

# The Global Risks Report 2025

## 20th Edition

INSIGHT REPORT



## Acknowledgement

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The report and an interactive data platform are available at <https://www.weforum.org/publications/global-risks-report-2025/>.

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# Preface



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Managing Director

The multi-decade structural forces highlighted in last year's *Global Risks Report* – technological acceleration, geostrategic shifts, climate change and demographic bifurcation – and the interactions they have with each other have continued their march onwards. The ensuing risks are becoming more complex and urgent, and accentuating a paradigm shift in the world order characterized by greater instability, polarizing narratives, eroding trust and insecurity. Moreover, this is occurring against a background where today's governance frameworks seem ill-equipped for addressing both known and emergent global risks or countering the fragility that those risks generate.

This is the 20th edition of the *Global Risks Report*. Looking back over the last two decades, environmental risks have steadily consolidated their position as the greatest source of long-term concern. This year's **Global Risks Perception Survey** shows that a sense of alarm is also mounting in the shorter term: Environmental problems, from extreme weather to pollution, are here now and the need to implement solutions is urgent.

Concerns about state-based armed conflict and geoeconomic confrontation have on average remained relatively high in the ranks over the last 20 years, with some variability. Today, geopolitical risk – and specifically the perception that conflicts could worsen or spread – tops the list of immediate-term concerns. Fear and uncertainty cloud the outlook in various parts of the world, including in Ukraine, the Middle East, and Sudan, with multilateral institutions struggling to provide effective mediation and work towards resolutions.

Societal risks such as inequality rank high among today's leading concerns as well as over the last years. Polarization within societies is further hardening views and affecting policy-making. It also continues to fan the flames of misinformation and disinformation, which, for the second year running, is the top-ranked short- to medium-term concern across all risk categories. Efforts to combat this risk are coming up against a formidable opponent in Generative AI-created false or misleading content that can be produced and distributed at scale. More broadly, technological risks, while not seen as immediate, rise in the rankings for the 10-year time horizon, given the rapid pace of change in areas such as AI and biotech.

Economic risks have fallen in the rankings since last year, with inflation and the risk of an economic downturn no longer top of mind among decision-makers and experts. But there is no room for complacency: if the coming months see a spiral of tariffs and other trade-restricting measures globally, the economic consequences could be significant. Elevated valuations in several asset classes make them more vulnerable to these and other risks.

In this report we dive deep into key global risk themes – conflict, trade wars, and technology and polarization as leading short- to medium-term concerns, as well as pollution, biotech and super-ageing as areas where serious risks could unfold over a longer-term time horizon. We also provide a retrospective view of the last two decades of assessing global risks. Twenty years ago, when we were preparing our first *Global Risks Report*, the world was in a different place. Risks that have been well managed and mitigated since then were those where the concerted and collective efforts of multistakeholder leaders helped to build common ground, compromises and mutually acceptable solutions. It will be up to visionary leaders to involve all key stakeholders to address the risks now foreseen for the next decade and to build durable peace and prosperity.

The report highlights the latest findings from our annual **Global Risks Perception Survey**, which this year brought together the collective intelligence of over 900 global leaders across academia, business, government, international organizations and civil society. It also leverages insights from some 100 thematic experts, including the risk specialists who form the Global Risks Report Advisory Board, the Global Future Council on Complex Risks, and the Chief Risk Officers Community. We would also like to express our gratitude to the core team that developed this report – Mark Elsner and Grace Atkinson – and to Ricky Li, Ignacio Moreno and Gayle Markovitz for their support.

The world has changed profoundly over the last 20 years and will continue to do so in unpredictable ways. But foresight based on informed, expert views remains critical for better planning and preparation, in both the short and long term. The 20th *Global Risks Report* continues to shine a light on globally relevant risks that are often complex and sometimes alarming. Yet, in examining the trajectory of the risks foreseen over the last two decades, it is clear that there is no viable alternative to multilateral solutions going forward. Leaders across the public and private sectors, civil society, international organizations and academia must seize the baton to work openly and constructively with each other. By deepening honest dialogue and acting urgently to mitigate the risks that lie ahead, we can rebuild trust and together create stronger, more resilient economies and societies.



# Overview of methodology

The **Global Risks Perception Survey (GRPS)** has underpinned the *Global Risks Report* for two decades and is the World Economic Forum's premier source of original global risks data. This year's **GRPS** has brought together leading insights on the evolving global risks landscape from over 900 experts across academia, business, government, international organizations and civil society. Responses for the **GRPS 2024-2025** were collected between 2 September and 18 October 2024.

"Global risk" is defined as the possibility of the occurrence of an event or condition that, if it occurs, would negatively impact a significant proportion of global GDP, population or natural resources. Relevant definitions for each of the 33 global risks are included in [Appendix A: Definitions and Global Risks List](#).

The GRPS 2024-2025 included the following components:

- **Risk landscape** invited respondents to assess the likely impact (severity) of global risks over one-, two- and 10-year horizons to illustrate the potential development of individual global risks over time and identify areas of key concern.
- **Consequences** asked respondents to consider the range of potential impacts of a global risk arising, to highlight relationships between risks and the potential for compounding crises.
- **Risk governance** invited respondents to reflect on which approaches have the most potential for driving action on global risk reduction and preparedness.
- **Outlook** asked respondents to predict the evolution of key aspects underpinning the global risks landscape.

[Appendix B: Global Risks Perception Survey 2024-2025](#) provides more detail on the methodology.

To complement **GRPS** data on global risks, the report also draws on the World Economic Forum's **Executive Opinion Survey (EOS)** to identify risks that pose the most severe threat to each country over the next two years, as identified by over 11,000 business leaders in 121 economies. When considered in context with the **GRPS**, this data provides insight into local concerns and priorities and points to potential "hot spots" and regional manifestations of global risks. [Appendix C: Executive Opinion Survey: National Risk Perceptions](#) provides more detail.

Finally, the report integrates the views of leading experts to generate foresight and to support analysis of the survey data. Contributions were collected from 59 colleagues across the World Economic Forum's platforms. The report also harnesses qualitative insights from 96 experts from across academia, business, government, international organizations and civil society through community meetings, private interviews and thematic workshops conducted from April to November 2024. Experts included members of the Global Risks Report Advisory Board, the Global Future Council on Complex Risks and the Chief Risk Officers Community. Refer to [Acknowledgements](#) for more detail.

# Key findings

The *Global Risks Report 2025* presents the findings of the **Global Risks Perception Survey 2024-2025 (GRPS)**, which captures insights from over 900 experts worldwide. The report analyses global risks through three timeframes to support decision-makers in balancing current crises and longer-term priorities. Chapter 1 explores current or immediate-term (in 2025) and short- to medium-term<sup>1</sup> (to 2027) risks, and Chapter 2 focuses on the risks emerging in the long term (to 2035). The report considers not only the survey findings and the range of implications, but also provides six in-depth analyses of selected risk themes.

Below are the key findings of the report, in which we compare the risk outlooks across the three time horizons.

## Declining optimism

As we enter 2025, the global outlook is increasingly fractured across geopolitical, environmental, societal, economic and technological domains. Over the last year we have witnessed the expansion and escalation of conflicts, a multitude of extreme weather events amplified by climate change, widespread societal and political polarization, and continued technological advancements accelerating the spread of false or misleading information. Optimism is limited as the danger of miscalculation or misjudgment by political and military actors

is high. We seem to be living in one of the most divided times since the Cold War, and this is reflected in the results of the **GRPS**, which reveal a bleak outlook across all three time horizons – current, short-term and long-term.

A majority of respondents (52%) anticipate an unsettled global outlook over the short term (next two years), a similar proportion to last year (Figure A). Another 31% expect turbulence and 5% a stormy outlook. Adding together these three categories of responses shows a combined four percentage point increase from last year, indicating a heightened pessimistic outlook for the world to 2027.

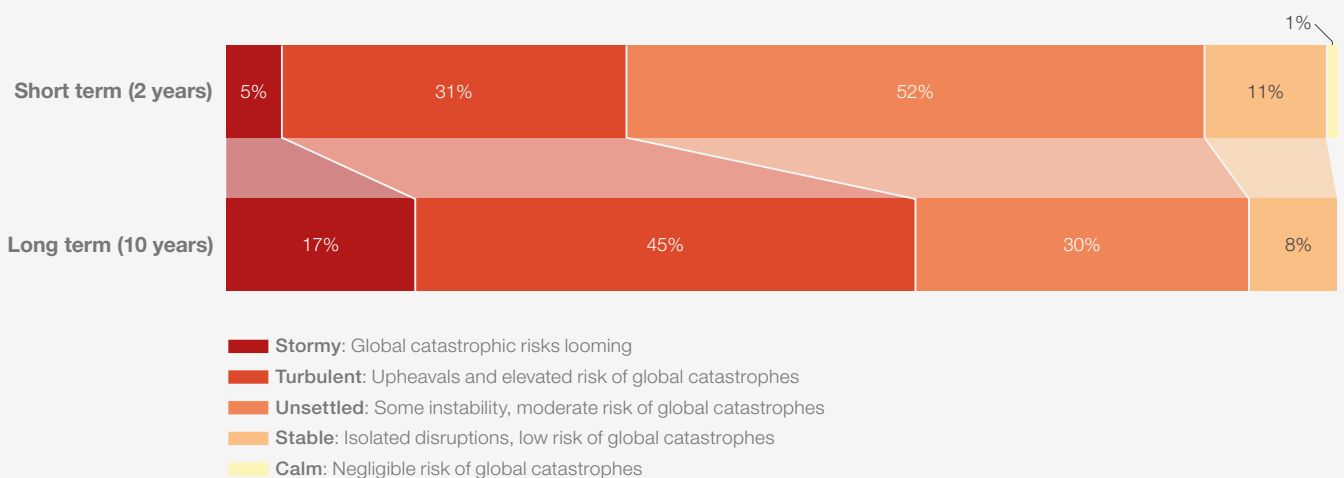
Compared to this two-year outlook, the landscape deteriorates over the 10-year timeframe, with 62% of respondents expecting stormy or turbulent times. This long-term outlook has remained similar to the survey results last year, in terms of its level of negativity, reflecting respondent skepticism that current societal mechanisms and governing institutions are capable of navigating and mending the fragility generated by the risks we face today.

## Deepening geopolitical and geoeconomic tensions

Comparing this year's findings for the world in 2025 with the two-year risk outlook provided by the **GRPS** two years ago shows how far

FIGURE A Short- and long-term global outlook

"Which of the following best characterizes your outlook for the world over the following time periods?"



Source  
World Economic Forum Global Risks Perception Survey  
2024-2025

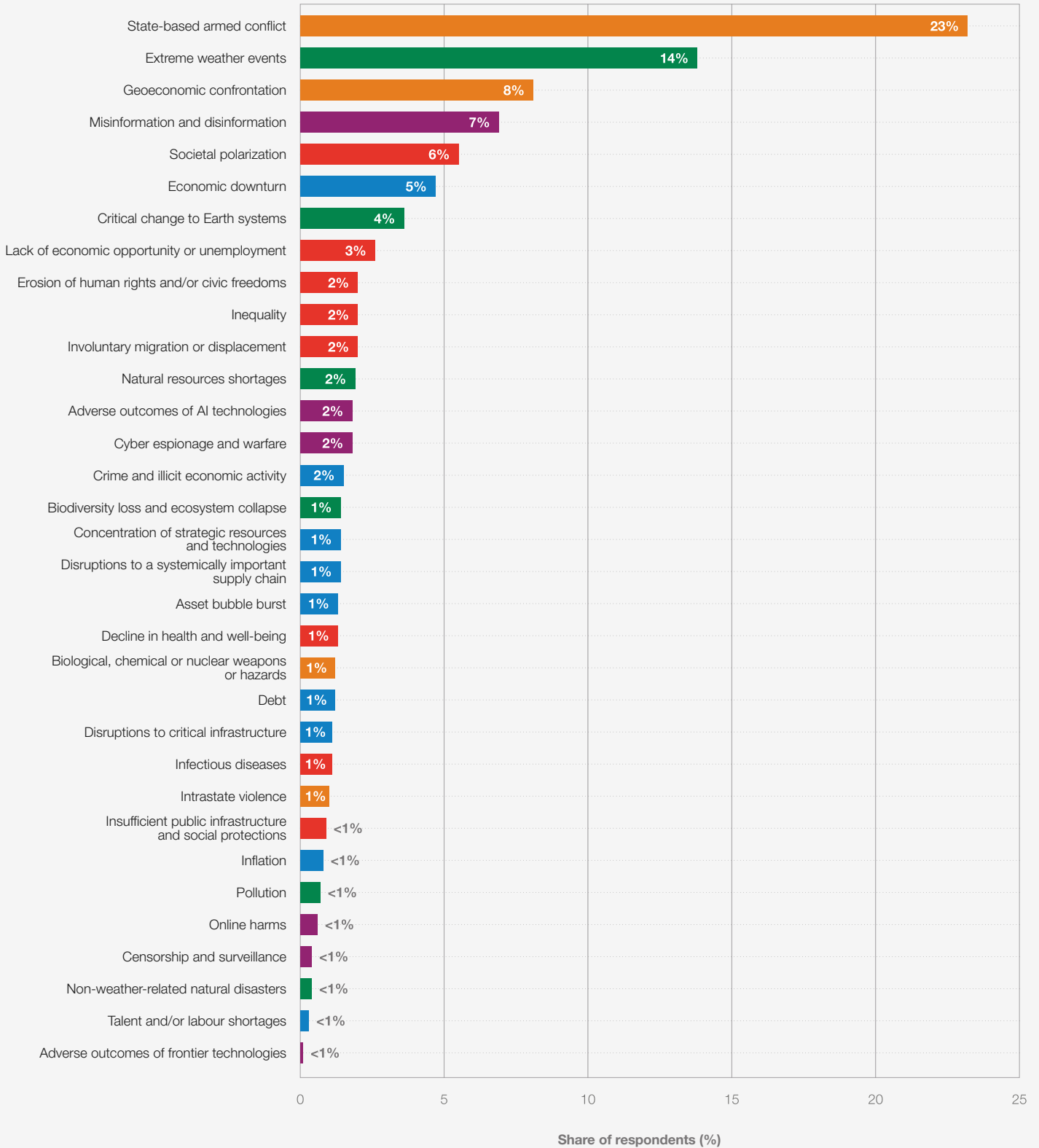
Note  
The percentages in the graph may not add up to 100% because values have been rounded up/down.

perceptions have darkened when it comes to conflict. **State-based armed conflict**, now ranked as the #1 current risk by 23% of respondents (Figure B), was overlooked as a leading two-year risk two years ago.

In a world that has seen an increasing number of armed conflicts over the last decade,<sup>2</sup> national security considerations are starting to dominate government agendas. **Section 1.3: "Geopolitical recession"** dives deep into the dangers of

**FIGURE B** Current Global Risk Landscape

"Please select one risk that you believe is most likely to present a material crisis on a global scale in 2025."



Source

Risk categories

Economic

Environmental

Geopolitical

Societal

Technological

World Economic Forum Global Risks Perception Survey 2024-2025.

unilateralism taking hold in national security considerations and highlights the worsening humanitarian impacts of the ongoing conflicts.

The risk of further destabilizing consequences following Russia's invasion of Ukraine, as well as in the Middle East and in Sudan are likely to be amplifying respondents' concerns beyond 2025 as well. In the two-year outlook, **State-based armed conflict** has moved up from #5 to #3 since our **GRPS 2023-24** (Figure C).

**Section 1.4: Supercharged economic tensions** explores how global geoeconomic tensions could unfold. The rise in the two-year ranking of **Geoeconomic confrontation**, from #14 last year to #9 today reflects unease about the path ahead for global economic relations. The role of technology in geopolitical tensions also concerns respondents, with **Cyber espionage and warfare** ranked #5 in the two-year outlook.

However, the top risk in 2027 is **Misinformation and disinformation**, for the second year in a row (Figure C). There are many ways in which a proliferation of false or misleading content is complicating the geopolitical environment. It is a leading mechanism for foreign entities to affect voter intentions; it can sow doubt among the general public worldwide about what is happening in conflict zones; or it can be used to tarnish the image of products or services from another country.

## A growing sense of societal fragmentation

Societal fractures are central to the overall risks landscape, as shown in the risk interconnections map (Figure D). **Inequality** (wealth, income) is

perceived as the most central risk of all, playing a significant role in both triggering and being influenced by other risks. It is contributing to weakening trust and diminishing our collective sense of shared values.

As well as **Inequality**, other societal risks also feature in the top 10 of the two-year ranking: **Societal polarization, Involuntary migration or displacement** and **Erosion of human rights and/or civic freedoms**. The importance ascribed to this set of societal risks by respondents suggests that social stability will be fragile over the next two years.

Respondent concern around certain key economic risks – **Economic downturn** and **Inflation** – has subsided since last year, with these two risks witnessing the largest falls in the two-year ranking (Figure 1.5). Nonetheless, the impacts of the cost-of-living crisis since 2022 contributed to **Inequality** becoming the top interconnected risk this year: **Economic downturn, Inflation, and Debt** were selected among the top causes of **Inequality** by **GRPS** respondents.

Although there are fewer societal risks in the top 10 of the 10-year risk ranking than in the top 10 of the two-year risk ranking (two compared to four, see Figure C), the profound societal fractures that feature prominently in this report should not be perceived as solely short-term risks. Looking ahead to the next decade, **Inequality** and **Societal polarization** continue to feature among the top 10 risks. This is an important pair of risks to watch, given how related they can be to bouts of social instability, and in turn to domestic political and to geostrategic volatility. In super-ageing societies – such as Japan, South Korea, Italy or Germany – unfavourable demographic trends could accentuate these risks over the next 10 years. Pensions crises and labour shortages in the long-term care

FIGURE C

### Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."

Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.



sector are likely to become acute and widespread problems in super-ageing societies, with no easy fix for governments. [Section 2.5: Super-ageing societies](#) explores this risk theme.

## Environmental risks - from long-term concern to urgent reality

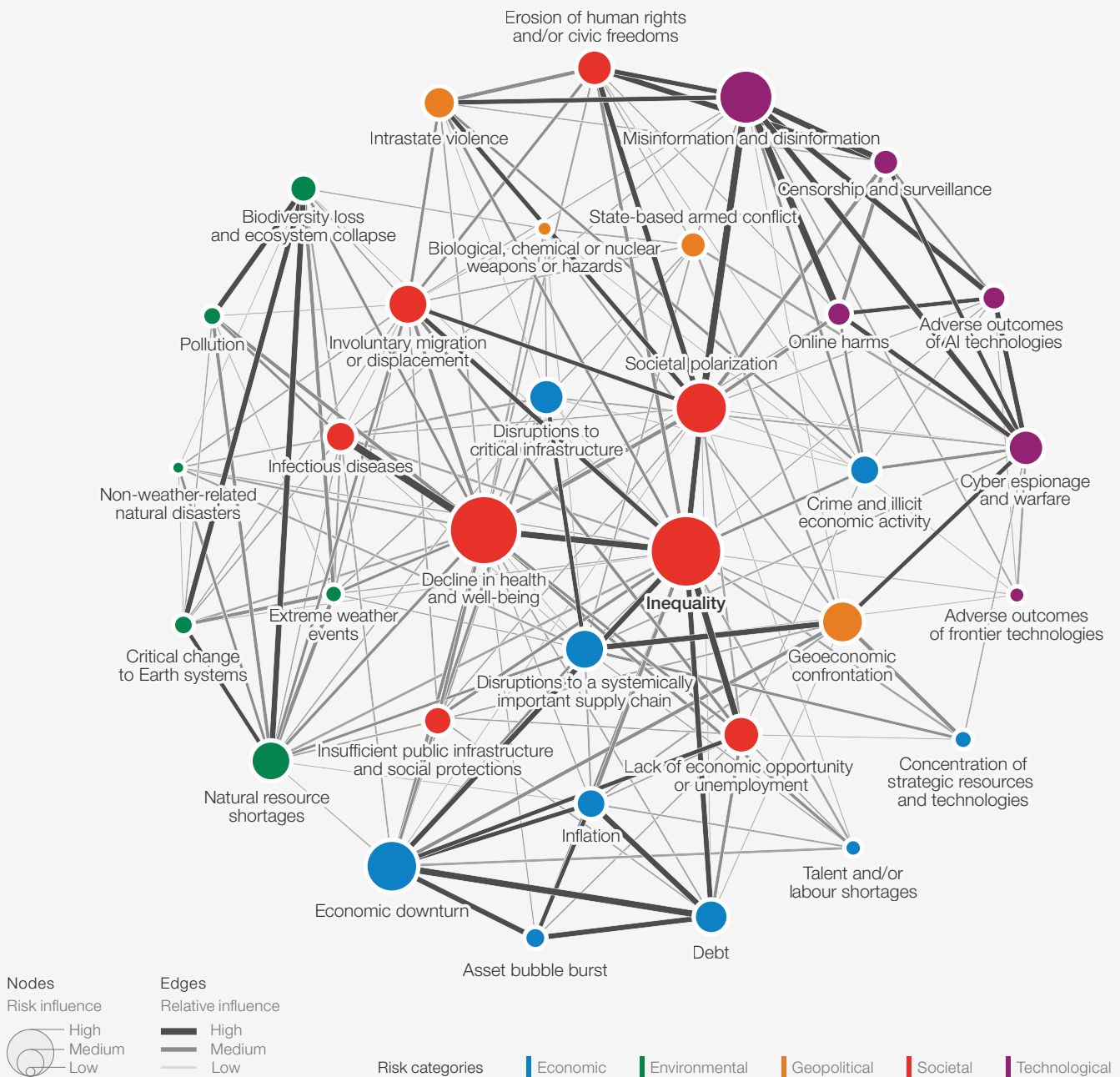
The impacts of environmental risks have worsened in intensity and frequency since the *Global Risks Report* was launched in 2006, as discussed in depth in [Section 2.6: Looking back: 20 years of the Global Risks Report](#). Moreover, the outlook

for environmental risks over the next decade is alarming – while all 33 risks in the **GRPS** are expected to worsen in severity (Figure E) from the two-year to the 10-year time horizon, environmental risks present the most significant deterioration.

**Extreme weather events** are anticipated to become even more of a concern than they already are, with this risk being top ranked in the 10-year risk list for the second year running. **Biodiversity loss and ecosystem collapse** ranks #2 over the 10-year horizon, with a significant deterioration compared to its two-year ranking.

The **GRPS** shows generational divergence when it comes to risk perceptions related to environmental

FIGURE D Global risks landscape: An interconnections map<sup>3</sup>



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025

issues, with younger survey respondents being more concerned about this over the next 10 years than older age groups. Take **Pollution**, for example, which the under 30s rank as the #3 most severe risk in 2035, the highest of any age group surveyed. As noted in last year's *Global Risks Report*, there is also divergence in how **Pollution** is ranked by stakeholder, with the public sector placing **Pollution** as a top 10 risk in the 10-year ranking, but not the private sector (Figure 2.4). **Section 2.3: Pollution at a crossroads** aims to fill awareness gaps by exploring under-appreciated pollutant risks that need to become more prominent in policy agendas by 2035 – and ideally much sooner given their significant impacts on health and ecosystems.

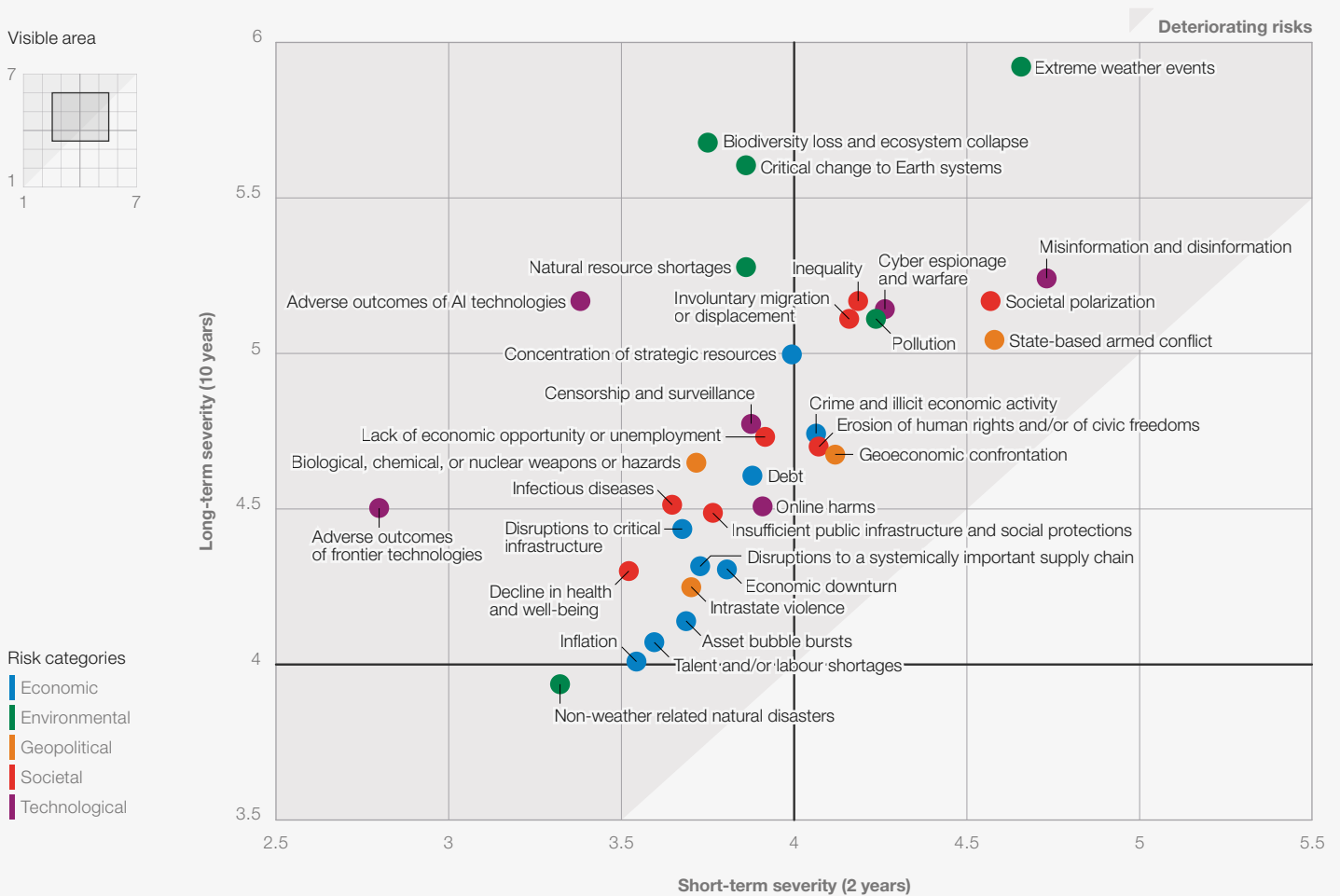
## Technological risks - still “under the radar”

In a year that has seen considerable experimentation by companies and individuals in making the best use of AI tools, concerns about **Adverse outcomes of AI technologies** are low in the risk ranking on a two-

year outlook. However, complacency around the risks of such technologies should be avoided given the fast-paced nature of change in the field of AI and its increasing ubiquity. Indeed, **Adverse outcomes of AI technologies** is one of the risks that climbs the most in the 10-year risk ranking compared to the two-year risk ranking (Figure G). In this report we highlight the role of Generative AI (GenAI) in producing false or misleading content at scale, and how that relates to societal polarization. **Section 1.5: Technology and polarization** explores this and the broader risks from greater connectivity, rapid growth in computing power and more powerful AI tools.

Among the areas experiencing the most rapid technological advances is the Biotech sector. **Section 2.4: Losing control of biotech?** takes an in-depth look at emerging risks in biotech, supercharged by AI. Over a 10-year time horizon, low-probability, high-impact risks exist, including **Intrastate violence** from biological terrorism and **Adverse outcomes of frontier technologies** involving accidental or malicious misuse of gene editing technologies, or even of brain-computer interfaces. At the same time, such risks do not

FIGURE E Relative severity of global risks over a 2- and 10-year period



Source  
World Economic Forum Global Risks Perception Survey  
2024-2025.

Note  
Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity].

diminish the tremendous actual and potential progress for humankind stemming from biotech.

## The time to act is now - is consensus possible in a fragmenting world?

Deepening divisions and increasing fragmentation are reshaping international relations and calling into question whether existing structures are equipped to tackle the challenges collectively confronting us. Levels of global cooperation across many areas of geopolitics and humanitarian issues, economic relations, and environmental, societal and technological challenges may reach new lows in the coming years. Key countries appear to be turning inward, focusing on mounting domestic economic or societal concerns, just when they should be seeking to strengthen multilateral ties to confront shared challenges.

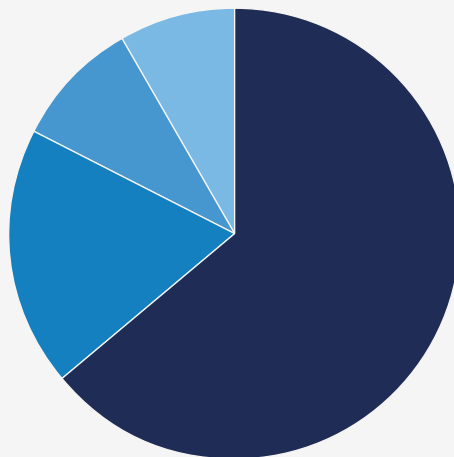
When asked about the characteristics of the global political outlook over the next decade, 64% of GRPS respondents believe that we will face a **Multipolar or fragmented order**, in which middle and great powers contest, set and enforce regional rules and norms (Figure F). Perceptions in response to this question have changed little compared to last year. The Western-led global order is expected to continue its decline over the next decade but will nonetheless remain an importance locus of power. Alternative power centres are likely to strengthen, not just led by China, but also by key emerging powers, including India and the Gulf states.

The decade ahead will be pivotal as leaders will be confronted with increasingly complex global risks. But to prevent a downward spiral in which citizens worldwide will be worse off than before, ultimately there is no option other than to find avenues for dialogue and collaboration.<sup>4</sup>

FIGURE F

### Global political outlook

"Which of the following best characterizes the global political environment for cooperation on global risks in 10 years?"



- 64%**  
Multipolar or fragmented order in which middle and great powers contest, set, and enforce regional rules and norms
- 19%**  
Bipolar or bifurcated order shaped by strategic competition between two superpowers
- 9%**  
Realignment towards a new international order led by an alternative superpower
- 8%**  
Continuation or reinvigoration of the US-led, rules-based international order

Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025

FIGURE G

Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."

Short term (2 years)

1 <sup>st</sup>	Misinformation and disinformation
2 <sup>nd</sup>	Extreme weather events
3 <sup>rd</sup>	State-based armed conflict
4 <sup>th</sup>	Societal polarization
5 <sup>th</sup>	Cyber espionage and warfare
6 <sup>th</sup>	Pollution
7 <sup>th</sup>	Inequality
8 <sup>th</sup>	Involuntary migration or displacement
9 <sup>th</sup>	Geoeconomic confrontation
10 <sup>th</sup>	Erosion of human rights and/or of civic freedoms
11 <sup>th</sup>	Crime and illicit economic activity
12 <sup>th</sup>	Concentration of strategic resources
13 <sup>th</sup>	Lack of economic opportunity or unemployment
14 <sup>th</sup>	Online harms
15 <sup>th</sup>	Debt
16 <sup>th</sup>	Censorship and surveillance
17 <sup>th</sup>	Critical change to Earth systems
18 <sup>th</sup>	Natural resource shortages
19 <sup>th</sup>	Economic downturn
20 <sup>th</sup>	Insufficient public infrastructure and social protections
21 <sup>st</sup>	Biodiversity loss and ecosystem collapse
22 <sup>nd</sup>	Disruptions to a systemically important supply chain
23 <sup>rd</sup>	Biological, chemical or nuclear hazards
24 <sup>th</sup>	Intrastate violence
25 <sup>th</sup>	Asset bubble bursts
26 <sup>th</sup>	Disruptions to critical infrastructure
27 <sup>th</sup>	Infectious diseases
28 <sup>th</sup>	Talent and/or labour shortages
29 <sup>th</sup>	Inflation
30 <sup>th</sup>	Decline in health and well-being
31 <sup>st</sup>	Adverse outcomes of AI technologies
32 <sup>nd</sup>	Non-weather related natural disasters
33 <sup>rd</sup>	Adverse outcomes of frontier technologies

Long term (10 years)

1 <sup>st</sup>	Extreme weather events
2 <sup>nd</sup>	Biodiversity loss and ecosystem collapse
3 <sup>rd</sup>	Critical change to Earth systems
4 <sup>th</sup>	Natural resource shortages
5 <sup>th</sup>	Misinformation and disinformation
6 <sup>th</sup>	Adverse outcomes of AI technologies
7 <sup>th</sup>	Inequality
8 <sup>th</sup>	Societal polarization
9 <sup>th</sup>	Cyber espionage and warfare
10 <sup>th</sup>	Pollution
11 <sup>th</sup>	Involuntary migration or displacement
12 <sup>th</sup>	State-based armed conflict
13 <sup>th</sup>	Concentration of strategic resources
14 <sup>th</sup>	Censorship and surveillance
15 <sup>th</sup>	Crime and illicit economic activity
16 <sup>th</sup>	Lack of economic opportunity or unemployment
17 <sup>th</sup>	Erosion of human rights and/or of civic freedoms
18 <sup>th</sup>	Geoeconomic confrontation
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30 <sup>th</sup>	Asset bubble bursts
31 <sup>st</sup>	Talent and/or labour shortages
32 <sup>nd</sup>	Inflation
33 <sup>rd</sup>	Non-weather related natural disasters

Source

World Economic Forum Global Risks Perception Survey 2024-2025

Risk categories

Economic

Environmental

Geopolitical

Societal

Technological



1

# Global Risks 2025: A world of growing divisions

## 1.1 The world in 2025

The current geopolitical climate, following Russia's invasion of Ukraine and with wars raging in the Middle East and in Sudan, makes it nearly impossible not to think about such events when assessing the one global risk expected to present a material crisis in 2025: close to one-quarter of survey respondents (23%) selected **State-based armed conflict** (proxy wars, civil wars, coups, terrorism, etc.) as the top risk for 2025 (Figure 1.1). Compared with last year, this risk has climbed from #8 to #1 in the rankings. Geopolitical tensions are also associated with the rising risk of **Geoeconomic confrontation** (sanctions, tariffs, investment screening), ranking #3, which is also driven by **Inequality**, **Societal polarization** and other factors.

The risks associated with **Extreme weather events** also is a key concern for the year ahead, with 14% of respondents selecting it. The burden of climate change is becoming more evident every year, as

pollution from continued use of fossil fuels such as coal, oil and gas leads to more frequent and severe extreme weather events. Heatwaves across parts of Asia; flooding in Brazil, Indonesia and parts of Europe; wildfires in Canada; and hurricanes Helene and Milton in the United States are just some recent examples of such events.

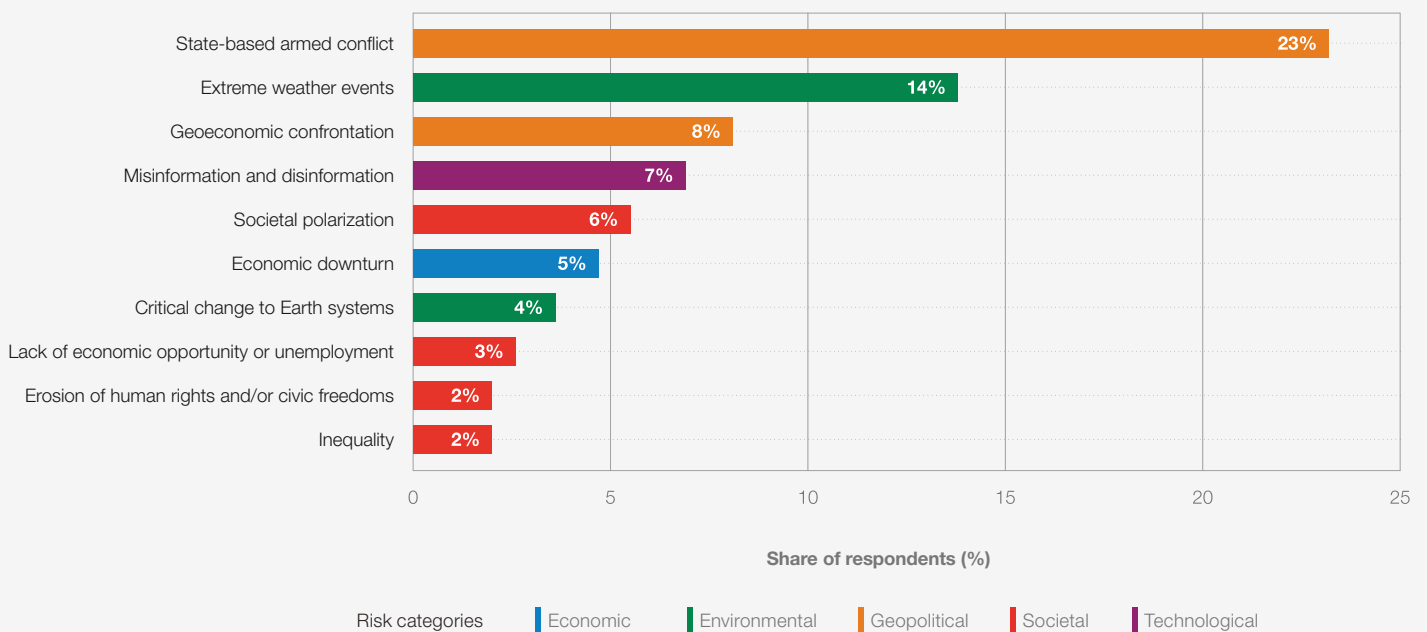
Similar to last year, **Misinformation and disinformation** and **Societal polarization** remain key current risks, in positions #4 and #5 respectively. The high rankings of these two risks is not surprising considering the accelerating spread of false or misleading information, which amplifies the other leading risks we face, from **State-based armed conflict** to **Extreme weather events**.

A sense of increasingly fragmented societies is reflected by four of the top 10 risks expected to present a material crisis in 2025 being societal in nature: **Societal polarization** (6% of respondents),

FIGURE 1.1

### Current Risk Landscape

"Please select one risk that you believe is most likely to present a material crisis on a global scale in 2025 (top 10 risks selected risks by respondents)."



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

**Lack of economic opportunity or unemployment (3%), Erosion of human rights and/or civic freedoms (2%) and Inequality (2%).**

On the economic front, **Inflation** is perceived as less of a concern this year than in 2024. However, perceptions of the overall economic outlook for 2025 remain fairly pessimistic across all age groups surveyed. The risk of an **Economic downturn**

(recession, stagnation) continues to be a common concern among respondents, coming in at #6 (5% of respondents), the same position as last year. The perceived vulnerabilities associated with the **Economic downturn** risk are higher for younger age groups: it is ranked #3 for under 30s, #4 for the 30-39-year age group and #5 for the 40-49-year age group (Figure 1.2), but does not even feature in the top 10 for those aged 60 years or older.

FIGURE 1.2 Current global risks, by age group

	<30	30-39	40-49	50-59	60-69	70+
1 <sup>st</sup>	Extreme weather events	State-based armed conflict	State-based armed conflict	State-based armed conflict	State-based armed conflict	State-based armed conflict
2 <sup>nd</sup>	State-based armed conflict	Extreme weather events	Extreme weather events	Extreme weather events	Extreme weather events	Extreme weather events
3 <sup>rd</sup>	<b>Economic downturn</b>	Geoeconomic confrontation	Geoeconomic confrontation	Geoeconomic confrontation	Critical change to Earth systems	Societal polarization
4 <sup>th</sup>	Misinformation and disinformation	<b>Economic downturn</b>	Misinformation and disinformation	Societal polarization	Geoeconomic confrontation	Geoeconomic confrontation
5 <sup>th</sup>	Societal polarization	Misinformation and disinformation	<b>Economic downturn</b>	Misinformation and disinformation	Misinformation and disinformation	Critical change to Earth systems
6 <sup>th</sup>	Erosion of human rights and/or civic freedoms	Crime and illicit economic activity	Societal polarization	Critical change to Earth systems	Societal polarization	Misinformation and disinformation
7 <sup>th</sup>	Adverse outcomes of AI technologies	Critical change to Earth systems	Cyber espionage and warfare	<b>Economic downturn</b>	Inequality	Adverse outcomes of AI technologies
8 <sup>th</sup>	Geoeconomic confrontation	Disruptions to a supply chain	Concentration of strategic resources	Debt	Involuntary migration or displacement	Asset bubble burst
9 <sup>th</sup>	Lack of economic opportunity	Involuntary migration or displacement	Critical change to Earth systems	Biodiversity loss and ecosystem collapse	Biological, chemical or nuclear hazards	Biodiversity loss and ecosystem collapse
10 <sup>th</sup>	Natural resources shortages	Lack of economic opportunity	Lack of economic opportunity	Disruptions to critical infrastructure	Cyber espionage and warfare	Biological, chemical or nuclear hazards
11 <sup>th</sup>	Asset bubble burst	Concentration of strategic resources	Adverse outcomes of AI technologies	Erosion of human rights and/or civic freedoms	<b>Economic downturn</b>	Concentration of strategic resources
12 <sup>th</sup>	Decline in health and well-being	Inflation	Erosion of human rights and/or civic freedoms	Inequality	Erosion of human rights and/or civic freedoms	Disruptions to critical infrastructure

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

Source

World Economic Forum Global Risks Perception Survey 2024-2025

Note

Sample size by age group varied, and all respondents were weighted equally for the purposes of global rankings. The results are based on the following: <30 years, n=122 (14% of total); 30-39, n=154 (17%); 40-49, n=250 (28%); 50-59, n=222 (25%); 60-69, n=104 (12%); and 70+, n=42 (5%).

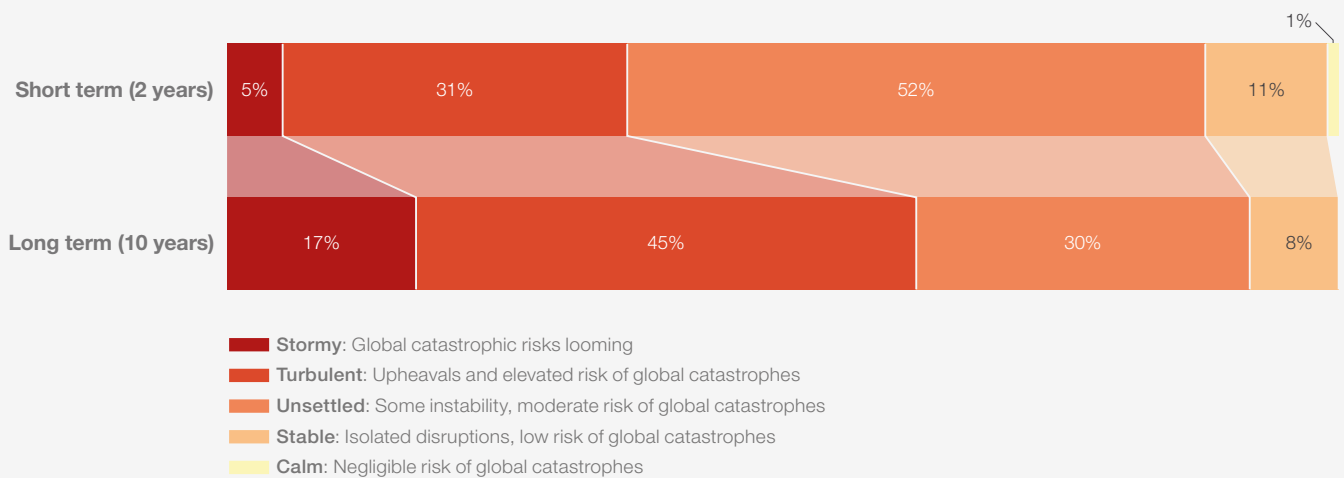
## 1.2 The path to 2027

The global outlook for 2027 is one of increased cynicism among survey respondents, with a high proportion of respondents to the **GRPS 2024-25** anticipating turbulence (31%), a four percentage-point increase since last year's edition (Figure 1.3). There is also a two percentage-point year-on-year increase to 5% in the number of respondents who are anticipating a stormy outlook – the most alarming of the five categories respondents were asked to select from – over the next two years.

The top risk for 2027 according to survey respondents is **Misinformation and disinformation** – for the second year in a row, since it was introduced into the **GRPS** risk list in 2022-23. Respondent concern has remained high following a year of “super elections”, with this risk also a top concern across a majority of age categories and stakeholder groups (Figures 1.6 and 1.7). Moreover, it is becoming more difficult to differentiate between AI- and human-generated **Misinformation and disinformation**. AI tools are enabling a proliferation in such information

FIGURE 1.3 Short- and long-term global outlook

"Which of the following best characterizes your outlook for the world over the following time periods?"

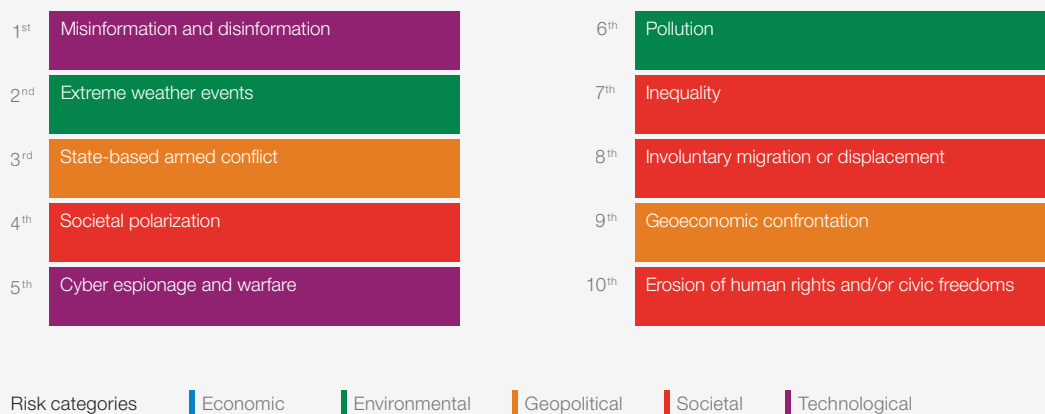


Source  
World Economic Forum Global Risks Perception Survey  
2024-2025

Note  
The percentages in the graph may not add up to 100% because values have been rounded up/down.

FIGURE 1.4 Global risks ranked by severity over the short term (2 years)

"Please estimate the likely impact (severity) of the following risks over a 2-year period."

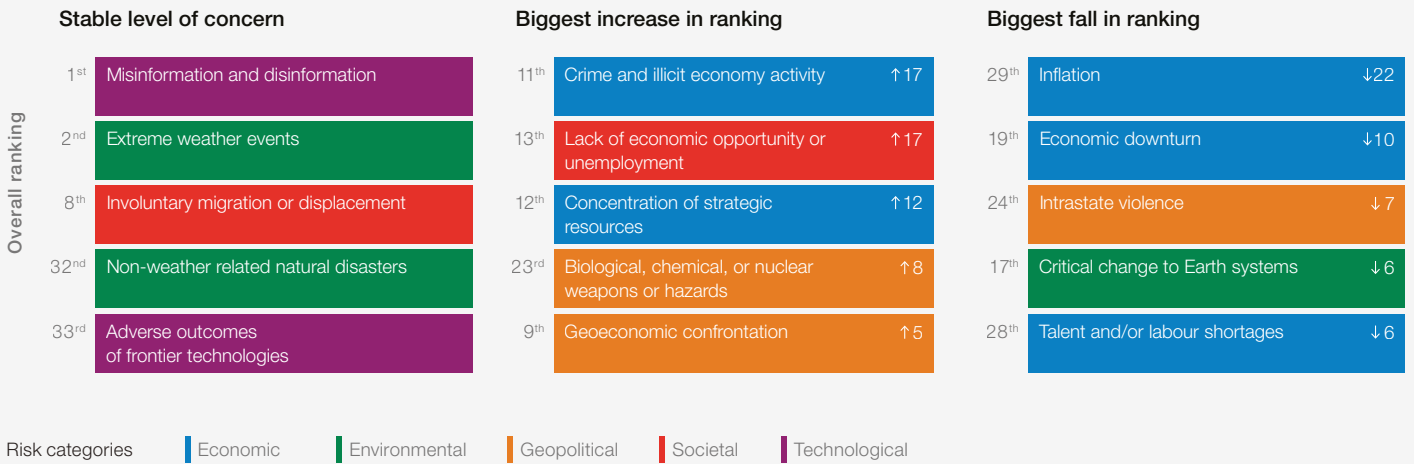


Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025

in the form of video, images, voice or text. Leading creators of false or misleading content include state actors in some countries.<sup>5</sup>

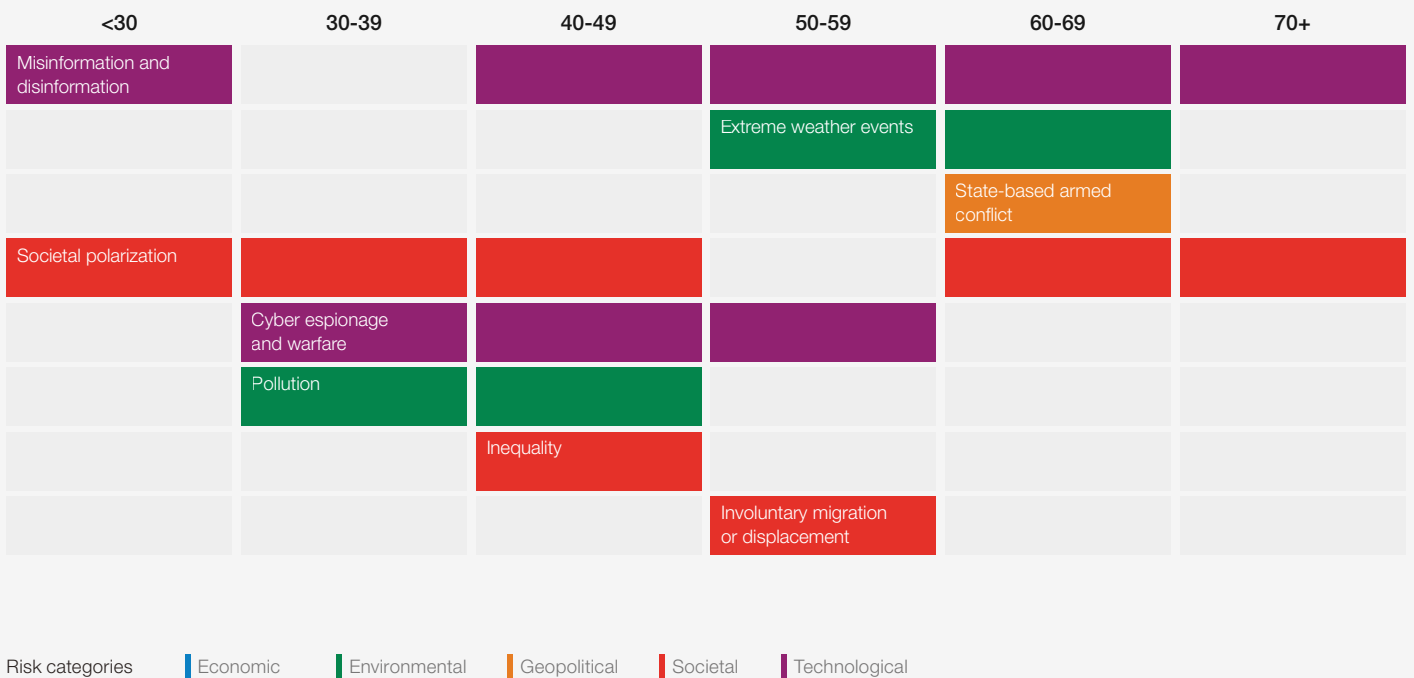
In a year that has seen the mass rollout of developments in AI and considerable experimentation with AI tools by companies and individuals, concerns about **Adverse outcomes of**

FIGURE 1.5 Change in short-term (2 years) global risks perception, 2023-2024 vs 2024-2025



Source  
World Economic Forum Global Risks  
Perception Surveys 2024-2025

FIGURE 1.6 Global risk perceptions over the short term (2 years), by age group



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

**Note**  
Each column represents the top 8 risks by age group, ordered by global ranking rather than within-age group rankings. A cell is coloured if the ranking of the risk for that age group is the same as the global ranking of that risk. Sample size by age group varied, and all respondents were weighted equally for the purposes of global rankings. The results are based on the following: <30, n=122 (14% of total); 30-39, n=154 (17%); 40-49, n=250 (28%); 50-59, n=222 (25%); 60-69, n=104 (12%); and 70+, n=42 (5%).



**AI technologies** is low in the risk ranking. In fact, it has slightly declined in the two-year outlook, with the risk now ranking #31 compared with #29 in last year's report. However, complacency around the risks of such technologies should be avoided given the fast-paced change in the field of AI and its increasing ubiquity. In this report we highlight how AI models are a factor in the relationship between technology and polarization. **Section 1.5: Technology and polarization** explores the risks for citizens resulting from the combination of greater connectivity, rapid growth in computing power, and more powerful AI models. In **Section 2.4: Losing control of biotech?** we highlight the role of AI in accelerating developments in this field, for both good and bad.

Respondents also express unease over **Cyber espionage and warfare**, which is #5 in the two-year ranking, echoing concerns outlined in the World Economic Forum's 2024 *Chief Risk Officers Outlook*, where 71% of Chief Risk Officers expressed concern about the impact of **Cyber risk and criminal activity (money laundering, cybercrime etc.)** severely impacting their organizations. The rising likelihood of threat actor activity and more sophisticated technological disruption were noted as particular concerns.<sup>6</sup>

Elevated cyber risk perceptions are one aspect of a broader environment of heightened geopolitical

and geoeconomic tensions, which is reflected in the two-year ranking of **State-based armed conflict** moving up from #5 in last year's report to #3 now. The risk of further destabilizing consequences in Ukraine, the Middle East, and Sudan are likely to be amplifying respondents' concerns. In a world that has been seeing an increasing number of armed conflicts for a decade, as detailed in **Section 1.3: "Geopolitical recession"**, national security considerations are increasingly dominating government agendas. That section of the report dives deep into the dangers of unilateralism taking hold, including its implications for deepening humanitarian crises.

Overall, the **GRPS** risks with some of the sharpest rises in ranking compared to the previous year are geostrategic in nature. **Biological, chemical, or nuclear weapons or hazards** (#23) and **Geoeconomic confrontation** (#9) are up eight and five positions, respectively, since the **GRPS 2023-24**. **Section 1.4: Supercharged economic tensions** explores how global geoeconomic tensions could unfold over the next two years. Private-sector concern with the two-year outlook for **Geoeconomic confrontation** has moved up from last year's edition of the report, where it was not a top 10 risk; it now is #6. There is also concern among both governments and academia, who rank this risk #9 and #10, respectively (Figure 1.7).

FIGURE 1.7 Global risks over the short term (2 years), by stakeholder group



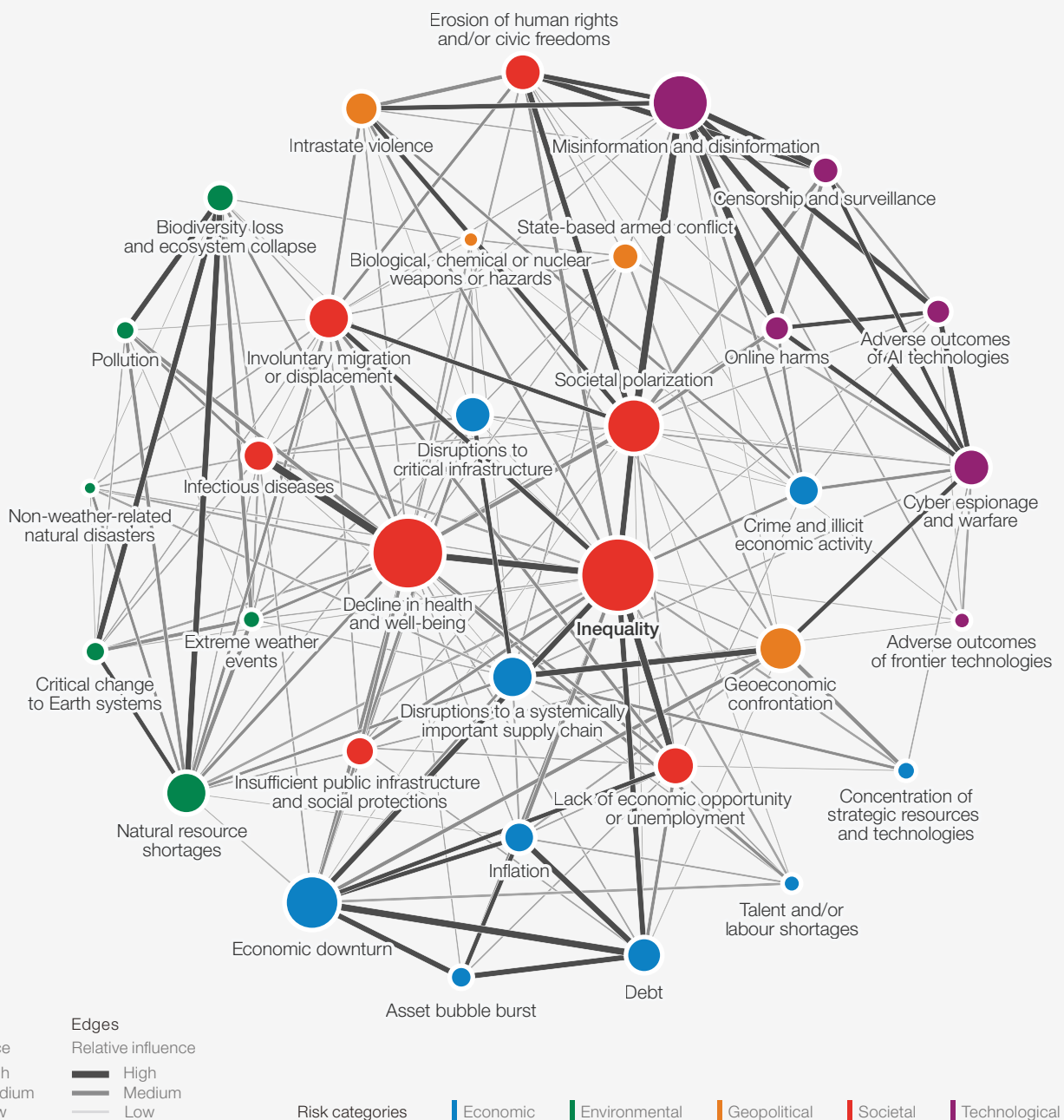
Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

Last year, two economic risks – **Inflation** and **Economic downturn** (recession, stagnation) – were new entrants in the top 10 ranking. Concerns around both have since subsided; in this year’s two-year risk ranking, there are no economic risks in the top 10. **Inflation**, which was #7 last year, has fallen to #29, with a similar decline for **Economic downturn**, which was #9 last year and is now #19. No stakeholder group selected either **Inflation** or **Economic downturn** as a top 10 risk, although there is ongoing concern about **Debt** among government stakeholders (at #7), and **Crime and illicit economic activity** among international organizations, private-sector and government

respondents (#6, #7 and #8, respectively). Across stakeholders in the aggregate, however, there are some sharp upticks in economic risk perceptions, with **Crime and illicit economic activity** increasing 17 positions to #11, and **Concentration of strategic resources** at #12, up 12 positions from last year.

This overall mixed picture for economic risk perceptions is not mirrored in societal risk perceptions, which have risen and feature prominently in the two-year risk landscape. **Inequality (wealth, income)** is #7 and **Societal polarization** is even higher, at #4. **Involuntary**

FIGURE 1.8 Global risks landscape: An interconnections map



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025

**migration or displacement** (#8), and **Erosion of human rights and/or civic freedoms** (#10) are also in the top 10. **Lack of economic opportunity or unemployment** has increased 17 positions from last year's edition and is now #13. **Inequality (wealth, income)** is perceived as the most central, interconnected risk of all, with significant potential to both trigger and be influenced by other risks (Figure 1.8). The importance ascribed to this set of societal risks suggests that social stability will be fragile over the next two years, weakening trust and diminishing our collective sense of shared values. This is being felt not only within societies but also between societies and governments: the perceived risk of **Censorship and surveillance** (#16) is up five places compared to last year.

Fractures across societal lines are also relevant to environmental risks, which have become a more divisive issue in domestic politics in many countries in recent years. On aggregate across **GRPS** respondents, concerns about environmental risks are high over the two-year horizon. Respondents list **Extreme weather events** as the #2 most severe risk for 2027, with **Pollution** at #6, up four places

from last year's report. While **Extreme weather events** remain a persistent concern year-on-year – the risk was also ranked #2 last year – the uptick in **Pollution** demonstrates that environmental risks that are often perceived as long-term threats are starting to be perceived with more certainty by respondents as short-term realities, as their effects become more apparent. Climate change is also an underlying driver of several other risks that rank high. For example, **Involuntary migration or displacement** is a leading concern, at #8.

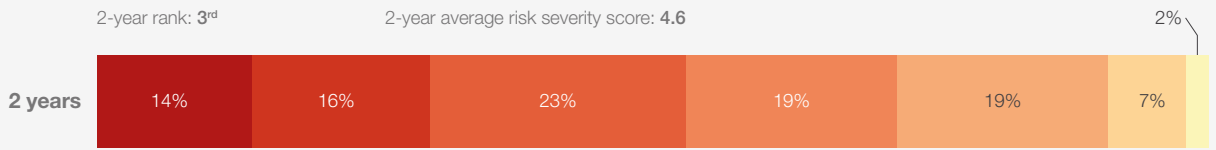
The following sections explore in-depth three risk themes and examine how these could play out over the next two years. **State-based armed conflict** (#3) and **Geoeconomic confrontation** (#9) are, respectively, at the core of [Section 1.3: "Geopolitical recession"](#) and [Section 1.4: Supercharged economic tensions](#), while [Section 1.5: Technology and polarization](#) explores the links between **Societal polarization** (#4), **Misinformation and disinformation** (#1), algorithmic bias and **Censorship and surveillance** (#16).

# 1.3 "Geopolitical recession"

FIGURE 1.9

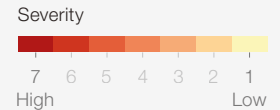
## Short-term (2 years) risk severity score: State-based armed conflict

*Bilateral or multilateral use of force between states and/or between a state and non-state actor(s), often with ideological, political, or religious goals, manifesting as war and/or organized, sustained violence. Includes, but is not limited to: hot wars; proxy wars; civil wars; guerilla warfare; terrorism; genocide; and assassinations.*



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025

Note  
Severity was assessed on a 1-7 Likert scale  
[1 = Low severity, 7 = High severity]. The percentages in the  
graphs may not add up to 100% because values have  
been rounded up/down.



- Over the next two years, uncertainty around the course of current conflicts and their aftermath is likely to remain high, and tensions elsewhere could escalate.
- A loss of support for and faith in the role of international organizations in conflict prevention and resolution has opened the door to more unilateralist moves.
- Humanitarian crises are multiplying and worsening, given funding constraints and major powers' lack of sustained focus on them.

**State-based armed conflict** (proxy wars, civil wars, coups, terrorism, etc.) was highlighted as by far the greatest risk for 2025 among the 33 risks ranked in the **GRPS**, with 23% of respondents anticipating a material global crisis. **GRPS** respondents cite **Geoeconomic confrontation** as well as the technology-related concerns **Cyber espionage and warfare** and **Misinformation and disinformation** among the risks most closely linked to State-based armed conflict (Figure 1.10). Concern about this risk among respondents remains alarming on a two-year horizon, with **State-based armed conflict** ranked #3, increasing two positions from last year's risk ranking.

In the **EOS**, **Armed conflict** – encompassing interstate, intrastate, proxy wars and coups – is identified as one of the top 10 global risks over the next two years. According to the **EOS**, this geopolitical risk ranks as the primary concern for executives in 12 countries, including Armenia, Israel, Kazakhstan and Poland, and features among the top five risks in an additional 11 economies, such as Egypt and Saudi Arabia (Figure 1.11). Executives who prioritize this risk according to the **EOS** frequently cite a high perception of related risks, including **Biological, chemical, or nuclear weapons or hazards** and **Geoeconomic confrontation**.

The top ranking of **State-based armed conflict** may also demonstrate concern among respondents

that we are in what has been termed a “geopolitical recession”<sup>7</sup> – an era characterized by a high



Anzhela Bets, Unsplash

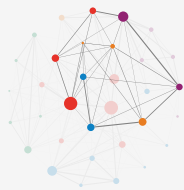
FIGURE 1.10

Global risk interconnections: State-based armed conflict

Risk categories

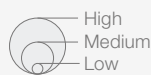
- Economic
- Environmental
- Geopolitical
- Societal
- Technological

Reference



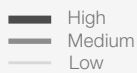
Nodes

Risk influence



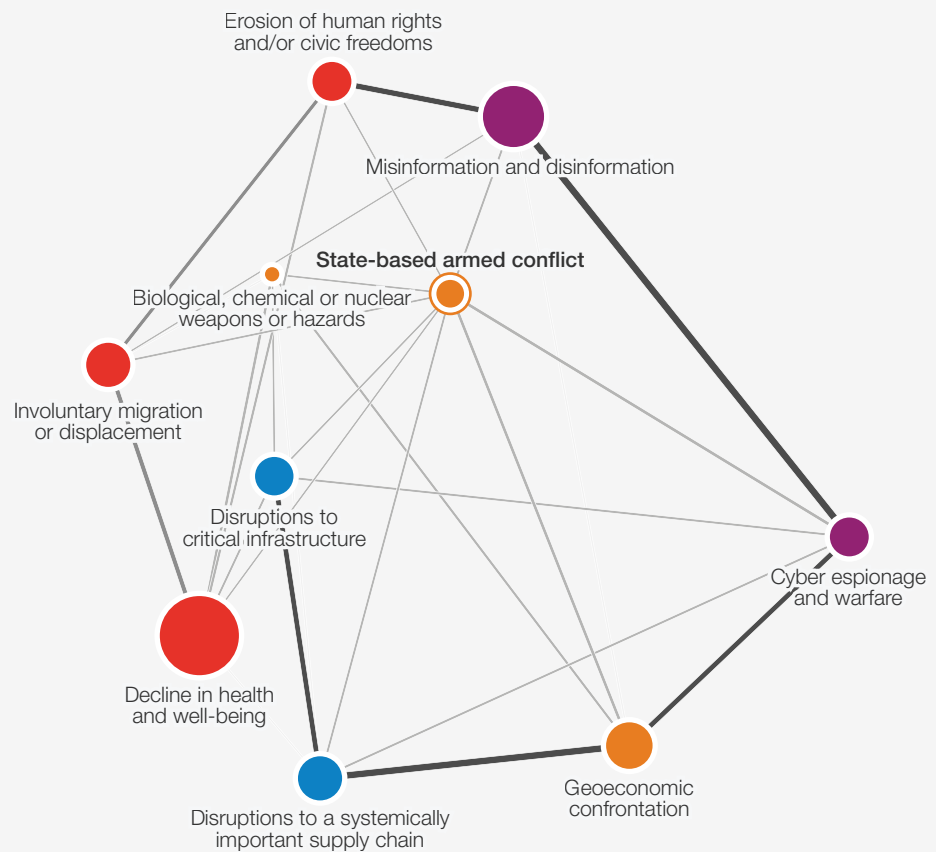
Edges

Relative influence



Source

World Economic Forum Global Risks Perception Survey 2024-2025.



number of conflicts, in which multilateralism is facing strong headwinds. It can also be argued that such a geopolitical recession started almost a decade ago (see Figure 1.12). Since 2014, the number of armed conflicts has been elevated compared to the period from the 1990s to the early 2010s. Interstate conflicts, while they tend to present the greatest threats to global stability, only constitute a small proportion of the total number of armed conflicts, which also include one-sided, non-state and intrastate armed conflicts.

### Escalation pathways

The GRPS results are also likely to reflect the depth of respondents' fears surrounding the two major current cross-border conflicts, Russia's invasion of Ukraine and the conflict in the Middle East, and perhaps also concern around the risks of conflict over Taiwan, China.

Regarding Russia's invasion of Ukraine, the position taken by the new US administration will be critical to its evolution. Will the United States take a firmer stance towards Russia, counting on such a move acting as a deterrent to further Russian escalation, and/or will it increase pressure on Ukraine, including

reducing financial support? In the latter case, European governments might increase their own support for Ukraine. The spectrum of possible outcomes over the next two years is wide, ranging from further escalation, perhaps also involving neighbouring countries, to uneasy agreement to freeze the conflict.

In the Middle East, any shift towards a full-scale Iran-Israel war over the next two years would draw in the United States further. Such a war would, in turn, generate more long-term instability in the entire region, including the Gulf economies, where US military bases could become targets. Meanwhile, recent political developments in Syria raise both opportunities and risks. Hopes are high that there could be a revitalization of the economy and a more inclusive political environment. However, building stability across Syria will be challenging, given the many competing interests that are involved. These include both domestic groups and foreign states; if other countries decide to intervene more heavily while the transition unfolds, this could lead to renewed confrontations.

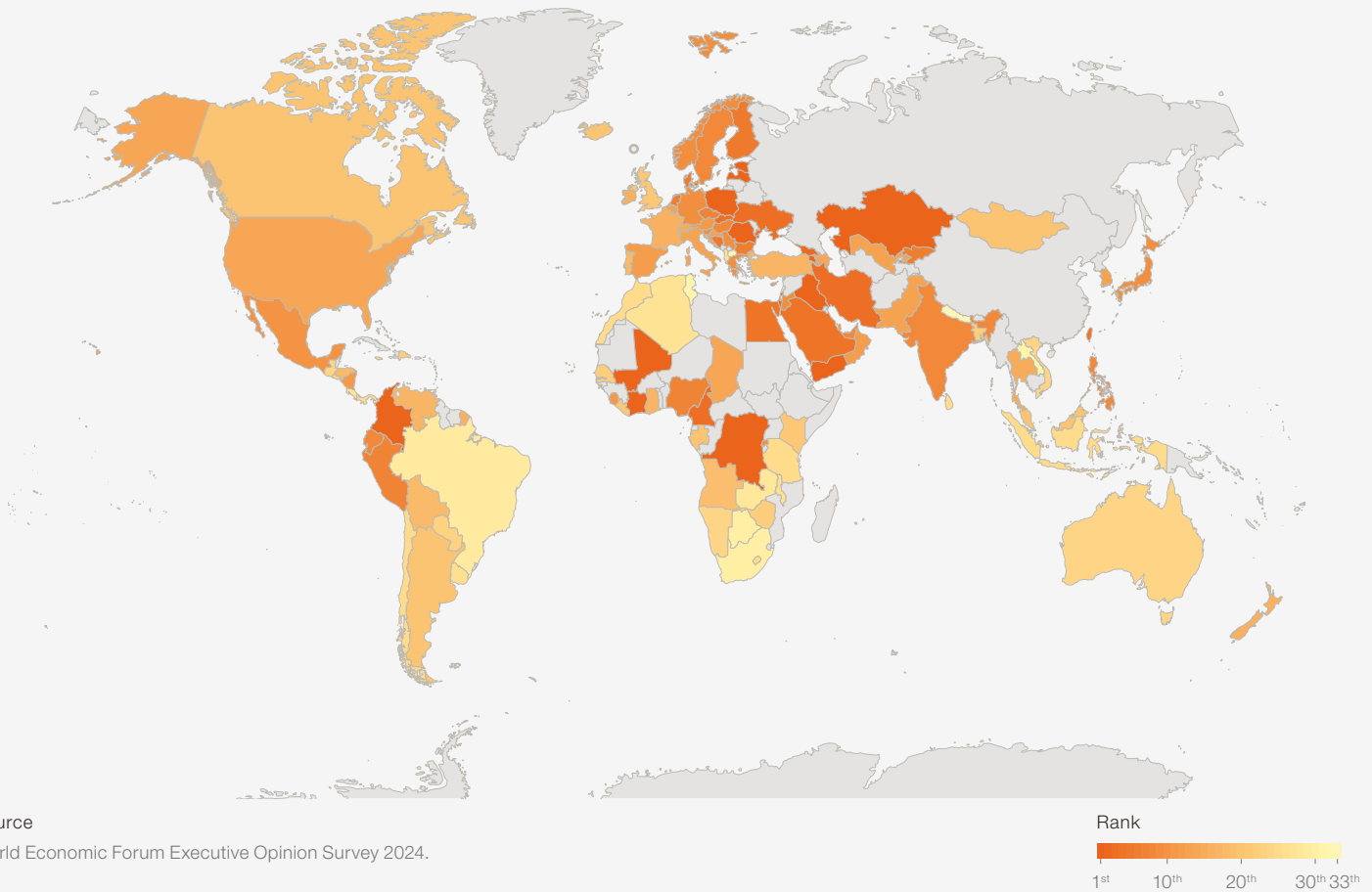
In addition, conflict over Taiwan, China cannot be ruled out. Limited armed confrontation could be triggered more easily if global tensions are high around goeconomic confrontation and if rhetoric



FIGURE 1.11

**National risk perceptions: Armed conflict (interstate, intrastate, proxy wars, coups, etc.)**

Executive Opinion Survey rank of national risks from the question "Which five risks are the most likely to pose the biggest threat to your country in the next two years?"



is aggressive. Both the United States and China may go further in the coming years in undertaking military manoeuvres close to Taiwan, China designed to show strength and act as deterrent. A major risk is that just one such manoeuvre could be misinterpreted by the other side and/or lead to accidental loss of life or destruction of hardware, leading to tit-for-tat military escalation.

**Waning appetite for multilateralism**

With the world facing this wide spectrum of ongoing armed conflicts, and escalation risks in the two major cross-border conflicts, the current weakness of the multilateral security framework with the UN Security Council (UNSC) at its core is alarming. The UNSC has not managed to stop conflicts from escalating, including Russia’s invasion of Ukraine and the wars in the Middle East and in Sudan.

Despite discussions over the last year about reinvigorating UN peacekeeping operations, these are in decline on aggregate, with their size having been reduced from over 100,000 peacekeepers in 2016<sup>8</sup> to around 68,000 in 2024.<sup>9</sup>

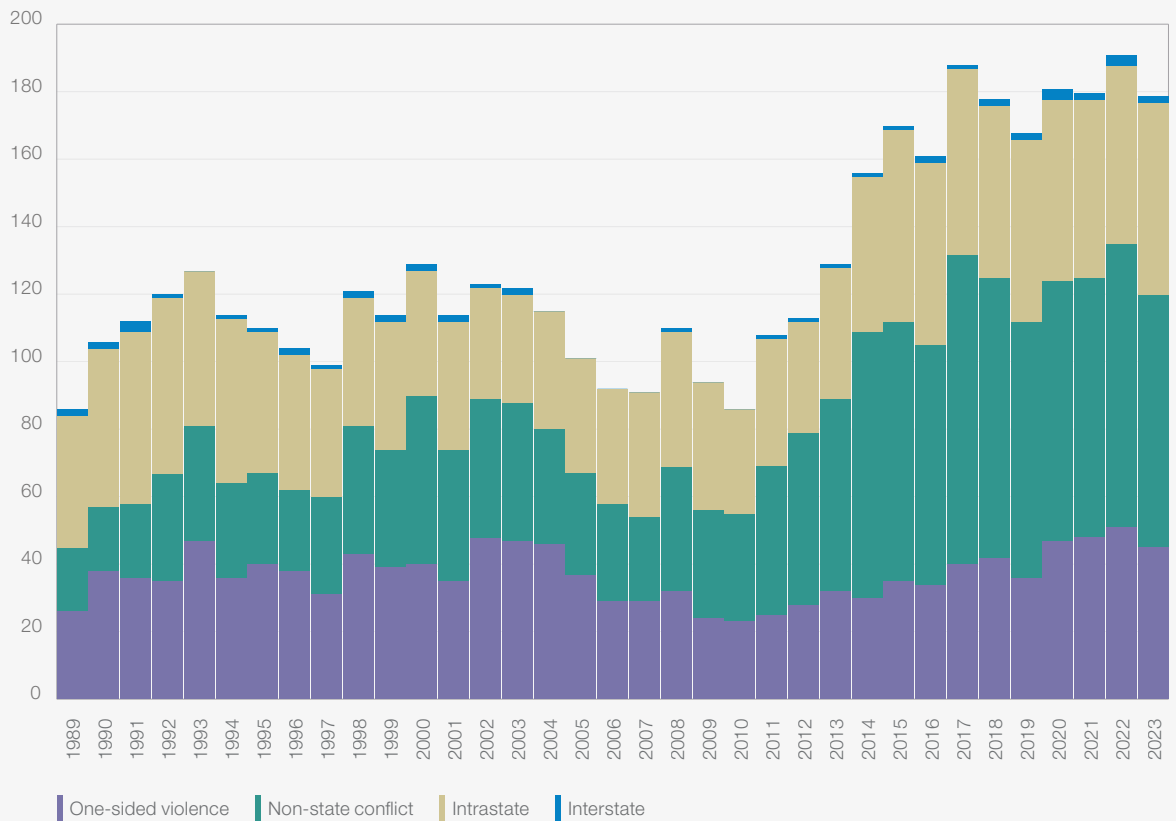
The UNSC faces ongoing structural challenges,<sup>10</sup> and over the next two years risks having even less impact, given the new US administration’s likely less favourable stance towards the UN generally and its preference for seeking solutions to conflicts unilaterally. There is a danger that more governments lose faith not only in the UNSC, but in multilateralism as a forum for resolving conflicts, and that the world instead becomes more adversarial, with conflicts ending only via battlefield, winner-takes-all victories and not through negotiated, multistakeholder peace agreements. While there continue to be discussions that aim towards reform of the UNSC, they are unlikely to make meaningful progress over the next two years given the complexity of aligning national interests and the current lack of political will to do so. Furthermore, there is no viable alternative global governance set-up in sight.

The growing vacuum in ensuring global stability at a multilateral level will lead governments around the world increasingly to take national security matters into their own hands, coordinating security and defense efforts only with select allied countries, or making unilateral military decisions. More countries will attempt to gain a greater degree of autonomy and self-sufficiency. Defense budgets could be prioritized over other long-term



FIGURE 1.12

Number of armed conflicts since the end of the Cold War (1989-2023)



Source

The Uppsala Conflict Data Program (UCDP).

investments, placing at risk spending in areas such as healthcare, education and infrastructure. This accelerating military spending would represent a continuation of recent trends: World military expenditure increased for the ninth consecutive year in 2023, reaching a total of \$2.4 trillion,<sup>11</sup> with 2023 seeing a steep rise over 2022 (see Figure 1.13). The top five countries accounted for 61% of the total. As governments with strengthening militaries perceive that multilateral constraints on unilateral military action are weaker, there could be more instances of cross-border military interventions in the coming years.

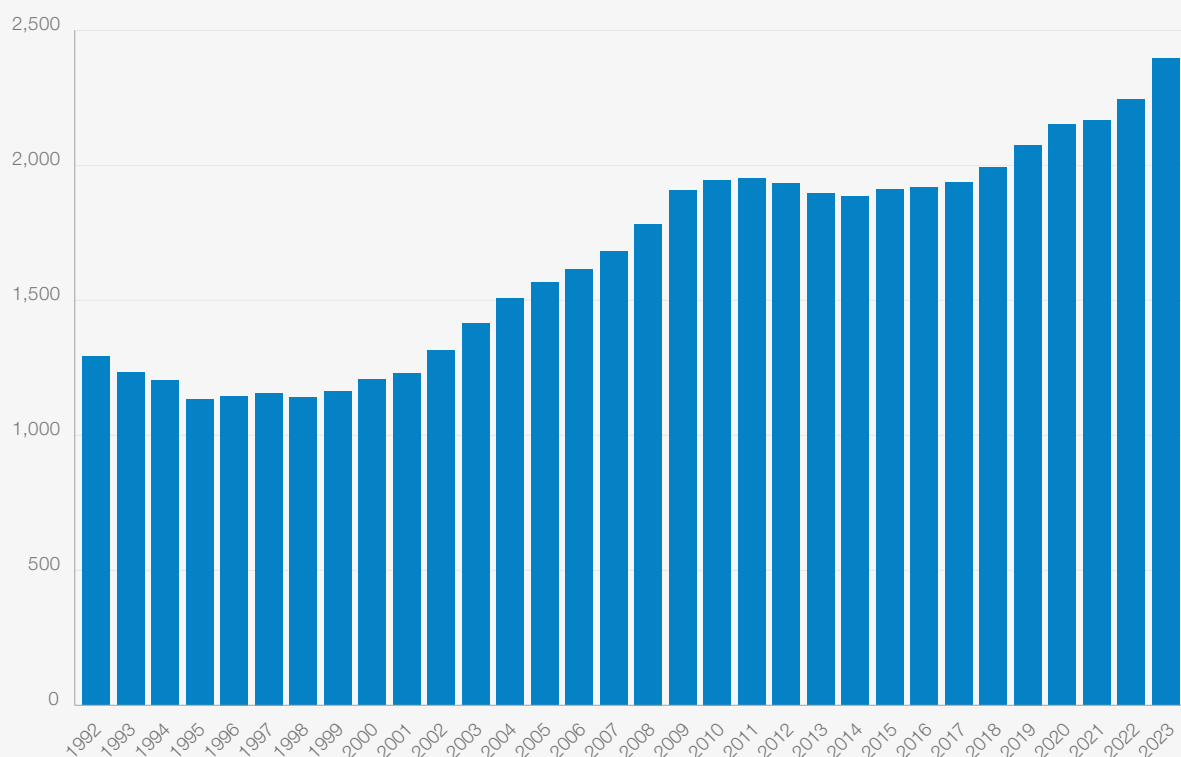
Unilateralism and the dominance of national security considerations in political agendas may also

have increasingly far-reaching repercussions for state-society relations worldwide. Increased state surveillance of citizens and restrictions on individual freedoms may become more commonplace in the name of national security. Perceived or actual threats from other countries also provide an opening for governments to seize control of narratives and suppress information, perhaps blurring the lines between genuine security considerations and political expedience. Governments may take measures that diminish the transparency of public expenditure, for example when it comes to funding parties to a conflict abroad. These are all conditions that will help authoritarian regimes consolidate their power and may lead to democratic regimes taking on more authoritarian characteristics.



Salah Darwish, Unsplash

FIGURE 1.13 | World military expenditure (billion \$), 1992-2023



Source

Stockholm International Peace Research Institute, *Military Expenditure Database*.

Note

Values are in billion \$ at constant 2022 prices and exchange rates.

### Worsening humanitarian crises

Even beyond global security considerations, multilateralism appears set to endure its most difficult period since the founding of the UN in 1945. Over the next two years, more questions are likely to be asked by national governments about the roles and priorities of key multilateral institutions, and there could be constraints placed on their funding. The outlook for this broader weakening of multilateralism is associated with declining global budgets for humanitarian aid (see Figure 1.14).

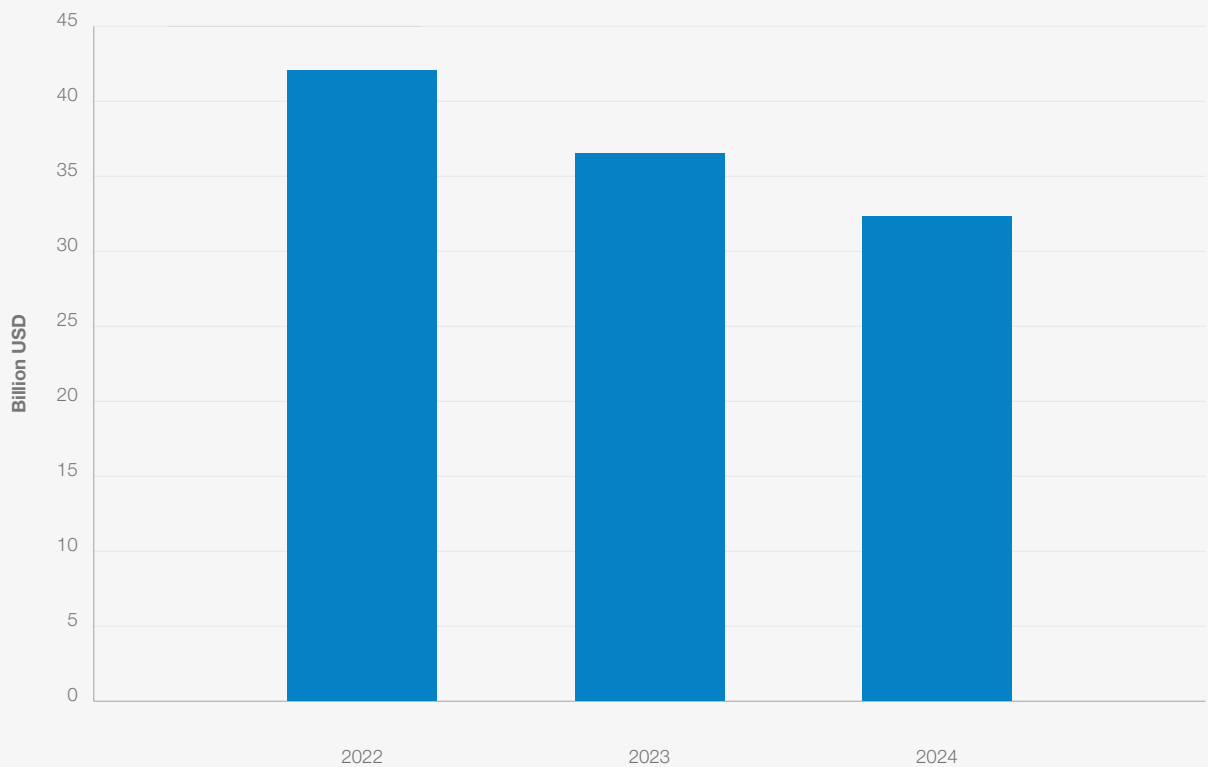
Declining funding translates into an acute risk of humanitarian crises deepening. Global humanitarian efforts are highly dependent on the financial and human resources and institutional know-how provided by the UN. This know-how, in areas such as logistics or relationships with local governments and NGOs, has been built up over decades and is irreplaceable over a short- or even medium-term time horizon. Over 90 million people in need receive humanitarian aid or development assistance from UN institutions on an annual basis.<sup>12</sup> A rising number of these individuals, as well as others who also need support but are unable to access it, will be at increasing risk of insecurity, disease,

malnutrition and starvation over the next two years if UN institutions and the humanitarian sector overall are weakened further.

Furthermore, higher levels of desperation will in some settings create more opportunities for armed groups to recruit. Countries in which serious humanitarian crises risk deepening further over the next two years and in turn fueling more violence include Sudan, Mali and Haiti. In Sudan, the domestic and regional impacts of reduced agricultural production and exports are already far-reaching. Like Ukraine, Sudan is a large exporter of agricultural products. It plays a critical role for neighbouring countries Ethiopia, South Sudan, Chad and Egypt.<sup>13</sup>

Forced displacement is also set to rise as international humanitarian aid efforts struggle to keep up. It is already at an all-time high, with over 122 million forcibly displaced people globally,<sup>14</sup> and 56% are displaced within their own countries. Among the 44% who are cross-border refugees, three quarters are hosted in low-income countries that have limited resources to support them. Sometimes refugees are confronted with nationalist sentiment or identity-related violence because of their ethnicity or religion, further fueling the potential for conflict in border areas. Increased competition

FIGURE 1.14 | Humanitarian funding (billion \$), 2022-2024



Source  
Financial Tracking Service by UN OCHA.

for jobs between refugees and locals can also be a source of tensions.

Rising unilateralism will have softer implications, too. Societies are developing more disinterested mindsets when it comes to conflicts and humanitarian crises in which their own citizens are not involved. As local media deprioritize reporting on “far-away” conflicts, a self-fulfilling cycle emerges, with greater tolerance by governments and societies of civilian casualties in warfare. This is a risk that has already started unfolding with respect to current conflicts, for example when it comes to Sudan: This war has rarely been at the top of global policy agendas despite its huge humanitarian toll. Such disinterest makes internationally coordinated humanitarian responses more difficult, especially when combined with the prevailing geopolitical and funding conditions.

## Actions for today

### A. Support multilateral institutions

The **GRPS** finds that the approach that respondents believe has the most long-term potential for driving action on risk reduction and preparedness regarding **State-based armed conflict** is **Global treaties**

**and agreements** (Figure 1.15. See also Figure 1.16), followed by **Multistakeholder engagement**. These findings strongly suggest that it is critical for public, private and civil society stakeholders across all countries to work together to reinforce existing multilateral institutions wherever feasible. This includes the UN Security Council; despite the challenges and complexity of reforming it, governments should continue dialogues with that ultimate objective in mind.

In highlighting the benefits of multilateralism in conflict resolution, leaders should draw on case studies of resolution of seemingly intractable conflicts. An example was the Colombian government’s peace agreement with the Revolutionary Armed Forces of Colombia (FARC) in November 2016. Broad international cooperation has also helped to tackle armed threats, for example in combating piracy off the Somali coast over the course of many years from 2008. Global leaders can draw optimism from such examples and showcase lessons learned and actionable strategies for ending current conflicts.

### B. Expand the role of regional organizations in managing tensions

Amid the current challenges facing global multilateralism, there is space for regional organizations to expand their roles in managing

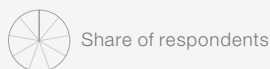
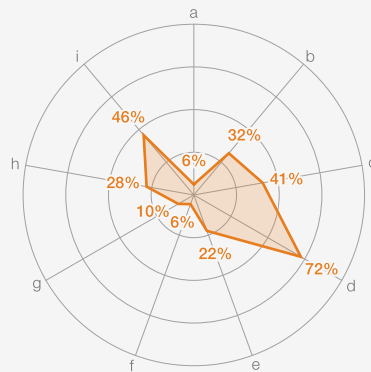
FIGURE 1.15

**Risk Governance: State-based armed conflict**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years? Select up to three for each risk."

**Approach**

- a. Financial instruments
- b. National and local regulations
- c. Multilateral treaties and agreements
- d. Global treaties and agreements
- e. Development assistance
- f. Corporate strategies
- g. Research & development
- h. Public awareness and education
- i. Multistakeholder engagement



**State-based armed conflict**  
(proxy, civil wars, coups, terrorism, etc.)

**Source**

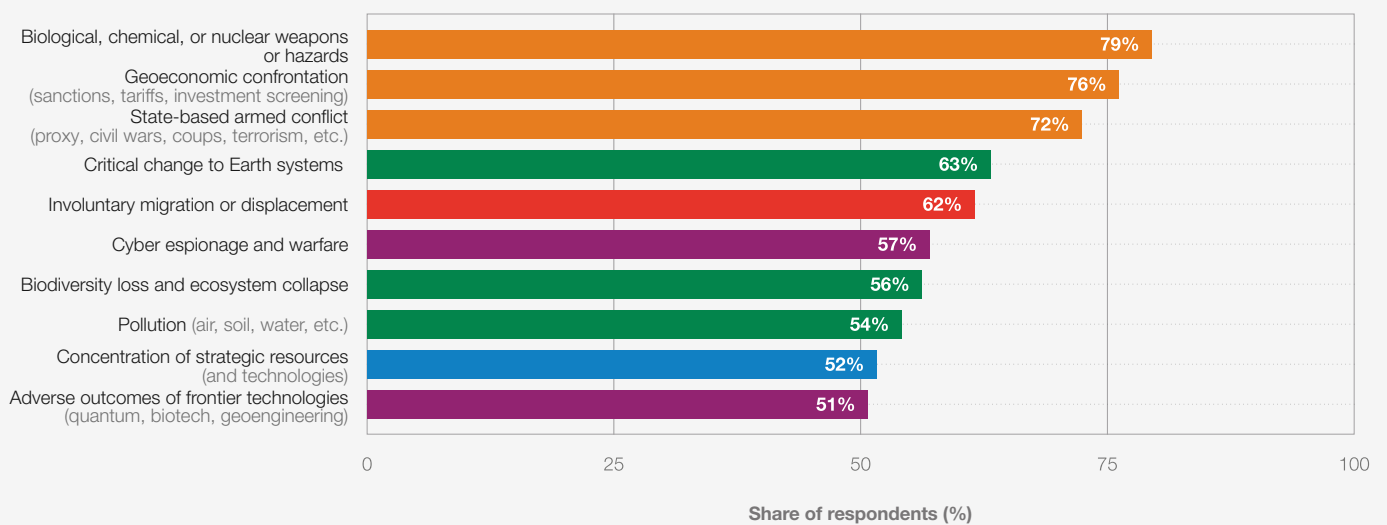
World Economic Forum Global Risks Perception Survey 2024-2025.

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

FIGURE 1.16

**Top risks that can be addressed by global treaties and arrangements**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"



Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

**Source**

World Economic Forum Global Risks Perception Survey 2024-2025.

geopolitical tensions in their regions. The African Union is a good example: It already has a track record in this regard, having carried out several peacekeeping operations across Africa and on other occasions has played a mediator role.<sup>15</sup> Nonetheless, there is a need for it to play a greater role in future in both peacekeeping and mediation.

### C. Diversify supply chains

For organizations, one of the big lessons taken from the ongoing conflicts is the need for supply

chain resilience and diversification. With geopolitical volatility likely to remain high over the next two years, organizational investment in geopolitical risk foresight and risk management is a must. When the level of uncertainty around conflicts or potential conflicts is high, scenario planning exercises can be a valuable tool to help organizations prepare for a range of different outcomes. Organizations need to consider not only whether their suppliers and supply routes are vulnerable to conflicts, but also what the reputational risks are of partnering or doing business with counterparts that are in any way party to a conflict.



Matthew  
TenBruggencate,  
Unsplash

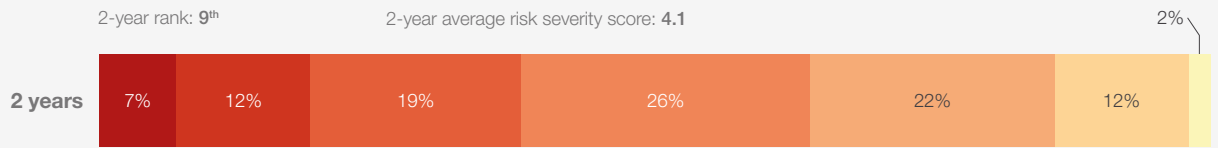


# 1.4 Supercharged economic tensions

FIGURE 1.17

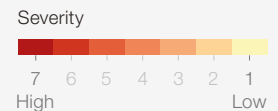
## Short-term (2 years) risk severity score: Goeconomic confrontation

Deployment of economic levers by global or regional powers to reshape economic interactions between nations, restricting goods, knowledge, services, or technology with the intent of building self-sufficiency, constraining geopolitical rivals and/or consolidating spheres of influence. Includes, but is not limited to: currency measures; investment controls; sanctions; state aid and subsidies; and trade controls.



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

Note  
Severity was assessed on a 1-7 Likert scale [1 – Low severity, 7 – High severity]. The percentages in the graphs may not add up to 100% because values have been rounded up/down.



- A worldwide escalation of broad tariff-based protectionism could lead to global trade declining.
- Deeper decoupling of trade between West and East would have worldwide repercussions, even beyond trade relationships.
- With economic growth in China and Europe already weak, an escalating trade war will introduce additional uncertainties into the global economic outlook.

Global trade relations are tense and there is a risk of unpredictable and potentially sharp changes in trade policies worldwide. **Goeconomic confrontation** (sanctions, tariffs, investment screening) ranks #3 for current (2025) risks according to the **GRPS** and #9 over a two-year horizon. This comes after trade tensions have already been rising steeply since 2017. According to Global Trade Alert, the number of harmful new policy interventions per year rose globally from 600 in 2017 to over 3,000 in each of 2022, 2023 and 2024.<sup>16</sup>

The incoming US administration has suggested that it will implement higher tariffs on imports from all trading partners, often singling out China, as well as Mexico and Canada. While these statements may have been the opening gambits ahead of future negotiations covering trade and other issues, they undoubtedly are a signal to the rest of the world that deepening protectionism is on the agenda.

US trading partners are considering retaliatory measures, as well as the timing for potentially implementing them. Over the next two years, there is a significant risk of escalating tariffs and other trade-related protectionism globally, which could accelerate broader decoupling between the United States and China, and their respective allies. While Cold War-style rhetoric between the United States and China could ramp up and fuel trade tensions between the two blocs, even the many countries

that are not aligned with either West or East would find themselves affected by these tensions.

In such an unfolding trade war scenario, initiatives currently underway could easily stall or come apart. For example, the EU's Carbon Border Adjustment Mechanism is more likely to face retaliation from trading partners; and efforts to cooperate in the area of digital regulation will come up against hardening negotiating positions. These and other initiatives need ongoing collaboration to keep moving forward.

### Across-the-board tariffs

In a worst-case scenario for tariff escalation over the next two years, governments would decide to impose tariffs not only on those countries/blocs imposing tariffs on them, but instead on all their trading partners. This widespread imposition of across-the-board tariffs globally would lead to a substantial contraction in global trade.<sup>17</sup>

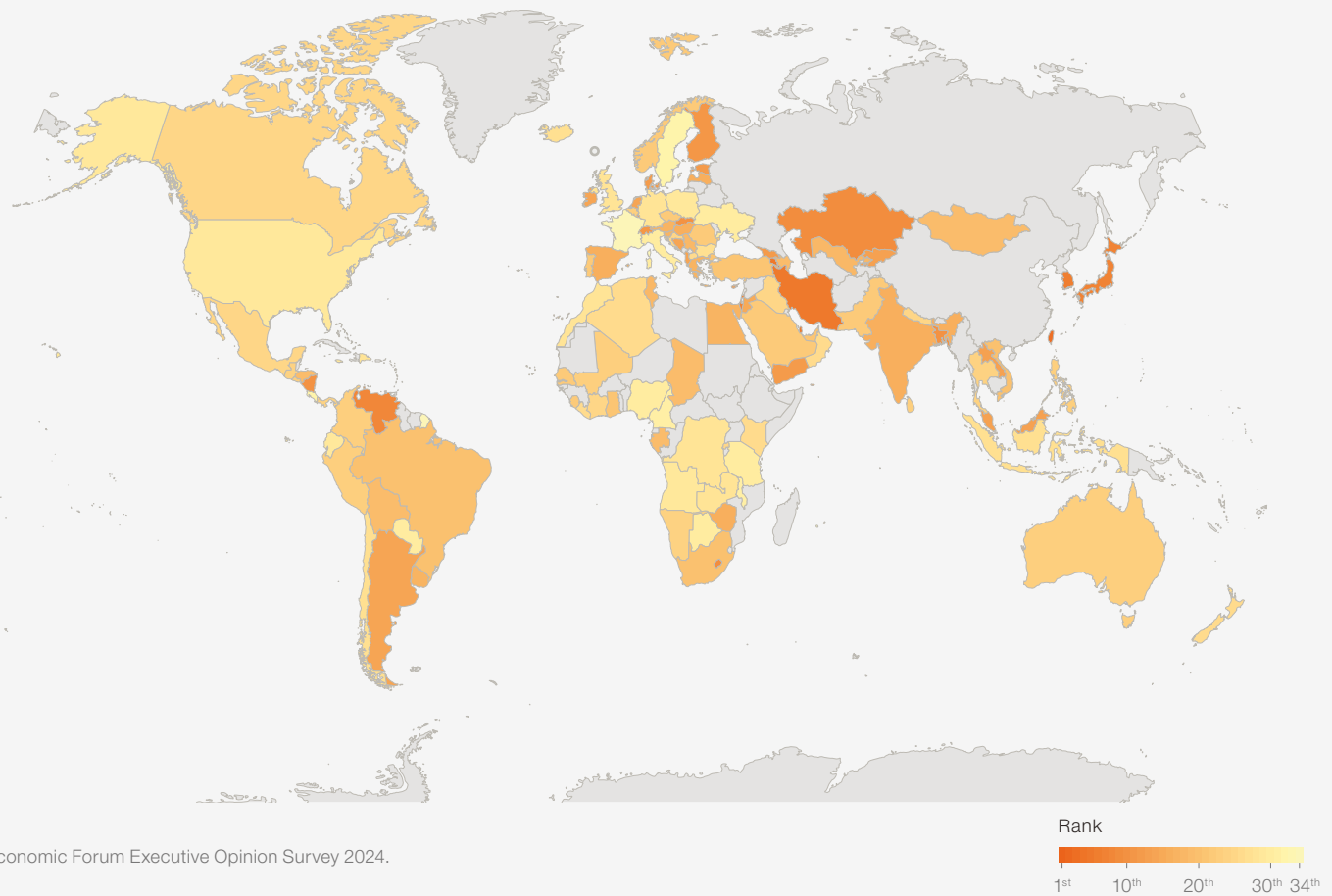
This scenario could originate from an escalation of the tariff conflict between the United States and China. The latter's dominance of global export markets is at the core of the new US administration's concerns. Not only in the United States, but manufacturing sectors worldwide have struggled to compete with Chinese products in a



FIGURE 1.18

**National risk perceptions: Geoeconomic confrontation**

Executive Opinion Survey rank of national risks from the question "Which five risks are the most likely to pose the biggest threat to your country in the next two years?"



Source  
World Economic Forum Executive Opinion Survey 2024.

range of sectors, such as solar panels or electric vehicles. While Chinese exports slowed from 2022-2023,<sup>18</sup> their growth has remained strong over a five-year timeframe.

If Chinese access to the US market is constrained by new tariffs, Chinese exports will be likely to flow to EU and other markets. But the EU has already started pushing back in selected areas of trade with China, for example imposing tariffs on electric vehicles imports from China for a period of five years in October 2024.<sup>19</sup> If faced with a potential influx of Chinese imports redirected from the United States, the EU might impose new tariffs on Chinese imports.

Other regions such as Latin America could take similar approaches in the face of diverted imports as they aim to defend local industries. Over the next two years, this could lead to a pattern of rolling, progressive protectionism spreading worldwide, at different speeds in different sectors, going well-beyond bilateral tit-for-tat tariffs. Some governments would move more aggressively than others, and once the first countries impose across-the-board tariffs on their trading partners, more countries could quickly follow.

**Escalation beyond tariffs**

Research published in November 2024 assessed the vulnerability of 173 countries to restrictive US trade measures. The research considers key concerns of US policy-makers, including those countries' bilateral trade surpluses with the United States, restrictions on market access for US exports, and existing tariffs, among other criteria.<sup>20</sup> Weighing the countries according to these criteria, South Korea is found to be the most at risk for being targeted with restrictive US trade measures, followed by China, Japan, Canada and India, at the next level of risk. However, other countries and blocs are found to be at risk, too: Brazil, the EU, Indonesia, Ireland, Italy, Kenya, Malaysia, Mexico and Thailand are the next group of economies.<sup>21</sup>

This assessment chimes with the results of the EOS, which show that **geoeconomic confrontation** (sanctions, tariffs, investment screening, etc.) is a prominent concern in Eastern Asia, in particular (Figure 1.18). In Taiwan, China and Hong Kong SAR, China, this risk is the third-most significant concern in their two-year outlooks. Moreover, 12 other economies, including Japan and South Korea, rank geoeconomic confrontation among their top 10 risks. While Eastern Asia may

be one region most immediately impacted by new trade restrictions, broadening global geoeconomic fragmentation would affect all economies, with those likely to suffer the most ultimately being emerging markets and low-income countries.<sup>22</sup>

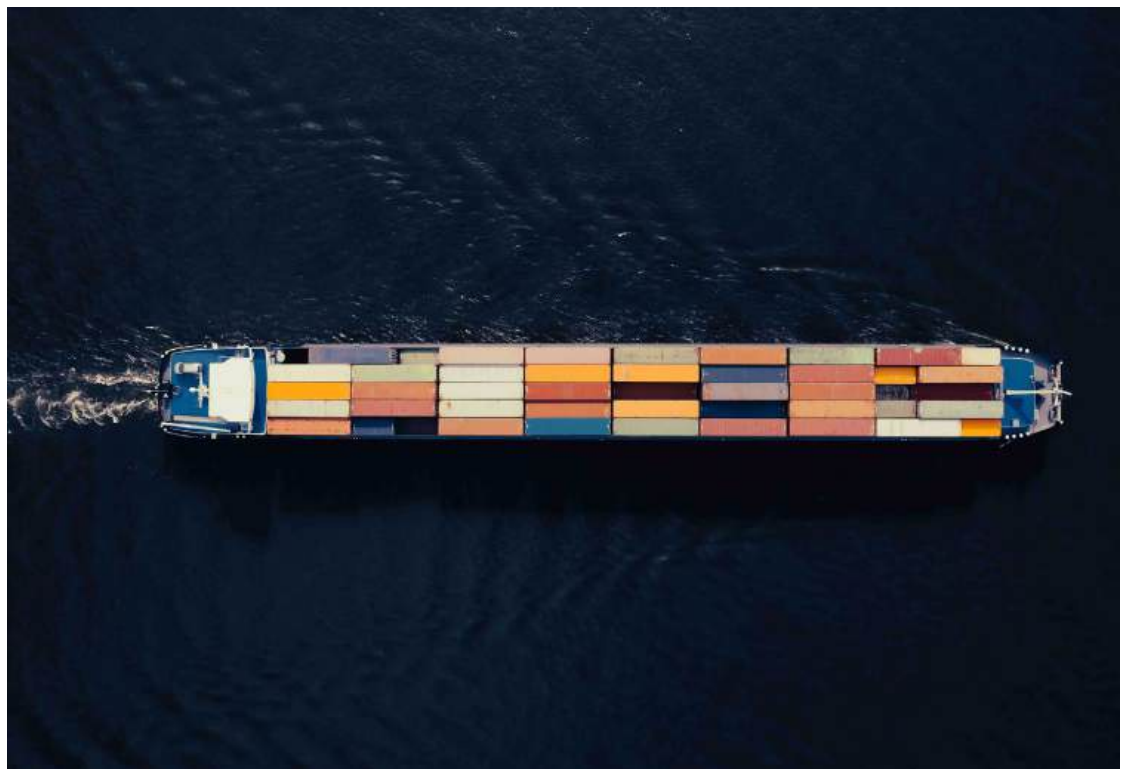
Beyond tariffs, industrial policy is at the core of other trade-related protectionist measures. The world is already in an era of industrial policy, with a high number of non-tariff barriers impacting trade relations. Two-thirds of all harmful trade restriction measures implemented in the last five years have been subsidies,<sup>23</sup> excluding export subsidies. Legislation such as the Inflation Reduction Act<sup>24</sup> or initiatives such as Make in India<sup>25</sup> are a rising characteristic of countries' inward focus and this trend could accelerate in a fragmenting trade environment. Although industrial policy can have benefits, for example addressing market failures, its risks include corruption and misallocation of resources.<sup>26</sup> A related area likely to see escalation is more blocking of trade and investment on national security grounds, with the number of sectors classified by governments as "strategically sensitive" expanding.

As the space for a multilateral, rules-based and open global trade environment diminishes, government interventions in the private sector could be used more frequently as a form of retaliation against companies' home governments. Employees of foreign companies could increasingly be prosecuted or have more restrictions placed on their in-country stays, and the number and size of fines imposed on companies for alleged regulatory non-compliance could be ratcheted up. Governments may make more use of sanctions targeting individuals, financial transactions and companies.

Some governments may foment more aggressive **Misinformation and disinformation** campaigns about goods and services from targeted countries. Results from the **EOS** indicate widespread concerns about the **Misinformation and disinformation** risk in a diverse set of countries, including India (#2), Germany (#4), Brazil (#6), and the United States (#6). Hardening public perceptions could lead to more frequent consumer boycotts of products.

Costs for companies doing business internationally will rise in this scenario. Global firms will need to navigate divergent sets of regulations in different, fragmenting parts of the world. Regulatory technology (RegTech) will be used more by governments to surveil foreign companies and ensure compliance,<sup>27</sup> reducing the time between new regulations being imposed and the need for companies to become fully compliant. IT infrastructure as well as data security and storage protocols will continue to be adapted to national security interests at the expense of cross-border commercial considerations. Finally, international data flows and financial transactions will become more cumbersome and costly, setting back some of the rapid progress made in recent years through the implementation of new technologies.

Government-led efforts at commercial cyber espionage could become more frequent as part of efforts to tilt the playing field towards their national champions. The **EOS** reveals that respondents in high-income countries tend to highlight cybersecurity risk. In some of these – for example Denmark, Luxembourg and the Netherlands – **Cyber insecurity** is one of the top three risks. Governments may also put pressure on domestically headquartered cloud services companies to restrict access in other countries.



Such a global fragmentation scenario will weaken the kind of multilateral collaboration required in many fields. For example, coordinating regulatory efforts and mobilizing the vast financial resources needed for the green transition will become much more difficult. Technological innovations that might make a difference towards greening economies will face more impediments to being shared across borders and scaled globally. Other areas where deeper global collaboration is badly needed, such as global health, energy or infrastructure, will also be likely to see slowdowns or reversals in progress. This will leave the world less well prepared for the next global pandemic, for example, while urgent public health and broader humanitarian issues will slip even further down the global agenda. Contagion from trade disruptions could spill over into food insecurity, too. Some large cities in Sub-Saharan Africa that are reliant on global commodity markets for their food supply are particularly at risk.

### Greater economic uncertainty

The World Economic Forum's September 2024 *Chief Economists Outlook* found that most of the chief economists surveyed (54%) expect the condition of the global economy to remain

unchanged over the next year, but four times as many expect conditions to weaken (37%) rather than to strengthen (9%).<sup>28</sup> This outlook aligns closely with the latest IMF forecast, which has economic growth stable at 3.2% annually in 2024 and 2025.<sup>29</sup> Even without accounting for the potential impacts of downside risks, this growth rate is tepid compared to the long-term average growth rate of 3.8% from 2000-2019.<sup>30</sup>

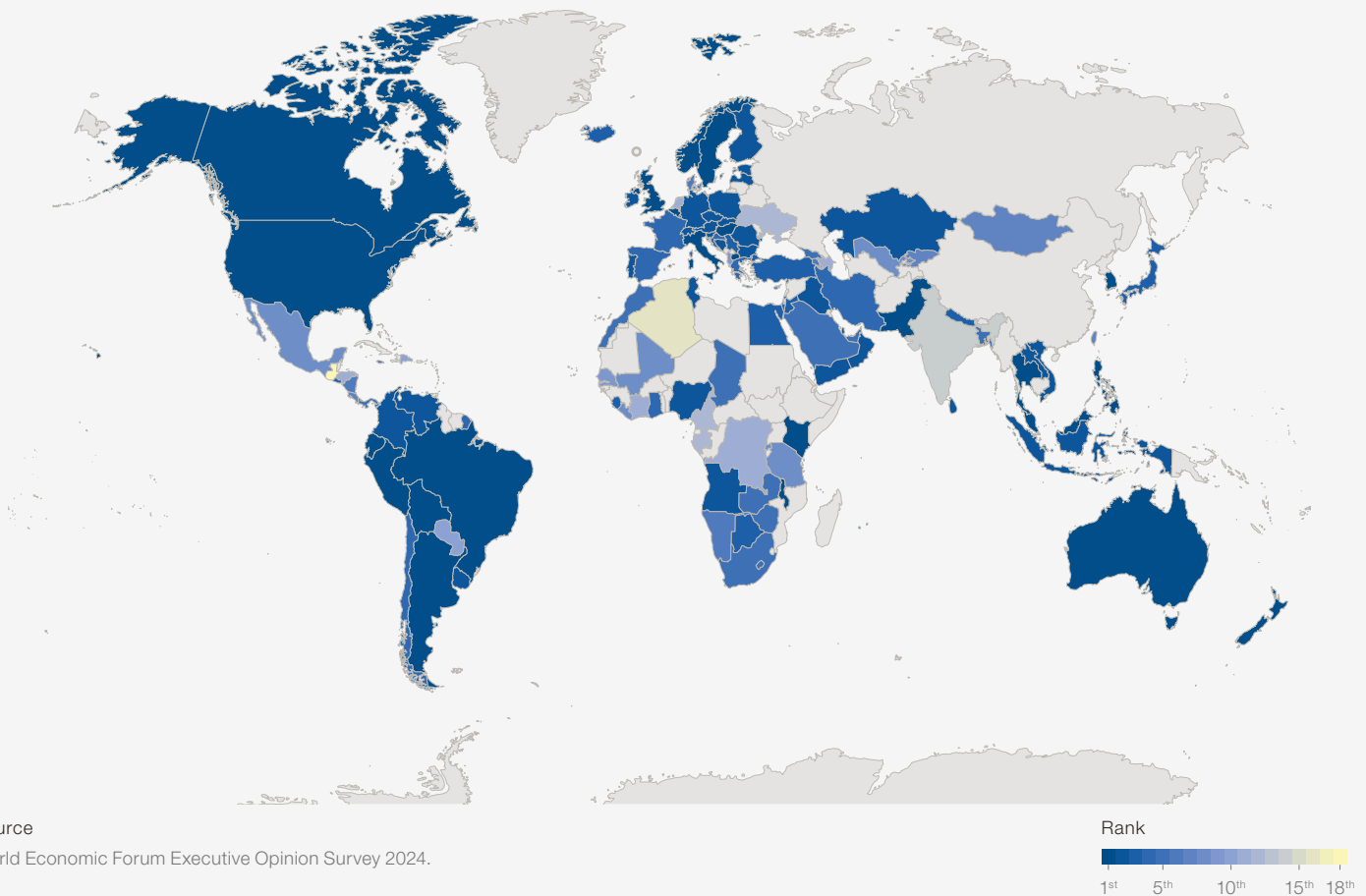
The IMF notes rising risks to the economy posed by conflict escalation, tariffs and trade policy uncertainty, lower migration, and the tightening of global financial conditions.<sup>31</sup> The latter could pose a challenge to financial stability given that valuations are elevated in several asset classes and the amount of leverage used by financial institutions is significant.<sup>32</sup> The rapid growth in the private credit market is one area to monitor.<sup>33</sup> More generally, both government and private-sector debt levels continue to rise globally.<sup>34</sup> There have been early signs that fiscal concerns could re-emerge over the next two years as markets will face a high volume of sovereign debt supply.<sup>35</sup>

Globally, **Economic downturn** tops the **EOS** global risk ranking in the next two years. This risk ranks first in five regions: Latin America and the Caribbean, Northern America, Oceania, South-

FIGURE 1.19

### National risk perceptions: Economic downturn (e.g. recession, stagnation)

Executive Opinion Survey rank of national risks from the question "Which five risks are the most likely to pose the biggest threat to your country in the next two years?"



Source  
World Economic Forum Executive Opinion Survey 2024.

Eastern Asia and Southern Asia. It also ranks first in three out of the four country income groups, with the only exception being lower-middle income countries. Respondents in 25 countries see **Economic downturn** as the leading risk, including developed economies such as the United States and United Kingdom, and emerging markets such as Brazil, Kenya and Malaysia (Figure 1.19).

In the short term, higher import tariffs cause an increase in the price of imported goods. The impact on global GDP depends on factors including the substitutability between imported and domestic goods; the response of exporting firms facing tariffs; and monetary policy reactions.<sup>36</sup> When it comes to the latter, monetary policy-makers are in the fortunate position of having just brought inflation back under control. The International Monetary Fund (IMF) projects headline global inflation to fall to 3.5% by the end of 2025, which is lower than the average in the two decades prior to the COVID-19 pandemic.<sup>37</sup> However, one risk is that an escalating trade war will lead to another upturn in inflation, forcing central banks to halt or even reverse course from cutting interest rates. If this is associated with a strengthening US dollar, there could be knock-on risks for countries and companies with US dollar debt refinancing needs.

Indirect impacts of tariffs include a fall in productivity, due to a change in the allocation of productive resources from more to less productive, more protected sectors and firms; a rise in the cost of capital caused by financial stress; and a drop in investment due to an increase in uncertainty about future business conditions, which causes firms to adopt a “wait-and-see” approach.<sup>38</sup> The latest *World Investment Report*, released in June 2024, cites fragmenting trade and regulatory environments

as among the key drivers of a 10% slump in global foreign direct investment last year.<sup>39</sup>

Analysis by the World Trade Organization (WTO) of the phase of the US-China trade conflict from 2018-2020 indicates that the direct impacts on the global economy of tariff increases during this period were far outweighed by the impacts of broader uncertainty around trade policy. With these broader impacts, the loss to global GDP was estimated at 0.34-0.50% during this period.<sup>40</sup> A true global trade war would have correspondingly more severe impacts, with estimates of global GDP losses highly uncertain but potentially much higher.<sup>41</sup>

The US-China trade conflict since 2018 also had clear business impacts: exits of foreign companies from China increased by 34% compared to pre-2018 levels.<sup>42</sup> Importantly, the impacts were much broader than only in the specific sectors targeted by US tariffs on Chinese products and affected non-US companies as well as US companies. These findings suggest that even the “scalpel” approach – levying tariffs on specific sectors – does not have a well-targeted outcome in terms of either sector or geography.<sup>43</sup> To reiterate, a broader global trade war would magnify these impacts on businesses.

## Actions for today

### A. Foster multilateralism

The **GRPS** finds that the approach that has the most long-term potential for driving action on risk reduction and preparedness regarding **Geoeconomic confrontation** is **Global treaties and agreements** (Figure 1.20). A specific area to prioritize would be

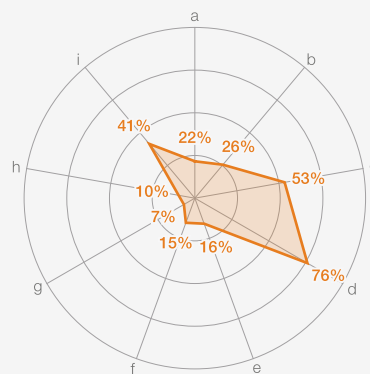
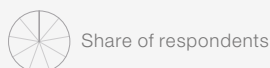
FIGURE 1.20

### Risk Governance: Geoeconomic confrontation

“Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years? Select up to three for each risk.”

#### Approach

- a. Financial instruments
- b. National and local regulations
- c. Minilateral treaties and agreements
- d. Global treaties and agreements
- e. Development assistance
- f. Corporate strategies
- g. Research & development
- h. Public awareness and education
- i. Multistakeholder engagement



Geoeconomic confrontation  
(sanctions, tariffs, investment screening)

#### Source

Source: World Economic Forum Global Risks Perception Survey 2024-2025.

#### Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

a revival of reforms at the WTO to address dispute resolution, tariff-setting rules and digital trade issues. With US-China **Geoeconomic confrontation** at the core of a fragmenting world, more opportunities will open up for rising powers, such as India or the Gulf countries, to fill the void and propose multilateral alternatives to the current global political economic order. These countries can also benefit by acting as a bridge between West and East, even though they too will suffer many of the negative impacts of the fragmenting environment. Smaller countries will face increasing pressure to align with the West or the East in their trade relationships.

### B. Develop strategic relationships

Governments could consider further prioritizing efforts to develop strategic regional or bilateral ties with countries that offer complementarity in terms of sectoral strengths, natural resource endowments and

skills. “Deep” regional trade agreements – outside the WTO but consistent with WTO requirements – and WTO-based plurilateral<sup>44</sup> or “minilateral” agreements can be considered (Figure 1.21).<sup>45</sup> Even at these levels, multistakeholder dialogue needs to be deepened to reinforce the message that well-designed deepening of trade can lead to mutually beneficial economic and social outcomes.

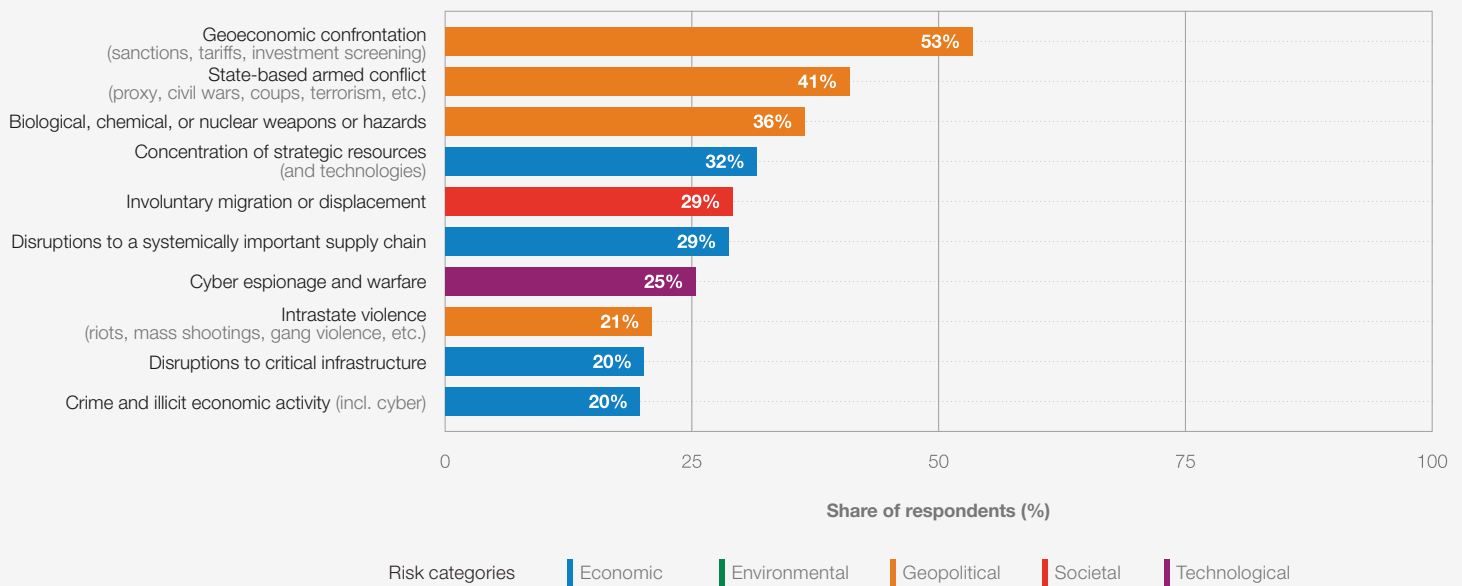
### C. Strengthen domestic economic resilience

In an environment where trade becomes more costly and cumbersome, emphasis needs to be placed on policies that strengthen the domestic economy, such as financial sector development or investment in education, health and infrastructure. On the supply side, developing greater self-sufficiency in key strategic sectors such as Energy, Agriculture, and Defense will increasingly become an important aspect of resilience at the national level.

FIGURE 1.21

### Top risks that can be addressed by “minilateral” treaties and agreements

*"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"*



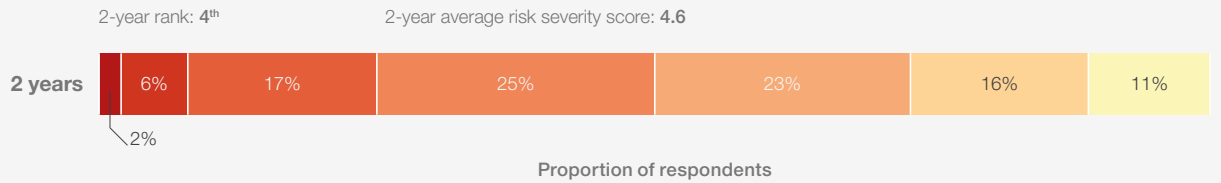
Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

# 1.5 Technology and polarization

FIGURE 1.22

## Short-term (2 years) risk severity score: Societal polarization

Present or perceived ideological and cultural divisions within and across communities leading to declining social stability, gridlocks in decision-making, economic disruption and increased political polarization.



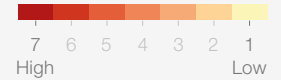
**Source**

World Economic Forum Global Risks Perception Survey 2024-2025.

**Note**

Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity]. The percentages in the graph may not add up to 100% because values have been rounded up/down.

**Severity**



- Rising use of digital platforms and a growing volume of AI-generated content are making divisive misinformation and disinformation more ubiquitous.
- Algorithmic bias could become more common due to political and societal polarization and associated misinformation and disinformation.
- Deeper digitalization can make surveillance easier for governments, companies and threat actors, and this becomes more of a risk as societies polarize further.

An estimated two-thirds of the world’s population – 5.5 billion people<sup>46</sup> – is online and over five billion people use social media.<sup>47</sup> The increasing ubiquity of sensors, CCTV cameras and biometric scanning, among other tools, is further adding to the digital footprint of the average citizen. In parallel, the world’s computing power is increasing rapidly.<sup>48</sup> This is enabling fast-improving AI and GenAI models to analyse unstructured data more quickly and is reducing the cost to produce content. With **Societal polarization** ranking #4 in the **GRPS** two-year ranking, the vulnerabilities associated with citizens’ online activities look set to continue deepening hand in hand with societal and political divisions. Taken as a whole, these developments threaten to fundamentally undermine individuals’ trust in information and institutions.

Like last year, **Misinformation and disinformation** tops this year’s **GRPS** two-year ranking. The amount of false or misleading content to which societies are exposed continues to rise, as does the difficulty that citizens, companies and governments face in distinguishing it from true information. The interplay of rising **Misinformation and disinformation** with political and **Societal polarization** creates greater scope for algorithmic bias. If human, institutional and societal biases are not addressed, and/or best practices in modelling are neglected, the conditions will be ripe for algorithmic bias to become more prevalent. Such bias, whether inherent in data, models or their creators, can lead to unjust outcomes.

Despite the dangers related to false or misleading content, and the associated risks of algorithmic bias, citizens need to strike a balance between privacy on one hand and increased online personalization and convenience on the other hand. While data governance and regulation vary worldwide, it is becoming easier for citizens to be monitored, enabling governments, technology companies and threat actors to reach deeper into people’s lives. Those with access to rising computing power and the ability to leverage sophisticated AI/GenAI models could, if they choose to, exploit further the vulnerabilities provided by citizens’ online footprints. Rising political and **Societal polarization** could become more of a driving force for such increased surveillance.

### Misinformation and disinformation in a polarized world

The advent of new technologies and the increase in user-generated content platforms is leading to a corresponding rise in the volume of content online. Flows of **Misinformation and disinformation** from those creating it are becoming more challenging to detect and remove in an increasingly fragmented media landscape.

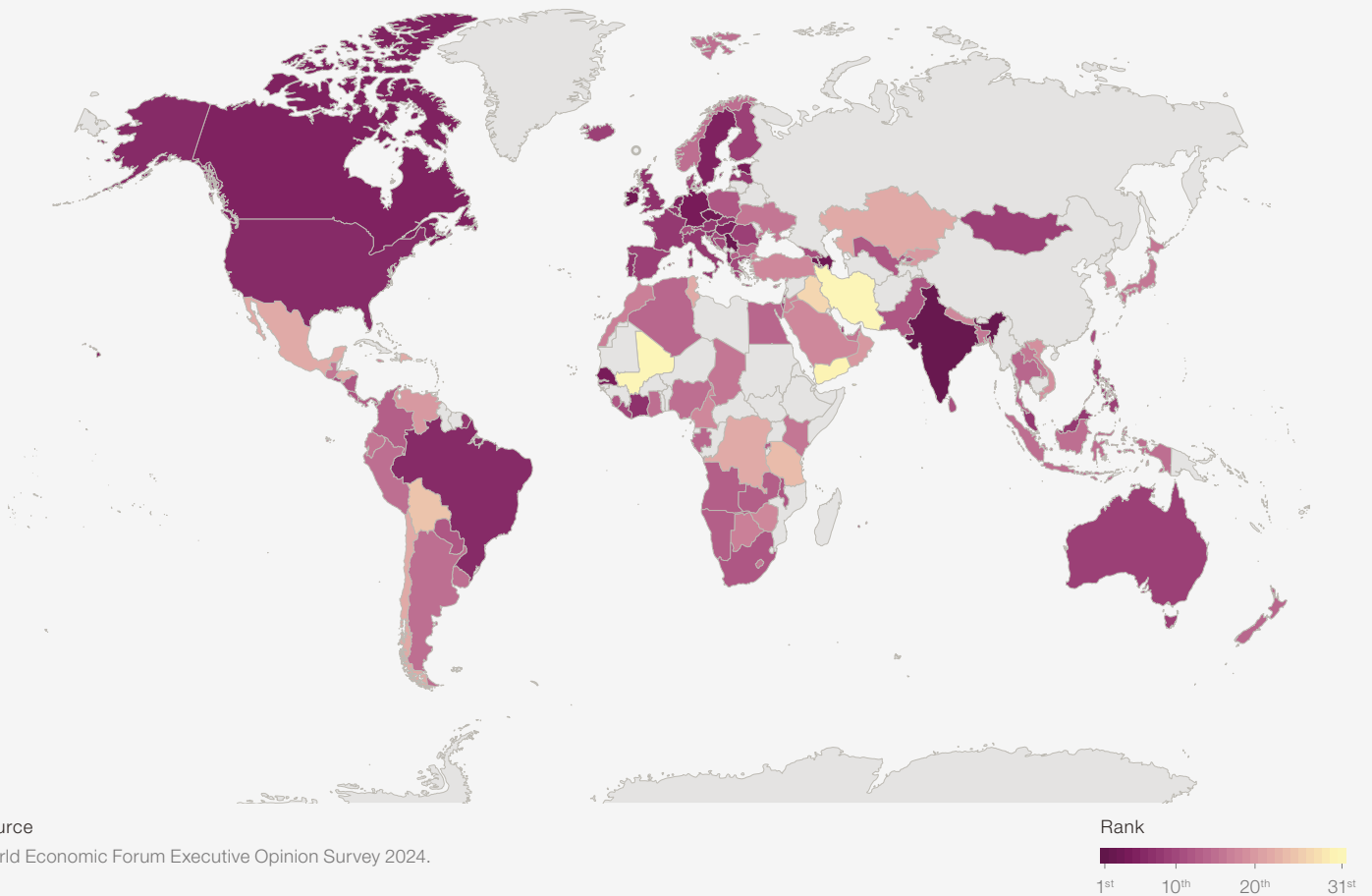
Differentiating between AI- and human-generated false or misleading content – in the form of video,



FIGURE 1.23

**National risk perceptions: Misinformation and disinformation**

Executive Survey Opinion rank of national risks from the question “Which five risks are the most likely to pose the biggest threat to your country in the next two years?”



Source  
World Economic Forum Executive Opinion Survey 2024.

images, voice or text – can be difficult. GenAI lowers the barriers for content production and distribution, and some of that content is inaccurate. Threat actors, state agencies in some countries,<sup>49</sup> activist groups, and individuals who may or may not have criminal intentions can automate and expand disinformation campaigns, greatly increasing their reach and impact.<sup>50</sup> **Misinformation and disinformation** can also be the result of AI-hallucinated content or human error, and these too are likely to rise amid the growing volume of content.

The upshot is that it is becoming increasingly hard to know where to turn for true information. Both political and **Societal polarization** skew narratives and distort facts, contributing to low and declining trust in media.<sup>51</sup> Across a sample of 47 countries, only 40% of respondents said that they trusted most news.<sup>52</sup>

According to the **EOS**, respondents in high-income countries are generally more likely to express concern about the risk of **Misinformation and disinformation** over the next two years than respondents in lower-income countries, with some

exceptions. This risk ranks among the top five in 13 countries, including India, Germany and Canada, and features in the top 10 in 30 additional countries (Figure 1.23). Respondents identifying this risk often also highlight **Societal polarization** as one of the most severe risks in the same timeframe. Poor quality content and lack of trust in information sources continue to present a threat to societies.<sup>53</sup>

Algorithms, especially complex machine learning models, can also be an entry point for cyberattacks that use disinformation. An example of this would be a structured query language injection attack, in which inputs are manipulated to generate incorrect outcomes or to compromise training data sets.<sup>54</sup> As many models lack transparency, either by intention, by accident, or because of intrinsic opacity, it is difficult to identify vulnerabilities and mitigate potential threats. In addition, given the reliance of algorithms on third-party data sources, software libraries and network infrastructures, threat actors can compromise the supply chain to manipulate algorithms and cause widespread damage. Further, as algorithms come to govern or influence more aspects of society, the potential for coordinated cyberattacks using automated systems grows.

## Algorithmic bias

Algorithmic bias can both be influenced by **Misinformation and disinformation** and can be a cause of it.<sup>55</sup> The risks of algorithmic bias are heightened when the data used for training an AI model is itself a biased sample. Sometimes, the bias can be obvious. For example, in a hiring process, a set of bios used as examples of good candidates might be drawn from a pool of previous candidates, all of whom might have the same gender, race or nationality. Other times, a bias can be less obvious: for example, a model could be trained on citizens' previous spending on education, without accounting for certain minority groups typically spending less on education. Synthetic data may be used, aiming to remove bias, but that can itself introduce new biases.<sup>56</sup>

Examples of biases against citizens include waiting times for a government appointment being assigned on the basis of a questionable set of input data and criteria, or automated responses failing to respond adequately to citizens' needs. When algorithms are applied to sensitive decisions, biases in training data or assumptions made during model design can perpetuate or exacerbate inequities, further disenfranchising marginalized groups. Predictive policing is one area where algorithmic bias based on race can be a concern.<sup>57</sup> Such risks are heightened further when there is no human participation in decision-making.

Unless there are clear accountability frameworks in place, the use of automated algorithms makes it challenging to assign responsibility when harmful or erroneous decisions are made, especially when AI is involved. Automated algorithms often operate as "black boxes", making it difficult for individuals to understand how decisions are made. This lack of transparency and accountability can foster mistrust and skepticism about the fairness and accuracy of decisions taken.

In many cases, algorithmic bias can be the result of lack of knowledge, testing or sufficient oversight. How a model is developed, applied and governed is key to mitigating these risks. Independently of the input dataset used, the personal biases of individuals designing the assumptions of the model can also play a role in leading to unjust outcomes. These personal biases may be accidental (for example, the result of those inputting the data having insufficient technical expertise) or intentional, for example, to pursue political aims.

One risk that could come into focus more over the next two years is algorithmic bias against people's political identity.<sup>58</sup> Algorithmic political bias might be used intentionally to, for example, affect recruitment into public-sector jobs or access to certain public services or financial services. What makes this risk especially dangerous is that individuals' political biases are widely known, and those biases can easily find their way into algorithms or data sets. Furthermore, individuals' political views can increasingly be determined, even against their will, from their online activities.<sup>59</sup>

Similarly to individual biases, societal biases can also play a role.<sup>60</sup> These are likely to become more prevalent as societal divisions deepen. In the **GRPS, Societal polarization** is ranked #4 over a two-year time horizon. Regionally, Latin America and the Caribbean, Eastern Asia and Europe manifest the most pressing concerns over **Societal polarization** in the next two years, according to the **EOS**.

## Citizen surveillance risks

Government technology (GovTech) is entering a new era, as AI, data analytics and digital platforms become the backbone of public administration.<sup>61</sup> Technology companies have long worked closely with governments, for example, in the sensitive

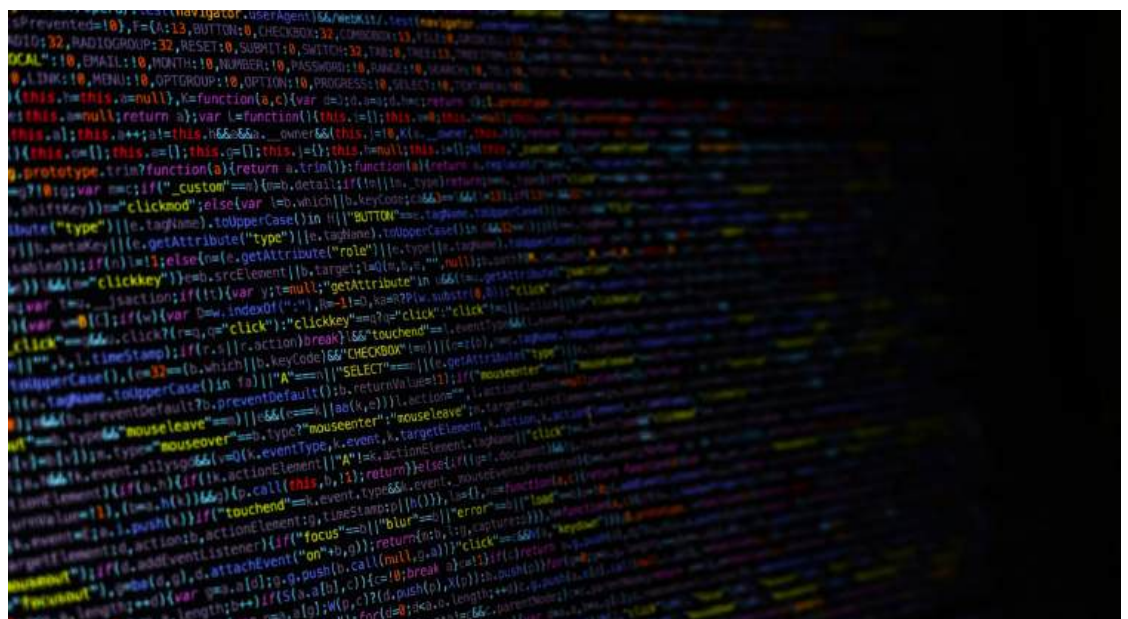


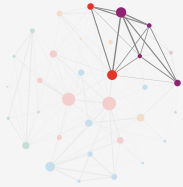
FIGURE 1.24

Global risk interconnections: Censorship and surveillance

Risk categories

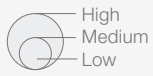
- Economic
- Environmental
- Geopolitical
- Societal
- Technological

Reference



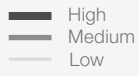
Nodes

Risk influence



Edges

Relative influence



Source

World Economic Forum Global Risks Perception Survey 2024-2025.

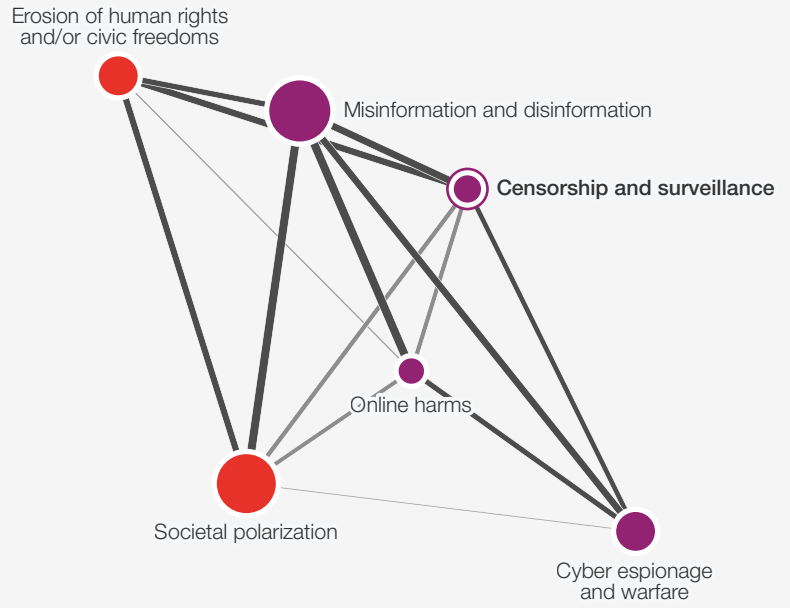
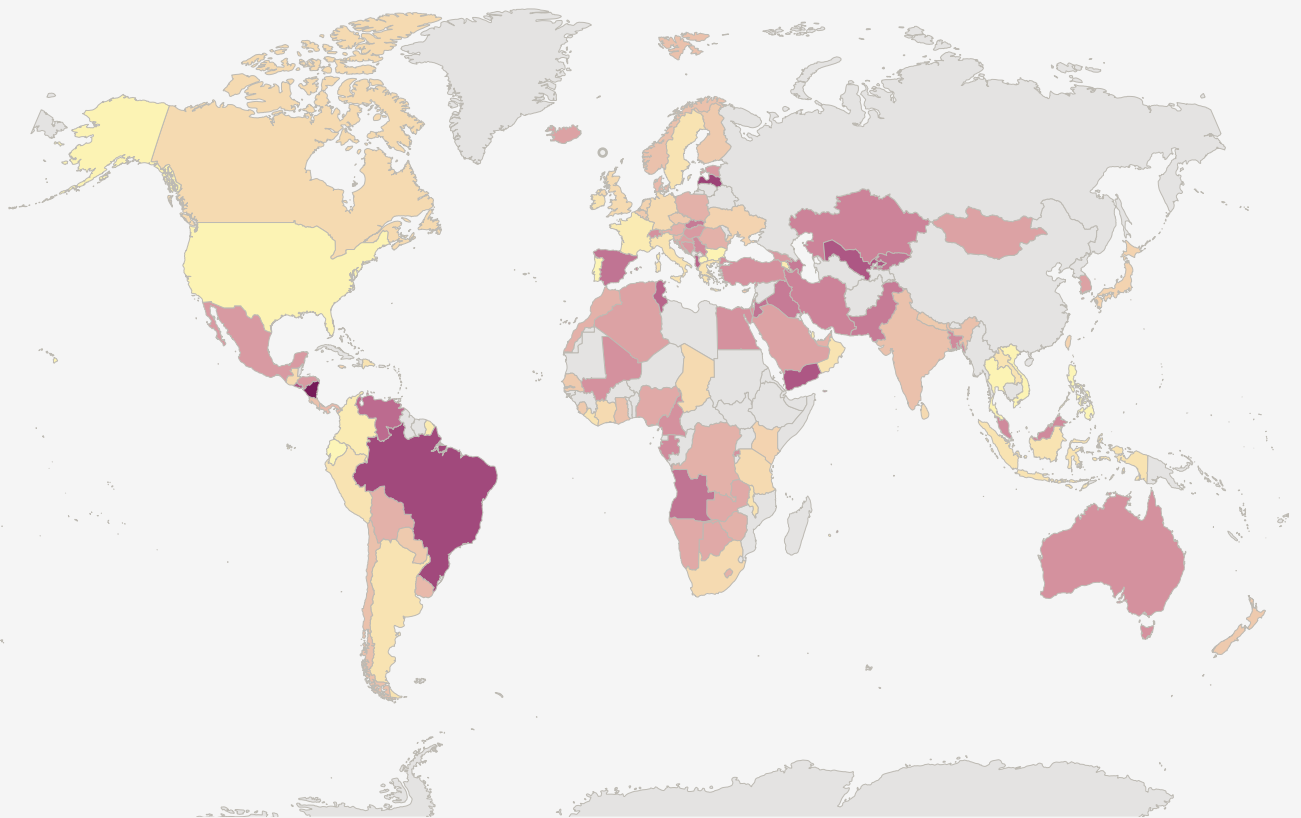


FIGURE 1.25

National risk perceptions: Censorship and surveillance

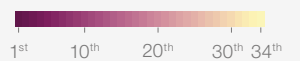
Executive Opinion Survey rank of national risks from the question "Which five risks are the most likely to pose the biggest threat to your country in the next two years?"



Source

World Economic Forum Executive Opinion Survey 2024.

Rank



Defense and Intelligence sectors. More recently, a broader range of government services, including other sensitive domains such as taxation, environmental protection, and voter verification and registration, have also become increasingly technology-dependent.<sup>62</sup> Governments now have unprecedented access to data on citizens – and technology companies often have even better access than the governments themselves do.<sup>63</sup> As the computing power available to governments and technology companies continues to rise, it becomes easier for both entities to monitor citizens' activities.

When managed responsibly, analysis and processing of citizen data enables governments and the technology companies with whom they work to enhance public services. This can remain beneficial for citizens if effective legal guardrails are in place and both governments and technology providers act in ways that earn trust.<sup>64</sup> However, without these conditions, the risks of misuse of surveillance capabilities rise.<sup>65</sup>

There is divergence worldwide around how governments can use the data that they can access, reflecting ideology and culture, as well as the technological capacity and resources available to each government. Regulations, such as the European Union's General Data Protection Regulation (GDPR) also play a role, aiming to enhance personal data protection by placing stricter limits on data usage by governments and businesses.

Meanwhile, citizens often remain unaware of how their personal data is collected, used and shared, limiting their ability to make informed decisions. Figure 1.24 shows the close connectivity between **Censorship and surveillance**, **Societal polarization**, **Misinformation and disinformation** and **Online harms**, highlighting the confluence of these risks in the digital ecosystem.

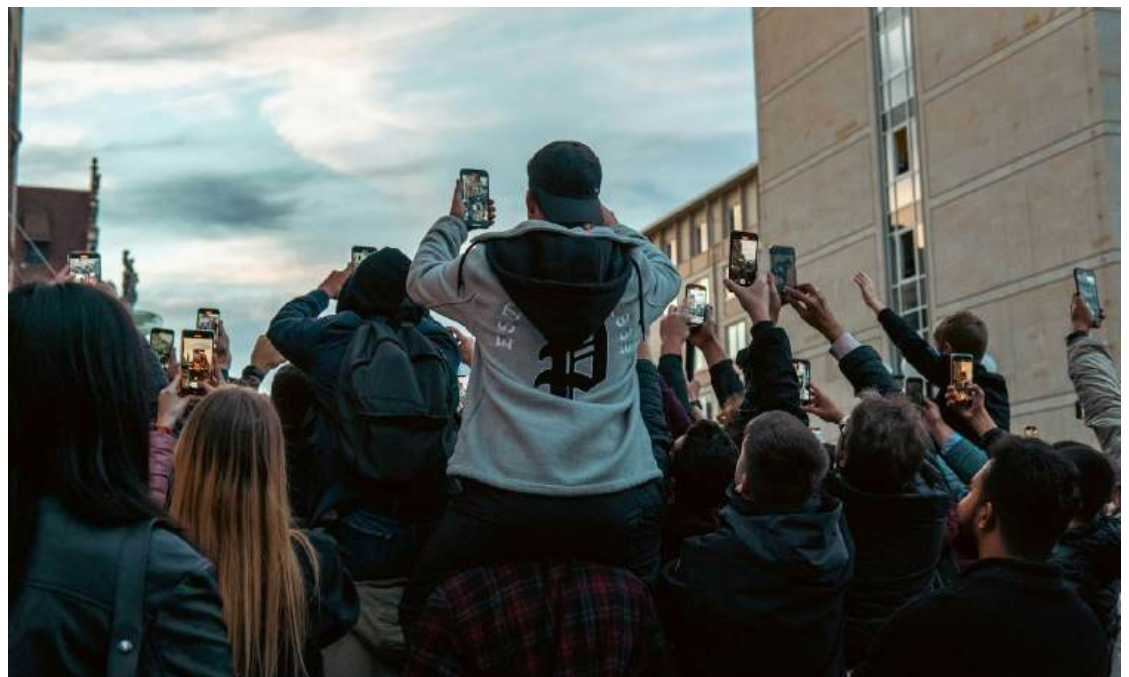
**Censorship and surveillance** ranks #16 in the **GRPS** risk ranking on a two-year outlook, increasing five positions since last year, showing that concern respondents have around this issue is real and growing. In a world of deepening societal and political divisions, amplified by eroding trust in the digital environment, concerns with **Censorship and surveillance** are most pronounced in Eastern Asia, Latin America and the Caribbean, and Central Asia, according to the **EOS** (Figure 1.25). Notably, Nicaragua ranks this risk as the fourth-most severe threat over the next two years, while eight other economies identify it among their top 15 risks.

## Actions for today

### A. Expand upskilling for people building and using automated algorithms

Organizations should use AI models that minimize bias and mitigate unintended consequences in content creation and distribution. While technical solutions for significantly debiasing automated algorithms already exist, their consistent application remains a challenge. If implemented correctly, these solutions could greatly reduce the risks associated with model bias. Common debiasing strategies include data pre-processing before training a model, in-processing techniques during training, and post-processing steps after training.<sup>66</sup> These methods help ensure that AI models are fairer and more equitable.

However, due to the rapid pace of change in AI development and the increasing complexity of its applications, keeping up with the latest advancements in algorithmic debiasing is difficult for many involved in building and using automated algorithms. To address this, there is a pressing need for continuous upskilling of developers, data





scientists and policy-makers. Governments, civil society and academia should collaborate to create comprehensive training programmes that are frequent, regular, and reflect the latest advancements in AI and algorithmic fairness.<sup>67</sup> These programmes should focus not only on technical skills but also emphasize the importance of ethical decision-making, responsible data-handling, and the societal impact of AI systems.

### B. Boost funding for digital literacy

The GRPS finds that **Misinformation and disinformation** and **Societal polarization** are the two risks for which **Public awareness and education** has the most long-term potential for driving action on risk reduction and preparedness (Figure 1.26). **Censorship and surveillance** is also within the top five risks that could be addressed in this way. There is an urgent need for comprehensive public awareness campaigns to educate citizens about the risks associated with digital spaces, as well as the tools and practices they can use to protect themselves and boost trust in their use of platforms. For example, citizens should be educated on privacy and security settings for their devices, including two-factor authentication, and app permissions. Awareness programmes should also cover recognizing phishing attempts, protecting personal data, and securely navigating social media. Additionally, digital literacy initiatives should help individuals understand the role of algorithms and data in shaping their online experiences, fostering critical thinking to identify and challenge biased or harmful content. Governments, civil society and private-sector organizations all have a role in

promoting these campaigns, ensuring they are accessible to diverse populations.

### C. Improve accountability and transparency frameworks

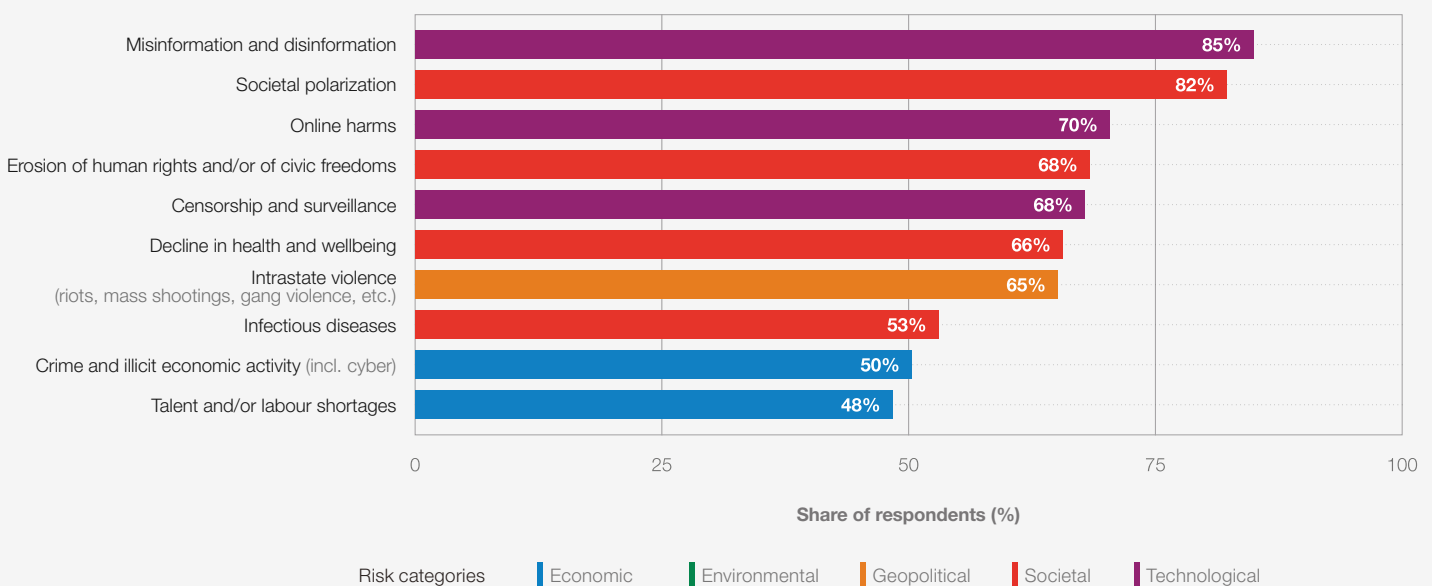
The World Economic Forum's Digital Trust Framework<sup>68</sup> spells out key governance themes for ensuring AI's sustainable and responsible adoption. They include accountability and transparency. The former could involve establishing supervisory boards and AI councils, as well as human oversight processes. These committees should consider diverse perspectives from technologists, ethicists, legal experts, creators and others to effectively assess GenAI products and features. They should be responsible for reviewing AI practices, identifying potential risks and ensuring compliance with both internal policies and external regulations.

Regarding transparency, nurturing consumers' trust requires organizations to inform about AI-generated content and its use through appropriate labelling and disclosures. Information on related data practices, safety policies and potential risks (such as bias and privacy) of the AI model used in GenAI products should be made available via accessible documentation. Standards and technical solutions to ensure content authenticity – such as digital watermarking, content origin and history, and blockchain-based rights management – are currently under development to support a trustworthy information ecosystem. However, successful adoption at scale requires policy frameworks that are aligned with common principles, rules and technological standards.

FIGURE 1.26

### Top risks addressed by public awareness and education

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"



Source  
World Economic Forum Global Risks  
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2

# Global Risks 2035: The point of no return

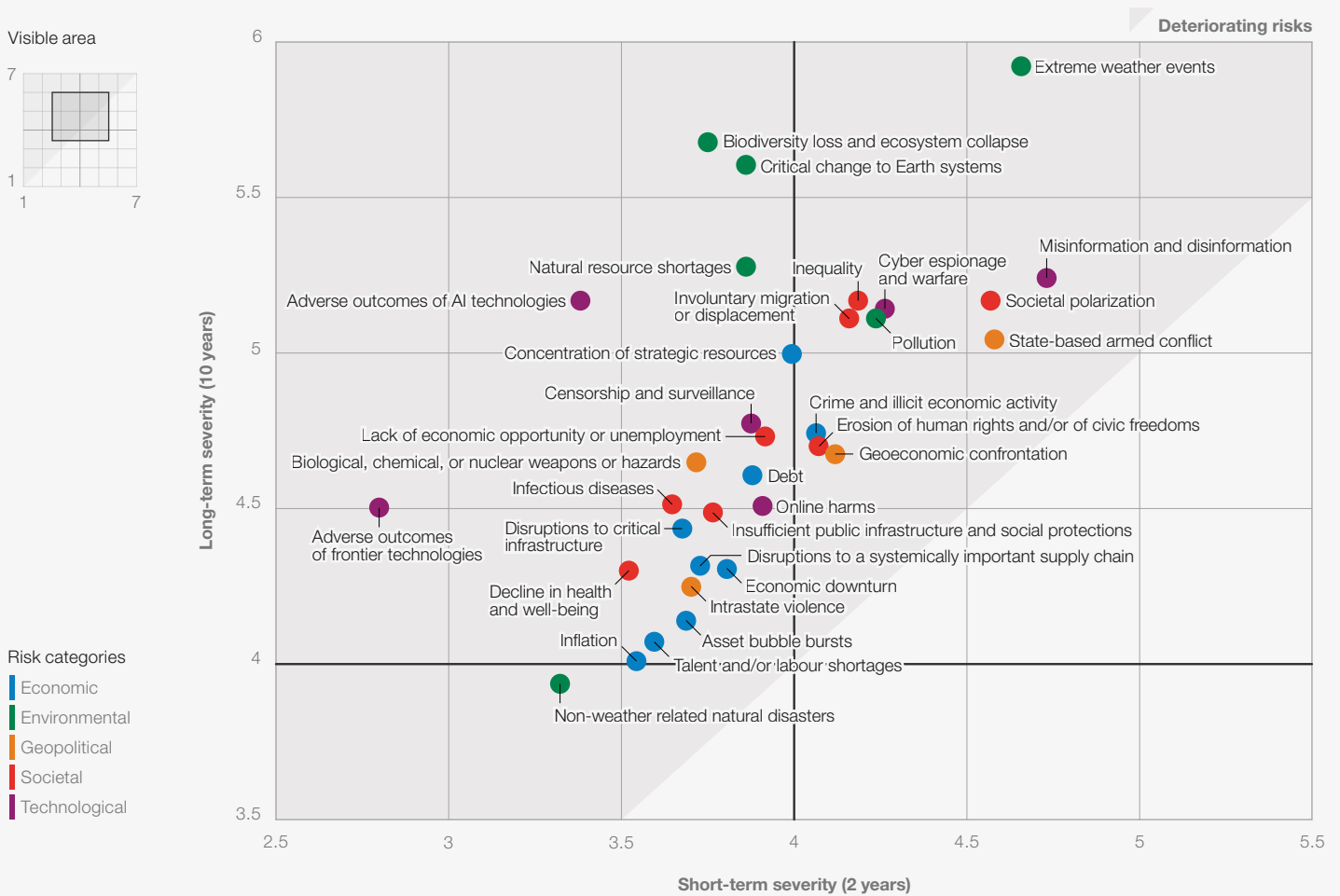
## 2.1 The world in 2035

The current and short-term risks landscape described in Chapter 1 may be exacerbated in terms of severity as the world moves towards 2035 – unless we collectively act on such foresight today and work collaboratively across all stakeholder groups towards a more promising future. This chapter focuses on the longer-term horizon, outlining survey results for the likely impact of risks in the next 10 years and providing in-depth assessments of three risk themes – pollution, biotech and super-ageing societies. The chapter concludes with a retrospective analysis of findings from the last two decades of Global Risks Reports.

The GRPS suggests that the road to 2035 will be challenging to navigate. Respondents are far less optimistic about the outlook for the world over the longer term than the short term. As noted in the [Key findings section](#), 62% of respondents to the GRPS predict a turbulent or stormy outlook over the next 10 years (Chapter 1, Figure A).

Comparing the two- and 10-year timeframes in more detail reveals a markedly deteriorating global risks landscape. All 33 risks surveyed increase in severity score over the long term compared to the short term, reflecting respondents' concerns about

FIGURE 2.1 Relative severity of global risks over a 2- and 10-year period



Source  
World Economic Forum Global Risks Perception Survey  
2024-2025.

Note  
Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity].

the heightened frequency or intensity of these risks over the course of the 10-year horizon (Figure 2.1).

Environmental and, to a lesser degree, technological risks dominate the long-term global risks landscape according to the **GRPS**. In fact, nearly all environmental risks are included in the top 10 (Figure 2.2). **Extreme weather events** are anticipated to become even more severe, with the risk ranked first over the next decade for the second year running. **Biodiversity loss and ecosystem collapse** ranks #2, up from #3 last year and with a significant deterioration compared to its two-year ranking (#21). **Critical change to Earth systems** at #3, **Natural resource shortages** at #4 and **Pollution** at #10 complete the very bleak outlook for environmental risks.

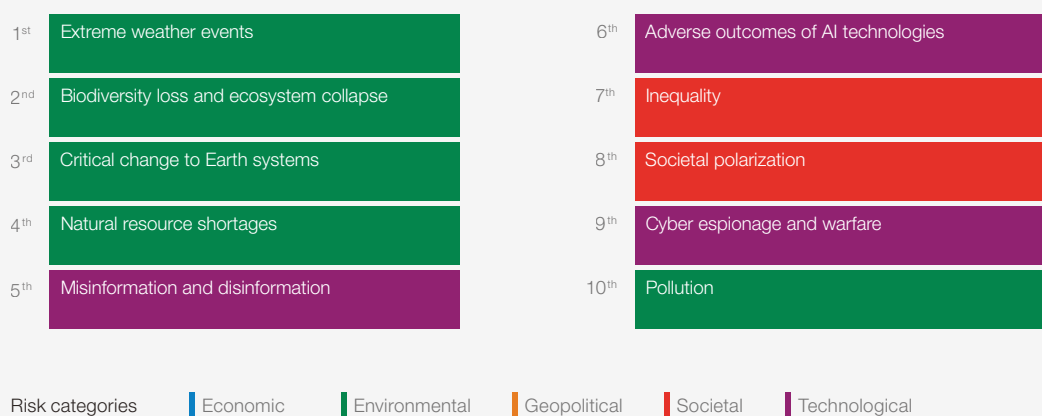
Technological risks fare little better than environmental risks over the next 10 years. **Adverse outcomes of AI technologies** follows **Biodiversity loss and ecosystem collapse** as one of the risks expected to increase in severity the most from the two-year to the 10-year timeframe, ranking #6 on the 10-year risk outlook compared to #31 on the two-year risk outlook.

Societal risks round out the top 10 on the 10-year horizon. **Inequality (wealth, income)** stands at #7, followed by **Societal polarization** at #8. This is an important pair of risks to watch, given how related they can be to bouts of social instability, and to both domestic political and geostrategic instability. In super-ageing societies, such as Japan, South

FIGURE 2.2

### Global risks over the long term (10 years), ranked by severity

*"Please estimate the likely impact (severity) of the following risks over a 10-year period."*



Source

World Economic Forum Global Risks Perception Survey 2024-2025.

Korea, Italy or Germany, unfavourable demographic trends could accentuate these societal risks over the next 10 years. Pensions crises and labour shortages in the long-term care sector are likely to become acute problems, with no easy fix for governments. [Section 2.5, Super-ageing societies](#) explores this risk theme.

Economic risks fall mostly in the bottom half of the 10-year risk ranking and have remained relatively stable compared to last year's survey. But as [Section 2.6, Looking back: 20 years of the Global Risks Report](#) shows, economic risks tend to be volatile over time – meaning that an economic crisis should not be ruled out over the next 10 years. One significant area of concern is **Crime and illicit economic opportunity**, which has increased 16 positions year-on-year to #15 in the 10-year ranking.

Geopolitical risks, despite topping the immediate-term ranking and featuring among the top 10 in the short-term ranking are noticeably absent from the top 10 rankings when it comes to the outlook for

the next decade. Nonetheless, **State-based armed conflict** has increased from #15 last year to #12, and there has been an uptick in the **Biological, chemical or nuclear weapons** risk by seven positions to #19. **State-based armed conflict** remains a long-term concern for respondents from the Middle East and Northern Africa in particular; this is the only region with a geopolitical risk in the top five (Figure 2.3).

The overall 10-year risk outlook has remained relatively stable compared to last year's Global Risks Report, suggesting that little has been achieved when it comes to risk mitigation or solutions. **Extreme weather events** (#1), **Natural resource shortages** (#4), **Misinformation and disinformation** (#5), **Adverse outcomes of AI** (#6) and **Pollution** (#10) rank identically compared to last year's edition. However, when it comes to **Pollution**, it is noticeable that younger survey respondents are especially concerned, with the under 30s age group ranking it at #3. There is also divergence across stakeholder groups in how **Pollution** is ranked, with government respondents,

FIGURE 2.3 | Global risks over the long term (10 years), by region



Source  
World Economic Forum Global Risks Perception Survey 2024-2025.

Note  
Each column represents the top 5 risks by region. Sample size by region varied, and all respondents were weighted equally for the purposes of global rankings. The results are based on the following: Eastern Asia, n = 38 (4% of total), Europe, n = 345 (40%), Latin America and the Caribbean, n = 105 (12%), Middle East and Northern Africa, n = 52 (6%), Northern America, n = 140 (16%), South-Eastern Asia, n = 46 (5%), Southern Asia, n = 78 (9%) and Sub-Saharan Africa, n = 49 (6%).

civil society and academia placing **Pollution** as a top 10 risk, but not the private sector or international organizations (Figure 2.4).

**Section 2.3, Pollution at a crossroads** explores under-appreciated pollutant risks that are likely to become more top of mind by 2035, given their significant impacts on health and ecosystems. Unless concrete action is taken today to address polluting activities, these impacts will only worsen.

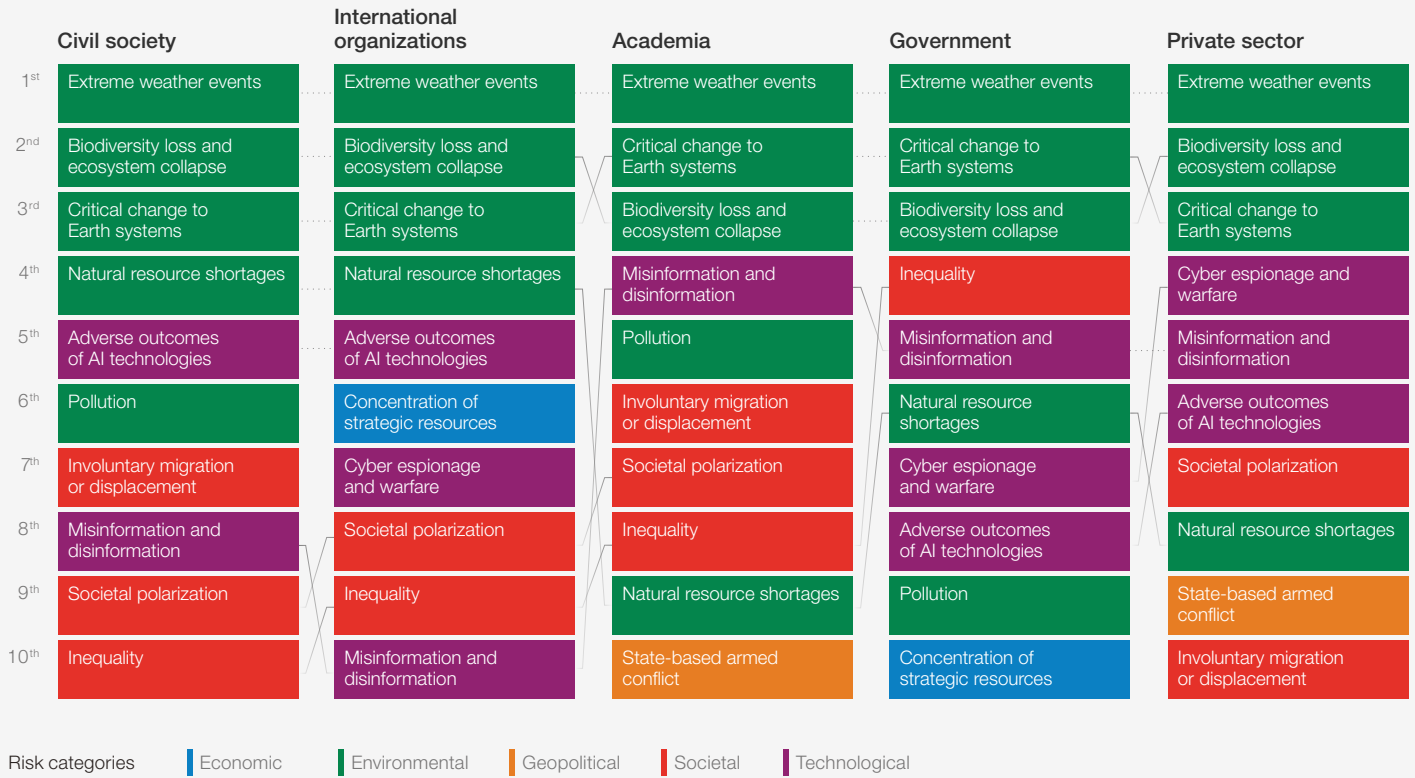
Looking further down the 10-year risk ranking (Chapter 1, Figure G), many positions have remained stable year-on-year, including **Concentration of strategic resources and technologies** (#13), **Censorship and surveillance** (#14), **Asset bubble bursts** (#30), **Inflation** (#32) and **Non-weather related natural disasters** (#33) as the lowest-ranked risk. **Adverse outcomes of frontier technologies** (#23) has also remained relatively stable, increasing just one position since last year's report. The risks that have seen the

biggest falls in their 10-year ranking compared to last year's report are **Intrastate violence**, down seven positions to #29 and **Decline in health and well-being**, down eight positions to #28.

The latter three risks – **Adverse outcomes of frontier technologies**, **Intrastate violence**, and **Decline in health and well-being** – are all related to **Section 2.4, Losing control of biotech?**, which provides an in-depth analysis of risks in the sector. Advances in biotech are leading to increasingly fast progress in medicine and explain, perhaps, some of the increased optimism regarding the **Decline in health and well-being** risk. But this progress comes alongside new low-probability, but high-impact risks. These include interstate or intrastate violence from biological terrorism, and **Adverse outcomes of frontier technologies** involving accidental or malicious misuse of gene editing technologies or of brain-computer interfaces.



FIGURE 2.4 | Global risks over the long term (10 years), by stakeholder group



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

## 2.2 Structural forces

In last year's *Global Risks Report*, we introduced the concept of **Structural forces** into our analysis of global risks. Four spheres – technological, geostrategic, climatic and demographic – continue to form the backdrop to the global risks that will play out over the next decade and beyond.

We define these **Structural forces** as the long-term shifts in the arrangement of, and relationships between, the systemic elements of the global landscape. These forces have the potential to materially impact the speed, spread or scope of global risks, and will in turn be influenced by each other. We are continuing to witness how these structural forces are converging, accelerating and creating instability in societies, economies and institutions. If left unaddressed, they could steer our world toward an increasingly fractured and unsustainable path.

The four **Structural forces** are summarized in Box 2.1. They are **Technological acceleration**; **Geostrategic shifts**; **Climate change**; and **Demographic bifurcation**. While all four forces have global ramifications, some, such as climate change, are more multi-directional in their development, which could allow for several potential futures. Similarly, while all represent longer-term shifts to the structural landscape, some have the potential to manifest more quickly due to underlying variables. Geostrategic shifts, for example, may lead to further divergence between leading powers, while technological acceleration can foster new discoveries that transform systems rapidly. As the results of the **GRPS** show, the **Structural forces**' influence on the global risks landscape is well underway.

### BOX 2.1

#### Structural forces

**Technological acceleration** relates to development pathways of emerging technologies and the expected significant developments over the next 10 years.

[Section 1.5: Technology and polarization](#) analyses risks associated with citizens' rising digital footprints in the context of Societal polarization, while [Section 2.4: Losing control of biotech?](#) explores the risks associated with accelerating progress in biotech.

**Geostrategic shifts** refers to evolving sources and concentration of geopolitical power. This, in turn, influences the global order, impacting alliances and their dynamics, as well as the offensive and defensive projection of soft and hard power. The ongoing loss of support for current multilateral institutions, and its impacts for global stability and humanitarian needs, is explored in [Section 1.3: "Geopolitical recession"](#), while [Section 1.4: Supercharged economic tensions](#) focuses on the risks of global trade fragmenting.

**Climate change** encompasses the range of possible trajectories of global warming and consequences to Earth systems. As a **Structural force**, climate change is closely related to trends in pollution: Unsustainable patterns of production and consumption are driving increasing pollution of air, water and land, with the nature and scale of impacts on health and ecosystems still coming to light. This is explored in [Section 2.3: Pollution at a crossroads](#).

**Demographic bifurcation** refers to changes in the size, growth and structure of populations around the world. While some countries are super-ageing societies, with over 20% of their populations aged over 65 years old, others have far younger population structures. [Section 2.5: Super-ageing societies](#) examines key risks that these countries are likely to experience – pensions crises and a long-term care crunches – as well as the knock-on impacts worldwide.

#### Source

World Economic Forum *Global Risks Report 2024*.

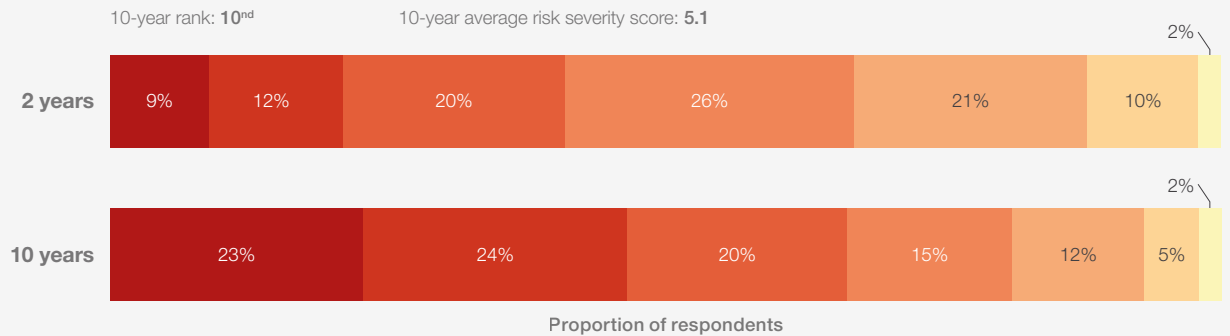
#### Note

Refer to [Appendix A: Definitions and Global Risks List](#) for further detail.

## 2.3 Pollution at a crossroads

FIGURE 2.5 Short- (2 years) and long-term (10 years) risk severity score: Pollution

Introduction of harmful materials into the air, water and soil stemming from human activity, resulting in impacts to and loss of human life, financial loss and/or damage to ecosystems. Includes, but is not limited to: household and industrial activities; environmental accidents such as oil spills; and radioactive contamination.



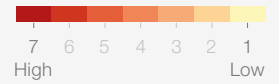
### Source

World Economic Forum Global Risks Perception Survey 2024-2025.

### Note

Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity]. The percentages in the graphs may not add up to 100% because values have been rounded up/down.

### Severity



- Short-lived climate pollutants such as black carbon and methane are accelerating the pace of climate change.
- Freshwater and ocean pollution are severely impacting human and ecosystem health, with antimicrobial pollution emerging as an increasing concern.
- Nitrogen and waste pollution are becoming more costly, generating a range of health and ecosystem impacts.

**Pollution** ranks #10 in the **GRPS 10-year** risk ranking, with 23% of respondents expressing maximal concern (Figure 2.5). Moreover, it is noticeable that younger survey respondents are especially alarmed, with the under 30s age group ranking it at #3 in the 10-year risk ranking.

In 2024, six of the nine “planetary boundaries” for environmental health were crossed, with a seventh boundary in jeopardy.<sup>1</sup> These boundaries contribute to the stability of the world’s life-support system, including our economies and societies. Unsustainable patterns of production and consumption are driving climate change, **Pollution**, and biodiversity loss, referred to by the United Nations Framework Convention on Climate Change (UNFCCC) as the Triple Planetary Crisis.<sup>2</sup> **Pollution** is the world’s largest environmental risk factor for disease and premature deaths,<sup>3</sup> and its impacts are unequal, with 92% of **Pollution**-related deaths and the greatest burden of related economic losses occurring in low- and middle-income countries.<sup>4</sup>

**Pollution** poses greater risks in specific geographies and disproportionately affects vulnerable groups of the population that are exposed to higher levels of **Pollution**. Marginalized communities, urban areas and industrial zones bear the large brunt of its impacts due to proximity

to sources of emissions, including waste disposal sites, and often limited green spaces. These disparities create further inequities in healthcare access and burden, as well as in economic costs.

By 2035, the compounded effects of **Pollution** threaten to erode ecosystem resilience, diminishing its ability to sustain life and deliver essential services. **Decline in health and well-being** (Figure 2.6) is increasingly associated with pollutant exposure, including the rising incidences of cardiovascular diseases, respiratory conditions, infertility rates and cancer.<sup>5</sup>

Anthropogenic activities are key drivers of all types of **Pollution**. These activities are expected to increase further over the next decade unless a different course of action is taken. Some polluting activities and pollutants are addressed under climate adaptation and mitigation efforts, including the drive towards net-zero greenhouse gas (GHG) emissions. However, there is a concerning common denominator of many countries’ green transition pathways: explicit, comprehensive plans for tackling the mounting health and ecosystem impacts of **Pollution** are missing.

Economies globally are at different stages of the green transition. In the **EOS**, executives were asked

to identify the top five risks most likely to pose the biggest threat to their respective country in the next two years. While **Pollution (air, water, soil)** ranks #18 of the 34 global risks, it emerges as the #1 concern in Central Asia and as a leading concern in Southern Asia (#6) and among lower-middle income economies (#11). At the country level, **Pollution** ranks among the top three risks in 10 countries, including Malta, Azerbaijan, Ghana, and Kosovo. Particularly in densely populated countries such as Bangladesh (#3) and India (#4), **Pollution** has become one of the most critical challenges to tackle (Figure 2.7).

A **Pollution**-conscious green transition is needed. Some of the pollutants that must be accounted for in that transition are newer or emerging, not well understood, or do not yet have enough evidence of their potential impacts. Different pollutants tend to come under the regulatory spotlight only as our awareness of their profound long-term impacts on health and ecosystems grows. Better understanding these pollutants and their impacts is a first step towards both targeted policies and adaptive strategies. The pollutants can be analysed within the lenses of air, water and land - even though, once introduced, they do not remain confined to a single environmental domain but create complex, interdependent impacts.

### “Super pollutants” in the air

Air pollutants include particulate matter (PM), ozone, nitrogen dioxide, sulphur dioxide and carbon monoxide. Exposure to air pollutants is a particularly

severe health risk for vulnerable populations, including children, pregnant women, people with pre-existing or chronic health conditions, and the elderly.<sup>6</sup> Air **Pollution** also significantly reduces work productivity, leading to increased sick days and commensurate economic losses.<sup>7</sup> Like **Pollution** overall, air **Pollution** impacts societies unequally, with people in lower and middle-income countries exposed to higher risks.<sup>8</sup> In 2024, people in the most polluted areas of the world were found to be breathing air at least six times more polluted than those in the least polluted areas.<sup>9</sup>

Short-lived climate pollutants (SLCPs), known as “super pollutants”, are a group of pollutants that remain in the atmosphere for a relatively short period of time in comparison to longer-lived GHGs.<sup>10</sup> However, these pollutants have a disproportionately higher impact on air quality and global warming. SLCPs include mainly black carbon, methane, hydrofluorocarbons (HFCs) and tropospheric ozone. They are responsible for up to 45% of near-term global warming.<sup>11</sup> Speed is crucial for incorporating SLCP reductions into a **Pollution**-conscious green transition.

### Black carbon

Black carbon, more commonly known as soot, is a SLCP that consists of tiny black particles that can be carried for thousands of kilometres. It is a component of PM, specifically PM2.5, which is formed by the incomplete combustion of fossil fuels. Its particles can penetrate the bloodstream through the alveoli in lungs to transport toxic compounds around the body.<sup>12</sup> PM2.5 has been linked to a wide range of health implications, including chronic

FIGURE 2.6 Global risk interconnections: Pollution

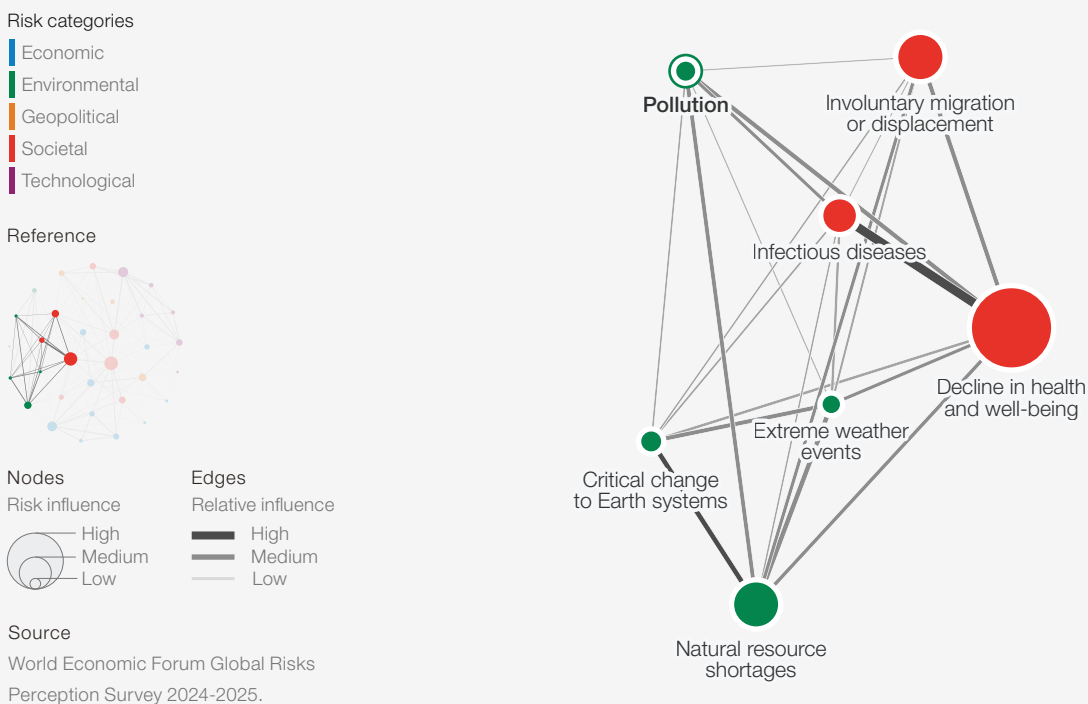
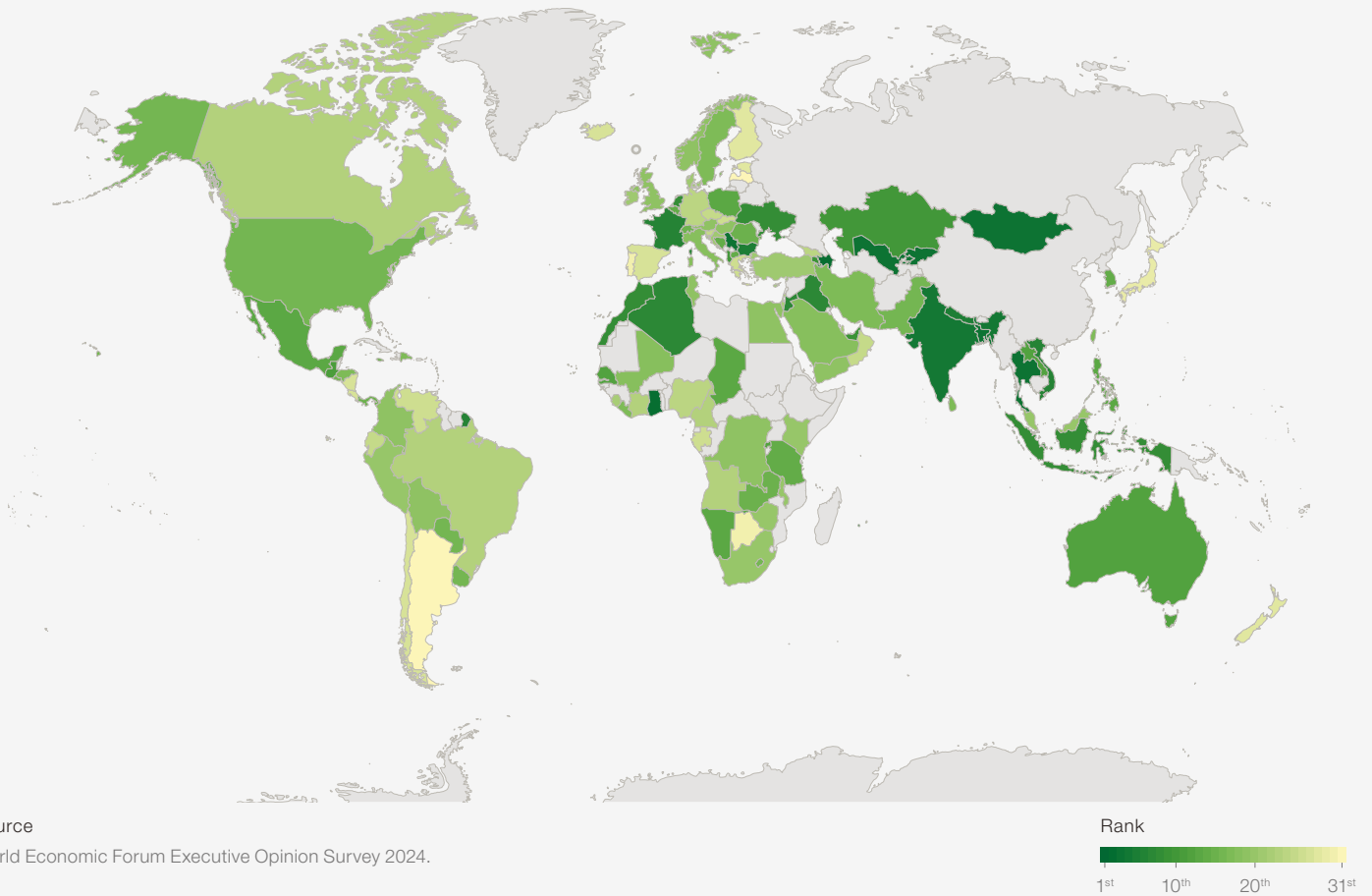


FIGURE 2.7

**National risk perceptions: Pollution (air, water, soil)**

Executive Opinion Survey rank of national risks from the question “Which five risks are the most likely to pose the biggest threat to your country in the next two years?”



Source  
World Economic Forum Executive Opinion Survey 2024.

respiratory conditions, strokes, heart attacks and cancer, as well as to early childhood development issues and long-term effects on cognition and health.<sup>13</sup> The particles of black carbon also affect the ecosystem by increasing plant surface temperature, interfering with rainfall and diminishing sunlight, which has a significant effect on crop losses each year.<sup>14</sup>

Black carbon contributes to accelerating the melting of ice and snow in polar and mountainous areas. Tackling black carbon is a “win-win” for both air **Pollution** and climate, as it is a particle that is up to 1,500 times stronger than carbon dioxide (CO<sub>2</sub>) per unit of mass.<sup>15</sup> While atmospheric warming is an emerging area of research on black carbon, any efforts to tackle the reduction of black carbon offer a quicker solution when combined with ongoing reduction of CO<sub>2</sub>.

Sources of black carbon vary from region to region and include sectors such as energy use (commercial and residential), industrial production, agricultural burning, combustion-powered cookstoves, and forest wildfires. Addressing black carbon emissions has the potential to slow the rate of warming of the climate by up to 50%

worldwide and up to two-thirds in the Arctic,<sup>16</sup> and can be achieved through cost-effective, affordable measures.<sup>17</sup>

**Methane**

Methane is a powerful SLCP with a warming potential over 80 times that of CO<sub>2</sub> over a 20-year period, which makes it a major contributor to climate change.<sup>18</sup> The main sources of methane emissions include fossil fuels, agriculture and waste. Methane has a relatively short atmospheric lifetime of approximately 12 years, which means that efforts to reduce methane can yield relatively rapid climate benefits.<sup>19</sup> It is a major precursor to ground-level ozone, an air pollutant that poses health risks, decreases agricultural yields, and stresses ecosystems.<sup>20</sup>

Failure to reduce methane emissions is recognized as one of the most significant short-term risks for limiting near-term global temperature rise.<sup>21</sup> The Global Methane Pledge (GMP), supported by 159 countries, has set an ambitious target to cut global methane emissions by 30% by 2030 from 2020 levels.<sup>22</sup> Meeting the GMP has the potential to reduce warming by at least 0.2 °C by 2050 and



annually prevent 26 million tons of crop losses, 255,000 premature deaths, 775 thousand asthma-related hospitalizations and 73 billion hours of lost labour due to extreme heat.<sup>23</sup>

## Water pollutants

### Per- and Polyfluoroalkyl substances (PFAS)

Per- and Polyfluoroalkyl substances (PFAS), also known as “forever chemicals” are used in consumer products to make them water, grease or stain resistant. They are useful in many industries, and are now being detected in our drinking water, soil, air and food. They pose a significant threat to people’s health, as they do not easily break down, and are toxic at extremely low levels.<sup>24</sup> Exposure to certain levels of PFAS can lead to significant health impacts, including decreased fertility in women, developmental delays in children, increased risk of certain cancers and reduced ability of the body to fight infections.<sup>25</sup> Governments are increasingly showing concern over the impacts of PFAS **Pollution**, and regulations are emerging to limit human exposure.

### Micro- and nanoplastics

The world is currently producing more than 430 million tonnes of plastic annually.<sup>26</sup> Each year, 19 million tonnes of plastic waste leak into the environment – 13 million onto land and six million into rivers and coastlines. Plastic does not biodegrade,<sup>27</sup> and over 99% of plastic is directly derived from fossil fuels.<sup>28</sup> Plastic **Pollution** in



Muhammad Numan, Unsplash

aquatic environments includes **Pollution** from shipping and fishing.<sup>29</sup>

Microplastics – pieces of plastic of less than five millimetres wide – include plastics originally manufactured to be that size (“primary microplastics”), for example microbeads, industrial plastic powders and pellets, but also pieces of plastic that have resulted from the degradation and fragmentation of larger items, for example plastic bottles, synthetic textiles and tyres. The World Health Organization (WHO) concludes that although further work is required to understand the impacts of microplastics on human and biodiversity health,<sup>30</sup> their presence has been detected both in our bodies and in the air, causing rising concern. Microplastics also affect the soil ecosystem and restrict the growth of plants,<sup>31</sup> both in marine and freshwater settings. Nanoplastics – pieces of plastic even smaller than microplastics at 100-1,000 nanometers wide – are an emerging area of high risk, as there is an increased chance of them being ingested, inhaled or absorbed.

Chemicals present in plastics are endocrine disrupting, interfering with hormone actions in the body. These chemicals can be released during the entire life cycle, with more than 13,000 chemical substances identified.<sup>32</sup> This is an area of emerging research and concern given that endocrine-disrupting chemicals are linked to significant health effects including infertility, obesity, cancer, thyroid problems and developmental issues.<sup>33</sup>

### Pharmaceuticals

Pharmaceutical **Pollution** falls into the category of “contaminants of emerging concern”,<sup>34</sup> alongside personal care products, sunscreen, insect repellents and detergents, which all tend to be long-lived and therefore accumulate at low levels over long periods of time in the environment. While pharmaceuticals have been well-established as water pollutants for decades, it is only recently that the extent and nature of that **Pollution** is starting to be assessed.<sup>35</sup> This is currently an unregulated category of pollutants.

Antimicrobial resistance in both people and animals is in part associated with antimicrobials entering water bodies, along with overuse and misuse of antimicrobials. Antimicrobials are medicines that are used to treat infections in people, animals and plants and include a range of antibiotics, antivirals, antifungals and antiparasitics.<sup>36</sup> Antimicrobials, when released into water from manufacturing waste, healthcare facilities, farming, and directly from consumers (both people and animals), can remain in the environment. Globally, there is insufficient awareness of and incentives among manufacturers and users of antimicrobials for sparing usage and correct disposal. The WHO issued guidelines on antimicrobial **Pollution** from medicines manufacturing in September 2024, aimed at providing a basis for better practices and regulation.<sup>37</sup>

## Nitrogen and waste disposal

### Nitrogen

Industrial agriculture has long been dependent on nitrogenous fertilizers to increase productivity. This has resulted in nitrogen **Pollution** becoming a major contaminant of soil, water and air. A key part of the problem is that the more these fertilizers are used to increase crop yields, the more is lost to the environment, escaping into water and the atmosphere, the latter as ammonia.

If groundwater becomes contaminated with nitrogen it can become a health issue. For example, high nitrate levels in drinking water can cause reproductive problems, methemoglobinemia, colorectal cancer, thyroid disease and neural tube defects.<sup>38</sup> Nitrogen in rivers flows into the sea causing eutrophication of coastal waters, a phenomenon generating various seawater health issues. Recent evidence shows that eutrophication is a problem that is on a worsening trend.<sup>39</sup>

Livestock manure and fertilizers in agriculture are responsible for 81% of ammonia emissions into the air globally. That contributes to 50% (in the EU) and 30% (in the United States) of PM2.5 air **Pollution**, causing chronic illnesses that can lead to premature mortality.<sup>40</sup> Livestock manure and fertilizer use also leads to nitrous oxide production, a potent GHG, and the most important substance for the depletion of the stratospheric ozone layer, with implications for the increased occurrence of skin cancer.

### Waste disposal

Waste can be categorized by origin (e.g. municipal solid waste or industrial waste), character (e.g.

hazardous waste or organic waste) or type (e.g. e-waste or healthcare waste). Improper waste disposal can lead to the spread of infectious diseases, the release of methane, and exposure to **Pollution** from chemicals released through landfills, organic waste, and burning of waste. For example, exposure to improperly managed e-waste and its components can release a wide range of different chemical particles into the environment, which can have multiple adverse health and developmental impacts, especially in young children and pregnant women.

Without urgent action on waste management, by 2050 its global annual cost – factoring in both the direct cost and the hidden costs of **Pollution**, ill health and climate change from poor waste disposal practices – could almost double from \$361 billion to \$640 billion.<sup>41</sup>

## Actions for today

### A. Improve monitoring, reporting and evaluation systems

For many emerging pollutants, such as nanoplastics, there is a lack of reliable data on health risks including reproductive and developmental toxicity and longer-term effects of low-level exposures. The GRPS finds that the approach with the third-highest potential for driving action on risk reduction and preparedness regarding **Pollution** over the next 10 years is **Research and development** (Figure 2.8). However, a lack of real-time data or a unified system for reporting, both nationally and internationally for many pollutants makes it difficult to measure, monitor and act. There must be an improvement

FIGURE 2.8

### Risk Governance: Pollution

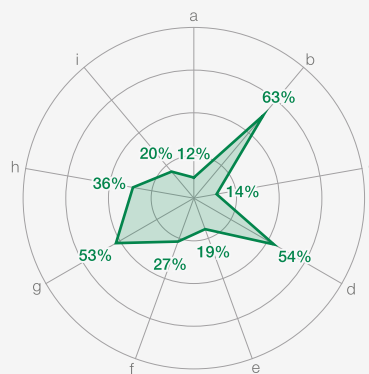
"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years? Select up to three for each risk."

#### Approach

- a. Financial instruments
- b. National and local regulations
- c. Multilateral treaties and agreements
- d. Global treaties and agreements
- e. Development assistance
- f. Corporate strategies
- g. Research & development
- h. Public awareness and education
- i. Multistakeholder engagement



Share of respondents



Pollution (air, soil, water, etc.)

#### Source

World Economic Forum Global Risks Perception Survey 2024-2025.

#### Risk categories

Economic

Environmental

Geopolitical

Societal

Technological

Photoholic, Unsplash



of the current monitoring, reporting and evaluation (MRE) systems to identify and understand emerging risks of pollutants and track progress over time. By improving existing MRE systems and sharing protocols, stakeholders can inform policy decisions, enhance transparency on pollutants and increase targeted interventions on **Pollution** sources and their impacts.

### **B. Strengthen regulatory frameworks**

To mitigate the health and ecosystem impacts of pollutants, more holistic and pre-emptive regulatory action is needed. Actions taken today can reduce the impacts of **Pollution** to 2035. According to a report by UNEP, approximately one-third of countries worldwide lack legally mandated standards for outdoor air quality.<sup>42</sup> A **Pollution**-conscious future requires building upon and strengthening regulatory frameworks to include and address well-established pollutants, but also new and emerging challenges. **National and local regulations** is identified by **GRPS** respondents as the approach with the most potential for driving action on risk reduction and preparedness regarding **Pollution** over the next 10 years (Figure 2.8). Effective regulation requires adaptive policies informed by ongoing scientific research.

### **C. Unlock ambitious funding**

Chronic underfunding of initiatives on **Pollution** persists. For example, less than 1% of all

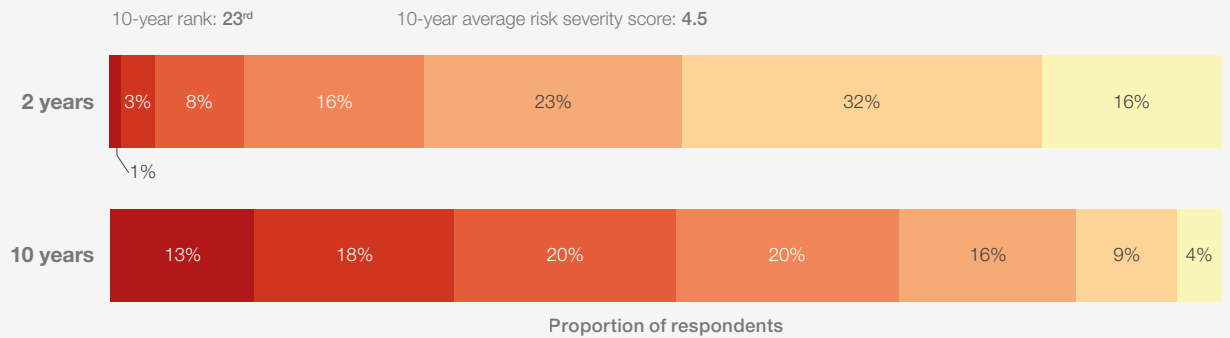
international development funding (\$17.3 billion) was expressly committed to targeting outdoor air **Pollution** between 2015 and 2021.<sup>43</sup> Large-scale, integrated and private-public-philanthropic collaborative action on funding is required for **Pollution** prevention at local, national and international scale. Innovative funding mechanisms will be required to address the transboundary nature of **Pollution**. For example, international financial institutions and multilateral development banks can further support **Pollution** mitigation efforts by providing concessional loans or grants.

One specific area requiring more funding is technological solutions. Many existing technologies make certain types of **Pollution** mitigation not only feasible, but economically advantageous by creating healthier environments and improving human health. Examples include improving waste management with advanced filtration systems and proper segregation at source, and methane capture technologies. Deploying current technologies widely and immediately, while continuously refining approaches as data improves, sets the foundation for a healthier, sustainable and resilient future. Governments can incentivize the integration of such technologies into industrial practices. Public-private collaboration in this area to unlock ambitious funding can help turn **Pollution** challenges into opportunities.

## 2.4 | Losing control of biotech?

FIGURE 2.9 **Short- (2 years) and long-term (10 years) risk severity score: Adverse outcomes of frontier technologies**

*Intended or unintended negative consequences of advances in frontier technologies on individuals, businesses, ecosystems and/or economies. Includes, but is not limited to: biotechnology; geo-engineering; and quantum computing.*



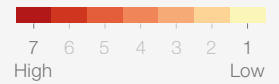
**Source**

World Economic Forum Global Risks Perception Survey 2024-2025.

**Note**

Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity]. The percentages in the graphs may not add up to 100% because values have been rounded up/down.

**Severity**



- It is becoming easier for threat actors to make use of advances in biotech to modify or create new biological agents, which if released could lead to pandemics or be used in targeted biological attacks.
- While biotech is offering groundbreaking solutions for health issues, these can come with new risks, from possible clinical complications to unknown long-term impacts.
- Unless comprehensive global ethical boundaries are set for biotech developments, then ethical concerns are likely to be disregarded by some, leading to new sources of division and conflict within societies.

**Adverse outcomes of frontier technologies**, including biotech, is one of the risks with the sharpest rise in **GRPS** ranking between the two-year and 10-year time horizons, by ten positions to #23. This divergence shows that, while global risks stemming from the field of biotech are not top of mind today, they will become more so within a decade. There are three sets of risks in biotech that need to be watched closely over the coming years: Rising accessibility of bioweapons; negative health impacts as the flipside of efforts to cure or prevent health issues; and the potential for those with access to leading-edge biotech to cross ethical boundaries.

In each of these three areas, the first warning signs are already emerging. Risks will grow over time and become more complex as further rapid technological progress is made. Advances in biotech are being supercharged by convergent technologies such as AI and machine learning approaches, streamlining the ability of both legitimate researchers and threat actors to make sense of large datasets.

Regional and national responses in the EOS reveal pockets of heightened concern around **Adverse**

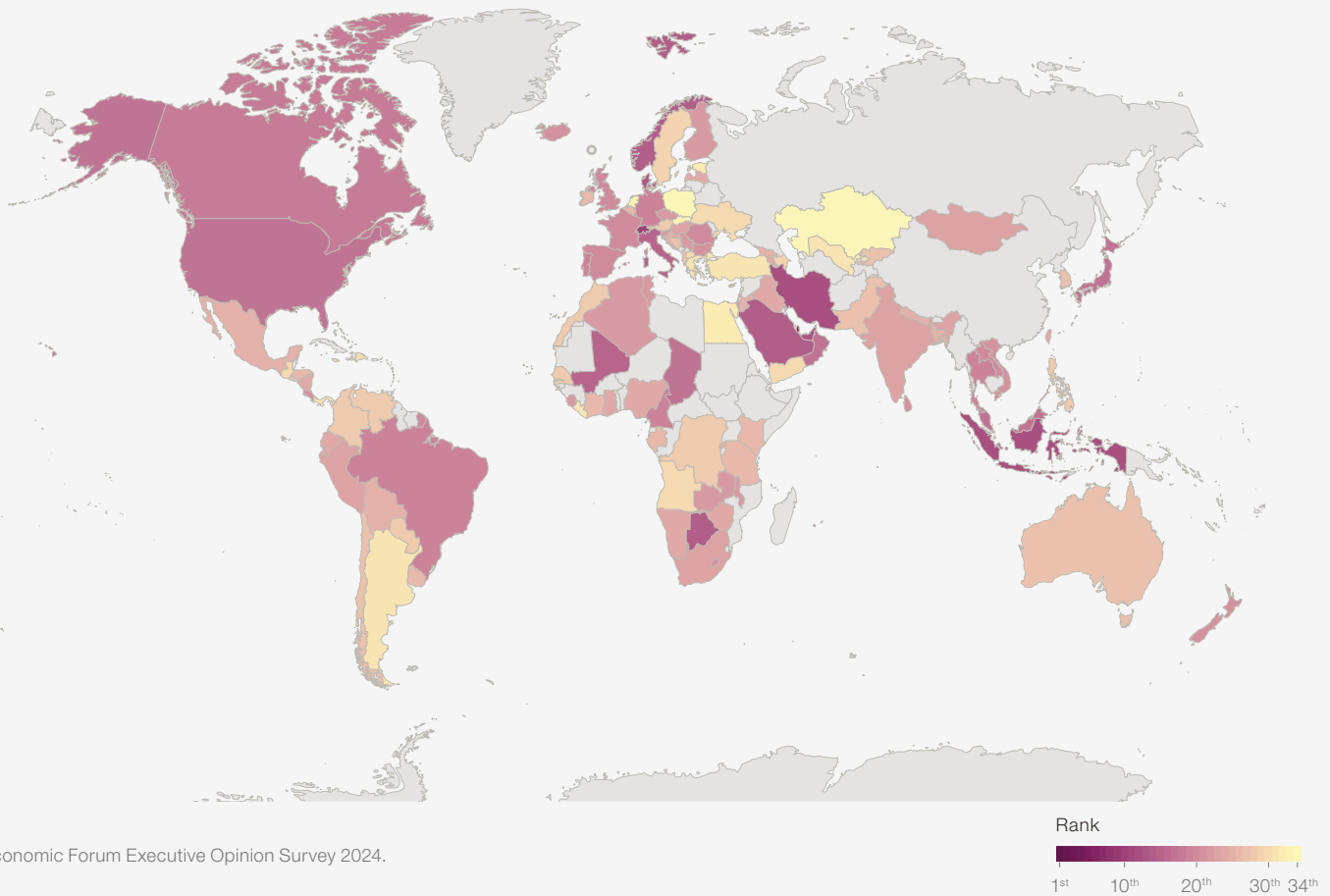
**outcomes of frontier technologies**, including biotech. Several nations, such as Qatar, Iran, Saudi Arabia, Switzerland and Denmark, assign this risk relatively high significance, reflecting their unique geopolitical or economic priorities. High-income regions exhibit moderate concern overall, whereas emerging economies have lower short-term rankings for this risk but may face rising exposure as technology adoption accelerates (Figure 2.10).

These risks come alongside tremendous new opportunities for breakthrough improvements not only in health, but also well-being, as well as agriculture, the development of new building materials, mining and many other areas.<sup>44</sup> Within a decade, products made using synthetic biology will permeate our societies much more than today,<sup>45</sup> and the tech-driven bioeconomy will play an increasingly important role in climate-change mitigation.<sup>46</sup> The scope of opportunities related to human genome editing, specifically, accelerated following the award in 2020 of the Nobel Prize in Chemistry to Emmanuelle Charpentier and Jennifer Doudna for their development of Clustered Regularly Interspaced Short Palindromic Repeats - associated protein 9 (CRISPR-Cas9), a technology that allows for precise cuts in DNA to modify

FIGURE 2.10

**National risk perceptions: Adverse outcomes of frontier technologies**

Executive Opinion Survey rank of national risks from the question “which five risks are the most likely to pose the biggest threat to your country in the next two years?”



Source  
World Economic Forum Executive Opinion Survey 2024.

genetic code. Genome editing technologies, including CRISPR-Cas9, have already been used to treat gene-related diseases such as sickle cell disease and haemophilia, among others. There has also, for example, been recent success in treating an inherited condition that causes vision loss in childhood.<sup>47</sup> Gene editing technologies are also used in some areas of research into cancer<sup>48</sup> and viruses such as HIV,<sup>49</sup> and there is hope that CRISPR-Cas9 could be used to counter antibiotic resistance. Overall, some 2,000 gene therapies are under development worldwide.<sup>50</sup> Many of these will become available within a decade, representing previously unthinkable progress. Eventually, gene therapies may become seen as an obvious choice to protect against disease, as vaccinations are today.

Significant progress is taking place in another promising field: brain-computer interfaces. The first people suffering from quadriplegia have received brain implants connecting their neural signals to digital devices.<sup>51</sup> Further, alternative technology (in several cases with sensors attached to the outside of the head and neck) is being applied to facilitate communication between the brain and artificial limbs, benefiting, for example, war veterans or people with motor neurone disease.<sup>52</sup>

**Broadening bioweapons threat**

Risk perceptions around **Adverse outcomes of frontier technologies** are likely in part to reflect the fear that militaries and terrorists will continue to pursue new uses of biotech as more potent and stealth forms of weaponry. Attaining and building out biotech leadership is likely to rise up the agendas of leading militaries. Over the next decade, biotech-based weapons could also become increasingly integrated with other (non-biological) weaponry. **Cyber espionage and warfare**, and **Biological, chemical or nuclear weapons** and hazards used in combination have far greater, compounding impacts than when used on their own.

Advances in AI-driven biotech will make biological weapons easier and cheaper to develop over the next decade.<sup>53</sup> The weapons themselves could be made more harmful than previous versions.<sup>54</sup> Or, they could be different to those previously built in that they might eventually be focused on specific target groups of people based on genetic characteristics, leaving other people unharmed.

Over the next decade there is also a risk that non-state actors could develop such weapons,



increasing the severity of future terrorist attacks. One area of particular concern is dual use of AI models: In a laboratory experiment reported in 2022, an AI system that had previously been used for medicinal drug discovery was trained to find and combine toxicity molecules. Within only six hours, 40,000 compounds at least as toxic as the sample nerve agent had been generated.<sup>55</sup> Theoretically, there is an unlimited number of new toxic substances that could be created using such models.<sup>56</sup> The researchers involved in the experiment emphasized that the computing power and software required for such experiments is easily attainable today.<sup>57</sup>

Experts are also warning about the relative ease with which viruses capable of infecting humans, such as monkeypox or smallpox, could be enhanced to evade human immune systems, making standard vaccines ineffective. With the tools and information required to alter a pathogen's genetic code becoming easier to access, it may only be a matter of time before a threat actor releases a virus that causes the next pandemic.<sup>58</sup>

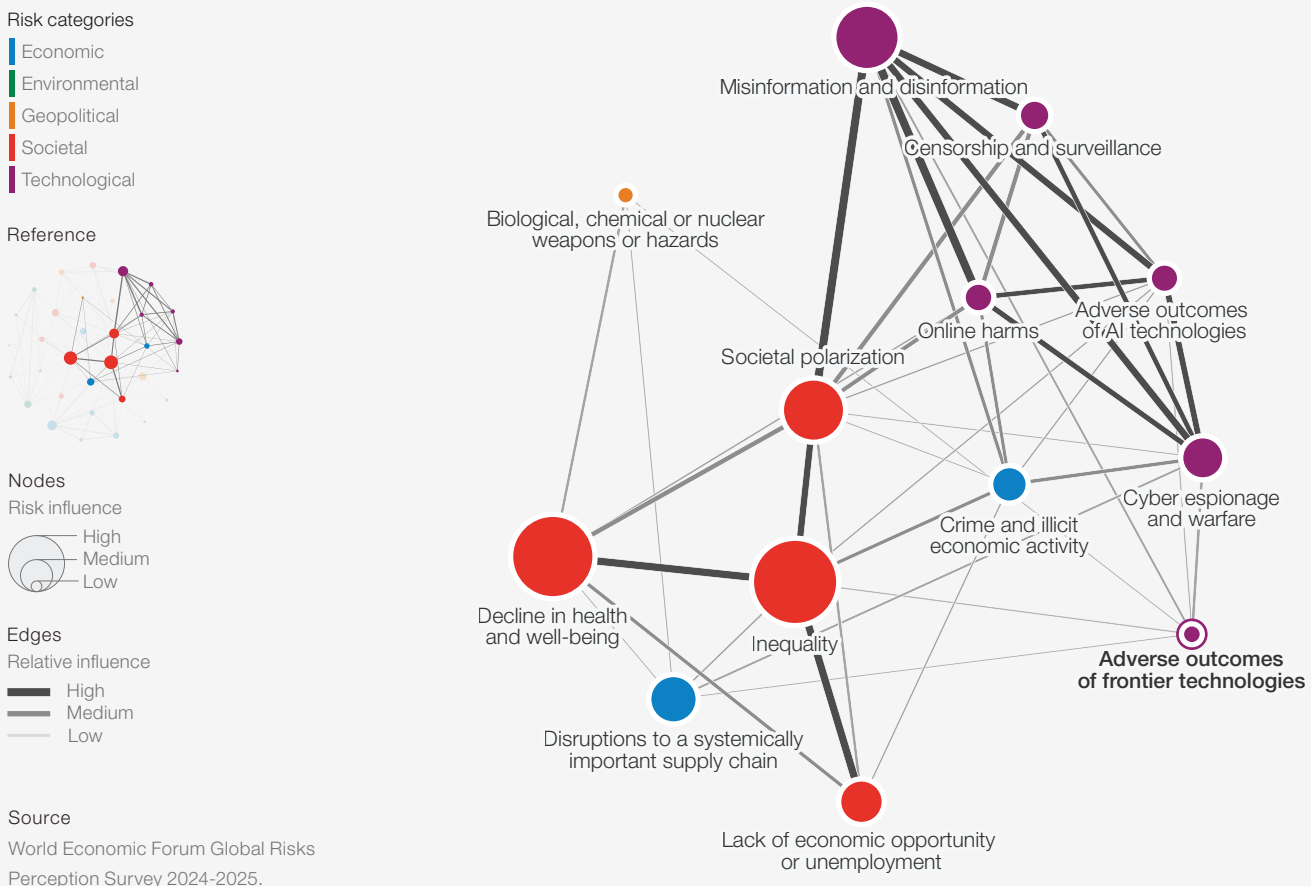
As the costs of setting up a laboratory and purchasing the necessary equipment are relatively limited, the main barrier to threat actors misusing advances in biotech is having the scientific expertise itself – a barrier that will be far from insurmountable over the next decade. Of course, it will also take

considerable (and unrelated) expertise to translate the creation of new toxic substances into the building of weaponry, given the complexities of transporting and disseminating the substances created. But unlike in the nuclear sector, where strict protocols and monitoring of materials and equipment make proliferation efforts relatively easy for governments to detect, this set of conditions is not present in the same way when it comes to weaponizing biotech.

Biotech can also provide a bridge from the biological world to the cyber realm. As far back as 2017, researchers in the United States demonstrated that it was possible to hack a computer using DNA sequence data. Under certain preconditions, they were able to introduce malware into DNA purchased online (at minimal cost), which was read and then processed by a computer that in turn became compromised by the malware.<sup>59</sup> Looking ahead a decade, as **Cyber espionage and warfare** becomes more sophisticated and more people become acquainted with biotech developments, it is conceivable that the researchers' warning – that hackers could use the DNA sequences from faked blood samples to gain access to hack computers – could come true.<sup>60</sup> Indeed, **GRPS** respondents express concern with the risk interconnection between **Adverse outcomes of frontier technologies** and **Cyber espionage and warfare**, as shown in Figure 2.11 below.

FIGURE 2.11

**Risk interconnections: Adverse outcomes of frontier technologies**



## Opaque health concerns

Beyond modifying biological agents and creating new ones for bioweaponry and terrorism, over the coming years there will be other opportunities to misuse – accidentally or on purpose – technologies for editing DNA and applying that to human cells (as well as animals, plants and ecosystems). Part of the trouble with human genome editing technology is that it is too new to predict its long-term effects on both the individuals being treated and future generations.

Problems can arise at the time an individual is receiving gene editing therapy. These may involve a range of clinical complications<sup>61</sup> or off-target effects (which are very common for CRISPR-Cas9). In some gene editing processes, an individual's genome is subject to significant rearrangements, which have the potential to generate other health issues, such as cancer or even new genetic diseases that are not yet understood by scientists and doctors.

In 2018, twins with the genomes of their embryos edited to be resistant to HIV were born in China. The case remains unique in the world – as far as is publicly known – and caused ethical controversy at the time. The twins were guaranteed anonymity by the Chinese government and so there has not been any publicly available tracking of their subsequent health status. The case demonstrates the reach of the technology, and other such surprise announcements by state or non-state actors cannot be excluded over the next decade. Although it may still be generally perceived to be a low-probability risk today, there only needs to be one instance of nefarious application of human genome editing (possibly in an unregulated or non-professional environment) for serious

consequences to result, perhaps involving loss of control with cascading health impacts.

Other areas of biotech present health risks that are also still somewhat opaque. For now, the risks associated with brain-computer interfaces appear distant, but this could change over 10 years. One category of risks is of a clinical nature, involving possible damage to the brain if the medical intervention is not carried out correctly or in case of complications. A growing number of individual biohackers are already implanting various small devices in different parts of their bodies, some of which they intend to link to the internet. These operations are often undertaken at considerable risk to themselves. If this trend catches on, it could lead not only to unforeseen medical complications for some of the individuals involved, but ultimately also to a world in which person-to-person connections start being replaced by permanent person-machine connectivity, partially divorced from physical reality. The COVID-19 pandemic highlighted the devastating impact of lessening face-to-face interaction; developments such as this have the potential to magnify that.

## Crossing ethical boundaries

The wide variety of applications of genome editing, from enhancing health or performance to editing foetuses, leads to difficult ethical questions around where the use of these technologies should stop. For example, would it be ethical to apply gene editing to change a child's eye or skin colour, to modify height or, if that were to become possible, to increase intelligence? What might be unintended consequences, in current or future generations, of editing genes and entire genomes in these ways?



The societal consequences also bear consideration. There is a risk of a future world in which a select global few have access to and use human genome editing technology to become stronger, healthier and happier, with the rest of the population – which over a 10-year timeframe is still likely to be the vast majority – unable to afford it. Gene therapy treatment, such as CAR-T therapy (an immunotherapy for cancer) for one person can easily cost half a million dollars or more for the therapy alone.<sup>62</sup> The limited access to such technologies is likely to represent another source of **Inequality**, exacerbating **Societal polarization** and political tensions.

**Inequality** and ethical considerations will increasingly also play out among countries. The concentration of biotech innovation among a few dominant biotech companies and countries could result in limited access to everyone else. This could leave low-income economies vulnerable due to limited awareness and expertise. The interconnection between **Adverse outcomes of frontier technologies** and the **Concentration of strategic resources and technologies**, observed in the **EOS**, highlights this risk.

The push for rapid progress will also increasingly test ethical boundaries in the domain of brain-computer interfaces. As more people opt for having a brain-computer interface, the time is likely to come over the next decade when demand will arise for the technology from those who are interested in enhancing the performance of their brains, potentially augmenting their own knowledge or productivity with an AI “add on”. At some point in this chain of developments, serious risks will emerge. The digital device to which the individual is connected may be able to “read” the

thoughts of the individual, compromising privacy. This could represent a substantive form of control over the individual by whoever is managing the connected device and its online content, whether that controller is an organization or the state. The individual might only be able to reverse the situation by having the implant removed.

## Actions for today

All stakeholders should act today to safeguard human development and ecosystems over the coming decade and beyond, allowing the benefits of biotech to be reaped while limiting the scope for adverse impacts. Specific areas to focus on are:

### A. Build a global set of norms

The pace of change in the sector is so fast that regulators globally struggle to keep up. Rising geopolitical tensions suggest that the political will for a comprehensive cross-border agreement on acceptable uses of biotech is unlikely to be present for some time, posing an ongoing challenge. But ultimately, intergovernmental agreements will be required to keep biotech risks under control. If one or more countries deviate from ethical and technical protocols, there is every chance that malicious or accidental developments in biotech will quickly become a problem for other countries, as well. As part of such a new framework, a global ethical oversight body should be established, consisting of individuals respected worldwide for their humanity and ethical positions, as well as top minds on biotech itself who are able to keep abreast of cutting-edge **Research & development** and help to direct government efforts in this

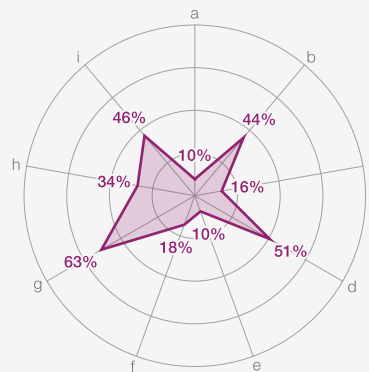
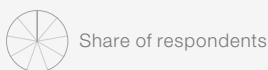
FIGURE 2.12

## Risk Governance: Adverse outcomes of frontier technologies

“Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years? Select up to three for each risk.”

### Approach

- a. Financial instruments
- b. National and local regulations
- c. Minilateral treaties and agreements
- d. Global treaties and agreements
- e. Development assistance
- f. Corporate strategies
- g. Research & development
- h. Public awareness and education
- i. Multistakeholder engagement



Adverse outcomes of frontier technologies (quantum, biotech, geoeengineering)

### Source

World Economic Forum Global Risks Perception Survey 2024-2025.

### Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

regard. **Research & development** was listed by **GRPS** respondents as the top approach for mitigating risks from **Adverse outcomes of frontier technologies** (Figure 2.12).

Pending such an intergovernmental agreement, which could take years, a less ambitious objective for the short term would be to establish and agree on a set of broad norms to guide government policies on biotech worldwide. Leading bioethics experts have emphasized the importance of broad-based dialogue across societies<sup>63</sup> to help establish such norms. Regarding human genome editing specifically, progress has already been made in this regard: the WHO in 2019 established an expert advisory committee to examine the scientific, ethical, social and legal challenges associated with it.<sup>64</sup> The committee in 2021 published a framework for governance<sup>65</sup> covering the key applications of human genome editing as well as a set of recommendations.<sup>66</sup> This is helpful guidance for countries, many of which do not yet have a legal framework covering all human genome editing applications.

### **B. Empower people through biotech education**

Biosafety rules exist and are strictly adhered to in most countries when it comes to recognized institutions undertaking work on gene editing. They include, for example, storage requirements, design of laboratories, protocols to safeguard the health of researchers and measures to prevent the escape of organisms into the environment.<sup>67</sup> However, individuals and communities that are

outside of recognized institutions, and who are experimenting with biotech also need to be made aware of and adhere to these biosafety rules.

In the years ahead, understanding the risks in the field of biotech is going to become increasingly important at an individual level. **Misinformation and disinformation** around biotech is a serious problem, with biohackers who are not medical professionals touting health remedies or performance-enhancing procedures based on biotech. As these uses of biotech become more ubiquitous, individuals will need to gain a more nuanced understanding of when it can be helpful to them, and when it may pose a danger to their health. A collaborative educational effort between the public sector, companies in the Biotech sector, and educational institutions should be launched to deepen citizens' understanding of the technology and its risks.

### **C. Incentivize biotech leaders to work in the public sector**

The public sector needs to continue to focus on making it attractive for the leading minds in the Biotech sector to work there, amid stiff competition from large pharma or technology companies, biotech startups or academia. The only way that regulators will be able to keep up with developments in biotech over the next decade will be to attract these top minds – if not into full-time employment then at least in the form of regular and intensive dialogue.

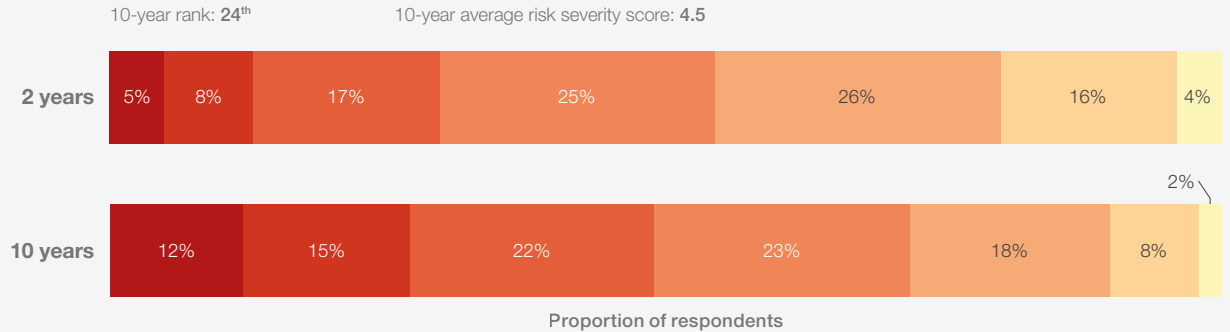


## 2.5 Super-ageing societies

FIGURE 2.13

### Short- (2 years) and long-term (10 years) risk severity score: Insufficient public infrastructure and social protections

Non-existent, inadequate, or inequitable public infrastructure, services and social protections. Includes, but is not limited to: unaffordable or inadequate social security and benefits; housing; public education; child and elderly care; healthcare; sanitation and transportation systems; and pension systems.



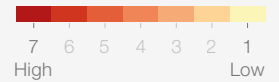
Source

World Economic Forum Global Risks Perception Survey 2024-2025.

Note

Severity was assessed on a 1-7 Likert scale [1 = Low severity, 7 = High severity]. The percentages in the graphs may not add up to 100% because values have been rounded up/down.

Severity



- Pension crises will start to bite over the next decade in super-ageing societies as dependency ratios rise further and government finances are stretched.
- Labour shortages in several sectors, in particular long-term care, are likely to become a characteristic of super-ageing societies unless policies shift.
- Super-ageing societies will pose global economic and labour-market challenges, even for countries still benefiting from their demographic dividend.

Countries are termed “super-ageing” or “super-aged” when over 20% of their populations are over 65 years old.<sup>68</sup> Several countries have already exceeded that mark, led by Japan<sup>69</sup> and including some countries in Europe.<sup>70</sup> Many more countries across Europe and Eastern Asia in particular are projected do so by 2035. Globally, the number of people aged 65 and older is expected to increase by 36%, from 857 million in 2025 to 1.2 billion in 2035.<sup>71</sup>

By 2035, populations in super-ageing societies could be experiencing a set of interconnected and cascading risks that underscore the **GRPS** finding that the severity – albeit not the ranking – of the risk of **Insufficient public infrastructure and social protections** is expected to rise from the two-year to the 10-year time horizon (Figure 2.13). An ongoing concern is that government funding for public infrastructure and social protections gets diverted during short-term crises.

Some super-ageing societies could be facing crises in their state pensions systems as well as in employer and private pensions, leading to more financial insecurity in old age and exacerbated

pressure on the labour force, which includes a growing number of unpaid caregivers. Indeed, super-ageing societies by 2035 are likely to face labour shortages.

Ranked second globally according to the **EOS**, **Labour and talent shortage** is selected as the top risk in Europe and Eastern Asia, where super-ageing is most pronounced. Twenty-one countries place the risk in first place, including two of the most super-ageing societies, Japan and Germany, while 40 other economies view it as one of the top five risks (Figure 2.14).

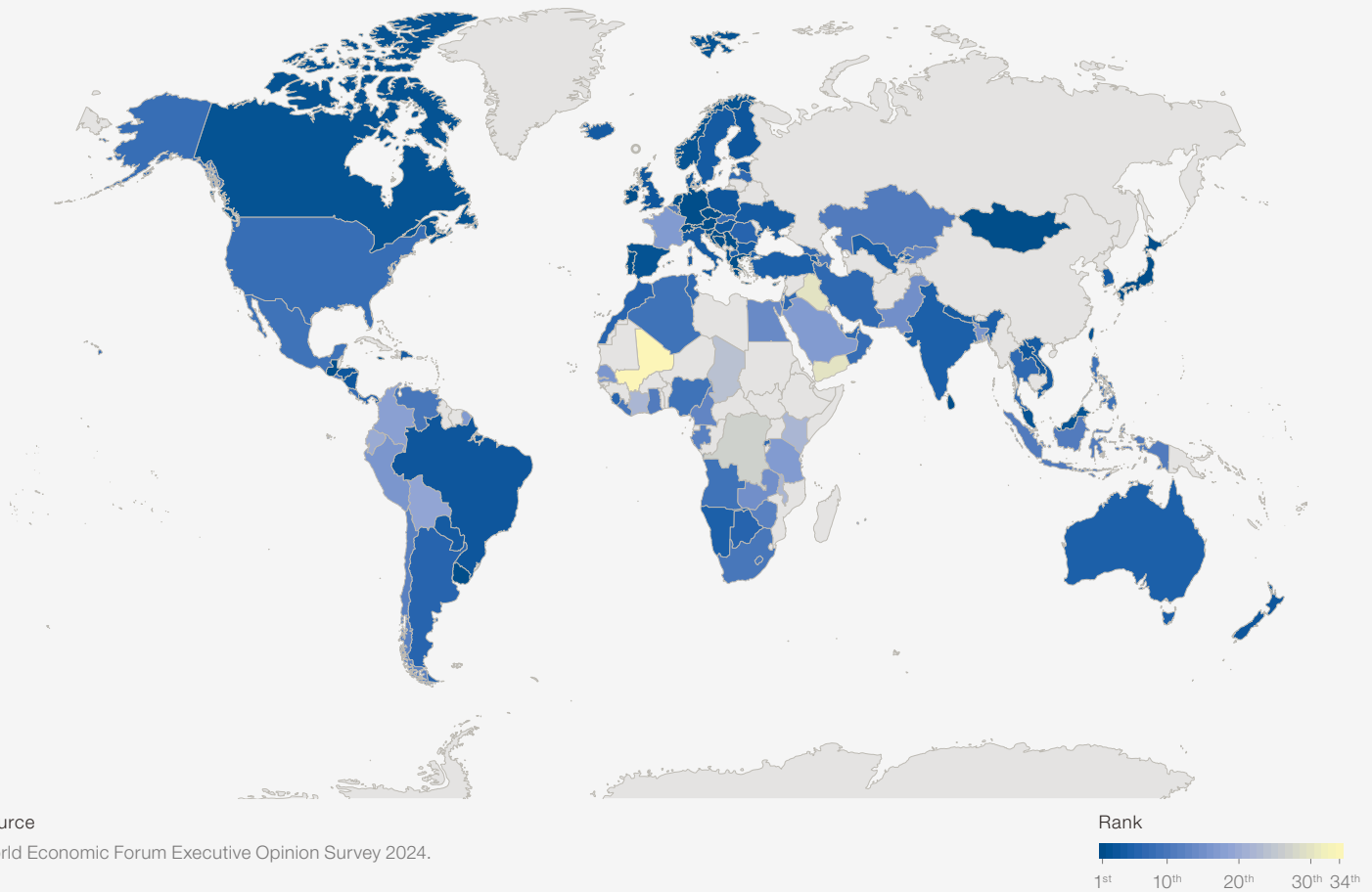
The long-term care sector will be especially affected by labour shortage. Care occupations are expected to see significant demand growth globally by 2030. Care systems – health care and social care – in super-ageing societies are already under clear and immediate strain. They will struggle to serve a fast-growing population over 60 years of age that has additional care needs while recruiting and retaining enough care workers. Care systems are, in great part, funded by governments and account for about 381 million jobs globally – 11.5% of total employment.<sup>72</sup> The accumulation of debt



FIGURE 2.14

**National risk perceptions: Labour and/or talent shortage**

Executive Survey Opinion rank of national risks from the question “which five risks are the most likely to pose the biggest threat to your country in the next two years?”



Source  
World Economic Forum Executive Opinion Survey 2024.

and competing spending needs on, for example, security and defense are likely to constrain the reach and sustainability of public expenditure on care systems over the next decade. Without increased public or blended investment, care demand will continue to be unmet.

Economies already experiencing this challenge are resorting to stop-gap measures, including attracting migrant care workers from other economies. But if this turns into a talent drain from countries with more youthful societies, those countries may then struggle to reap the benefits of their demographic dividend and will, several decades from now, run into super-ageing society challenges of their own.

There will be no easy solutions to this problem set, given the sustained strength to 2035 of the two underlying trends generating higher average dependency ratios, not only across super-ageing societies, but at the global level: declining fertility rates and rising life expectancy, though not necessarily in better health.<sup>73</sup>

**Pension crises**

Over the next decade the pensions crises and their implications will start hitting home in super-ageing societies, as it becomes clear that current state pension systems were designed for a much younger demographic with fewer years of retirement that needed funding. But it is not only state pension systems that will be struggling. Many employees are moving from Defined Benefits to Defined Contribution schemes – putting the onus on the individual to come up with strategies for saving over a lifetime. However, for many people this can be challenging as they may have insufficient income, lack the requisite financial understanding,<sup>74</sup> or fail to make good early decisions about savings and retirement.<sup>75</sup>

As dependency ratios rise, fewer people will be contributing to employer and private pensions schemes relative to the number of people whose retirements need funding, and with the length of those retirements rising. This will put pressure on institutional pension funds, some of which may seek to increase their returns by allocating higher proportions of their assets to riskier investments, such as crypto assets, private credit or other

alternative investments. These riskier investments will not always pay off, and over time this could worsen the already suboptimal funding ratios of some of these institutions. If there are extended periods of market underperformance, this could lead to many more individuals facing shortfalls in funding their retirement.<sup>76</sup>

The pension gaps in super-ageing societies will be exacerbated by the long-term impacts of the rise of the “gig economy” and the associated failure to make sufficient pensions contributions during periods of gig work. Pension shortfalls will also disproportionately affect lower-income workers who have not managed to make significant savings during their careers, even if they have been fully employed. In the EU, for example, already today one in five elderly people face the risk of poverty or social exclusion<sup>77</sup> and this figure is set to rise by 2035.

Women on average have significantly higher pensions gaps than men given time taken out of formal employment over the course of their careers to care for children or elderly relatives, as well as their lower average pay compared to men. In the EU, women’s pensions are nearly 30% lower than those of men, meaning that they are at a 35% higher risk of poverty.<sup>78</sup>

The societal implications of **Insufficient public infrastructure and social protections**, such as pensions and care systems, are shown in Figure 2.15, which reveals that **Inequality** was selected by **GRPS** respondents as a significant connected risk.

A common proposal for alleviating the pensions crisis in super-ageing societies is raising the

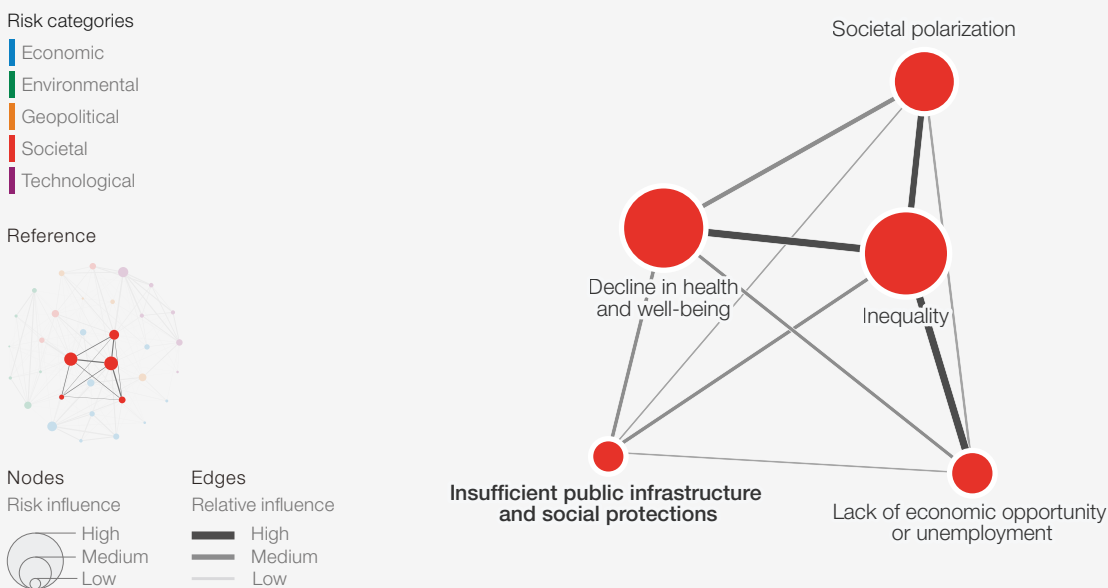
statutory retirement age, and in some countries this has already occurred. However, attempts to do this to the extent needed to stem the pension crises will face resistance from voters, a rising proportion of whom are themselves close to retirement. This segment of the population tends to have high voter turnout, making it increasingly likely that policy outcomes will be in their favour. Intergenerational tensions could become an ongoing feature of super-ageing societies, with discontented younger working cohorts resenting being called upon to pay more towards funding retiree pensions.

There is also a gap between what global executives believe needs to be done to adjust pension schemes and what they view as businesses’ responsibilities. One-quarter of global executives (25%) support policy changes to pension schemes and retirement ages, but a lower share (14%) of executives view such measures as an effective business practice for expanding their talent base, as reported in the World Economic Forum’s *Future of Jobs Report 2025*. This illustrates the complexity of aligning key stakeholder interests behind pension reforms.

Even if official retirement ages can be increased, the impact on reducing the scale of the pension crises may be smaller than hoped for. Some people do not manage to work to their expected retirement age, as their working lives are cut short by illness or disability, job loss or other reasons. The inability to extend retirement age is an especially significant risk for people in physically demanding jobs. However, many would like to be upskilled or reskilled to be able to extend their careers.

FIGURE 2.15

**Risk interconnections: Insufficient public infrastructure and social protections**



## Long-term care crunch

In super-ageing societies, the balance between public sector, private sector and family support in the provision of long-term care is varied. The predominant case globally is that government healthcare and social services, and other government financial assistance for retirees, play important roles.<sup>79</sup> In high-income countries with less of a contribution by the public sector, more of a role is played by private insurance, private care facilities, and home care services.<sup>80</sup>

Given the rising demand for its services, the care sector overall is set to need many more workers by 2035. In the United States, for example, demand for long-term care services and support workers alone is projected to grow by 44% from 2020-2035.<sup>81</sup> This rising demand needs to be set against an environment in which staff are often underpaid and overworked. Unless long-term care providers can find ways to improve pay and working conditions, the risk of labour shortages in the sector will only rise. Market forces can lead to more private-sector provision of long-term care filling some of the void. However, for many families, paying for private long-term care will remain out of reach financially.

Immigration into super-ageing societies is already playing a role in addressing the sector's labour needs. However, migrant workers are overrepresented in the less regulated areas of the care economy, such as home-based care and domestic work, and earn nearly 13% less than the national average.<sup>82</sup> The political climate around immigration is strained and may become more so over the coming years, with anti-immigration policies becoming more mainstream in several super-ageing societies.

Similarly, over a 10-year timeframe, there is only so much that increased labour-force participation in super-ageing societies can contribute to addressing the long-term care crunch. Attracting more women to enter the formal workforce can play a role. However, the balance of incentives available to women needs rethinking for there to be a meaningful change in female labour-force participation. Women currently provide two-thirds of unpaid work worldwide, which keeps 708 million of them from joining the labour force.<sup>83</sup>

Without meaningful transformation of the care sector and its resourcing, the scope for either immigration or increased labour force participation to solve the long-term care crunch over the next 10 years remains limited. Governments and companies may be tempted to turn to technology in an effort to increase sectoral productivity. This can involve everything from automated reminders to take pills, to chatbots responding to medical queries and robots delivering meals, ideally freeing up time for more social interactions wherever possible. But while these and other technologies may help

optimize care delivery and reach, demand for care skills and jobs is likely to be far from fully met by technological innovation

## Super-ageing societies of the future

While today's super-ageing societies are the ones that will feel the brunt of the negative impacts of demographic trends on their economies and societies over the next decade, ripple effects will be felt worldwide, leading to risks elsewhere, too. Global economic growth over the next decade is likely to be constrained by demographics in super-ageing societies, many of which are among the world's largest economies. In addition, there are likely to be direct knock-on impacts from today's super-ageing societies. Despite policy pushback on immigration in the short-medium term, in the longer term the need to fill labour shortages could be decisive in shaping policy. As a consequence, countries with more youthful populations will face the risk of depletion of their own future workforces as many more young, working-age people migrate to super-ageing societies to help fill labour shortages there. Working-age people who remain in the super-ageing societies of the future could be left hard-pressed to sustain the rest of the populations there.



Celine Ylmz, Unsplash





Austin Curtis, Unsplash

Many countries with youthful demographics are in Sub-Saharan Africa, which has by far the highest fertility rate globally.<sup>84</sup> These demographics will help sustain rising working-age populations for several decades. But a key challenge over the next decade will be to generate employment opportunities on a sufficient scale and that offer job security. The International Labour Organization (ILO) notes that 72% of young adult workers (aged 25 to 29) in the region are in a form of work deemed “insecure”.<sup>85</sup> Limited investment in human capital, which is essential to developing an attractive economy that can generate sufficient employment opportunities, is a significant risk.<sup>86</sup>

Societies that are young today and looking at positive demographic trends for the next decade or more could ultimately follow similar demographic trajectories to the super-ageing societies of today and will then face problems that could be even more complex. While this risk may play out fully only over several decades, eventually low-income, super-ageing societies of the future could face a perfect storm – all the social and economic problems associated with today’s super-ageing societies but without fully developed social safety nets in place, and without the pools of private savings accumulated by some in today’s super-ageing societies.

## Actions for today

### A. Further encourage flexible work policies

Organizations in both the public and private sectors need to further develop their flexible work policies

as part of their **Corporate strategies** (Figure 2.16), with more options for leaving and coming back to the workforce at different life stages. This will help employees who are taking a non-linear life path, for example, including education, working across different sectors, and professional training or reskilling in the middle of a career, as well as years taken out to care for children or elderly family members before coming back to work.<sup>87</sup>

### B. Campaign to improve pre-retirement health choices

A large-scale, multi-faceted public-private effort to improve the health choices of future retirees should be launched. An impactful way to address the long-term care crisis, and to give the elderly the opportunity to contribute productively to the economy, is for individuals to lead healthier lives pre-retirement, thereby diminishing the need for long-term care in the first place. In Singapore, for example, the government is creating a “health district” to help their citizens live healthier, longer lives.<sup>88</sup> Such initiatives can include helping people to understand the impacts of building healthy habits early on, focusing on key areas such as exercise, nutrition and social interactions. **National and local regulations**, the approach cited in the GRPS as having the most potential for driving action on risk reduction and preparedness when it comes to **Insufficient public infrastructure and social protections**, can play a role in this regard (Figure 2.16). The initiative would have not only an individual dimension, but a patriotic, national-level one, too: By becoming healthier for longer, individuals can contribute to a stronger economy and lower fiscal pressures in the decades ahead.

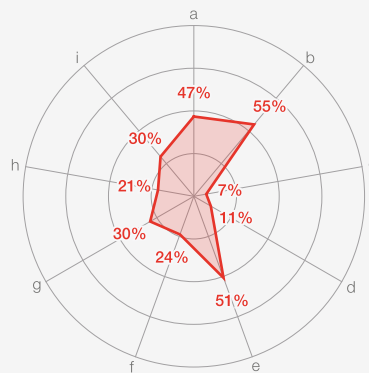
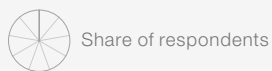
FIGURE 2.16

**Risk Governance: Insufficient public infrastructure and social protections**

“Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years? Select up to three for each risk.”

**Approach**

- a. Financial instruments
- b. National and local regulations
- c. Multilateral treaties and agreements
- d. Global treaties and agreements
- e. Development assistance
- f. Corporate strategies
- g. Research & development
- h. Public awareness and education
- i. Multistakeholder engagement



**Insufficient public infrastructure and social protections**

**Source**

World Economic Forum Global Risks Perception Survey 2024-2025.

**Risk categories**

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

**C. Proactively build social cohesion across generations**

At a societal level, all stakeholders need to reconsider the prospect of an inter-generational conflict playing out and take measures today to avoid that. The upcoming demographic shifts could be an opportunity to reframe the conversation. Every young person will become old, if they are lucky; engaging in more cross-generational

social activities could increase life satisfaction for everyone, improve long-term social cohesion and provide real benefits towards resolving a range of global problems.<sup>89</sup> More can also be done to encourage older individuals to remain in the workforce, for example by reskilling and by tailoring jobs more to their skill sets. **Corporate strategies** (Figure 2.16) also have a role to play: Organizations could consider incentivizing the creation of cross-generational teams.

## 2.6 Looking back: 20 years of the *Global Risks Report*

The first edition of the Global Risks Report was launched in 2006 in a risks landscape characterized by terrorism and concerns around avian influenza, among other risks. Over the course of the 20 editions of the report, we have lived through significant events that have reshaped our economic and societal landscapes, from the 2007-2008 global financial crisis to the COVID-19 pandemic. We have also witnessed the compounding effects of the **Structural forces** of **Technological acceleration**, **Geostrategic shifts**, **Climate change** and **Demographic bifurcation** (Box 2.1). These Structural forces are determining long-term shifts in the arrangement of, and relation between, the systemic elements of the global landscape.

Figure 2.17 shows the average 10-year risk outlook rankings of the risks covered in the current edition

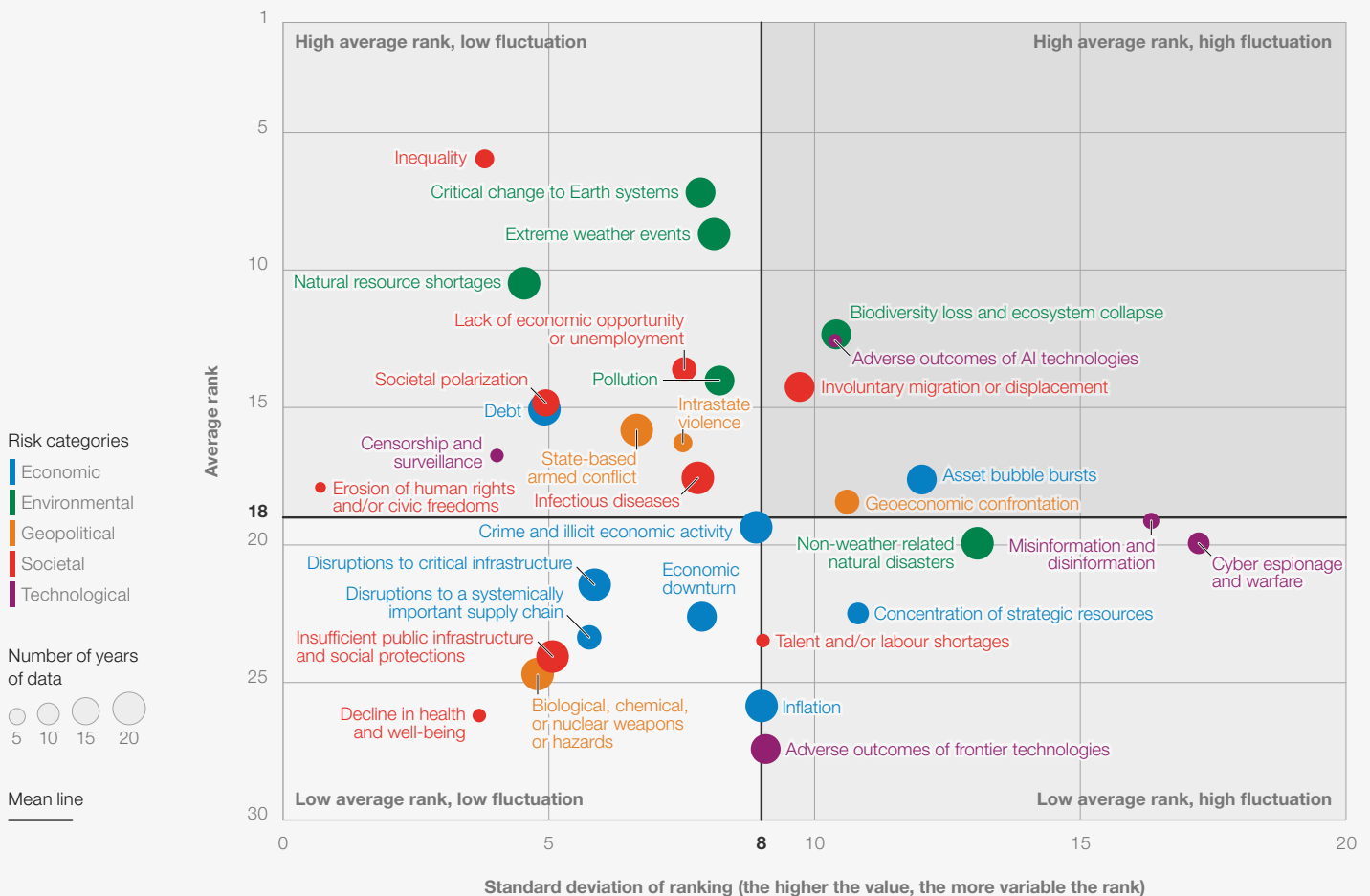
of the Global Risks Report over the last 20 years and the fluctuations of those rankings over that time period. The figure illustrates how consistently or variably each risk has been perceived over time, as represented by the standard deviation of its ranking. The sections that follow assess further how the 10-year outlooks for key risks and risk categories have changed over the last two decades.

### Key trends in risk perceptions

**Environmental risks have consistently topped the 10-year ranking**

When assessing the evolution of perceptions of the four **Structural forces**, **Climate change** is the

FIGURE 2.17 Average risk ranking and variability, 2006-25



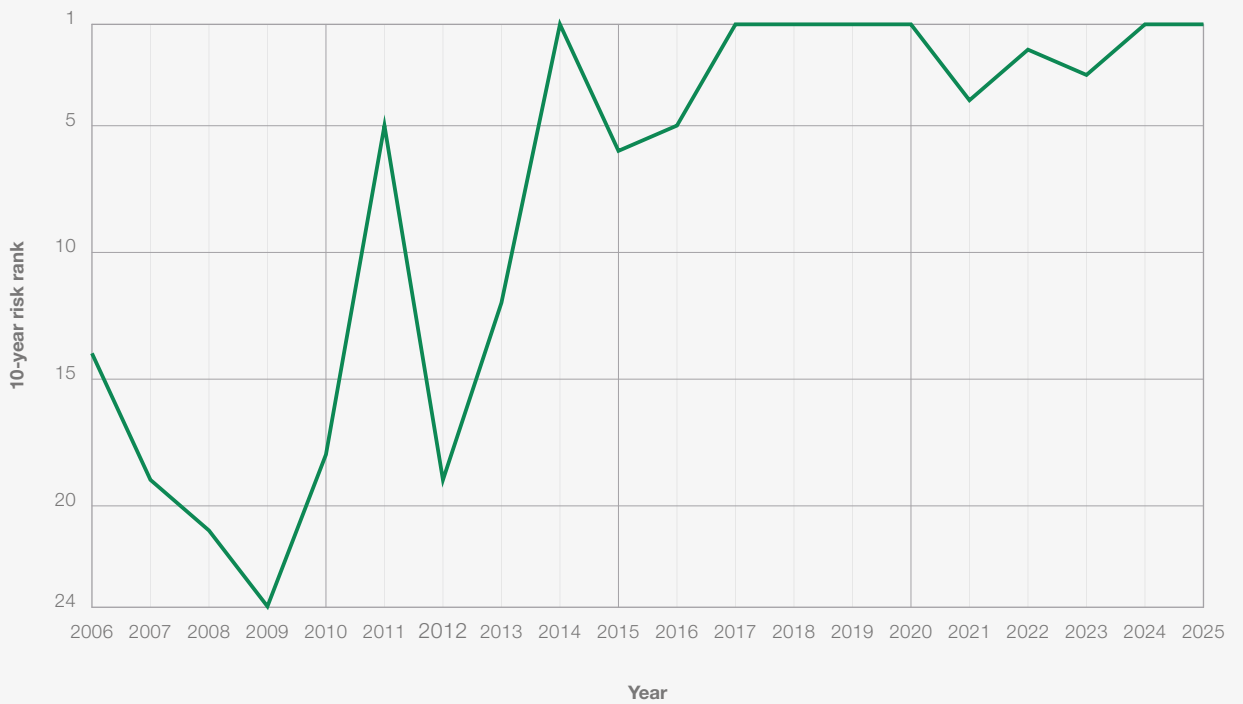
Source  
World Economic Forum Global Risks Perception Survey  
2005-2006 to 2024-2025.

Note  
Average risk severity and fluctuation over a 20-year period, based on the list of global risks in the *Global Risks Report 2025*. The x-axis represents the standard deviation of risk severity rankings, indicating volatility in risk perception. The y-axis denotes the average severity ranking, where higher values reflect more critical risks. Dot size corresponds to the frequency of a risk's appearance across the last twenty editions of the *Global Risks Report*. Online harms was not included in Figure 2.17 due to being a new risk introduced in the *Global Risks Report 2025*.



FIGURE 2.18

Extreme weather events: Evolution in ranking, 2009-2025



Source

World Economic Forum Global Risks Perception Survey 2005-2006 to 2024-2025.

— Extreme weather events (floods, heatwaves, etc.)

one that has been most consistently perceived as experiencing a clear ongoing systemic shift. Environmental risks have dramatically increased in ranking over the 10-year time horizon since the introduction of the *Global Risks Report* in 2006, and in recent years continuously rank as severe concerns. The highest-ranking environmental risks over the last 20 years have been **Critical change to Earth systems**, **Extreme weather events**, **Natural resource shortages** and **Pollution**, as highlighted in the upper-left quadrant of Figure 2.17. As the effects of Climate change-induced events and developments have become more visible over time, and public awareness of their implications has risen, the rankings of environmental risks have continued to rise.

The clearest example is **Extreme-weather events**, currently ranked as the #1 risk for the next 10 years. Since 2014, it has consistently ranked as a top 6 risk (Figure 2.18). From 2017-2020 it ranked as the top risk and has retaken that spot since 2024.

The ranking of **Extreme weather events** has tended to rise as such events have worsened in intensity and frequency. **Extreme weather events** are becoming more common and expensive, with the cost per event having increased nearly 77%, inflation-adjusted, over the last five decades.<sup>90</sup> The effects of climate change-driven **Extreme weather events** are being felt across the world and often hit the poorest communities the hardest. Global heat records continue to be broken.<sup>91</sup>

The **Pollution** risk demonstrates shifting prominence over time in the 10-year risk outlook. First introduced in 2009, **Pollution** risk initially encompassed **Air pollution and nanoparticles pollution** (paint, cosmetics, healthcare). Over the subsequent 10 years, the risk evolved in concept and rose in perceived importance (Figure 2.19). In 2017, **Human-made environmental damage and disasters** (e.g. oil spills, radioactive contamination, etc.) ranked #7 and entered the top 10 risks over the 10-year horizon. Ever since, concerns about **Pollution**, according to our historical GRPS data, have remained a top 10 long-term risk, and this year also ranked #6 over the two-year time horizon.

Among the other environmental risks, **Critical change to Earth systems** jumped in ranking in the 10-year risk outlook from #21 in 2013 to #4 in 2014 and has been in the top five ever since, aside from 2017 when it was #6. **Biodiversity loss and ecosystem collapse** has experienced one of the largest increases in ranking among all risks, moving from #37 in 2009 to #2 in 2025.

**Perennial worries about conflict**

Both **State-based armed conflict** and **Intrastate violence** feature in the upper-left quadrant of Figure 2.17, showing that concerns about conflict, although especially high today, have never been far from top of mind among decision-makers over the last 20 years.

FIGURE 2.19

Pollution: Evolution in ranking, 2009-2025



Source  
World Economic Forum Global Risks  
Report, 2009-2025.

Looking deeper into **State-based armed conflict**, its 10-year risk ranking experienced noticeable upticks in 2010-2011, when it rose from #24 to #7 – perhaps in part because of the start of the Syrian civil war in March 2011. A similar uptick is seen from 2014-2015, as the war in Syria escalated, with heavy casualties.<sup>92</sup>

The heightened long-term risk perceptions have unfortunately been validated by the Russian invasion of Ukraine, and the wars in the Middle East and Sudan, among others. Indeed, **State-based armed conflict** is the #1 short-term concern today among GRPS respondents. **Section 1.3: “Geopolitical recession”** notes the growing realization that we are in an era of conflict, without multilateral solutions in sight.

**State-based armed conflict** is a clear example of the interconnected nature of risks and of their compounding effects. Conflict intensifies humanitarian crises, including **Involuntary migration or displacement**. Perceptions of this risk in the GRPS have experienced a pattern similar to that of **State-based armed conflict**, in particular from 2015 onwards.

**Societal risks are the third major long-term concern**

The third category of risks with a strong presence in the upper-left quadrant of Figure 2.17 is societal risks. Although this risk category has not featured

in every edition of the Global Risks Report, five of the eight risks rank above the average: **Inequality (wealth, income)**, **Lack of economic opportunity or unemployment**, **Societal polarization**, **Infectious diseases**, and **Erosion of human rights and/or civic freedoms**.

**Inequality, Lack of economic opportunity or unemployment**, and **Societal polarization** are the three societal risks that have ranked high consistently. These rankings provided steady indications that we were moving towards a more polarized world. Looking at **Societal polarization** more closely, it has increased its ranking from #21 when it was introduced in 2012 to #8 this year.

**Economic risks are perceived as less of a long-term risk**

Looking at Figure 2.17, six economic risks rank below the average over the last 20 years: **Disruptions to critical infrastructure**, **Disruptions to a systematically important supply chain**, **Crime and illicit economic activity**, **Economic downturn**, **Inflation** and **Concentration of strategic resources** (and technologies).

Only two economic risks have presented an above-average long-term threat according to GRPS respondents: **Debt** (corporate, public, household), which, as shown in Figure 2.20, has remained relatively stable as a long-term risk since the 2007-2008 financial crisis, and **Asset bubble burst**.

While **Asset bubble burst** was one of the top-ranked long-term risks during and in the immediate aftermath of the financial crisis, its ranking subsequently fell off sharply as the global economy regained a stable footing in subsequent years.

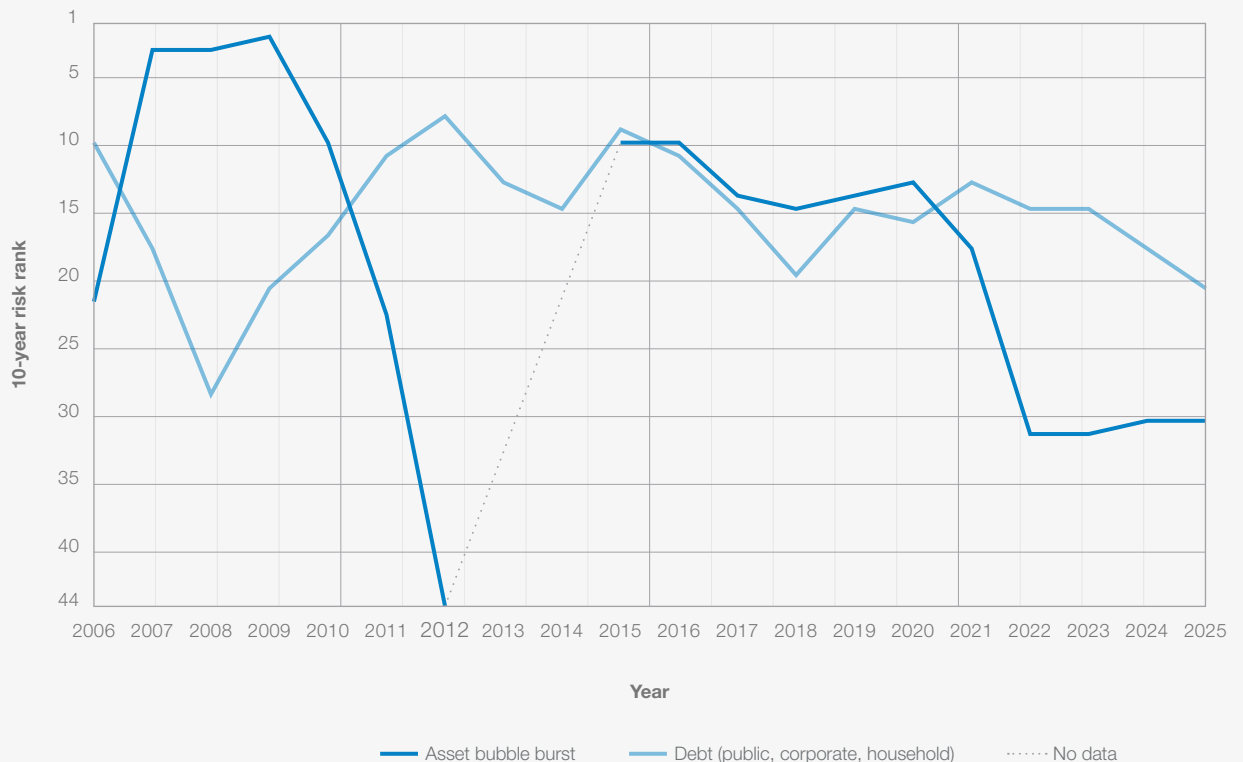
**Technological acceleration is the structural force to watch**

Perceptions of long-term technological risks have been among the most volatile of all the risks considered in the last 20 years of the *Global Risks Report*. While this can be explained by the current set of technology risks being relatively new to the report, it nonetheless is a warning sign that technological risks might be the area to watch the most for unexpected future risk developments. The impacts of technological acceleration are difficult to assess. Even going back to the first edition of

the *Global Risks Report* in 2006, it was noted that risks associated with new technologies were among those whose outcomes were very unclear.

Over the course of the 20 editions of the *Global Risks Report*, the category of technology has itself changed frequently, with risks in 2006 related to the **Convergence of technologies, Nanotechnology, Electromagnetic fields and Pervasive computing**. Such threats have evolved markedly and today the category includes **Misinformation and disinformation, Censorship and surveillance, Adverse outcomes of frontier technologies, Adverse outcomes of AI technologies, and Cyber espionage and warfare**. Undoubtedly, this categorization will be subject to further significant realignment in the coming years given the pace and range of different possible directions of technological change.

FIGURE 2.20 **Debt and Asset bubble burst: Evolution in ranking, 2009-2025**



Source  
World Economic Forum Global Risks  
Report, 2009-2025.

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# Appendix A

## Definitions and Global Risks List

### Definitions

For the purposes of this report, “**Climate change**” is a structural force that encompasses the trajectories of global warming and possible consequences to Earth systems, reflecting anthropogenic actions and environmental changes.

“**Demographic bifurcation**” is a structural force that refers to changes to the size, growth and structure of national, regional or global populations, and the resulting impact on socioeconomic and political structures. It includes, but is not limited to, migration, fertility and ageing rates.

“**Geostrategic shifts**” is a structural force that refers to changing geopolitical power dynamics. It encompasses global and regional alliances and relations, the offensive and defensive projection of different sources of power (including economic), and national attitudes relating to key actors, governance mechanisms and strategic goals.

“**Global risk**” is the possibility of the occurrence of an event or condition that, if it occurs, would negatively impact a significant proportion of global GDP, population or natural resources.

“**Structural force**” is the long-term shift in the arrangement of and relation between the systemic elements of the global landscape. These shifts

are not risks in and of themselves, but have the potential to materially influence the speed, spread and scope of global risks. These include but are not limited to: climate change, demographic bifurcation, geostrategic shifts and technological acceleration.

“**Technological acceleration**” is a structural force that refers to technological developments enabled by exponential growth in computing power and analysis. It has the potential to blur boundaries between technology and humanity, and rapidly give rise to novel and unpredictable global risks.

“**Under-the-radar risk**” is a global risk where new intelligence, a marked deterioration, key decision point or similar suggests that the severity of the risk (likelihood or impact) is increasing and/or is higher than indicated by global risk perceptions.

### Global risk list

Table A.1 presents the list of 33 global risks and definitions adopted in the **Global Risks Perception Survey 2024-2025 (GRPS)**.

To ensure legibility, the names of some of the global risks have been abbreviated throughout the report. The portion of the full name used in the abbreviation is in bold in Table A.1.

TABLE A.1 Definitions of global risks

SOCIAL	
<b>Decline in health and well-being</b>	Regular or chronic impacts on physical and mental health and well-being that require substantive medical attention and/or limit activities of daily living. Includes, but is not limited to: conditions linked to ageing, excessive consumption habits, and climate change (including heatwaves) and pollution.
<b>Erosion of human rights and/or civic freedoms</b>	Loss of protections for rights inherent to all human beings, regardless of individual status, and/or the freedoms that underpin civic space. Includes, but is not limited to the right to: life and liberty; work and education; freedom of expression; peaceful assembly; non-discrimination based on gender, race, ethnicity and other characteristics; and privacy.
<b>Inequality (wealth, income)</b>	Present or perceived substantive disparities in the distribution of assets, wealth or income within or between countries, resulting in material differences in related economic outcomes. Includes, but is not limited to: growing or persistent poverty and economic polarization.
<b>Infectious diseases</b>	Spread of viruses, parasites, fungi or bacteria leading to a widespread loss of life and economic disruption. Includes, but is not limited to: zoonotic diseases, releases of natural or man-made pathogens, the resurgence of pre-existing diseases due to lower levels of immunity, the rise of antimicrobial resistance, and the impact of climate change and environmental degradation on pathogens and their vectors.

**Insufficient public infrastructure and social protections** Non-existent, inadequate or inequitable public infrastructure, services and social protections. Includes, but is not limited to: unaffordable or inadequate social security and benefits, housing, public education, child and elderly care, healthcare, sanitation and transportation systems, and pension systems.

**Lack of economic opportunity or unemployment** Structural deterioration of work prospects or standards of work and/or persistent barriers to the realization of economic potential and security. Includes, but is not limited to: erosion of workers' rights; stagnating wages; rising unemployment and underemployment; displacement due to automation or the green transition; stagnant social mobility; and unequal access to educational, technological and economic opportunities.

**Involuntary migration or displacement** Forced movement or displacement across or within borders, stemming from, but not limited to: persistent discrimination and persecution; lack of economic advancement opportunities; human-made disasters; natural disasters and extreme weather events, including the impacts of climate change; and internal or interstate conflict.

**Societal polarization** Present or perceived ideological and cultural divisions within and across communities leading to declining social stability, gridlocks in decision-making, economic disruption and increased political polarization.

## TECHNOLOGICAL

**Adverse outcomes of AI technologies** Intended or unintended negative consequences of advances in AI and related technological capabilities (including Generative AI) on individuals, businesses, ecosystems and/or economies.

**Adverse outcomes of frontier technologies** (quantum, biotech, geoengineering) Intended or unintended negative consequences of advances in frontier technologies on individuals, businesses, ecosystems and/or economies. Includes, but is not limited to: brain-computer interfaces, biotechnology, geo-engineering and quantum computing.

**Censorship and surveillance** Broad and pervasive observation of a place or person and/or suppression of communication, information and ideas, physically or digitally, to the extent that it significantly infringes on human and civil rights (e.g. privacy, freedom of speech and freedom of expression).

**Cyber espionage and warfare** Use of cyber weapons and tools by state and non-state actors to gain control over a digital presence, cause operational disruption, and/or compromise or damage an entity's technological and information networks and infrastructure. Includes: defensive and offensive cyber operations that occur during or trigger armed conflict, and cyberattacks that steal classified, sensitive data or intellectual property to gain an advantage.

**Misinformation and disinformation** Persistent false information (deliberate or otherwise) widely spread through media networks, shifting public opinion in a significant way towards distrust in facts and authority. Includes, but is not limited to: false, imposter, manipulated and fabricated content.

**Online harms** Erosion of protection from and/or prevalence of harmful behaviour that poses a digital threat to the emotional or mental health and well-being of individuals. Includes, but is not limited to: online child sexual abuse, online harassment and cyber bullying.

## GEOPOLITICAL

**State-based armed conflict** (proxy, civil wars, coups, terrorism, etc.) Bilateral or multilateral use of force between states and/or between a state and non-state actor(s), often with ideological, political or religious goals, manifesting as war and/or organized, sustained violence. Includes, but is not limited to: hot wars, proxy wars, civil wars, guerilla warfare, terrorism, genocide and assassinations.

**Biological, chemical or nuclear weapons or hazards** Intentional or accidental release of biological, chemical, nuclear or radiological hazards, resulting in loss of life, destruction and/or international crises. Includes, but is not limited to: accidents at or sabotage of biolaboratories, chemical plants and nuclear power plants; and intentional or accidental release of biological, chemical and nuclear weapons.

**Geoeconomic confrontation** (sanctions, tariffs, investment screening) Deployment of economic levers by global or regional powers to reshape economic interactions between nations, restricting goods, knowledge, services or technology with the intent of building self-sufficiency, constraining geopolitical rivals and/or consolidating spheres of influence. Includes, but is not limited to: currency measures, investment controls, sanctions, state aid and subsidies, and trade controls.

**Intrastate violence** (riots, mass shootings, gang violence, etc.) Use of force that takes place within a country or community that results in loss of life, severe injury or material damage. Includes, but is not limited to: mass shootings as well as crimes threatening or causing physical harm to the community, such as gang violence, gender-based violence and abductions.

## ENVIRONMENTAL

**Biodiversity loss and ecosystem collapse** Severe consequences for the environment, humankind and economic activity due to destruction of natural capital stemming from species extinction or reduction, spanning both terrestrial and marine ecosystems.

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**Critical change to Earth systems** Long-term, potentially irreversible and self-perpetuating changes to critical planetary systems, as a result of breaching a critical climatic or ecological threshold or ‘tipping point’, at a regional or global level. Includes, but is not limited to: sea level rise from collapsing ice sheets, carbon release from thawing permafrost, and disruption of ocean or atmospheric currents.

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**Extreme weather events (floods, heatwaves, etc.)** Loss of human life, damage to ecosystems, destruction of property and/or financial loss due to extreme weather events. Includes, but is not limited to: land-based (e.g. wildfires), water-based (e.g. floods), and atmospheric and temperature-related (e.g. heat-waves) events, including those exacerbated by climate change.

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**Natural resource shortages (food, water)** Supply shortages of food or water for human, industry or ecosystem use, manifesting as food and water insecurity at a local, regional or global level, stemming from, but not limited to: human overexploitation and mismanagement of critical natural resources, climate change (including drought and desertification), and/or a lack of suitable infrastructure.

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**Non-weather-related natural disasters (earthquakes, volcanoes, tsunamis, solar flares, etc.)** Loss of human life, damage to ecosystems, destruction of property and/or financial loss due to non-weather-related natural disasters. Includes, but is not limited to: land-based (e.g. earthquakes, volcanoes), water-based (e.g. tsunamis) and extra-terrestrial-based (e.g. asteroid strikes and geomagnetic storms) events.

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**Pollution (air, soil, water, etc.)** Introduction of harmful materials into the air, water and soil stemming from human activity, resulting in impacts to and loss of human life, financial loss and/or damage to ecosystems. Includes, but is not limited to: household and industrial activities; environmental accidents, such as oil spills; and radioactive contamination.

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## ECONOMIC

**Asset bubble burst** Prices for housing, investment funds, shares and other assets become increasingly disconnected from the real economy, leading to a severe drop in demand and prices. Includes, but is not limited to: cryptocurrencies, housing prices and stock markets.

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**Concentration of strategic resources and technologies** Concentration of strategically important resources (minerals, materials, technologies) among a small number of individuals, businesses or states that can control access and dictate discretionary pricing.

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**Crime and illicit economic activity (incl. cyber)** Global proliferation of organized crime or the illicit activities of businesses and individuals that undermine economic advancement and growth, facilitated on both a borderless and digital basis. Includes, but is not limited to: illicit financial flows (e.g. tax evasion, sanctions evasion and money laundering), illicit trade and trafficking (e.g. counterfeiting, human trafficking, wildlife trade and weapons), and cybercrime (including ransomware, data theft and online fraud)

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**Debt (public, corporate, household)** Corporate, household, or public finances struggle to service debt accumulation, resulting in mass bankruptcies or insolvencies, liquidity crises or defaults and sovereign debt crises.

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**Disruptions to a systemically important supply chain** Major disruption or collapse of a systemically important global supply chain or industry with an impact on the global economy, financial markets or society leading to an abrupt shock to the supply and demand of systemically important goods and services at a global scale. Includes, but is not limited to: energy, technological hardware, medical supplies, and fast-moving consumer goods.

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**Disruptions to critical infrastructure** Overload or shutdown of physical and digital infrastructure (including satellites) or services underpinning critical systems, including the internet, telecommunications, public utilities, financial systems or energy, stemming from, but not limited to: cyberattacks, intentional or unintentional physical damage, extreme weather events, and natural disasters.

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**Economic downturn (recession, stagnation)** Near-zero or slow global growth lasting for several years or a global contraction (recession or depression).

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**Inflation** Sustained increases in the price of goods and services. Includes the potential for broad sections of the population being unable to maintain current lifestyle with declining purchasing power.

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**Talent and/or labour shortages** Global, geographical or industry mismatches between labour and skills supply and demand.

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# Appendix B

## Global Risks Perception Survey 2024-2025

The **Global Risks Perception Survey (GRPS)** is the World Economic Forum's source of original risks data, harnessing the expertise of the Forum's extensive network of academia, business, government, international organizations and civil society. Survey responses were collected from 2 September to 18 October 2024 from the World Economic Forum's multistakeholder communities.

### Updates to the GRPS 2024-2025

The list of 33 global risks included in the survey was updated in 2024 as follows:

- One new risk was added in response to observed trends in technological advancements
  - “Online harms”, defined as the erosion of protection from and/or prevalence of harmful behaviour that poses a digital threat to the emotional or mental health and well-being of individuals. Includes, but is not limited to: online child sexual abuse, online harassment and cyber bullying.
- In addition:
  - “Chronic health conditions” was renamed “Decline in health and well-being” to update clarity of risk for respondents.
  - “Inequality or lack of economic opportunity” has been separated out into two separate societal risks: “Inequality (wealth, income)” and “Lack of economic opportunity or unemployment”, with “Unemployment” merged with the latter.
  - “Insufficient public infrastructure and services” has been renamed “Insufficient public infrastructure and social protections”.
  - “Cyber insecurity” has been renamed “Cyber espionage and warfare”, with cybercrime now included as an economic risk within “Crime and illicit economic activity (incl. cyber)”, formerly referred to as “Illicit economic activity”.
  - “Technological power concentration” as a technological risk has been recategorized as an economic risk within “Concentration of strategic resources and technologies”.
- “Intrastate armed conflict” has been renamed “State-based armed conflict (proxy, civil wars, coups, terrorism, etc.)”, with “Terrorism” no longer a separate risk but now merged within the definition.

### Methodology

The **GRPS 2024–2025** was further refined this year to gather more granular perceptions of risk and to incorporate new approaches to risk management and analysis. To that end, the **GRPS 2024–2025** was comprised of seven sections:

- **Current risk landscape** asked respondents to select one risk among 33 pre-selected risks that they believe is most likely to present a material crisis on a global scale in 2025. The final rank is based on a simple tally of the number of times a risk was identified. This has changed from last year, when respondents were asked to select up to five risks among 20 pre-selected risks that differed from the main risk list. The 33 options are listed in Appendix A above. Respondents were also able to write in additional risks to Other, a free-text field.
- **Short- and long-term risks landscape** asked respondents to estimate the likely impact (severity) of each of the 33 global risks, on a 1-7 scale [1 = Low severity, 7 = High severity], over both two-year and 10-year periods. “Severity” is meant to take into consideration the impact on populations, the economy or environmental resources on a global scale. Respondents were also allowed to nominate any other risk considered missing from the 33 global risks. A simple average based on the scores selected was calculated. In addition, if a respondent selected the highest severity score (7) for any of the 33 risks, they were asked a follow-up question to identify areas of particular concern with respect to the identified risk.
- **Consequences** seeks to understand the potential consequences of risks, to create a network map of the global risk landscape. Respondents were provided 10 randomly selected global risks (from the full list of 33 global risks) and were then asked to select up to five global risks (from the full list) likely to be triggered by each of the 10 randomly selected risks. In the visual results, “Nodes: Risk influence” is based on a simple tally of

all bidirectional relationships identified by respondents. “Edges: Relative influence” is based on a simple tally of the number of times the risk was identified as a consequence. The graphics in the report do not show all connections: weaker relationships identified by less than 25% of respondents were not included as edges.

- **Risk governance** asked respondents to identify approach(es) that they expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years, with respect to the most severe risks (severity score of 6 or 7 over the 10-year timeframe). Respondents could choose among the following nine approaches: **Financial instruments** (e.g. insurance, catastrophe bonds, public risk pools); **National and local regulations** (e.g. environmental, operational, financial regulations and incentives); **Minilateral treaties and agreements** (e.g. Basel, Wassenaar, regional free trade agreements); **Global treaties and agreements** (e.g. United Nations Framework Convention on Climate Change [UNFCCC], Paris, Montreal, Nonproliferation Treaty [NPT], World Trade Organization [WTO]); **Development assistance** (e.g. international aid for disaster risk response and reduction); **Corporate strategies** (e.g. environmental, social and governance [ESG] reporting, resilient supply chains, social initiatives, public-private partnerships [PPPs]); **Research and development** (e.g. new technologies, early-warning systems, global risk research); **Public awareness and education** (e.g. campaigns, school curricula, media products); **Multistakeholder engagement** (e.g. platforms for exchanging knowledge, best practices, alignment). A simple tally of the number of times an approach was identified was calculated for each risk. To ensure legibility, the names of some of the global risks have been abbreviated in the figures.
- **Risk outlook** asked respondents to characterize the evolution of the global risks landscape based on a number of factors. It first asked respondents to select a statement that they believe best characterizes **the global political environment for cooperation on global risks in 10 years**. Respondents were provided with four options: (1) Continuation or reinvigoration of the US-led, rules-based international order; (2) Multipolar or fragmented order in which middle and great powers contest, set and enforce regional rules and norms; (3) Bipolar or bifurcated order shaped by strategic competition between two superpowers; (4) Realignment towards a new international order led by an alternative superpower. A simple tally for each of the four options was calculated.
- Finally, respondents were asked to select a statement that best characterizes their **outlook for the world over the next two and 10**

**years**. Respondents were provided with the same five options for both time periods: (1) Calm: negligible risk of global catastrophes; (2) Stable: isolated disruptions, low risk of global catastrophes; (3) Unsettled: some instability, moderate risk of global catastrophes; (4) Turbulent: upheavals and elevated risk of global catastrophes; (5) Stormy: global catastrophic risks looming. A simple tally for each of the five options was calculated.

This year the risk outlook question asking respondents to indicate which statement best characterizes current and future global efforts to manage the Earth’s resources was removed from the survey in an effort to streamline questions asked to respondents

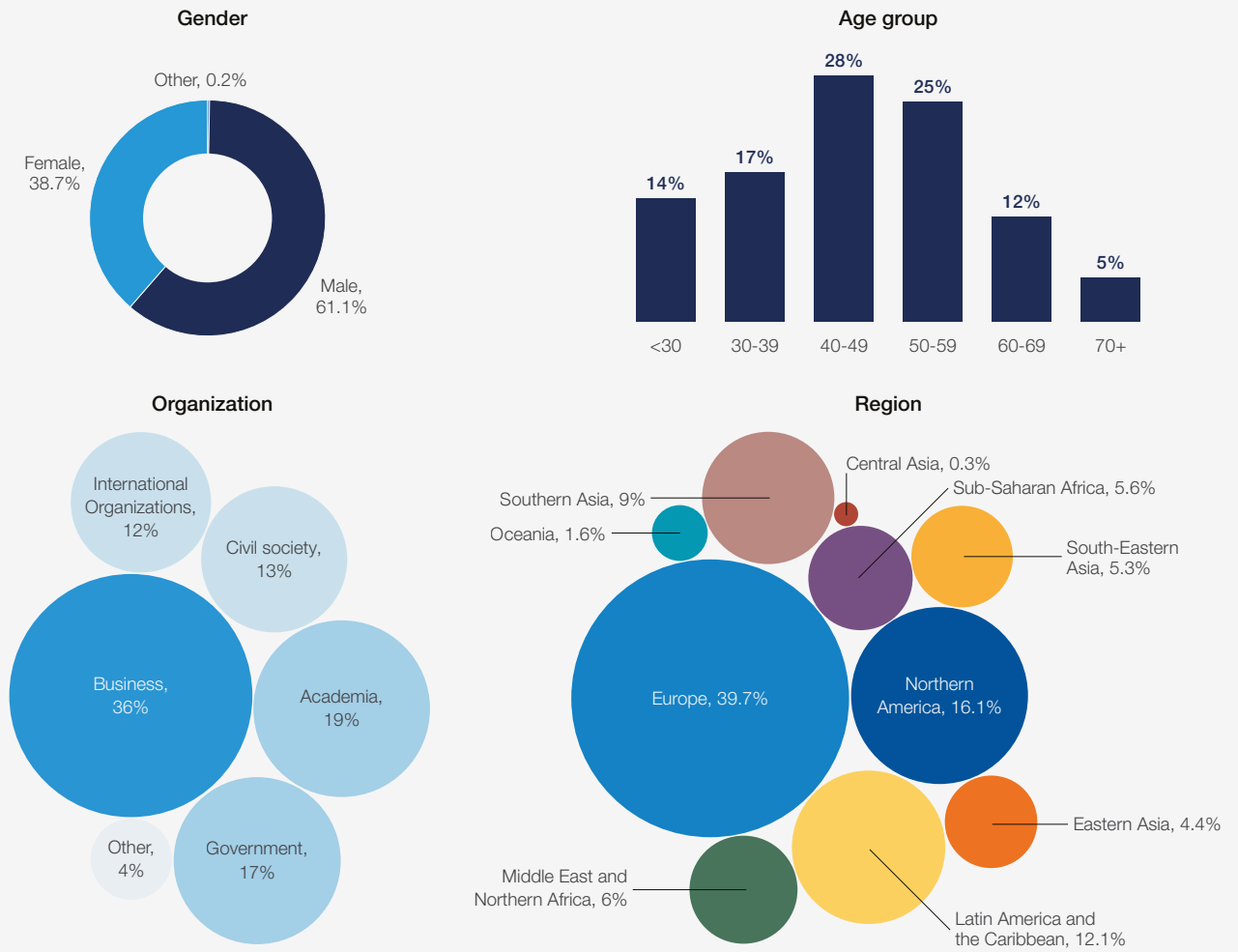
## Completion thresholds

A total of 1,112 responses to the GRPS were received. From these, 909 were kept, based on the threshold of at least one non-demographic answer, a minimum answer time of two minutes, and the filtering of multiple submissions based on browser cookies as well as partial responses that have overlapping IP numbers and demographic answers with a fully recorded response (100%).

- **Current risk landscape:** 909 respondents selected at least one risk.
- **Short- and long-term risks landscape:** 780 respondents evaluated the severity of at least one risk in one timeframe.
- **Consequences:** 596 respondents paired at least one risk with one consequence.
- **Risk governance:** 461 respondents selected at least one approach for at least one risk.
- **Risk outlook:** 562 respondents answered at least one question.
- **Outlook for the world:** 561 respondents answered over at least one timeframe.
- **Sample distribution:** 909 respondents who answered at least one non-demographic question were used to calculate the sample distribution by place of residence (region), gender, age, area of expertise and organization type.

Figure B.1 presents key descriptive statistics and information about the profiles of the respondents.

FIGURE B.1 | Survey sample composition



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

# Appendix C

## Executive Opinion Survey: National Risk Perceptions

Table C.1 presents the list of 34 risks that were incorporated into the World Economic Forum's 2024 **Executive Opinion Survey (EOS)**, which was administered between April and August 2024. The risks are comparable to those in the **GRPS 2024-2025** but are applied at a more granular level to reflect the possible short-term and country-level manifestations of global risks.

To ensure legibility, the names of some of the global risks have been abbreviated throughout this report. The portion of the full name used in the abbreviation is in bold.

FIGURE C.1

National risk list

<b>Economic downturn</b> (recession, stagnation)	<b>Intrastate violence</b> (civil strikes, riots)
<b>Labour and/or talent shortage</b>	<b>Geoeconomic confrontation</b> (sanctions, tariffs, investment screening etc.)
<b>Inflation</b>	<b>Terrorist Attacks</b>
<b>Public debt</b>	<b>Biological, chemical, or nuclear weapons or hazards</b>
<b>Energy-supply shortage</b>	<b>Societal polarization</b>
<b>Crime and illicit economic activity</b>	<b>Chronic health conditions and decline in health and well-being</b> (heart, cancer, diabetes, depression etc.)
<b>Private debt</b> (corporate, household)	<b>Erosion of human rights and/or civic freedoms</b>
<b>Asset bubble burst</b>	<b>Infectious diseases</b> (COVID-19, influenza, tuberculosis, malaria, etc.)
<b>Attacks on critical infrastructure</b>	<b>Involuntary migration</b>
<b>Concentration of strategic resources and technologies</b>	<b>Unemployment or lack of economic opportunity</b>
<b>Biodiversity loss</b> (marine, freshwater, terrestrial)	<b>Poverty and inequality (wealth, income)</b>
<b>Extreme weather events</b> (floods, heatwaves, etc.)	<b>Insufficient public services and social protections</b> (incl. education, infrastructure, pensions)
<b>Food-supply shortage</b>	<b>Adverse outcomes of artificial intelligence technologies</b>
<b>Non-weather related natural disasters</b> (earthquakes, volcanoes, tsunamis, solar flares etc.)	<b>Adverse outcomes of frontier technologies</b> (quantum, biotech, geoengineering etc.)
<b>Pollution</b> (air, soil, water, etc.)	<b>Cyber insecurity</b>
<b>Water-supply shortage</b>	<b>Censorship and surveillance</b>
<b>Armed conflict</b> (interstate, intrastate, proxy wars, coups etc.)	<b>Misinformation and disinformation</b>

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

Source

World Economic Forum Executive Opinion Survey 2024.

Over 11,000 respondents were presented with the following question: “Which five risks are the most likely to pose the biggest threat to your country in the next two years?” and were asked to select these from the list of 34 risks in Table C.1.

“Risk 1” indicates the most frequently selected risk in each economy. Tied risks are presented in alphabetical order, with the tie indicated by numbering.

To analyse the results of country or economy groups (such as the G20 or EU), country-level results are aggregated by taking a simple average of the ranking of the risk (from 1-34) by the countries or economies included in the group.



TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

Albania	Australia	Belgium
1st Involuntary migration	1st Economic downturn (e.g. recession, stagnation)	1st Economic downturn (e.g. recession, stagnation)
2nd Labour and/or talent shortage	2nd Energy supply shortage	2nd Involuntary migration
3rd Crime and illicit economic activity	3rd Inflation	3rd Inflation
4th Insufficient public services and social protections	4th Food supply shortage	4th Public debt
5th Inequality (wealth, income)	5th Labour and/or talent shortage	5th Poverty and inequality (wealth, income)
Algeria	Austria	Bolivia (Plurinational State of)
1st Inflation	1st Labour and/or talent shortage	1st Economic downturn (e.g. recession, stagnation)
2nd Water supply shortage	2nd Economic downturn (e.g. recession, stagnation)	2nd Inflation
3rd Unemployment or lack of economic opportunity	3rd Societal polarization	3rd Intrastate violence (civil strikes, riots)
4th Cyber insecurity	4th Cyber insecurity	4th Public debt
5th Infectious diseases (COVID-19, influenza, tuberculosis, malaria etc.)	5th Extreme weather events (floods, heatwaves etc.)	5th Unemployment or lack of economic opportunity
Angola	Azerbaijan	Bosnia and Herzegovina
1st Poverty and inequality (wealth, income)	1st Adverse outcomes of artificial intelligence technologies	1st Labour and/or talent shortage
2nd Economic downturn (e.g. recession, stagnation)	2nd Pollution (air, water, soil)	2nd Economic downturn (e.g. recession, stagnation)
3rd Inflation	3rd Misinformation and disinformation	3rd Inflation
4th Unemployment or lack of economic opportunity	4th Inflation	4th Intrastate violence (civil strikes, riots)
5th Public debt	5th Involuntary migration	5th Armed conflict (interstate, intrastate, proxy wars, coups etc.)
Argentina	Bahrain	Botswana
1st Economic downturn (e.g. recession, stagnation)	1st Economic downturn (e.g. recession, stagnation)	1st Unemployment or lack of economic opportunity
2nd Poverty and inequality (wealth, income)	2nd Inflation	2nd Poverty and inequality (wealth, income)
3rd Inflation	3rd Labour and/or talent shortage	3rd Economic downturn (e.g. recession, stagnation)
4th Public debt	4th Unemployment or lack of economic opportunity	4th Food supply shortage
5th Unemployment or lack of economic opportunity	5th Cyber insecurity	5th Inflation
Armenia	Bangladesh	Brazil
1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Inflation	1st Economic downturn (e.g. recession, stagnation)
2nd Involuntary migration	2nd Extreme weather events (floods, heatwaves etc.)	2nd Public debt
3rd Misinformation and disinformation	3rd Pollution (air, water, soil)	3rd Labour and/or talent shortage
4th Labour and/or talent shortage	4th Unemployment or lack of economic opportunity	4th Extreme weather events (floods, heatwaves etc.)
5th Geoeconomic confrontation (sanctions, tariffs, investment screening etc.)	5th Economic downturn (e.g. recession, stagnation)	5th Poverty and inequality (wealth, income)

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

Brunei Darussalam	Cape Verde	Costa Rica
1st Unemployment or lack of economic opportunity	1st Poverty and inequality (wealth, income)	1st Crime and illicit economic activity
2nd Labour and/or talent shortage	2nd Labour and/or talent shortage	2nd Poverty and inequality (wealth, income)
3rd Economic downturn (e.g. recession, stagnation)	3rd Unemployment or lack of economic opportunity	3rd Public debt
4th Inflation	4th Inflation	4th Insufficient public services and social protections
5th Poverty and inequality (wealth, income)	5th Public debt	5th Water supply shortage
Bulgaria	Chad	Côte D'Ivoire
1st Inflation	1st Poverty and inequality (wealth, income)	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)
2nd Economic downturn (e.g. recession, stagnation)	2nd Water supply shortage	2nd Poverty and inequality (wealth, income)
3rd Poverty and inequality (wealth, income)	3rd Energy supply shortage	3rd Intrastate violence (civil strikes, riots)
4th Labour and/or talent shortage	4th Food supply shortage	4th Public debt
5th Pollution (air, water, soil)	5th Economic downturn (e.g. recession, stagnation)	5th Inflation
	5th Private debt (corporate, household)	
Cameroon	Chile	Croatia
1st Unemployment or lack of economic opportunity	1st Crime and illicit economic activity	1st Labour and/or talent shortage
2nd Inflation	1st Societal polarization	2nd Extreme weather events (floods, heatwaves etc.)
3rd Armed conflict (interstate, intrastate, proxy wars, coups etc.)	3rd Involuntary migration	3rd Inflation
4th Energy supply shortage	4th Economic downturn (e.g. recession, stagnation)	4th Economic downturn (e.g. recession, stagnation)
5th Chronic health conditions and decline in well-being	5th Intrastate violence (civil strikes, riots)	5th Asset bubble burst
Canada	Colombia	Cyprus
1st Economic downturn (e.g. recession, stagnation)	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Involuntary migration
2nd Labour and/or talent shortage	2nd Economic downturn (e.g. recession, stagnation)	2nd Labour and/or talent shortage
3rd Inflation	3rd Intrastate violence (civil strikes, riots)	3rd Inflation
4th Poverty and inequality (wealth, income)	4th Poverty and inequality (wealth, income)	4th Economic downturn (e.g. recession, stagnation)
5th Adverse outcomes of artificial intelligence technologies	5th Societal polarization	5th Private debt (corporate, household)
5th Misinformation and disinformation		
	Czechia	
	1st Labour and/or talent shortage	
	2nd Economic downturn (e.g. recession, stagnation)	
	3rd Misinformation and disinformation	
	4th Public debt	
	5th Societal polarization	

TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

<p><b>Democratic Republic of the Congo</b></p> <ul style="list-style-type: none"> <li>1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>2nd Poverty and inequality (wealth, income)</li> <li>3rd Unemployment or lack of economic opportunity</li> <li>4th Crime and illicit economic activity</li> <li>5th Food supply shortage</li> </ul>	<p><b>El Salvador</b></p> <ul style="list-style-type: none"> <li>1st Public debt</li> <li>2nd Erosion of human rights and/or civic freedoms</li> <li>3rd Economic downturn (e.g. recession, stagnation)</li> <li>4th Poverty and inequality (wealth, income)</li> <li>5th Food supply shortage</li> </ul>	<p><b>Georgia</b></p> <ul style="list-style-type: none"> <li>1st Cyber insecurity</li> <li>2nd Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>3rd Societal polarization</li> <li>4th Involuntary migration</li> <li>5th Economic downturn (e.g. recession, stagnation)</li> </ul>
<p><b>Denmark</b></p> <ul style="list-style-type: none"> <li>1st Cyber insecurity</li> <li>2nd Attacks on critical infrastructure</li> <li>3rd Labour and/or talent shortage</li> <li>4th Extreme weather events (floods, heatwaves etc.)</li> <li>5th Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> </ul>	<p><b>Estonia</b></p> <ul style="list-style-type: none"> <li>1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Labour and/or talent shortage</li> <li>4th Misinformation and disinformation</li> <li>5th Cyber insecurity</li> </ul>	<p><b>Germany</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Involuntary migration</li> <li>4th Misinformation and disinformation</li> <li>5th Energy supply shortage</li> </ul>
<p><b>Dominican Republic</b></p> <ul style="list-style-type: none"> <li>1st Extreme weather events (floods, heatwaves etc.)</li> <li>2nd Public debt</li> <li>3rd Poverty and inequality (wealth, income)</li> <li>4th Labour and/or talent shortage</li> <li>5th Involuntary migration</li> </ul>	<p><b>Finland</b></p> <ul style="list-style-type: none"> <li>1st Public debt</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Labour and/or talent shortage</li> <li>4th Involuntary migration</li> <li>5th Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> </ul>	<p><b>Ghana</b></p> <ul style="list-style-type: none"> <li>1st Inflation</li> <li>2nd Pollution (air, water, soil)</li> <li>3rd Public debt</li> <li>4th Economic downturn (e.g. recession, stagnation)</li> <li>5th Unemployment or lack of economic opportunity</li> </ul>
<p><b>Ecuador</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Crime and illicit economic activity</li> <li>3rd Poverty and inequality (wealth, income)</li> <li>4th Energy supply shortage</li> <li>5th Unemployment or lack of economic opportunity</li> </ul>	<p><b>France</b></p> <ul style="list-style-type: none"> <li>1st Inflation</li> <li>2nd Intrastate violence (civil strikes, riots)</li> <li>3rd Involuntary migration</li> <li>4th Economic downturn (e.g. recession, stagnation)</li> <li>4th Water supply shortage</li> </ul>	<p><b>Greece</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Extreme weather events (floods, heatwaves etc.)</li> <li>3rd Inflation</li> <li>4th Economic downturn (e.g. recession, stagnation)</li> <li>5th Public debt</li> </ul>
<p><b>Egypt</b></p> <ul style="list-style-type: none"> <li>1st Inflation</li> <li>2nd Public debt</li> <li>3rd Economic downturn (e.g. recession, stagnation)</li> <li>4th Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>5th Water supply shortage</li> </ul>	<p><b>Gabon</b></p> <ul style="list-style-type: none"> <li>1st Unemployment or lack of economic opportunity</li> <li>1st Poverty and inequality (wealth, income)</li> <li>3rd Energy supply shortage</li> <li>4th Water supply shortage</li> <li>5th Public debt</li> </ul>	<p><b>Guatemala</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Insufficient public services and social protections</li> <li>3rd Extreme weather events (floods, heatwaves etc.)</li> <li>4th Societal polarization</li> <li>5th Crime and illicit economic activity</li> </ul>

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

Honduras	Indonesia	Italy
1st Energy supply shortage	1st Adverse outcomes of artificial intelligence technologies	1st Economic downturn (e.g. recession, stagnation)
2nd Unemployment or lack of economic opportunity	2nd Economic downturn (e.g. recession, stagnation)	2nd Extreme weather events (floods, heatwaves etc.)
3rd Labour and/or talent shortage	3rd Poverty and inequality (wealth, income)	3rd Inflation
4th Extreme weather events (floods, heatwaves etc.)	4th Extreme weather events (floods, heatwaves etc.)	4th Labour and/or talent shortage
5th Involuntary migration	5th Food supply shortage	5th Poverty and inequality (wealth, income)
Hong Kong SAR, China	Iran (Islamic Republic of)	Jamaica
1st Economic downturn (e.g. recession, stagnation)	1st Inflation	1st Labour and/or talent shortage
2nd Labour and/or talent shortage	2nd Water supply shortage	2nd Crime and illicit economic activity
3rd Geoeconomic confrontation (sanctions, tariffs, investment screening etc.)	3rd Armed conflict (interstate, intrastate, proxy wars, coups etc.)	3rd Extreme weather events (floods, heatwaves etc.)
4th Asset bubble burst	4th Economic downturn (e.g. recession, stagnation)	4th Inflation
5th Unemployment or lack of economic opportunity	5th Geoeconomic confrontation (sanctions, tariffs, investment screening etc.)	5th Economic downturn (e.g. recession, stagnation)
Hungary	Iraq	Japan
1st Economic downturn (e.g. recession, stagnation)	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Labour and/or talent shortage
2nd Inflation	2nd Economic downturn (e.g. recession, stagnation)	2nd Non-weather-related natural disasters (earthquakes, volcanoes, etc.)
3rd Labour and/or talent shortage	3rd Water supply shortage	3rd Economic downturn (e.g. recession, stagnation)
4th Public debt	4th Energy supply shortage	4th Extreme weather events (floods, heatwaves etc.)
5th Misinformation and disinformation	5th Crime and illicit economic activity	5th Energy supply shortage
Iceland	Ireland	Jordan
1st Inflation	1st Labour and/or talent shortage	1st Unemployment or lack of economic opportunity
2nd Non-weather-related natural disasters (earthquakes, volcanoes, etc.)	2nd Economic downturn (e.g. recession, stagnation)	2nd Inflation
3rd Economic downturn (e.g. recession, stagnation)	3rd Misinformation and disinformation	3rd Economic downturn (e.g. recession, stagnation)
4th Labour and/or talent shortage	4th Energy supply shortage	4th Water supply shortage
5th Energy supply shortage	5th Cyber insecurity	5th Public debt
India	Israel	Kazakhstan
1st Water supply shortage	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)
2nd Misinformation and disinformation	2nd Terrorist attacks	2nd Economic downturn (e.g. recession, stagnation)
3rd Erosion of human rights and/or civic freedoms	3rd Attacks on critical infrastructure	3rd Water supply shortage
4th Pollution (air, water, soil)	4th Economic downturn (e.g. recession, stagnation)	4th Poverty and inequality (wealth, income)
5th Labour and/or talent shortage	5th Intrastate violence (civil strikes, riots)	4th Inflation

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

<p><b>Kenya</b></p> <p>1st Economic downturn (e.g. recession, stagnation)</p> <p>2nd Unemployment or lack of economic opportunity</p> <p>3rd Public debt</p> <p>4th Poverty and inequality (wealth, income)</p> <p>5th Food supply shortage</p>	<p><b>Lesotho</b></p> <p>1st Energy supply shortage</p> <p>2nd Food supply shortage</p> <p>3rd Chronic health conditions and decline in well-being</p> <p>4th Water supply shortage</p> <p>5th Economic downturn (e.g. recession, stagnation)</p>	<p><b>Malaysia</b></p> <p>1st Economic downturn (e.g. recession, stagnation)</p> <p>2nd Labour and/or talent shortage</p> <p>3rd Inflation</p> <p>4th Food supply shortage</p> <p>5th Unemployment or lack of economic opportunity</p>
<p><b>Kosovo*</b></p> <p>1st Inflation</p> <p>2nd Pollution (air, water, soil)</p> <p>3rd Cyber insecurity</p> <p>4th Involuntary migration</p> <p>5th Extreme weather events (floods, heatwaves etc.)</p>	<p><b>Liberia</b></p> <p>1st Energy supply shortage</p> <p>1st Food supply shortage</p> <p>3rd Poverty and inequality (wealth, income)</p> <p>4th Unemployment or lack of economic opportunity</p> <p>5th Public debt</p> <p>5th Inflation</p>	<p><b>Mali</b></p> <p>1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)</p> <p>2nd Energy supply shortage</p> <p>3rd Adverse outcomes of artificial intelligence technologies</p> <p>4th Cyber insecurity</p> <p>5th Chronic health conditions and decline in well-being</p>
<p><b>Kyrgyzstan</b></p> <p>1st Energy supply shortage</p> <p>2nd Water supply shortage</p> <p>3rd Pollution (air, water, soil)</p> <p>4th Inflation</p> <p>5th Public debt</p>	<p><b>Luxembourg</b></p> <p>1st Labour and/or talent shortage</p> <p>2nd Economic downturn (e.g. recession, stagnation)</p> <p>3rd Cyber insecurity</p> <p>4th Private debt (corporate, household)</p> <p>5th Inflation</p>	<p><b>Malta</b></p> <p>1st Pollution (air, water, soil)</p> <p>2nd Labour and/or talent shortage</p> <p>2nd Inflation</p> <p>4th Extreme weather events (floods, heatwaves etc.)</p> <p>5th Economic downturn (e.g. recession, stagnation)</p> <p>5th Energy supply shortage</p>
<p><b>Lao PDR</b></p> <p>1st Inflation</p> <p>2nd Economic downturn (e.g. recession, stagnation)</p> <p>3rd Labour and/or talent shortage</p> <p>4th Energy supply shortage</p> <p>5th Public debt</p>	<p><b>Malawi</b></p> <p>1st Economic downturn (e.g. recession, stagnation)</p> <p>2nd Extreme weather events (floods, heatwaves etc.)</p> <p>3rd Public debt</p> <p>4th Inflation</p> <p>5th Unemployment or lack of economic opportunity</p>	<p><b>Mauritius</b></p> <p>1st Labour and/or talent shortage</p> <p>2nd Extreme weather events (floods, heatwaves etc.)</p> <p>3rd Public debt</p> <p>4th Inflation</p> <p>5th Economic downturn (e.g. recession, stagnation)</p>
<p><b>Latvia</b></p> <p>1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)</p> <p>2nd Economic downturn (e.g. recession, stagnation)</p> <p>3rd Cyber insecurity</p> <p>4th Attacks on critical infrastructure</p> <p>5th Inflation</p>		

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

**Mexico**

1st	Water supply shortage
2nd	Crime and illicit economic activity
3rd	Energy supply shortage
4th	Poverty and inequality (wealth, income)
5th	Insufficient public services and social protections

**Netherlands**

1st	Labour and/or talent shortage
2nd	Energy supply shortage
3rd	Cyber insecurity
4th	Societal polarization
5th	Misinformation and disinformation

**Norway**

1st	Economic downturn (e.g. recession, stagnation)
2nd	Labour and/or talent shortage
3rd	Energy supply shortage
4th	Involuntary migration
5th	Intrastate violence (civil strikes, riots)

**Mongolia**

1st	Labour and/or talent shortage
2nd	Energy supply shortage
3rd	Pollution (air, water, soil)
4th	Poverty and inequality (wealth, income)
5th	Extreme weather events (floods, heatwaves etc.)

**New Zealand**

1st	Economic downturn (e.g. recession, stagnation)
2nd	Inflation
3rd	Labour and/or talent shortage
4th	Extreme weather events (floods, heatwaves etc.)
5th	Poverty and inequality (wealth, income)

**Oman**

1st	Extreme weather events (floods, heatwaves etc.)
2nd	Economic downturn (e.g. recession, stagnation)
3rd	Unemployment or lack of economic opportunity
4th	Adverse outcomes of artificial intelligence technologies
5th	Inflation

**Morocco**

1st	Water supply shortage
2nd	Inflation
3rd	Poverty and inequality (wealth, income)
4th	Unemployment or lack of economic opportunity
5th	Economic downturn (e.g. recession, stagnation)

**Nicaragua**

1st	Erosion of human rights and/or civic freedoms
2nd	Involuntary migration
3rd	Labour and/or talent shortage
4th	Censorship and surveillance
5th	Poverty and inequality (wealth, income)

**Pakistan**

1st	Economic downturn (e.g. recession, stagnation)
2nd	Inflation
3rd	Water supply shortage
4th	Energy supply shortage
5th	Poverty and inequality (wealth, income)

**Namibia**

1st	Poverty and inequality (wealth, income)
2nd	Unemployment or lack of economic opportunity
3rd	Water supply shortage
4th	Food supply shortage
5th	Labour and/or talent shortage

**Nigeria**

1st	Food supply shortage
2nd	Economic downturn (e.g. recession, stagnation)
3.01rd	Unemployment or lack of economic opportunity
3.02rd	Poverty and inequality (wealth, income)
5th	Energy supply shortage

**Panama**

1st	Public debt
2nd	Water supply shortage
3rd	Poverty and inequality (wealth, income)
4th	Insufficient public services and social protections
5th	Economic downturn (e.g. recession, stagnation)

**Nepal**

1st	Unemployment or lack of economic opportunity
2nd	Involuntary migration
3rd	Economic downturn (e.g. recession, stagnation)
4th	Labour and/or talent shortage
5th	Pollution (air, water, soil)

**North Macedonia**

1st	Economic downturn (e.g. recession, stagnation)
2nd	Inflation
3rd	Involuntary migration
4th	Food supply shortage
5th	Labour and/or talent shortage

**Paraguay**

1st	Poverty and inequality (wealth, income)
2nd	Insufficient public services and social protections
3rd	Crime and illicit economic activity
4th	Labour and/or talent shortage
5th	Public debt



TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

Peru	Romania	Sierra Leone
1st Economic downturn (e.g. recession, stagnation)	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Food supply shortage
2nd Intrastate violence (civil strikes, riots)	2nd Economic downturn (e.g. recession, stagnation)	2nd Water supply shortage
3rd Crime and illicit economic activity	3rd Inflation	3rd Economic downturn (e.g. recession, stagnation)
4th Poverty and inequality (wealth, income)	4th Chronic health conditions and decline in well-being	3rd Inflation
5th Societal polarization	4th Public debt	5th Intrastate violence (civil strikes, riots)
Philippines	Rwanda	Singapore
1st Economic downturn (e.g. recession, stagnation)	1st Inflation	1st Labour and/or talent shortage
2nd Poverty and inequality (wealth, income)	2nd Unemployment or lack of economic opportunity	2nd Economic downturn (e.g. recession, stagnation)
3rd Inflation	3rd Food supply shortage	3rd Inflation
4th Food supply shortage	4th Extreme weather events (floods, heatwaves etc.)	4th Cyber insecurity
5th Unemployment or lack of economic opportunity	5th Cyber insecurity	5th Adverse outcomes of artificial intelligence technologies
Poland	Saudi Arabia	Slovakia
1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Asset bubble burst	1st Public debt
2nd Economic downturn (e.g. recession, stagnation)	2nd Inflation	2nd Economic downturn (e.g. recession, stagnation)
3rd Labour and/or talent shortage	3rd Adverse outcomes of artificial intelligence technologies	3rd Armed conflict (interstate, intrastate, proxy wars, coups etc.)
4th Inflation	4th Armed conflict (interstate, intrastate, proxy wars, coups etc.)	4th Adverse outcomes of artificial intelligence technologies
5th Attacks on critical infrastructure	5th Economic downturn (e.g. recession, stagnation)	5th Societal polarization
Portugal	Senegal	Slovenia
1st Labour and/or talent shortage	1st Unemployment or lack of economic opportunity	1st Labour and/or talent shortage
2nd Economic downturn (e.g. recession, stagnation)	2nd Poverty and inequality (wealth, income)	2nd Economic downturn (e.g. recession, stagnation)
3rd Insufficient public services and social protections	3rd Private debt (corporate, household)	3rd Extreme weather events (floods, heatwaves etc.)
4th Poverty and inequality (wealth, income)	4th Extreme weather events (floods, heatwaves etc.)	4th Insufficient public services and social protections
5th Public debt	4th Misinformation and disinformation	5th Public debt
Qatar	Serbia	South Africa
1st Inflation	1st Labour and/or talent shortage	1st Energy supply shortage
2st Economic downturn (e.g. recession, stagnation)	2nd Misinformation and disinformation	2nd Unemployment or lack of economic opportunity
3rd Asset bubble burst	3rd Economic downturn (e.g. recession, stagnation)	3rd Water supply shortage
4rd Attacks on critical infrastructure	3rd Pollution (air, water, soil)	4th Poverty and inequality (wealth, income)
5th Geoeconomic confrontation (sanctions, tariffs, investment screening etc.)	5th Extreme weather events (floods, heatwaves etc.)	5th Economic downturn (e.g. recession, stagnation)

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

TABLE C.2 | Top five risks identified by the Executive Opinion Survey (EOS)

<p><b>South Korea</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Extreme weather events (floods, heatwaves etc.)</li> <li>3rd Societal polarization</li> <li>4th Labour and/or talent shortage</li> <li>5th Inflation</li> </ul>	<p><b>Taiwan, China</b></p> <ul style="list-style-type: none"> <li>1st Energy supply shortage</li> <li>2nd Labour and/or talent shortage</li> <li>3rd Geoeconomic confrontation (sanctions, tariffs, investment screening etc.)</li> <li>4th Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>5th Non-weather-related natural disasters (earthquakes, volcanoes, etc.)</li> </ul>	<p><b>United Arab Emirates</b></p> <ul style="list-style-type: none"> <li>1st Inflation</li> <li>2nd Asset bubble burst</li> <li>3rd Extreme weather events (floods, heatwaves etc.)</li> <li>4th Cyber insecurity</li> <li>5th Economic downturn (e.g. recession, stagnation)</li> </ul>
<p><b>Spain</b></p> <ul style="list-style-type: none"> <li>1st Public debt</li> <li>2nd Labour and/or talent shortage</li> <li>3rd Societal polarization</li> <li>4th Economic downturn (e.g. recession, stagnation)</li> <li>5th Water supply shortage</li> </ul>	<p><b>Thailand</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Private debt (corporate, household)</li> <li>3rd Pollution (air, water, soil)</li> <li>4th Poverty and inequality (wealth, income)</li> <li>5th Public debt</li> </ul>	<p><b>United Kingdom</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Inflation</li> <li>3rd Labour and/or talent shortage</li> <li>4th Adverse outcomes of artificial intelligence technologies</li> <li>5th Involuntary migration</li> </ul>
<p><b>Sri Lanka</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Public debt</li> <li>4th Poverty and inequality (wealth, income)</li> <li>5th Inflation</li> </ul>	<p><b>Tunisia</b></p> <ul style="list-style-type: none"> <li>1st Water supply shortage</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Food supply shortage</li> <li>4th Public debt</li> <li>5th Inflation</li> </ul>	<p><b>United Republic of Tanzania</b></p> <ul style="list-style-type: none"> <li>1st Unemployment or lack of economic opportunity</li> <li>2nd Public debt</li> <li>3rd Poverty and inequality (wealth, income)</li> <li>4th Chronic health conditions and decline in well-being</li> <li>5th Inflation</li> </ul>
<p><b>Sweden</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Involuntary migration</li> <li>3rd Crime and illicit economic activity</li> <li>4th Labour and/or talent shortage</li> <li>5th Misinformation and disinformation</li> </ul>	<p><b>Türkiye</b></p> <ul style="list-style-type: none"> <li>1st Inflation</li> <li>2nd Involuntary migration</li> <li>3rd Economic downturn (e.g. recession, stagnation)</li> <li>4th Poverty and inequality (wealth, income)</li> <li>5th Labour and/or talent shortage</li> </ul>	<p><b>United States of America</b></p> <ul style="list-style-type: none"> <li>1st Economic downturn (e.g. recession, stagnation)</li> <li>2nd Inflation</li> <li>3rd Adverse outcomes of artificial intelligence technologies</li> <li>4th Food supply shortage</li> <li>5th Extreme weather events (floods, heatwaves etc.)</li> </ul>
<p><b>Switzerland</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Energy supply shortage</li> <li>4th Extreme weather events (floods, heatwaves etc.)</li> <li>5th Cyber insecurity</li> </ul>	<p><b>Ukraine</b></p> <ul style="list-style-type: none"> <li>1st Involuntary migration</li> <li>2nd Attacks on critical infrastructure</li> <li>3rd Armed conflict (interstate, intrastate, proxy wars, coups etc.)</li> <li>4th Labour and/or talent shortage</li> <li>5th Public debt</li> </ul>	<p><b>Uruguay</b></p> <ul style="list-style-type: none"> <li>1st Labour and/or talent shortage</li> <li>2nd Economic downturn (e.g. recession, stagnation)</li> <li>3rd Poverty and inequality (wealth, income)</li> <li>4th Crime and illicit economic activity</li> <li>5th Extreme weather events (floods, heatwaves etc.)</li> </ul>

Uzbekistan	Viet Nam	Zambia
1st Water supply shortage	1st Adverse outcomes of artificial intelligence technologies	1st Energy supply shortage
2nd Energy supply shortage	2nd Economic downturn (e.g. recession, stagnation)	2nd Food supply shortage
3rd Pollution (air, water, soil)	3rd Inflation	3rd Water supply shortage
4th Public debt	4th Labour and/or talent shortage	4th Poverty and inequality (wealth, income)
5th Labour and/or talent shortage	4th Water supply shortage	5th Economic downturn (e.g. recession, stagnation)
Venezuela, Bolivarian Republic of	Yemen	Zimbabwe
1st Energy supply shortage	1st Armed conflict (interstate, intrastate, proxy wars, coups etc.)	1st Energy supply shortage
2nd Economic downturn (e.g. recession, stagnation)	2nd Economic downturn (e.g. recession, stagnation)	2nd Food supply shortage
3rd Insufficient public services and social protections	3rd Unemployment or lack of economic opportunity	3rd Water supply shortage
4th Water supply shortage	4th Poverty and inequality (wealth, income)	4th Inflation
5th Inflation	5th Chronic health conditions and decline in well-being	5th Economic downturn (e.g. recession, stagnation)

Risk categories Economic Environmental Geopolitical Societal Technological

Source

World Economic Forum Executive Opinion Survey 2024.

# Appendix D

## Risk governance

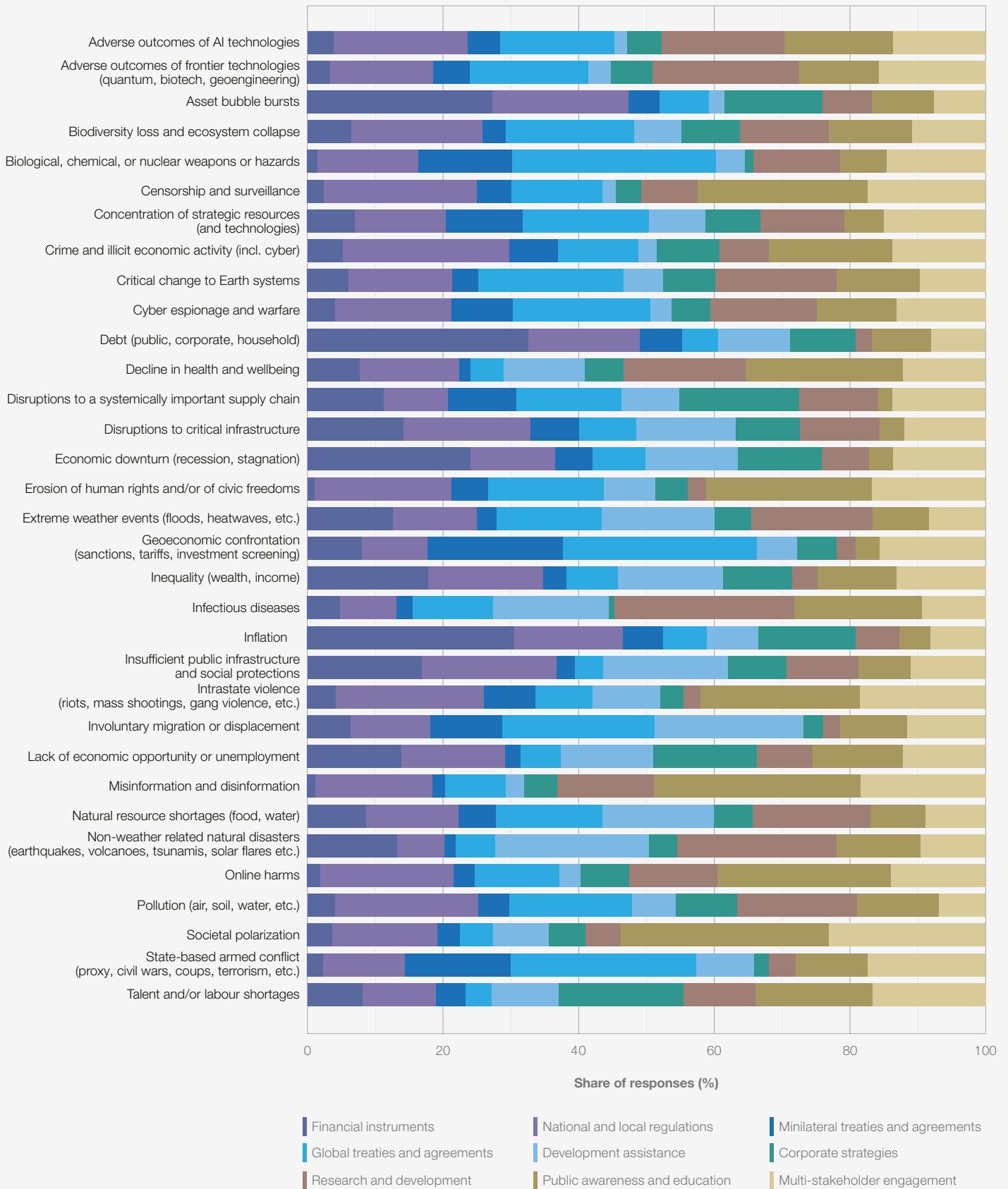
**GRPS** respondents were asked to identify approach(es) that they expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years. The following figures present the set of 33 global risks with corresponding

risk reduction and preparedness approaches for addressing them. As well as figures of the top 10 risks addressed by those approaches not already covered in Chapters 1 or 2.

FIGURE D.1

**Risk governance**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"



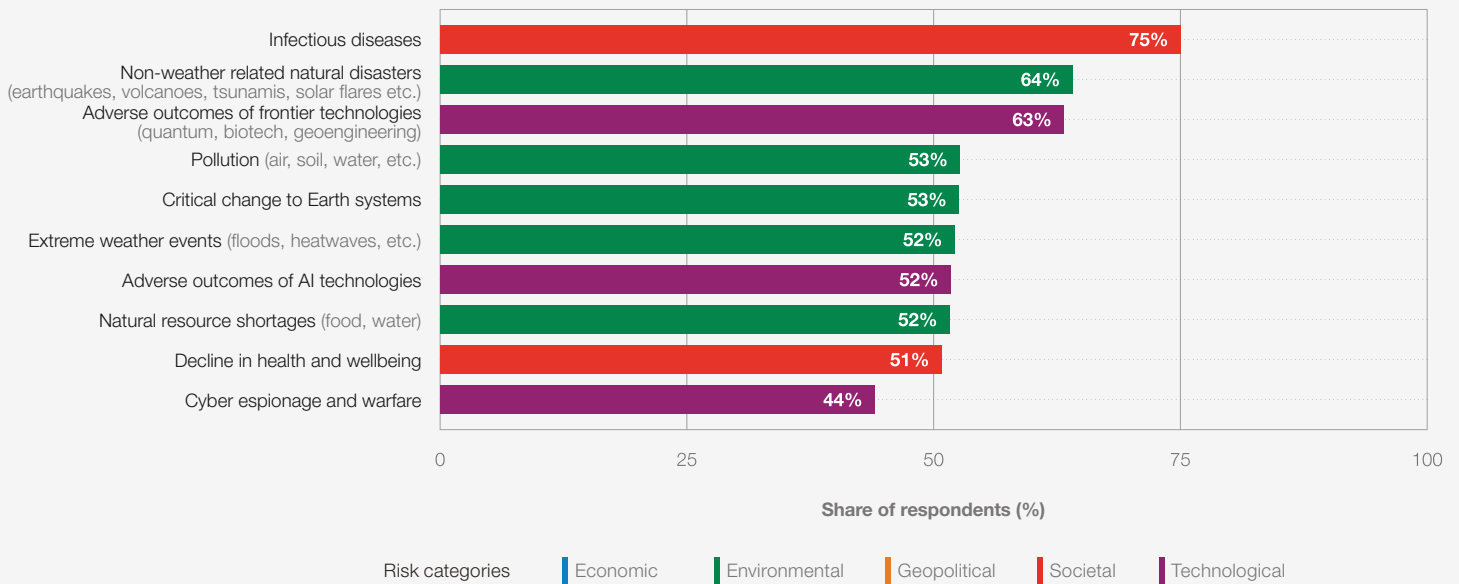
Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

Note  
Respondents could select up to three responses from the following nine options: Financial instruments, National and local regulations, Minilateral treaties and agreements, Global treaties and agreements, Development assistance, corporate strategies, Research & development, Public awareness and education, Multi-stakeholder engagement.

FIGURE D.2

**Top global risks addressed by Research and development**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"

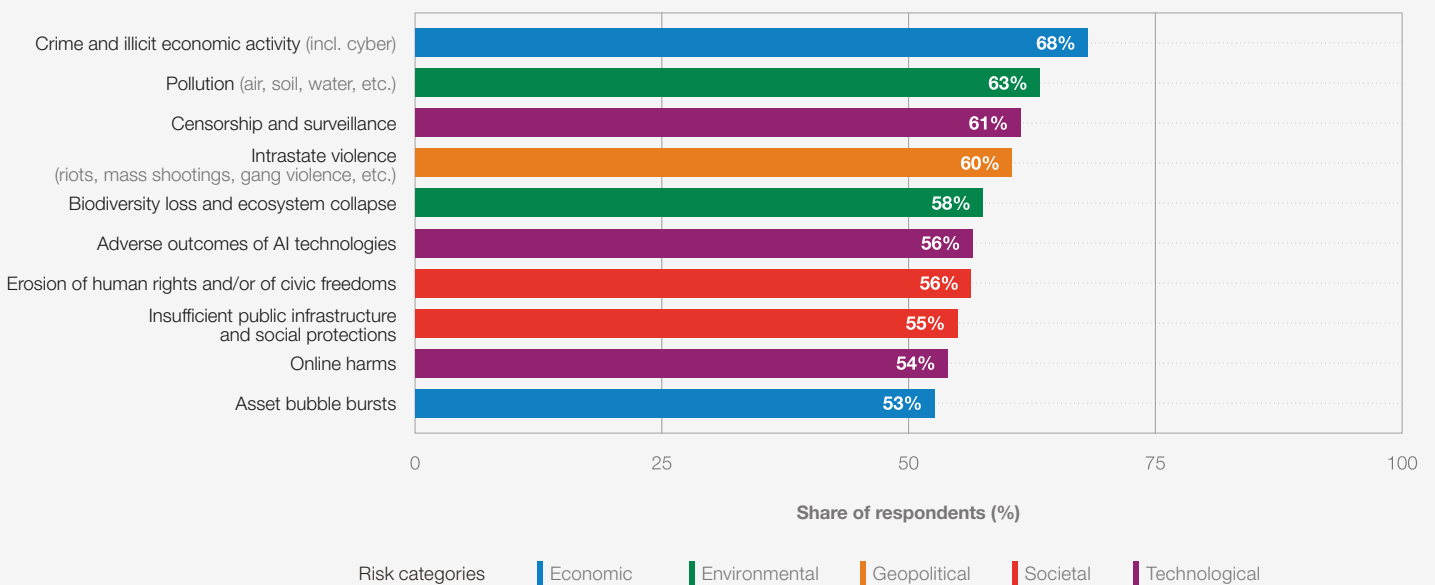


Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

FIGURE D.3

**Top global risks addressed by National and local regulations**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"



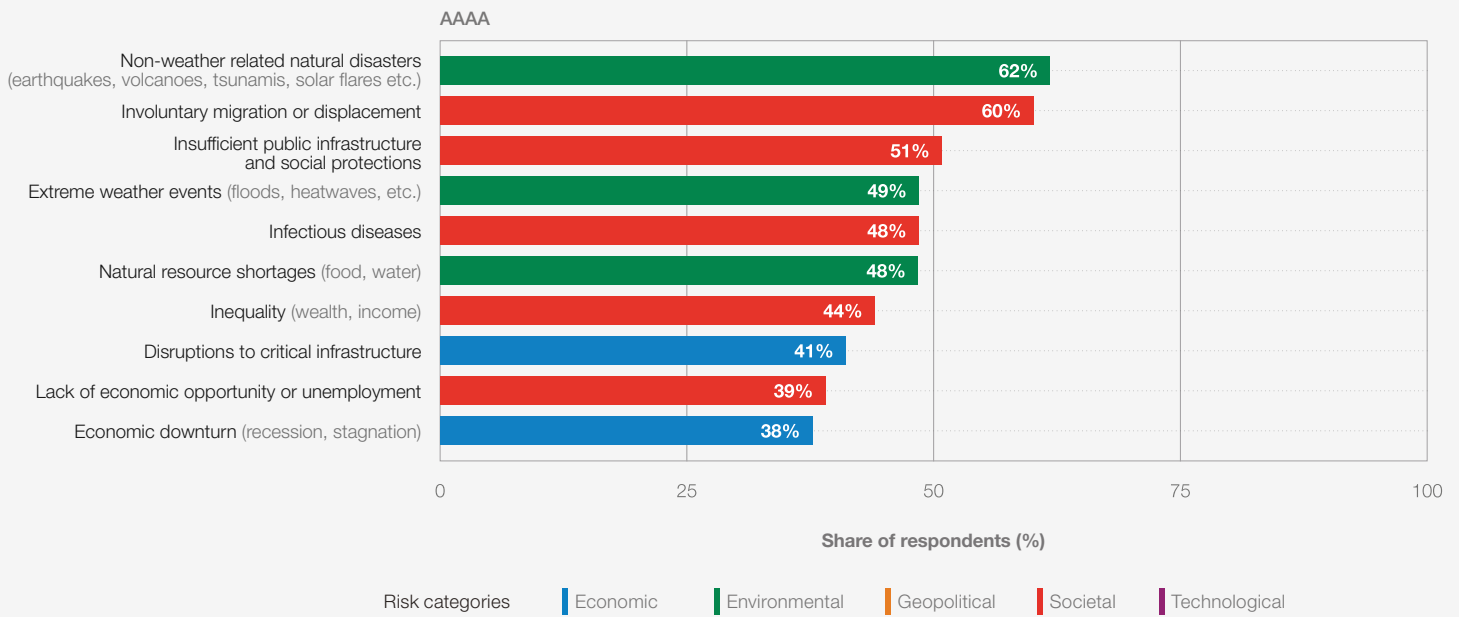
Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.



FIGURE D.4

**Top global risks addressed by Development assistance**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"

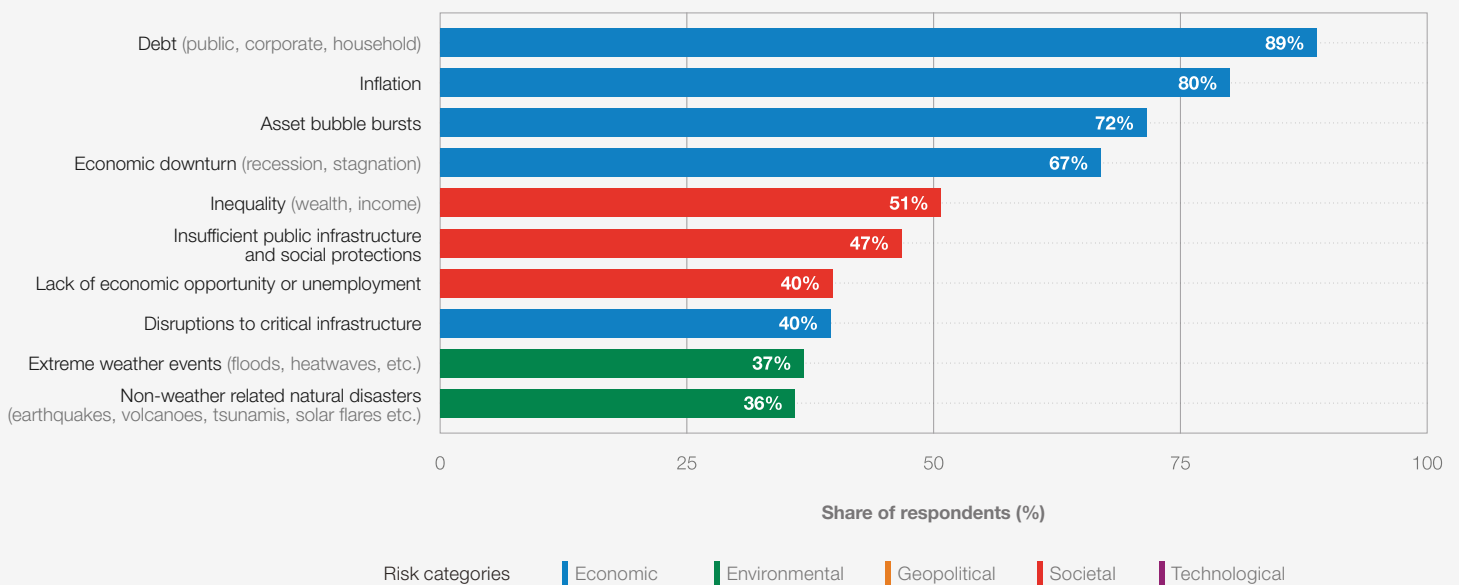


Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

FIGURE D.5

**Top global risks addressed by Financial instruments**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"

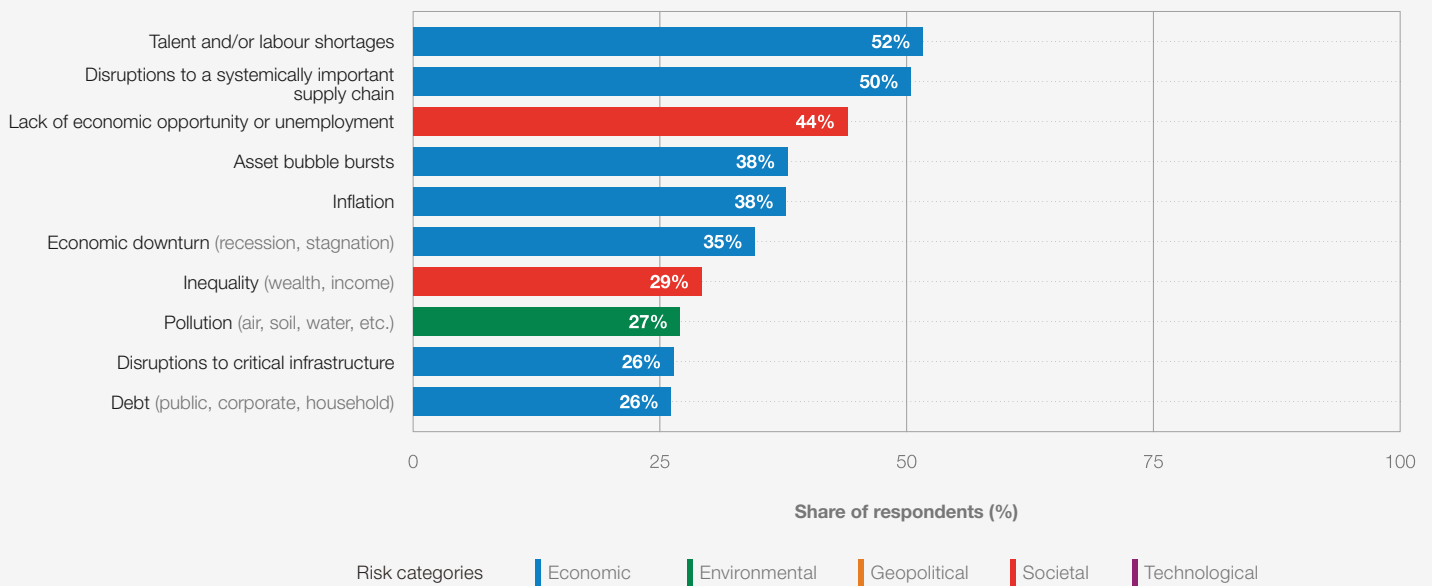


Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

FIGURE D.6

**Top global risks addressed by Corporate strategies**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"

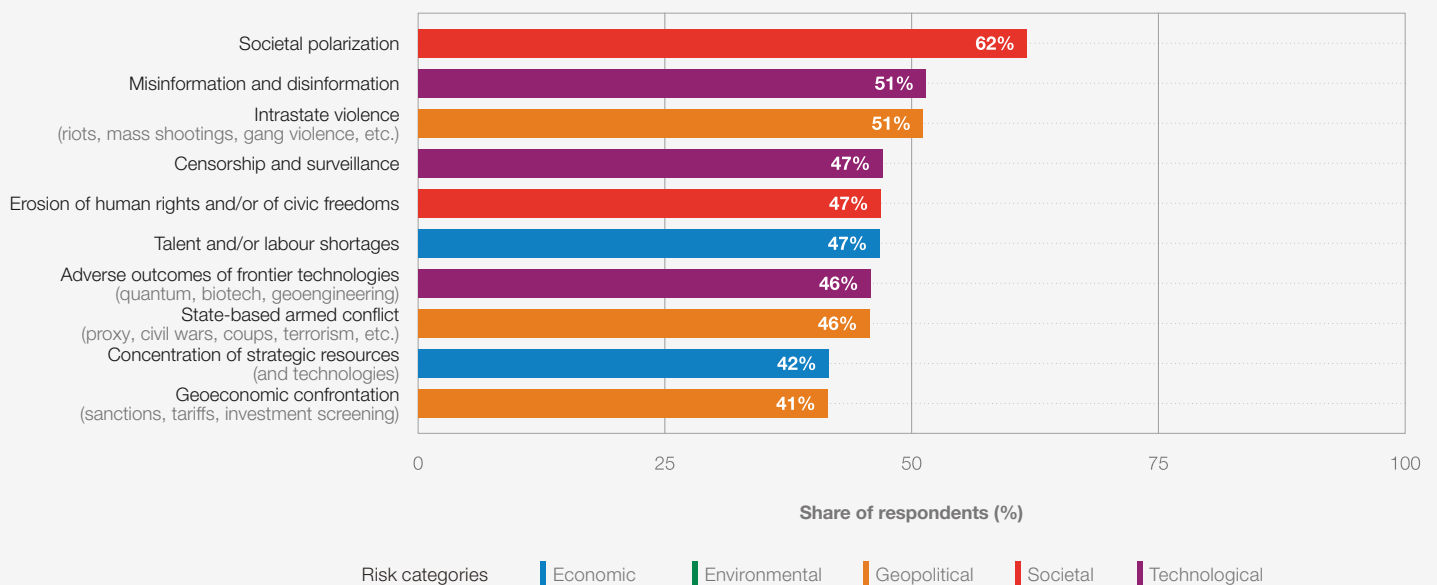


Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

FIGURE D.7

**Top global risks addressed by Multi-stakeholder engagement**

"Which approach(es) do you expect to have the most potential for driving action on risk reduction and preparedness over the next 10 years?"



Source  
World Economic Forum Global Risks  
Perception Survey 2024-2025.

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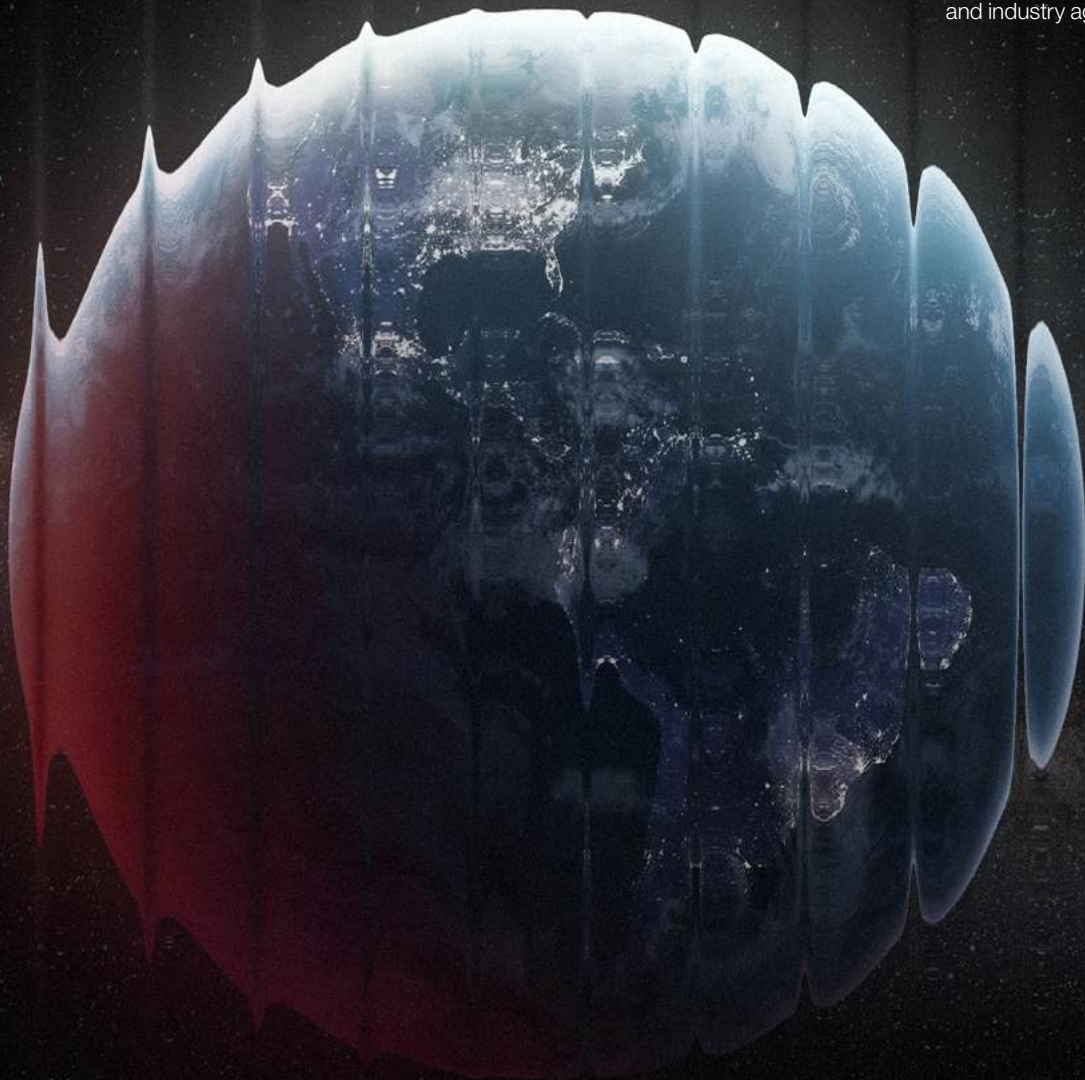
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