

# Future of Earth

Investing in solutions for a more sustainable planet

Throughout history, human ingenuity has prevailed in the face of numerous challenges. One recent example is the rapid development of the COVID-19 vaccine. Looking to the future, one of the biggest hurdles we face is what economists have called the “environmental credit crunch.” Our current standard of living and overall level of consumption are unsustainable in relation to our planet’s finite natural resources. As global citizens, consumers, and investors, we are stewards of the Earth. We have the power to shape a more sustainable path that will allow us to continue to evolve our quality of life while preserving our planet for the next generation. The “Future of Earth” rests with us.

Urgent action is needed to combat the growing climate crisis. From extreme weather to unsafe air quality, the environmental and human toll of climate change has become apparent. Natural disasters caused an economic loss of USD 268 billion globally in 2020, according to Aon.<sup>1</sup> In the US alone, 22 natural disaster events took a financial toll of more than USD 1 billion each, a new annual record and double the number recorded in 2019.<sup>2</sup>

A coordinated effort between the public and private sectors will be critical to solving the challenges ahead. For investors, the transition to a more sustainable future presents both risks and opportunities. While climate change is a rising source of uncertainty in assessing asset values, more companies are endeavoring to reduce their environmental footprint and be better positioned for the future. Those that are innovating to solve climate-related challenges will enjoy robust long-term growth prospects.

<sup>1</sup> Aon Impact Forecasting, “Weather, Climate & Catastrophe Insight: 2020 Annual Report,” <https://www.aon.com/global-weather-catastrophe-natural-disasters-costs-climate-change-2020-annual-report/index.html>

<sup>2</sup> NOAA National Centers for Environmental Information 2021, “Billion-Dollar Weather and Climate Disasters,” <https://www.ncdc.noaa.gov/billions/>

## Investment takeaways

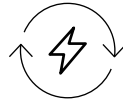
A range of sustainable and thematic investment strategies can help investors integrate these corporate-level considerations into their portfolio. Thematic investments typically target companies with revenue exposure to unique or innovative products and services, while sustainable investment strategies consider company operations alongside a number of environmental, social, and governance factors. Notably, thematic and sustainable investments often overlap, and many strategies will consider both of these factors in their investment analysis.



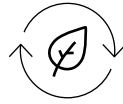
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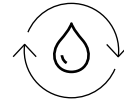
### People, health, and communities



### Energy



### Land



### Water

Air pollution is the fourth most common cause of death globally. It leads to respiratory and cardiovascular disease and is linked to certain forms of cancer. Other effects of climate change on human health include extreme heat in larger cities and the potential for wider spread of infectious disease by insects as temperatures rise.

Climate change not only impacts human health and mortality; it also influences the sustainability of our communities. These adverse effects are disproportionately felt in parts of the emerging world, leading to displacement of low-income populations, and, in the most extreme cases, have put some areas at risk of becoming uninhabitable. Beyond the human toll, there is a large economic cost associated with these trends.

Energy-related emissions account for over two-thirds of global greenhouse gas emissions, highlighting the need to end our reliance on fossil fuels. A complete decarbonization and transition to clean fuels is an enormous task. History has shown that scaling up supplies of any energy resource takes decades, and this is why it is important to begin the process now.

The good news is that the pace of the transition appears brisk. We expect the market share for renewables to rise rapidly at the expense of coal and oil, the two largest energy sources. Still, fossil fuels may retain a major role for decades, given their widespread use.

Scalable and affordable clean energy technologies in transportation fuels and for industrial use are under development, but many remain immature. For now, ensuring energy security requires a diversified, “all of the above” strategy to achieve a successful transition to a clean energy future.

Sustainable land use is key to meeting climate targets. In its landmark Global Assessment Report on Biodiversity and Ecosystem Services, the UN estimates that 75% of the earth’s surface has been severely altered by human actions, while the IPCC estimates that about 21–37% of total emissions are attributable to the food system.

Tackling environmental issues and biodiversity loss is a huge and complex task. To reduce environmental harm and systemic risks, we need to rethink how we produce and consume the food we eat and the clothes we wear, their respective supply chains, and how we live. We need to enhance sustainable supply chains and trade.

The good news is that investors and governments alike are awakening to the risks involved in land mismanagement and the accelerating destruction of nature, as well as the opportunities to invest in conservation and land management solutions.

Water is abundant on a global scale. Seventy-one percent of the Earth is covered by water; however, only 2.5% of the world’s water is freshwater, and of this, 69% is locked in glaciers or frozen ice caps.<sup>3</sup> Despite this inflexible supply, demand is constantly growing. Since the beginning of the 20th century, from 1900 to 2010, global water withdrawal increased 7.3 times, whereas the world population grew 4.4 times.<sup>4</sup>

Long-term developments such as a growing population, rising living standards, industrialization in emerging markets, and a lack of infrastructure heavily affect water supply and demand. Climate change is another vital factor influencing the global water supply in terms of quality, quantity, and timing. The UN estimates that 2.2 billion people lack safely managed drinking water, and nearly 700 million could be displaced by 2030 due to water scarcity.

### Where to invest

- Treatments for illnesses linked to climate change, including drugs and medical devices
- Urban planning solutions and smart cities technologies
- Companies that effectively address their employees’ working conditions and their exposure to physical climate risks

- Electric transport, fuel cells, batteries and alternative fuels
- Carbon capture and energy efficiency solutions
- Companies that manage their carbon emissions effectively

- Land use monitoring and supply chain validation
- Smart agriculture technologies
- Sustainable production and consumption practices and solutions

- Smart water networks, water automation systems and meters
- Water testing and desalination equipment
- Companies that effectively manage their water consumption in operations and supply chains

<sup>3</sup> Igor A. Shiklomanov, “World Fresh Water Resources” chapter in “Water in Crisis: A Guide to the World’s Fresh Water Resources,” Peter H. Gleick (editor), Oxford University Press, New York, 1993

<sup>4</sup> Food and Agriculture Organization of the United Nations, Water use. Extracted from: <http://www.fao.org/aquastat/en/overview/methodology/water-use/> in 2020

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