Insights into responsible investing



Wealth Management

Q1 2025

Sustainability in action: Key insights from recent conferences

2024's Climate Week NYC, the Principles of Responsible Investment (PRI), and the United Nations Biodiversity Conference of the Parties (COP16) all highlighted one powerful theme: sustainability requires collective and immediate action with 2020–2030 being called the "transformative twenties."

Quoting PRI keynote speaker Mark Carney, the UN Special Envoy on Climate Action and Finance: "You are the first generation of investors to understand the importance of including climate risks. But you are also the last generation that can do something to mitigate them." These forums brought together research insights, concerns, and solutions on the intersecting issues of climate, finance, and social equity.

Financing the low carbon transition in a just order

A "just transition" focuses on moving to a low-carbon economy in a way that is fair and inclusive for everyone. The shift in focus in recent years away from portfolio decarbonization toward financing real world decarbonization was a consistent theme discussed during the Climate Week and the Principles of Responsible Investment conference, including the growing appetite and comfort in transition (brown to green) finance when supported by transparent and credible transition plans.¹ As we shift from fossil fuels to renewable energy, we think it's essential to consider the effects on workers and communities. Supporting workers through education, training, and social protections is important, especially in industries like coal and oil.

Indigenous rights and priorities

Indigenous peoples and local communities often inhabit and protect some of the world's most biodiverse and carbon-rich areas. Protecting their land rights is an important climate strategy that also fulfills human rights obligations, particularly as these ecosystems face threats from deforestation and mining. Discussions at the PRI emphasized the need for investment strategies that help empower Indigenous communities as well as respect Indigenous land rights and mandates.

Corporate accountability and transparency

With greenhushing concerns leading some companies to withdraw certain reporting, we see a risk of diminishing data quality for solutions. The necessity for robust data on emissions, biodiversity impacts, and supply chain practices can help keep investors informed. Alignment among globally recognized standards, such as those established by the International Sustainability Standards Board (ISSB) and the Task Force on Climate-Related Financial Disclosures (TCFD), can help enhance corporate accountability and transparency.

Biodiversity and nature-based solutions

COP16, the UN summit on biodiversity, assessed nations' progress toward targets of protecting 30% of the globe's land and sea areas, halving food waste, and materially reducing the use of harmful chemicals. According to Forbes, COP16 ran into overtime and ended with some achievements but many issues unresolved.²

Two of the wins from COP16 included a decision to incorporate Indigenous voices in future biodiversity decisions and the establishment of the "Cali Fund," a benefit-sharing mechanism. The "Cali Fund" initiative addresses how certain industries like pharmaceuticals and animal and plant breeding, that benefit from biodiversity, should share profits with developing countries, Indigenous Peoples, and local communities since biodiversity is a shared global resource. Despite some advances, COP16 left deep divisions in how biodiversity should be financed.

Continued on next page

Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.

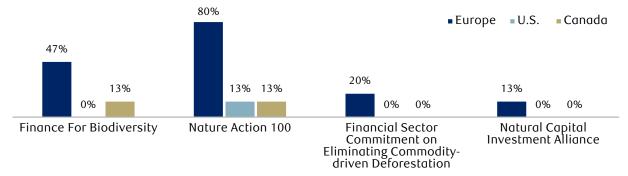
PAGE 2 OF 9 • Q1 2025 SUSTAINABILITY IN ACTION

Investments in nature-based solutions, including reforestation, wetland restoration, and sustainable agriculture, were called out as important for preserving ecosystems while mitigating climate impacts. RBC Capital Markets observes a growing number of funds focusing on biodiversity and ecosystem restoration. As focus on biodiversity grows, exclusions of palm oil and pesticides are becoming more common.

Investor response

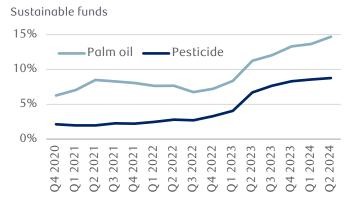
The three conferences, all held near the end of 2024, placed significant focus on blended finance, which combines public, private, and philanthropic capital, as a viable solution for decarbonizing emerging market economies, where traditional investment channels may overlook potentially risky projects. Many discussions also included a call for more education for investors on the topics of responsible investing.

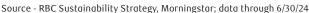
Percentage of top asset managers signed onto biodiversity- and nature-related investment groups

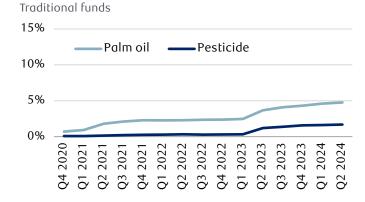


Source - RBC Sustainability Strategy, company websites; based on analysis of top 15 firms in terms of assets under management (AUM) in each region as ranked by Morningstar

Percentage of European equity funds with explicit palm oil and pesticide exclusions











How to incorporate RI into annual planning

Leveraging our responsible investing workbook

New year, new goals?

The start of a new year offers a good opportunity to review your personal as well as financial goals. Being aware and cognizant of your plan is crucial, and as you reflect on the past year and look ahead toward the future, it can be a prudent time to decide to either make some changes or stay the course.

Have you considered incorporating new solutions into your investment portfolio? Have you considered responsible investing and how to incorporate it into your portfolio?

New topics

Responsible Investment is still a new topic for many to understand. Learning the terminology is step one. Many individuals have different definitions of what responsible investing means to them, and this can lead to the various applications of responsible investing: integration of environmental, social, and governance (ESG) factors; ESG screening and exclusions; thematic ESG investing; and impact investing.

Investors can implement responsible investing into their portfolios through several strategies and across different asset classes. These approaches are not mutually exclusive. An investment product or portfolio can incorporate more than one strategy, and multiple strategies can be applied simultaneously within the investment process.

An investor may be interested in exploring the various approaches to better understand if and when a particular approach may fit into their financial plan. We think now is an opportune time to understand the definitions and to consider any future portfolio implementation.

Determine your approach

Different goals may lead to a different responsible investing approach, as you may want to:

- Incorporate material ESG data alongside traditional financial analysis
- Invest in companies with responsible environmental and social practices
- Exclude certain areas to align with personal values and beliefs
- · Support specific themes, issues, or causes
- Target innovations that aim to help solve social or environmental challenges
- · Invest in a measurable impact
- · Consider charitable or philanthropic giving strategies

Getting started

Education is a great place to start when it comes to investment-related topics. Reflect on when and how the various applications of responsible investing may fit into an investment portfolio. Contact your advisor to learn more about this topic and the capabilities available, including a copy of our Responsible Investing workbook.

Generational wealth transfer presents an opportunity for families to further discuss this topic. Responsible investing can help bridge the generation gap as it can spark discussions around various family values and principles.

Consider setting up a financial wellness check-in on your personal financial goals and to see how responsible investing may fit into your investment portfolio in the future.

Responsible investing is an umbrella term encompassing the approaches used to deliberately incorporate environmental, social, and governance (ESG) considerations into an investment portfolio. We believe there are four main applications of this data, and each applies this data very differently. The four applications are:

ESG integration

Systematically incorporating material ESG factors into investment decision-making to identify potential risks and opportunities and help improve long-term risk-adjusted returns.

ESG screening & exclusion

Applying positive or negative screens to include or exclude assets from the investment universe. Thematic ESG investing

Investing in assets involved in a particular ESG-related theme or seeking to address a specific social or environmental issue.

Impact investing

Investing in assets that intend to generate a measurable positive social or environmental impact.



Wind as a key investable theme

Demand for power is surging, driven by energy-hungry AI technologies, a growing global population, emerging economies, and an industrial resurgence. As the world contends with the impacts of climate change, we see an opportunity for renewable power sources to be a solution.

To meet this need, McKinsey projects renewable energy sources to double in the power mix, potentially accounting for up to 80% of electricity generation by 2050.³ Wind energy is also more equally distributed across the globe compared to fossil fuels, which means that countries and communities can harness its power regardless of economic status or geographical location.⁴

What is wind power?

Wind power is generated by turbines that are placed on land or on offshore open spaces. When the wind spins the blades of the turbines, the generator on the inside converts mechanical and kinetic power into electricity. While there are some environmental challenges with respect to wind power, such a process has less impact on the environment as it does not burn any fuel, does not require water to cool off, and does not pollute the air in the process, according to the U.S. Energy Department.⁵

Once electricity is generated, it can be supplied via the electrical grid, or stored for future use with batteries and pumped-storage hydropower. Small individual wind turbines can produce enough to power a home while the biggest turbines can even supply a neighborhood, according to National Geographic.

What are wind farms?

Wind turbines can be standalone structures, or they can be clustered together in what is known as a "wind farm." Onshore wind farms are usually located on top of a mountain or in an otherwise blustery location to take advantage of natural winds. The main challenges include land use conflicts and noise concerns.

Due to technological advancements, windmills can be placed in the water, creating "offshore wind farms." The main advantages include their distance from local populations and the significant space available to dramatically increase the size and number of turbines. Electricity produced by offshore wind turbines travels back to land through a series of cable systems and connects to the electrical grid. The global commissioned capacity of offshore wind increased from three gigawatts (GW) in 2010 to approximately 66 GW in 2023—roughly enough capacity to meet Spain's electricity demand, according to McKinsey.6

Opportunities

Advancements in areas such as turbine design, materials, and energy storage capacity are enabling the construction of larger windmills which can capture more energy from wind. These innovations, combined with improved grid integration, enhance the reliability of wind energy, making it a more viable option for power generation, in our view.

Between 2010 and 2022, the cost of wind power fell by 85%. We believe this dramatic decrease has positioned wind as a competitive alternative to fossil fuels, appealing to both investors and policymakers seeking sustainable solutions.⁷

As a result, in 2023, global spend on renewable energy exceeded that of fossil fuels by nearly two to one, reflecting a shift in investment priorities, according to the International Energy Agency (IEA). Moreover, investments in wind and solar technologies are generating 2.5 times more energy output than a decade ago, showcasing significant progress in energy production.⁸

Bloomberg research indicates that wind investment reached \$217 billion in 2023, with offshore wind projects hitting a record \$76.7 billion. This 79% increase from the previous year highlights the accelerating momentum in the offshore wind sector.⁹

Opportunities related to climate mitigation strategies, those that prevent or reduce greenhouse gases in the atmosphere, such as renewable energy (solar and wind), may be of interest to certain investors. While thematic investments associated with the environment may be more volatile than more diversified strategies in the short term, we believe they are part of a secular transformation of the economy and are likely to endure over the long term.¹⁰

Challenges

The outlook for wind energy is promising, in our view, but it is not without challenges. Energy production can fluctuate with seasonal changes and climate shocks. It's critical that the engineering of wind farms is able to ensure that windmills can withstand extreme weather conditions and account for batteries to store energy generated during periods of favorable weather conditions.

While up to 95% of the materials in a wind turbine—including steel, aluminum, and copper—can be recycled, the blades present a challenge. They are made from composite materials like fiberglass, which are difficult to process; as a result, they often end up in landfills at the end of their lifecycle, according to a report by the BBC. This creates an environmental issue as the large, durable blades can take decades to decompose. Research is underway to find more sustainable, recyclable blade materials.¹¹

Compared to its counterpart, solar energy, wind energy is lagging in development. Solar has been growing at a faster rate mostly due to the conveniently small size of panels; wind often requires larger spaces and equipment for installation.¹² Those issues underscore the need to speed up the development of wind projects and for additional support from governments, communities, and global regulations.

The global renewable energy sector has already seen growth over the past decade, and we see attractive opportunities within the renewable energy space, particularly for wind, in the years to come.

PAGE 7 OF 9 • Q1 2025 MAKING WAVES WITH BLUE TECH



Making waves with Blue Tech

The oceans and climate are inextricably linked, and oceans can play a big role in addressing climate change as they are the planet's greatest carbon sink.¹³ According to the UN, oceans generate 50% of the oxygen we need, absorb 25% of all carbon dioxide emissions, and capture 90% of the excess heat generated by these emissions.¹⁴ But with so much pollution in the atmosphere over the centuries, it's likely going to take more than nature to restore the balance.

The blue economy

With the increased focus on meeting net-zero goals and significant developments in technological capabilities, we see significant growth for the blue economy, which, as per the World Bank's definition, encompasses "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health."

In other words, the blue economy includes all economic activity that directly or indirectly is linked to the oceans, seas, and coasts, including the responsible utilization of their natural resources. For example, blue economy activities include fishing and aquaculture, coastal tourism, renewable energy, water desalination, undersea cabling, seabed extraction industries, and deep sea mining, as well as many others. The UN estimates the Sustainable Blue Economy's annual economic value at \$2.5 trillion globally, which is equivalent to the world's seventh-largest economy.

What is Blue Tech?

One of the UN's 17 Sustainable Development Goals (SDGs) is "Life below water" and aims to conserve and sustainably use the oceans, seas, and marine resources. This SDG sets out seven targets for a sustainable ocean economy by 2030. We believe reaching those targets requires significant developments, and innovators across the globe are developing business models and cuttingedge capabilities in the blue economy, creating what is known as the Blue Tech industry. Blue Tech or blue technology refers to a wide range of new, innovative technologies focused on promoting the environmentally sustainable use of ocean resources while preserving the health of water ecosystems.

Activities

Ocean monitoring

Blue Tech is used for monitoring and preserving the health of marine ecosystems. It involves the use of radars, acoustics sensors, satellites, and monitoring systems to track water quality, detect pollution, study marine biodiversity, and implement effective conservation measures. Examples of such innovations include robotic floats that can track various metrics, tide gauges that measure sea levels, oil spill detection systems, and many other tools that aim to help reduce pollution and maintain the cleanliness of coastal areas.¹⁷

Bioresources management

According to the UN's 2024 Sustainable Development Goals Report, overfishing and poor resource management are driving continued declines in fish populations. Blue Tech involves the development of AI-based, innovative techniques for marine spatial planning, fish farming, shellfish cultivation, and the environmentally sustainable harvest of marine resources to help ensure the long-term health and productivity of marine ecosystems.¹⁸

Ocean exploration

Blue Tech also includes the use of autonomous vehicles for remote operations, seabed mapping, and marine geomatics, and radar acoustics sensors to map the seafloor, study marine life, locate wrecks, and collect valuable data for scientific research.¹⁹

The future of Blue Tech

The blue economy represents the intersection of marine and environmental science with technological progress, advocating for more sustainable use of ocean resources. The sector emerged in response to changing ocean conditions and the impacts of climate change on our aquatic resources, and is driving the use of adaptive tools to inform decisions related to managing fisheries, oceans, and coastal infrastructure. Blue Tech is characterized by highly innovative companies, with a focus on research and development as well as collaborations with government and educational research centers. Market opportunities are broad, in our opinion, with a significant international market in areas such as marine transportation, ocean renewable energy, fisheries & aquaculture, and seabed mining. By embracing these Blue Tech practices, we can help pave the way for a more prosperous and resilient future for "life below water."20

Sources cited

- 1 Themes from Climate Week NYC 2024. RBC Capital Markets, The Sustainability Scoop (Oct. 1, 2024). https://www.rbcinsight.com/wm/Share/ResearchViewer/?SSS_B6C6B0EF4813D853DED9EB9D18B363C9
- 2 COP 16's Chaotic End: What It Means For The Future Of Biodiversity. David Carlin, Forbes (Nov. 4, 2024). https://www.forbes.com/sites/davidcarlin/2024/11/04/cop-16s-chaotic-end-what-it-means-for-the-future-of-biodiversity/
- The Global Energy Perspective 2024. McKinsey & Company (2024). https://www.mckinsey.com/industries/energy-and-materials/our-insights/global-energy-perspective
- 4 Are renewable energy sources more evenly distributed than fossil fuels? I. Overland, J. Juraev, and R. Vakulchuk, Renewable Energy 200 (2022). https://www.sciencedirect.com/science/article/pii/S0960148122013969#sec4
- 5 Advantages and Challenges of Wind Energy. U.S. Department of Energy, accessed Dec. 18, 2024. https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy
- 6 Offshore wind: Strategies for uncertain times. McKinsey & Co. (2024). https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/offshore-wind-strategies-for-uncertain-times
- 7 Canada's Energy Transformation: An Outlook of Supply and Demand In the 2030s. RBC Thought Leadership (2024). https://thoughtleadership.rbc.com/canadas-energy-transformation-an-outlook-of-supply-and-demand-in-the-2030s
- 8 World Energy Investment 2024: Overview and key findings. International Energy Agency (2024). https://www.iea.org/reports/world-energy-investment-2024/overview-and-key-findings
- 9 Offshore Wind Investment Hit All-Time High in 2023. Oliver Metcalfe, BloombergNEF (Feb. 7, 2024). https://about.bnef.com/blog/offshore-wind-investment-hit-all-time-high-in-2023/
- 10 Institutional Investors Are Trying to Tell Us Something About ESG. Thomas Kuh, Ignites (Nov. 5, 2024). https://www.ignites.com/c/4672094/623654/institutional_investors_trying_tell_something_about
- 11 When wind turbine blades get old what's next? Michael Winrow, BBC (March 11, 2024). https://www.bbc.com/news/business-68225891
- 12 A Wind Power Crisis Is Holding Back the World's Green Energy Goal. Will Mathis and Josh Saul, Bloomberg (Oct. 22, 2024). https://www.bloomberg.com/news/articles/2024-10-23/wind-power-crisis-is-threat-to-world-s-renewable-energy-target
- 13 The OceanTech Wave: Diving Deep for Climate Action. Andrew Carey, RBC Thought Leadership (June 11, 2024). https://thoughtleadership.rbc.com/the-oceantech-wave-diving-deep-for-climate-action/

- 14 The ocean the world's greatest ally against climate change. United Nations, accessed Nov. 18, 2024. https://www.un.org/en/climatechange/science/climate-issues/ocean
- 15 What is the blue economy? London School of Economics and Political Science (Dec. 11, 2024). https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-blue-economy/
- 16 Sustainable Blue Economy. UN Environment Programme, accessed Dec. 17, 2024. https://www.unep.org/topics/ocean-seas-and-coasts/ecosystem-based-approaches/sustainable-blue-economy
- 17 Monitoring Platforms. U.S. National Oceanic and Atmospheric Administration, accessed Dec. 17, 2024. https://globalocean.noaa.gov/monitoring-platforms/
- 18 Integrated oceans management. Government of Canada, updated Aug. 9. 2024. https://www.dfo-mpo.gc.ca/oceans/management-gestion/index-eng.html
- 19 Ocean technologies. Government of Canada, updated July 31, 2017. https://ised-isde.canada.ca/site/shipbuilding-industrial-marine/en/ocean-technologies
- 20 What is the Blue Economy? Blue Robotics Inc. (May 30, 2023). https://bluerobotics.com/what-is-the-blue-economy/

U.S. Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.

In the U.S., RBC Wealth Management operates as a division of RBC Capital Markets, LLC. In Canada, RBC Wealth Management includes, without limitation, RBC Dominion Securities Inc. (RBC DS)*, which is a foreign affiliate of RBC Capital Markets, LLC. *Member – Canadian Investor Protection Fund. This document has been prepared by an employee of RBC Wealth Management in the U.S. for use by RBC Wealth Management in the U.S. and RBC DS in Canada. Each of the aforementioned corporate entities and the Royal Bank of Canada are separate corporate entities which are affiliated.

At RBC Wealth Management, Responsible Investing is an umbrella term encompassing the approaches used to deliberately incorporate environmental, social and governance (ESG) considerations into an investment portfolio. The application of certain approaches may cause a strategy to forgo investment opportunities available to strategies that do not use such approaches. This may cause those strategies to underperform a benchmark that does not consider ESG factors. There is no single definition for the use of ESG data therefore terminology may be different across the industry. Past performance is no guarantee of future results. This material has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. All opinions and estimates constitute the author's judgment as of the date of this publication, are subject to change without notice and are provided in good faith but without legal responsibility. It is not possible to invest directly in an index. Nothing in this communication constitutes legal, accounting or tax advice or individually tailored investment advice. RBC Wealth Management does not provide tax or legal advice. All decisions regarding the tax or legal implications of your investments should be made in connection with your independent tax or legal advisor. The information contained herein has been derived from sources believed to be reliable, but no representation or warranty, express or implied, is made by RBC Wealth Management, its affiliates or any other person as to its accuracy, completeness or correctness.

© 2025 RBC Wealth Management, a division of RBC Capital Markets, LLC, registered investment adviser and Member NYSE/FINRA/SIPC. All rights reserved.