

Q3 2020 PHYSICAL RISKS



In our Q2 2019 newsletter, we discussed the impact of decarbonisation trends, while our Q3 2019 newsletter focused on the importance of biodiversity. While the global COVID-19 crisis brought a new emphasis to social issues for ESG investors in 2020, we also observe a growing recognition that the “E pillar” issue of climate change risk has broad and far reaching implications for companies and investors, beyond the issues of carbon price and risks to carbon intensive businesses that we’ve discussed. Physical and environmental risks from climate change can mean more than simply “stranded assets” for the Energy sector; by affecting supply chains, transport, insurance, and other costs of doing business, it can mean “stranded business models” affecting a broad range of industries. Markets and investors are taking notice, and as Cambridge Associates has noted, “investors that evolve more quickly to incorporate these risks and opportunities into their investment decision-making frameworks are likely to be better prepared for the future than their peers.”¹

Climate Change Disruption: Unfortunately, the Future Is Now Twelve years ago the World Resources Institute published a review that stated “Global warming may dominate headlines today. Ecosystem degradation will do so tomorrow.”² In recent years, with rising sea levels threatening coastal towns and wildfires rampant in Australia, the Amazon, and the American West Coast, this sentiment rings true. Since 2000 there have been at least 13 major climate events resulting in significant socioeconomic repercussions. The events include lethal heat waves, drought, hurricanes, fires, flooding, and depletion of water supply.³ The science indicates that these physical risks will not be slowing down, and the socioeconomic effects of a changing environment and biodiversity loss are large and often unpredictable.

Ecosystem Stress and Water Scarcity In the last 50 years, it is estimated that 60% of the Earth’s

examined ecosystem services have been degraded due to human impact.⁴ As one of the United Nations’ Sustainable Development Goals, water security has been a central component of global development work. The World Economic Forum Global Risk Report has listed water crises among its biggest risks for eight straight years. In the next 50 years, almost half of the 204 freshwater basins in the United States may be unable to meet demand for fresh water, according to a study in the journal *Earth’s Future*.⁵ In Europe, where investor concern over water is perhaps the strongest, it is estimated that more than 11% of the population and 17% of its territory have been affected by water scarcity, costing approximately \$100bn since 1980.⁶

A new McKinsey & Company report examines the effect and dependency of mining on water. The study found that 30%-50% of global operations of copper, gold, iron ore, and zinc are concentrated in regions where water stress is already high and worsening. In Chile, 80% of copper production is already located in areas with extremely high water stress and by 2040, it will be 100%. By 2050, 40% of Russian iron ore production will exist in areas of extreme water stress.⁷ Examples of the dependency of many industries on ecosystem services such as water are abundant. Water use in food and drink production, timber for packaging, furniture and paper, productive land for fruit, vegetables and fibres for clothes are just a few examples of industry dependencies on natural capital. In fact, a new analysis by the WEF & PwC argues that every industry will be affected by the availability of environmental resources. Climate change is creating material risks, today.^{8,9}

Business has been behind the curve. In a report from 2010, less than one in five companies saw biodiversity as an important business issue, and only two out of the world’s largest 100 companies managed it as a strategic risk, despite the mounting evidence that businesses face material risks through biodiversity dependencies.¹⁰ A more recent study of Fortune 500 companies found that less than half mentioned biodiversity in their sustainability reports, and only five set specific, measurable and time-bound targets.¹¹ A 2018 CDP survey has found that while businesses are becoming more aware of water-related risks, with over 75% of companies reporting that they are exposed to substantive water risks, they are “not actually reducing their consumption or putting in place policies to encourage water efficiency”. In fact, there has been a 50% rise in the number of companies reporting higher water withdrawal, mostly in the agriculture, manufacturing, and mineral extraction sectors.

Furthermore, fewer than a third of companies in these sectors have incentives in place for executives linked to water-related issues.¹² The implications are wide ranging, and the impact is significant. A study carried out by the UN Environment Programme puts the economic impact of biodiversity loss at between \$2-\$4.5tn annually and says this impact will be felt in product pricing, availability of products and financing, and supply chain disruptions for consumers, business and government.¹³

Implications For Investors An increasing number of initiatives and stakeholders recognise that biodiversity loss can create a material risk to the profitability of businesses and to potential losses for investors; businesses, investors and regulators are beginning to recognise the materiality of biodiversity impacts and dependencies. For example, the OECD Guidelines For Responsible Agricultural Supply Chains call on companies and investors to consider biodiversity impacts in conducting supply chain due diligence.¹⁴ However, assessing the materiality of biodiversity dependencies and effects can be challenging for companies. Consequently, integrating these physical risks into a risk management and reporting framework is often not prioritised.

Investors may bear part of the blame. We hypothesise that short-sighted financial markets may undervalue risks that appear uncertain or distant, and thus create adverse incentives; biodiversity risk assessment and mitigation has near term costs, but the long term benefits may historically have been lost on investors.



The loss of biodiversity impacts our raw material supply chain. We're highly dependent upon the earth and its ability to produce the natural resources we use to make food.

STEVE YUCKNUT
Vice President, Sustainability, Kraft

A recent report from the Climate-Related Market Risk Subcommittee, commissioned by the U.S. CFTC to advise financial regulators in the U.S. on climate risks, also suggests that financial markets had not accurately accounted for the risks of physical damage from climate change. The report stresses, "U.S.



A lot of our license not just to grow but, frankly, to continue operating, depends on how effectively we can demonstrate operational excellence in sensitive environments, so we have incorporated biodiversity thinking in our activities for some time.

ROXANNE DECYK
Executive Vice President, Global
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financial regulators must recognise that climate change poses serious emerging risks to the US financial system, and they should move urgently and decisively to measure, understand, and address these risks", and warns that failure to do so could "have cascading effects on portfolios and balance sheets and therefore systemic implications for financial stability".¹⁵ The report also recommended the SEC's guidance on climate risk disclosure to be updated to improve consistency among listed companies and that material climate risks must be disclosed under existing law, and climate risk disclosure should cover material risks for various time horizons. This CFTC report represents a significant departure from the regulatory trends witnessed during the current U.S. administration, and only underlines the dramatic shift taking place in mainstream thinking around investment and climate risks.

We believe investors should not wait for regulation to compel changes. Investors can work to ensure that physical risks arising from or exacerbated by climate change, including those surrounding water stress and biodiversity loss, are accounted for in investment decision making today. For example, a company's reliance on at-risk ecosystem services, as well as the effect of ecological stresses on the company's operations, are inputs in our ESG investment framework. Examples of assessment data include percentage of operations in business segments with high water intensity or in countries with water shortages, a company's impact and reliance on biodiversity, and exposure to climate-related hazards such as storms or floods.

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Investors can also encourage companies to address these issues directly. A 2019 study that asked 1,168 CFOs what their companies are doing on climate change demonstrated that stakeholder pressure leads to action. The study found that a third of the companies that were not under pressure from any particular stakeholder said they were not taking any action to manage, mitigate or adapt to climate change. However, only 3% of companies that experienced stakeholder pressure failed to take any action.¹⁶ ECO Advisors partakes in collaborative engagements on relevant issues relating to climate change mitigation and preserving biodiversity. Through collaboration, investors can pool resources and form an effective and representative voice. A sample of our engagements includes the Global Investor Engagement on Meat Sourcing, which calls on fast food companies to de-risk their meat and dairy supply chains against climate and water risks, the investor Statement on Deforestation and Forest Fires in the Amazon, the Cerrado Manifesto Statement of Support, and the PRI Investor Working Group on Sustainable Palm Oil.

REFERENCE FOOTNOTES

¹ Varco, Chris, et al. “The Materiality of Sustainability for Investors.” Cambridge Associates, 18 June 2020.

² Corporate Ecosystem Services Review, World Resources Institute et al., 2008

³ <https://www.mckinsey.com/business-functions/sustainability/our-insights/confronting-climate-risk>

⁴ <https://www.millenniumassessment.org/en/Condition.html#:~:text=In%20addition%2C%20approximately%2060%25%20,%2C%20natural%20hazards%2C%20and%20pests>

⁵ <https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018EF001091>

⁶ https://ec.europa.eu/environment/water/quantity/scarcity_en.htm

⁷ https://www.ooskanews.com/story/2020/02/mckinsey-company-describes-water-stress-mining-sector_179224

⁸ <https://www.pwc.co.uk/assets/pdf/wef-biodiversity-and-business-risk.pdf>

⁹ http://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf

¹⁰ <https://www.industryweek.com/finance/article/22010709/the-economics-and-business-risks-of-biodiversity-loss#:~:text=The%20research%2C%20which%20was%20conducted.supply%20chain%20disruptions%20for%20consumers>

¹¹ <https://reports.weforum.org/global-risks-report-2020/save-the-axolotl/#view/fn-31>

¹² https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/004/232/original/CDP_Global_Water_Report_2018.pdf?1554392583

¹³ <https://www.industryweek.com/finance/article/22010709/the-economics-and-business-risks-of-biodiversity-loss#:~:text=The%20research%2C%20which%20was%20conducted.supply%20chain%20disruptions%20for%20consumers>

¹⁴ <https://www.oecd-ilibrary.org/sites/45adbd0e-en/index.html?itemId=/content/component/45adbd0e-en>

¹⁵ <https://cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf>

¹⁶ <https://www2.deloitte.com/us/en/insights/topics/strategy/impact-and-opportunities-of-climate-change-on-business.html#:~:text=Besides%20the%20most%20obvious%20physical,markets%20and%20regulation%20that%20can>