asn impact investors

Impact Report
ASN Biodiversity Fund

September 2023

Contents

Foreword

This is the first impact report of one of the first investment funds in the world that invests across the globe in protecting and restoring biodiversity. It is its first impact report because at the end of 2022, the ASN Biodiversity Fund (ASN Biodiversiteitsfonds) celebrated its first year in existence.

Everything we produce and consume depends on nature. Loss of biodiversity therefore has huge consequences. With the ASN Biodiversity Fund, we invest in new businesses and business models that use production methods that are in harmony with nature and are committed to protecting and restoring biodiversity. Like the investment fund itself, these businesses are often new and in the start-up phase. They are pioneers that, just like us, firmly believe in the possibilities and the financial opportunities offered by producing in harmony with nature.

With regard to measuring the impact of investments in biodiversity, we are also pioneers, alongside the businesses in which we invest. We focus on measuring what has never been measured before. What we have already learnt, simply from preparing the first impact report of this fund, is that even the fact that we focus on measuring the impact of these investments means we are contributing to the development of the measurement methodology. There are many parties that also want to invest in biodiversity, but are waiting for measurement methods first. What we want to say to those parties is: make sure you get started, as this does not just contribute to biodiversity, but also to improving the measurement methodology.

This is a bit of a chicken-and-egg issue. Without investing in protection and restoration, we can neither make nor measure progress. They are interdependent.

What this first year has taught us – or rather, what we have experienced – is that there is a wealth of opportunities owing to the growing number of pioneers worldwide. Those pioneers take up challenges, achieve results, share their knowledge and commit fully to growing their positive impact. It is genuinely a pleasure to maintain ties with them. It will be even more of a pleasure to help them continue to grow, thanks to private investors and preferably also increasing numbers of institutional investors. There is a world to be won.

Karin van Dijk
Fund Manager ASN Biodiversity Fund

San Lie
Director

Highlights 2022

January

Invested in

AquaSpark
› Investing in the Future of Aquaculture

Sustainable seas and fisheries

March

eco business Fund

Regenerative agriculture and agroforestry

ASN Biodiversity Fund invests in the Wild Life Conservation Bond
Ecotourism

FOOD SECURITIES FUND

Regenerative agriculture and agroforestry

Wide Open Agriculture

Regenerative agriculture and agroforestry

Investment: SLM Europe Silva Fund – **Regenerative agriculture and agroforestry**

August

Investment in:

THE KINGFISH COMPANY

Sustainable seas and fisheries

September

Start worldwide search for more listed companies that don't cause damage to biodiversity

November

One year anniversary ASN Biodiversity Fund

Investment in Papyrus Australia **– Regenerative agriculture and agroforestry**

December

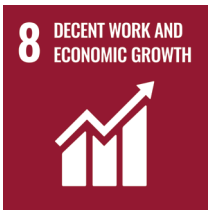
Investment in new Forest Climate Solutions Fund – **Sustainable Forestry**

The ASN Biodiversity Fund

The ASN Biodiversity Fund invests in restoring and protecting biodiversity by investing in sustainable forestry, regenerative agriculture and agroforestry, sustainable seas and fisheries and ecotourism. The fund focuses on projects and businesses with a measurable positive impact on biodiversity. At the same time, the ASN Biodiversity Fund focuses on creating new green jobs that do not come at the expense of the natural environment and contribute to the prosperity of local communities.

Thanks to careful selection, the ASN Biodiversity Fund combines long-term capital growth with a modest dividend yield. The fund aims to offer investors the best realistically possible financial return with a sustainability return.

The ASN Biodiversity Fund contributes to this by aligning its sustainability indicators with the following Sustainable Development Goals (SDGs):



Decent work and economic growth (SDG 8)

Climate action (SDG 13)

Life below water (SDG 14)

Life on land (SDG 15)

SUSTAINABLE INVESTMENT OBJECTIVE

ASN Impact Investors is working towards a sustainable and just society. The ASN Biodiversity Fund contributes to this by achieving the following sustainable investment objective:

To restore, protect and enrich biodiversity (expressed as the number of hectares of protected and restored nature on land and at sea).

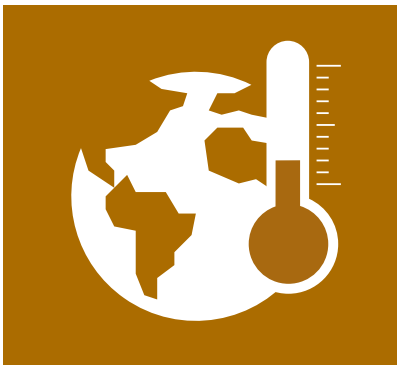
The ASN Biodiversity Fund is an Article 9 product within the meaning of the SFDR. An Article 9 product is an investment product with a specific focus on achieving one or more sustainability goals.

The fund invests only in projects that are admitted to the ASN Investment Universe and has strict mandatory elements in accordance with the investment strategy that also require the projects to comply with the Equator Principles and/or comparable local laws and regulations. As part of the policy, projects are also assessed with regard to good governance and ethical conduct.

Impact themes

Biodiversity

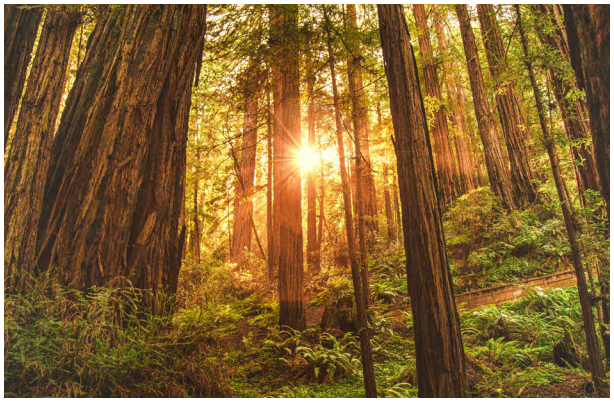
Green jobs



Climate

Since the fund only has environmental objectives, all investments are categorised as ‘Environmental’. Although the fund has a biodiversity objective, the investment strategy takes into account social criteria, including local communities, to achieve a long-term positive impact on biodiversity.

Impact sectors



Sustainable forestry

Regenerative agriculture and agroforestry

Sustainable seas and fisheries

Ecotourism

Impact on biodiversity

We want to quantify the positive impact of our investments in the ASN Biodiversity Fund as meticulously as possible. We do this to account for and share the results in this Impact Report each year, but also to continue to improve the way in which the fund contributes to protecting and restoring biodiversity.

Calculating positive impacts on biodiversity poses a number of challenges. Whereas the carbon footprint hinges on a single emissions metric, biodiversity combines a range of factors: land use, water quality, species diversity etc. As there is no common and properly defined methodology yet for calculating the positive impact on biodiversity, this requires an innovative approach. This exploratory aspect affects the level of detail and the robustness of the figures.

We are the first investment manager worldwide that focuses on quantifying the positive impact of our investments on restoring and protecting biodiversity. This also means that our work is pioneering. At the same time, we are seeing that this enables us to accelerate progress in developing the measurement methodology through our investments.

Impact on biodiversity in 2022

In number of m^2 protected or restored per euro invested in the fund in 2022

Protected or restored	Negative impact
1,2 m^2 per euro invested	0,3 m^2 per euro invested

This means that each euro that was invested in the ASN Biodiversity Fund in 2022 resulted in 1.2 m^2 biodiversity protected or restored. This concerns the impact per year, i.e. not a one-off impact. In addition, a negative impact of 0.3 m^2 per euro invested also derives from the calculation. This reflects, for example, the negative impact of the portion of the investments that has not yet switched to regenerative agriculture or agroforestry, the part of the production that is not possible (yet) without negative impact, or the negative impact of business premises.

The ASN Biodiversity Fund is still in the start-up phase and regularly makes new investments. It was therefore not possible to include the impact of all projects for the whole of 2022 in the calculation. Nonetheless, for the initial total of almost 30 million euros invested in 2022, each euro invested resulted in 1 m^2 of protected or restored nature. For the first half of 2023, we measured a higher positive impact per m^2. These data were just in time to be included in this publication as well.

Changes in impact on biodiversity in the first two quarters of 2023

In number of m^2 protected or restored per euro of assets invested in the fund

Protected or restored	Negative impact
1,3 m^2 per euro invested	0,3 m^2 per euro invested
1,4 m^2 per euro invested	0,3 m^2 per euro invested

The methodology for measuring the impact on biodiversity of the ASN Biodiversity Fund is still evolving. The data used will improve all the time. As a result, the calculated impact may be adjusted in the future if better and more data become available. On the following pages, we explain the approach we used to arrive at these first impact figures for the ASN Biodiversity Fund.

Approach for measuring impact on biodiversity

ASN Impact Investors strives for a net positive impact on biodiversity by 2030 with the total of the investments and loans in the portfolio. Since 2015, we have been working with **PRé Sustainability**, an expert in life cycle assessment, to calculate the negative impact on biodiversity (the biodiversity footprint) of listed investments. We use the Biodiversity Footprint for Financial Institutions (BFFI) for this. This open-source methodology was developed by ASN, PRé Sustainability and **CREM**, a sustainability consultancy, and reflects the number of hectares where biodiversity has been lost.

A further contribution to the strategy targeting net positive impact is made through the positive impact on biodiversity provided by the ASN Biodiversity Fund. The ASN Biodiversity Fund aims to make a positive impact by investing in funds and businesses that restore and protect biodiversity.

The BFFI method uses 'background data' to calculate the impact on biodiversity. We work with available country-specific data and sector-specific data instead of actual data on the businesses' impact on biodiversity, because these are not available (yet). Life Cycle Assessments (LCA) provide insight into the input and output of businesses' production processes, and on the extent to which the production processes of products are harmful to the environment. In this way, we can obtain an overall picture of all the raw materials used and the emissions generated. As part of this process, we also need to understand how these emissions affect the 17 principal impact categories, including land use, climate change and acidification. We then translate this into the possible loss of biodiversity in ecosystems on land, in fresh water and in salt water. We express this as PDF ha per year. In this context, PDF stands for Potential Disappeared Fraction of species. For convenience, we often just use m^2 or hectare, but using the potential disappeared fraction of species in m^2 or hectare per year is more accurate. This measuring tool makes it possible to add up the losses of widely divergent species. Having this measuring tool is important, because it enables us to steer on nature restoration.

The BFFI method as a starting point for calculating the positive impact

ASN is a front runner in measuring impact on biodiversity and strives ceaselessly to improve the measurement methodology continually, for example by including matters such as investment criteria and certificates in the calculation as well. The latter is something we do to measure the impact of the ASN Biodiversity Fund on biodiversity.

The BFFI method referred to above was used as a starting point for this. Next, we collected project-specific data from the investments in this fund where possible. In doing so, we also took data reliability and data completeness into account. That is the reason why we also used databases (for example, for cocoa grown in agroforestry) to substantiate the calculations, although these are not available for all activities in all sectors. Also, if a certification scheme exists for a project, we can make reasonable assumptions on that basis for data on fertilisers, pesticides and the type of land use, in accordance with the criteria for the certification scheme that applies to the investment concerned.

Lastly, we used a variety of approaches to map the fund's impact on biodiversity because the ASN Biodiversity Fund invests in various sectors and activities.

REGENERATIVE AGRICULTURE AND AGROFORESTRY

There are different systems of regenerative agriculture and agroforestry, each of which has a different impact on biodiversity. When switching from an intensive agricultural system to more sustainable or regenerative (forest) agriculture, every type of land use is taken into account.

REFORESTATION

The impact of reforestation is reported as a positive impact, as there will be an actual increase in biodiversity.

LAND CONSERVATION

In calculating the effect of land conservation, we assume that deforestation is avoided owing to nature conservation. Accordingly, the avoided impact consists of the quantity of land that would be deforested if the fund was not there, while we set the positive impact of land conservation for the fund at zero.

SUSTAINABLE SEAS AND FISHERIES

To calculate the footprint of the aquaculture system in the fund, we first took the absolute footprint of each investment, based on LCA data on the sector. This data set was adjusted for the specific practices of the investment.

It is assumed that the fish that is farmed more sustainably because of the investment prevents the farming of fish using conventional practices.

The key principle underlying the newly developed measurement method is that an increase in biodiversity is required for a positive impact. A reduction of the negative impact is not enough to qualify as a positive impact.

Positive impact

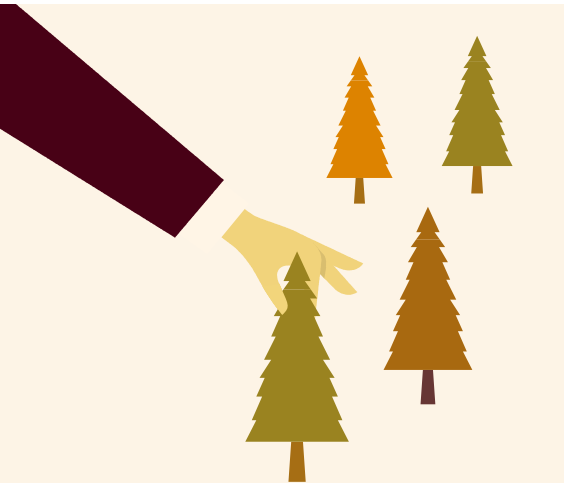
A key challenge in measuring the positive impact is how to determine the benchmark: positive in comparison with what? The principle applied in the BFFI method is that the term 'positive impact' is used only when measuring or modelling an increase in biodiversity compared with pre-investment levels.

Examples of positive impact:

1. Degraded land is reforested and there is an expected increase in species richness as a result of the reforestation activities.
2. A forestry project transitions from a low-biodiversity management system, such as a monoculture tree plantation, to a high-biodiversity management system.

There is an ongoing debate on what is to be considered a fair and realistic benchmark. In order to determine the benchmarks in the development of biodiversity, PRé Sustainability – in consultation with us – built on earlier discussions and research, some of which was commissioned by the Ministry of Agriculture, Nature and Food Quality and the Netherlands Enterprise Agency (RVO).

A number of investments by the ASN Biodiversity Fund relate to various different activities that potentially strengthen biodiversity. This makes it very difficult to set boundaries in the assessment, especially as the available data on the various activities are still limited. In those cases, we therefore concentrated on what is most important, i.e. on the most material activities with regard to the impact on biodiversity.



Modelling hierarchy

We only speak of a positive impact in the case of an actual improvement in the biodiversity level. We classify comparisons with alternative production methods or with a sector average as avoided impact. As a consequence, the following hierarchy applies in reporting on positive or avoided impact:

1. Reporting on actual increases in biodiversity compared with a previous or current situation.
2. Calculating the avoided negative impact on the basis of country-specific or region-specific deforestation percentages as a result of initiatives for land conservation.
3. Calculating the actual impact of sustainable practices compared with conventional practices and reporting the difference as avoided impact.

Sources

We use a range of different data sources for our analyses:

- Publicly available data from annual reports (or similar documents) of the specific investments and businesses;
- Internal information of ASN, such as the ASN sustainability criteria for investments;
- The World Food LCA database, which contains highly detailed life cycle assessments to determine the environmental impact of agricultural products;
- The Ecoinvent LCA database, for sectors other than agriculture and as a source of background information;
- Information obtained from the investments.

Data quality

To calculate the impact on biodiversity of each of the investments, we collect project-specific data where possible and make reasonable assumptions. In doing so, we take data reliability and data completeness into account. We conclude agreements in advance with the projects and funds in which we invest on what data they are required to collect in order to report on impact. In practice, however, this can prove to be a challenge. In cases where we have insufficient specific data, we use databases to substantiate our calculations, although these are not available for all activities in all sectors.

Fortunately, the number of investments for which we have extensive documentation and project-specific data is expected to grow. In that case, only a few or no assumptions will be required and the results will reflect the positive impact of the project.

With regard to measuring the impact of investments in biodiversity, we are still pioneers, alongside the businesses in which we invest. We focus on measuring what has never been measured before. The fact that we can make these investments and want to justify and recognise their impact helps to accelerate the development of the measurement methodology. It also means that we accept that the measurement methodology is still evolving and not yet perfect. The data used will improve over time. As a result, the calculated impact may be adjusted in the future if better and more data become available.


Karin van Dijk

‘We’re now dispelling any doubt’

A milestone for the ASN Biodiversity Fund: 2022 was its first full financial year, which means the first conclusions can now be drawn. What is the positive impact that investors’ money has on biodiversity? Quantifying this was quite a challenge. Fund manager Karin van Dijk explains.

Is measuring the positive impact on biodiversity out of the ordinary?
‘No investor has ever measured and calculated the positive impact on nature of specific projects and businesses in this way before. There was no generally accepted measurement method for this yet. On top of that, it’s a difficult task: counting how many tonnes of CO^2 emissions have been avoided is much simpler than establishing how populations of birds and other animals are developing.’

So it’s a matter of counting trees and birds?
‘It’s not that simple. For example, a huge amount of effort goes into measurements using satellite images, which allow us to derive the quantity of biomass on land. DNA analysis of soil samples allows you to establish how healthy the soil is, and there are certainly ways to quantify animal numbers in an area using sound recordings. But these are expensive technologies that are not yet fully mature. That’s why we’re building on the existing methodology for calculating the negative impact on biodiversity. We’re only able to use part of this methodology for this fund, because our focus is on protecting and especially restoring nature. In tandem with our partner **PRé Sustainability**, we therefore expanded and refined the measurement methodology for biodiversity. Extensive scientific research has already been undertaken on life cycle assessment and natural ecosystems. In combination with the data we receive from the parties in which we invest, this provided enough of a basis to arrive at a figure.’

Every euro in this fund restores or protects 1 square meter of nature?
‘That’s right, and I can immediately say that this is a very cautious, conservative estimate. Our fund is in the start-up phase, we invest in projects that have not yet realized their full impact. That is not possible: nature needs time. Although I am very happy with the speed at which the rhino population in Africa is growing (+7.3%) and that we are contributing to this as an investor.’

'Moreover, we have to make assumptions if concrete data on our investments is lacking. It is also crucial that you know what the starting situation is. We are not satisfied with saying: we manage so many hectares sustainably, no: we really want to know what difference our investment makes compared to the baseline, that situation in which we do nothing. What is the nature that we manage to preserve, and where does real recovery take place, such as with the reforestation of the Amazon? We don't want to count ourselves rich. We have only counted the impact that we can fully substantiate. It's not black and white, it's not math. But it indicates that things are going in the right direction. And the first half of 2023 shows a further improvement in the impact.'

Measuring impact is pioneering work. Did you learn much from this?
'Yes, because this was the first time that we tested theory and assumptions against practice. For example, we gained a much better understanding of how important a baseline measurement is: what happens to biodiversity on a site and its surroundings, and what is the added value of the investment? Thanks to the measurement, we also know even better what information we definitely need to obtain from our investments. We'll target this even more stringently in the future. We've also shown that certification provides much additional information. For organic farming, certification schemes stipulate that no pesticides must be used. That's something that we can include in our calculations. We also pass on what we've learned to other financial parties with which we've joined forces to work on standards for investments in biodiversity, such as the Partnership for Biodiversity Accounting Financials (PBAF) and the Biodiversity Footprint for Financial Institutions (BFFI).'

These figures look good. Do they confirm your expectations?
'Of course, we knew that all our investments genuinely have a tremendously positive impact on nature. I was in the Amazon myself last summer to visit and assess a number of projects and businesses and to learn to understand the local context better. It might take a bumpy ride in a car for 10 hours a day, but you can see with your own eyes how much clear-felling has taken place there in the rainforest for soy cultivation and livestock farming. There are endless plains. Nature has been really violated there. If these are replanted with forest, it will genuinely make a huge difference.'

Why is it so important to measure impact in this new way?
'It signals to your investors and other parties that you're on the right track. Recognising impact is crucial in that respect, especially because large investors quite often use the lack of impact data as an excuse for not moving forward. We're now dispelling any doubt about the results: investing in a positive impact on biodiversity really works. Moreover, we're happy to share how we get our data. In that sense, we work on an open-source basis. As far as we're concerned, much more can be invested in biodiversity and many larger investors can help with this as well. ASN Impact Investors has found more than enough attractive projects and businesses throughout the world that are eager to scale up and are seeking funding for this. This is not yet progressing anywhere near fast enough for us. That's why we're publishing this report and these figures: to inspire as many others as possible, so that we help accelerate the protection and restoration of biodiversity worldwide.'

Impact on climate: CO_2 capture

The ASN Biodiversity Fund has already captured alsmost 23,000 tonnes of CO_2 emissions in its first year. This equates to 3% of the total CO_2 emissions of all investments by ASN Impact Investors combined. This was achieved although the fund is still in the start-up phase and we were as yet only able to calculate this for the investments by the ASN Biodiversity Fund in sustainable agroforestry.

Together with Guidehouse, we have developed a measurement method to measure the positive impact of investments on climate. Scientific articles were used to supply the figures used to calculate the removal of CO_2 emissions.

CO_2 capture of sustainable agroforestry of the ASN Biodiversity Fund	2022
CO_2 capture in tons per year	-22.939

The methodology for measuring the CO_2 impact of investments and loans is constantly evolving and the data used are improving all the time. As a result, the calculated CO2 impact may be adjusted in the future if better data become available.

Impact on green jobs

With the ASN Biodiversity Fund, we are also guided by the number of green jobs that our investments create and retain, as sustainable employment is crucial for protecting biodiversity. It is precisely by creating green jobs that the investments ensure they are future-proof. The investments also justify their existence at the local level.

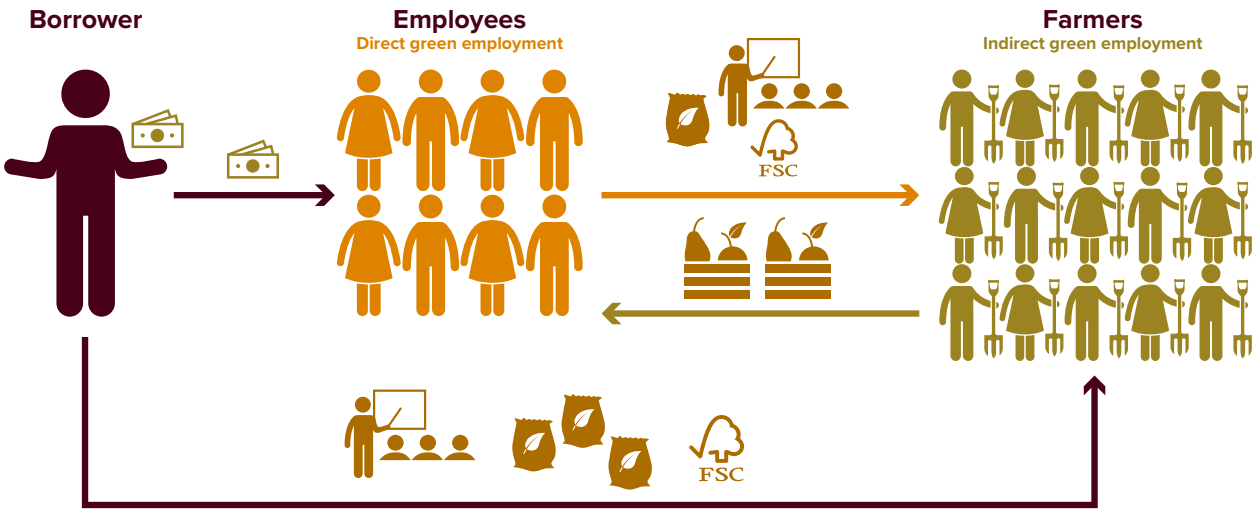
Only if the local population is able to earn money from nature will it also be able to conserve nature. A characteristic aspect of the financing is that education is often provided to enable the farmers to produce in a sustainable manner, protecting or even restoring biodiversity and achieving good financial returns.

Definition: like CREM, the organisation with which we actively cooperate on the measurements, we define green jobs as jobs that contribute to protecting and restoring biodiversity.

Definition of direct and indirect green jobs

Direct green jobs
Direct green jobs concern employees employed directly by the fund/project/business in which the ASN Biodiversity Fund invests.

Indirect green jobs
Indirect green jobs concern employees who are not employed directly by the fund/project/business in which the ASN Biodiversity Fund invests, but who are able to generate income from the activities that arise from the investment. The employment for these employees arises from, or can continue to exist owing to, the activities carried out by the direct employees. This also includes borrowers that are able to carry out activities and recruit and/or retain employees because of the loan provided by the fund in which the ASN Biodiversity Fund invests.



Data sources and data coverage
The number of reported green direct and indirect jobs was obtained from the reported data of the funds and the other investments by the ASN Biodiversity Fund.

The data come from:
- information received from the investment itself;
- impact reports;
- annual reports;
- websites.

Next, the number of these jobs that is attributable to the investments by the ASN Biodiversity Fund is calculated. In practice, it is still difficult to quantify the total impact on green jobs, particularly as regards the indirect jobs to which the investments contribute. For six out of ten investments by the ASN Biodiversity Fund, it was not yet possible to quantify the number of indirect jobs for 2022. As for the number of direct jobs, the same was true for one out of ten investments.

The total number of direct and indirect green jobs created by the underlying investments:

4,014 direct green jobs

609,976 indirect green jobs

The number of these direct and indirect green jobs that are attributable to investments by the ASN Biodiversity Fund:

197 direct green jobs

11,886 indirect green jobs

‘DECADE TO DELIVER’ FOR BIODIVERSITY

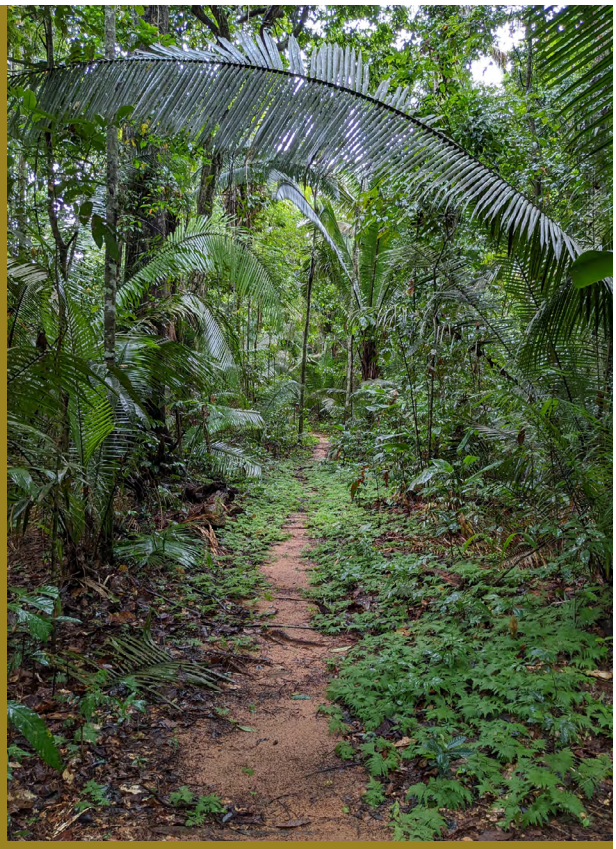
With regard to biodiversity in general, the market challenge is crystal clear: according to the World Wildlife Fund’s (WWF) 2022 Living Planet Report, worldwide biodiversity has dropped by as much as 69% since 1970.

Fortunately, the awareness that quick and drastic change is imperative seems to have sunk in, finally, in both politics and business. At the UN biodiversity summit in December 2022, almost 200 countries concluded a historical agreement, referred to by some as the ‘Paris Agreement for biodiversity’.

A key commitment agreed by those countries is that at least 30% of all land and water on earth must be a protected area by 2030. They also promised major steps in the fields of sustainable fisheries and sustainable agriculture and forestry.

Legislation was also passed in Europe in 2022 that prohibits imports of products that contribute to deforestation. This ensures that products such as timber, cocoa, coffee, soy, palm oil, rubber and beef must be grown and bred more sustainably in the future.

A great deal of money will be required to deliver on all these commitments. That money will have to come from both governments and markets. And that is exactly why we developed the ASN Biodiversity Fund: to help create and drive a new economy in which we produce and consume in harmony with nature.



The 2020s are sometimes also designated as ‘the decade to deliver’. As important as agreed commitments are, concrete results are far more important. The ASN Biodiversity Fund achieves these through its investments, thanks to the investors who are working with us towards an economy in which humans and nature are in harmony.

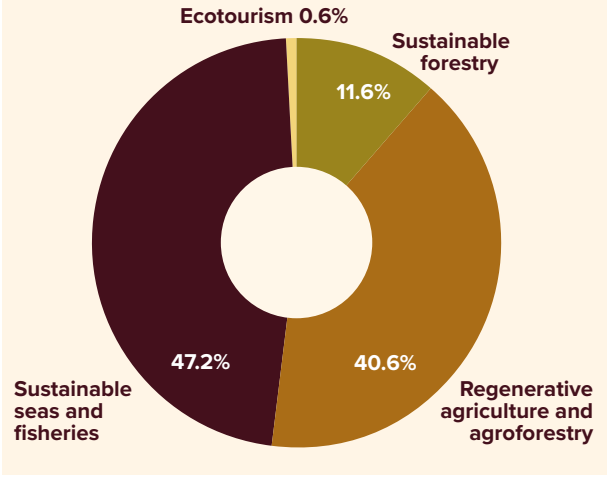
Portfolio development

We focus on investments that combine restoring and protecting biodiversity with financial returns. We are pleasantly surprised by the number of projects that we have identified ourselves and the number of projects that have reached out to us in the past period.

We expect that demand for sustainable food and sustainable building materials will continue to rise continually in the years ahead. Now that the urgency of the loss of biodiversity is clearer than ever, demand for sustainable alternatives is growing as well.

The investments in the fund since November 2021 contribute to projects that protect, restore and enrich biodiversity. Below, we briefly describe the investments we added to the portfolio in 2022.

The fund invested in the following sectors at the end of 2022:



INVESTMENTS

Regenerative agriculture and agroforestry

New investments in regenerative agriculture and agroforestry in 2022:

eco.business Fund

eco.business Fund provides loans to small businesses in Latin America and the Caribbean that are committed to conserving and restoring local ecosystems. The businesses in agriculture, fishing, forestry and ecotourism, which include coffee farmers, fishers and banana farmers, can apply to local banks and microcredit institutions for a loan if they have a recognised sustainability certification and if their activities contribute to conserving and restoring nature.

Impact:

- Nearly **1.1 million hectares** of agricultural land under sustainable management
- **5.2 million m^3** of water saved
- **143,800 liters** of herbicide avoided
- **540 hectares** of soil erosion avoided

This information comes from eco.business Fund's own impact report.

Food Securities Fund

The Food Securities Fund (FSF) supports sustainable agricultural businesses in emerging and developing markets. It focuses mainly on sub-Saharan Africa and the value chains around coffee, cocoa and cashew nuts. By providing additional working capital at the right time to the parties that purchase the agricultural products from smallholders, the latter can be better supported in switching to more sustainable cultivation methods, which strengthen biodiversity.

Impact:

With **65,700** farmers, more than **40,000** hectares are under sustainable management

Seedlings for **300,000** trees distributed

Seedlings for **1 million** food crops distributed

1,000 green jobs

This information comes from the Food Securities Fund's own impact report.

SLM's Silva Europe Fund

The new Silva Europe Fund of fund manager SLM Partners invests in sustainable forestry and regenerative orchards with nut, almond and olive trees in Europe. By arranging for the forests and orchards in which the fund invests to be managed innovatively and ecologically, the fund generates a positive impact on soil, biodiversity, water regime, climate and society.

This new SLM Partners fund only started out recently and has therefore not yet published an impact report of its own. In the autumn of 2022, we spoke with the founder about the system change he is pursuing based on his combined focus on impact and profitability.

Wide Open Agriculture

The Australian listed company Wide Open Agriculture (WOA.AX) finances and helps farmers in western Australia to grow and sell crops that strengthen rather than deplete their land, such as oats for oat milk and lupins as a protein substitute with many uses. Through its own brand Dirty Clean Food, WOA ensures that these regenerative agriculture products reach consumers. They can be found on supermarket shelves, for example in the form of OatUP oat milk.

Impact:

For more impact data from Wide Open Agriculture: https://www.wideopenagriculture.com.au/impact-reports

Amazon Biodiversity Fund

The mission of the Amazon Biodiversity Fund is twofold: to protect and enhance biodiversity and to improve the livelihoods of the people who live and work in the gigantic but vulnerable Amazon region. There is a funding gap here, a lack of capital for companies and projects that want to make a positive contribution to the environment and biodiversity with new business models. The fund invests in early-stage but scalable projects and companies in conservation, reforestation, community livelihoods, smallholder value chains, sustainable agriculture, innovation in technology and access to finance and services.

Impact:

This information comes from the Amazon Biodiversity Fund's own impact report. We interviewed co-founders Nick Oakes and Vincent Gradt in 2022 about their mission and working methods.

Sustainable seas and fisheries

New investments in sustainable seas and fisheries in 2022:

Aqua-Spark

The Dutch private equity fund Aqua-Spark invests worldwide in an ecosystem of, among others, sustainable fish and crustacean farms and sustainable fish feed producers. In doing so, it covers the entire value chain in aquaculture, including small and medium-sized enterprises engaged in farming techniques, disease control and access to markets. A well known Aqua-Spark investment is Protix, the fast-growing Dutch manufacturer of insect-based livestock feed and fish feed.

Impact:

- **125 hectares** of sea protected
- **66 million** fish saved by alternative fish food ingredients
- **191 million** kilos of fish feed saved

This information comes from Aqua-Spark's own impact report. We interviewed its founders Mike Velings and Amy Novogratz on how they are making aquaculture more sustainable with targeted investments throughout the chain.

Kingfish Company

Kingfish Company is a fast-growing farmer of sustainable fish that operates a large facility in the province of Zeeland. The business specialises in yellowtail kingfish, a predatory fish that is related to mackerel and that can serve as an alternative to tuna as regards taste and structure. In addition to the fish farm in Zeeland, Kingfish is also developing a much larger fish farm in Maine, USA.

Ecotourism

New investments in ecotourism in 2022:

Wildlife Conservation Bond

The World Bank's Wildlife Conservation Bond, or Black Rhino Bond, contributes to the conservation of the extremely vulnerable black rhino in South Africa. The five-year, AAA-rated bond is linked to an outcome-based subsidy, which depends on the development of the rhino population in two wildlife reserves. The loan is intended for the investments that the reserves make in crops, trees and plants and anything else that strengthens the rhino's habitat.

Impact:

- Black rhino population increases from **3.7%** to **7.3%**
- **92,098** hectares of nature under improved management
- **2,300** jobs created

This information comes from the Wildlife Conservation Bond's own impact report.

Sustainable forestry

New investments in sustainable forestry in 2022:

Forest Climate Solutions Fund

This new timber fund of the US specialist in sustainable forestry New Forests focuses on carbon forestry in the USA: capture of CO_2 in older forests so as to generate carbon credits to be spent by the state of California. The fund invests in natural forests for sustainable forestry, which includes strengthening the wildlife population, a better water regime and absorbing CO_2.

Impact: we invested in this new fund in December 2022. At that time, no forests were under management yet. This year, New Forests acquired its first forest for this new fund. As a result, there are no impact data for 2022 yet. We interviewed the portfolio manager on how the new Forest Climate Solutions Fund uses a 'Forestry plus' approach to focus on strengthening both biodiversity and returns.

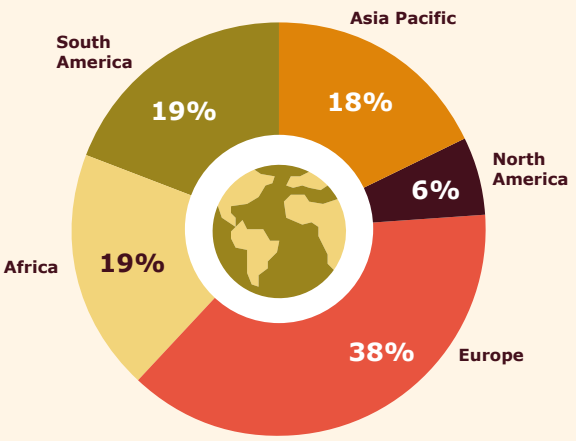
Papyrus Australia

The Australian listed company Papyrus Australia develops technology that allows waste flows from banana plantations and other businesses to be converted into sustainable packaging materials and liquid organic artificial fertilisers. In addition, the Papryus process allows fibres from banana trees to be used in sheet material and laminates for kitchens and musical equipment.

At the end of 2022, we had 77 projects in 37 countries and on six continents.

Largest investments in 2022:		
1.	Aqua-Spark	18.1%
2.	eco.business Fund	7.5%
3.	SLM Silva Europe Fund	7.4%
4.	Food Securities Fund	7.4%
5.	Wildlife Conservation Bond	1.4%
6.	Papyrus Australia	0.5%
7.	Kingfish	0.4%
8.	Wide Open Agriculture	0.2%
9.	Amazon Biodiversity Fund	0.2%
10.	Forest Climate Solutions Fund	0.1%

Regional distribution 12/31/2022



As at year-end 2022, the largest part of our portfolio was invested in Europe. This was mainly because of the addition of SLM's Silva Europe Fund in the autumn of 2022.

Roel Nozeman

New study Make Nature Count 2.0 assigns price to ecosystem services

‘Money is a language everyone understands’

By measuring the positive impact of investments on biodiversity, you can count how many hectares of land have been restored and how animal and plant species are developing. But you can also put a price tag on the development of this natural capital. The study ‘Make Nature Count 2.0’ looked at two projects of the ASN Biodiversity Fund from that perspective.

Measuring impact on biodiversity is pioneering work. In 2015, ASN was the first to map the biodiversity footprint of investments by using a new measurement method, the BFFI. That footprint concerns quantities of land, water and air that are or are not protected or restored to a pristine nature condition.

But in an economy in which everything we produce and consume ultimately depends on nature, you can also assign an economic value to the latter. Without clean air, people become ill. A healthy forest captures CO_2 and is a good place for people to relax. Clean drinking water is vitally important. Such ecosystems contribute directly and indirectly to human well-being. These are hugely valuable ecosystems that we use ‘for free’.

Researchers are working on pricing methods for such ecosystem services. The **Foundation for Sustainable Development (FSD)** enters their results into a large database that contains the monetary value of local ecosystem services throughout the world.

Roel Nozeman, head of biodiversity at ASN Bank, and Sytse de Jong, researcher at ASN’s Expertise Centre for Sustainability, worked with the FSD to examine two investments by the ASN Biodiversity Fund on the basis of this Ecosystem Services Valuation Database (ESVD).

Nozeman: ‘By looking at the impact on biodiversity in this way, you include many more impacts than just the revenue of a specific project for the entrepreneur and the investor. The ecosystem services that we measure affect stakeholders much further afield, such as farmers in the local area or society as a whole, which is entitled to protection against climate change. You can only arrive at a total economic value if you take everything into account.’

De Jong: ‘In that respect, biodiversity is completely different from climate, which primarily concerns emissions. That’s much simpler than nature: a forest in Spain represents a completely different value than a forest in the Netherlands, or the Amazon, for example.’

Nozeman and De Jong selected an agricultural project by SLM’s Silva Europe Fund in Spain, where an entrepreneur is switching from monoculture to an organic approach. They also included a project by the Amazon Biodiversity Fund concerning reforestation in the Amazon in their study.

Next, they drew a comparison with the situation at the start of those projects: how will the investments increase the revenue in dollars from specific ecosystem services and products such as wood, almonds and olives in the years ahead?

As regards the Spanish farmer, he is still busy switching to organic cultivation and at the same time wants to restore the dry, depleted nature on his land. Over several years, this new land management method will have a significant positive impact on the biodiversity of the land, which the Make Nature Count 2.0 study has managed to translate into hard dollars. The study has not been completed yet, but the initial results are impressive.

De Jong: ‘Compared with the baseline, the total economic value clearly increases. What our calculations also show is that investing in nature always needs time, precisely because it’s literally about growth. You won’t achieve the full revenue from ecosystem services that a project aims for within a year or two, but that’s also part of investing in biodiversity: being guided by the longer term.’

Nozeman: ‘And then we see very clearly: whereas you would normally have to depreciate land that produces progressively lower yields owing to monoculture, these investments in restoring biodiversity grow in value over time.’

Sytse de Jong

The study itself is pioneering work, Nozeman says. ‘We’re the first to calculate the total economic value of investments. This provides insights into the value that the investments add. As far as I’m concerned, it would be ideal if we could at some point do this for all projects, and ultimately for all investments by ASN Impact Investors.’

With the Make Nature Count 2.0 study, which is set to be published at the end of this year, the researchers clearly want to inspire both other financial parties and government authorities to include the economic value of biodiversity in their decision-making, De Jong: ‘Their policies can be guided by the insights into the value of ecosystem services. We’re now making visible what was invisible before: the value of nature, expressed in money. After all, money is a language everyone understands.’