

Mighty oaks from little acorns grow:  
*Sovereign wealth funds'*  
*progress on climate change*



# Message from IFSWF and OPSWF

The first time that the International Forum of Sovereign Wealth Funds (IFSWF) discussed the financial impact of climate change was at our 2016 annual meeting *Investing in a Climate of Change* hosted by the New Zealand Superannuation Fund in Auckland.

For many of our members, this was the first time they had considered this issue in any depth and they had many questions around why this topic was relevant to them, how it would affect their portfolio and whether they needed to implement measures to integrate the risks and opportunities into their investment process.

Fast forward four years, and it is noticeable how much progress has been made. Less than a year after the IFSWF meeting in Auckland, six of the world's largest sovereign wealth funds formed the One Planet Sovereign Wealth Funds (OPSWF), under the auspices of the One Planet Summit and the Élysée Palace. These institutions pledged to focus on the issue of climate change and work towards creating a set of principles to apply across their portfolios. Less than a year later, they published the OPSWF Framework. In 2019 a group of the world's largest asset managers that counted the OPSWF members among their biggest clients came together to support the design and integration of climate-related strategies, methodologies and indicators. In 2020, the OPSWF Network expanded to 14 sovereign wealth funds, 14 asset managers and five private investment firms, with a combined \$30 trillion assets under management and ownership, all of whom are working towards implementing the Framework.

This progress has also been noticeable in sovereign wealth funds' investment behaviour. IFSWF's database shows that sovereign wealth fund investments in agritech, forestry and renewables increased almost six-fold from eight investments valued at \$324 million in 2015 to 18 investments valued at \$2 billion in 2020, a total of over \$5 billion invested over the last five years. In 2020, amid the challenges of the coronavirus pandemic, investors' focus on environmental, social and governance issues (ESG), including climate change, has intensified.

In response, and with a lack of systematic evidence from across the sovereign wealth fund industry, IFSWF and OPSWF launched a unique survey to shed light on sovereign wealth funds' attitudes to climate change and how they integrate it into their investment and governance processes.

In September 2020, we circulated a wide-ranging, first-of-its-kind survey to all IFSWF and OPSWF members to analyse whether and how they perceive climate change considerations as aligned with their investment horizons in their decision-making; exercise their ownership rights to encourage companies to address material climate change issues, and integrate climate change considerations into their investment process. These key topics reflect the three pillars of the OPSWF Framework.

For the first time, in this report, we can provide evidence of how sovereign wealth funds think about climate change and implement related strategies. We also provide recommendations about how sovereign wealth funds can further manage the climate-related risks and opportunities and strive for sustainable value creation for current and future generations of their citizens. We will continue to work with our members to facilitate open discussion on these and related topics, to strengthen the community. We hope that this survey promotes a deeper understanding of sovereign wealth fund activity on this important topic.

# Executive Summary

This report presents the findings from the first comprehensive survey of sovereign wealth funds' attitudes to climate change, launched in September 2020. The findings represent the responses from 34 sovereign wealth funds from around the world and additional interviews. Given their size and influence in the financial system, these institutions can scale up and accelerate the transition to a low-carbon economy, while managing the investment portfolio risks and opportunities posed by climate change.

The report demonstrates that there is a broad consensus among sovereign wealth funds that they – and other investors – need to take immediate action to mitigate the effects of climate change: 93% recognise that climate change is a risk and/or opportunity for their portfolios. The majority also agree that financial markets are under-pricing climate change risks and that unchecked climate change will leave future generations of their citizens worse off.

Eighty-eight per cent of sovereign wealth funds surveyed claimed to take climate change into account in their investment processes in some way, though the survey highlights some sharp differences in how systematic and sophisticated these approaches are.

Slightly more than a third of respondents (36%) currently have a formal climate change strategy in place. Of these, 55% have adopted these policies since 2015, with 30% having introduced policies since 2018. Although most of the attention to the issue appears nascent, a few early adopters, notably New Zealand Superannuation Fund and Norges Bank Investment Management, have been on this journey for more than ten years.

Encouragingly, 60% of sovereign wealth funds report that Board or CEO-level executives are now responsible for climate change within their organisations, demonstrating that the majority recognise the strategic importance of the topic. Further, 30% of responding institutions have more than 10% of their portfolios invested in climate-related strategies, suggesting some funds are indeed shifting capital, although there is scope for accelerating action.

The report reveals that many sovereign wealth funds are focused on finding opportunities in climate solutions such as renewable energy generation, energy efficiency projects and low-emission transport that have a present-day investment case and return profile. Approximately three-quarters of respondents that pursued opportunities related to the low-carbon economy thought these sectors would yield the best returns over time.

More than half report undertaking climate-related engagement with portfolio companies, while 14% have divested based on environmental considerations.

The survey also revealed that sovereign wealth funds are currently focusing their climate change efforts on real assets, such as property and infrastructure, and privately held companies, while multi-asset, and/or whole portfolio approaches, are still rare.

The survey highlighted two main barriers to action: finding appropriate data on which to base decisions and convincing stakeholders of the business case for action. On the first point, OPSWF members recently signed a joint statement calling for enhanced climate-related financial disclosure, adding their voice to the growing international movement to improve the quantity and quality of climate-related financial data. On the second, it is encouraging to note that only 10% of sovereign wealth funds surveyed expect climate strategies to lead to negative returns in the short term and just 3% expected long-term negative returns from implementing such strategies. Forty-three per cent expect positive long-term returns. We surmise that evidence for the business case and stakeholder buy-in could be enhanced if sovereign wealth funds improve their reporting on the issue; over half of respondents do not publicly disclose any information on their climate change approach.

Overall, the survey shows that sovereign wealth funds are increasingly considering climate risks and opportunities in their investment decisions. However, they could be more ambitious and systematic in their approaches. A few early movers demonstrate high levels of sophistication, whereas the majority are taking tentative – but important – steps in the right direction.

We will repeat the survey at the end of 2021 and hope to see more sovereign wealth funds apply a more strategic and systematic approach to climate change in their portfolios.

#### **Six recommendations arise from the survey findings:**

- 1. Adopt and implement climate-related policies.** This should include a commitment to take action in integrating material climate risks and opportunities in core investment decision-making. The OPSWF Framework provides common principles from which to begin.
- 2. Seek out the appropriate talent and expertise.** This will help the design and implementation of a strategy for the integration of climate risks and opportunities, and the development of a strong financially focused business case for action.
- 3. Explore board member and executive education.** This will help expedite the adoption and communication of such strategies and is particularly important where these individuals are directly responsible for the approach taken.
- 4. Use metrics** to show not only climate impact (i.e. success in reducing carbon exposure) but also comparable returns and risk reduction. This will establish precedence and evidence for others to follow, as well as increase stakeholder buy-in.
- 5. Communicate to all stakeholders** the strategic importance of climate change. This should include engagement with asset managers and portfolio companies to outline climate-related expectations where appropriate. Sovereign wealth funds should also be transparent in reporting of policies and metrics to safeguard reputations and send market signals.
- 6. Partner with peers and international initiatives** to share experience and generate greater leadership from within the sovereign wealth fund community.

## About the Survey

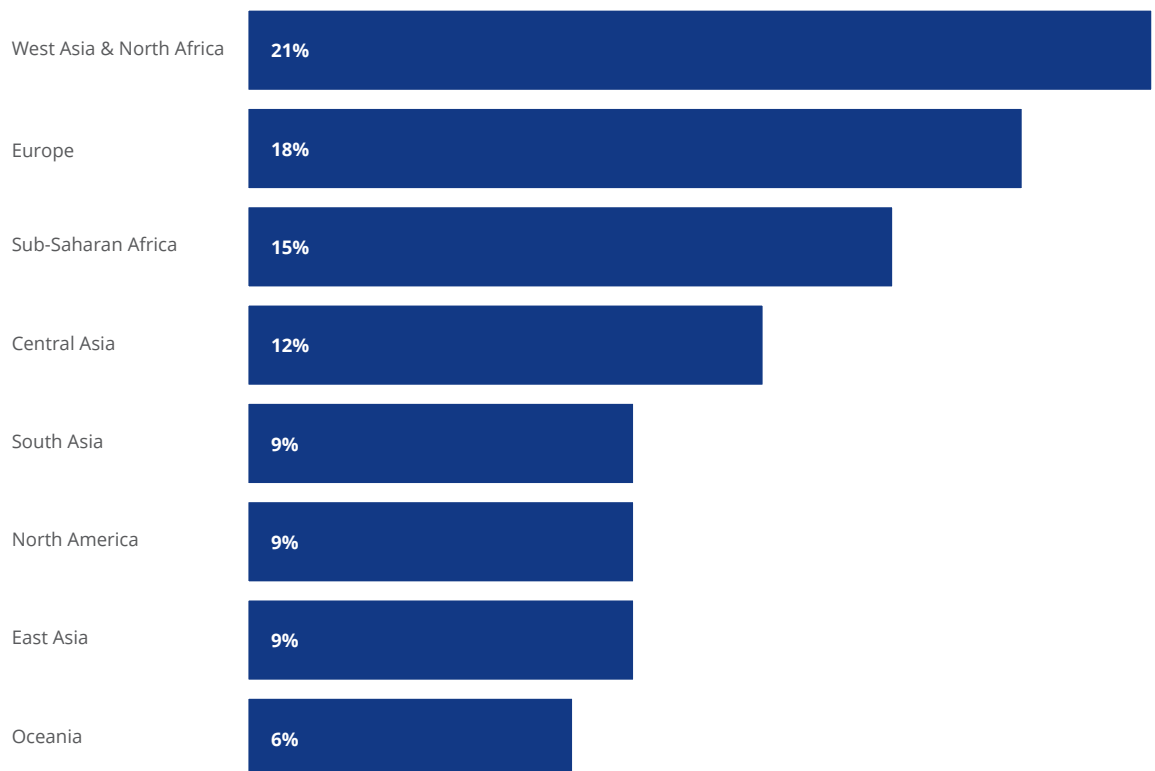
For this report, we launched the first comprehensive survey to specifically examine sovereign wealth funds' attitudes to climate change and how they integrate these considerations into their investment and governance decision-making processes. Survey responses are further supplemented by interviews.

We believe that the results represent a decisive and accurate view of how this investor group approaches climate change.

In September 2020, we distributed the survey to 42 sovereign wealth funds – the combined membership of IFSWF and OPSWF. Thirty four institutions (81%) responded. These responses represent the views of 43% of the world's 78 sovereign wealth funds. While the survey was anonymous – so we do not know which institutions completed the survey – the distribution list included all the world's largest sovereign wealth funds with total assets under management of more than \$5.5 trillion, approximately 90% of sovereign wealth funds' total assets under management, according to IFSWF's database.

The respondent institutions broadly represented the total geographical distribution of sovereign wealth funds, as shown in the chart below.

**Geographical Distribution of Respondents\***



\*Chart doesn't total 100% due to rounding

## Introduction: Why climate change matters for sovereign wealth funds

Climate change is already occurring more rapidly and more severely than expected, affecting societies, ecosystems, economies and portfolios. The 2020 World Economic Forum Global Risks Report ranks the failure to act on climate change and the experience of more frequent and more severe extreme weather as the most significant economic threats facing the international community.<sup>1</sup> At a time when there is heightened attention to systemic risk from the Covid-19 pandemic, financial institutions cannot afford to ignore the systemic risk from climate change.

According to overwhelming scientific consensus, greenhouse gases created by human activity have caused much of the observed increase in global temperatures over the past 100 years.<sup>2</sup> Since the industrial revolution began in the late 1800s, global temperatures have risen approximately 1.2°C on average, an order of magnitude more than it rose in the previous 65 million years.<sup>3</sup> Globally, in records dating back to 1850, the warmest six years have all occurred since 2015.<sup>4</sup> Warming will occur in some regions more rapidly than others; for example, and importantly, the Arctic is predicted to warm three times faster than the global mean.<sup>5</sup> Indeed, significant warming in the Arctic has already been observed, as temperatures north of the Arctic Circle in Siberia hit a new high of 38°C in June 2020, and average Arctic temperatures were 5°C above average in 2020, according to the World Meteorological Organization.<sup>6</sup> This warming could lead to a global tipping point, beyond which reversing catastrophic climate change becomes increasingly impossible.<sup>7</sup>

Scientists and global governments have agreed that, to avoid the worst and most irreversible effects of climate change in the future, global average temperature rise should be kept “well below 2°C” and ideally to 1.5°C by the end of the century. To achieve this goal, the world needs to take urgent action. The associated emissions pathway to 1.5°C requires halving carbon dioxide (CO<sub>2</sub>) emissions from 2010 levels by 2030 and reaching net-zero by 2050, as well as reducing other greenhouse gas emissions.<sup>8</sup> Ahead of the COP26 meeting of global leaders to be hosted by the UK Government in November 2021, governments, companies and financial institutions alike are being encouraged to ratchet up their commitments and action to support these goals.<sup>9</sup>

1 [World Economic Forum Global Risk Report 2020](#)

2 Myles R. Allen et al., [Global Warming of 1.5 °C, International Panel on Climate Change](#)

3 Peter Siegmund et al., “The Global Climate in 2015-2019,” World Meteorological Organization, 2019; Noah S. Diffenbaugh and Christopher B. Field, “Changes in ecologically critical terrestrial climate conditions,” *Science*, August 2013, Volume 341, Number 6145; Seth D. Burgess, Samuel Bowring, and Shu-Zhong Shen, “High-precision timeline for Earth’s most severe extinction,” *Proceedings of the National Academy of Sciences*, March 2014, Volume 111, Number 9

4 Ibid

5 Myles R. Allen et al., Special report: Global warming of 1.5°C, IPCC, 2018

6 [2020 on track to be one of three warmest years on record, World Meteorological Organization](#)

7 Timothy Lenton et al. [Climate tipping points – too risky to bet against](#), *Nature*, 28 November 2019

8 “Net-zero” refers to a balance of emissions released into and removed from the atmosphere. A net-zero pathway requires reducing most emissions and then using natural or chemical carbon sinks to remove the remaining excess carbon from the atmosphere. Myles R. Allen et al., Special report: Global warming of 1.5°C, IPCC, 2018

9 For more information see: <https://ukcop26.org/>

As the climate changes, all financial portfolios will face a myriad of direct and indirect threats to both short- and long-term value creation. In 2015, the Bank of England identified three major climate-related factors that pose a systemic risk to financial stability:<sup>10</sup>

- **Physical Risk:** Extreme weather events such as hurricanes, drought and flooding continue to increase in both intensity and frequency. As well as extreme temporary events, chronic physical climate effects will also materialise through the sustained shift of ecosystems from changes in temperature, precipitation and sea-level rise. No supply chain, community or country is immune from the physical hazards that accompany climate change, and the financial, human and natural impact of these risks is already significant.
- **Transition Risk:** The financial risks that could result from the process of local, national and international adjustment towards a lower-carbon economy. Changes in policy, technology and physical risks could prompt a reassessment of the value of a large range of assets as costs and opportunities from climate change become apparent. The rising relative cost of fossil fuel against renewable generation is already evidence of this shift, and this risk is likely to increase rapidly as governments and consumers increase their commitment to tackling climate change.
- **Liability Risk:** These are impacts that could arise if parties who have suffered loss or damage from the effects of climate change seek compensation. Such claims are starting to emerge but are increasingly likely as attribution science and physical risks increase in the coming years and decades. Liability risk has the potential to hit carbon extractors and emitters – and, if they have liability cover, their insurers – the hardest. Legal action against asset owners and governments failing to act on climate change has also begun in some jurisdictions,<sup>11</sup> with potential reputational, governance and financial impacts.

As large, long-term providers of capital to the economic system, sovereign wealth funds are exposed directly and indirectly to these risks, with financial implications for their portfolios and the societies they serve. How these risks play out over the short, medium and long term will vary based on each sovereign wealth fund's exposure to different asset classes, geographies, sectors and companies. Enhanced analysis of portfolio emissions and vulnerability to these risks could aid risk management and the identification of investment opportunities.

Sovereign wealth funds have an important role to play in the transition towards a low-carbon economy that could limit future climate risk. Emerging climate-related opportunities are likely to benefit from growing demand as climate policies change and consumer behaviour shifts, with a 2016 International Finance Corporation report identifying a \$23 trillion market for opportunities in climate-smart investments in emerging markets by 2030.<sup>12</sup> An analysis by the United Nations Framework Convention on Climate Change put the global financing gap for the low-carbon transition as ranging from \$1.6 trillion to \$3.8 trillion annually between 2016 and 2050.<sup>13</sup> These assessments demonstrate the scale of the challenge, but also the scale of the investment opportunities available. Companies can develop new financial and business models to deliver the next wave of climate solutions from transport and waste, to agriculture and energy storage. But they will require more long-term, patient capital to succeed.

<sup>10</sup> Mark Carney, "[Breaking the Tragedy of the Horizon – climate change and financial stability](#)", Speech given at Lloyd's of London 29 September 2015

<sup>11</sup> Joana Setzer, Rebecca Byrnes, [Global trends in climate change litigation: 2020 snapshot](#), Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science

<sup>12</sup> [International Finance Corporation, Climate Investment Opportunities in Emerging Markets, December 2019](#)

<sup>13</sup> [Bridging the Gap in Climate Finance: The Untapped Potential of Investing in Short-Lived Climate Pollutant Mitigation in Developing Countries | Climate & Clean Air Coalition](#)

Climate change and the low-carbon transition will create winners and losers in every sector and asset class. Integrating these factors into investment decision-making can, therefore, contribute to the protection of long-term value. Many investors, including sovereign wealth funds, have been doing just that, with investment flows into climate solutions reaching record highs of \$501.3 billion in 2020.<sup>14</sup> This survey seeks to shed light on the views and actions of sovereign wealth funds as they navigate these trends.

For many investors, increasing attention to climate change requires the development of new internal capacity, policies and investment methodologies, but the risk of failing to do so is great. The physical risks of climate change are manifesting globally at the same time as the world community rapidly scales up its climate actions: most leading economies have now committed to net-zero pathways by the middle of the century, including the United Kingdom, France, Japan and South Korea. The United States and the European Union are likely to make similar pledges in 2021.

It is no longer a question of “if climate change will affect portfolios”, it is a question of how. As the world begins its recovery from Covid-19, sovereign wealth funds could use this momentum of global reset and reflection to fast-track the integration of climate change risks and opportunities to protect portfolio returns and reduce systemic financial risk. This could help national economies to “build back better” and improve resilience within the global financial, economic, environmental and social systems to reduce the likelihood of future climate-related shocks.



<sup>14</sup> [Energy Transition Investment Hit \\$500 Billion in 2020 – For the First Time, | Bloomberg New Energy Finance](#)



# New Zealand Superannuation Fund's Climate Change Strategy

Climate change is one of the most defining and complex issues of our time. As a long-term investor, the Guardians of New Zealand Superannuation has made it a priority to consider how the NZ Super Fund should respond to the risks and opportunities stemming from climate change. As the global energy system transitions away from fossil fuels, some assets may become obsolete or uneconomic. Similarly, changing weather patterns and extreme events may increase some assets' physical risks.

Our research suggested that the market was not adequately pricing these risks, so in 2016, we developed our Climate Change Investment Strategy. This strategy seeks to reduce the Fund's exposure to climate-related risks and invest in opportunities which will benefit from the transition to a low-carbon economy. We believe doing this will help us fulfil our mandate to maximise the Fund's returns without taking undue risk.

Our Climate Change Investment Strategy has four pillars:

- **Reduce** – decrease the transition risk of the portfolio. We do this by:
  - measuring our carbon footprint;
  - setting a target to reduce our portfolio's emissions intensity and our holdings of potential emissions from reserves; and
  - applying a bespoke carbon methodology to our equity portfolio and our benchmark.
- **Analyse** – integrate climate change considerations into our assessment of potential new investments and when we review our existing holdings. We do this by building climate change scenarios into our valuation of investments.
- **Engage** – influence the companies we own an interest in to continuously mitigate and improve resilience to climate-related risks. We do this by being an active owner, including prioritising engagement and voting in accordance with our climate change views.
- **Search** – focuses us on finding companies that will thrive during the low-carbon transition. We do this by actively searching for new opportunities in the areas such as alternative energy, energy efficiency and transformational infrastructure.

We have successfully achieved our 2020 carbon reduction targets of a 20% reduction in carbon intensity (versus our reference portfolio) and a 40% reduction in exposure to fossil fuel reserves and have set new 2025 targets of a 40% reduction in carbon intensity and an 80% reduction in fossil fuel reserves. You can learn more about our Climate Change Investment Strategy [here](#).

## NZSF Bespoke Carbon Methodology

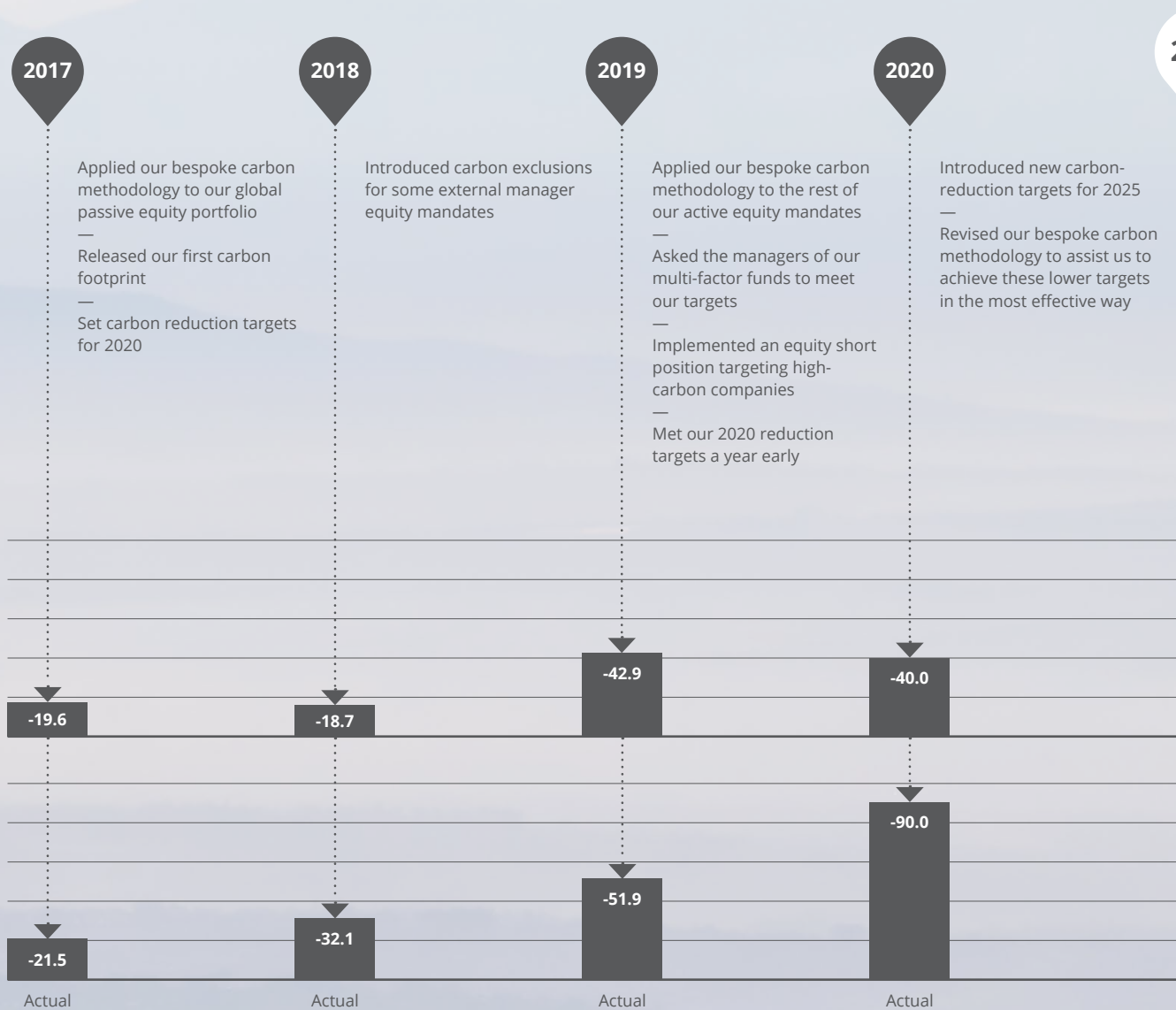
Our bespoke carbon methodology ensures we are reducing carbon intensity and removing exposure to fossil fuel reserves in our passive public equity portfolio. The methodology is as follows:

1. We start with the constituents of a broad global equity index;
2. We remove any company that holds fossil fuel reserves;
3. Of the companies that remain, we include all companies that achieve a top-quartile Carbon Emissions Score from MSCI in our portfolio;
4. Of the companies without a top-quartile Carbon Emissions Score, we remove the most carbon intensive companies;
5. We calculate whether this total meets our desired reduction target relative to the portfolio we started with in Step 1. If it does, then this becomes our new passive portfolio. If it does not, we continue to repeat Step 4, until it does;
6. We repeat this process each year.

The methodology affords us discretion to hold carbon intensive companies, if they can provide evidence of using best-in-class strategies and have an action plan for dealing with their carbon exposure.

To-date this bespoke carbon methodology has added approximately 60 basis points per year or \$600 million in total to our portfolio.

# Our emissions reduction story



**2025**

**New targets\***



With three years of experience in implementing carbon reductions, we now have greater confidence that doing so will improve the Fund's portfolio and believe more ambitious targets are appropriate.

While the Fund applies exact reduction targets to its physical equity holdings, the total footprint of the Fund will vary depending upon the overall composition of the Fund's assets. In any given year the footprint may be higher or lower than the target, but on average over time we expect to be in line with it.

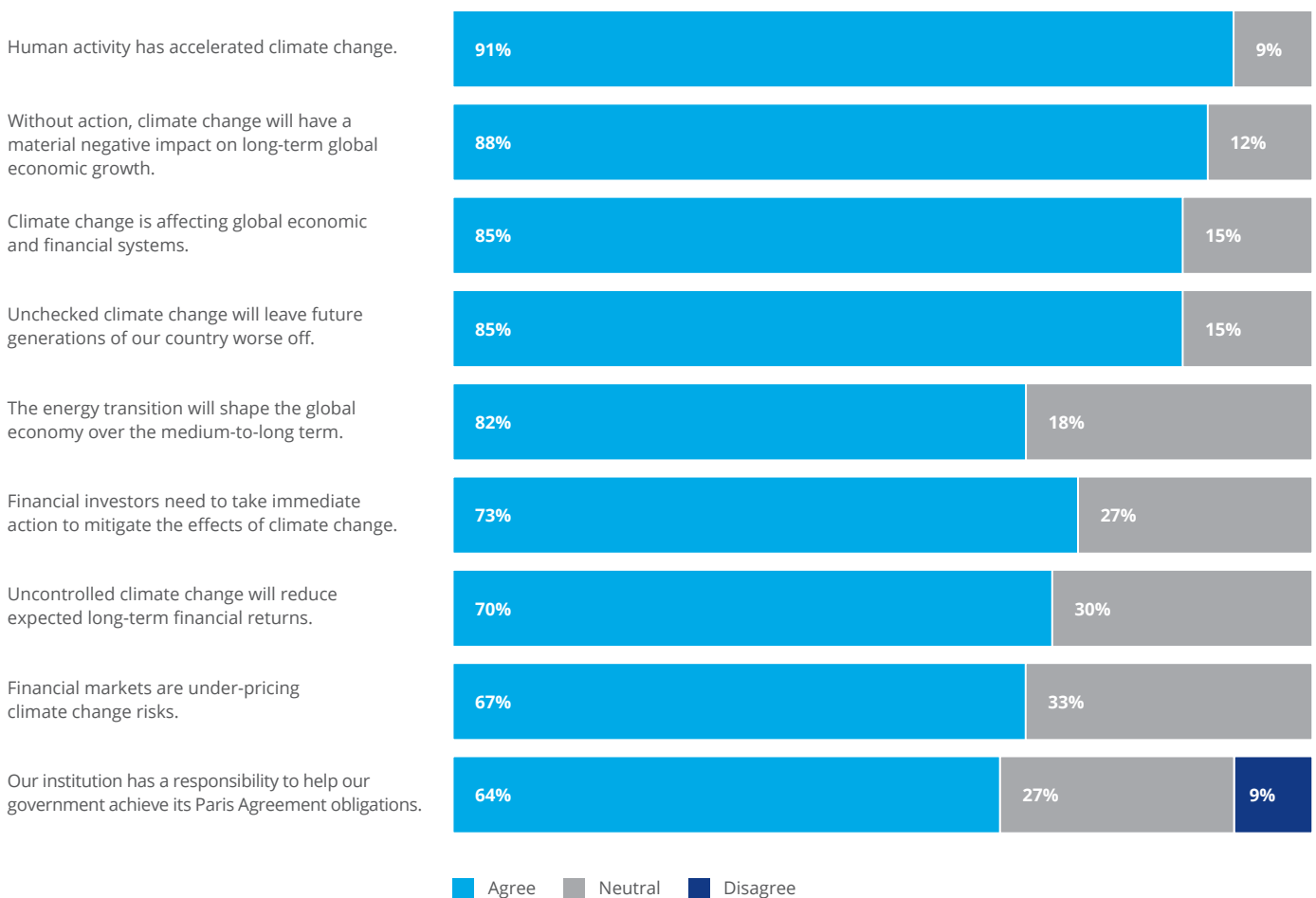
*\*Relative to Reference Portfolio benchmark*

# Sovereign Wealth Funds accept climate change is happening and the majority believe it will affect economic growth and financial returns

Ninety-one per cent of the respondents believe that human activity has accelerated climate change, 88% believe that it will have a material negative impact on long-term economic growth and 85% think it will leave future generations of their countries worse off, as shown in Figure 1 below.

Seventy per cent of respondents agreed with the statement that “Uncontrolled climate change will reduce expected long-term financial returns” and 67% agreed that “financial markets are under-pricing climate change risks.” These responses suggest that despite having a broad understanding of climate change, some sovereign wealth funds are not yet as confident in the link between the impact of climate change on asset values, financial markets and, ultimately, their bottom line.

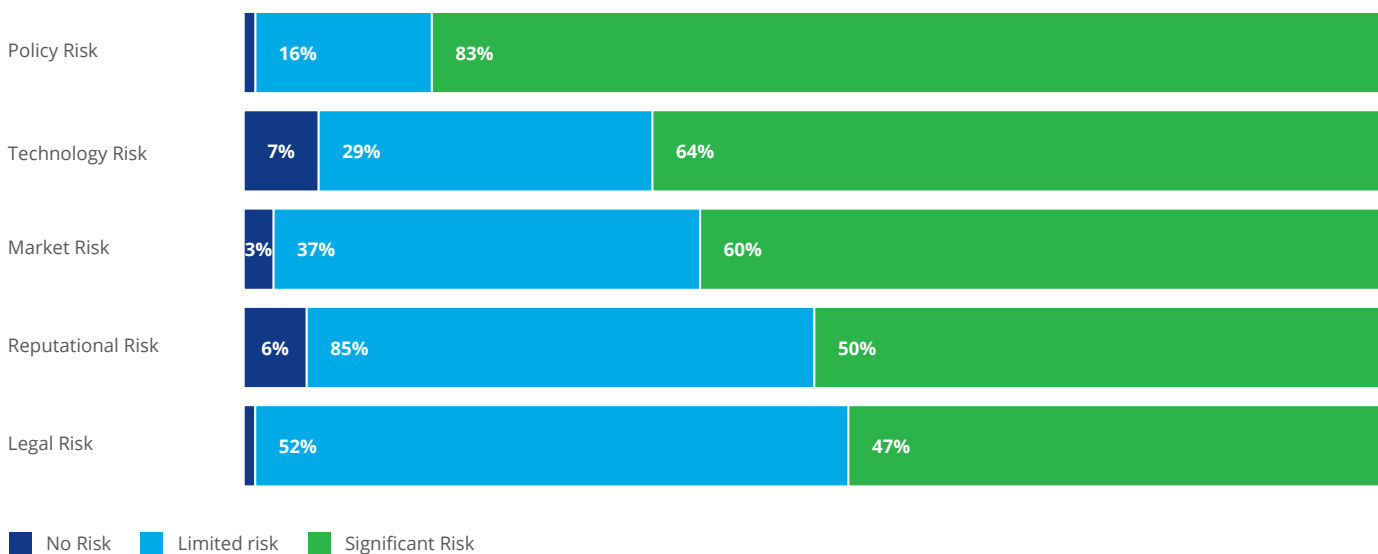
**Figure 1: Sovereign wealth fund opinions on climate change**



Source: IFSWF-OPSWF Climate Change Survey 2020

Sovereign wealth funds acknowledge the disruption that will be caused to the status quo by the low carbon transition resulting from climate action. Eighty-three per cent said that climate-related policy change is a significant risk to the financial system, and only one sovereign wealth fund saw no risk to the financial system from the low carbon transition (Figure 2).

**Figure 2: Which climate change transition risks do you think pose the biggest risks to the financial system?**



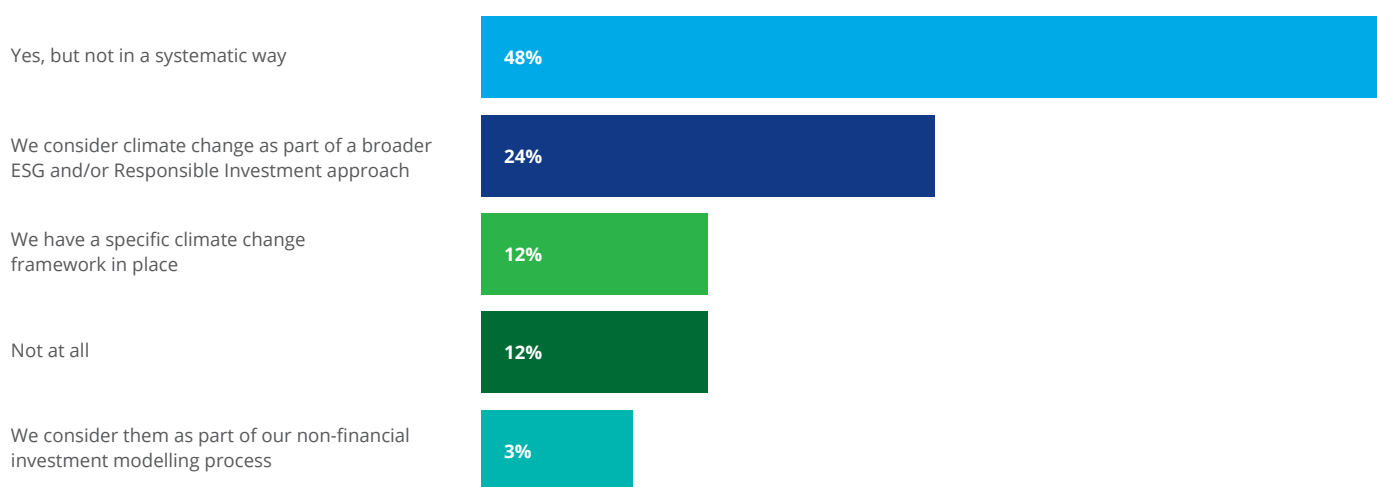
Source: IFSWF-OPSWF Climate Change Survey 2020

Beyond a broad understanding of the social and economic costs of climate change, almost three-quarters (73%) of respondents acknowledge that climate change poses both risks and opportunities for their institution. Only 6% believed that climate change was neither a risk nor an opportunity for them. Further, only 10% of sovereign wealth funds surveyed expect climate strategies to lead to negative returns in the short term and just 3% expected a long-term negative return from implementing such strategies. Almost half (43%) expect positive long-term returns. This suggests that for many, there is a business case that can be made for acting. The survey also found that the Covid-19 pandemic had increased consideration of climate change in the investment process and the attractiveness of sustainable investments.

# Moving beyond awareness to action: from climate policies to capital allocation

Eighty-eight per cent of sovereign wealth funds say that they take climate change into account in their investment processes in some way, though there are sharp differences in how systematically this approach is applied (Figure 3).

**Figure 3: Do you take climate-change-related risks and opportunities into consideration in your investment process?**



Source: IFSWF-OPSWF Climate Change Survey 2020

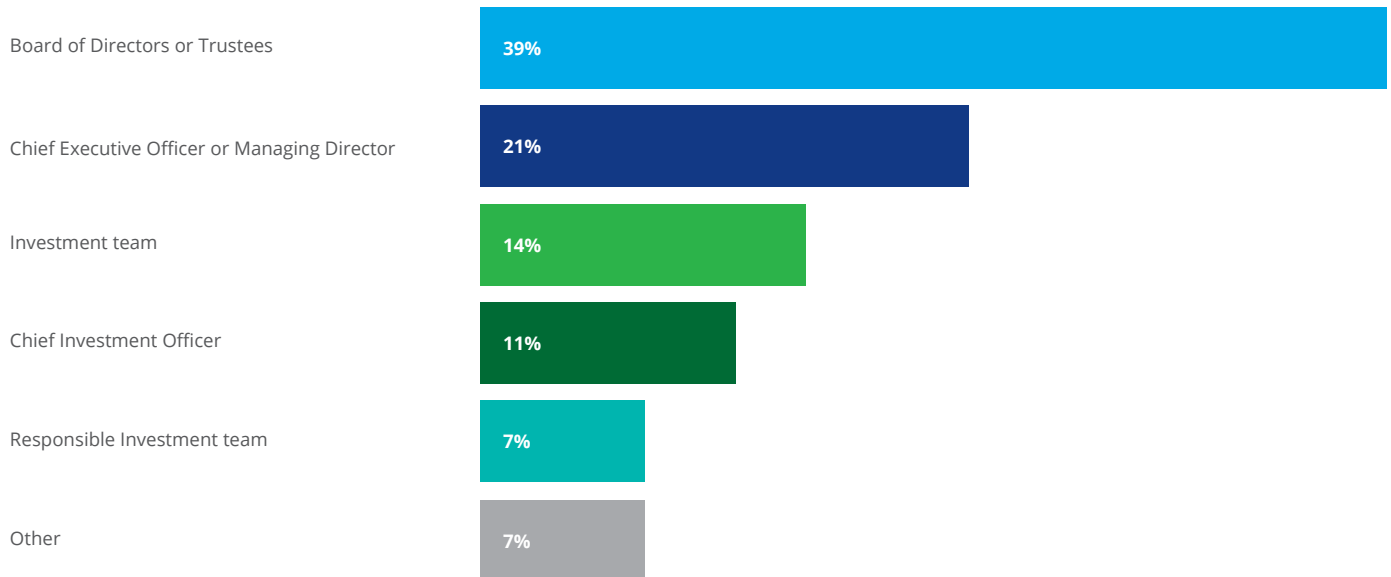
Just over a third of respondents have a formal climate change or ESG<sup>15</sup> strategy in place, though for many this was a relatively recent development. Only Norges Bank Investment Management and the New Zealand Superannuation Fund have had climate strategies in place for more than ten years and they continue to lead the way for other investors by taking steps to ensure that these policies remain relevant and ambitious. For example, the New Zealand Superannuation Fund is currently overhauling its 10-year-old responsible investment (RI) strategy to stay on track with global best practice. It has launched a project, *Resetting the Responsible Investment Compass*, to assess whether its current strategy is future-proofed given ongoing global and domestic developments.

Other sovereign wealth funds have adopted their climate change strategies more recently. Approximately a third (30%) said that they had only adopted their policy since 2018, and a further 15% were still researching how to address the matter. Another 25% had adopted their climate change approach between 2015 and 2017. One example is the National Treasury Management Agency (NTMA), which manages the Ireland Strategic Investment Fund (ISIF), which launched a Climate Strategy in 2020, emphasising the growing awareness of the importance of climate considerations in all aspects of its business.

Our findings suggest that many sovereign wealth funds are still in the process of building their business case and researching climate change. Although many are yet to systematise climate consideration, 60% note that Board or CEO-level executives are responsible for climate change within their organisations (Figure 4). This suggests that for many, it is seen as a strategic topic, and this top-down leadership could be vital in securing future policies and action.

<sup>15</sup> ESG refers to environmental, social and governance. Climate change is often considered as part of the environmental umbrella of ESG strategies

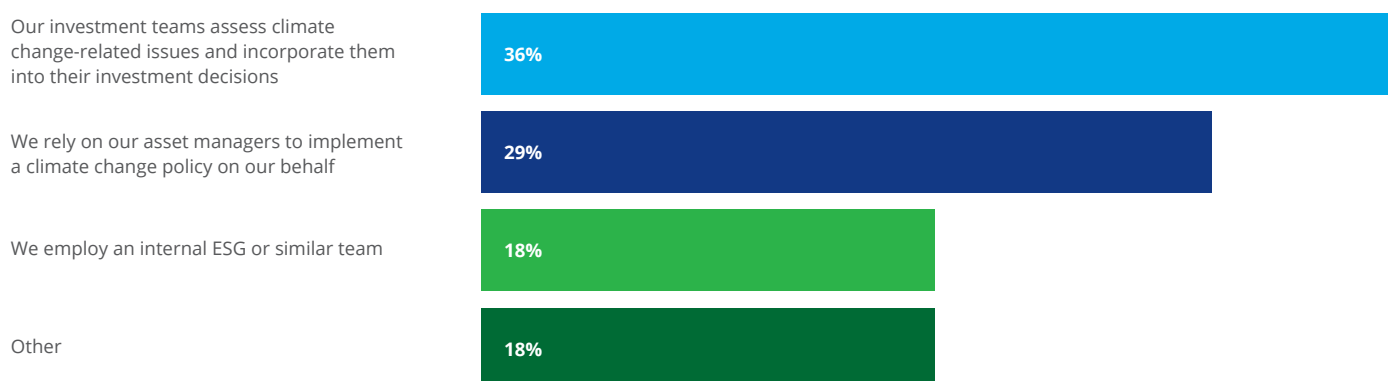
**Figure 4: Who is ultimately responsible for the integration of climate change issues into the investment process?\***



Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

Over a third (36%) of sovereign wealth funds surveyed assign climate change considerations to their investment teams (Figure 5) and 14% said the investment team had overall responsibility for the issue (Figure 4). A further third of respondents rely on their asset managers to implement their climate change strategy. Only 18% of respondents have an internal team to deal with climate change and similar issues, as shown in Figure 5. It can be argued that encouraging all investment teams and managers to consider climate change, rather than creating siloed climate expertise, is an efficient and integrated approach,<sup>16</sup> state-owned entities often struggle with limited resources. Consequently, hiring and retaining a specific team to address this issue may be expensive and stakeholders may not view such a team as an efficient use of scarce resources. However, more sovereign wealth funds do appear to be considering establishing specialist teams to oversee climate change and other ESG issues. For example, Senegal's FONSIS has initiated the process of updating its policies and process to adopt OPSWF guidelines through a new dedicated team working on disclosure and ESG policies. What is clear is that sovereign wealth funds are at varying stages of the process of formally integrating climate change into their investment strategies and are adopting different approaches to match their institutional structures and capacities.

**Figure 5: How do you implement your approach to climate change risks and opportunities?\***



Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

<sup>16</sup> [Principles of Responsible Investment, The Impact of ESG integration on the investment process](#)

As many sovereign wealth funds are still at an early stage of developing and implementing their approach to climate change, the degree to which awareness and policies on climate change have manifested into capital allocation decisions remains uneven. Over a quarter (26%) of respondents reported that they had not invested any of their portfolios in alignment with a climate change strategy, and another 19% did not want to disclose this metric (Figure 6). Only 30% of responding institutions had more than 10% of their portfolios invested in climate-related strategies, and of these only 7% had more than 50% of their portfolios aligned with climate strategies. There is, however, more anecdotal evidence that sovereign wealth funds are increasingly dedicating capital to climate change solutions. For example, the 2019-2021 business plan for Italy's CDP Equity includes the target of allocating up to 15% of all new mobilised resources to the energy transition and climate change. The increasing (re)allocation of capital in line with climate-specific strategies will be an important measure to track in the coming years as the world looks to sovereign wealth funds to turn ambition into action.

Figure 6: What % of your portfolio is invested in climate change strategy? (% of mentions)

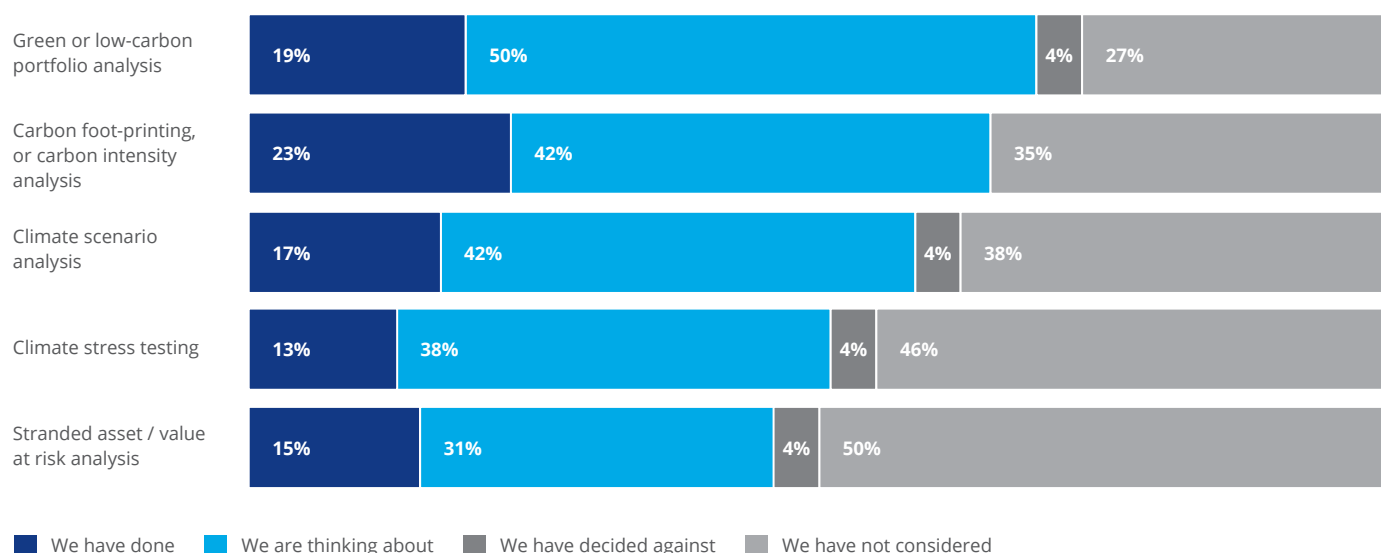


Source: IFSWF-OPSWF Climate Change Survey 2020

# Assessing climate-related risks and opportunities

Key to the implementation of climate strategies and any decision to (re)allocate capital will be the assessment of climate-related risks and opportunities. Here we can also see that many sovereign wealth funds are still in the early stages of using and evaluating the range of available climate analyses, such as carbon footprinting (Figure 7). On average, less than 20% of respondents had undertaken any of the analyses listed in the survey. For example, less than a quarter (23%) of respondents had undertaken a carbon-foot printing exercise, though an additional 42% were considering doing so. Half of the respondents were considering a low-carbon portfolio analysis, although only 19% had done so. It is notable, however, that very few institutions (only one respondent) had rejected any of these techniques, suggesting that sovereign funds are still exploring these types of tools and that climate-related portfolio assessment will increase.

Figure 7: How sovereign wealth funds are assessing the climate-related risks and opportunities?\*



Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

Almost a third (30%) of respondents reported that the biggest obstacle to implementing a climate change policy is the challenge of finding reliable data on which to base financial decisions (Figure 8). Accessing and integrating comparable climate-related financial data was noted as an ongoing challenge for even the most advanced sovereign wealth funds. One sovereign wealth fund has even gone so far as to develop its own in-house data set, rather than rely on the existing commercial providers, but is still challenged due to varying levels of disclosure and accuracy of measurement at the company level. To contribute to global efforts to improve the availability and comparability of climate-related information, 13 OPSWF members made a joint statement of support<sup>17</sup> for the recommendations of the Task Force for Climate-related Disclosures (TCFD) in November 2020. TCFD is an internationally recognised framework for companies and financial institutions to report on their material climate change issues in their governance, strategy, risk management, and metrics and targets.<sup>18</sup>

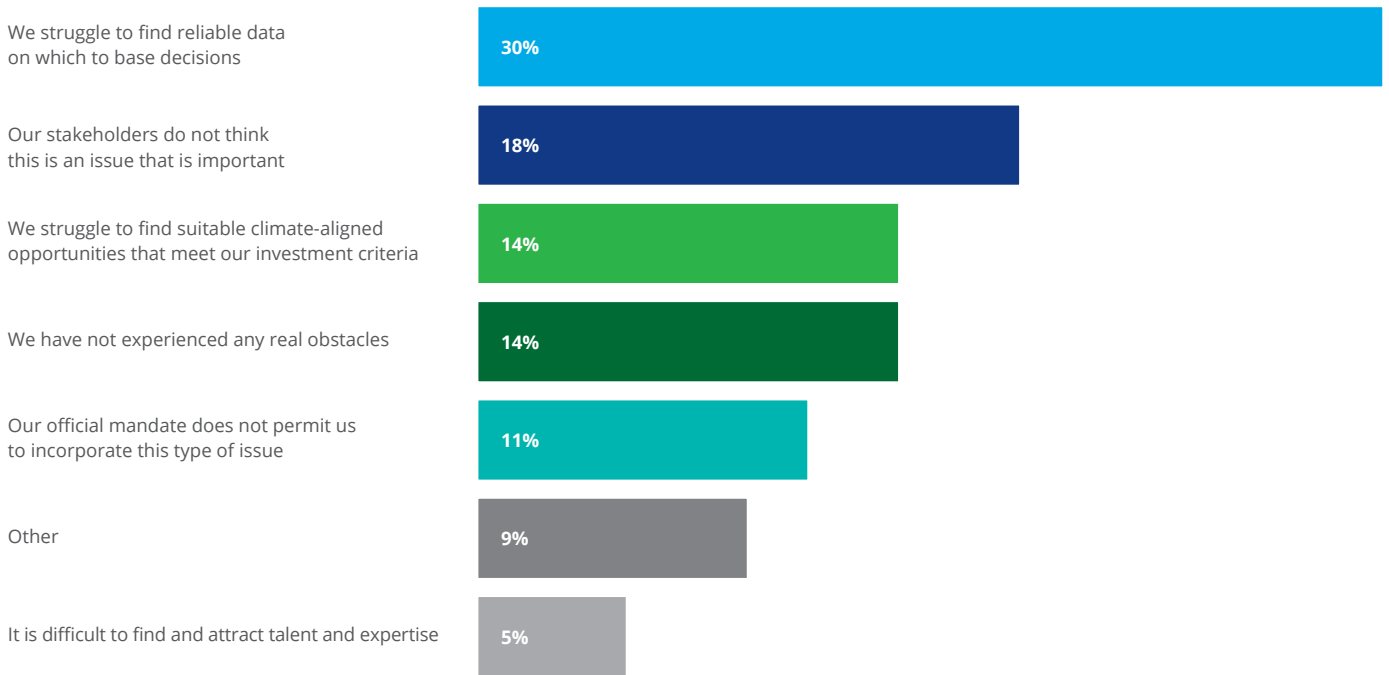
<sup>17</sup> [OPSWF SWF Statement on Climate-Related Financial Disclosures](#)

<sup>18</sup> [Recommendations Overview - TCFD Knowledge Hub](#)



Improved data and a growing evidence base for the business case for climate consideration could also help overcome another noted barrier: 18% of sovereign wealth funds say that their stakeholders do not think that climate change is an important issue.

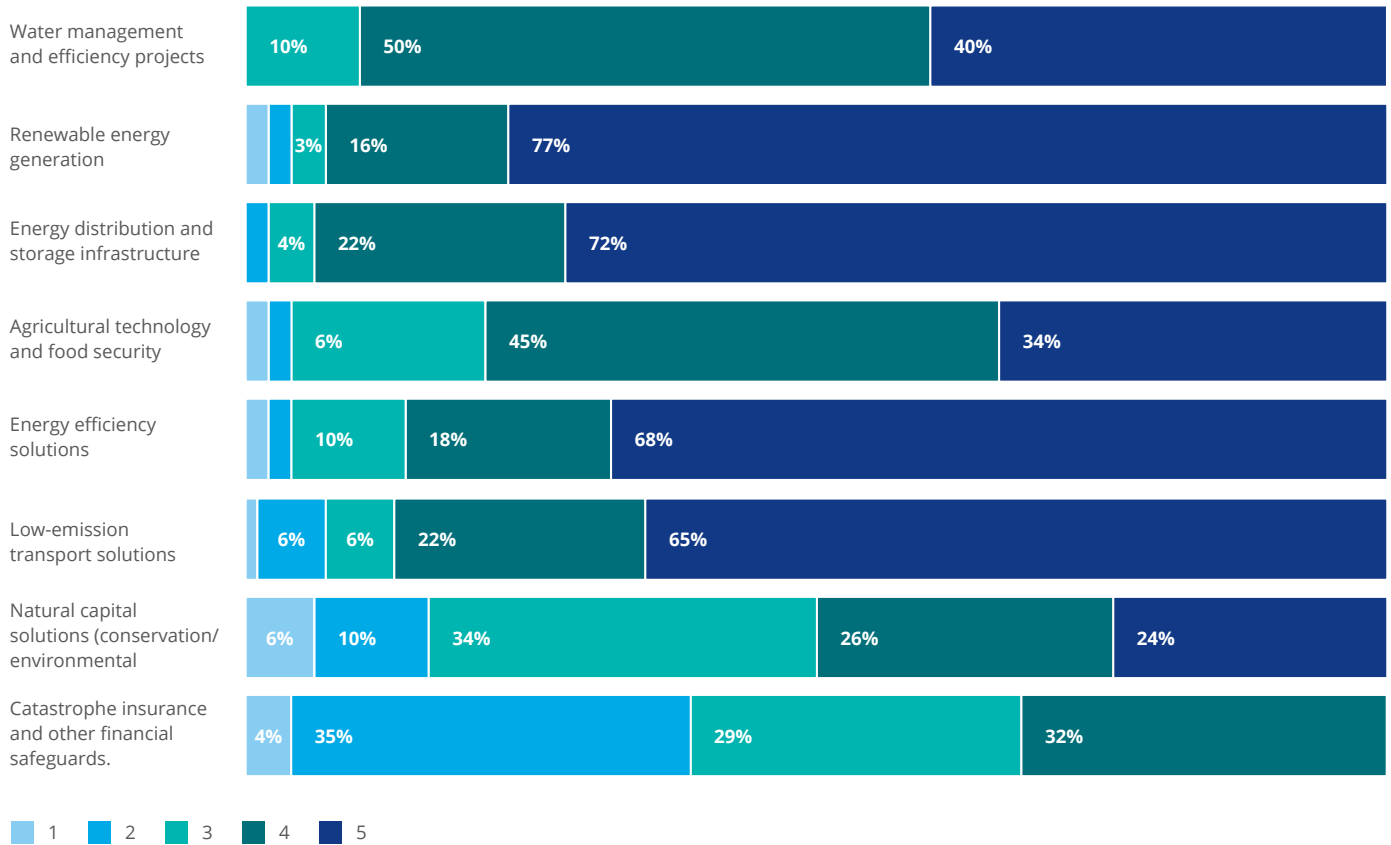
**Figure 8: What are the biggest obstacles to incorporating climate change considerations into your investment process? (% of mentions)\***



Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

The findings also suggest that many sovereign wealth funds are only in the early stages of identifying investment opportunities related to climate change and are most positive towards investments in established sectors, such as renewable energy generation, energy efficiency solutions and low-emission transport solutions (Figure 9). Thirty per cent of respondents reported having already made investments to increase exposure to low carbon investments. For example, Saudi Arabia's Public Investment Fund has signed a \$5 billion agreement with ACWA Power, a local power-generation company, and the NEOM giga-project<sup>19</sup> to build a green hydrogen-based ammonia production facility powered by renewable energy. Notably, sovereign wealth funds appear more interested in investing in low carbon solutions (45%) than reducing exposure to high carbon sectors (39%) (Figure 10).

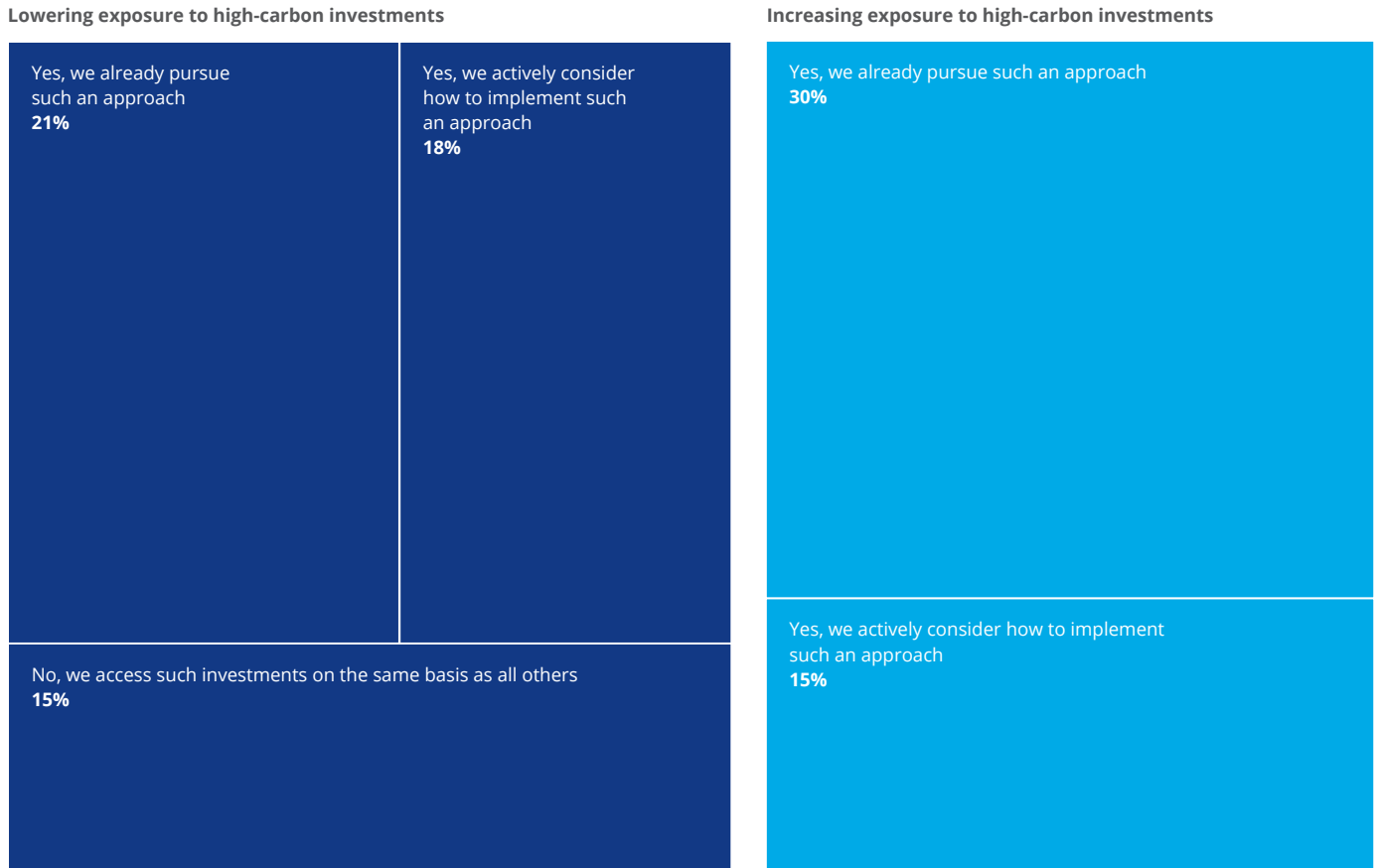
Figure 9: If you actively pursue investment opportunities relating to the low-carbon economy or solutions to mitigate the impact of climate change, in which sectors do you see the best investment opportunities? Please rate 1 to 5 where 5 is the best.



Source: IFSWF-OPSWF Climate Change Survey 2020



Figure 10: Do you actively seek to alter your exposure to climate risks and opportunities\*

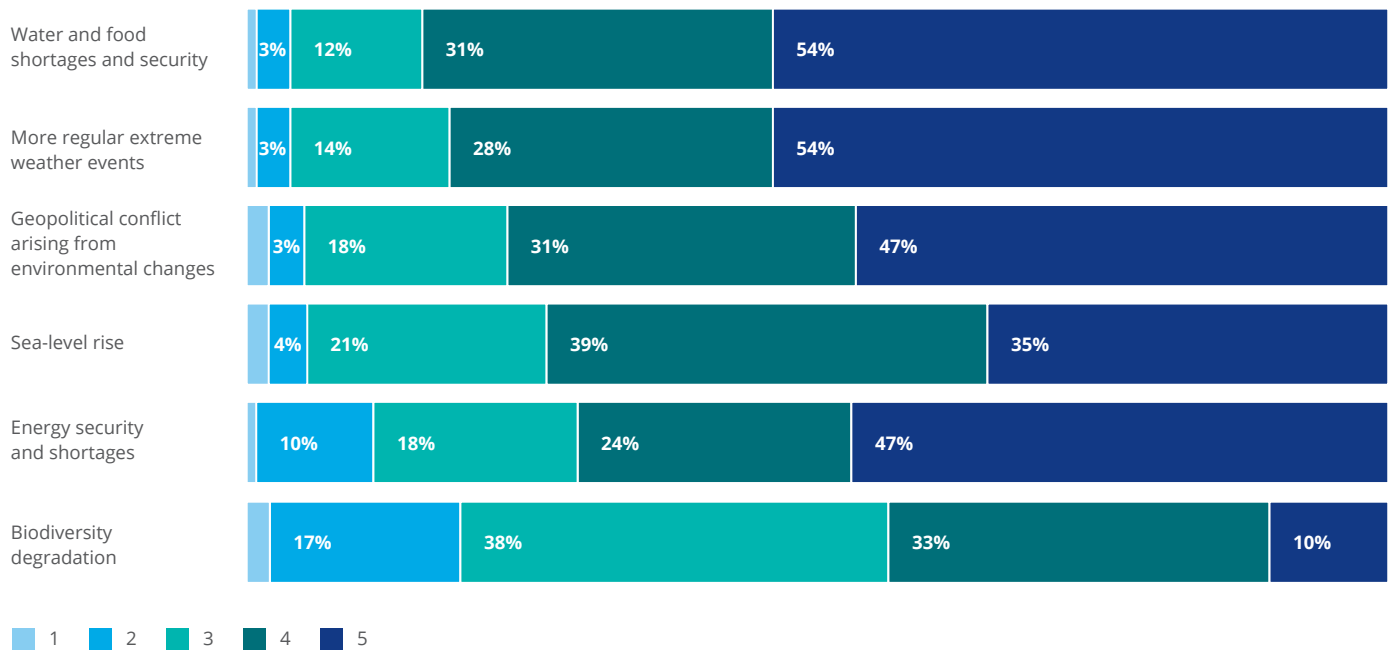


Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

Other opportunities such as water management, agritech or food security are less popular, even though 54% of respondents pointed to water and food shortages and security being the most severe physical effects of climate change (Figure 11). This suggests that sovereign wealth funds are more focused on the low-carbon transition than on supporting physical risk adaptation.



**Figure 11: Which physical effects of climate change do you think pose the greatest risks to the financial system?  
Please rate 1 to 5 where 5 is the greatest.**



Source: IFSWF-OPSWF Climate Change Survey 2020

That said, sovereign wealth funds are investing in these sectors. The IFSWF database shows that their direct investments in these sectors have more than tripled from \$92 million in 2018 to \$303 million in 2020, with 80% of the latter investments in early-stage or growth rounds, suggesting that sovereign wealth funds are fast developing the expertise to take advantage of the opportunities, particularly in the agritech sector. For example, in May 2020, Singapore's GIC led a \$250 million capital round for Apeel Sciences – a company that helps reduce food waste by producing plant-derived coatings to double or triple the shelf life of many fruits and vegetables, without needing refrigeration.

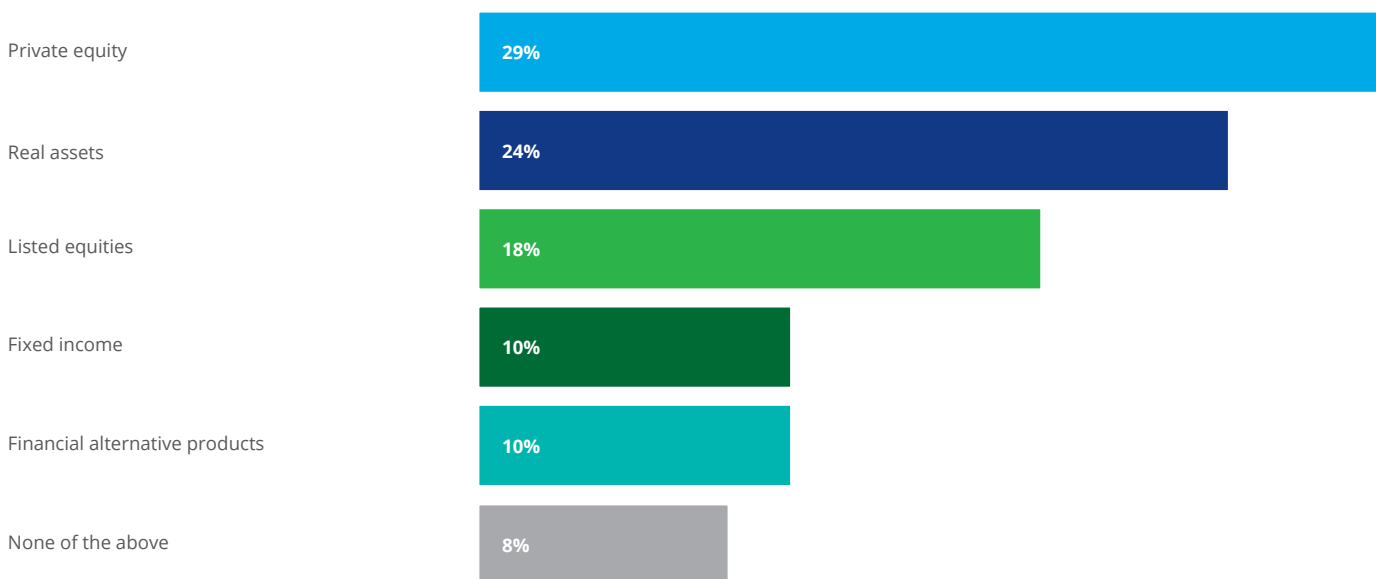
While some sovereign wealth funds are becoming more interested in an expanding range of climate-related opportunities, there are still some areas that they are yet to explore in any depth. For example, although climate policymakers and some financial institutions are beginning to focus on natural capital and biodiversity loss,<sup>20</sup> there is little evidence of them being considered within the sovereign wealth fund community. However, there is scope for further exploration, collaboration and investment in this space as 50% of respondents ranked these opportunities as a 4 or 5. Similarly, our survey suggests that sovereign wealth funds have yet to be convinced of the extent to which the financial services sector will be affected by climate-related transition risk, and, as a result, catastrophe insurance and other financial safeguards scored relatively poorly as investment opportunities (Figure 9, above).

<sup>20</sup>A 2020 survey by Credit Suisse in conjunction with Responsible Investor found that 84% of respondents were very concerned by biodiversity loss and 51% believed that biodiversity would be a major investment trend by the end of the decade. More information available: <https://www.responsible-investor.com/articles/data-voted-the-biggest-hurdle-for-investors-trying-to-address-biodiversity>

That sovereign wealth funds are focusing their climate change efforts in the more established areas is also evidenced by their integration of these issues across asset classes, with only 10% applying such consideration in their alternatives or fixed-income investments. However, it should be noted that just 8% of respondents – only three sovereign wealth funds – said that they did not take this issue into account in any asset class.

Twenty-nine per cent of respondents considered climate change in their private equity assets and 24% in real assets such as property and infrastructure (Figure 12). Of those sovereign wealth funds that invest in unlisted assets, 52% said that they support climate-change-related shareholder resolutions when they are brought forward, but only 30% feel they have the expertise to propose climate change resolutions in their privately held portfolio companies.

**Figure 12: In which asset classes do you pursue targeted portfolio construction or security selection for climate-change-related purposes? (% of mentions)\***



Source: IFSWF-OPSWF Climate Change Survey 2020 \*Chart doesn't total 100% due to rounding

Private equity and real assets are often investors' entry points for climate change integration, as one of our respondents noted, "We are currently still in the research phase on the climate change issue, we have selected private-market investments in this area, but are yet to finalise the firm-wide approach". One reason for this could be that sovereign wealth funds tend to own larger stakes than they do in publicly listed companies, so tend to have more influence and greater visibility on the investment, making it easier to assess and address climate issues.

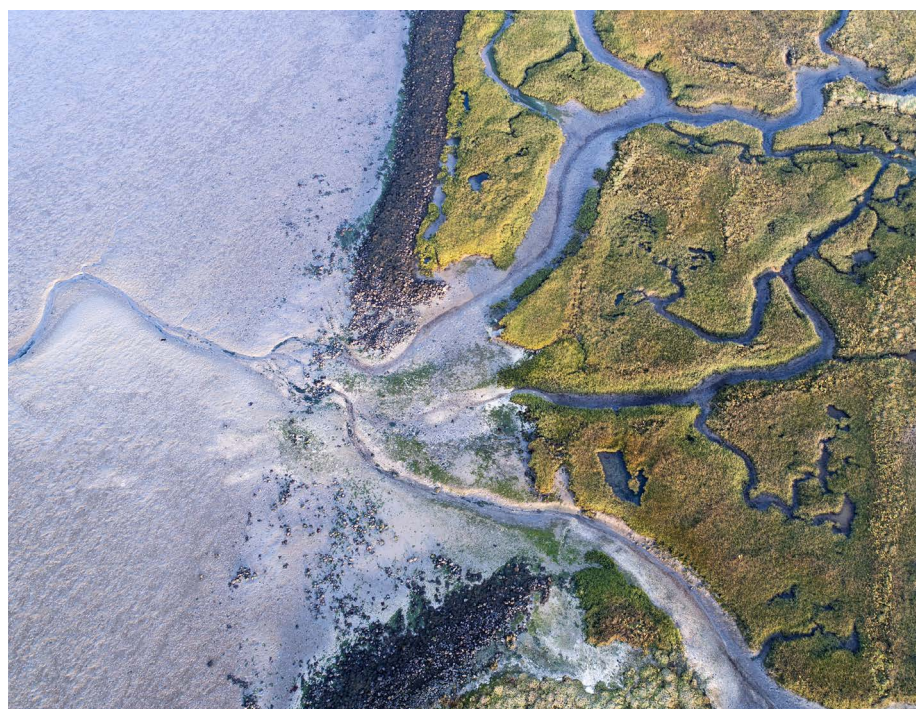
Low-carbon opportunities may be more obvious in these asset classes, including renewable energy infrastructure or investments to upgrade real estate to higher energy-efficiency and sustainability standards. The OPSWF 2020 Companion Document, which outlines progress to date among OPSWF members in aligning with the OPSWF Framework, provides numerous examples of such sovereign wealth fund investments. For example, the Korea Investment Corporation owns a green building area of 236,000 square metres and achieved savings of 629 MWh of energy via a green building energy-saving system. Likewise, the Qatar Investment Authority has financed energy efficiency retrofits of the Empire State Building that have cut energy use by 38% and will eliminate an estimated 105,000 tonnes of carbon emissions over the next 15 years.

Fewer sovereign wealth funds, currently only 18% according to our survey, pursue targeted security selection in the listed equity markets, although there is some indication that more sovereign wealth funds may begin to adopt such an approach. For example, in 2019, the Abu Dhabi Investment Authority started piloting a new mandate that aims to integrate climate change considerations into its equities' portfolio construction. Mr Farouk Bastaki, Managing Director of the Kuwait Investment Authority, told ABANA (formerly the Arab Bankers Association of North America) in October 2019 that the KIA had adopted the OPSWF Framework and "contacted more than 130 asset managers... to push for a sustainable environment through climate-friendly investment policies."<sup>21</sup>

Sovereign wealth funds are also engaging their portfolio companies on the topic. More than half (54%) of survey respondents claimed they engage with their portfolio companies (either directly or indirectly) on climate change issues. Climate change was the subject of 31% of the Korea Investment Corporation's engagements, according to its 2020 Sustainable Development Report. These are positive steps suggesting again that while most sovereign wealth funds have yet to develop a strategic approach to climate change, they are engaging on the topic – even if they are following the lead of other investors or relying on their asset managers to do this for them.

However, the survey also pointed out that sovereign wealth funds often do not have formal expectations for asset managers and portfolio companies to report on climate change metrics and strategies. Only 26% had specific expectations on companies and 21% outlined expectations for managers. A further 15% of sovereign wealth funds indicated that they expected visibility of companies' and managers' climate approaches but did not have specific requirements.

Sovereign wealth funds are more likely to engage with their portfolio companies on climate change than they are to divest on climate grounds. Only 14% of respondents reported having divested based on environmental considerations. Given that 21% of respondents reported having lowered exposure to high-carbon sectors, it seems that some sovereign wealth funds view divestment as a separate, distinct action, perhaps bound up in ethical decisions and/or climate activism.



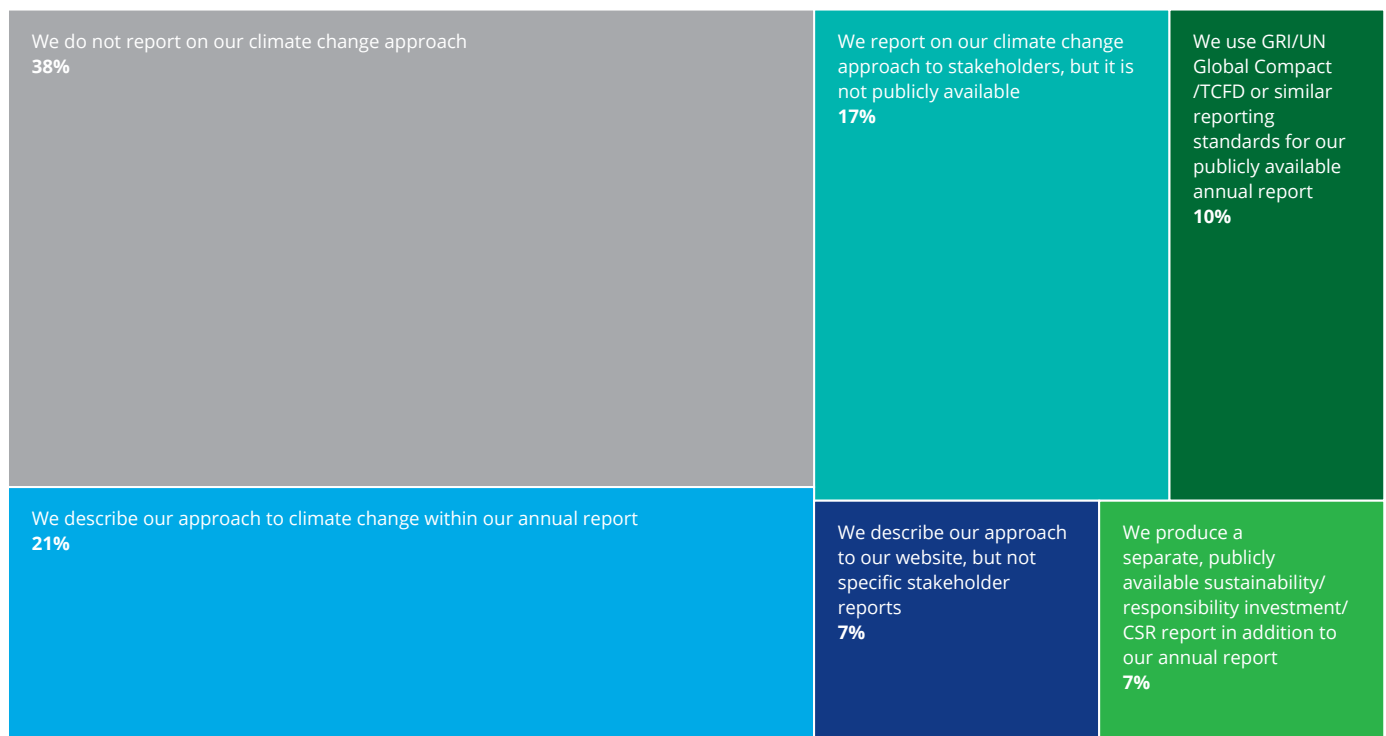
<sup>21</sup> [Farouk Bastaki, ABANA Achievement Award Acceptance Speech](#)

# Measurement and reporting

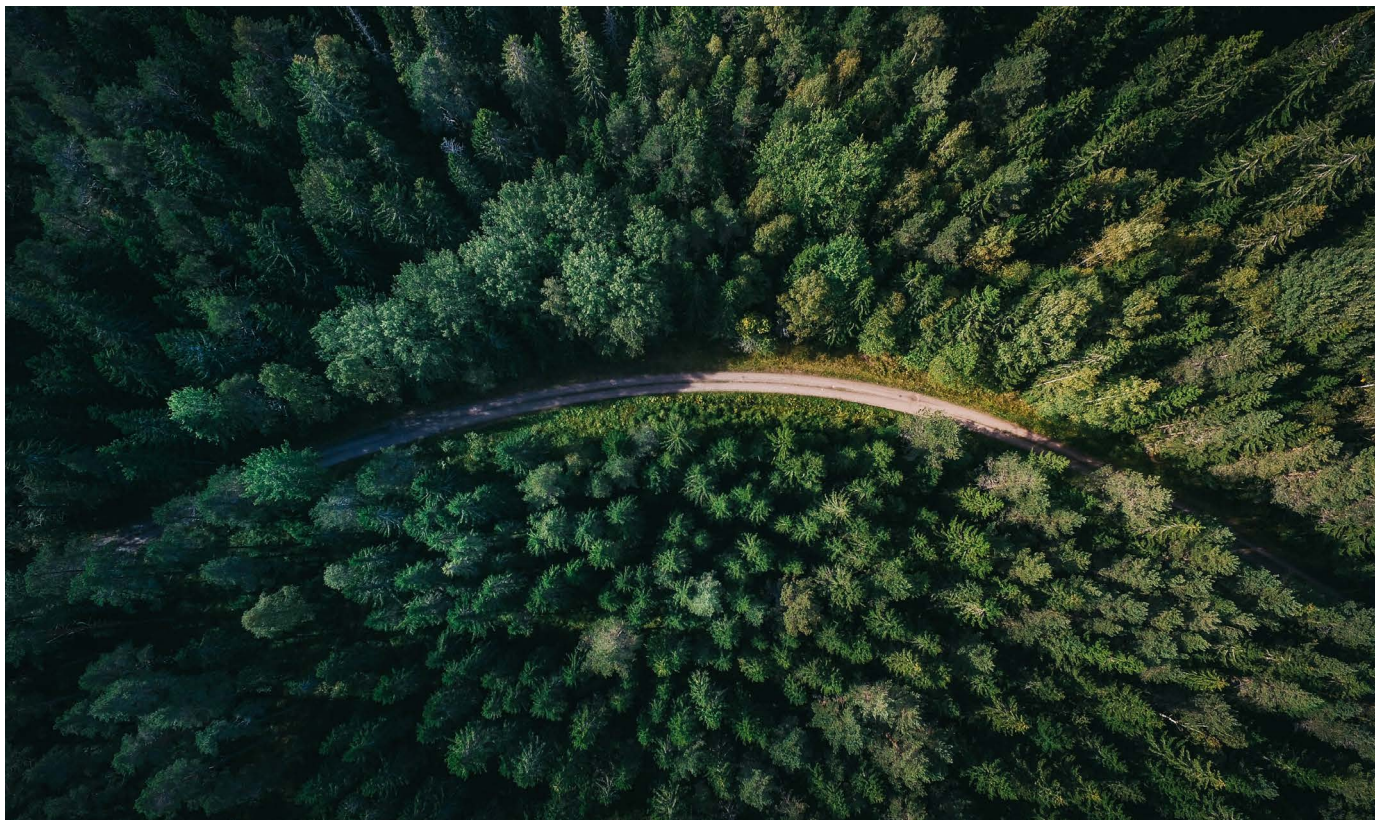
Sovereign wealth funds' measurement and reporting on climate change also varies between institutions. Currently, less than half of the respondents use metrics to assess their climate change performance. However, of those that do, 60% have also set targets against which to assess their progress. There is also evidence that more sovereign wealth funds are developing metrics and targets. Bpifrance, for example, is currently developing key performance indicators (KPIs) to assess the carbon footprint, the climate exposure and the climate-change-related risks associated with their portfolios. Deciding upon quantitative metrics is an important step to ensure accountability and transparency to stakeholders, and to educate and enable board members and senior executives to make strategic decisions.

Perhaps because few sovereign wealth funds have undertaken climate risk analysis or developed a set of metrics and KPIs, only 45% of those surveyed publicly report on their climate change policies, as illustrated in Figure 13. Further, it should be noted that several sovereign wealth funds, including the New Zealand Superannuation Fund, Singapore's GIC and Norges Bank Investment Management, reported on their climate actions broadly in line with the TCFD recommendations, which are widely recognised as international good practice. Being transparent on this issue and the progress being made is likely to be key for sovereign wealth funds' reputation as global investors in the future, and their ability to co-invest with other public- and private-sector actors concerned by climate change and/or attract private-sector capital into their economies. If sovereign wealth funds do not clearly report on their approach to climate change, they run the risk of looking like they are doing nothing or very little on this issue, when, in truth, the majority are increasingly active.

**Figure 13: How do you report on your climate change strategy?**



## Conclusions and recommendations



Overall, this first-of-its-kind survey of 34 sovereign wealth shows that the majority recognise the risks and opportunities relating to climate change and are considering them to some extent in their investment decisions. Whilst early movers have sophisticated strategies in place, the majority lack systematic policies and practices. Many sovereign wealth funds are at the beginning of a journey towards considering the issue and taking tentative – but important – steps to align policies, engage with companies and managers, and/or integrate climate into investment portfolio decisions.

The evidence of this survey can be viewed as a promising start given that 2016 was the first time many funds considered the topic and should be welcomed by financial markets. Sovereign wealth funds are paying attention to the risks and opportunities of the low-carbon transition, actively seeking out direct investments in renewable energy, energy efficiency and low-carbon solutions in both emerging and developed markets.

Changing investment practices in these large and complex institutions will take time. Neither is aligning with the goals of the Paris Agreement straightforward, with methodologies and pathways still being developed internationally. To some extent, this complexity is reflected in the diversity of approaches reported in this survey. However, given the notable and increasing impacts of climate change, and sovereign wealth funds' recognition of its impact on investment portfolios, this process of alignment could be accelerated.



Based on these findings, we recommend six steps that sovereign wealth funds could take to accelerate the integration of climate change issues within their institutions.

**Six recommendations arise from the survey findings:**

- 1. Adopt and implement climate-related policies.** This should include a commitment to take action in integrating material climate risks and opportunities in core investment decision-making. The OPSWF Framework provides common principles from which to begin.
- 2. Seek out the appropriate talent and expertise.** This will help the design and implementation of a strategy for the integration of climate risks and opportunities, and the development of a strong financially focused business case for action.
- 3. Explore board member and executive education.** This will help expedite the adoption and communication of such strategies and is particularly important where these individuals are directly responsible for the approach taken.
- 4. Use metrics** to show not only climate impact (i.e. success in reducing carbon exposure) but also comparable returns and risk reduction. This will establish precedence and evidence for others to follow, as well as increase stakeholder buy-in.
- 5. Communicate to all stakeholders** the strategic importance of climate change. This should include engagement with asset managers and portfolio companies to outline climate-related expectations where appropriate. Sovereign wealth funds should also be transparent in reporting of policies and metrics to safeguard reputations and send market signals.
- 6. Partner with peers and international initiatives** to share experience and generate greater leadership from within the sovereign wealth fund community.

OPSWF and IFSWF will repeat the survey at the end of 2021 and hope to see more sovereign wealth funds apply a more strategic and systematic approach to climate change in their portfolios.

# Acknowledgements

The International Forum of Sovereign Wealth Funds and One Planet Sovereign Wealth Funds would like to thank their members for their participation in this survey and additional interviews. Without their support we would not be able to bring this comprehensive few of their approaches to light.

IFSWF and OPSWF would also like to thank Dr Elizabeth Harnett, Technical Advisor, OPSWF, and Dr Victoria Barbary, Director of Strategy and Communications at the IFSWF for designing the survey and preparing the text. They would also like to thank Enrico Soddu, Head of Data and Analytics at the IFSWF for all the analysis and data visualisation in this report.

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## About the International Forum of Sovereign Wealth Funds (IFSWF)

The International Forum of Sovereign Wealth Funds (IFSWF) is a voluntary organisation of global sovereign wealth funds committed to working together and strengthening the community through dialogue, research and self-assessment.

In 2008, a group of 23 leading state-owned international investors from around the world established the IFSWF's precursor, the International Working Group of Sovereign Wealth Funds, following discussions with global groups such as the G20, International Monetary Fund and the US Department of the Treasury. The Working Group created a set of Generally Accepted Principles and Practices, known as the [Santiago Principles](#), for sovereign wealth funds' institutional governance and risk-management frameworks. Following the [Kuwait Declaration](#) in 2009, the International Working Group became the IFSWF with the mandate of helping members implement the Principles.

Today, helping members implement the [Santiago Principles](#) remains the foundation of the IFSWF's activity. But the Forum now represents a group of almost 40 sovereign wealth funds from all corners of the globe, with a variety of mandates and at various stages in their development. As a result, the Forum's focus has evolved. In addition to encouraging the ongoing commitment to the Santiago Principles, the Forum also undertakes research, facilitates peer assistance exercises and holds workshops and seminars to help members enhance their existing investment capabilities. The IFSWF also undertakes to represent its members to the global financial and policy communities.

### Standard Setting

The IFSWF helps foster good governance practices within the membership by enabling members to share their unique experiences of applying the Santiago Principles with each other. By sharing experiences, the Forum helps members to improve their governance and accountability structures and practices. The IFSWF also promotes transparency by encouraging members to report publicly on their experiences of implementing the Santiago Principles.

### Knowledge Sharing

The IFSWF seeks to help members raise their expected risk-adjusted returns by regularly bringing our members together to share their perspectives on specific governance, investment and operational issues. We also undertake peer assistance on investment practices, asset allocation and financial risk assessment. The Forum works with academic and practitioner experts to help members fulfil their mandate in an increasingly challenging and complex investment environment.

### Representation

The Forum helps represent the views of its members to the wider financial community. It provides a contact point through which members can collaborate with multilateral finance organisations and, where appropriate, engages with the media on issues of interest to the membership.

## About One Planet Sovereign Wealth Funds

[One Planet Sovereign Wealth Funds](#) was established at the One Planet Summit in December 2017. The objectives of the initiative are to:

- Help mobilise the capital of sovereign wealth funds, to innovate and expand the market for investment opportunities that advance alignment with the goals of the Paris Agreement.
- Accelerate efforts to integrate financial risks and opportunities related to climate change in the management of large, long-term asset pools.
- Leverage the scale and benefits of knowledge-sharing, while preserving flexibility and agility.

On 6 July 2018, the OPSWF founding members published a voluntary framework ("[the Framework](#)") outlining principles for sovereign wealth funds to systematically integrate climate change into their decision-making, and how they can collectively support ambitious global climate action.

This Framework includes 12 recommendations based on three guiding principles:

- **Principle 1: Alignment**
  - Build climate change considerations, which are aligned with the sovereign wealth funds' investment horizons, into decision-making.
- **Principle 2: Ownership**
  - Encourage companies to address material climate change issues in their governance, business strategy and planning, risk management and public reporting to promote value creation.
- **Principle 3: Integration**
  - Integrate the consideration of climate-change-related risks and opportunities into investment management to improve the resilience of long-term investment portfolios.

Following the drafting of the Framework, members committed to continuing to work together to develop and share best practices relating to the implementation of the Framework principles. The One Planet Asset Managers (OPAM), the One Planet Private Equity Funds (OPPEF) initiatives and the One Planet Research Forum have also been established to accelerate efforts in supporting the implementation of the Framework and to support the transition towards more sustainable financial markets.

Since the Framework was launched in 2018, the initiative has grown rapidly from six founding members with \$3 trillion of assets to 33 members with over \$30 trillion of assets under management and ownership. For more information, visit [oneplanetwfs.org](http://oneplanetwfs.org)

