EXPERT VIEW

Ofi invest

BIODIVERSITY

Combatting plastic waste to protect the oceans

#19

MACIF

ofi Asset Management

A BRAND Ofi invest aéma GROUPE

OFI AM is an integral part of Ofi Invest, the asset management division of Aéma groupe (which also includes Macif, Abeille Assurances and Aésio mutuelle), which itself consists of the businesses of the Ofi group, Aéma REIM and Abeille Assurances' asset management arm

For OFI AM and its mutualist insurance shareholders, protecting the oceans from plastic pollution is an essential issue. *And yet, the negative impacts of plastic production and use on biodiversity and the oceans are still not sufficiently priced into company valuations by the financial markets.*

This report is the fruit of an engagement campaign on the issue of plastic pollution and the oceans conducted by OFI AM's ESG research team on behalf of its MACIF shareholder *and with the invaluable assistance and shared experience of the Surfrider Foundation Europe.*

First, it presents ***some background on the issues and challenges*** *raised by plastic, due to its omnipresence in our consumer lives.*

Second, it lists the ***extra-financial risks*** *arising from the plastic value chain for investors in managing their portfolios.*

Lastly, it details the ***methodology and findings of the engagement campaign*** *we conducted with 19 companies between March 2020 and May 2022.*

Summary of contents

Background

Plastic has become inextricable from modern life. **It is an essential and omnipresent component of our daily activities. And yet, its production and composition do significant harm to biodiversity and the environment in general.** By using it intensively, we all take part in the scourge that is plastic pollution in the oceans and nature in general. **Plastic has huge impacts on biodiversity:** 100,000 mammals and 1 million seabirds die each year, suffocated or poisoned by plastic waste[1]. Almost 700 marine species are jeopardised by plastic, of which 17% are classified as threatened or critically endangered by the WWF.

The OECD's latest report[2] on plastic use and pollution, published in June 2022, found that **plastic consumption had quadrupled in 30 years,** driven by growth in emerging markets. Global output of plastic doubled between 2000 and 2019, from 234 million to 460 million tonnes. In addition, plastics account for 3.4% of global greenhouse gas emissions.

The report also found that almost half of plastic waste is due to OECD countries. Plastic waste has doubled in two decades, to 353 million tonnes in 2019 from 156 million tonnes in 2000. Almost two thirds of this are from plastic products that have a useful life of less than five years, such as packaging (40%), consumer goods (12%) and clothing and textiles (11%). Most plastic waste ends up in landfills or incinerators or is released into the environment. Only 9% is actually recycled.

We are now all beginning to become aware of this scourge. In March 2022, **United Nations member-nations pledged to negotiate a legally binding international agreement by 2024** to put an end to plastic pollution. Lawmakers are also beginning to address the issue on a national level. The media report on controversies involving plastic pollution of the oceans and damage to our natural capital. Civil society and NGOs have blamed multinational companies for producing and intensively using plastic and the failure to make consumers aware of how waste is managed.

In this ecosystem, investors also have a role to play in raising awareness at the companies in which they invest of the impacts of this scourge. They can do so by measuring their portfolios' footprint on biodiversity, by assessing how well these portfolios are aligned with long-term objectives of biodiversity and protection of the oceans, and by offering financing solutions to plastic alternatives.

[1] *Marine Pollution, "The Ocean Conference United Nations", New York, 5-9 June 2017*
[2] *"Global Plastics Outlook: Policy Scenarios to 2060", OECD, June 2022*

KEY MESSAGES

1 - Plastic is omnipresent in consumer behaviour, but exponential growth and mismanagement of plastic waste has caused pollution affecting all ecosystems.

2 - New thought must be given to the lifecycle of plastic, as many plastic products are single-use. In addition to the challenges of the circularity of plastic, recycling solutions are few in number and must be rethought and developed.

3 - For investors, there are many extra-financial risks to consider regarding the companies in which they invest, including their capacities:

- to manage the negative impacts arising from the pollution of ecosystems;
- to manage risks arising from controversies, whether reputational, operational, legal or health-related;
- to adapt to regulatory trends; and
- to set up a trajectory of plastic reduction.

4 - Of the 19 companies with which we engaged between March 2020 and May 2022:

- Most identified plastic as a significant risk;
- Only one company included a sustainability criterion related to recycling of plastic packaging in its long-term management remuneration packages;
- All companies surveyed are members of associations or initiatives for combatting plastic pollution, and one third of them take part in more than 10 associations;
- Plastic is seldom taken into consideration in sustainability policies applicable to suppliers;
- Microplastics-exposed companies make little effort to reduce their impact, and textile companies in particular are not forthcoming in their disclosures on the volumes of synthetic fibres they use;
- Most company' commitments are to the recyclability of packaging and the share of packaging made with recycled plastic in the case of agro-food groups, but progress still needs to be made, particularly in commitments to reduce the use of plastics in absolute terms;
- There is still too little disclosure of companies' total tonnage. For the majority of the most forthcoming companies, volumes continue to rise in spite of awareness campaigns on the issue.

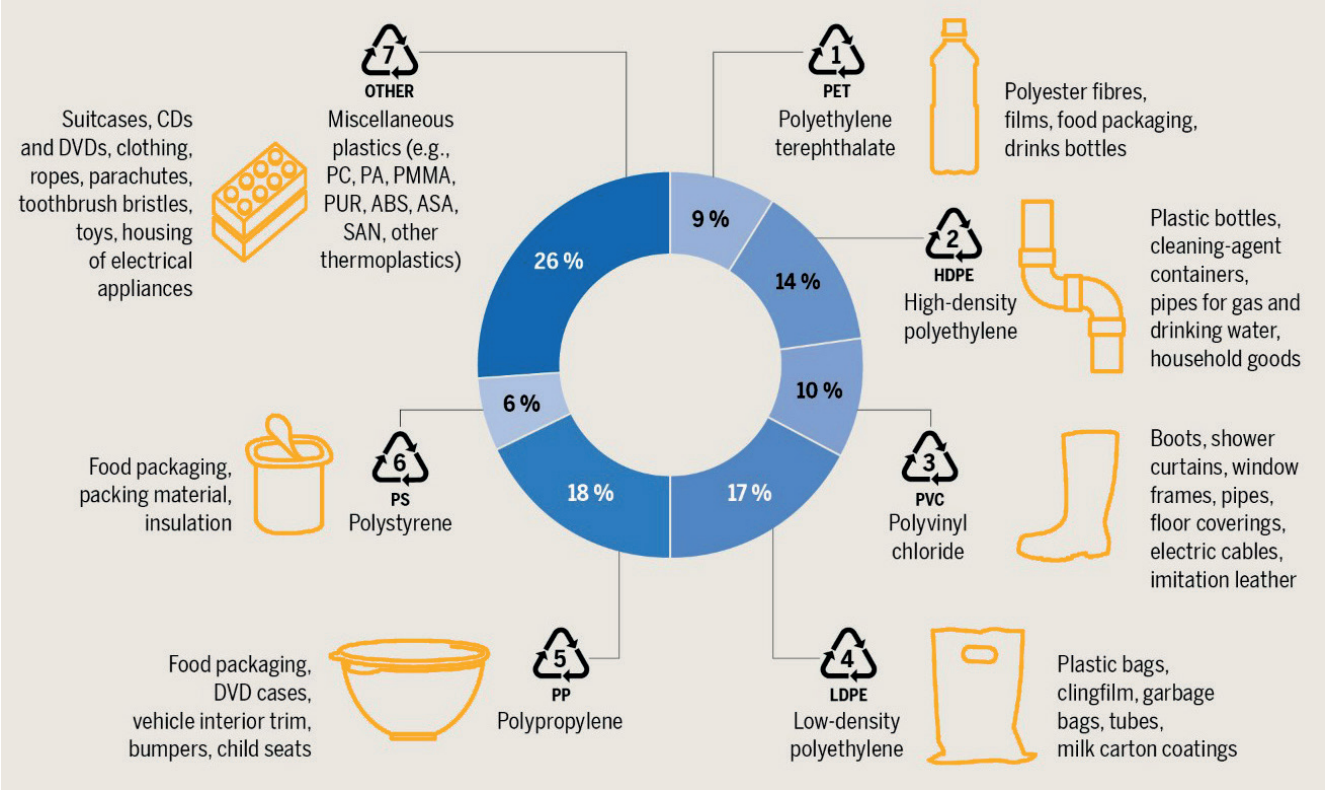
Plastic is everywhere in consumers' lives: stakes and challenges for the environment

WHAT IS PLASTIC?

Plastic is an umbrella terms for all synthetic materials made from hydrocarbons and formed by a chemical reaction called polymerisation. The polymer used in plastic consists of chains of carbon atoms obtained from the transformation of coal, oil or natural gas.

The word "plastic" describes a multitude of materials that have distinctive characteristics, uses and properties, as seen in the illustration below from the 2020 Plastic Atlas.

THE PLASTIC ROUNDABOUT
Seven recycling codes defined by the European Commission and percentage of total quantity produced worldwide, 2015



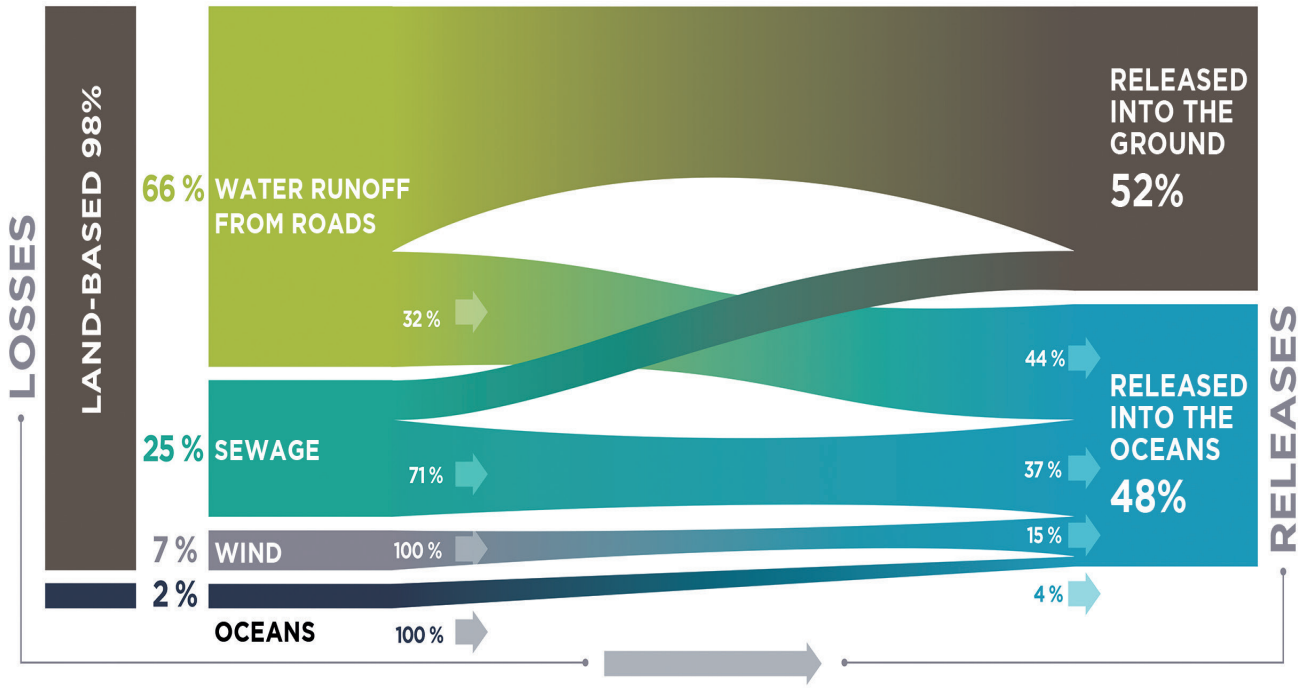
Sources: Heinrich Böll Stiftung, La Fabrique Écologique, Break Free from Plastic - "2020 Plastic Atlas"

We make a distinction between macroplastics and microplastics:

- **"Macroplastics" are objects or fragments of plastic having a diameter of more than 5 millimetres.** One third of plastics produced are for packaging; these are "macroplastics". The OECD estimates that macroplastics account for 88% of the plastics that are released into the natural environment. This is due to insufficient collection and disposal[3]. They often end up in the oceans and on beaches.

- **"Microplastics" are microparticles of plastic smaller than 5 millimetres.** There are two types of microplastics:
  1. **Primary microplastics:** these are particles that are released directly into the environment and that come from land-based activities such as vehicle tire wear, wear on synthetic textiles during home washing, boat hull paint, road markings and urban dust. According to the International Union for Conservation of Nature (IUCN), about 15% to 31% of all plastic in the oceans is of primary origin. Primary microplastics are a concern, as about 52% of them remain in the ground, but 48% are transported into the oceans by water runoff and streams, as illustrated in the chart below.
  2. **Secondary microplastics** are produced by the fragmentation of more voluminous plastic items (packaging, fishing nets, etc.) that are exposed to the marine environment and to the sun, among other things.

GLOBAL OCEAN POLLUTION
Percentage of various paths to microplastics pollution



Source: « Microplastiques primaires dans les océans : évaluation mondiale des sources », February 2017 – Julien Boucher, Damien Friot

[3] *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options, OECD, June 2022*

A PROMINENT MATERIAL IN OUR CONSUMER LIVES

In recent decades, plastic has gradually replaced glass, paper, metal and fabric as a material. Most industries have used plastic extensively due to its many advantages[4]:

- **Its versatility:** plastic can be fashioned and moulded into any form depending on its intended use. Some plastics can even be folded or flattened or used as vacuum-packing material for enhanced preservation.
- **Its resiliency:** plastic has good mechanical resiliency to compression, deformation and chemicals. Its ability to withstand shocks also makes it a choice material compared to other materials such as wood, certain metals or even glass. Moreover, it does not rust, and its strength-to-weight ratio is very popular with consumers.
- **Its weight:** plastic is lighter than other materials, such as glass. This makes it very popular with both consumers and companies. It can be used to transport a larger number of goods, which lowers operating costs.
- **Its customisation:** its texture and appearance are adaptable to any product. What's more, it can be made in a wide range of colours for each product, which gives it a considerable marketing advantage.
- **Its price:** plastic is made from petroleum, a raw material that is often less expensive than other materials such as metal or glass. The energy required to produce plastic is rather low compared to other materials.

In recognition of these advantages, plastic has replaced traditional materials and has become a must-have in our consumer lives.
All that being said, while plastic was originally regarded as a high-quality material, we now find it used increasingly in single-use packaging, such as utensils, plastic cups and straws.
According to the OECD, by 2060, barring ambitious policies in this area, output of plastic and plastic waste is expected to triple. Growth is greatest in developing and emerging market countries in Africa and Asia. However, OECD countries are still the biggest producers.

LIFECYCLE OF PLASTIC AND ITS ENVIRONMENTAL IMPACTS: THE CHALLENGES OF RECYCLING AND OF THE CIRCULAR ECONOMY

A HEAVY CARBON AND ENVIRONMENTAL FOOTPRINT

Plastic's carbon footprint is not neutral. While plastic could originally be obtained from various raw materials such as cellulose, starch or natural gas, petroleum is still its main component. Meanwhile, natural gas and petroleum are fossil fuels that are increasingly targeted in investors' climate strategies.

According to the OECD, plastics are responsible for 3.4% of global greenhouse gas emissions. What's more, projections suggest that global output of oil used in making plastic will continue to rise. In 2019, it accounted for the emission of 1.8 billion tonnes of greenhouse gasses. **Petrochemical products will account for about half of global oil production in 2050, exceeding road transport, aviation and shipping[5].** This growth seems to be at odds with investors' gradual divestment from the oil & gas sector and is due to the oil & gas industry's search for new markets.

In addition to plastics' carbon footprint, they also leave a very heavy environmental footprint on biodiversity and in the oceans, as booming supply and demand for plastic is resulting in a spike in waste production. According to the WWF, between 4.8 and 12.7 million tonnes of plastic ends up in the oceans each year, or the equivalent of a lorry full of rubbish each minute.

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[4] *"Plastics: plastic-free investment strategy: the next challenge for the consumer staples sector?" - Société Générale Sustainability Research, 2019*
[5] *Report d'information n°2132 déposé par la Commission des affaires européennes sur la stratégie européenne sur les matières plastiques, 2019, "The future of petrochemicals: Towards more sustainable plastics and fertilisers", IEA, 2018*

RETHINKING THE LIFECYCLE OF PLASTIC

According to the OECD, annual per capita production of plastic waste amounts to 221 kg in the United States, 114 kg in European OECD member-countries, and 69 kg on average in Japan and Korea. On a global scale, in 20 years, production of plastic waste has doubled. Most plastic waste is dumped into landfills (50%), incinerated (19%) or released into the environment (22%). Only 9% is recycled.

Plastic, moreover, is often single-use. Products consisting entirely or partly of plastic are often not designed, created or sold for several trips or rotations during their lifecycles or are not created to be reused in the same way that they were originally designed for. According to the WWF, "single-use plastic products in most cases have useful lives of less than one year (or even a few minutes) and always less than three years" (**read here**).

The useful lives of plastics vary considerably from one product to another. While plastics used in buildings and civil works projects for piping or coatings have average useful lives of 35 years, plastics used in packaging "live" on average less than half a year, and plastics incorporated into consumer goods have an average functional useful life of three years[6]. However, when set aside plastics' potential lifespans – from several centuries to a millennium – a useful life of several decades is insignificant.

Microplastic remains a major source of plastic pollution as it follows a linear lifecycle. Little is known of the impact of releasing primary microplastics into the environment, and collection technologies are almost non-existent. We nonetheless take note of initiatives such as the installation of filters in washing machines that capture microplastic residue that is pulled off our clothing during washing. In 2020, the French government decided to require a microplastics filter on all new washing machines as of 1 January 2025.

There is **a considerable loss of value, estimated at billions of euros, in the value chain of plastic-using companies due to its non-circular lifecycle.**

In reaction to the risks and urgency of the plastic situation, companies are seeking out solutions, particularly by reworking their plastic value chains, lifecycles, research & development (R&D) and investment. This has led to the discovery of an alternative schema: a circular schema. Circularity is the principle according to which previously used and worn-out products are used as raw materials for new products or materials.

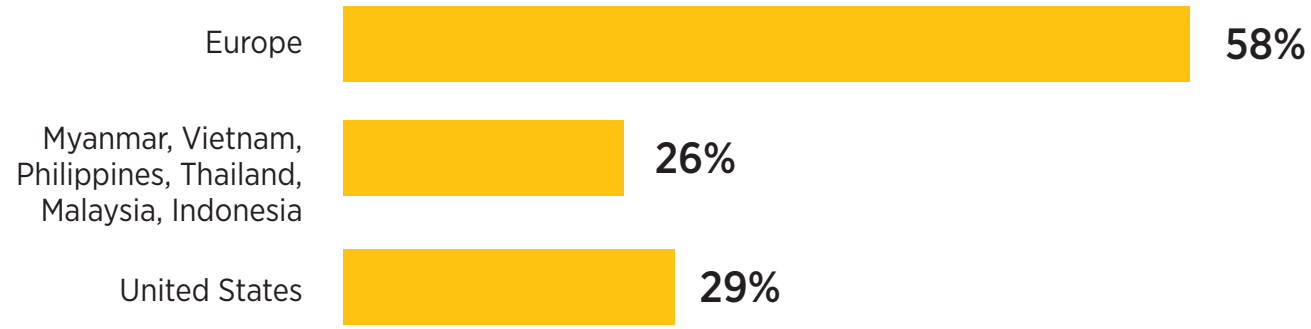
[6] *Heinrich Böll Stiftung, La Fabrique Écologique, Break Free From Plastic - "Plastic Atlas 2020"*

RECYCLING: BACKGROUND AND CHALLENGES

Recycling is an integral part of the concept of circularity and helps reduce plastic's environmental footprint. Its advantages are to reduce raw materials use; air, water and ground pollution; the quantity of plastic waste; and greenhouse gas emissions.

However, only few polymer types are recycled, such as PET (polyethylene terephthalate), HDPE (high-density polyethylene), PVC (polyvinyl chloride), LDPE (low-density polyethylene), PP (polypropylene), and PS (polystyrene). Moreover, collection systems and recycling processes differ from country to country. For plastic waste like PET, the recycling rate still varies widely between Southeast Asia, the US and Europe[7].

AVERAGE PET RECYCLING RATE IN 2018



Source: OFI AM

Moreover, **recycling of plastic poses many challenges:**

- Recycling requires **lots of energy, high labour costs and heavy investments.**
- It also **depends on individual countries' waste collection and sorting systems.** Recycling infrastructures are often lacking in developing countries. As a result, a large quantity of waste ends up in landfills, incinerators or the natural environment. This raises the issue of who is responsible for processing waste.
- **Flows of recyclable waste sent by developed countries to emerging market and developing countries** are completely disproportionate to the capacity of those countries to process said waste. China, the first country to receive recyclable waste, banned the importation of plastic waste in 2018. Plastic waste from developed countries has since been redirected to Malaysia, Thailand, Vietnam, Indonesia and Turkey.
- **Not all materials are recyclable, and some can be recycled just once,** as the material is degraded upon each recycling operation. This degradation is called "downcycling".

[7] "GA Circular", 2019, "Full Circle: Accelerating the Circular Economy for Post-Consumer PET bottles in Southeast Asia", p.26 (10 October 2022), "Plastics Recycling update", 2019, "European PET bottle recycling hits 58 percent" (10/01/22)

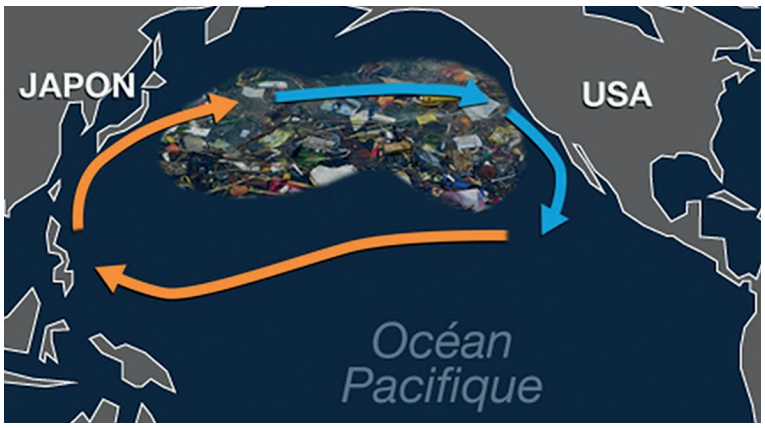
Risks for investors throughout the plastic value chain

SUSTAINABILITY RISK, PARTICULARLY IN BIODIVERSITY

Because of its close dependence on fossil fuels and its linear lifecycle, plastic poses a risk to investors. The production and use of plastics and companies' mismanagement of the environmental impacts they cause may also pose a risk to investors. In their investment decisions, they must in take into account how their portfolio companies' manage the challenges of biodiversity protection and climate change.

Skyrocketing supply and demand of plastic has caused an explosion in waste production. Between 4.8 and 12.7 million tonnes of plastic ends up in the oceans each year, or the equivalent of one lorry full of rubbish each minute[8]. The ongoing pollution of the oceans has contributed to the formation of a plastic-populated "7th Continent" called "The Great Pacific Garbage Patch". Alone, this "continent" in the northern Pacific is almost six times as large as France (3.4 million km^2) and contains more than 30 million tonnes of waste.

According to the World Bank, **plastic waste worldwide is expected to rise by 70% by 2050[9]** from current levels. By then, the oceans could contain more than plastic than fish. The consequences on biodiversity are clear: about 94% of birds' stomachs in the North Sea region have been found to contain plastic, and 86% of sea turtles confuse it with food and ingest it[10]. This phenomenon causes the deaths of 100,000 mammals and about 1 million seabirds each year, which are trapped, suffocated or poisoned by plastic waste. Almost 700 marine species are threatened by plastic, of which 17% are classified as threatened or critically endangered by the WWF.



Plastic microparticles also have a negative impact on marine biodiversity. In the oceans, micro-debris is rapidly covered with periphyton, a biofilm of algae, bacteria and fixed microorganisms. To planktivore fish, these microplastics take on the taste and smell of their food. Ingestion of microplastics by marine organisms can have devastating effects, obstructing their digestive mechanisms and intoxicating fish.

Microplastics don't just affect oceans. Plastic microparticles are also found in the soil and are mostly ignored, whereas their concentration there can be four to 20 times higher than in water. In 2018, an initial experimental study looked into the biophysical impacts of microplastics in the ground. The experiments found that microplastics had affected the structuring of the soil and the biophysical environment[11].

Plastic's impact on the environment has led industry actors to rethink the production and development of plastic products. Alternatives have emerged in recent years making it possible to break with the long-standing dependence on plastic. OFI discussed some initiatives with companies as part of its plastics and oceans engagement; these are described in the third part of this report.

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[8] *WWF, 2019 and WWF, 2019*
[9] *World Economic Forum, "The New Plastics Economy: Rethinking the future of plastics", 2016*
[10] *"The impacts of marine litter", Ministry of Ecological Transition, 2021*
[11] *"Impacts of Microplastics on the Soil Biophysical Environment", by Souza Machado, A. A., Lau, C. W., Till, J., Kloas, W., Lehmann, A., Becker, R., & Rillig, M. C. (2018).*

REPUTATIONAL RISK

Echoing the dramatic findings of plastic pollution in the oceans, many controversies have been reported by the media. They have helped reinforce awareness of this phenomenon by public opinion and highlighted the need to act and adopt urgent measures.

Manufacturers are the biggest consumers of plastic packaging, ahead of the agro-food industry. However, the plastic products most commonly found in the ecosystem are from big agro-food groups.

According to the annual survey of the *Break Free from Plastic movement,* which brings together NGOs and citizens acting individually or collectively, inventories the plastic packaging from these industrial groups that has been found in rivers, parks and other natural sites. The *Coca-Cola Company* and *PepsiCo* have topped the rankings each year since the first survey was first published in 2017. In 2021, the other companies cited were Unilever in third place, followed by *Nestlé, Procter & Gamble, Mondelez international, Philip Morris International, Danone* and *Colgate-Palmolive. Break Free from Plastic* has called out these groups' disclosures, which focus on increased use of recycled plastic, and recommends acting instead on reducing the use of both virgin and recycled plastic.

NGOs such as *Greenpeace* continue to criticise these companies on their management of plastic packaging, particularly the rise of single-use plastic. It accuses them of relying on informal collection systems in developing countries to recover their packaging, in order to meet their sustainable development obligations. The NGOs therefore call on major agro-food groups to assume their share of responsibility for the external costs of combatting the plastic pollution generated by single-use products and to take on a share of the costs of collection, processing and remediation of environmental damage.

SOCIETAL RISK: A HEALTH RISK

In addition to its environmental risks, plastic also poses a societal risk. This is, in fact, a human health risk, as people also ingest microplastics. Plastic microparticles are present in our food (seafood, etc.) and drinking water. **A human being ingests on average 5 grammes of plastic each week, or the equivalent of a credit card, according to the WWF[12].** The long-term effects on the human body of ingesting plastic are not yet well documented. Even so, some additives, colorants and pigments in plastic seem to affect sexual functions, fertility and cognitive development. Some studies have also found increased occurrence of genetic mutations and cancers[13][14][15].

In recent months, *Environment International,* a scientific journal, has published several studies that found increased occurrence of plastic micro and nanoparticles in the water, air, food and even our faeces. For the first time, the presence of "significant" amounts of microplastics in human blood and even in the placentas of pregnant women has been scientifically proven[16]. It has not yet been determined whether organisms can eliminate microplastics, to what extent they may be transported to organs, and the related risks. These studies demonstrate a possible correlation between the presence of microplastics and health risks, but, in their view, it would be difficult to establish a link of causality at this point, due to the number of chemicals to which we are exposed in our everyday lives.

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[12] *WWF, 2019*
[13] *GESAMP. Sources, fate and effects of microplastics in the marine environment: part two of a global assessment. Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, 2015*
[14] *Melzer, David, and al., "Association of urinary bisphenol a concentration with heart disease: evidence" from NHANES 2003/06, PloS one 5.1, 2010*
[15] *Linares V, Bellés M, Domingo JL : « Human exposure to PBDE and critical evaluation of health hazards ». Arch Toxicol (2015)*
[16] *Melzer, David, and al., Association of urinary bisphenol a concentration with heart disease: evidence from NHANES 2003/06, PloS one 5.1, 2010*

REGULATORY RISK AND PERHAPS EVEN LEGAL RISK?

Combatting the scourge of plastic pollution is gradually becoming a regulatory, and even legal, risk.

HOW FAR ALONG ARE REGULATIONS?

ON A GLOBAL SCALE, 2022 was highlighted by two events that, while symbolic at this stage, are still important in reflecting awareness of the extent of this scourge and the determination to take collective action to bring it under control.

The first of these events was in March 2022, when 175 countries met in Nairobi, Kenya for the United Nations Environment Assembly (UNEA). They approved a resolution opening the door to a global treaty on combatting plastic pollution. Under terms of this agreement deemed "historic", member-states approved a motion a creating an Intergovernmental Negotiating Committee in charge of drawing up a "legally binding" text by 2024 **with the goal of ending plastic pollution.**

The negotiations mandate includes **"the full lifecycle of plastics",** their use and the management of plastic waste, as well as reuse and recycling, as called for by various environmental actors.

One month before the Nairobi conference, France had hosted the One Ocean Summit in Brest, bringing together about 40 heads of state and government. At the summit, leaders pledged to protect the oceans, combat illegal fishing, and plastic pollution, and to produce an ambitious treaty on the high seas.

Currently worldwide, more than 120 countries ban or tax some single-use plastics, but these are not enough to reduce global pollution. Most regulations apply only to particular items such as plastic bags, which account for a very small portion of plastic waste, and are more effective in combatting unauthorised dumping of waste than in reducing consumption of plastics. Only a minority of countries encourage waste recycling through taxes on dumping or incineration (**read here**).

ON A EUROPEAN SCALE, on 30 August 2022 the European Commission unveiled a plan to regulate microplastics[17]. It proposes to ban their sale through the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation. The text will ultimately ban microplastics from cosmetics, cleaning products and athletic fields. This draft regulation nonetheless consists of several waivers[18] that could retain some usages for as much as 12 years after the text enters force, waivers that have been denounced by the European Environment Bureau (EEB) and ClientEarth.

These measures are part of the **European Union's plastic strategy** unveiled in January 2018, as well as the **circular economy strategic plan** of March 2020 and the **"zero pollution" action plan** of May 2021. This tougher legal line affects more than half of the companies in the EuroStoxx 600 that are exposed to plastic risks.

IN FRANCE, on 6 October 2022, MPs passed a **bill "aiming to combat plastics that are dangerous for the environment and health",** which bans **"single-use, non-recyclable plastic packaging"** beginning in 2025. A ministerial order will have to specify the criteria for determining which plastics can be included in recycling processes. The text is now scheduled to be submitted to the Senate by the end of December 2022 or in early 2023.

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[17] Linares V, Bellés M, Domingo JL: Human exposure to PBDE and critical evaluation of health hazards. Arch Toxicol (2015)

[18] The first deals with microparticles meant for industrial facilities and for certain medicines, fertilisers, food additives and in vitro diagnostics. The second applies to microplastics "confined (...) so as to prevent release into the environment". The third series of exceptions authorises temporary uses of plastic particles in 10 categories of products.

In 2020, the National Assembly had adopted the anti-waste law for a circular economy whose objective was to end the sale of single-use plastic packaging by 2040. This will require some adjustments from manufacturers. Meanwhile, some single-use plastic products have already been banned and others will be phased out.

On microplastics more specifically, the law provides for a ban, effective 1 January 2024, on the sale of medical devices containing microplastics and for a ban, effective 1 January 2026, on the sale of rinsing cosmetics products containing microplastics, such as shampoos, shower gels and makeup removers.

TOWARDS A JUDICIALIZATION OF PLASTIC POLLUTION RISKS FOR COMPANIES

As with other issues pertaining to companies' social and societal responsibility, such as their climate strategy or their adherence to basic rights, including in their supply chains, NGOs keep close track of companies' policies on reducing plastic waste, and call them out on their duty of due diligence.

For example, in September 2022, **Auchan*, Carrefour*, Casino*, Danone*, Lactalis*, Les Mousquetaires*, Picard Surgelés*, Nestlé France*** and **McDonald's France*** were put on notice by a **coalition of NGOs including ClientEarth, Surfrider Foundation Europe and Zero Waste France** for failing to meet their due diligence obligations[19]. These nine agro-food and retailing giants have three months to adjust their due diligence schedules before the NGOs take them to court.

They asked that measures be adapted or implemented to mitigate risks and prevent serious harm to the environment, to health and to human rights from the use of plastics. The coalition's purpose is to force them to commit to "plastic reduction" in all their activities and to a trajectory for doing so.

ClientEarth

SURFRIDER FOUNDATION EUROPE

ZEROWASTE FRANCE

[19] *"Plastic pollution: food giants attacked by NGOs on their duty of vigilance", Novethic, 30 September 2022.*

** For illustrative purposes only. Any reference to a company or a specific security is not to be construed as a recommendation to buy, to sell, to hold or to invest directly in said company or securities.*

Engaging with plastic-using companies: methodology and findings

OFI AM'S ENGAGEMENT METHODOLOGY

OFI AM's engagement policy aims to **move companies' practices forward through a dialogue-based approach to achieving a defined objective.** Over the course of many years, OFI AM has developed management expertise in **socially responsible investment** (SRI), based on the work of its ESG research team. OFI AM's engagement policy is an integral part of this process of researching and assessing the sustainability of companies and, ultimately, of our asset management process. **This policy is expressed through dialogue with the companies, on the one hand, and by voting at shareholder meetings on the other hand.**

Regarding the management and use of plastic, OFI AM's ESG research team worked from March 2020 to May 2022 on a survey ordered by MACIF, our shareholder. OFI AM's ESG analysts engaged with 20 companies from eight different countries. **The engagement process unfolded in several stages:**

- Identifying those sectors exposed to the issue of plastic pollution and to plastic pollution risks;
- Selecting from the MACIF portfolio 20 companies from sectors bearing a significant responsibility for ocean pollution. The questions asked of issuers were adjusted to the type of pollution caused by their activities, i.e., pollution of microplastic or microplastic origin; and
- Soliciting disclosures from companies to achieve a better understanding of the maturity of their plastics policy.

In October 2020, ESG analysts drafted maintenance guides with the assistance of Surfrider Foundation Europe, an NGO. OFI AM joined with this association for its expertise on plastic pollution in oceans and streams. Surfrider's mission is to protect and to enhance the value of lakes, rivers, oceans, waves and shorelines. It currently has 18,000 members and operates in 12 countries.

Two questionnaires were prepared, the first on exposure to macroplastics (packaging) and the second on exposure to microplastics. Fifteen companies on the list were determined to be exposed to macroplastics and five companies to microplastics. Each questionnaire had three parts:

- companies' policies and commitments,
- their management systems and actions, and
- their performance metrics and results.

In the course of the survey, **Heineken NV*,** the Dutch brewer, was withdrawn from the engagement approach after it demonstrated its low exposure to this issue. This lowered the number of surveyed companies from 20 to 19.

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FINDINGS OF ENGAGEMENTS WITH COMPANIES

Of the 19 issuers approached between November 2020 and April 2022, 18 agreed to a dialogue with OFI AM. This campaign helped identify the good practices of some issuers, but also the challenges encountered by others, due mainly to the versatility of plastic and the difficulty of securing alternatives covering all of its applications.

COMPANIES' POLICIES AND COMMITTMENTS

Our discussions with these 18 companies found that 10 of them address the environmental impacts of plastic on the board of directors level and believe that plastic poses a material sustainability risk that must be managed. This shows that they have **become aware of how important the challenge is.** However, 36% of the companies identified it as an insignificant risk, and 9% did not identify it as a risk at all.

Plastic pollution is seldom included in ESG challenges in determining managers' annual or multi-annual remuneration. Only one company, **Unilever*,** includes this challenge in its long-term variable remuneration plan.

> In accordance with the **Unilever's*** objectives, its managers' remuneration is indexed to a KPI that measures the increase of recycled material in packaging. Unilever* is one of the few companies with a long-term manager remuneration package that includes a sustainability progress index (SPI), and this has been the case since 2017. This index accounts for 25% of long-term remuneration. In 2021, the SPI included eight sustainability metrics, including recycling of plastic materials.

Most companies surveyed are members of local associations, foundations and initiatives that work on this issue. Six companies having a heavy impact on plastic pollution are proactive in discussing the issue and have joined more than 10 local initiatives or associations, such as the **Ellen McArthur Foundation,** partnerships with the **WWF,** the **Consumer Goods Forum,** and others. These associations and foundations are designed to encourage collaboration, and to allow the exchange of knowledge and access to information on the issues at hand. They also promote research through projects likely to have a significant impact. Joining these initiatives can contribute to combatting plastic pollution and help to better grasp and manage this scourge.

As for **raising awareness among their suppliers of sustainability challenges,** while most companies surveyed incorporate sustainability factors in their supplier policies, **few policies make explicit reference to plastic.** This, in spite of the fact that setting goals, establishing standards, enhancing operating processes and better steering resources towards research & development are essential for reducing suppliers' use of plastic.

We can nonetheless expect progress in the future. Companies with which we dialogued often mentioned the importance of involving the entire value chain, including upstream. They also stressed the importance of seeking out the critical mass that would make it possible, for example, to lower the prices of recycled plastic or to develop alternative solutions.

End-consumers are the last to use products and to dispose of waste. It is therefore essential to make them aware of the environmental pollution generated by plastic and to urge them to recycle plastic-containing products. With this in mind, **the companies with which we engaged focus their awareness campaigns on the recyclability of their product packaging in order to inform their end-consumers.** They make little mention of plastic's impact on our ecosystems. Some publicity campaigns have been launched, showing companies' efforts in collecting plastic and their sale of new recycled plastic products, for example.

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PepsiCo* has launched several awareness and public relations campaigns with its consumers at the local level. For example, it has begun education programmes in schools to inform young people on the issue of recycling. In Latin America, PepsiCo* has proposed an advertising campaign in partnership with National Geographic called "Planet Love", in order to educate and urge the public to contribute to a more sustainable world, beginning with the responsible use and disposal of plastic. PepsiCo* has also publicised the issue of plastic pollution during the Super Bowl, which is the championship game of American football and a heavily covered event.

MANAGEMENT SYSTEMS AND PLASTIC-REDUCTION INITIATIVES

Regarding management systems and initiatives for reducing the use of plastic, our survey assessed the companies' approaches on the basis of four types of objectives:

- **objectives of reduction,** centred on the company's efforts to reduce plastic use;
- **objectives of absolute reduction,** which are a stronger signal sent out by the company's management, with marked awareness and, perhaps, the determination to eliminate plastic altogether;
- **objectives of recyclability,** which show whether or not the company has planned to enhance the recyclability of plastic products sold; and
- **objectives recycled inputs for plastic,** that helps identify companies seeking to offer products with less virgin plastic and that include recycled plastic.

Of the 18 companies with which we spoke, 13 have pledged to reduce the quantity of plastic in their packaging, and most of them are focusing on single-use plastic. Although the companies generally identified plastic as a threat or a risk to their business, most of them have not taken the measures necessary for achieving these objectives. Only four of them have formulated a convincing absolute-reduction objective.

Most companies do not truly wish to do away with plastic completely on any particular timeline, citing the operating and financial impacts that a transition would entail and a lack of competitive alternatives at this stage. The ultimate elimination of plastic in product packaging is therefore a far-off objective, as the vast majority of companies do not wish to do away with plastic completely in their packaging.

Nestlé* pledges by 2025 to make 100% of its packaging recyclable or reusable. It bases this objective on three main pillars: doing away with non-recyclable plastics, encouraging the use of plastics having the best recycling rate, and eliminating or modifying complex combinations of packaging materials. The group also pledges to reduce its use of newly made plastic (i.e., virgin plastic) by one third by 2025. To date, 86.8% of packaging at Nestlé* is recyclable or reusable, and Nestlé has reduced its use of virgin plastic by 8.1% since 2018.

Twelve of the 18 companies with which we spoke prefer to set recyclability objectives and 13 have set objectives on the quantity of recycled plastic that they use. Hence, **the preferred avenue of action on plastic is circularity, as discussed in the examples below:**

Coca Cola* European Partners is one of the companies that are closest to its recyclability objective for all of its products, with a 98% rate. Only 2% now remains for meeting its 100% target by 2025.

Danone* wants to raise the quantity of recycled and bio-sourced plastics used in its packaging. It has announced that its ambition by 2025 is to have 25% of its plastic packaging based on recycled materials. Danone* says that it wants to achieve an average of 50% of recycled materials for all its water and drink bottles by 2025 and 100% for its Evian brand bottles.

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Objectives of recyclability and recycled inputs are important for achieving circularity of plastic, but we mustn't forget collection and sorting in completing the loop of plastic circularity.

With this in mind, **65% of issuers surveyed have taken actions that we believe are convincing or satisfactory for assisting in collection.** Most of these involve financing of local NGOs in developing countries to encourage the collection of plastic waste in ecosystems. Other initiatives consist in financing local governments or local and regional collection and recycling projects.

> **Unilever*** is trying to harmonise its plastic policy on a global basis and in particular in developing countries that have less of the infrastructure necessary for collecting and recycling plastic waste. Unilever wants to collect and recycle more products than it sells in volume terms.
>
> **Unilever*, PepsiCo*, P&G* and Coca-Cola*,** announced in 2021 that they would collectively invest a total of 100 million dollars to the Circulate Capital Ocean Fund – the world's first investment fund dedicated to plastic waste in oceans. The fund provides financing to start-ups and SMEs in waste management, recycling and the circular economy in India, Indonesia, Thailand, Vietnam and the Philippines.

Our discussions highlighted **the gap in collection infrastructures between developed countries and emerging market countries.** The companies surveyed focus their efforts on countries in which collection systems are still informal and where there is a high risk that plastics will be released into the natural environment.

Few companies are involved directly in the collection stage and even fewer in the sorting stage. Investors therefore have a role to play in steering their investments towards actors that best anticipate these challenges and are developing alternatives. Among the companies that are getting the jump on these challenges, we can cite the example of **Carbios*,** a green chemicals company that has developed a technology for using enzymes to separate PET polymers (plastic used in bottles and barquettes, etc.).

> **Nestlé Waters*, PepsiCo*** and **Michelin*** are partners of **Carbios*,** which is developing industrial processes for closing the lifecycle of plastics and textiles. In particular, a partnership since 2019 with Michelin* aims to develop a "100% sustainable tire" by 2025 based on used PET plastics.

PERFORMANCE METRICS AND FINDINGS

The first metric that we followed up on was the volume in tonnes of plastic used by each of the companies with which we engaged.

This metric helps estimate the market share of each company compared to global plastic production. Some companies calculate this metric and disclose it once per year, while others are beginning to measure it. Still others are unfamiliar with it or have decided not to disclose it.

We identified **three categories of companies by volume:**

- **the global beverage giants The Coca-Cola Company* and PepsiCo*,** which have annual volumes of 3 million tonnes and 2.4 million tonnes, respectively.
- **Major food, and household & personal care groups** such as **Nestlé*, Danone*, P&G*** and **Unilever*,** which have tonnages ranging from 1.3 million tonnes for Nestlé to 690,000 tonnes for Unilever.
- **other companies,** which have volumes below 500,000 tonnes. **Michelin*** is a special case, as if we add the volumes of natural rubber bought, the volumes involved are close to those of **Nestlé*.**

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Only one third of the companies have reduced their tonnage from one year to the next. On the basis of our discussions with them, we found that they had suffered from the Covid-19 impact in 2020, and that volumes had in some cases been pushed downwards (e.g., **Essity***), and in some cases, upwards (e.g., **Sodexo*** and **Nestlé***), depending on the context and business of the companies involved. Some companies told us of their difficulty in decorrelating growth in volumes of products sold with the volume of plastic used. This is the case of **Danone*, PepsiCo*** and **P&G*** in particular.

The second metric monitored was the introduction of a microplastics policy.

Based on our survey, **microplastics policies are either non-existent or have been less than convincing (94%). The vast majority of companies have not assessed the impact of microparticles of plastic generated by their activity.** Some companies learned of the issue of microplastic through their discussions with us, while those that are furthest along on this path were not very forthcoming. In general, issuers have focused their policies on macroplastics. This is no surprise, as NGO campaigns such as "Break Free from Plastic" deal with packaging collected and counted by major brands on beaches. We also found that **those companies that are the most heavily exposed to microplastics** on our engagement panel, whether in the textile or tire sectors, **are still trying to measure and test their products' exposure.**

> Among companies exposed to the issue of microplastics, **P&G*** has had a programme in place since 2017 to combat microplastics. P&G* has pledged to exit microbeads (smaller than 5 mm). Since 2019, cleaning and beauty products and toothpaste have contained no microbeads. P&G* makes a distinction between primary microplastics and secondary microplastics from grinding up of macroplastics. P&G* has done much research on reducing the release of microplastics during washing and when using detergents. Washing in cold water, for example, reduces the quantity of microfibres by 30%.

OPPORTUNITIES: TOWARDS A FUTURE WITHOUT VIRGIN PLASTIC?

Recycled plastic is not necessarily a long-term solution. Recycling of plastic entails the use of virgin plastic combined with recyclable plastic to obtain satisfactory quality. This point was mentioned several times by companies with which we engaged.

For agro-food companies, the presence of numerous chemical additives makes it impossible to ensure a satisfactory level of food security. In fact, in their choice of packaging materials, these companies depend on virgin plastic to ensure acceptable quality and to guarantee proper preservation of food. **Pending the development of satisfactory alternatives, the only acceptable solution to date is to lower the consumption of plastic.**

For this purpose, **some companies are shifting towards the use of packaging designed with conventional materials such as cartons, paper, glass or metal.** Materials' environmental impact depends on the type of segment in which the material is used, the geographical region where the material is analysed, packaging volume, and the recycling rate. When they contain other materials, plastic in particular, cartons generate a lower environmental impact than plastic (PET, HDPE and PP) and glass except for cartons of still water.

When including a material's impact on global warming, soil acidification, scarcity of natural resources, water consumption and cancerous toxicity, rPET (i.e., recycled PET) seems to be the best option, ahead of conventional PET, bottles made of returnable glass, and, ultimately, bottles made of non-returnable glass. Even so, glass draws objections for its weight and to the large amount of energy needed to produce and transport it.

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Another solution being considered is to market plastic-containing paper packaging. Some brands have developed bottles or cartons that include small quantities of plastic to guarantee a product's sealing qualities, these are hard to recycle. Moreover, more work must be done in selling larger-volume bottles, with 2-litre bottles being preferable to 33 cl bottles.

> **Danone*** sells larger-volume containers such as recyclable demijohns (25 litres), which can reduce plastic footprints. In 2022, Danone also began to experiment with mineral water in bulk with its Evian brand. The "Evian, like at the spring" pilot initiative consists in setting up drinking fountains supplied by 44-litre demijohns for three months from several partners, including **Sodexo*.** Danone believes that if this initiative becomes more widespread, that could reduce the quantity of plastic on the market by 25%.

Reusable packaging is another alternative adopted by a growing number of companies. This is commonly used in the logistics sector for moving goods on palettes or in tanks or containers. Reusable packaging can also be used in the retailing sector to transport household cleaning products or food, for example.

Some of these packaging materials are returnable: a deposit is left upon purchase and refunded when the packaging is returned. This helps to prevent consumable packaging and to reduce the total quantity of single-use plastic and, ultimately, to reduce quantities of plastic waste in landfills or incinerators or released into the environment. The deposit system is also a proactive way of preventing waste before it is created. Some companies reported to us the difficulties of setting up a deposit system, due to regional regulations, high entry tickets or consumer habits. **There are still many obstacles to setting up deposit systems.**

Lastly, **some packaging can be repaired or recycled.** Reusable packaging also helps reduce the carbon footprint and energy consumption of the petrochemical value chain.

> **Carrefour*** is taking part in a returnable packaging project alongside Loop, a start-up, in which its customers bring back the packaging of their favourite items to reuse them after cleaning and refilling. The group tested about 30 product references at several hypermarkets in 2021. Several brands, such as **Danone*,** and **Badoit*** and **Evian*** for bottled water, **Maison Verte*** for detergent, **Nutella*,** and **Puget*** olive oil, have played along by offering reusable packaging for their products.

> At **PepsiCo*,** returnable packaging may be compatible with soda machines sparkling waters like **SodaStream*,** in reducing the use of single-use plastic.

The vast majority of companies with which we engaged told us that turning consumers away from virgin plastic requires shifts in buying habits, as well as financial backing from governments, particularly via investments.

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Conclusion

Damage to ecosystems caused by plastic pollution is a major scourge that must be addressed holistically. Greater awareness in combatting this phenomenon is needed at all levels – among consumers, companies, and investors, as well as on the government and international levels.

Our economic models must be rethought; consumer behaviour must be altered; existing legislation must be strengthened; management and use of plastic in exposed sectors such as agro-food must be adjusted; the circularity of the lifecycle and management of waste must be rethought. Investors, for their part, must ensure that companies have included these challenges in their growth projections and have laid out credible plastic reduction trajectories for mitigating sustainability impacts and the related risks.

Reducing or eliminating plastic, regulatory shifts, R&D spending, changes in behaviours and in products, etc. **incur costs for companies,** costs that will inevitably have repercussions down the line on shareholder profits and consumer prices.

The engagement we conducted found that **the environmental impacts of the use of plastic are still not taken sufficiently into account by the companies with which we engaged.** Only a minority of them have committed to absolute reductions. Plastic recyclability is still an open issue, and only a drastic reduction in the use of plastic will help resolve this scourge.

Our discussions were a first step in reminding companies of the importance of the challenge of plastic pollution and in making them aware of these issues. Nevertheless, we have seen growing investor concern for them.

In managing OFI AM's portfolios, our engagement has allowed our ESG team to analyse issuers via a grid of metrics and, where called for, to adjust ESG ratings accordingly in the event of a divergence with the findings of our data provider. Since July 2022, four companies have been granted a bonus to their ratings on managing and recycling packaging. A malus was charged to three others. In addition, a downward adjustment was made to the ESG rating of all tiremakers, as tire abrasion is one of the main contributors to microplastic pollution.

Going forward, asset managers and investors should pay special attention to oil & gas companies and to makers of polymers derived from fossil fuels, which are the basis of plastic and have a big role to play in combatting this scourge. **Discussions are therefore in order with oil & gas companies on how well they are aligned with the Paris Agreements and on issues arising from their petrochemical investments, particularly regarding additional production capacity in polymers meant for the making of plastic.**

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