating intentional positive impact. Phenix Capital defines impact investing as **investing with the dual mandate of financial return and positive societal or environmental impacts**, with the notion of measuring the positive and negative impact of investments, ensuring both **intentionality and additionality** among these.

Phenix Capital's Impact Database features funds that align with this definition through their creation of solutions for global social and environmental issues, whilst prioritising financial returns. This category of impact investments can be referred to as **financial-first impact investments.**

FUND SOURCING PROCESS



INTRODUCTION



Biodiversity, the living component of natural capital, is the life force of the planet, and yet its demise is closer than we think. According to the World Economic Forum's [2024 Global Risks Report](#), biodiversity loss and ecosystem collapse is the third top 10 problem in a decade's time and right now one million species are on the brink of extinction.

If you look at the Sustainable Development Goals (SDGs), biodiversity is included as a subset of Life on Land (SDG15) but its survival, not explicitly included within Life Below Water (SDG14) even though it is a significant component of it, is conditional on achieving Climate Action (SDG13).

Put into an economic context, despite the fact that more than 55% of the world's \$58 trillion in gross domestic product (GDP) is highly or moderately dependent on nature, the United Nations only adopted a framework to go beyond GDP to make sure that natural capital is recognised in economic decision-making and reporting in 2021.

Right now, some \$7 trillion is invested globally each year in activities that have a direct **negative impact** on nature from both public and private sector sources, equivalent to roughly 7% of global GDP, according to the UN Environment Programme (UNEP) [State of Finance for Nature report](#).

The UNEP report finds that in 2022, investments in nature-based solutions totalled approximately \$200 billion, but private nature-negative finance flows amount to \$5 trillion annually, 140 times larger than the \$35 billion of private investments in nature-based solutions.

Key to driving investments into biodiversity will be to focus on its interconnectedness to nearly all the SDGs, primarily Climate Action (SDG13), and focusing in investments in regenerative, sustainable and circular practices.

Last year's [Biodiversity Report 2023](#), covered the [Biodiversity of Areas Beyond National Jurisdiction Treaty](#), and [Kunming-Montreal Global Biodiversity Framework](#). The latter may not be legally binding but it is the first-time a target of \$200 billion of annual biodiversity funding by 2030 has been agreed.

Since then, progress has been made with 320 organisations from more than 46 countries representing \$4 trillion in market capitalisation, committing to making nature-related disclosure, based on the [Taskforce on Nature-related Financial Disclosures](#) (TNFD) recommendations published in September 2023.

Today, according to BloombergNEF's [Biodiversity Finance Factbook](#), financing explicitly to protect and restore the planet's more fragile natural resources currently amounts to \$166 billion per year, less than one-sixth of the annual investment in the energy transition.

This will need to jump to almost \$1 trillion by 2030 to sustainably manage biodiversity and maintain the integrity of ecosystems. Global GDP could be \$2.7 trillion a year lower than projected levels by 2030 due to biodiversity loss.

Key Takeaways:

- **234% growth in funds focusing on biodiversity since 2015**
- **21% of all impact funds in database open for biodiversity investing**
- **40.4% of impact funds in database have a biodiversity focus**
- **75% of all North American real asset funds focus on timber/forestry**
- **SDG2 is the investor preference for biodiversity-focused funds**

IMPACT THEMES MAPPED AGAINST THE SDGS



The Phenix Capital Group has mapped the SDGs against Impact Themes, which are based on **the most globally endorsed terms used by practitioners in the financial sector** and what's used by generally accepted frameworks, to enable both fund managers and fund allocators to better **understand how the SDGs and it's sub-goals translate into outcome-based investment areas** - by the name that they are commonly known and referred to in the financial industry.

Mapped against the SDGs' sub-goals, our Impact Themes offer a comprehensive way for investors and fund managers in the financial industry to identify what social or environmental outcome is generated by an impact investment and its contribution to the Sustainable Development Goals.

THE REVAMPED IMPACT THEMES ARE ALREADY AVAILABLE IN OUR IMPACT DATABASE FOR FUND FILTERING, VIA THE FUND SEARCH FUNCTION.

BE PART OF THE IMPACT REPORT

Every month Phenix Capital Group publishes a new Impact Report, bringing up-to-date data on impact investments and interviews with impact fund managers and investors from the field.

PAST REPORTS INCLUDE:



See all Impact Reports on our website, visit: <https://phenixcapitalgroup.com/impact-report>

WOULD YOU LIKE TO BE FEATURED IN THE NEXT EDITION?

Featured interviews are carefully chosen taking into consideration the theme from the month and the expertise of the person to be interviewed, besides the company where he or she works.

Talk to our team about opportunities to be featured. Upcoming report topics include:

MONTH	REPORT THEME
May 2024	Blue Economy/ Oceans
June 2024	Private debt
August 2024	Infrastructure
September 2024	SDGs/ Investor report
October 2024	Real Estate
November 2024	Gender Lens
December 2024	Public Equity

Contact us to learn more about how to be featured in our reports.

BIODIVERSITY FUNDS

FUNDS OVERVIEW

1080

Funds on Impact Database targeting biodiversity related themes

566

Fund Managers on Impact Database with biodiversity related themes

567

Open for investment funds

406

Organisations with open for investment funds

€223 bn

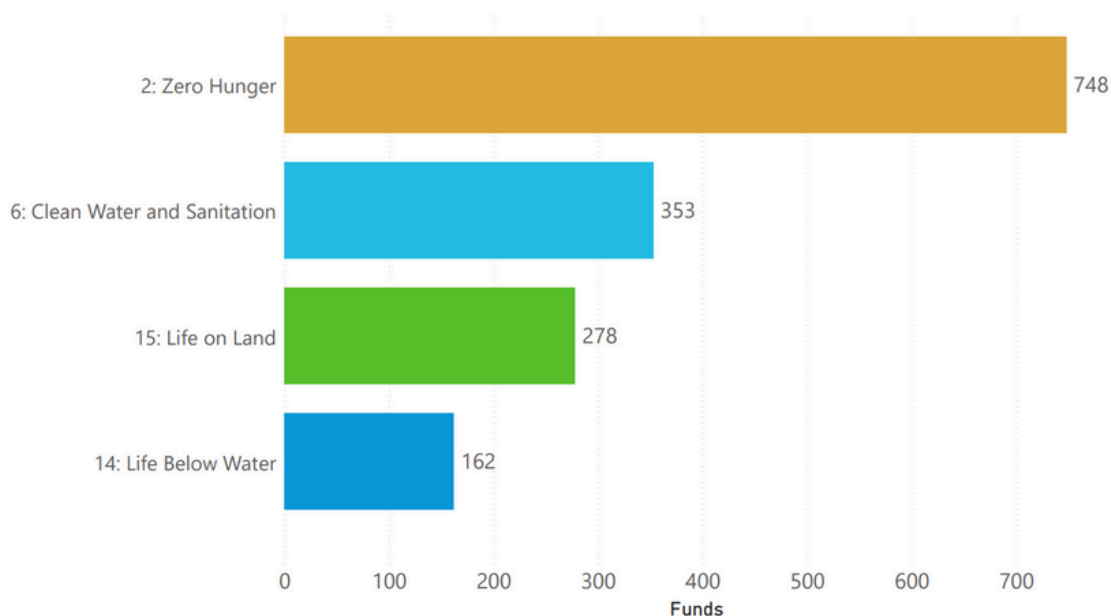
Total capital raised towards biodiversity related themes

€129 bn

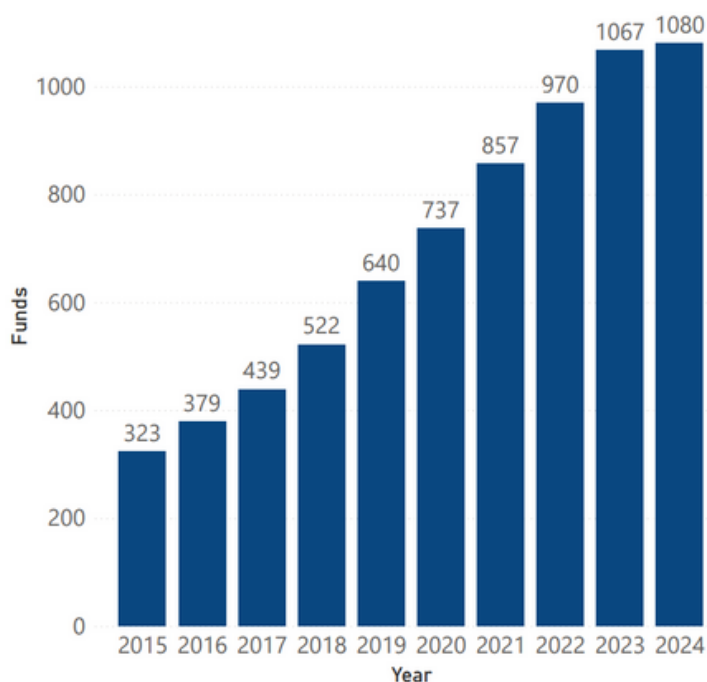
Total target size of open for investment funds

DATA OVERVIEW

Number of funds targeting biodiversity related SDG(s)



Cumulative number of funds targeting biodiversity (SDG 2, 6, 14 and 15)



With no Sustainable Development Goal (SDG) dedicated specifically to biological diversity, which encompasses living ecosystems from genes and bacteria to forests and coral reefs, biodiversity officially sits as subset of Life of Land (SDG15).

Yet biodiversity touches so many of the SDGs that for the purposes of this report we are also focusing on Zero Hunger (SDG2); Clean Water and Sanitation (SDG6); and Life Below Water (SDG14).

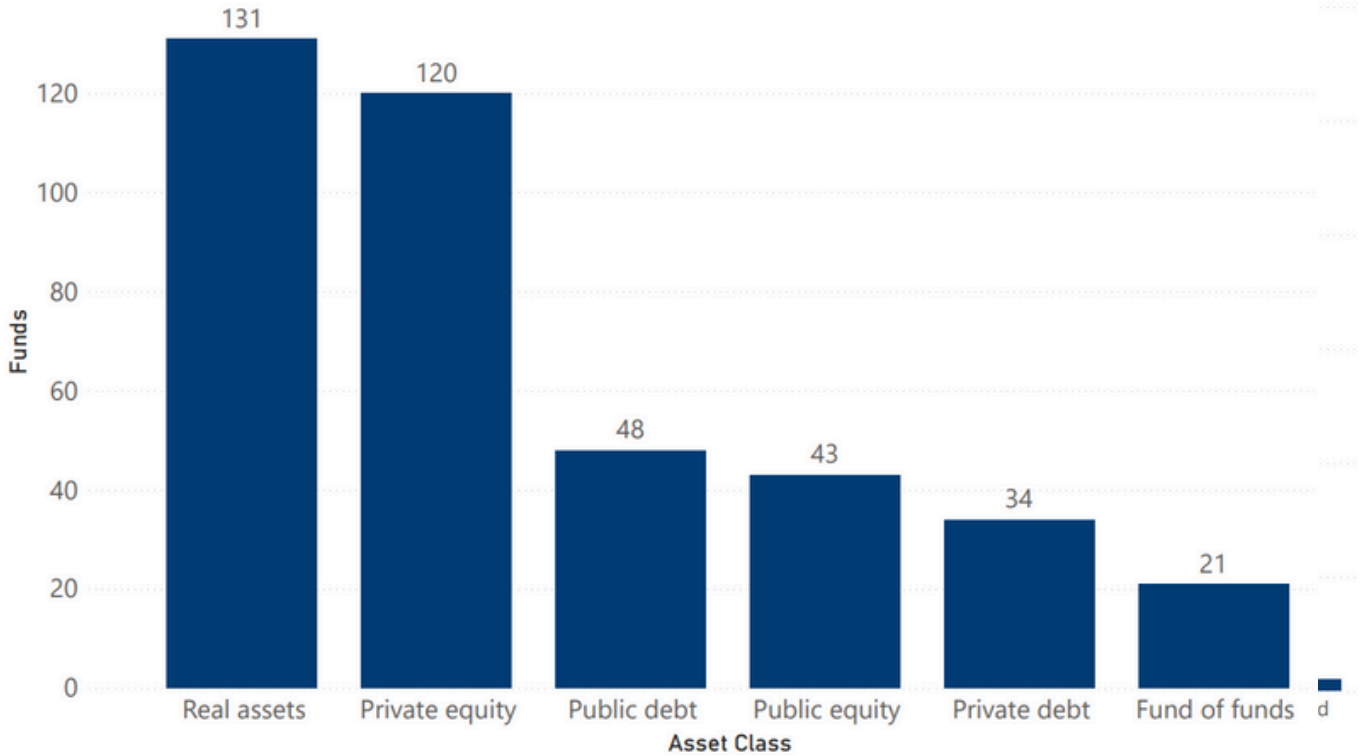
Since 2015, the Phenix Impact Database has seen 234% increase in the number of funds targeting these four SDGs and since 2023, the number of funds has grown by 13%.

More than one billion people rely on forests for their livelihoods. And land and the ocean absorb more than half of all carbon emissions.

Right now, one million species are threatened with extinction as irreplaceable ecosystems like parts of the Amazon rainforest are turning from carbon sinks into carbon sources due to deforestation. Some 85% of wetlands, such as mangrove swamps have disappeared.

FUNDS TARGETING SDG 14 AND 15 AT A GLANCE

Number of Funds by Asset Class targeting SDGs 14 and 15



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

When it comes to the number of funds targeting Life on Land (SDG15) and Life Below Water (SDG14) relating to biodiversity, real assets and private equity dominate in terms of number of funds in the database with 131 and 120, respectively.

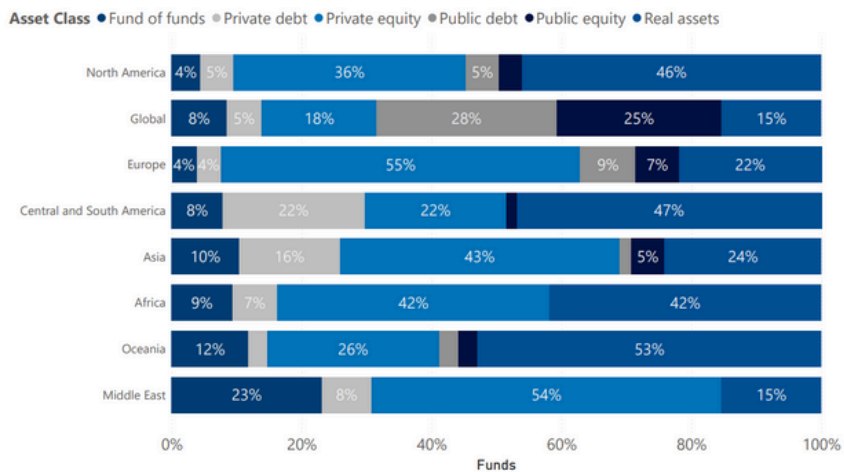
In terms of geography, biodiversity funds focused on Oceania (53%), Central and South America (47%), North America (46%) and Africa 42%, have a preference for investing real assets.

Regionally, private equity access to biodiversity is popular in funds focused on Europe (55%), Middle East (54%), Asia (43%) and Africa (42%).

While the Middle East focused funds also prefer accessing biodiversity via funds of funds (23%). Central and South American funds favour private debt (22%).

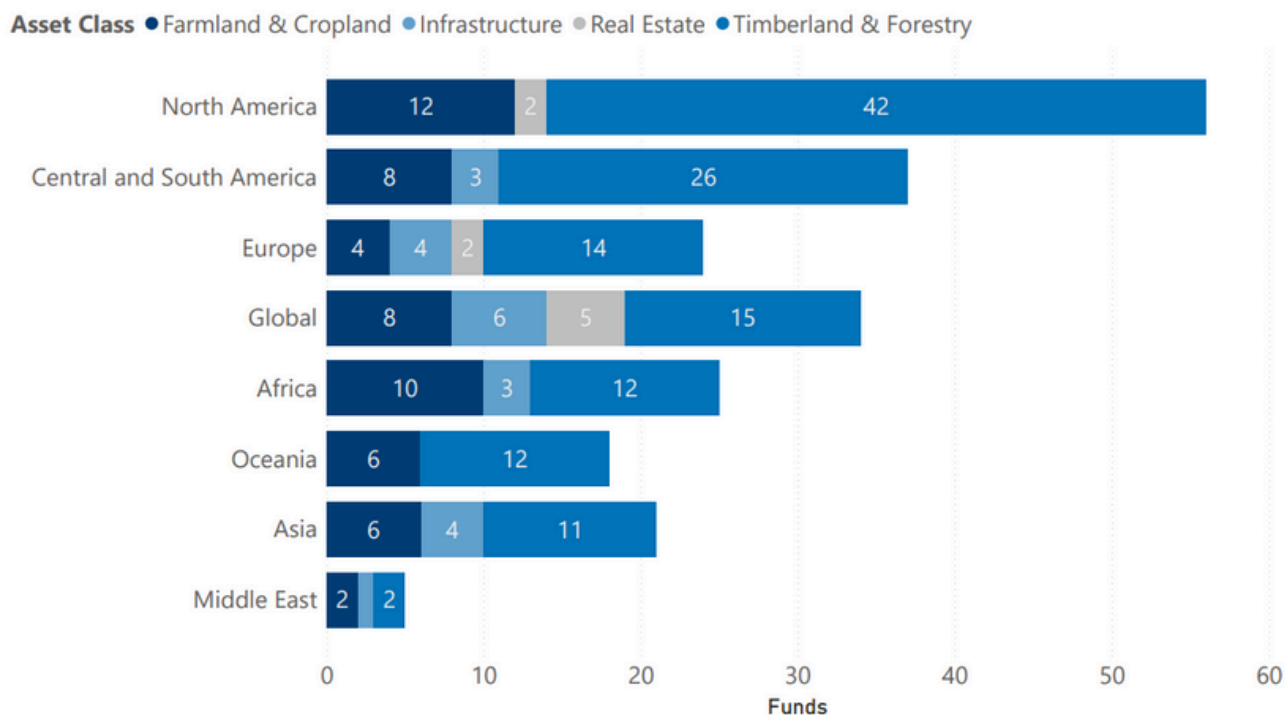
Interestingly, funds that are global in nature have a larger proportion to public debt (28%) and public equities (25%).

Fund distribution by Asset Class and Region (Targeting SDGs 14 and 15)



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

Number of funds by type of Real Asset



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

With real assets making up the majority, equivalent to 12%, of all biodiversity-linked funds in the Phenix Impact database, a deep dive into the number and type of funds in this asset class shows that forest and timberland funds are the most dominant subcategory globally.

For North America, 75% of the biodiversity funds fall into this category, while for central and South America, and Europe the percentage is 70% and 58%, respectively. Their popularity is two-fold.

The first is that sale of carbon credits allows landowners to increase their financial returns by creating woodlands for both timber and non-timber objectives.

Secondly, one of the largest sectors whose economic value generation is dependent on nature and its services, and therefore exposed to nature loss, is construction. The 2020 World Economic Forum and PwC report *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business* and the Economy estimates this at \$4 trillion.

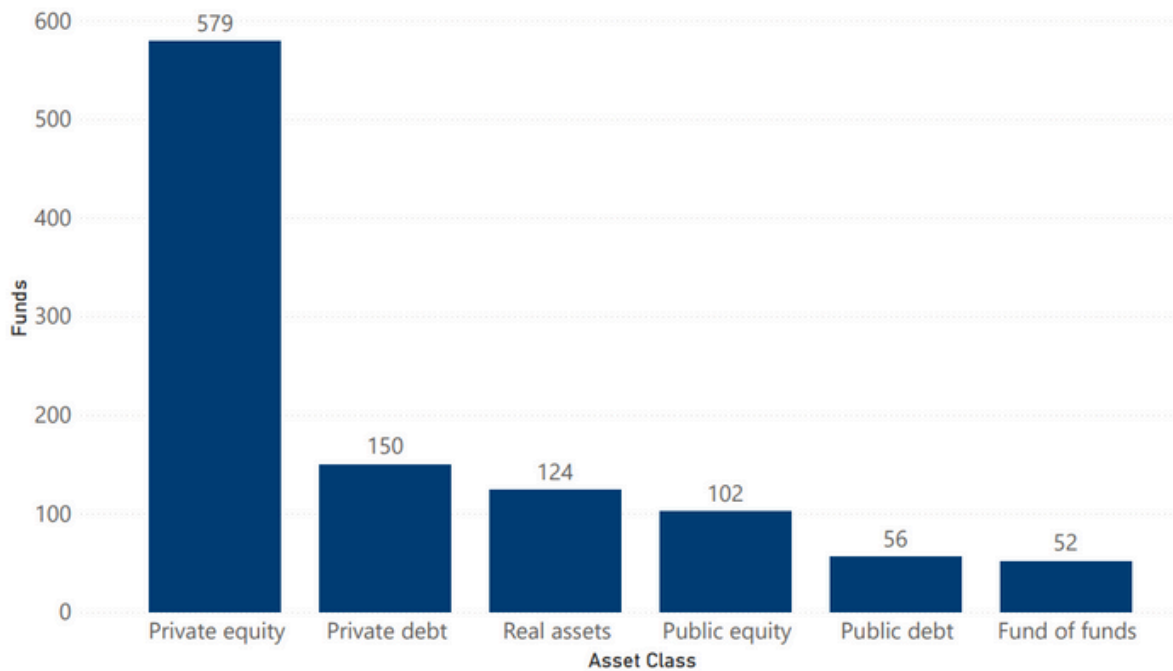
Farmland and cropland funds are the next most popular real asset class, with 40% of the Africa focused funds in this category, while for Oceania and Asia the percentage is 33% and 28%, respectively.

Food infrastructure investment is crucial to alleviating the growing threats to global food security, as agriculture and food and beverages, which at \$2.5 trillion, and \$1.4 trillion, respectively, are the next two most nature-dependent sectors.

*Data may overlap as funds can target several asset classes, SDGs and/or regions.

FUNDS TARGETING SDG 2 and 6 AT A GLANCE

Number of Funds by Asset Class targeting SDGs 2 and 6



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

With freshwater critical to farming, and therefore food security, the report also takes a closer look at Zero Hunger (SDG2) and Clean Water & Sanitation (SDG6) as proxies for biodiversity investing. For these two SDGs, it is clear the majority of the funds, 53.6%, are focused on private equity.

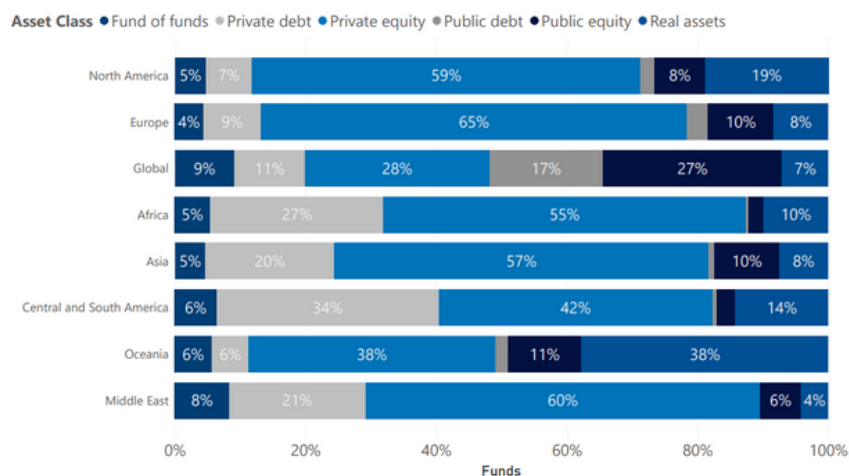
In terms of geography, with the exception of Oceania and global funds, the focus is primarily on private equity funds with Europe, Middle East and North America making up 65%, 60% and 59% of these funds, respectively.

Global funds also have 27% of their biodiversity assets in public equity, while Oceania focused funds have 38% in real assets and Central and South America funds have 34% in private debt.

In 2020, the Paulson Institute published a report titled *Financing Nature: Closing the Global Biodiversity Financing Gap*, which as of 2019, saw between \$124 and \$143 billion per year spent on biodiversity conservation versus between \$722 and \$967 billion per year for what is needed to protect biodiversity.

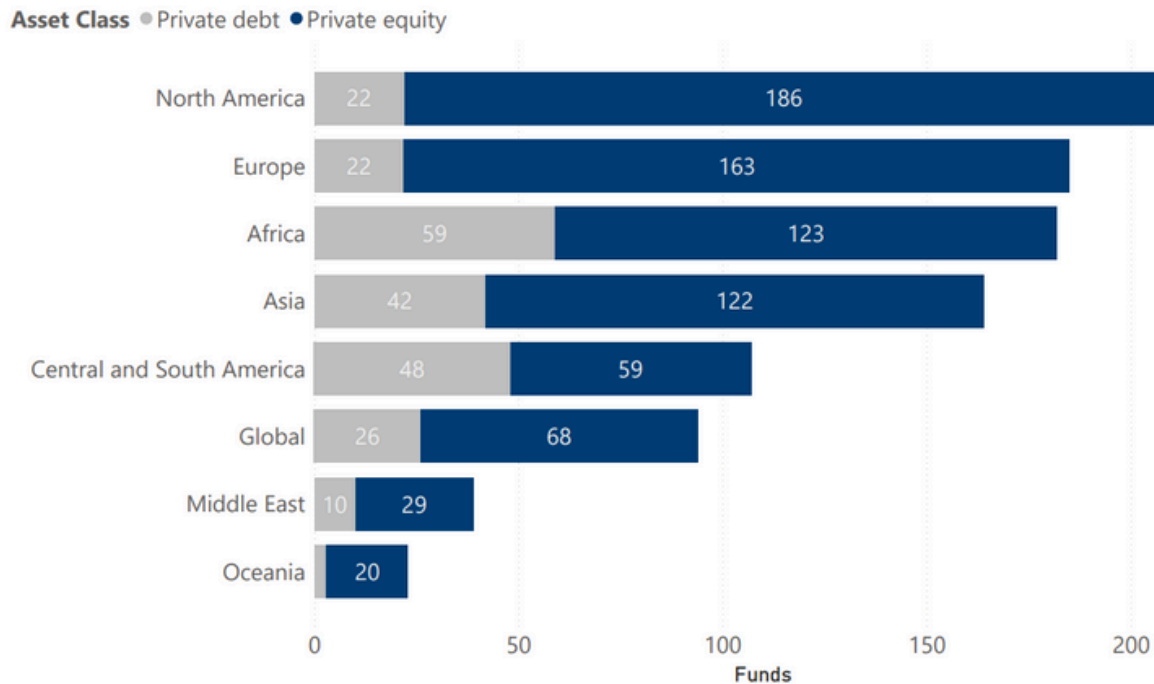
The private sector will be instrumental in closing the gap, according to the report and private equity, with a medium to long term focus and direct access to management, is the perfect player to invest in change.

Fund distribution by Asset Class and Region (Targeting SDGs 2 and 6)



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

Number of Private Equity and Debt funds per region (targeting SDGs 2 and 6)



*Data may overlap as funds can target several asset classes, SDGs and/or regions.

While it is clear that private equity is clearly the private market instrument of choice in terms of numbers of funds focusing on Zero Hunger (SDG2) and Clean Water & Sanitation (SDG6) as proxies for biodiversity investing, private debt is also making it into investor portfolios, particularly in central or South America, where 45% of the investments are in private debt.

If biodiversity credits start to gain traction as a way of both delivering returns and nature positive outcomes, this percentage could start to grow globally. There are currently projects in New Zealand, Colombia and Australia. Right now however, 89.4% and 88% of the funds with a North American and European focus, respectively, are still private equity vehicles.

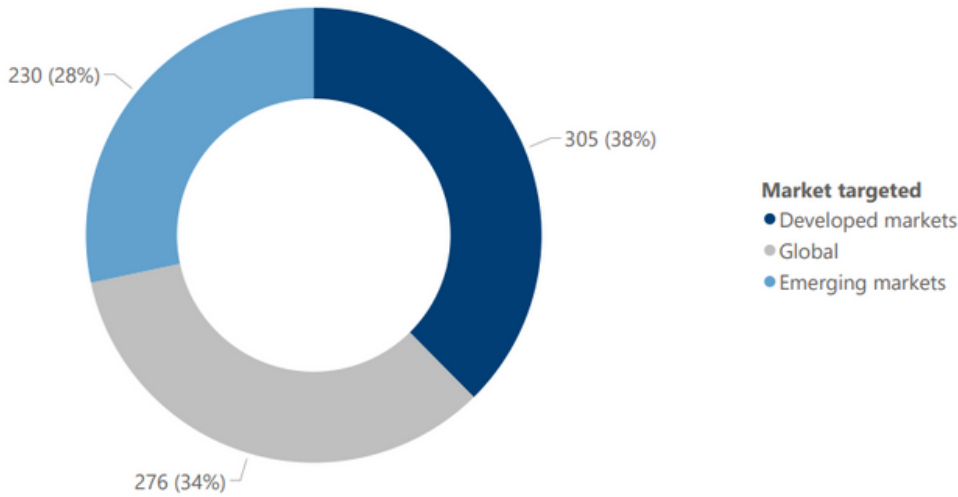
Of the all the water on the planet, only 3% is fresh water and less than 1% is accessible (with the rest locked in glaciers, ice sheets or stored underground, according to Nasa), making water a crucial resource to biodiversity. Right now, a number of interlinked factors are making water a critical global risk: climate change; increasing human demand; and degrading freshwater ecosystems such as disappearing wetlands.

Wetlands, grassland, and forests all play a role in ground water storage as well as acting as watershed and helping to capture, process and dilute pollutants. According to the WWF Living Planet Report 2022, freshwater species populations have seen the greatest overall global decline (83%), and within this species group, on average, monitored migratory fish populations have declined by 76% between 1970 and 2016 globally.

*Data may overlap as funds can target several asset classes, SDGs and/or regions.

BIODIVERSITY - INVESTORS' PREFERENCES

Distribution of number of investors by market invested in



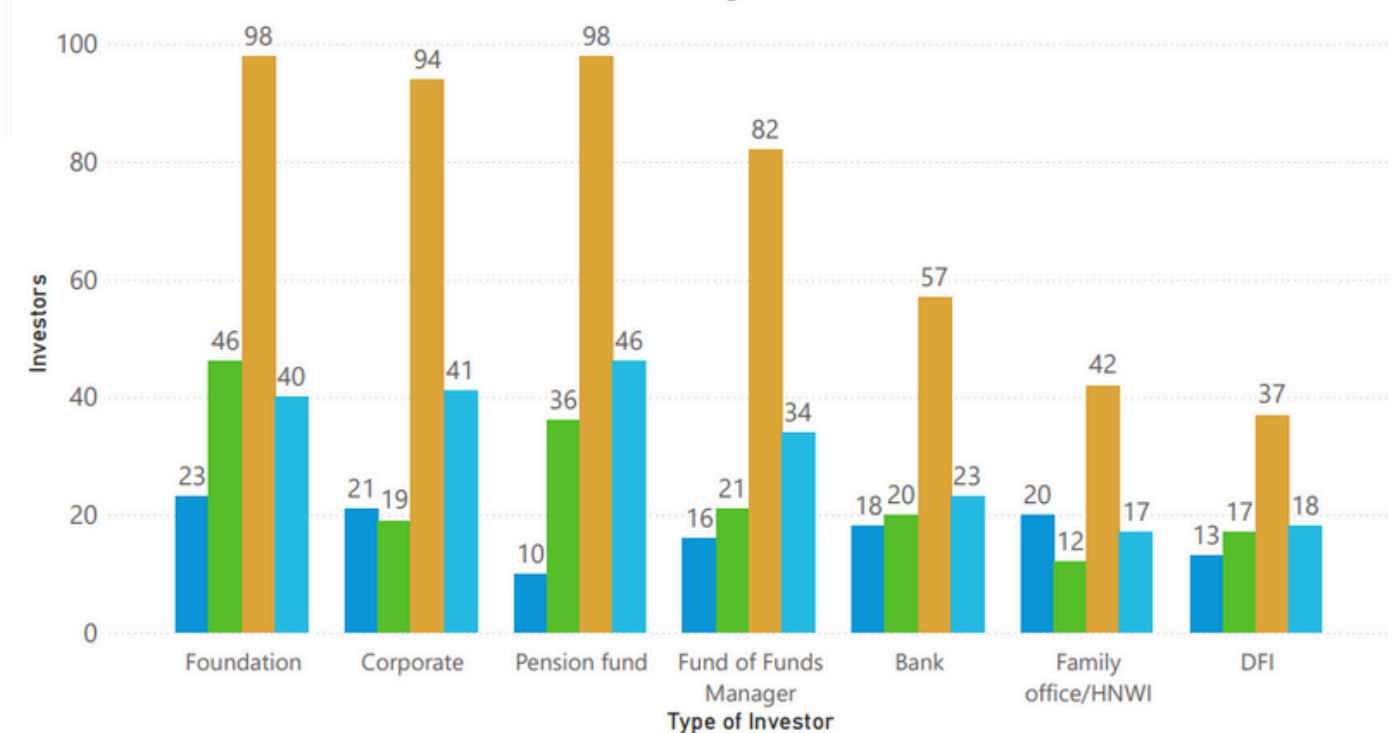
*Data may overlap as funds can target several asset classes, SDGs and/or regions.

Protecting biodiversity is a global issue, and the distribution of the number of investors by market invested in, reflects this. When it comes to investor type all are focused on Zero Hunger above the three other biodiversity-related SDGs.

Foundations are the only ones that put Life on Land in second places, while SDG13 is the least important of the four to family offices and corporates, who have placed Life Below Water in second place. Fund of funds, corporates, banks and DFIs put Clean Water & Sanitation in second place.

Number of investors by type - investing towards biodiversity

SDGs ● 14: Life Below Water ● 15: Life on Land ● 2: Zero Hunger ● 6: Clean Water and Sanitation



*Data may overlap as funds can target several asset classes, SDGs and/or regions.



Dirk Meuleman

CEO

Phenix Capital Group

Ahead of International Day for Biodiversity on 22 May, Niki Natarajan, Head of Research, sat down with Chief Executive Officer, Dirk Meuleman, to explore biodiversity, and why it needs to be the core focus with respect to the Sustainable Development Goals (SDGs) over the next decade.

Dirk Meuleman is CEO at Phenix Capital Group. Phenix Capital Group is an Amsterdam-based investment consultant that catalyses institutional capital for the SDGs through their advisory work and marketing and intelligence tools.

Prior to Phenix Capital, Dirk was a portfolio manager of private equity and infrastructure at Shell and MN pension fund, which is the third largest Dutch pension fund. Together with this extensive experience as an institutional investor, Dirk has sat on the advisory board of over 20 private equity funds.

Dirk is Dutch and holds degrees in International Business Administration, Entrepreneurship and Public Administration from Erasmus University in Rotterdam.

Dirk is a CFA and CAIA Charter holder.

Why do you believe biodiversity needs to have centre stage for the next decade?

Quite simply, biodiversity is in crisis. There has been a [nearly 70% decline](#) in wildlife populations in just 50 years. That is just one fraction of the biodiversity destruction that is happening on the planet right now, and the pace is accelerating at an alarming rate.

Five years ago, the [PBES Global Assessment Report](#) suggested that one million species were threatened with extinction. The report highlighted the five drivers: climate change, pollution, destruction of habitats, invasive alien species, and over exploitation of the natural environment.

All five drivers are primarily the result of human activity. From a macro perspective, we seem to have forgotten that the biosphere, the worldwide sum of all ecosystems on the earth, is to all intents and purposes a closed system that provides all living organisms, with food, water and gases to exist.

Unless we find a way to return to a more sustainable, regenerative and circular way of living, we are heading to the [sixth mass extinction](#), only this time, it is our unsustainable use of land, water and energy, and climate change that will drive it.

Is it too late, or can something be done to reverse the impacts?

The first two things that need to change if we want to stand a chance of reversing the impacts, are timeframe and mindset. I personally believe part of the problem is the fact that, like climate change was, say 30 years ago, mass extinction is too big a concept for the human mind, and, unlikely in our generation.

So despite being largely culpable for the current collapse in biological diversity, we don't seem to have a sense of urgency to address the issues that are driving species to dying off [1,000 times more quickly](#) today. In fact, even the annual WEF [Global Risk Report](#) ranked biodiversity loss as the third most severe threat humanity would face in the next 10 years, throwing the problem into the long grass.



Along with giving our actions a sense of urgency, we also need to remember how interconnected we are to the natural environment. Like climate change, as a race we seem to need to feel and see the effect before we believe the theory. Biodiversity needs to come out of the shadows and into our everyday life.

Perhaps the best way to illustrate this is to think about biodiversity from the SDG impact investing framework. Biodiversity, the living organism subset of the planet's natural capital, is so interconnected that it is integral to achieving practically all of the SDGs. Yet right now, biodiversity is technically only covered as a subset of Life on Land (SDG15).

This is despite both the land and the providing homes to huge ecosystems that are sources of: food and achieving Zero Hunger (SDG2); freshwater (SDG6); medicines and so linked to Good Health & Wellbeing (SDG3); building materials for both Industry, Innovation and Infrastructure (SDG9); as well as Sustainable Cities & Communities (SDG11), just to name a few. As mentioned in this report, more than 55% of the world's gross domestic product is highly or moderately dependent on nature.

Some [1.6 billion people](#) are dependent on forests for their timber, food, fuel, jobs and shelter, while the ocean provides livelihoods to [billions](#), ticking the Decent Work & Economic Growth goal (SDG8).

In his book, *Impact – Reshaping Capitalism to Drive Real Change*, Sir Ronald Cohen shows us that a solution is within our grasp. He calls it the Impact Revolution, a concept that has been driving us here at Phenix Capital. The key is to shift away from just focusing on profits and risk-return to incorporating, and more importantly measuring, impact investment.



What are the next steps on an international scale?

To move from a what can nature give us for “free” notion, we all need to start valuing ecosystem services like we value economic output. There is progress. Taking Sir Ronald’s ideas a step further, we need to shift from a GDP focus to a more ‘gross environment product’(GEP) measurement.

Right now, [the GEP index](#) is just a concept designed as an ecological growth measure and evaluate ecological development caused by human interventions. It is founded on four essential pillars: air, water, soil, and forest, and designed to run parallel to GDP.

The journey to account for nature started in 2021, when the United Nations adopted a [framework](#) to go beyond GDP to make sure that natural capital is recognised in economic decision-making and reporting.

Perhaps in a more concrete way, now we have the [BBNJ Treaty](#), the [Biodiversity Plan](#) and, most recently, some 320 firms committing to making [nature-related disclosures](#), we have a structure.

What can investors do now to invest in the preservation of nature?

Three years ago, the UN Environment Programme published a report, [State of Finance for Nature](#), stating a total investment in nature of over \$8 trillion is required between now and 2050 (with annual investments reaching hundreds of billions annually by 2050) to successfully tackle the interlinked climate, biodiversity, and land degradation crises.

If biodiversity were a standalone SDG some of this financing would already be moving towards nature specifically. The low take-up for investing Life Below Water (SDG14)— that we address in our next month’s report— proves right now that nature is not seen as a priority in its own right. As such, while there are various investment options out there, asset managers are more likely to be focusing on, for example, timber and forestry, as it is both an asset and a carbon credit.





Right now, the majority of the financing and innovation comes from the public sector. According to the UNEP report, private finance only accounted for less than 15%, including capital mobilised through sustainable agricultural and forestry supply chains, private equity investments, biodiversity offsets financed by private sectors, philanthropic capital, private finance leveraged by multilateral organisations and forest and other land use-related carbon markets.

Given there is no specific biodiversity SDG, what themes should investors seek out?

I believe that part of the problem is lack of clear definition of the types of strategies and themes that constitute financial-first biodiversity investments. I think investors need to know “saving the planet” does not need to be just about philanthropy and as such someone else’s problem.

Now it is up to investors and asset managers to push for more investment opportunities to seek to make a positive impact. While there are currently opportunities in the listed sector, I strongly believe that it’s possible to invest to protect biodiversity while earning a financial return in private markets, particularly private equity is the way to do this. The Phenix Impact Database only focuses on financial first impact funds across all of the SDGs. As this report shows, right now innovation, and with it the potential for returns AND impact, is still in the private markets and real asset space. The challenge is that those type of investments are difficult to source and difficult to access, not to mention they require a lot of due diligence prior to investment.

Thematically the options are many and varied and the focus needs to be on sustainable and regenerative practices in farming, aquaculture and forestry. For manufacturing, circular economy businesses need to be the norm. Plastic and waste recycling is become a common theme in fashion. Looking at the global risks can give a lens towards opportunities, for example food security is leading innovation in alternative sources of protein.

Last year was a big year for putting biodiversity in the headlines, but we don’t have time to waste. It might cost more than a [trillion](#) to safeguard biodiversity, , but the ultimate cost of inaction could be extinction. The good news is as this year’s biodiversity report shows, the number of financial first impact funds in the space are growing in response to investor demand for biodiversity return-driven investment solutions. Now all we need to do is up the ante.

DEEP DIVE: CIRCULAR ECONOMY

As nature-positive movements start to look at alternatives to pure Gross Domestic Product driven economic models, the circular economy has emerged. The idea has its roots in the 1960s, first developed by [Professor Kenneth E. Boulding](#), a pioneer environmental economist, who wanted to find a way to maintain environmental quality in a world of rampant economic growth.

To achieve this, the 'take, make and dispose' mind set needed to be changed. Boulding's analogy is perhaps the most poignant to bring the home the notion of an enclosed biosphere with finite resources. He described the earth as a single spaceship with limited reservoirs of anything, either for extraction or for pollution, and in this 'economy' success is "the nature, extent, quality, and complexity of the total capital stock" rather than economic throughput.

This concept highlights the core concept of biodiversity; like the biosphere, it operates in a closed system. The only way to not deplete the finite natural capital resources, whether organic or inorganic, is to operate in a sustainable regenerative way. The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.

In this way, the life cycle of products is extended. In practice, it implies reducing waste to a minimum. Right now, some [2.12 billion tons of waste](#) is dumped globally every year. If all this waste was put on trucks, they would go around the world 24 times with approximately 99% of what is bought thrown away within six months. Moreover, despite only accounting for 16% of the world's population, high income countries generate 34%, equivalent to [683 million tonnes](#), of the world's waste.

In Europe in 2020, [4.8 tonnes of waste](#) were generated per EU inhabitant and 39.2 % of waste was recycled with 32.2 % landfilled. The European Union produces more than 2.2 billion tonnes of waste every year and is changing its waste management laws towards a circular economy by 2050.

One of the changes include tackling planned obsolescence where products are designed to have a limited life span towards making the 'right to repair' easier and cheaper. In the UK this law was introduced in [July 2021](#) with the aim of extending electronics and appliances by up to 10 years.

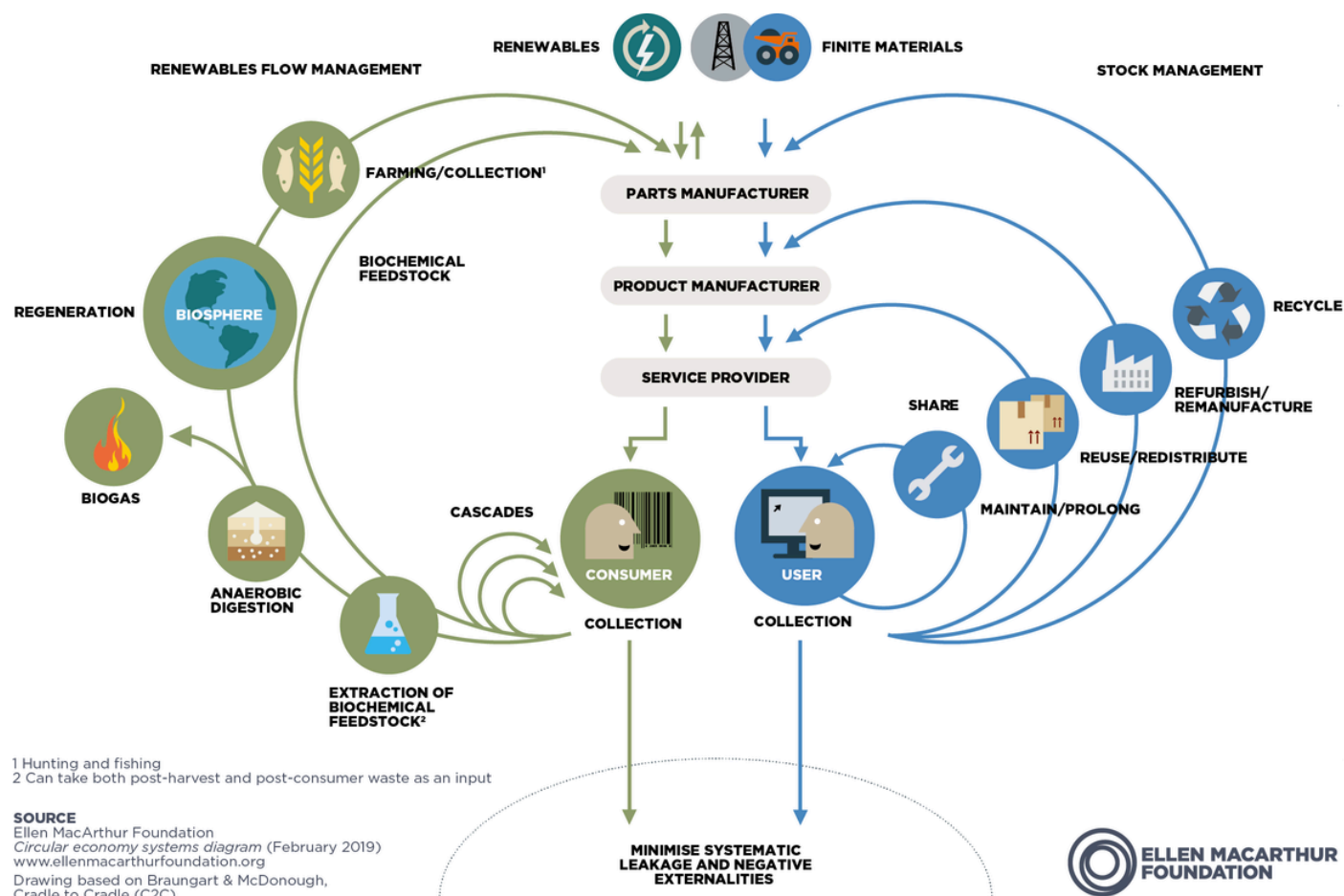


The range of waste includes food, plastics, technology, clothing and chemicals and needs to be tackled from both a finite resource perspective, but also as part of a climate change strategy. Waste generates greenhouse gas emissions, of which methane—responsible for some 30% of the rise in global temperatures since the industrial revolution—is a significant protagonist, and was the fourth source of [methane emissions in 2021](#).

According to a report [Zero Waste to Zero Emissions](#), the waste sector accounts for 20% of global methane emissions, a stronger greenhouse gas than CO2. Better waste management could cut waste sector emissions by 84%, equivalent to 1.4 billion tonnes, and significantly reduce emissions in other sectors. Production and disposal of plastics alone creates [3% of global emissions](#).

From an investment point of view, companies showing sustainable, regenerative, low waste, low consumption and low emission strategies will start to become more and more attractive. Although waste can be recycled into byproducts with a potential resale value, the valorisation of waste misses the point of a circular economy, which is to create a system where materials never become waste and nature is regenerated.

In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. This, as mentioned, tackles climate change, biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources. According to the [Ellen MacArthur Foundation](#), the circular economy is based on three principles: elimination of waste; circulate products and materials (at their highest value); and regenerate nature.





In 2016, only 14% of all plastic packaging is collected for recycling after use and vast quantities escape into the environment, according to a report [The New Plastics Economy: Rethinking the future of plastics](#), written together with World Economic Forum, Ellen MacArthur, Foundation, and McKinsey & Company. “This not only results in a loss of \$80 to \$120 billion per year, but if the current trend continues, there could be more plastic than fish (by weight) in the ocean by 2050,” she said.

According to the foundation, 2040 a [circular economy for plastics](#) has the potential to: reduce the annual volume of plastics entering our oceans by 80%; reduce greenhouse gas emissions by 25%; generate savings of \$200 billion per year; and create 700,000 net additional jobs. The global recycled plastics market was valued at [\\$46.7 billion in 2021](#) and is expected to grow at a CAGR of 7.4% between 2022 and 2030.

The ‘fast fashion’ industry not only produces textile waste and emissions from production and waste, but is also critical polluter of water. Sustainable Development Goal (SDG) Clean Water & Sanitation (SDG6) is one of the Phenix Capital Biodiversity Report’s key investment fund criteria.

In 2019, the United Nation Environment Programme launched the UN Alliance for Sustainable Fashion in an attempt to halt the environmentally and socially destructive practices of the fashion industry, which according to the [World Resources Institute](#), is the second-biggest consumer of water and is responsible for 2% to 8% of global carbon emissions.

A decade ago, Levi Strauss calculated that nearly [3,800 litres of water](#) used throughout the lifetime of a pair of jeans, cotton cultivation (68%) and consumer use (23%) continue to have the most significant impact on water consumption. Since then, Levi Strauss has been implementing water saving ideas, with other fashion retailers following suit to shrink their water footprint.

H&M entered a water stewardship partnership with World Wildlife Fund in 2011, sharing the learnings [a decade later](#) with respect to climate, water and biodiversity. In 2019, Ralph Lauren set a [goal of 20%](#) or greater reduction in total water use across operations and value chain by 2025 and worked with the [WWF to analyse](#) to map key areas of water risk and develop a water footprint.

Ellen MacArthur Foundation created [a vision for a circular economy in fashion](#), in an attempt to reduce the millions of tonnes of clothes that are produced, worn, and thrown away. A commonly quoted statistic suggests that only [1% of used clothes](#) are recycled into new clothes, which results in the equivalent of a truck load of clothes being burnt or sent to landfill.

Well known brands such as H&M and Tommy Hilfiger are embracing circularity. Peer to peer resale platforms such as Vinted and Vestaire are helping the circulation of 'preloved' clothes, while By Rotation is a fashion rental app a market that even Ralph Lauren is in. Deep dive case studies of all these examples and many more can be [found here](#).

A year ago, we looked at [Food Security](#) as a global risk and therefore an opportunity for impact investing. According to the [UNEP Food Waste Index 2024](#), around 1.05 billion tonnes of food waste were generated in 2022, 19% of which was edible.

Creating sustainable, regenerative practises in farming practises, food production and distribution will be key to feeding the future 10 billion people, but also protecting biodiversity, and the climate, which is why Climate Action (SDG13), Life Below Water (SDG14) and Life on Land (SDG15) were also key biodiversity criteria for the report. Agricultural themes within food include aquaculture, agroforestry, rotational grazing and permaculture.

According to the [Ellen MacArthur Foundation](#), cities are a key place to focus on when it comes to food circularity, as half of the world's population currently lives in cities, a number that is expected to grow to 68% by 2050 at which stage 80% of the world's food will be eaten within cities.

Tackling cities is not just important from a food circularity point of view, but also from the built environment. This will mean reducing CO2 emissions from building materials by [38% in 2050](#), by reducing demand for steel, aluminium, cement, and plastic, for example and supporting Sustainable Cities and Communities (SDG11).



Business and finance, where it is estimated that information and communication technology (ICT) could produce around 2.1% to 3.9% of global greenhouse gas emissions, is also a focus for a circular economy. And these emissions numbers do not include emerging 'ecosystems' such as cryptocurrencies have an impact in energy and water resources.

According to a study titled *The Environmental Footprint of Bitcoin Mining Across the Globe* between 2020-2021 period, the global Bitcoin mining network consumed 173.42 Terawatt hours of electricity. This means that if Bitcoin were a country, its energy consumption would have ranked 27th in the world, ahead of a country like Pakistan, with a population of over 230 million people.

The resulting carbon footprint was equivalent to that of burning 84 billion pounds of coal or operating 190 natural gas-fired power plants. To offset this footprint, 3.9 billion trees should be planted, covering an area almost equal to the area of the Netherlands, Switzerland, or Denmark or 7% of the Amazon rainforest.

During this time period, Bitcoin's water footprint was similar to the amount of water required to fill over 660,000 Olympic-sized swimming pools, enough to meet the current domestic water needs of more than 300 million people in rural sub-Saharan Africa. The land footprint of worldwide Bitcoin mining activities during this period was 1.4 times the area of Los Angeles.

Unless circularity is introduced, all of these sectors will ultimately impact biodiversity, which provides the natural capital for industry and the economy. Ellen MacArthur Foundation's 2021 report [The Nature Imperative: How the circular economy tackles biodiversity loss](#) has sector deep dives in all of the circular economies mentioned including fashion, food, plastic and the built environment.

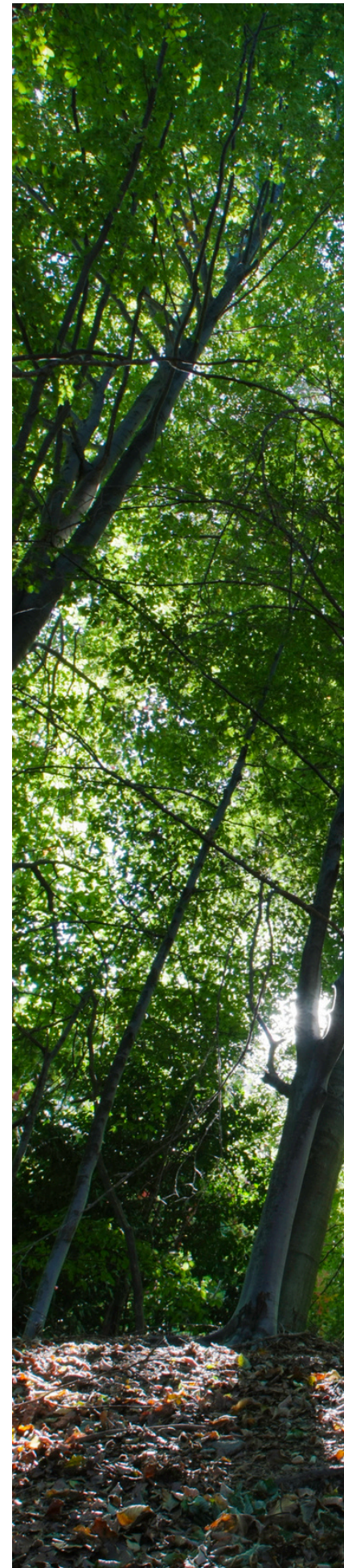
Today, there Pace, the [Platform for Accelerating the Circular Economy](#), which is helping to drive change focusing their educational efforts on key sectors: plastics, textiles, electronics, food and capital equipment (machinery and large tools such as medical scanners, agricultural equipment and manufacturing infrastructure).



While the circular economy has societal and environmental benefits, including lower greenhouse gas emissions, cleaner water, and fewer landfills, in 2015, it was estimated that a circular economy could provide \$4.5 trillion in economic opportunity by reducing waste, stimulating innovation and creating employment.

As can be seen since then, new business models focused on reuse, repair, remanufacturing and sharing models offer innovation opportunities.

In short, the opportunities from a circular economy, come from managing finite resources better; reducing emissions; job creation—it is estimate this could be six to 20 million jobs—and most importantly perhaps, protect human health and biodiversity.



PHENIX IMPACT FUND ASSESSMENT

Phenix Impact Fund Assessment is a proprietary framework developed in close consultation with institutional asset owners and industry leaders, for the purpose of **assessing the robustness of a fund's impact proposition**.

On 6 themes and 45 criteria, it examines to what extent the policies, procedures and human resources are in place to deliver the impact that a fund aims to create.

ASSESSING THE ROBUSTNESS OF IMPACT FUND PROPOSITIONS

Uncover strengths and weaknesses

Adopt industry best practices

Prepare for institutional impact due diligence



PHENIX IMPACT
FUND ASSESSMENT

September 2023

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GLOSSARY & SYMBOLS

Committed capital: Amount committed in a fund vehicle by its limited partners / investors.

Developed markets: We include Europe (excl. Eastern Europe), North America, Asia Pacific (Singapore, Japan, and South Korea only), ia (New Zealand, Australia) Middle East and Africa (Israel only).

Direct lending: A specialised form of private debt, in which loans are made to middle-market companies. It is the private debt strategy with lower risk, achieved by using collateral.

Emerging markets: We include Latin and Central America, Asia Pacific (excl. Singapore, Japan, South Korea), Middle East and Africa (excl. Israel) Europe (Eastern Europe only).

Fund managers: Organisation managing commingled, pooled and customised vehicles invested by institutional asset owners. Also called General Partner or GP.

Global: Funds that have an investment geographic scope encompassing both developed and emerging markets.

Impact investing: Investments with the dual mandate of financial return and positive societal or environmental impacts, with the notion of measuring the positive and negative impact of investments, ensuring both intentionality and additionality among these.

Institutional asset owners: Outsourced CIOs, pension funds, insurance companies, family offices, sovereign wealth funds, endowments, foundations, banks, fiduciary managers, discretionary investment consultants. Also called Limited Partner or LP.

Market targeted: Markets fund managers target for their investments: We include Global, Developed markets, Emerging markets.

Mezzanine: A specialised form of financing in which loans are subordinated to banks, with no collateral. It is the most equity-like form of private debt.

Microcredit: A common form of microfinance, characterised by small loans to individuals or small companies.

Private debt: Debt instruments to companies: direct lending, mezzanine, microfinance strategies.

Public debt: Publicly traded fixed income securities: investment grade or high yield, focused on green bonds and municipal and community infrastructure and affordable housing issuers.

Regions targeted: Regions fund managers target for their investments: We include Asia Pacific (East Asia, Central Asia, South Asia, South East Asia), Europe (Western Europe, Eastern Europe), Global, Latin and Central America, Middle East and Africa (East Africa, Middle East, Northern Africa, West Africa, Southern Africa), North America, Oceania.

Target fund size: Amount the fund manager is targeting when raising capital.

Vintage: Year where the fund manager first calls capital from investors.

Full glossary: www.phenixcapitalgroup.com/impact-investing-glossary

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CONTACT US TO LEARN MORE ABOUT IMPACT INVESTING

E: info@phenixcapitalgroup.com

T: +31 20 240 27 31

www.phenixcapitalgroup.com

