Frontiers in sustainable agriculture: putting your money where your mouth is



Foreword



There are few things more fundamental to human health and happiness than the food on our plate. A growing global population needs to eat, and that depends on the world having a sustainable food system.

So far, so obvious. But it is not enough for the reasoning to be sound. We must also make sure the economics of the system are aligned with doing the right thing. Right now there are significant risks to the way we produce our food that are lurking in the blind spots of the world's capital markets.

Simply put, without pollinators food systems fail, without fisheries communities fail and without antibiotics health systems fail. Any one of these would cause untold suffering. If

all three occur we would witness a global catastrophe. These issues could also have potential impacts on capital markets running into trillions of pounds, but they are not yet on the radar of those with the financial muscle to positively address them.

One of the values that drives Aviva is the need to create legacy, what I've called being a good ancestor. This means being committed to act as a responsible investor and engaging with companies to act more sustainably. It also means doing our bit to help lead change to the way the market works.

By considering the issues raised in this report, we want to work with others towards a more sustainable capital market that can both meet the needs of long-term investors and at the same time help all of us towards a more sustainable, well-fed, future.

Mark Wilson, CEO, Aviva plc



Aims of this paper

In 2009, the UK Government's Chief Scientist at the time, John Beddington, warned that in 2030 the world will be demanding 50% more energy, 50% more food and 30% more water against a background of far greater climate variability. The challenge of this water, energy and food security nexus does not take into account many sustainable agriculture blind spots, which have the potential to compound this looming "perfect storm"ⁱ.

This short paper uses the framework of the Sustainable Development Goals (SDGs) to focus on three sustainable agriculture blind spots: oceanic plastic and sustainable fisheries; antimicrobial resistance; and pollinators. These emergent but pertinent topics have the potential to significantly disrupt the food supply chains we rely upon yet do not prominently feature in the conversations between investors and their investee companies.

These issues require attention. This paper identifies contemporary tools and data sets freely available and makes suggestions for questions investors should be asking to identify the companies who are leader and laggards.

It concludes with a call to action for broader stakeholders including companies, public policy makers, civil society and the EAT-Lancet Commission.



"Without pollinators food systems fail, without fisheries many countries fail and without antibiotics health systems fail."



Three of the blind spots in Sustainable Agriculture

Anti-Microbial Resistance (AMR) **The challenge**

Antibiotic resistance is one of the biggest threats to global health today, according to the World Health Organization (WHO)ⁱⁱ. Resistance is rising to dangerously high levels globally and is indiscriminate in who it affects. As antibiotics become less effective, a growing list of infections, including pneumonia, tuberculosis, blood poisoning and gonorrhoea, are becoming increasingly difficult and sometimes impossible to treat.

Rising levels of antibiotic resistance have provoked alarming statements from medical authorities across the globe. The Chief Medical Officer in the United Kingdom, Dame Sally Davies, spoke in 2013 of an apocalyptic scenario in the near future, in which people going for simple medical procedures die of routine infections "because we have run out of antibiotics". The World Health Organization now warns of a post-antibiotic age, where common infections, minor injuries and routine operations can kill once again. Currently circa 700,000 people a year die from antibiotic resistance. It has been estimated that this could rise to 10 million a year by 2050, making it the world's biggest killer.ⁱⁱⁱ

The overuse of antibiotics in agriculture is widely recognised as a contributing factor to this crisis. The UK Review on Antimicrobial Resistance, led by Lord Jim O'Neill, stated that the evidence linking farm antibiotic use and resistance in human infections "warrants a significant reduction in farm antibiotic use, both by overall quantity and by antibiotics that are important for human health."

In intensive farming systems, the routine preventative mass-medication of animals with antibiotics is common. This practice is particularly prevalent in the pig and poultry sectors, where animals are often kept in crowded conditions, and disease outbreaks are more common and harder to control. In the Netherlands and other European countries where calves are farmed intensively, these animals can also receive high levels of antibiotics.

Today, intensive livestock production methods and factory farming, are the dominant system of livestock farming. An estimated 70% of farmed animals are now raised in this system, including 99% of farm animals in the US.

Excessive use of antibiotics in farming, especially factory farming, and the corresponding dangers to human health, creates systemic risks across the food, farming and pharmaceutical industries. It also puts lives at risk.

These include potential costs of regulatory change and reputational damage. Furthermore, as the momentum for a concerted global effort to address AMR grows, companies risk being caught on the wrong side of the debate if they continue putting short-term profitability before the common good.

The race against the declining efficacy of our antibiotics will be closely run. The challenges facing livestock farmers and supply chain actors are significant. But there are also huge benefits to be reaped. Tackling farm antibiotic overuse could see farming businesses benefit from increased resilience, food and pharmaceutical companies from improved company brand value, and investors from the long-term, sustainable returns generated from a robust and well-functioning system. Most crucially, tackling profligate farm antibiotic use will help to safeguard these vital resources for current and future generations.

It isn't just health that is at risk from the spread of drugresistant 'superbugs'.

The macro economic implications of the antibiotic resistance crisis are hugely significant. Levels of drugresistant infections by 2050 are predicted to cost the world \$100 trillion in lost output between now and 2050^{iv}, which is more than the current global economy. The WHO estimates that in the EU alone, the issue is costing more than \$1.5 billion in healthcare expenses and productivity losses.

With antibiotic resistance in farm animals, food and certain human infections increasing in a number of countries worldwide, we must act fast to save our antibiotics.

Investor interventions and tools

Raising awareness

In 2016, Aviva Investors convened and chaired the first ever investor conference on antibiotic resistance in conjunction with the UK Government's Antimicrobial Resistance Review team, with Lord Jim O'Neill as a keynote speaker. During World Antibiotics Awareness Week, we also launched our report Superbugs and Superrisks: A Guide for Investors in conjunction with the Alliance to Save our Antibiotics and FAIRR.

This briefing, written in conjunction with the Alliance to Save our Antibiotics and FAIRR sets out the investment risks associated with farm antibiotic misuse, and key ways in which investors can engage companies to mitigate this risk and drive improvements within the food, farm and pharmaceutical sectors.

Engagement

Aviva Investors meets individually and collectively with the companies they invest in, predominantly in the pharmaceutical, food retailer and producers sectors to discuss their strategy on antibiotic resistance. We encourage our investee companies to establish a comprehensive antibiotics policy that includes clear timelines for phasing out routine, prophylactic use of antibiotics across all livestock, seafood and poultry supply chains.

Following extensive engagement several companies have committed to phase out antibiotic. One example with the power to shift the market is McDonald's. In September 2017, after the company decided to cut global antibiotic use in multiple species, starting with chicken, Aviva's CEO Mark Wilson sent a letter to the CEO of McDonald's to congratulate him on that decision.

Investor tools

Investment Risk & Return (FAIRR)

Aviva Investors is a founding signatory to the Farm Animal Investment Risk & Return (FAIRR) coalition of over 150 institutional investors with collective assets under management of \$5.9 trillion. FAIRR aims to encourage companies to disclose how they are addressing the issue of overuse of antibiotics through their supply chains. FAIRR developed a best practice policy on antibiotics stewardship to provide guidance to food companies, including both meat producers and purchasers in the development of their individual policies.

The Coller FAIRR Protein Producers Index, launched in June 2018, is the world's first comprehensive assessment of how some of the largest global intensive livestock and fish farming companies (by market capitalisation) are managing critical risks facing the sector. The 60 Index companies have combined revenues of \$299 billion, most of which are derived from producing and processing intensively farmed livestock and fish.

The goal of the Index is to help investors assess and engage with companies to ensure these risks are managed across corporate operations and supply chains. Antibiotic usage is one of the key risk factors in scope for this Index.

Access to Medicine Index

Aviva has also been involved from the outset with the Access to Medicine Index, which independently ranks pharmaceutical companies' efforts to improve access to medicine in developing countries.

We are very supportive of their Antibiotic Resistance Benchmark which was launched at the Annual Meeting of the World Economic Focus in Davos in January 2018. The benchmark compares how a cross-section of the pharmaceutical industry is responding to the threat from drug-resistant infections.

It measures the 30 most active players in antimicrobial development and production and includes multinational pharmaceutical companies, biotechnology firms and manufacturers of generic medicines. GSK and Johnson & Johnson lead the eight large research-based pharmaceutical companies included in the Benchmark. GSK has the most antimicrobial medicines in its R&D pipeline, including for pathogens experts view as the highest priority targets for AMR. GSK is one of only two companies to fully separate bonuses from the volume of antibiotic sales, removing the incentive for sales staff to oversell antibiotics. Johnson & Johnson focuses its attention on tuberculosis (TB): access to its breakthrough medicine for multidrug-resistant TB is being tightly controlled through national TB programs. These leaders are followed by Novartis, Pfizer and Sanofi together. Pfizer performs particularly well in stewardship measures, while Sanofi is stronger in R&D. Novartis delivers a consistently solid performance in most areas.

Biotechnology firms have a critical role to play in developing new antimicrobials.

Entasis leads, particularly when it comes to planning ahead to help ensure successful candidates will be made accessible but also used wisely. It is followed by Polyphor, Summit and Tetraphase in joint second place. Generics manufacturers account for the majority of antibiotics sold today, giving them significant power to slow the growth of antimicrobial resistance (AMR). Of the 10 evaluated, Mylan leads, with the strongest performance in several areas, including an equitable pricing approach and environmental risk-management strategy. Mylan is followed by Cipla then Fresenius Kabi.

"Biotechnology firms have a critical role to play in developing new antimicrobials."



Questions to ask of companies Food producers and retailers

Governance

- At what level is the issue of antibiotic resistance discussed in your organisation? (H&S team, divisional management, senior leadership, Board of Directors?)
- Who do you perceive has most responsibility for combatting antibiotic resistance?
- How do you view yourself as contributing to the solutions (e.g. responsible practices, new incentives, etc.)?
- To what other systemic issues would you compare AMR?

Strategy

- Have any studies been commissioned to quantify this impact?
- Are clients alive to this topic and asking you for more information?
- What are the company's policies and practices regarding non-therapeutic use of antibiotics?

Risk Management

- How does your supply chain, both upstream and downstream, stand to be affected by antibiotic resistance?
- Does antibiotic resistance feature on your corporate risk register?

Metrics and targets

- What measures will the company put in place to improve animal husbandry, health and welfare – in order to reduce the need for antibiotics in the first place?
- Does the company have a clear, time bound policy and plan for the elimination of routine use of antibiotics in its global supply chain?
- Does the company have a clear, time bound policy outlining a commitment to limiting farm use of the 'critically important' antibiotics, which restricts use of these antibiotics to where sensitivity testing shows that no other antibiotics are likely to work?

Pharmaceutical and Biotech industry

Governance

- At what level is the issue of antibiotic resistance discussed in your organisation? (H&S team, divisional management, senior leadership, Board of Directors?)
- How have the recommendations of the Review on Antimicrobial Resistance landed internally and what outcomes can you share?
- Who do you perceive has most responsibility for combatting antibiotic resistance?
- How do you view yourself as contributing to the solutions (e.g. responsible practices, new incentives, etc.)?

Strategy

- What is your approach to R&D in this area?
- Is your company actively engaged with policy discussions taking place in multilateral forums and with national governments about the national and international response to drug resistance?
- Is your company a signatory to the January 2016 Davos Declaration, or September 2016 industry 'roadmap' for action on antibiotic resistance? If so, what action is your company taking to implement the commitments contained in these documents?

Risk Management

- Which product lines stand to be affected by this trend?
- How do you keep abreast of the latest science around antibiotic resistance, and the latest policy developments on this issue?
- Does antibiotic resistance feature on your corporate risk register?
- Have you assessed the impact of rising drug resistance on demand for non-antibiotic drugs (or devices) which depend upon the availability of effective antibiotic treatments or prophylaxis for their successful use?

Metrics and targets

- What percentage of your research and development spend relates to this area?
- Where do you disclose the metrics used to assess AMR-related risks and opportunities in line with your strategy and risk management process?



Sustainable fisheries and oceanic plastic **The challenge**

For over three decades, the world's marine fish stocks have come under increasing pressure from fishing, loss of habitats and pollution. Rising sea temperatures and the increasing acidity of the oceans are placing further stress on already stressed ecosystems. Illegal fishing and unreported catches undermine fisheries management, while subsidies continue to support unsustainable fishing practices. Around 85% of global fish stocks are overexploited, depleted, fully exploited or in recovery from exploitation^v.

In parallel, the production of plastic has surged from 15 million tonnes in 1964 to 311 million tonnes in 2014, and is expected to double again over the next 20 years. The negative externalities generated by packaging plastic packaging, are now estimated by UNEP to reach \$40 billion, with each year, at least 8 million tonnes of plastics leak into the ocean^{vi}. Recent studies estimate that oceans will contain more plastic than fish by weight by 2050^{vii}.

We now know that microplastics enter the foodchain, with significant amounts being found in fish and shellfish destined for human consumption. Furthermore, since chemical pollutants can bind to microplastics, these associated toxins could accumulate in predator species such as shark, tuna and mackerel.

At stake is the multi¬billion dollar global fishing industry, one of the oldest in the world. As a society, the destruction of a crucial source of food and income comes at a time when the global population is predicted to swell to 9.3 billion people. The market value of the world's marine and coastal resources is estimated at \$3 trillion per year, or around 5% of global GDP^{viii}.

Fish farming – aquaculture – has experienced massive growth in the past two decades and now provides half the seafood consumed worldwide. This represents a positive trend for food production but will not take pressure off wild stocks, because the growth in demand consistently exceeds the growth of supply. Aquaculture can also have significant sustainability issues through the use of wild fish to make feed, the environmental impacts of farms, and the vulnerability of the industry to rampant disease outbreaks resistant to antibiotics. Reducing plastic pollution makes demonstrable progress towards fulfilling multiple SDGs: Responsible Consumption and Production (SDG 12), Life Below Water (SDG 14), Life on Land (SDG 15), Good Health and Well-being (SDG 3), and Sustainable Cities and Communities (SDG 11). SDG 14 specifically sets out targets for the conservation and sustainable use of the World's oceans, including reducing pollution of all kinds, particularly from land-based activities.

25% of plastic is made into packaging. Much of this packaging is for single use applications where materials are used briefly and then discarded. These materials can persist in the environment, partially degraded, for hundreds of years, which, as well as causing damage to marine life, could also have a material impact by exposing companies to reputational damage.

In December 2017, nearly 200 nations at a UN Environment Assembly in Nairobi signed a resolution to eliminate plastic pollution in world oceans. In January 2018, the European Commission released a plastics strategy calling for all plastic packaging in the EU market to be recyclable or reusable by 2030 and for reduced consumption of single-use plastics.

Sustainability is central to the business success of companies that produce, process, or retail seafood because of the significant risks inherent in the supply chain. Companies engaged in the seafood sector have to manage a multitude of risk factors, such as the overexploitation of wild fisheries, the use of materials or techniques that can lead to wider systemic problems (i.e. antibiotics) or illegal fishing.

Investor interventions and tools

On World Oceans Day 2016 Aviva Investors, Sustainable Fisheries Partnership and the United Nations backed principles of responsible Investment launched a report on sustainable seafood and responsible investment^{ix}. The report highlights the challenges facing many fishery sectors globally, particularly in developing countries. Partly due to weak regulation, many fishing grounds are only producing a fraction of historical catches. The report identifies a number of risks facing companies and investors in the fisheries / aquaculture sector, including:

- Supply-chain disruption. When wild fisheries are over exploited, stocks can collapse.
- **Reputational damage.** Responsible sourcing and supply-chain traceability are increasingly expected by Western consumers.
- Water pollution. Waste outputs from aquaculture such as antibiotics and waste can severely affect the surrounding water course.
- Association with human rights abuses. Fishery value chains can be associated with labour rights abuses, as well as social challenges such as 'fish-for-sex'.

The report sets out strategies for companies to ensure that the fish in their supply chains are responsibly sourced.

In April 2017, Aviva Investors convened a TED-style teach-in for the finance community, in conjunction with RI.com and Sustainable Fisheries Partnership, on a variety of tools and initiatives available to investors and companies with a subsequent debriefing document to the buy-side, sell-side, company and NGO attendees distributed on World Ocean's Day 2017.

Aviva has also provided input to policy-makers: as part of our membership of the European Commission's High Level Expert Group (HLEG) on Sustainable Finance we have submitted our recommendations on sustainable fisheries, and the sustainable use of marine resources is now mentioned in the HLEG's final report. We are also supportive of the European Commission's Blue Economy Financing Principles, which were developed through a broad consultation led by the European Commission, WWF, the Prince of Wales's International Sustainability Unit and the European Investment Bank (EIB).

Our current focus has broadened to include retailers who use plastics for packaging; chemical companies who manufacture plastics and logistics companies who transport pre-production plastics. The plastic packaging used by retailers and the supply chains for the pre-production plastic pellets from which this packaging is manufactured are a major source of microplastic pollution.

Collaborative tools

As You Sow has convened a Plastic Solutions Investor Alliance, with over 25 institutional investors, to engage publicly traded companies on the threat posed by plastic pollution.

Seafood Stewardship Index

The Seafood Stewardship Index (SSI) will assess and rank leading seafood companies on their efforts to advance stewardship of natural resources and seafood production chains. It focuses on the largest seafood companies by seafood-related turnover as they have a unique and significant role in enabling the transition to a more sustainable seafood production system. This Index is developed by Index Initiative, one of the founding partners of the World Benchmarking Alliance (WBA). By making this benchmark free and accessible to all, governments, investors, consumers, and civil society will be able to exert their influence to improve corporate performance. The league tables that derive from benchmarks leverage the forces of competition to improve performance: leaders are motivated to do more, while laggards are incentivized to catch up.

The Seafood Stewardship Index will help track progress, by publishing an updated Index report every 2 years.



Ocean Disclosure Project

The Ocean Disclosure Project (ODP) is a sustainability reporting platform for companies that use wild caught seafood within their business. The project allows companies to disclose all of the source fisheries that provide them with fish, and this data can then be matched with information on the sustainable management of those fisheries plus further details around the fishing gear, nationality of fishing fleets and environmental impacts.

The project has been created by Sustainable Fisheries Partnership, a US-based not-for-profit organisation, but it will become independent by 2020. The ODP currently has seven participants – the retailers Asda, Morrisons, COOP Food and Publix along with the supplier Joseph Robertson and the two aquaculture feed companies Skretting and Biomar. The project allows companies to demonstrate their commitment to transparency and responsible sourcing while providing valuable information for consumers, investors, NGOs and others who take an interest in sustainable ocean management.

Fishtracker

The Fish Tracker Initiative has investigated the role that financial institutions play in financing the trade in global fisheries – in particular the exploitation of wild fish stocks or their processing for entry into the commercial food chain. Many such fishery businesses, many of which are focused on wild catch, are listed on stock exchanges. There, we find household name banks as lenders and large pension funds and insurance companies as shareholders.

Fish Tracker's inaugural research has focused on a fisheries universe of circa 300 publicly-listed companies with a combined market cap of \$529 billion. The research guides institutional investors and other relevant financial intermediaries to better engage with investments in the wild catch fisheries sector.

Keystone Dialogues

The Keystone Dialogues provide opportunities for CEOs to effectively engage in the transformation of the seafood sector towards more sustainable practices across the globe. The Soneva Statement was signed by CEOs and Presidents of the two largest marine resource companies by revenues (Maruha Nichiro Corporation and Nippon Suisan Kaisha, Ltd), the two largest tuna companies (Thai Union Group PCL and Dongwon Industries), the two largest salmon farmers (Marine Harvest ASA and Cermaq – subsidiary of Mitsubishi Corporation) and the two largest aquafeeds companies (Skretting – subsidiary of Nutreco, and Cargill Aqua Nutrition) in November 2016.

The announcement is part of a new initiative – the Seafood Business for Ocean Stewardship – that, for the first time, connects wild capture fisheries to aquaculture businesses, connects European and North American companies to Asian companies and connects the global seafood business to science. The initiative is the conclusion of the Soneva Dialogue, a unique meeting between CEOs, senior leadership of major seafood companies, and leading scientists.

The dialogue, initiated by the Stockholm Resilience Centre, took place at the Soneva Fushi Resort on the Maldives under the patronage of HRH Crown Princess Victoria of Sweden – Advocate for the UN Sustainable Development Goals (SDGs). The dialogue was a Stockholm Resilience Centre event supported by Forum for the Future and the Soneva Foundation.



Questions to ask of companies

Governance

- Does the company have a policy regarding the sustainable management of the seafood resources it uses in its business?
- What is the company policy regarding the disclosure of source fisheries that produce raw material for the business

Strategy

- What is the company policy towards producing/ purchasing seafood from fisheries engaged in fishery/aquaculture improvement projects?
- What is the company policy towards producing/ purchasing farmed seafood that is certified as responsible?

Risk Management

- Does the company have traceability systems in place that ensure the avoidance of illegally caught fish?
- What sanctions have been adopted when illegal raw material has been detected?
- Has the company assessed the environmental and social risks of the fisheries used to produce fishmeal and fish oil for aquaculture feed?

Metrics and Targets

- Has the company assessed the current management status of all the stocks of wild fish that are part of their business?
- What is the company policy towards producing/ purchasing wild seafood that is certified sustainable?
- Does it have a time bound target for 100% certified sustainable?

Plastic packaging producers and retailers

- Will you disclose your annual plastic packaging use and set plastic reduction goals?
- What are your plans to transition plastic packaging to materials that are recyclable, reusable, or compostable?
- What is your research and development spend on alternatives to plastic for packaging purposes, especially for single use packaging?
- To what extent are you supporting public policy measures on reducing plastic waste and broadening producer responsibility?
- What conversations are you having with your tier one and two suppliers regarding this topic?



Pollinators The challenge

About 75% of the world's food crops depend at least in part on pollination, of which bees do most of the heavy lifting. Pollination improves the fruit or seed quantity and/or quality of 70% of the 1,330 most commercially valuable tropical crops and 85% of the 264 highest yield crops cultivated in Europe making pollinators worth up to US\$577 billion annually^x.

A number of sectors stand to be affected adversely by the decline of pollinators, not least agricultural commodities, food producers and the pharmaceutical sector. The global nature of many investors' assets under management means systemic issues such as a loss of pollinators have the potential to impact heavily the valuation models of companies and, ultimately, the value of the asset base.

Accepted wisdom indicates we are in the midst of the sixth major extinction of biological diversity. The planet is losing between 2 and 10% of biodiversity per decade, due largely to habitat loss, pest invasion, pollution, over-harvesting and disease.

Specifically, between 75% and 95% of all flowering plants need help with pollination. Pollinators are a keystone species; they are vital to the food chain of our planet.

For instance, the apple orchards of south-west China no longer benefit from pollinators due to excessive pesticide use and natural habitat erosion. Hand pollination is now standard for these high-value crops, but there are not enough humans on the planet to manually pollinate all crops

Many listed companies for whom insect pollination is central to their business models and to those in their supply chain are exposed to significant financial risk. Pollinator populations are declining rapidly, with 9% or more of many wild bees facing local extinction.

Because of the impact of neonicotinoids on pollinator populations, we've also shown our support to governmental initiatives to ban pesticides that are harmful of bees: we were fully supportive, and indeed had called for, the EU's recent permanent ban.

Investor interventions and tools

Aviva Investors has long been concerned about the effect of neonicotinoids on pollinator populations. Our concern stems not only from the moral case to take action but from the effect a decline in pollinators will have upon investor portfolios and financial markets more broadly.

Given the impact of neonicotinoids on pollinator populations, Aviva has also shown our support to governmental initiatives to ban pesticides that are harmful to bees: we were fully supportive, and indeed had called for, the EU's recent permanent ban

Beeconomics

We catalysed and spoke at a UK Sustainable Investment Forum event, know as Beeconomics and a Principles of Responsible Investment webinar on the same. Recently we created a dossier for MEPs ahead of the EC's recent vote on the use of neonicotinoids. We have also contributed a chapter entitled "Pollinators as a portfolio risk" in the book The Business of Bees.

We continue to engage companies as wide ranging as Bayer and Britvic on their strategic response to this topic.

Partnership for Pollinators

The University of Cambridge Institute for Sustainability Leadership (CISL) is working with a group of pollination experts, including the UN Environment World Conservation Monitoring Centre, Fauna & Flora International (FFI) and the University of East Anglia (UEA), to help business take action. The Partnership for Pollinators aims to help companies understand and manage the risks posed by pollinator decline – to improve their supply chain resilience, and protect the natural ecosystems on which they rely.

The group's report, The pollination deficit: Towards supply chain resilience in the face of pollinator decline, surveyed companies including Mars Incorporated, The Jordans & Ryvita Company and The Body Shop. It acknowledged the business risk associated with pollinator decline, and in particular recognised the potential operational and reputational risks. However, the companies also identified a gap in knowledge around the businesses' vulnerability.



EU Pollinators Initiative

The European Commission (DG ENV) is currently preparing a communication on the EU Pollinators Initiative about the causes and consequences of pollinator declines, potential mitigation measures and the EU dimension to the problem. In the consultation activities on the initiative, it became evident there is a need for a broad range of synergised actions, including from the private sector.

The initiative therefore aims to facilitate the uptake of pollinator friendly practices in the private sector by collecting best business practice examples of actions that address the decline of pollinators and promote their conservation in different economic sectors.

Questions to ask of companies Food producers and retailers

Governance

- What is management's role in assessing and managing risks and opportunities associated with pollinator decline?
- How do you keep abreast of the latest science around pollinator decline?
- How do you work with your tier one and two suppliers on this topic? For instance, have you asked them to phase out the use of neonicotinoids outside the EU or increase forage areas for wild pollinators on their land?

Strategy

- What contingency measures and scenarios have been discussed around this issue?
- What initiatives and incentives have been put in place to mitigate the impact?

Risk Management

- How does your supply chain, both upstream and downstream, stand to be affected by a loss of pollinators?
- Have any studies been commissioned to quantify this impact?

Metrics and Targets

• Describe the targets used by the company to manage pollinator-related risks and opportunities and performance against targets.



Conclusion

How can we tackle these frontiers in sustainable agriculture?

These three frontiers are not established topics within the investment community, but rising threats that have remained blind spots.

Given the emergent but pertinent nature of this issue the investee company's response to the questions above can be an excellent proxy for their overall environmental, social and governance risk and opportunity management.

There is a role for all stakeholders – scientists, the civil society, government, companies and investors – to ensure that there is sufficient research and data to support engagement, incentives to facilitate investment decisions, and awareness around the issues.

Scientists and civil society

Investment practitioners are unlikely to have first-hand scientific expertise, and benefit hugely from evidence being shared by NGOs, think tanks and academics on rising threats. Information shared and highlighted by the media and NGOs are also key means of highlighting responsible investment issues and corporate behaviour, thereby increasing the onus on investors to demonstrate their stewardship.

Policy Makers

Policy-makers can also ensure that the right incentives are in place for investors to be able to integrate sustainable considerations in their engagement with companies and investment decisions. For instance, much could still be done to clarify fiduciaries' understanding of their duties and their mandate, and note that investor duties should incorporate sustainability issues.

EAT-Lancet Commission

The EAT-Lancet Commission on Food, Planet, Health brings together world-leading scientists from across the globe to scientifically assess whether this transformation is possible and what implications it might have for achieving the SDGs and the Paris Agreement. The Commission will deliver the first full scientific review of what constitutes a healthy diet from a sustainable food system and will outline a clear set of science-based targets, also referred to as "the equivalent of the 2-degree target for food". These targets will set the safe operating space for food systems.

The Commission needs to make clear how companies should be evaluated on their contribution to sustainable agriculture.

Companies

One of the issues faced by the private sector is the little amount of information on how companies are aligned to the SDGs. A February 2017 Harvard Business School and Oxford University's Saïd School of Business paper reported that 45% of 368 institutional investors globally found that a lack of data comparability across firms was limiting their firms' ability to use sustainability information in their investment decisions. How can an investor be expected to reduce its exposure to water risk when most large companies in most sectors do not report their water usage, or do so using different standards and methodologies?

Without this information, responsible investors have no effective way to identify where to allocate capital to maximise the sustainability impact of their capital. The result is an inefficient allocation of capital and the inability for investors to evaluate their exposures to sustainably risks and opportunities. While corporate indices play a key role in global capital markets by acting as reference points for portfolio performance, existing stock and bond market benchmarks tend to only reflect ESG risks to the extent that the listed equity or bond market does so more generally.

World Benchmarking Alliance

An emerging powerful and potentially transformative way to address this challenge is the production of international league tables measuring and comparing corporate performance on the SDGs. The global need for such league tables is widely acknowledged, from the Business and Sustainable Development Commission (BSDC) to the EU High-level Expert Group on Sustainable Finance. These league tables require sophisticated benchmarks that can provide financial institutions, companies, governments, and civil society with information they can use to allocate capital, increase transparency, track and compare corporate sustainability performance, and ultimately catalyse action and accelerate SDG delivery.

Aviva, the UN Foundation, BSDC, and Index Initiative are putting forward the idea of a World Benchmarking Alliance (WBA). We envision that the WBA would become an institution that will develop, fund, house, and safeguard publicly available, free corporate sustainability benchmarks aligned with the Sustainable Development Goals. By providing all stakeholders with access to this information, the WBA will help investors, civil society, governments and individuals exert their full influence and help the private sector play its role in delivering the SDGs. This environment of enhanced transparency and understanding can fundamentally change the quality of multi-stakeholder engagement and align corporate performance with sustainability objectives. Benchmarks and league tables are only powerful tools if they are considered robust, credible, and used by a large number of actors. Only through the formation of a genuine alliance can the WBA be effective as a global institution and develop high-quality benchmarks.

Over the course of nine months (Sept 2017 – May 2018), WBA has held a series of global and regional consultations with stakeholders to refine the WBA's ambition, institutional structure, and inform its priorities in terms of SDGs and industries. These consultations are being complemented by additional research, interviews, online consultations and expert meetings.

The WBA intends to fund, house and safeguard publicly available corporate SDG performance benchmarks. The global SDG community will only be able to assess, direct and adjust business' SDG contributions if we have at our disposal data that is standardised, comparable, reliable and clear. These free corporate benchmarks will help companies, investors and others drive change by raising awareness and promoting a corporate race to the top.

"There is a role for all stakeholders – scientists, the civil society, government, companies and investors – to ensure that there is sufficient research and data to support engagement, incentives to facilitate investment decisions, and awareness around the issues."

About Aviva

Aviva is one of the world's largest insurance and asset management companies, tracing its history back more than three hundred years to 1696. We are a long-term business and must also create long-term returns for our customers and shareholders.

Agreed upon by 193 countries in September 2015, the Sustainable Development Goals (SDGs) are the milestones marking the path towards the future we want.

We believe the SDGs represent a unique opportunity to make sustainable development a reality and create a lasting legacy. These goals cannot be achieved without the firm commitment of the private sector to work with government and civil society to deliver the solutions and investments needed to achieve the SDGs.

With trillions of dollars under management at the global scale, the investment community has a key role in ensure that private finance is directed towards companies orientating themselves towards long term sustainable development and the SDGs. Mobilising private finance frames one of the most important SDG challenges: shaping the risks, returns, and other incentives facing market actors to ensure private financing supports achievement of the SDGs.

As investors, we believe in positive engagement to steer companies towards more sustainable strategies that both improve business performance and deliver environmental and social benefits. While much has been said about the need to mobilise the trillions of private finance for sustainable development, it is also crucial to consider how systemic issues have the potential to impact the valuation model of companies.

Authors

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