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INTEGRATION OF PLASTICS IMPACT EVALUATION INTO ESG ASSESSMENTS

Stocktaking and guidance for ESG data and insights providers

2021

FOREWORD

Plastic production is growing every year, reaching about 360 million tonnes in 2018.[1] With recycling rates of only 14%,[2] a lot of significant value is lost for the economy – US$80-120 billion from disposal of single-use plastics – and the large volumes that end up in nature cause social and environmental damage.[3] While the urgency for action has been recognized, trends such as increasing e-commerce and low fossil fuel prices drive further plastic consumption. In several applications, substitution is difficult and brings trade-offs – for example, around the shelf life of food and hygiene needs.

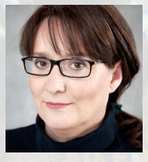
The COVID-19 pandemic has led to a steep increase in single-use items such as face masks and gowns, and fears around contamination have led to reversal of action to reduce plastics. The UK government, for example, suspended extra charges on single-use plastic bags,[4] and Tamil Nadu in India reversed its ban on single-use plastic bags.[5] Some corporate giants have even reversed policies that encourage reusable containers.[6] With these developments in mind, it is – now more than ever – important to focus action to tackle the plastic challenge.

Corporate action - or inaction - on plastic can come with significant business value or risk. This is connected to changing consumer preferences, modifications in production and operations, and regulations. A prominent example is the Sword Policy in China from 2017, which banned imports of foreign plastic waste, affecting waste streams around the world.

Plastics impact, therefore, is an important topic to consider in financial decisions. Incorporating the topic into decision-making requires both awareness and consistent, comparable information.

The report at hand is directed at ESG data and insights providers, corporates and financial institutions: all of these need to collaborate to advance from the current status quo. It provides the basis to understand the dual impact that plastic has – from a social and environmental as well as business value perspective. It details how plastics impact evaluation can be incorporated into ESG assessment and disclosure, and the specifics that need to be considered for different industries.

We hope you will find it contains valuable insights and guidance to support corporate action on plastics.



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CONTENTS

WHY THIS REPORT?

This guidance is directed at everybody who assesses companies on their environmental, social and governance (ESG)-related performance and is looking for input on how to integrate plastics into the evaluation criteria, for example:

- ESG data and insights providers
- Financial institutions, including investors
- Sustainability, investor relations or other team managers aiming to increase transparency on plastic usage and impact in their organization.

The guidance intends to inspire action by:

- Providing the basis to understand the dual impact that plastic has – from a social and environmental as well as business value perspective
- Highlighting required stakeholders and their current actions on plastic and plastic disclosure, calling out challenges and gaps
- Detailing how plastics impact evaluation can be incorporated into ESG assessment and which specifics need to be considered for different industries.

ANDREAS FEINER
CEO of Arabesque S-Ray GmbH

"Global awareness around plastics challenges has grown dramatically over recent years. Research suggests that we can reduce plastic pollution by 78% by 2040 if feasible interventions are implemented. The financial sector has the opportunity to drive this necessary change through the proper incorporation of plastic-related data into investment decisions. Key challenges including a lack of quality plastics data from corporates and the absence of mandatory, standardized indicators need to be overcome. This invaluable report shines light onto the current level of plastics impact evaluation across the marketplace, and the opportunities we must capture to ensure greater integration of plastics information into financial and investment decision-making."

KRISTINA RÜTER
Global Head of ESG Methodology, ISS ESG

"There are no widely recognized standards for corporate disclosure on plastics, presenting a challenge to both investors and ESG research providers in gathering dispersed information and generating meaningful assessments. ISS ESG pioneered plastics-related performance assessments that reflect sector-specific risks and opportunities. An innovative example is the Solactive ISS ESG Beyond Plastic Waste Index, which leverages our research on companies' ability to facilitate the transformation to a sustainable and circular plastic economy. As investors increasingly seek data and solutions to de-risk their portfolios and capitalize on the transformation of the plastics value chain, we are excited about WWF's initiative and look forward to seeing an acceleration in disclosure and innovation in this space."

LOTTE GRIEK
Head of Corporate Sustainability Assessment, S&P Global

"In recent years, plastic waste has emerged globally as a material issue for many industries. Our updates to the 2020 Corporate Sustainability Assessment methodology reflect this, and will enable us to identify companies that are taking a responsible and well-balanced approach towards plastic packaging waste reduction, while contributing to greater availability of data on this topic."

IN BRIEF

Lightweight, low-cost and durable, plastic is one of the most widely used industrial and household materials. But over recent years, the environmental and societal challenges connected to plastics have become more prominent. In 2019 fossil-based plastics emitted 860 million tonnes of CO_2 throughout their life cycle – equivalent to the annual emissions from 200 coal-fired power stations.[7]

Stakeholder awareness and action towards the better management of plastics has been increasing. As risks and opportunities connected to plastics management and mitigation or substitution translate into short- and longer-term business value, the topic is also becoming increasingly interesting for investors and other players in the financial services sector. This report aims to give a comprehensive view of how plastic impact evaluation is currently considered in the sustainable finance landscape, and provide guidance on how it can be integrated going forward.

Overall, the study defines three groups of actors that form the sustainable finance landscape: **financial institutions, companies, and ESG data and insights (D&I) providers**. Their current actions show the shift in perspective and momentum towards considering material sustainability topics, such as plastics:

- **Financial institutions** (e.g. investors, banking institutions, asset managers) are recognizing the financial implications of ESG factors and reward businesses that proactively cover ESG-related risks by e.g. providing beneficial financing conditions.
- **Companies** are reacting to cues from financial institutions and investors and are working towards improving performance on ESG-related metrics.
- **ESG D&I providers** are bridging the information gap between financial institutions and companies, increasing transparency.

860 MILLION TONNES

CO_2 EMISSIONS FROM FOSSIL-BASED PLASTICS IN 2019

ESG D&I providers offer four main services that can support sustainable investment decisions:

- **Data aggregators** provide raw data compiled from company reports and other sources of inputs required for investment decisions or ratings.
- **Analytics providers** run analytics and models on ESG data to help other firms and/or their own company to take investment decisions.
- **Ratings providers** score companies on a scale according to their individual methodologies and evaluation criteria.
- **Indices providers** companies using their own or other ratings.

While some firms offer services in one of these areas, others provide integrated offerings drawing on several of these services.

Besides the three main groups of actors, further stakeholders influence and shape the sustainable finance landscape. Potential **influencers** are **regulatory bodies, standard-setting bodies** (e.g. the Global Reporting Initiative (GRI)), **networks** (e.g. Plastic Solutions Investors Alliance), **employees, customers, NGOs** (national and international) and **industry associations**.

An important group of influencers promoting sustainability are **regulatory bodies,** who often help to scale action. A driver in recent years was the European Commission with the Action Plan for Financing Sustainable Growth. With the development of a taxonomy that provides a classification system for climate-related activities, the EU pushes for more standardization in disclosure and transparency. Criteria for activities contributing to transitioning to a circular economy – which includes addressing (plastic) waste – are currently under development.[8] Another example of a strong regulatory push is the "Guidelines for Establishing the Green Financial System" in China. This includes a three-step strategy in which all listed companies are required to disclose their environmental information as of 2020.[9]

With mandatory, standardized reporting and full transparency being promoted but not yet globally available, ESG D&I providers have played and will in the mid-term continue to play an important role in promoting more sustainable finance decisions and corporate action. In the longer term, with increased mandatory, standardized disclosure, the value proposition for ESG D&I providers might shift more towards providing insights and consultancy rather than pure data. Nevertheless, their role in the transition to a more sustainable financial system will be important.

With inputs from interviews with six ESG D&I providers and three financial institutions, we discuss the current level of inclusion of plastic impact assessment in evaluation criteria of ESG D&I providers and the connected opportunities, and translate this into concrete recommendations. The insights from the interviews are encouraging, as all ESG D&I providers interviewed recognize the material financial impact connected to plastics, perceive initial interest by investors, and are already either including or working towards including plastics impact evaluation in their frameworks.

In this report, we answer three guiding questions to support ESG D&I providers on their journey towards standardized disclosure on plastics. Each question is supported with actionable guidance material, e.g. a list of 15 indicator categories. The report can also help financial institutions and companies engaging in the plastics value chain when building internal assessment or reporting frameworks.

Question #1: How should the materiality of plastics be assessed for different industries?

Determine for which industries plastic-related disclosure and inclusion in ESG assessment is relevant based on their position in the plastics value chain and relevant risks and opportunities.

RECOMMENDATION 1.1:

Categorize companies into three industry groups – plastic manufacturers, plastic users and plastic waste managers – when assessing relevant sectors for plastics impact evaluation. Assess the sub-industries (specifically of plastic users) according to the type of plastics dealt with, plastic intensity in the product and/or process and the lifespan of the plastic considered.

RECOMMENDATION 1.2:

Identify the plastic-related risks and opportunities faced by the company on the basis of its position in the plastics value chain, while being cognizant of the variations across different sub-industries.

Question #2: How should indicators be designed to evaluate corporate action on plastics and its impact?

Develop a set of indicators that make corporate action on plastics management transparent and correctly capture the company's strategy on addressing the challenge.

RECOMMENDATION 2.1:

Design indicators that assess the companies on their performance on current plastic action and preparedness for transitioning into more action; check for possible loopholes in the indicators.

RECOMMENDATION 2.2:

Prioritize the indicators as per outcome priorities and avoid including a long list of indicators that will not realistically be reported on.

Question #3: How can plastics impact evaluation be integrated into an existing ESG assessment approach?

Update the methodology as per the new/modified indicators and align data collection processes.

RECOMMENDATION 3.1:

Modify the analysis framework reflecting on how directly indicators should link to plastics, which reporting category they should be included in, and what weight in scoring they should have.

RECOMMENDATION 3.2:

Update the data collection process based on ability to source data manually or automatically and expected data sources.

To achieve the goal of reducing the negative impact of plastics, companies, financial institutions and ESG D&I providers need to collaborate. Companies need to develop clear roadmaps and ambitions on how to tackle the challenge. This will allow them to reduce risks and identify new opportunities. Financial institutions need to more closely assess the materiality of plastics and invest in businesses that manage plastics-related risks well. By connecting the perspective of environmental and social impact with financial value from risks and opportunities, ESG D&I providers can promote action among stakeholders attracted primarily by business value creation. They can engage with the disclosing companies to support them to effectively communicate the value of their action. They can also support the investor community by highlighting the financial materiality of plastics and advise how to engage on it with portfolio companies.

Finally, regulatory bodies, as influencers, will have a key role by providing an overarching framework. Besides the regional progress in regulations related to ESG disclosure, a global harmonization of metrics, e.g. based on a global treaty, would increase transparency and facilitate and promote more targeted decisions and actions to solve the plastic challenge.

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CHAPTER 1: THE DOUBLE MATERIALITY OF PLASTICS

THE DOUBLE MATERIALITY OF PLASTICS

Due to the environmental and societal challenges that come with plastics, stakeholder awareness and action towards better management has been increasing. Various approaches exist to tackle the challenges, which often come with trade-offs. The implications of plastics management for short and longer-term business value make the topic increasingly important for investors and other players in financial services.

Plastic has a unique value proposition but comes with environmental and societal challenges

Plastic has become a ubiquitous part of our daily lives. It is a durable, lightweight, low-cost material whose flexible characteristics make it suitable for many different applications. Besides its advantages, it has one key property which can also make it particularly problematic: a degradation time which normally takes several hundred years.[10] With about 360 million tonnes of plastics being manufactured globally (in 2018)[11] and recycling rates of only 14%[12], the material has permeated our physical environment. Every year, about 8 million tonnes end up in the sea.[13] Leaked plastic is entering the marine food chain through species consuming plastic waste, especially microplastics (i.e. very small fragments of plastic), that pollutes the environment during the use-phase or end-of-life of products. The effect of microplastic on human health is not yet fully understood, but using the precautionary principle, the release of microplastics into the environment should be prevented.[14] Furthermore, the plastics life cycle is a large contributor to climate change. In 2019 the production, management and incineration of fossil-based plastics added 860 million tonnes of CO2 to the atmosphere – equivalent to the emissions from 200 coal-fired power stations. By 2050 the carbon footprint of plastics is expected to triple in size.[15]

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Various approaches exist to tackle the challenges, which often come with trade-offs

Action to reduce plastics impact can be classified into i) eliminate, ii) innovate, and iii) circulate,[16] but it often comes with economic and environmental trade-offs. For instance, replacing single-use plastics with reusable alternatives is estimated to be up to five times more expensive in some applications.[17] On the environmental front, plastics produced from bio-based instead of fossil feedstocks can increase environmental pollution (eutrophication) from fertilizer use and compete with food production.[18] Even the reduction of plastic volume (i.e. weight) can come with unintended negative consequences, e.g. using lightweight plastics such as expanded polystyrene (EPS) makes recycling more difficult and expensive. The complexity of the challenge makes it difficult to develop generalized mitigation strategies, so careful and context-specific assessments are often required.

Stakeholder awareness and action around plastics-related challenges have increased

The pressure to do something to eliminate plastic pollution has led to increased campaigning activity and action from different stakeholders. More than 60 countries have introduced bans, taxes and targets to regulate the use and disposal of plastics.[19] Many stakeholders around the world are calling for a global agreement on plastic pollution through national and international structures. One first step was the amendment of the Basel Convention in 2019, which now includes plastic-waste-related trade and transparency requirements in a legally binding framework.

Effort is also put into supporting innovation in this space. As an example of public funding, the European research programme Horizon 2020 allocated about €100 million to projects related to plastic strategies between 2018 and 2020.[20] There is also significant private investment: the Alliance to End Plastic Waste (AEPW), consisting of more than 45 major global companies, committed over US$1 billion with the goal of investing US$1.5 billion by 2024 on solutions to prevent leakage as well as recover and create value from plastic waste.[21]

Several further initiatives promote knowledge creation and action: the Ellen MacArthur Foundation (EMF), in collaboration with the United Nations Environment Programme (UNEP), established the "Global Commitment" promoting a circular plastic economy that today counts 400 signatories including companies representing 20% of all plastic packaging produced globally.[22] WWF has set a vision of "No Plastic in Nature by 2030" that aims to reduce plastic pollution through improving the global governance framework and accelerating the transition to circularity. The focus for this is on material and product redesign, consumer behaviour and circular waste management.[23] The corporate activation hub ReSource: Plastic aims to take business from commitment to action, e.g. through jointly developed tools such as a standardized footprint tracking and reporting mechanism.[24]

A recent study by a non-profit foundation ranked corporates on plastic packaging pollution and measured the progress of 50 large consumer goods companies. It revealed that nearly half of the surveyed companies pledged to make all packaging recyclable by 2025. Many of those commitments are still too new to determine which advances have been achieved to date.[25] Overall, 32% of global plastic waste is mismanaged today.[26] The accountability for this issue and the connected exposure to risks and opportunities varies among industry sectors.

The implications of plastics management for business value cause the "double materiality" of plastics and make the topic increasingly important for investors

The financial risks and opportunities arising from plastic action and inaction can be substantial. This is what creates the double materiality of plastics for companies, i.e. makes it a sustainability issue that affects not just the environment and society but also the companies' own finances. For example, 95% of the value of plastic packaging is lost after its initial use, which translates to an annual loss of US$80-120 billion.[27] On the opportunity side, recycling waste from the market can either have a positive or neutral cost impact. In Europe, for instance, waste prevention and reuse, with better eco-design, could bring net savings to businesses of up to €600 billion and boost gross domestic product (GDP) by 1%.[28]

In recent years, a considerable amount of investor action related to plastics and the circular economy indicates a growing interest in the issue of plastics pollution. Morgan Stanley, for instance, committed to the "prevention, reduction and removal of 50 million metric tonnes of plastic waste" from landfills and the environment by 2030.[29] The Plastic Solutions Investors Alliance has concentrated its engagement on leading consumer goods companies and has 40 investors as signatories including Aviva, Axa and Hermes.[30] Besides that, 26 financial institutions with US$4.2 trillion of assets under management have so far endorsed the EMF's New Plastics Economy initiative.[31]

This report reviews the current level of inclusion of plastics-related criteria in evaluations by ESG D&I providers, and offers guidance on integrating plastic impact assessment into ESG ratings

The guidance in this report aims to support ESG D&I providers to further develop their capabilities to include plastic in their assessment methodologies. It is also meant for all other stakeholders that aim to increase transparency on corporate plastics impact and get insights on its relevance and the current status of disclosure and evaluation.

To assess the current integration of plastics in ESG assessment, we looked at the public documentation of 14 ESG D&I providers. Furthermore, we conducted nine interviews with six ESG D&I providers and three financial institutions in May and June 2020 to capture their views.

The remainder of the report is structured as follows: Chapter 2 describes the role of ESG D&I providers in the sustainable finance landscape and highlights the increasing demand for ESG data. Chapter 3 elaborates on the current level of integration of plastics in ESG data. Chapter 4 offers industry-specific guidance for integrating plastic impact assessments into ESG rating and what indicator categories can be developed. Finally, Chapter 5 outlines an engagement plan which summarizes how ESG D&I providers will be approached in order to implement the suggested concepts.

CHAPTER 2:

SUSTAINABLE FINANCE AND THE ROLE OF ESG ASSESSMENTS

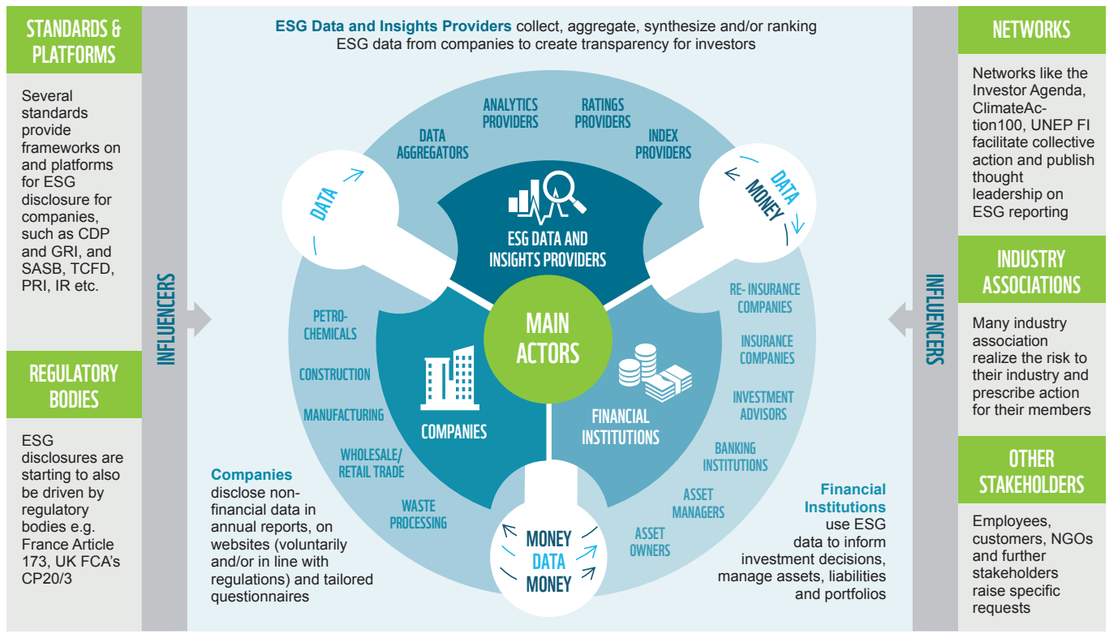
SUSTAINABLE FINANCE AND THE ROLE OF ESG ASSESSMENTS

Three main actors in the sustainable finance landscape – financial institutions, companies and ESG D&I providers – are evolving their approaches on material sustainability topics. Influencer groups such as regulatory bodies and standard-setting bodies also have a crucial role to play in providing guidance on ESG-related disclosures. The evaluation of ESG impact by ESG D&I providers has been effective in strengthening action towards sustainability and will be an important lever to address the plastics challenge as well.

The shift in perspective and momentum towards considering material sustainability topics is visible in the action of the three main actors in the sustainable finance landscape.

Sustainable investing typically involves three main actors: financial institutions, companies and ESG D&I providers. These actors are connected through data and/or financial flows and are contributing towards embedding sustainability within the financial markets.

Figure 1: Overview of ESG landscape



ESG: environmental, social and governance, GRI: Global Reporting Initiative, SASB: Sustainability Accounting Standards Board, TCFD: Task Force on Climate-related Financial Disclosures, PRI: Principles for Responsible Investment, formerly CDP: Carbon Disclosure Project, UNEP FI: UNEP Finance Initiative. Source: Accenture Strategy Research

Financial institutions are recognizing the financial implications of ESG factors and reward businesses that proactively cover for ESG-related risks.

There is an increased understanding and growing consensus among investors on the correlation between companies' performance against ESG issues and their overall financial performance. Analysis has shown that US companies with high ESG rankings in S&P500 Index have outperformed their peers that had low ESG rankings by at least 3% consistently for the last five years.[32] Another study that looked at the share price of global companies (valued at over US$500 million) concluded that companies that had strong ESG strategies and policies in place outperformed their peers in the stock markets in the wake of the COVID-19 pandemic.[33] Increased investor interest in sustainability also showed in the 2019 United Nations Global Compact-Accenture Strategy Chief Executive Officer (CEO) Study on Sustainability, that had participation from more than 1,000 top executives across 21 industries and 99 countries. In this study, CEOs citing "lack of recognition from investors" as a barrier towards adopting sustainable business practices dropped from 34% in 2010 to only 13% in 2019.[34]

Companies are reacting to cues from investors and are working towards improving their performance on ESG-related metrics.

More and more companies are recognizing the value of integrating sustainability into their business strategies and invest accordingly to future-proof their business. In 2016, 90% of CEOs said they were personally committed to ensuring that their companies lead on the sustainable development agenda.[35] In doing so, there is a huge market opportunity. According to a study by the World Bank, businesses stand to gain at least US$12 trillion a year in market opportunities by adopting sustainable practices, which outweighs the required US$7 trillion annual investment.[36] This is already supported by evidence from performance reports by leading companies; for example, Unilever stated that in 2018, its Sustainable Living Brands grew 69% faster than its other businesses.[37]

ESG D&I providers are currently playing a key role in bridging the information gap between financial institutions and companies.

ESG D&I providers offer four main services that form the bedrock of sustainable investment decisions. Providers differ in the range of services they cover; while some firms offer niche services in one of the areas, others have integrated offerings of several services.

- **Data aggregators** provide raw data compiled from company reports and other sources of inputs required for investment decisions or ratings.
- **Analytics providers** run analytics and models on ESG data to help other firms and/or their own company to take investment decisions.
- **Ratings providers** score companies on a scale according to their individual methodologies and evaluation criteria.
- **Indices providers** develop a leaderboard or ranking of companies using their own ratings or another company's ratings.

To provide these services, ESG D&I providers mostly rely on public sources for inputs such as companies' annual reports, corporate social responsibility (CSR) or sustainability reports, websites etc. Some providers also reach out to companies for data that is not published, through surveys, questionnaires and interviews. While manual data collection and analysis is a big part of the process, ESG D&I providers also use automation tools in varying degrees.

Currently, there are more than 135 providers of ESG data and insights with over 50,000 companies as clients.[38] The industry landscape is rapidly changing with a series of mergers and acquisitions happening over the last 10 years. The bigger players that initially provided only mainstream financial data are gaining ESG capabilities by acquiring niche players and the industry is moving towards consolidation.

Different influencers are playing a significant role in shaping the sustainable finance landscape.

Stakeholders such as standard-setting bodies (like the Global Reporting Initiative (GRI) and CDP (formerly the Carbon Disclosure Project)), networks (like Investor Agenda), employees, customers, NGOs (national and international) and industry associations play a huge role in influencing the landscape.

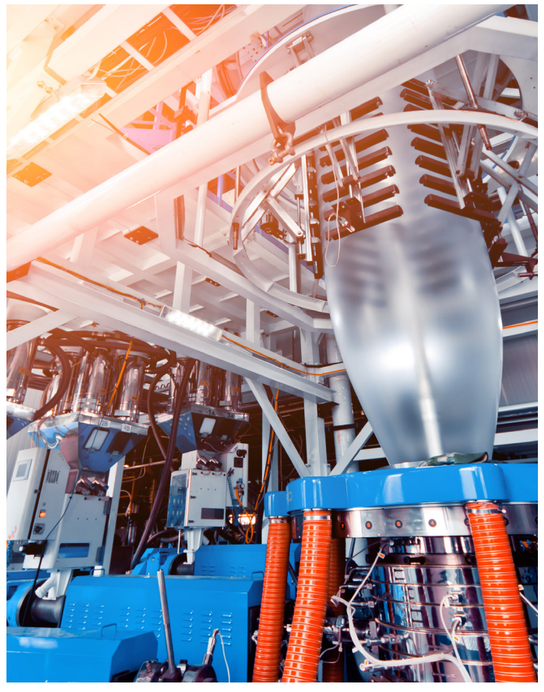
Particularly important influencers to call out are **standard-setting bodies** such as the Sustainability Accounting Standards Board (SASB) Foundation and GRI who provide very detailed guidance for corporates on how to disclose non-financial information. While SASB focuses on sustainability-related risks and opportunities affecting a company's financial condition, GRI analyses at positive and negative contributions of a company towards sustainable development. Recently (in July 2020) the institutions announced a collaboration to support companies to use the standards concurrently.[39] GRI and SASB are commonly used for other ESG disclosures and also provide some guidance on plastics impact disclosure. Besides these standards, there are further initiatives from e.g. the World Economic Forum and UN advocating on plastics-related action as well as

disclosure, while also facilitating dialogue among different stakeholders. A summary of indicators suggested by SASB and GRI as well as consideration of plastic in multi stakeholder initiatives is included in Appendix I (Table 2: Plastic-related indicators of common reporting standards).

Other influencers promoting sustainability are **regulatory bodies,** who often help to scale action. A driver in recent years was the European Commission and its Action Plan for Financing Sustainable Growth. With the development of a taxonomy that provides a classification system for climate related activities, the EU pushes for more standardization in disclosure and transparency. Criteria for activities contributing to transitioning to a circular economy – which includes addressing plastic waste – are currently under development.[40]

Another example of a strong regulatory push was the "Guidelines for Establishing the Green Financial System" in China in 2016. Under these guidelines, the central and local governments have launched policies promoting the development of responsible investment.[41] According to the three-step strategy all listed companies are required to disclose their environmental information from the year 2020 onwards.[42] While this clarifies the obligations of listed companies and provides a high-level disclosing structure, a detailed framework of indicators is not available.[43]

In the US, the Investment Advisory Committee of the Securities and Exchange Commission (SEC) recently advised the SEC to have specific policies on ESG-related disclosures.[44]



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Currently the SEC requires businesses to disclose on topics that are considered "material", which gives issuers the leeway to define what they want to disclose on. To date, the SEC has not provided ESG-specific legally mandated guidelines. Though the SEC is slowly updating its legislation around business disclosure requirements, it is still lagging behind European advances.[45]

These regulations will influence the future set-up of the sustainable finance landscape. With mandatory, standardized reporting and full transparency being promoted but not yet globally available, ESG D&I providers have played and will in the mid-term continue to play an important role in promoting more sustainable finance decisions and corporate action. The value proposition from ESG D&I providers might shift more towards providing insights and consultancy rather than pure data in the longer term. Technology developments such as advanced data mining and analytics or a common disclosure platform or protocol could further promote this trend. Either way, their role in transforming the financial system into a more sustainable one will be important.

Financial markets are increasingly taking notice of sustainable businesses and sustainability related factors affecting businesses.

In January 2019, the number of total assets invested in ESG exchange-traded funds (ETFs) and exchange-traded products (ETPs) listed globally rose by 9.97% from the previous year.[46] There has also been a surge in the number of "conventional" or "mainstream" funds and assets that are now considering ESG factors in their assessment criteria. The value of assets under management that consider ESG factors increased from less than US$50 billion in 2016 to more than US$900 billion in 2019.[47]

ESG data is no longer an exception when it comes to investment decisions. Institutional investors are increasingly turning to ESG D&I providers to evaluate a company's ESG performance. Institutional assets worth US$3 trillion now track ESG scores when making financial decisions.[48] Looking at the specialized ESG D&I market, the estimated size was US$617 million in 2019,[49] which is expected to grow by 20% annually.[50]

THE VALUE OF ASSETS UNDER MANAGEMENT THAT CONSIDERS ESG FACTORS INCREASED FROM LESS THAN

US$50 BILLION

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IN 2019

Many financial institutions are building internal capabilities on ESG assessments. For example, a study from the Asset Management Association of China found that 38% of the asset management institutions that participated in the study (72% were private equity fund managers and 15% were public offerings of fund companies) have developed indicator systems for green investments, 35% have established a green investment database, and 29% have established a green investment due diligence standard.[51]

This interest is supported by standards and guidance on how to incorporate ESG topics into businesses and investment practices. International frameworks have laid out detailed metrics for ESG-related performance, encouraging businesses to align with them. The United Nations Global Compact (UNGC) has more than 12,000 corporate signatories,[52] GRI has over 23,000 reports recorded in its database,[53] CDP has more than 8,400 companies disclosing to it[54] and the UN Principles for Responsible Investment (PRI) have close to 2,250 signatories.[55] These developments show how the interest in and importance of ESG data has increased over the last few years.

While some factors advance the offerings of ESG D&I providers, there are also challenges.

ESG reporting is maturing as data availability in companies increases, and ESG D&I providers are improving their ability to collect and analyse that data with technology solutions. For instance, Arabesque S-Ray tracks more than 7,000 of the largest corporations globally and assesses over 200 ESG metrics scanning over 50,000 news sources to assess companies' performance on non-financial indicators.[56] Morgan Stanley Capital International (MSCI) also claims to leverage artificial intelligence and alternative data to provide dynamic investment-related insights.[57]

However, despite the progress on ESG reporting, there are challenges with the ESG data. With changing trends and financial materiality of indicators, methodologies are being updated regularly leading to a reduced continuity. This challenge, as well as the absence of a standard reporting scheme on materiality and measurement, leads to further discrepancies across ratings. While conventional credit ratings have >90% correlation between the different providers, in the case of ESG ratings this is much lower, and sometimes contradictory.[58] Moreover, the limited quantity and quality of data disclosed by the companies makes it very challenging to provide consistent ESG data and insights. Accordingly, ESG D&I providers are not able to fully capture the positive or negative social and environmental impact of corporate action. Furthermore, the disclosed ESG data often only tracks the company's performance with backward-looking data and does not fully incorporate future commitments and policies. As financial investment decisions are based on expectations regarding future performance, this is a material gap to address.

Evaluation of ESG impact by ESG D&I providers has been effective in strengthening companies' sustainability actions and can help address the plastics challenge as well.

After investors started demanding data on non-financial parameters and ESG D&I providers initiated a wave of competition among peers on that front, the number of ESG factors that companies disclose on and the number of companies disclosing have increased. An example is reporting on carbon emissions. In 2002, CDP had only 35 investors requesting climate information and 245 companies disclosing on it. Today more than 8,400 companies disclose information through CDP, at the request of more than 515 investors.[59] This transparency and interest in performance is triggering action. Today, more than 1,000 companies are taking science-based climate action, compared to only 34 in 2015.[60] Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered "science-based" if they are in line with what the latest climate science says is necessary to limit global warming to well below 2°C, targeting 1.5°C.

More transparency on plastic can have a similar impact on corporate commitment and action in the future. Some new products and services to promote corporate action on plastics are already emerging, such as the Solactive Beyond Plastics Waste Index, which tracks companies that exhibit a significant commitment to action on the plastics challenge.[61] Similarly, S&P Global recently released the key sustainability factors for ESG evaluations of consumer goods. This gives a 40% weightage to waste and pollution, within which plastic is highlighted, looking at the share of packaging material recycled, reused and recovered and the share of recycled materials used.[62]

IN 2002, CDP HAD ONLY

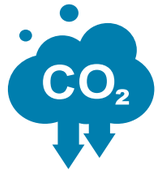
35 INVESTORS

REQUESTING CLIMATE INFORMATION

TODAY MORE THAN

8,400 COMPANIES

DISCLOSE INFORMATION THROUGH CDP



TODAY MORE THAN

1,000 COMPANIES

ARE TAKING SCIENCE-BASED CLIMATE ACTION

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CHAPTER 3:
CURRENT LEVEL OF ACTIVITY FROM ESG DATA AND INSIGHTS PROVIDERS AROUND PLASTICS

CURRENT LEVEL OF ACTIVITY FROM ESG DATA AND INSIGHTS PROVIDERS AROUND PLASTICS

Due to the environmental and societal challenges that come with plastics, stakeholder awareness and action towards better management has been increasing. Various approaches exist to tackle the challenges, which often come with trade-offs. The implications of plastics management for short- and longer-term business value make the topic increasingly important for investors and other players in financial services.

ESG D&I providers see the material financial impact connected to plastics.

Interviews with six international ESG D&I providers showed that they all perceive plastics as a material topic. The definition of materiality is based on a stakeholder approach and considers how companies impact stakeholders and vice versa. To be considered relevant for any rating, the topic must be financially material, i.e. translate into an impact on a company's bottom line. With the risks and opportunities connected to plastics, ESG D&I providers see these criteria as being fulfilled. Five out of the six ESG D&I providers interviewed believed there are both risks and opportunities for companies emerging from the plastics challenge.

The most pressing business risks were considered to be the impact on companies' reputations and the potential impacts of new regulations. The most pertinent opportunity is seen to be emerging from innovations in products, processes and business models.

Most of the interviewees highlighted a need to differentiate the materiality between sectors. A representative from one financial institution stated: "The critical industries need to be identified and asked to disclose with comparable numbers. We should not force companies to disclose on plastics, when it is not critical."

ESG D&I providers include aspects of plastics impact evaluation in their rating criteria.

Rating methodologies are continuously updated in line with trends and emerging topics. The interviews revealed that the introduction of new topics is connected to three things: 1) importance from an environmental, social or governance perspective; 2) potential impact on the bottom line of companies; and 3) the level of current corporate reporting and disclosure, especially for providers drawing on public sources and automated data gathering. Every update in their methodologies is assessed from a cost-benefit perspective. The transparency of plastics inclusion in ratings by ESG D&I providers is rather low. Reviewing the publicly available information of 14 providers only showed inclusion by three. Five of the six D&I providers interviewed already included KPIs related to plastics in their assessments, and the sixth stated that it was working on doing so. These KPIs used were mostly around packaging, waste, recycled content, end-of-life programmes and eco-design of products.

> *"Investors care about and want to see disclosure on the plastics components that are most material for companies and from the companies that will potentially face the most significant cost related to their pollution activities."*
>
> **Dr. Barnabas Acs**, Director of Sales Strategy & Execution, Investment & Advisory, ESG, Refinitiv

All interviewed D&I providers stated that the indicators are integrated into existing themes such as waste management or packaging rather than being called out as a separate category.

As there is no standard measurement method to assess the exposure to plastics-related challenges, they have all developed their own methodologies and indicators with guidance from frameworks such as those of SASB and GRI (Appendix I: Table 2). The interviewees stressed that these standards are an important source of information in the development of indicators. Four out of six ESG D&I providers stated that they apply industry-specific assessment rules to account for the varying exposure that different sectors face.

> *"Our ratings are very sector-specific because materiality varies across sectors. To adequately assess risks and opportunities, we also need sector-specific indicators on plastic."*
>
> **Ronja Wöstheinrich**, Senior Associate, ESG Methodology, ISS ESG

> *"On the regulatory risks and opportunities side we also have to look at the geographical aspect as regulations vary between different states."*
>
> **Beth Burks**, Director, Sustainable Finance, S&P Global

The scope of the indicators also varies between the ESG D&I providers. Two of them indicated that they only have performance indicators for plastics capturing the actual current performance. One focuses mainly on transition indicators that assess future commitments and policies, and the remaining two capture both perspectives.

ESG D&I providers face challenges and barriers to including plastics impact evaluation in their methodologies.

The main challenges for ESG D&I providers are the lack of standardization in reporting metrics and the lack of disclosure of comparable metrics by companies. Providers strive for consistent assessments in order to benchmark performance, which non-comparable and missing data points impede. "There are many distinctive methodologies around plastics out there because a standard way of reporting and indicators have yet to be agreed," stated a representative from one financial institution we interviewed. Several providers engage in networks to work towards common metrics, such as EMF, GRI, SASB, the World Business Council for Sustainable Development (WBCSD), and the Future of Sustainable Data Alliance (FoSDA). Providers highlighted that some of the complexities they face with this task are the trade-offs in solutions, the relevance of different indicators for actors along the value chain and the relevance of local contexts for impact assessments (e.g. with regard to available waste management infrastructure).

The challenge around data availability elicited differing views from ESG D&I providers. While some providers believe the challenge stems from a lack of reporting capabilities within disclosing companies, others perceived this issue as a lack of willingness from companies to disclose on this uncomfortable topic:

> *"We have seen a lot of companies that are very enthusiastic about reporting on plastics; however, many of them are still working hard towards measuring these KPIs in a meaningful way."*
>
> *"Based on in-depth engagement with corporates, we see that a wealth of data across different environmental and social metrics is being collected by companies which is not yet available in their reporting."*
>
> **Lotte Griek**, Director, Head of Corporate Sustainability Assessments, S&P Global

Further reasons given by ESG D&I providers to explain the low quantity and quality of data were limited external pressure to report and a lack of understanding and technical ability to measure impact as a result of limited guidance in sharing best practices or common standards.

ESG D&I providers also understand that it is challenging for companies to quantify the rather indirect impact of plastics. It is difficult for them to track their products and see whether they are ending up in the ocean or if the recyclable products are actually being recycled.

Another challenge identified is the slow increase in demand from investors despite the growing interest in the issue. The key reason for this is that the financial implications are not yet well described, and awareness is still low.

Figure 2: Overview of challenges mentioned by interviewed ESG D&I providers

WHAT ARE THE BARRIERS TO MAKING FURTHER PROGRESS ON INCLUSION OF PLASTICS-RELATED INDICATORS?

Limited disclosure from companies (amount and quality of data; number of companies) due to lack of understanding and technical ability to measure and report.

> *"As companies are currently not reporting on plastics, data is our main challenge"*
>
> **Roan DuFeu**, Research Associate, Arabesque

Limitations in comparability due to lack of standardized and accepted list of indicators.

> *"We are not a standard setter and only assess topics that companies are pressured to report on"*
>
> **Elena Philipova**, Global Head of ESG Position, Refinitiv

Slow increase in demand from investors because material implications of plastic impact are not yet established completely.

> *"If only one or two clients demand something we would not act on it"*
>
> Consumer goods research analyst

Number of mentions; n=6

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CHAPTER 4:
GUIDANCE FOR INTEGRATING PLASTICS IMPACT EVALUATION IN ESG ASSESSMENTS

GUIDANCE FOR INTEGRATING PLASTICS IMPACT EVALUATION IN ESG ASSESSMENTS

Three foundational questions need to be answered when integrating plastics impact evaluation in assessment frameworks. This chapter provides guidance on how to assess the materiality of plastic, define specific indicators and integrate this into the assessment approach.

While some ESG D&I providers are incorporating plastics impact evaluation into their analyses, other stakeholders do not yet do so. To support ESG D&I providers as well as other actors in the sustainable finance landscape, this section provides guidance on how to address plastics impact in non-financial disclosure. Three key questions need to be answered to develop a framework for inclusion of plastics impact evaluation:

Question #1: How should the materiality of plastics be assessed for different industries?

Determine for which industries plastic-related disclosure and inclusion in ESG rating is relevant based on connection to the plastics value chain and risks and opportunities.

Question #2: How should indicators be designed to evaluate corporate action on plastics and its impact?

Develop a set of indicators that make corporate action on plastics management transparent and correctly capture the company's strategy on addressing the challenge.

Question #3: How can plastics impact evaluation be integrated into an existing ESG assessment approach?

Update the methodology as per the new/modified indicators and align data collection processes.

Question#1: How should the materiality of plastics be assessed for different industries?

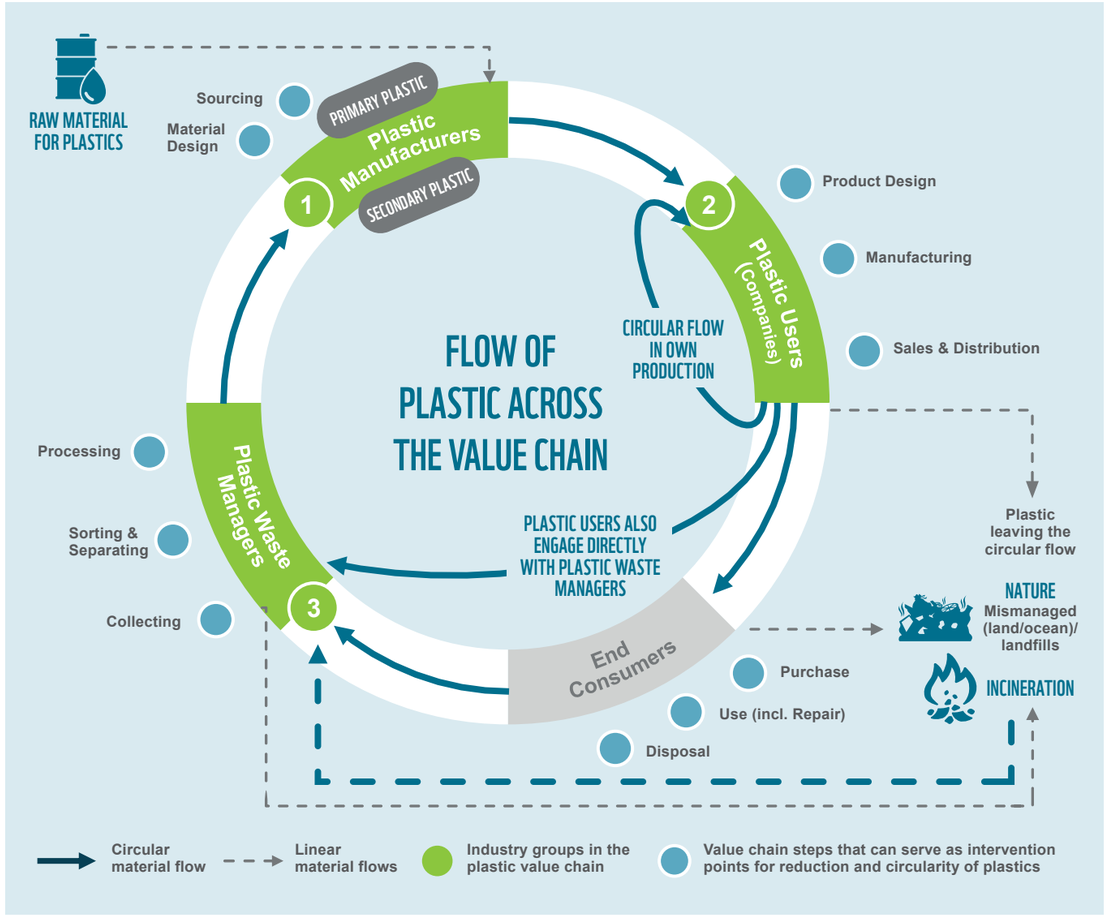
RECOMMENDATION 1.1:

Categorize companies into three industry groups – plastic manufacturers, plastic users and plastic waste managers – when assessing relevant sectors for plastics impact evaluation. Assess the sub-industries (specifically of plastic users) according to type of plastics dealt with, plastic intensity in the product and/or process and the lifespan of the plastic considered.

To prevent increasing disclosure and assessment efforts for companies for which plastics impact is not material, the sectors directly linked to the plastics value chain need to be identified. The plastics value chain is comprised of three industry groups:

- **Plastic manufacturers:** This group broadly includes chemical companies which produce plastic material, as well as plastic converters that transform plastic material into functional forms like packaging, car parts for car manufacturing etc.
- **Plastic users:** Industries which use plastics in their products or packaging. These could be further categorized into sub-industries like the toy industry, automotive industry, food and beverage industry etc.
- **Plastic waste managers:** Industries involved in collecting, sorting, separating and processing waste materials which can then be recycled and/or reused.

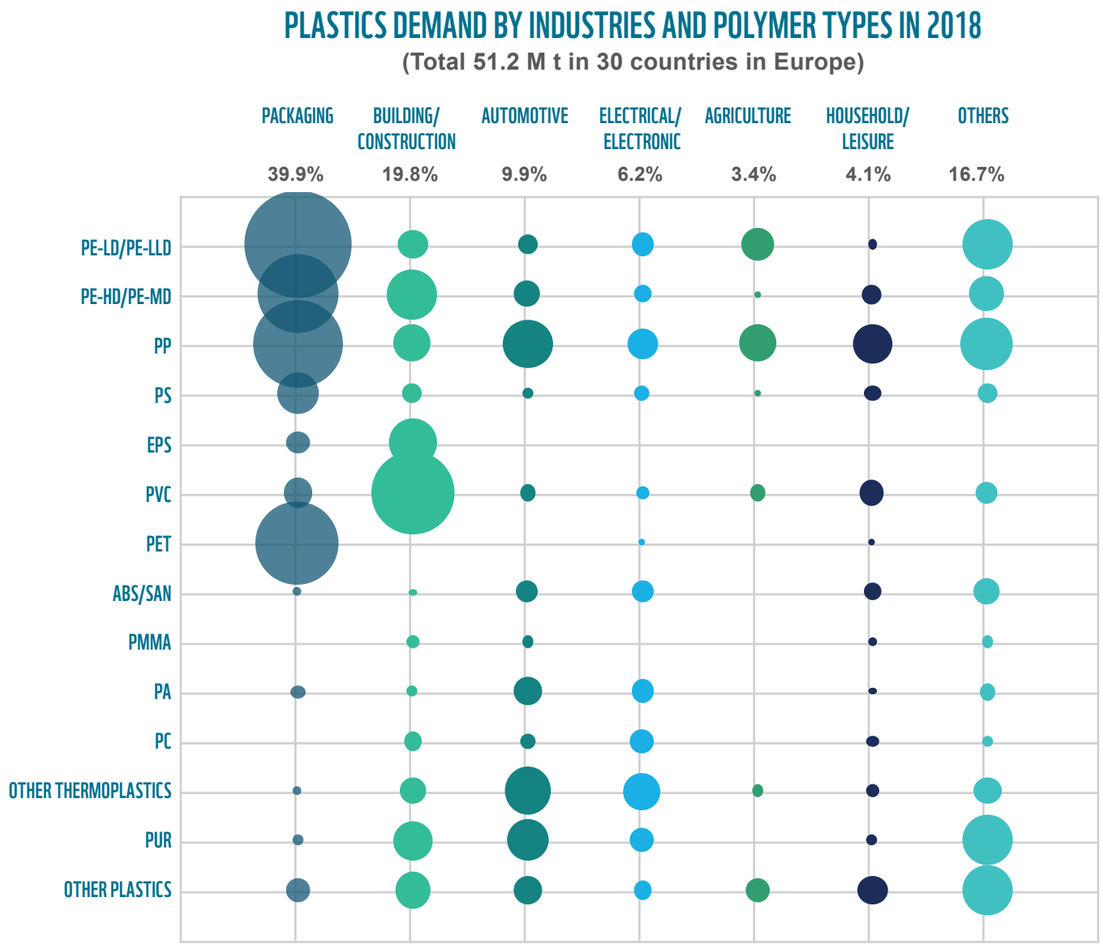
Figure 3: Overview of flow of plastic across the value chain



There are sub-industries within these groups that differ with regards to 1) type of plastics dealt with; 2) the intensity of plastics in the product; and 3) the lifespan of the plastic-containing product.

- **Type of plastics** describes the key plastic formulations being used. Different applications require different types of plastic such as polyethylene terephthalate (PET), highdensity polyethylene (HDPE), polystyrene (PS), polyvinyl chloride (PVC) etc. These plastics have different chemical characteristics (e.g. regarding recyclability) and thus also varying impacts on the environment.[63,64] For example, while most PVC is used in construction, the biggest share of PE and PET is used for packaging.[65]
- **Intensity of plastics** refers to the amount of plastic used per unit of revenue – considering plastic in supply chains, product and packaging. According to a UNEP analysis, the consumer goods industry and the toy industry are the most plastic-intensive, followed by the soft drinks industry. While for the toy industry the largest contributor is plastic in product, for soft drinks it is plastic in packaging.[66] (Appendix III: Figure 8)
- **Lifespan of the plastic product/packaging** is mainly defined by reusability and durability and directly impacts the frequency of disposal of a particular product (or packaging). A plastic product with a useful life of more than three years is considered to be durable (such as building and construction material, automobiles, appliances, furniture, consumer electronics etc.), while a useful life of less than this is considered as non-durable (such as packaging, diapers, trash bags, toys etc.).[67] Lifespan and intensity may counterbalance each other in cases where a product that has high plastic intensity has a longer lifespan.

Figure 4: Use of plastics by type and industry (based on PlasticsEurope data for 2018[68])



Variation in these aspects across sub-industries is especially noticeable for plastic users. For this group, a more thorough assessment of the three aspects is recommended. The plastics impact and respective risk and opportunities will vary and need to be made transparent. For the other industry groups, though slight differences may occur, a detailed assessment by sub-industry is not required.

An important caveat is that even though the differences across industry groups and sub-industries must be accounted for, the eventual aim for ESG D&I providers must be to develop a common scale that allows comparison between different industry groups and sub-industries as well.

Categorizing sectors as per these three industry groups enables ESG D&I providers to design and prioritize relevant indicators. Assessing plastic use across the different sectors can highlight those that need to be pushed for disclosure most urgently.

RECOMMENDATION 1.2:

Identify the plastic-related risks and opportunities faced by each industry group on the basis of their position in the plastics value chain, while being cognizant of the variations across different sub-industries.

The key differentiator from a financial perspective across industry groups is connected to the different plastics-related risks and opportunities that they are exposed to. For a financial assessment, the ways in which companies harness available opportunities and mitigate risks are important. ESG D&I providers therefore promote transparency for high-risk and high-opportunity areas. The risks relate to two questions: 1) Can the industry be held (partially) responsible for causing sustainability challenges connected to plastics? 2) Is the industry facing reputational, operational, regulatory, financial or market-related risks? The answers to these questions depend on the products and services that the industry offers as well as the general sourcing, production and distribution processes they have in place.

The opportunities lie in product, process or business model innovations and the connected potential for new or increased business. The three industry groups, by virtue of their offerings and processes, are exposed to different types of opportunities, which also depend on the push and pull factors that they face in the market.

Our analysis suggests that, of the three industry groups, plastic waste managers are the best placed with medium risks and high opportunities in the foreseeable future. They are well positioned to expand their market with increasing regulations on recycling and growing consumer awareness around plastic waste management. Plastic waste managers can expect to improve cost efficiency and new offerings in the near future. Risk is relatively low in the short term if the plastic waste is managed well, although there could be some potential risks if insufficient disposal routes are used. There may also be risks to the demand for product innovation if the prices for virgin material continue to remain low, making it much cheaper to source virgin plastic than to procure recycled plastic. However, these need to be balanced against the regulatory and reputational risks in the long term if they don't recycle as much as they are required to or have committed to. There are also financial risks if they end up having higher costs than anticipated in meeting their targets, because the technology is still being developed.

Plastic manufacturers' ESG profiles are more driven by high risks rather than opportunities since their entire portfolio consists of a product that may become less desirable to consumers because of regulations and behavioural changes in the future. Within this industry group, there are some differences in exposure between chemical companies and plastics converters. As chemical companies produce raw materials but don't convert them into plastic products, they are not as exposed to the producer responsibility challenge as plastics converters. The opportunities arise from the fact that both chemical companies and converters can explore possibilities to design products that are environmentally friendly. There is also opportunity for chemical recycling of recycled feedstocks, which may become more attractive for plastic converters and subsequently plastic users, who might be required by law to meet a certain threshold of recycled content in their inputs.

Lastly, plastic users are at high risk but also have high opportunities. The highest risk is reputational as it is the company's brand name that appears on the plastic item, so they are held responsible for the plastic pollution. Other risks arise from the cost implications and operational impacts of having to switch to alternatives if regulatory and reputational factors play out. On the other hand, there are high opportunities for this industry group to redesign their business models for circularity and eliminate plastics, which could bring advantages for reputation and cost-competitiveness in the long run.

Figure 5: Overview of risks and challenges for plastic manufacturers, plastic users and plastic waste managers

		PLASTIC MANUFACTURERS	PLASTIC USERS (COMPANIES)	PLASTIC WASTE MANAGERS
PERFORMANCE INDICATORS	Is the industry partly responsible for causing sustainability challenges connected to plastic?	High risk because plastic manufacturers are the originator of problematic material; especially converters	High risk because sub-industries demand high volume of plastic but often do not control the disposal at end of life	Not at risk when well managed; medium risk when insufficient disposal routes are used
	Is the industry facing reputational, operational, regulatory, financial or market-related risks because of plastics?	High risk with scrutiny on businesses using problematic plastics; possibility of increased regulations and reduced demand	High risk as consumer awareness on sustainability is growing; Regulations expected to get more stringent (e.g. single use plastic)	Some risk in the short term because of continued low prices for virgin material though supported by regulations and consumer preference; there might be risks in long term when regulations become prescriptive and call for greater accountability
OPPORTUNITIES	Are there opportunities for product innovation?	High opportunity to design inputs/ products which are environment-friendly and use recycled inputs, and also opportunities for chemical recycling for recycled feedstock	High opportunity to reconsider materials used for packaging and products	High opportunity from invention of new processing and recycling technologies
	Are there opportunities for process innovation?	Medium opportunity to aim for less plastic loss during the process and to build circularity into the system	High opportunity to rethink process to reduce waste and build-in circularity into the system	Medium opportunity to develop new processes which are more efficient in collection and conversion of plastic
	Are there opportunities for business model innovation?	Medium opportunity as business models can potentially benefit from value chain collaborations	High opportunity to develop new models for customer engagement such as buyback of plastic, refill models etc..	High opportunity to develop business models that interact directly with customers or end consumers
OVERALL		RISK: HIGH OPPORTUNITY: MEDIUM	RISK: HIGH OPPORTUNITY: HIGH	RISK: MEDIUM OPPORTUNITY: HIGH

Low risk/ High opportunity Medium risk/ Medium opportunity High risk/ Low opportunity

Question#2: How should indicators be designed to evaluate corporate action on plastics and its impact?

Currently there is no standardized approach to measuring and reporting corporate plastics impact. Different institutions and networks like the EMF have provided some direction[69] and discussion but there is no agreed-upon approach to date. Until a standard set of indicators is developed, similar to the GHG Protocol for CO_2 reporting,[70] it is important to ensure alignment with existing reporting standards (e.g. SASB or GRI) and regulations (e.g. EU taxonomy on sustainable investment). Currently, some reporting does not mirror the actual performance – from understating what is being done or optimizing reporting to almost 'greenwashing' without actual positive ESG-related impact. For example, lightweighting of plastics is often used as a success target, even though it may result in adverse consequences as lightweight plastics may be harder to collect and recycle.

This section outlines different pathways to capturing a company's performance in terms of how it contributes to the plastics challenge or addresses it. It is important to assess companies on both current performance and preparedness for the future.

RECOMMENDATION 2.1:

Assess companies on their performance on current action on plastics and preparedness for transitioning into more action; check for possible loopholes in the indicators.

Performance indicators:

Performance on plastics can be evaluated with three lenses:

1. The amount of plastic and problematic plastic (Appendix II: Figure 6) that a company adds to the value chain with its products. This includes assessing the type, amount and lifespan of plastic in portfolio. As well as the waste that will be generated through the use phase and end of life of the products, the assessment should consider the avoidance of adding plastics into the value chain through products designed for plastic reduction, reusability and recyclability.

2. The amount of plastic waste a company generates in its operations and how it diverts that waste from landfills. This again would depend on the type, amount and lifespan of the plastic in portfolio, but also on the manufacturing and operations processes that the company has in place.

3. The company's contribution to recovery of existing plastic waste by taking ownership of its own products at end of life or by investing either directly into initiatives and technologies, or indirectly through channels as stipulated by the government or managed by other external bodies/alliances.

It is important to measure performance versus a relevant baseline. While in some cases it is possible to cut down on plastic and use a suitable and sustainable alternative, in other cases such alternatives may not exist.

Figure 6: Overview of performance indicator categories

IS THE INDUSTRY PARTLY RESPONSIBLE FOR CAUSING SUSTAINABILITY CHALLENGES CONNECTED TO PLASTIC?	**What is the type, intensity and lifespan of plastic in product?**	**Plastic in Portfolio:** Products designed for plastics reduction, reusability and recyclability as well as plastic waste generated depending on the type, intensity and lifespan of plastic
	How plastic-intensive is the process?	**Plastic in Process:** Plastic waste generated during operations and disposal
	Is there action on plastic waste recovery?	**Plastic Waste Recovery:** Use of recycled content in inputs and action on waste recovery and related infrastructure

PREPAREDNESS INDICATORS

Indicators on preparedness capture the transition that a company is trying to make to reduce its plastics footprint. As mentioned earlier, an evaluation focusing on performance data only captures past development and misses the forward-looking component that is critical in investment decisions. Preparedness indicators look at three major elements of a company's strategy:

1. The targets that the company has set on reducing plastics use in product/process and increasing action on addressing waste. These should refer to actionable goals which are time-bound.

2. The roadmap with concrete actions and milestones that the company has laid out.

3. The organizational anchoring that will enable the company to realize these actions.

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Figure 7: Overview of preparedness indicator categories

INDICATORS TO DESCRIBE A COMPANY'S FOOTPRINT MANAGEMENT? (PREPAREDNESS INDICATORS)	**Are there targets on reducing negative impact of plastic?**	**Strategy and targets:** Clear guiding principle and ambition level, manifested through SMART targets
	Is there a roadmap with concrete actions?	**Actions, milestones and collaboration:** Defined programmes with timeline and strategic prioritization of partnerships
	Is the strategy organizationally anchored?	**Internal governance and transparency:** Clearly defined roles, incentive, policies and transparency

A list of recommended indicator categories is provided below, with important considerations for each. These indicator categories must be included in an assessment framework in a way that ensures they do not contradict each other, and a company's improvement on one of the metrics does not consequently result in a deterioration on any other. Additionally, when evaluating a company on these indicator categories, the overarching sustainability goals should remain in focus. Often, a better performance on plastics may result in negative implications for energy consumption, carbon footprint and other such sustainability targets. Evaluators must design the metrics and their weightages in a way that accounts for these trade-offs.

Table 1: Recommended indicator categories for plastics impact and important considerations

		INDICATOR CATEGORY	DESCRIPTION AND POINTS TO CONSIDER	EXAMPLE METRIC
PERFORMANCE INDICATORS	PLASTIC IN PORTFOLIO	**#1: Total plastic footprint**	Measures the overall plastic footprint, highlighting different types of plastic used (including additives); can be used to build baselines and benchmarks. WWF's ReSource plastic initiative (resource-plastic.com) provides metrics that can help define this indicator (see Annex 1).	% of revenue from products containing plastics
		#2: Problematic plastic in portfolio*	Increases transparency around plastic impact generated by the product/packaging either during the use phase (like microplastics from some types of textiles) or at end of life. Special care in the design of metrics is required to prevent unintended actions to optimize indicators. If a metric in this category is e.g. based on weight/volume, light-weighted flexible plastics might become more prevalent, which would add to the challenge rather than solving it because flexible plastics are harder to collect and sort. One way to solve this can be the use of metrics measuring the share of revenue generated from products containing problematic plastic either in their composition or in the packaging. This puts focus on overall minimization of use across the portfolio rather than weight optimization.	% of revenue from products containing problematic plastics
		#3: Recyclable or compostable plastic in portfolio	The challenge with this indicator category is to define recyclability, although a number of detailed criteria exist.[81] It is not so much about the recyclability of individual components but the final application (e.g. moving towards single-material design). Apart from technical recyclability, it is also about plastics being designed to be recyclable (e.g. by being easily separable) within the recycling infrastructure that exists in the places where they are sold. Use of compostable plastic can be valuable in targeted applications coupled with proper waste management infrastructure. However, as compostable plastic may not break down in natural environments, it is not an alternative to decreasing leakage to nature and has limited advantages unless diverted to composting facilities.	% volume of packaging material that is recyclable
	PLASTIC FROM PROCESS	**#4: Waste generated in operations**	The amount of residual plastic that is left behind at the site of production (e.g. by-products, scrap, packaging material) varies in type and quantity from the three industry groups. As this waste is generated among its own boundaries, companies have full visibility and control.	% of plastic waste in total manufacturing waste
		#5: Responsible disposal of waste from operations	It may not be possible to eliminate plastic waste in operations. For the residual, producers have to take responsibility for environment-friendly disposal/ processing. There are many forms of responsible disposal/processing; key is diversion from landfills and moving towards recycling or reuse of the plastic in a closed loop or through a third party.	% of plastic waste sent for recycling
	PLASTIC WASTE RECOVERY	**#6: Use of recycled content in portfolio**	Besides design for recyclability (indicator category #3), increasing the use of recycled content is key to promote circular plastic flows and move the value chain to recovery and recycling. While recyclability aims to reduce the future impact (i.e. at the end of life of product or packaging), a high share of recycled plastics shows how a company has already helped close the loop today.	% of recycled content by volume in plastic inputs, e.g. split by polymer type
PERFORMACE INDICATORS	PLASTIC FROM PROCESS	**#7: Action on waste recovery of own products at end of life**	The company's responsibility is to ensure that its product or the associated packaging is not adding to the plastics challenge. Evaluators must acknowledge the action (or lack of it) that a company is taking to recover the plastic and prevent unmanaged disposal. This indicator category can include either the actual physical recovery initiatives such as buy-backs of plastic waste, or indirect action towards recovery such as expenditure on extended producer responsibility (EPR) schemes. In the future, concepts like 'plastic tax' or 'offsetting credits' for plastics might be further possible proxies to look at. These concepts are not yet as advanced as they are for e.g. carbon emissions, and require further development, standardization and scaling.	$ and/or % of revenue EPR expenditure to take responsibility for impact of plastic at end of life of product
		#8: Initiatives on infrastructure and beyond own supply chain	Apart from action within company boundaries, an important metric is the investment into waste management systems across its geographic footprint and support of pilots or research and development (R&D) for new technologies. This indicator category has a broad scope with multiple possible metrics, also including corporate citizenship activities connected to plastic waste such as clean-up activities.	$ EPR expenditure for infrastructure/ # of cleanup activities undertaken
PREPAREDNESS INDICATORS	STRATEGY AND TARGETS	**#9: Commitment to phasing out of problematic plastic**	Public commitments and targets guide corporate action and make the ambition level transparent. This indicator category specifically looks at reduction in problematic plastic by designing for circularity and reusability, and minimizing waste generated. It is important to assess not just whether such targets exist but also how ambitious they are relative to what can be achieved realistically, and what impact they will have.	Target on elimination of single-use plastics
		#10: Commitment to addressing existing plastic waste	Captures a company's commitment to future contributions to tackling the plastic challenge by investing in new technologies for waste management, advancing infrastructure etc. This could be both for the company's own supply chain as well as beyond its own supply chain.	Commitment to efforts on improving waste management systems
	ACTIONS, MILESTONES AND COLLABORATION	**#11: Actions and partnerships**	Targets need to be backed by a clear roadmap and concrete steps. The roadmap can be defined by tasks on a timeline mobilizing both internal (mainly through defined actions) and external stakeholders (mainly through partnerships). To evaluate roadmaps, it is important to assess that the activities laid out are actionable and that the company is prepared to get started on them in a one- or two-year timeframe to reach the longer-term targets. When assessing partnerships and alliances that are supported by the company, it is important to have a defined criteria on the kind of alliances that are considered impactful and credible.	# of global alliances supported
		#12: Reporting on milestones and progress	Setting and reporting on interim milestones promotes continuous action and prevents postponing tackling challenges – especially those connected to additional costs. With this indicator category, evaluators can assess the consistency with which a company progresses on its plasticsrelated targets. Reporting should consider the relevance of the metrics towards achievement of overall targets.	Performance on interim milestones

• Problematic plastic is plastic that is single-use and easily leaks into nature because of negligent consumer attitudes; that cannot be recycled mechanically because of its polymer type, blend or design; or that is not re covered for reuse and recycling, and is not naturally compostable.

		INDICATOR CATEGORY	DESCRIPTION AND POINTS TO CONSIDER	EXAMPLE METRIC
PREPAREDNESS INDICATORS	INTERNAL GOVERNANCE AND TRANSPARENCY	**#13: Roles and responsibilities**	Roles and responsibilities make up the organizational structure of the company. Only if it is clear who is responsible to drive action, build and share know-how etc. can the strategy be brought to life. Proof points that can support the assessment are e.g. definition of responsible departments, involvement of C-level, employees dedicated to working on the plastics challenge (like those in R&D for new materials, or in design teams etc.).	% of total full time employees assigned to the work on developing substitutes for problematic plastics
		#14: Policies and incentives	Policies and incentives guide action as they define intent and set boundaries on the one side and drive action on the other. Integration of plastics into both embeds the topic into the everyday action of the company. It is important to track not just the number of such policies or incentives, but the level of application and reach across the hierarchy. For example, one metric to evaluate this indicator category could be the number of C-suite executives that have part of their remuneration connected to plastics performance (e.g. along with other sustainability topics).	Incentives for innovation in R&D for product
		#15: Measurement reporting and communication	Transparency and disclosure as such should also be considered. A company must not be negatively rated for disclosing even though it might have a long way to go on its plastics-related performance and preparedness. If ESG reporting on plastics-related metrics is to succeed and drive change, companies that don't disclose any information on their plastic footprint should always be considered less favourably in ratings and rankings than those that do. It is also important to balance the assessment on quantity of disclosures with the quality of disclosures.	# of metrics disclosed

RECOMMENDATION 2.2:

Prioritize the indicators as per outcome priorities and do not aim to include a long list of indicators that do not get reported on.

It is recommended that ESG D&I providers select a few indicators that are most material for a given industry and that fit the best with the providers' existing methodologies. Three questions can support the selection:

- **Is the data for that indicator measurable in the short term?**
  Align indicators with realistically available reporting capabilities/capabilities that can be built in a short period.
- **Are there examples of companies already reporting on such indicators?**
  Inform assessment of relevance for industries and sub-industries by using currently reported metrics from industry leaders.
- **Is it aligned to priority outcomes on plastic waste for the company?**
  Define the outcomes related to plastic waste to be treated with highest priority and focus on related indicators – e.g. if the use of recycled plastics will be a key driver for change, focus on its application and waste recovery.

International standards and frameworks have laid out definitions and indicators for plastics (mostly implicitly included in broader themes like waste, pollution etc.). These include those used by the EMF, the EU taxonomy, GRI, Task Force on Climate-Related Financial Disclosures (TCFD), SASB, World Economic Forum (WEF) and UNGC. These standards include different approaches and guidance on prioritization. For example, UNGC looks at where plastics could be part of the Sustainable Development Goals (SDGs), and gives recommendations on how to define and report on priority targets.

Question #3: How can plastics impact evaluation be integrated into an existing ESG assessment approach?

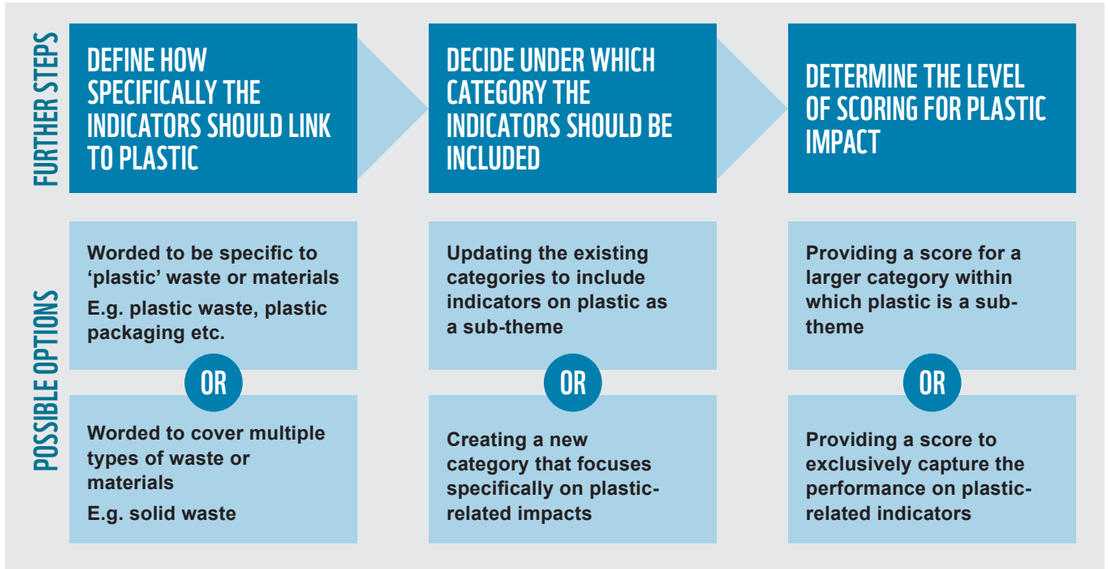
Once the indicators are defined, ESG D&I providers will have to find the most effective way to include them into their methodologies. Most providers have distinct methodologies and approaches for data collection, and therefore need to tailor the integration to their specific context. This section outlines general considerations when incorporating the new indicators.

RECOMMENDATION 3.1:

Modify the analysis framework reflecting on how directly indicators should link to plastics, in which reporting category they should be included and what weight in scoring they should have.

The ESG D&I providers should look at how specific they want the indicators to be, then identify the category under which the indicator should be included, and finally decide the level at which they would like to assign scores for plastics impact.

Figure 8: Overview of further steps with possible options towards a successful integration of plastics in the approach



RECOMMENDATION 3.2:

Update data collection process based on ability to source data manually or automatically and expected data sources.

The updates to the data collection process and sources depend on the current processes that an ESG D&I provider has in place (automated/manual) and the type of sources that it scans (publicly available/private responses).

Figure 9: Overview of data collection processes and data source types available

PROCESS OF DATA COLLECTION	PUBLICLY AVAILABLE SOURCES	PRIVATE RESPONSES FROM COMPANIES
MANUAL	Include more targeted information sources that release information about companies' action on plastic-related issues E.g. PSI Working paper, EMF reports, UNEP research paper, European Commission report on EU's plastic approach, Greenpeace report etc.	Update questionnaire to include questions on plastic-related data and update companies about the change in methodology at the start of the reporting year
AUTOMATED	Enhance keyword search for data crawlers to include plastic-related information and statistics	Modify the technology platform that hosts the data to include fields on plastic impact, and integrate the fields to final scoring algorithm

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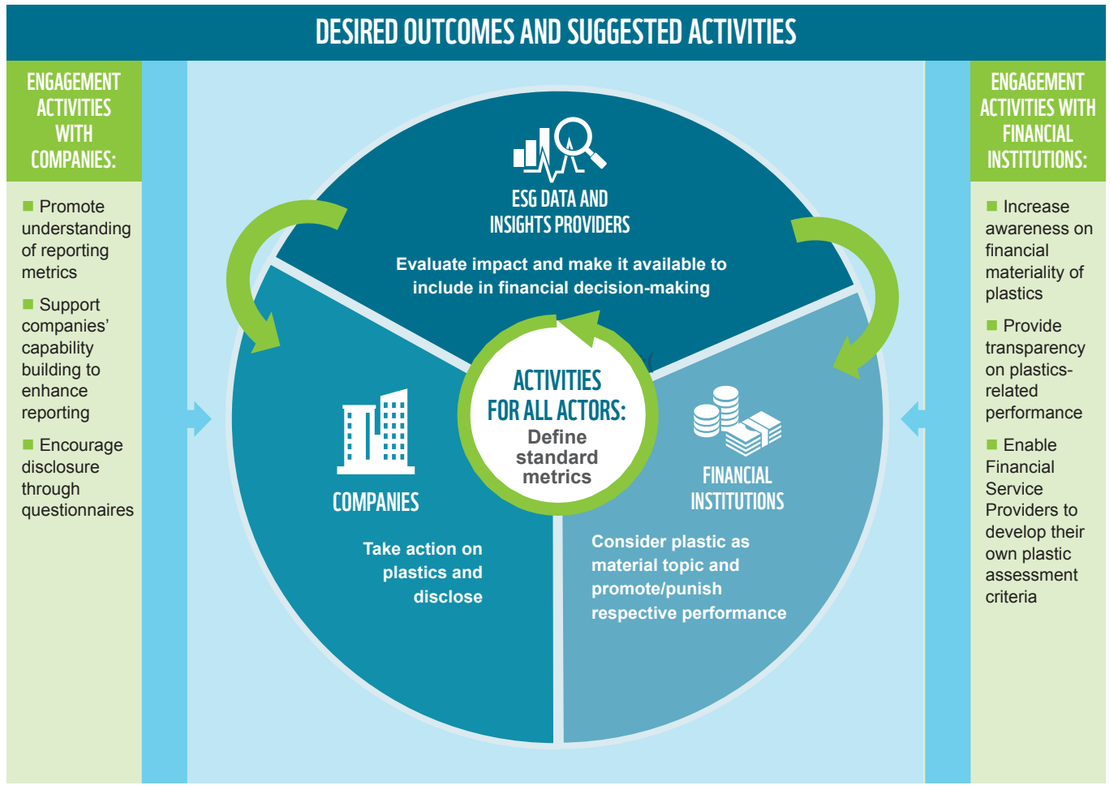
CHAPTER 5:

COLLECTIVE ACTION TO INCREASE TRANSPARENCY ON PLASTIC AND SUPPORT CHANGE

COLLECTIVE ACTION TO INCREASE TRANSPARENCY ON PLASTIC AND SUPPORT CHANGE

A joint effort by all stakeholders is needed to solve the challenge of lack of standardization in disclosure requirements related to plastics, and overall towards proper management of plastics. ESG D&I providers can encourage companies to disclose better. With financial institutions they can work towards highlighting the financial materiality of plastics and advise how to engage on the issue with portfolio companies.

Figure 10: Overview of ESG D&I providers' engagement activities to influence other main actors on plastics action



The overall ambition of the sustainable finance landscape should be to reduce plastic pollution, and all actors have a specific role to play.

To reduce and mitigate negative impacts from plastics, companies should commit (set measurable and time-bound targets), act (initiate efforts on reducing, reusing and recycling plastics and support R&D in these areas) and advocate (to policymakers, to consumers and to industry peers). They need to prioritize a shift away from wasteful single-use packaging and move towards circular models, and in doing so they must transparently communicate on their performance and ambitions.

As shown by companies' performance on climate action, transparency can be a huge lever. ESG D&I providers can play an important role in evaluating companies' impacts and making them comparable and available for financial institutions. By connecting the perspective of environmental and social impact with financial value from risks and opportunities they can promote action among stakeholders attracted primarily by business value creation.

A key driver in the coming years will be the regulations being implemented in Europe (taxonomy) and the consequent increasing transparency. Regulatory bodies around the world can support the transformation of the finance system and the move towards more sustainable business practice, by looking at this and other good practice examples for policies to set supportive boundaries and shape the landscape.

The current key challenge of data availability and comparability needs to be jointly addressed in a standardization approach.

There is currently no universally accepted standard to report on action or impact related to plastics, which is one of the key barriers to more effectively using ESG ratings. Upcoming regulations, such as the European Action Plan for Financing Sustainable Growth with the taxonomy, might promote transparency and disclosure, but further action is needed. Working towards a standard assessment and disclosure – similar to the GHG Protocol – will help. Success will depend on all actors, from both private and public sector, working on a joint approach to regulatory requirements. To find a balance between what companies are currently willing to disclose and what external stakeholders need to objectively assess the impact, NGOs and academia must also play a strong role. Influencers such as standards providers can also support the discourse and the implementation.

Collective action from all stakeholders will drive outcomes towards the goal of proper plastic management.

To achieve the goal of reducing the negative impact of plastics, companies, financial institutions and ESG D&I providers need to collaborate. Companies need to develop clear roadmaps and ambitions on how to tackle the challenge. This will allow them to reduce risks and identify new opportunities. Financial institutions need to more closely assess the materiality of plastics and invest in businesses that manage plastics-related risks. They can engage with the disclosing companies to support them to effectively communicate the value of their action. They can also support the investor community by highlighting the financial materiality of plastics and advise portfolio companies on how to engage with the issue. Furthermore, they can support financial services providers in the development of new products such as performance-based loans connected to ESG ratings for plastics.

It will be important that ESG D&I providers closely observe developments around standardized and mandatory disclosure to continuously advance their value proposition. Today, data and increased transparency are assets that investors are looking for, but more advanced services and support should be considered – for example around engagement protocols for asset managers that want to work with portfolio companies on their plastic performance.

Finally, influencers such as regulatory bodies will have a key role by providing an overarching framework. Besides the regional progress on regulations related to ESG disclosures, a global harmonization of metrics would increase transparency. Governments, businesses and civil society are calling for a global treaty to prevent plastic pollution. A global treaty could support businesses by reducing operational complexity and compliance risk across markets, enabling better investment planning, simplifying reporting and coordinating actions across the plastic value chain.[82]

GLOSSARY OF KEY TERMS

ACRONYM/TERM	DEFINITION
ABS	Acrylonitrile butadiene styrene resin
CDP	Reporting initiative, formerly the Carbon Disclosure Project
CEO	Chief executive officer
CSR	Corporate social responsibility
EMF	Ellen MacArthur Foundation
EPS	Expanded polystyrene
EPR	Extended producer responsibility
ESG	Environmental, social, governance
ESG D&I	Environmental, social, governance data and insights
ETF	Exchange traded fund
ETP	Exchange traded product
EU	European Union
FoSDA	Future of Sustainable Data Alliance
GDP	Gross domestic product
GHG	Greenhouse gas
GRI	Global Reporting Initiative
MSCI	Morgan Stanley Capital International
NGO	Non-governmental organization
Other plastics	Thermosets, adhesives, coatings and sealants
PA	Polyamides
PBT	Polybutylene terephthalate
PC	Polycarbonate
PE	Polyethylene
PE-HD	Polyethylene, high density
PE-LD	Polyethylene, low density
PE-LLD	Polyethylene, linear low density
PET	Polyethylene terephthalate
PMMA	Polymethyl methacrylate
PP	Polypropylene
PRI	Principles for Responsible Investment
PS	Polystyrene
PUR	Polyurethane
PVC	Polyvinyl chloride
R&D	Research and development
SAN	Styrene-acrylonitrile copolymer
SASB	Sustainable Accounting Standards Board
SEC	US Securities and Exchange Commission
TCFD	Task Force on Climate-related Financial Disclosure
Thermoplastics	Standard plastics (PE, PP, PVC, PS, EPS, PET [bottle grade]) + engineering plastics (ABS, SAN, PA, PC, PBT, POM, PMMA, blends, and others including high performance polymers)
UN	United Nations
UNEP	United Nations Environment Program
UNGC	United Nations Global Compact
USEPA	United States Environmental Protection Agency
WBCSD	World Business Council for Sustainable Development
WEF	World Economic Forum

APPENDIX I

Reference to plastics in reporting standards and initiatives

Table 2: Plastic-related indicators of common reporting standards

NAME	NAME OF DOCUMENT	PLASTIC REFERENCE	RELEVANT SECTION	WASTE/PLASTICS-RELATED DISCLOSURE REQUIREMENTS
GRI	GRI 301: MATERIALS (2016)[71]	**Plastics explicitly mentioned in reporting recommendations**	Disclosure 301-1 Materials used by weight or volume	Total weight or volume of materials that are used to produce and package the organization's primary products (recommended to include plastics)
			Disclosure 301-3 Reclaimed products and their packaging materials	Percentage of reclaimed products and their packaging materials (including plastics)
	GRI 306: WASTE (2020)[72]	**Plastics explicitly mentioned in the "disclosure guidance" section detailing the "disclosure requirements"**	Disclosure 306-1 Waste generation and significant waste-related impacts	Description of activities that lead or could lead to waste-related impacts on the economy, environment or society; potential threat of marine pollution from leaked plastic packaging given as one example
			Disclosure 306-2 Management of significant waste-related impacts	Description of actions to prevent waste generation as well as waste-related goals and targets; improved materials selection and product design given as examples
			Disclosure 306-3 Waste generated	Total weight of waste generated in metric tonnes with a breakdown by composition of waste, plastic given as one example
			Disclosure 306-4 Waste diverted from disposal	Total weight of waste diverted from disposal in metric tonnes, and a breakdown of this total by composition of the waste and recovery options such as reuse, recycling and others; plastic given as one example
			Disclosure 306-5 Waste directed to disposal	Total weight of waste directed to disposal in metric tons, and a breakdown of this total by composition of the waste and disposal options such as incineration (with and without energy recovery), landfilling, and others; plastics given as one example

NAME	NAME OF DOCUMENT	PLASTIC REFERENCE	RELEVANT SECTION	WASTE/PLASTICS-RELATED DISCLOSURE REQUIREMENTS
SASB	SASB MATERIALITY MAP (2018)[73]	**Plastics explicitly mentioned as part of different issue categories (only applicable for selected sub-industries)**	Waste & hazardous materials	**Restaurants** Total amount of waste; total weight of packaging; percentage of packaging that is made from recycled and/or renewable materials; percentage of packaging that is recyclable, reusable and/or compostable
			Product design & life cycle management	**Household & personal products** Total weight of packaging; percentage of packaging that is made from recycled and/or renewable materials; percentage of packaging that is recyclable, reusable and/or compostable; strategies to reduce the environmental impact of packaging through its lifecycle **Container & packaging** Revenue from products that are reusable, recyclable and/or compostable; strategies to reduce the environmental impact of packaging through its lifecycle
			Materials sourcing & Efficiency	**Electronic manufacturing services & original design manufacturing** Weight of end-of life products and e-waste recovered, percentage recycled

Table 3: Important global initiatives on sustainability and plastic disclosure

NAME OF INSTITUTION	NAME OF DOCUMENT	DESCRIPTION	PLASTIC REFERENCE	ILLUSTRATIVE INDICATORS
ELLEN MCARTHUR FOUNDATION (EMF)	CIRCULARITY INDICATORS – AN APPROACH TO MEASURING CIRCULARITY (2015) [74]	**Proposes an indicator that measures how well a product or company performs in the context of a circular economy**	Plastics not explicitly mentioned in the proposed indicators, but in some application examples	"Material Circularity Indicator (MCI)" is calculated by assessing the following inputs: - Input in the production process: How much input is coming from virgin and recycled materials and reused components? - Utility during use phase: How long and intensely is the product used compared to an industry average? - Destination after use: How much material goes into landfill, getting recycled, reused? - Efficiency of recycling: How efficient are recycling processes?
WWF ReSource	TRANSPARENT 2020 - MAPPING CORPORATE ACTION ON PLASTIC WASTE (2020)[75]	**Pilots a method to assess companies' plastic footprints and publicly report the progress of their plastic waste commitments**	Plastics explicitly mentioned	ReSource footprint tracker measures the following variables: • Amount of plastic used and sold by the company • Polymer type and form of plastics used • Source of the plastics material • Plastics end of life (recycled, reused, disposed)
WEF	TOWARD COMMON METRICS AND CONSISTENT REPORTING OF SUSTAINABLE VALUE CREATION (2020)[76]	**Proposes metrics to ensure consistent reporting of sustainable value creation**	Plastics explicitly mentioned	Tonnes of single-use plastic disposed of; "valued societal impact" in monetary terms of solid waste disposal, including plastics and other waste streams
UNGC	INTEGRATING THE SDGS INTO CORPORATE REPORTING: A PRACTICAL GUIDE (2018)[77] BUSINESS REPORTING ON SDGS: AN ANALYSIS OF THE GOALS AND TARGETS (2017)[78]	**Suggests advancing sustainability reporting by assessing company-relevant Sustainable Development Goals and setting related targets. Proposed indicators for disclosure are summarized from different reporting standards**	Plastics/packaging impact explicitly mentioned in SDG 8 (Decent work and economic growth), SDG 12 (Sustainable production and consumption), SDG 14 (Life below water)	**Business action suggested** Tracking and reporting e.g. methods to minimize amount of plastic in own products; understanding waste generation, e.g. extending the responsibility to post-consumer stage including waste collection, reuse and recycling; reducing marine pollution by e.g. adopting circular model for plastics production; developing circular models for products; improving resource efficiency **Disclosure suggested (based on available standards)** Amount of product or waste covered by extended producer responsibility; percentage of recycled input materials used in primary products; percentage of reclaimed products and packaging **Possible disclosure gap called out** Use and reduction of non-degradable materials in operation and supply chain; circular model for plastic production; change consumers' behaviour

APPENDIX II

Definitions of plastic types

Figure 11: Definition of problematic plastic

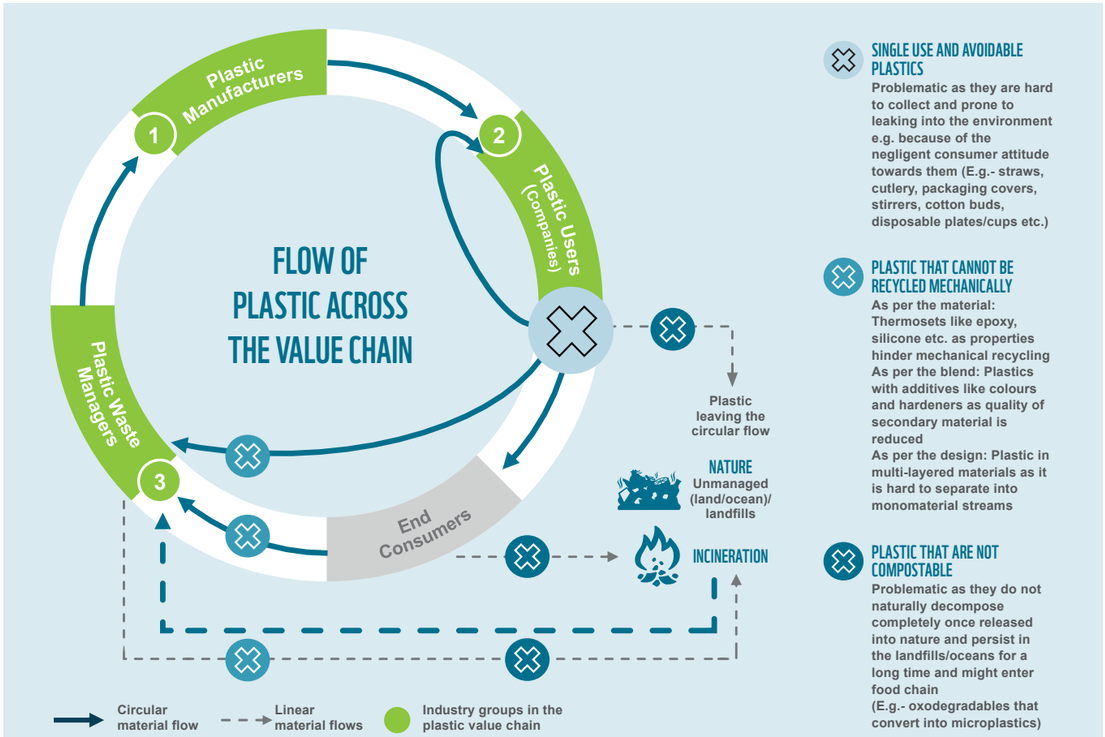
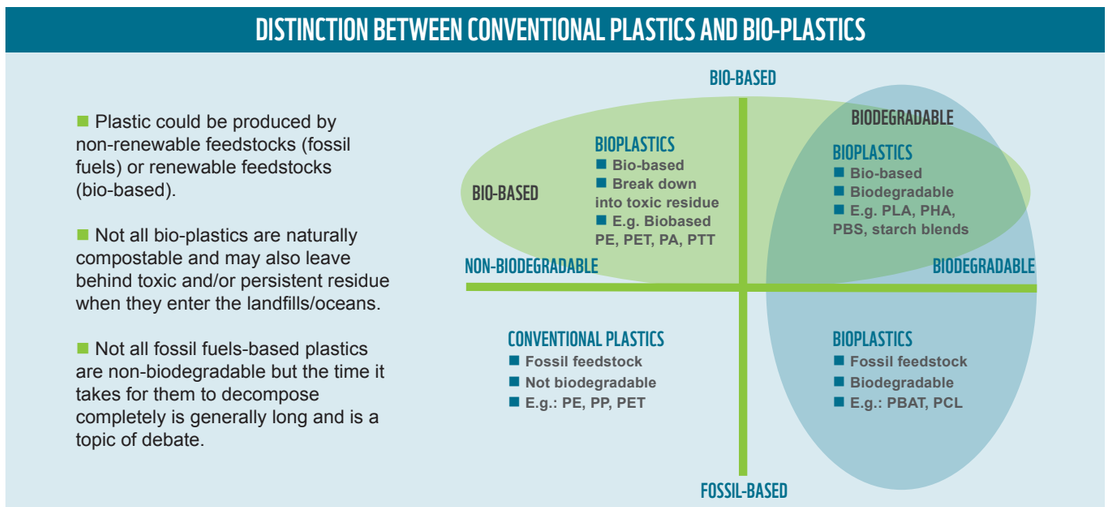


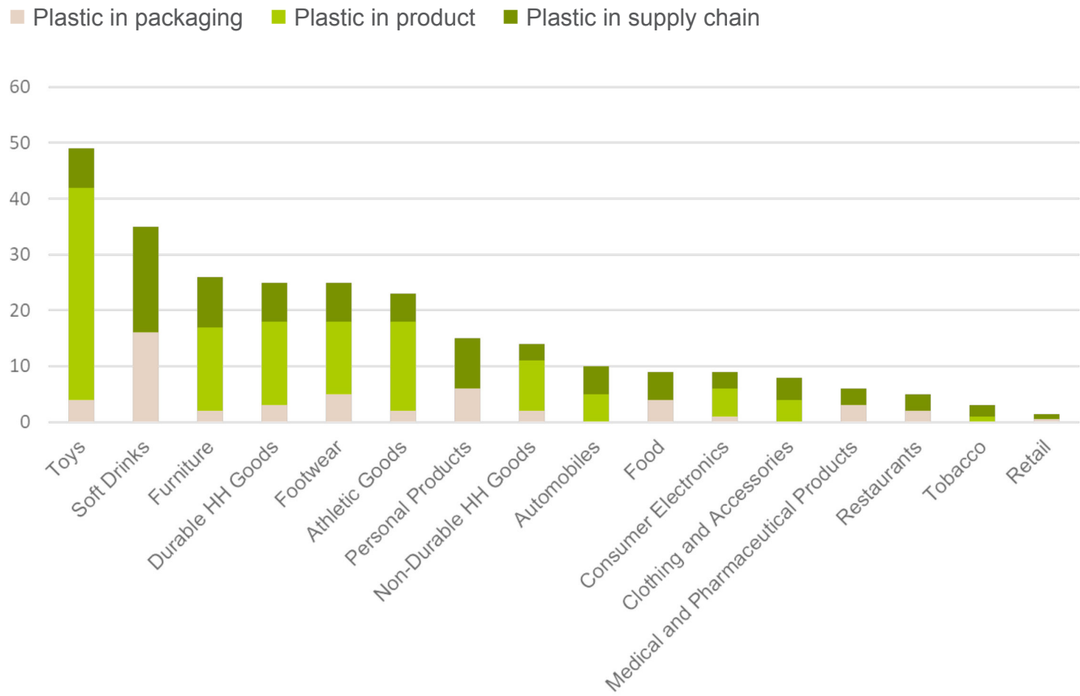
Figure 12: Distinction between conventional plastics and bioplastics (based on European Bioplastics' Fact Sheet[79])



APPENDIX III

Plastic intensity

Figure 13: Plastic intensity in sub-industries within plastic users (based on UNEP (2014))[80]



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