

SUMMARY

CHEMICAL INDUSTRY IS NOT YET THE GAME CHANGER IT COULD BE

Dutch responsible investor perspectives and activities, focused on the chemical sector and natural capital

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This summary captures the highlights from the report ‘Chemical industry is not yet the game changer it should be’, a research conducted by Kristel Verhoef (Kristel Clear Sustainable Strategies) in 2019. The research report was written in collaboration with Caroline van Leenders (Dutch Ministry of Agriculture, Nature and Food Quality), Elsbeth Roelofs (MVO Netherlands), and Martin Lok (Capitals Coalition). The production of the original report and this summary was made possible by funding from the Dutch Ministry of Agriculture, Nature and Food Quality (Ministerie LNV).

This summary captures the highlights of the report which discusses *investor viewpoints and activities* regarding natural capital, the chemical industry and their interlinkages. This exploration is part of a joint initiative¹ to stimulate insight for the chemical sector into its *dependency* and *impact* on natural capital and natural capital accounting. **Natural capital** is another term for the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people. The benefits provided for society by natural capital include clean air, food, water, energy, shelter, medicine and the raw materials we use in the creation of products. It also provides less obvious benefits such as flood defence, climate regulation, pollination and recreation.

Seen from a sustainability perspective, it is important to realise that our economies depend greatly on natural capital, while at the same time having a large negative impact on it. These insights are also amongst the key lessons learnt by the front-runners in the implementation of the Natural Capital Protocol². The use of natural capital approaches helps to identify a company’s dependencies on nature. It provides a starting point for further development of a company’s strategic risk management. If not identified or handled properly, these dependencies can become a major risk to the company’s financial performance in the future. The fact that the World Economic Forum’s Global Risks Report 2020^[1] states that *the top five risks for the world economy in terms of likelihood are directly linked to natural capital* supports this lesson.

Another possible motivation for companies to gain insight into their dependency and impact on natural capital is that their investors increasingly care about the risks and possibilities related to natural capital. This research therefore sought to shed light on the relevance of natural capital for responsible investors, both negative and positive, now and in the future, looking specifically at the chemical sector.

Approach of the research

For this report, 10 semi-structured expert interviews³ were conducted with Dutch investors of various sizes, all with a responsible investment overlay, and five expert organisations that are known to have a great deal of experience

¹ Dutch employers’ organisation VNO-NCW, the Dutch Ministry of Agriculture, Nature and Food Quality, the Royal Netherlands Institute of Chartered Accountants (NBA) and MVO Nederland.

² <https://naturalcapitalcoalition.org/natural-capital-protocol>.

^[1] **Top five by likelihood:** (1) Extreme weather (2) Biodiversity loss (3) Climate action failure (4) Natural disasters (5) Human-made environmental disasters. **Top five by impact:** (1) Biodiversity loss (2) Climate action failure (3) Water crises (4) Human-made environmental disasters (5). See <https://www.weforum.org/reports/the-global-risks-report-2020>.

³ NN Investment Partners, Achmea Investment Management, ASN Investment Funds, Robeco, PGGM, Eumedion, VBDO, Sustainable Finance Lab, University of Utrecht, Sustainalytics, Netherlands Enterprise Agency.

of representing or working with investors. Additionally, brief desk research was conducted on responsible investors' agendas in relation to the chemical sector and natural capital.

INVESTORS: NATURAL CAPITAL IS A CRUCIAL PART OF LONG-TERM VALUE CREATION

Awareness of the importance of natural capital has grown during the past ten years. All interviewed investors and experts agree that natural capital is becoming increasingly important for investors because of megatrends like climate change, world population growth, resource scarcity and associated legislation and standards. Long-term investors and companies are responding to this. Part of the response by investors lies in *redefining corporate value*. Whereas in traditional financial analyses investors only distinguish between material and non-material factors, long-term investors perceive this dual thinking as too restrictive and incomplete to respond to fundamental changes in the economy. The direction is therefore changing, slowly but surely, towards assessing a company's value based on a more complete picture of value creation for all stakeholders, including the wider society, and their strategy to realise this.

For investors, natural capital is therefore part of a vision of a new economy in which it is one of the six capitals (financial, manufactured, intellectual, human, social and relationship, and natural capital) of the Integrated Reporting Framework (IRF) as defined by the International Integrated Reporting Council (IIRC). Most of the time, however, it is isolated Environmental, Social and Governance (ESG) themes that attract investors' attention, as a *holistic view is not yet practical* according to the interviewees. Important natural capital themes mentioned by respondents are *climate, water scarcity, deforestation, energy efficiency, circular resource use, biodiversity, air emissions and soil recovery*. This scattered focus has led all kinds of investor front-runners to try to determine the necessary common ground on which to assess and compare companies and activities around natural capital themes. The common ground is needed to accelerate and scale initiatives around various natural capital themes, as we have seen in the development of initiatives relating to climate change⁴.

Climate change has risen to the top of responsible investment agendas over the last decade. When mainstream investors work on climate change, the main focus is often on carbon emissions. There is much less awareness and consensus, however, about *water, deforestation, climate adaptation and biodiversity risks and impacts*, and on the ways to incorporate them into quantitative corporate assessments. If we look at the top five in the Global Risks report, the 2030 targets of the Sustainable Development goals, these themes should also be seen as important and requiring urgent action on the part of companies and their investors.

INVESTORS' VIEW OF THE CHEMICAL SECTOR: VERY DIVERSE, VAST RANGE OF POSSIBILITIES

The (global) chemical sector is extremely diversified. The sector could be seen as the raw material supplier of modern society, as it provides the raw materials for many products and processes in the automotive, agrifood, construction, textiles, health industries and many other sectors. Products range from base or commodity chemicals, plastics and plastic products, specialty and fine chemicals and agrochemicals to biochemistry products. Moving to renewable resources and developing products and processes that will enhance sustainability downstream will thus have enormous impact on a broad range of sectors downstream of the chemical value chain. If the chemical sector

⁴ One of the relevant initiatives cited several times by investors is the development of the EU Taxonomy, a set of technical screening criteria that specify requirements for determining Substantial Contribution and **Doing No Significant Harm (DNSH)**. Natural capital components included in the Taxonomy are *climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, waste prevention and recycling, pollution prevention and control and protection of healthy ecosystems*.

moves towards renewable raw materials, and renewable energy supply, this will of course have an enormous impact on the oil and gas sector, as these sectors are very much interlinked – both in the supply of energy and raw materials from the oil and gas sector to the chemical sector and in the use of specific substances and processes from the chemical sector that facilitate oil and gas extraction and refining.

Respondents see many opportunities, such as catalysts, the development of processes for hydrogen production, all kinds of processes and products to increase energy efficiency, carbon-absorbing concrete, batteries, dashboards and coatings, as well as various forms of recycling and reuse of products in other sectors. There is a vast range of possibilities here for the chemical sector to come up with innovative solutions that result in the greening of those sectors. Without the chemical sector, many other sectors, such as the agrifood industry, the construction sector, the automotive industry and the packaging industry, **cannot** become fully sustainable. In addition, the chemical sector could be a driving force behind many necessary transitions related to natural capital impacts or the SDGs. However, the chemical sector is *not yet the game changer investors believe it could be*. Within the sector itself, there is too little movement in terms of greening or innovative solutions as the investors see it. More should be done to increase energy efficiency, switch to renewable carbon products and look for more sustainable sources of energy. The sector would also benefit from investing in the renewal of outdated installations and processes, phasing out harmful substances and embracing a more circular approach in the manufacturing process.

The industry's enormous carbon footprint is the sector's main threat in terms of natural capital. Globally, the chemical industry accounts for 10 percent of total energy demand⁵. This high demand for energy, combined with extensive use of fossil raw materials, makes the chemical sector one of the biggest emitters on the planet. If the current growth of production continues, plastics (not including other chemicals) will make up 15 percent of global annual carbon emissions in 2050. This enormous carbon footprint, combined with the sector's related dependency on fossil fuels and materials, is seen by all respondents as a material risk, as it is expected that regulation around carbon is going to be ever stricter, and carbon pricing is a distinct possibility.

Other potential problematic dependencies of the chemical sector on natural capital are seen in phosphate, potassium and water. These are not yet seen so much as material risks, however, as they currently have only an incidental impact on the business case. Investors do expect that physical risks might become material in the long run. Negative impacts of the chemical industry on natural capital are seen in producing, using and disposing of harmful substances in nature, such as pesticides, insecticides and fertilisers, but also per- and polyfluoroalkyl substances (PFAS) and plastic that can result in air, soil and water pollution, loss of biodiversity and sometimes adverse human health effects.

Difficult to discuss: obstacles to greening and innovation within the chemical industry

The sector is not seen as very proactive in connecting with stakeholders or putting effort into making stakeholders understand its complex challenges. In general, many natural capital considerations are seen as difficult to discuss with many chemical companies, as they do not consider them sufficiently important. In some instances, investors use climate change as a means of opening the door to other relevant environmental subjects.

HOW RESPONSIBLE INVESTORS WORK WITH THE CHEMICAL SECTOR

When discussing investors' strategies, including in responsible investment, it is important to understand that those strategies can have different aims. While some strategies are aimed at improvement to *reduce specific risks* or *improve an investor's competitive position*, others are specifically aimed at *having a positive impact on a specified sustainability target*. While those aims are often interlinked, responsible investors' activities can support both

⁵ Source: [The Chemical Industry's Contributions to Climate Change](#)

goals simultaneously, but do not necessarily have to. Aiming for impact does provide investors with a competitive advantage, as it improves investor reputation. However, the reverse does not necessarily apply, as not all responsible investor strategies lead to a transformation push or a positive impact on the real economy.

In general, two means of influence on companies can be distinguished: investment decisions and active ownership. Responsible *investment decision* strategies include ESG integration, exclusion-inclusion strategies and investing in opportunities.

Environmental, Social and Governance Integration

ESG integration means the explicit consideration of ESG factors in investment decisions and portfolio construction. In each sector, a selection is made of ESG factors that are most material and hence financially relevant. *Natural capital dependencies in the chemical sector therefore only become relevant when the related risks influence individual companies' investment cases.* For the chemical industry, ESG factors such as product quality and safety, innovation strategy (particularly in the case of fine chemicals), climate change preparedness, fuel prices and water footprint are cited as factors which, combined with more traditional financial and economic metrics, lead to an aggregated view of each of the individual companies. It is expected that over time natural capital components will gain increasing priority among the factors used to assess chemical companies. ESG integration is mainly set up as a tool for the investor, who can use it to protect his or her assets and try to gain a competitive advantage.

Exclusion / inclusion in mainstream and sustainable funds

Portfolios are constructed on the basis of the funds' sustainability ambitions, but also investors' beliefs and the types of asset classes they invest in. Portfolio construction can focus on maximum diversification or be based specifically on certain investment beliefs and sustainability views. Many *mainstream responsible investment funds* include all companies, except those that systematically violate international treaties like the UN Global Compact. In addition to mainstream responsible investment funds, there are all kinds of competing sustainable and responsible investment funds, sometimes even within one asset manager, that pursue various levels of sustainability ambitions. What is regarded as 'sustainably managed' may differ from one investor to another, as well as from one fund to another. A cautious development that is taking place is **divestment** from high-risk activities or products that conflict with investors' sustainability ambitions. Examples are the recent divestment from tobacco and fossil fuels. There are also *best-in-class funds* that focus on the most sustainably managed companies within each sector. Here ESG scores are used to distinguish between the leaders and followers within each sector. The **real-world impact** that comes with certain business models is often not included in those assessments. This means that chemical companies can be included in these types of sustainable funds based on their strong ESG policies and management systems, *without actually having to deal with their negative real-world impacts.* By contrast, other investors have a very strict idea of how a sustainable future will or should look and only include in their portfolio or funds the companies and sectors that are in line with their vision of a sustainable world.

Investing in opportunities

Investors have always wanted to invest in opportunities. What is new, however, is that responsible investors have a clear preference for investing in opportunities that lead to solutions for societal challenges. Examples are SDG equity or credit funds, but green bonds and impact investments also fall within this category. There is a very strong desire amongst responsible investors to support companies that do well from an impact perspective or that provide solutions to societal problems. This is a development within responsible investment markets that could potentially have a beneficial effect on chemical companies that want to do well. Within stock markets, investors are increasingly taking proportionally higher stakes in companies that are seen as doing well. This potentially provides

those companies with an investor base that is loyal, long-term and stakeholder-focused. It is expected that in due course more collective commitments to societal impact targets, like the Dutch financial sector commitment on climate change, as well as achieving more common ground on how to define, monitor, measure and report progress around various natural capital themes, could accelerate investment in activities, projects and companies that are driving necessary transitions. *The financial sector can therefore be an important ally for the chemical industry.*

Active ownership

Alongside investment decisions, the other main strategy used by investors to reduce their risks and improve their impact is *active ownership, or voting and engagement*. Bond and equity investors often see this strategy as their main means of influence. Most engagements with the chemical industry are focused on either *climate change* or *product safety*. The most intense and structured engagement that is currently taking place with several chemical companies is the Climate Action 100+ initiative⁶. Another subject that has received plenty of attention in the investor community is the *production, use and disposal of plastic*. Most investor engagement activities are currently geared towards plastic users, like the packaging industry. However, there is increasing awareness amongst investors that solutions cannot be assessed in isolation and must be considered in the context of the whole plastics value chain. Furthermore, there are several other engagement initiatives focused on the chemical industry that are initiated by individual or smaller groups of investors. Those focus predominantly on *energy efficiency, renewable energy and product safety*. One respondent mentions that the chemical sector is currently one of the sectors that is being considered for engagement on biodiversity impacts, which is currently being set up.

CHEMICAL SECTOR NOT (YET) AT THE TOP OF ENGAGED INDUSTRIES DUE TO LIMITED CAPACITY AND DIVERSIFIED INVESTOR PORTFOLIOS

Currently, when reflecting on investor pressure on the chemical industry, various respondents mention that the chemical sector is not yet one of the principal industries in terms of investor engagement. That is remarkable, as investors believe the role of the chemical industry is crucial as part of efforts to green the economy. A comparison made by one of the interviewees is between Shell and BASF. Whereas Shell receives lots of pressure from investors and other stakeholders to change, investment pressure on BASF is much more moderate, even though both companies have comparable levels of sustainability challenges.

This is not believed to be a conscious decision by investors unwilling to engage with chemical companies, but *merely a result of investors with limited capacity and diversified portfolios having to prioritise*. Negative screening and engagement are not usually the result of individual investor agenda setting; investor pressure is often focused either on companies involved in severe controversies, where investors are obligated to act and where they see most financial risks, or on companies that are most exposed to reputational risks as a result of media and civil society attention. The chemical downstream suppliers, such as mining companies, as well as upstream customers such as retail, oil and gas, pharma and food companies, usually appear on many of the lists and thus receive more pressing and unsolicited investor attention.

RECOMMENDATIONS

For chemical companies:

The main recommendation for chemical companies from this research is not to wait for the turning point of increased regulation and capital constraints, but to take the ‘carrot’ (i.e. risk reduction and competitive advantages) instead of the ‘stick’. *If they do not anticipate sufficiently and wait, they will be too late*, with the result that there

⁶ This is a collaborative investor initiative to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change. The companies include 100 ‘systemically important emitters’, accounting for two-thirds of annual global industrial emissions, alongside more than 60 others with a significant opportunity to drive the clean energy transition. Various chemical companies such as **Bayer** and **BASF** are part of that list.

will then be greater pressure to change and perhaps greater cost. To accelerate change and use capacity effectively within the chemical sectors and subsectors, chemical companies are advised to collaborate with their peers: joint challenges require joint solutions. In dialogues with chemical companies' shareholders and bondholders a clear business strategy should be set out for the next four to six years that provides a well-founded picture of how a company is going to create value for its various stakeholders, nature and society in the medium to long term, while addressing its physical, operational, legal and financial risks. Natural capital should be one of the key capitals to be included in that strategy. Furthermore, by stepping out of the shadow into the spotlight, chemical companies can let transparency work in their favour. Companies that approach their challenges and opportunities proactively will be able to own, create and tell their story on their own terms and, if they are fast enough, gain a competitive advantage over their peers.

For investors:

The main recommendation for investors is to increase their understanding of the role of the chemical industry within natural capital challenges and opportunities. Sustainability risk analyses in chemical sector value chains, like those already being conducted for various commodity chains, would be a very relevant means of increasing this understanding, as would analyses focusing specifically on *real-world impacts*. Regular dialogues with and site visits to chemical companies would increase the shared understanding of specific opportunities or challenges. They would also provide a stronger incentive for chemical companies to ensure that natural capital challenges are indeed seen as relevant by the companies' shareholders. When natural capital challenges and opportunities are increasingly considered in the context of value chains, current chemical industry clients from a variety of sectors will be asked by their shareholders and bondholders to assess, monitor and deal with the impacts of their supply chains, increasing the pressure on chemical companies to transform. A more general recommendation for responsible equity and bond investors who want to contribute to society is to assess seriously how they can change their investment decision process to actually achieve this contribution. The influence potential of investment decisions will never be realised without sustainability ambitions starting to affect the most fundamental investor decisions.

EPILOGUE: NATURE IS OUR BUSINESS

At MVO Nederland we see the chemical sector as potentially one of the most important catalysts for a transition to a more sustainable, circular economy. That means a circular economy in which the value of nature (i.e. natural capital) is not only actively valued, but is finally seen as the ***cornerstone of human society*** and the worldwide economy that it really is. Nature, its biodiversity, and its ecosystems services such as a stable climate, are interlinked and interdependent, so much so that they effectively cannot be seen as separate from each other. For instance, a degraded piece of land, with a minimum of biodiversity, is ***most*** susceptible to climate change. Why? A less dense and layered green cover results in a lower overall capacity to hold water (so less water is available as a resource for communities and businesses), having greater sun and wind exposure (for biobased resources). This leads to much higher surface temperatures and more extreme and sudden *temperature changes* (resulting in a greater need for irrigation for the cultivation of biobased resources and more cooling for chemical processes), causing higher evaporation/transpiration in soils, plants and animals. Most life forms have evolved within rather narrow climatic bandwidths, with a high interdependency on other life forms (for food, nesting, pollination, seed dispersal, etc.). So, a landscape that has less capacity to hold water, in which top soils wash away because of a lack of green cover, harbours less and less (genetic) diversity in plants (leaving only the smaller subset of life forms with the capacity to deal with more extreme climates), and contains less water and has poorer soils. This results in even less green cover and capacity to store water and nurture life.

The mitigation of climate change therefore needs the richest possible biodiversity to be resilient enough to cope with more extreme climate change scenarios. In that sense, we can simply state that ‘nature is business’ if we look at the chemical sector and the economy as a whole. One of the main challenges we face as a global society is achieving an overall reduction in our negative impact on the wider environment (be it toxic runoff, CO₂ emissions, artificially intensified nitrification, etc.), as well as sourcing raw materials sustainably while considering natural capital impacts and dependencies. In that way we will move from having a negative impact on the world and the environment, to having a neutral impact. Or, better still: towards having a beneficial impact on nature and biodiversity.

Where do responsible investors and chemical industries meet?

Responsible investors do see the potential of chemical industries to be the game changer towards a sustainable society. There is a huge potential market for sustainably sourced products that promote sustainability in other sectors. However, investors could support chemical industries more by looking beyond climate and CO₂ reduction to implement a broader capitals perspective. The risks of not changing the chemical business, or changing too slowly, will ultimately be even greater and more costly for a business, but also for society as a whole. After all, there are no jobs on a dead planet.

Lastly, it would help to create more dynamics in this area if chemical industries could provide responsible investors with more insight into the nature of their businesses (products, processes, impact and dependency assessments and investments/divestments necessary to meet the climate objectives and to go beyond climate). This will help investors to be better running mates in industries’ quest to meet the SDGs and reduce the nature and climate risks that lie ahead, in such a way that both chemical industries and investors would say: nature is **our** business!