

UN Global Risk Report

Sensemaking Report

05 June 2024

Table of Contents

- **Executive Summary**
- **Section 1: Methodology**
 - The Global Risk Report
 - The Global Risk Survey
 - Data Analysis
- **Section 2: Global Risk Landscape**
 - What are the most pertinent global risks?
 - Risk Dimensions
 - Risk Imminence
 - Risk Characteristics
- **Section 3: Risk Priority and Multilateral Preparedness**
 - Perceptions of Priorities
 - Perceptions of Multilateral Preparedness
 - Correlates of Priority
- **Section 4: Barriers and Actions to Addressing Risks**
 - Barriers
 - Actions
- **Section 5: Risk Interconnectedness**
- **Section 6: Regional, Stakeholder and Demographic Observations**
 - Nuances in Global Risk Perception: Regional and Stakeholder
 - Regional Highlights
 - Stakeholder Highlights
 - Gender
 - Age
- **Conclusion**
- **Appendix**

Executive Summary

Background

- The United Nations Common Agenda recognizes that the world needs to be better prepared to prevent and respond to major global risks, ranging from direct conflicts to extreme weather and pandemics. In this context, the UN Secretary General called for the UN to issue a Strategic Foresight and Global Risk Report on a regular basis. This report responds to that call.
- Specialized risk assessment is important in establishing the probability and impacts related to global risks. So too are the perceptions of these risks among stakeholders. Stakeholder views on risks and appropriate protective actions set the boundaries on which risk preparedness actions are possible at the multilateral and national levels. Understanding stakeholders' perceptions is therefore essential to chart a roadmap towards preventing and responding effectively to global risks.
- Data on risk perceptions were gathered in a survey conducted in early 2024. 28 global risks were identified through an extensive process of literature review and consultation, covering societal, technological, environmental, economic and political risks.
- Respondents were comprised of a diverse set of stakeholders representing different types of organizations, regional and demographic groups. Where applicable, statistical techniques were used to analyze the data and to assess whether observed correlations were significant from a statistical perspective.

The Global Risk Landscape

- Respondents identified **Mis & Disinformation**, **Geopolitical Tensions**, and **Rise in Inequalities** as the most likely of global risks to occur. These three risks were also considered to be the most imminent—the most likely to be already impacting people, or to occur in the very near future.
- Stakeholders viewed **Large-Scale War**, **Climate Change Inaction**, and **Weapons of Mass Destruction (WMDs)** as the risks which would have the most severe impact if they were to manifest.
- Following a definition of “Risk = Probability x Impact,” or “Likelihood x Severity,” the greatest global risks in the eyes of survey respondents were **Climate Change Inaction**, **Large-Scale Pollution**, and **Mis & Disinformation**.
- Considering these different dimensions, we can categorize risks into groups: high impact-high likelihood; high impact-lower/moderate likelihood, and lower/moderate impact-high likelihood. These different categories of risks will require distinct strategies to raise awareness, convey scientific information, and mobilize stakeholders to take appropriate action.
- Breaking down the data by region, environmental risks such as **Climate Change Inaction**, **Natural Hazard Risks**, and **Large-Scale Pollution**, and political risks including **Mis & Disinformation** and **Geopolitical Tensions** were consistently ranked as top risks across all regions. However, there were some statistically significant differences in regional risk ratings. Respondents from Sub-Saharan Africa and Latin America and the Caribbean perceived a large number of risks to be significantly higher than respondents from Europe and Northern America. These were predominantly economic risks (**Global Financial Crisis**, **Economic Fragmentation**, **Global Economic Stagnation**, **Supply Chain Collapse**).

- There were few significant differences in risk perceptions between stakeholder groups. Civil society organizations perceived higher risks from **Multilateral Institution Collapse** and **Social Cohesion Collapse** than Member States; Experts also perceived significantly higher **Social Cohesion Collapse** than Member States. **Natural Resource Shortages** were a particular concern for Private Sector respondents—they rated this risk higher than Experts (with high significance).
- Female respondents rated most risks more highly than males. These differences were statistically significant. Age was not a significant explanatory variable of risk perception. Both of these findings are in line with previous academic work on risk perceptions.
- Certain global risks are strongly interconnected in the eyes of stakeholders. The strongest perceived connections were: **Geopolitical Tensions** as a cause of **Large-Scale War**; **Climate Change Inaction** as a cause of **Natural Hazard Risks**; and **Biorisks** as a cause of a **New Pandemic**.
- Certain risks were seen to be either the cause or the consequence of many other risks. The risks with the highest degree of centrality were political (**Geopolitical Tensions**, **Rule of Law Collapse**, **Large-Scale War**) and societal (**Social Cohesion Collapse**).
- Stakeholders understand risks to be linked in causal chains which sometimes cross multiple STEEP domains. **Geopolitical Tensions**, for example, were seen to be caused by environmental risks (**Natural Resource Shortages**) as well as political risks, and to lead directly to economic risks (**Supply Chain Collapse**) and indirectly to societal risks (**Mass Movement of People**), in addition to having impacts on other political risks.

Actions to Address Risks

- Stakeholders see collective action as the most effective way to tackle the majority of global risks. Across the 28 global risks surveyed, joint action by multiple governments, joint action by governments and civil society, and joint action by governments and the private sector were viewed as most effective to address global risks. Unilateral action by national governments was considered among the most effective forms of action to address **Rise in Inequalities** and **Mass Movement of People**. Yet, across all the 28 global risks surveyed, such unilateral action was considered less effective compared to action involving two or more governments working together.
- Respondents identified weak governance or coordination mechanisms; lack of political consensus; lack of trust and accountability; incorrect prioritization of risks, and inadequate data and information as the key barriers to dealing with global risks. The identification of weak governance as the top barrier to action implies a critical role for multilateral institutions in establishing or strengthening these mechanisms.
- Stakeholders did not simply take the view that multilateral institutions should focus their efforts on the top global risks by severity and likelihood. They expressed the view that multilateral institutions should prioritize specific risks spanning environmental (**Climate Change Inaction**, **Large-Scale Pollution**), political (**Large-Scale War**, **Rule of Law Collapse**) and societal categories (**Rise in Inequalities**).
- There was a considerable gap in the eyes of respondents between the risks that multilateral institutions *should* be prioritizing, and those risks which multilateral institutions were seen as well prepared to manage currently. Among the top 10 risks by priority, **Mis & Disinformation** stood out as the risk that respondents perceived multilateral institutions to be least prepared to manage, followed by a **New Pandemic** and **WMDs**.

The Way Forward

- Stakeholders' perceptions of global risks and appropriate responses can provide a valuable complement to professional risk assessments. Integrating these views into global risk management efforts is in line with the Common Agenda's commitment to strong involvement of all stakeholder groups in delivering the agenda; this multi-stakeholder involvement (or engagement) can be taken forward with national-level risk listening exercises and efforts at all levels to shape a safer, better, greener future in the face of uncertainty.

Section 1: Methodology

The Global Risk Report

In the seminal UN75 Declaration, the Member States of the United Nations committed to “learn, share experiences and information to reduce risks and make our systems more resilient.” Amid the unprecedented challenges posed by the pandemic, Member States recognized the urgent need to enhance global governance for present and future generations. The UN Secretary General’s Our Common Agenda (A/75/982) called on global stakeholders to accelerate the implementation of the Sustainable Development Goals (SDGs) and address key gaps that have been emerging since 2015. In this context, the Secretary General proposed that the United Nations issue a Strategic Foresight and Global Risks Report to Member States on a regular basis. The United Nations Global Risk Report (GRR) responds to that proposal.

The UN GRR is a timely and essential input to strengthen global risk management. The world has emerged from the COVID-19 pandemic to confront an intersecting set of social, political, economic, environmental, and technological risks. As the Summit of the Future in September 2024 approaches, it is crucial to forge a new global consensus that prepares all stakeholders for a future wrought with risks, yet replete with opportunities.

The UN GRR aims to provide a comprehensive and forward-looking analysis of global risks across three core areas:

1. **Global Risk Perceptions and Dimensions:** This section explores the most pressing global risks in the eyes of stakeholders, examining regional and stakeholder differences in risk perceptions, and contrasts short-term risks with a long-term risk outlook up to 2050.
2. **Risk Interactions:** This section investigates how stakeholders perceive risks to interact and cascade, identifying risks which cause, are caused by, or exacerbate other risks.
3. **Multilateral System Preparedness:** This section assesses stakeholders’ views on the readiness of multilateral institutions to identify, reduce, and mitigate global risks, and highlights action areas for enhanced resilience-building efforts.

This report is concerned with **perceptions** of global risks held by a diverse set of stakeholders representing public, civil society, and private organizations, as well as risk domain experts. While stakeholders’ risk perceptions may differ from each other and in some cases diverge from the findings of technical risk assessments (e.g., mortality statistics), perceptions are of critical importance because they influence action. Stakeholder support for multilateral governance reform and initiatives, is shaped by their understanding of risks and appropriate responses. Similarly, their support as well for national policy changes which are aligned with global risk management objectives will be influenced by their views on risks and proposed protective actions. Scholarly work conducted over the last four decades provides a strong conceptual and methodological foundation which we have drawn on to gather, analyze, and interpret data on risk perceptions.^{1,2,3,4,5}

By aligning with the principles and goals outlined in "Our Common Agenda," the GRR underscores the UN’s commitment to proactive and inclusive global governance. It aims to serve as a cornerstone for international efforts to build a more resilient, sustainable, and equitable future for all, reinforcing our collective responsibility to safeguard humanity’s future.

The Global Risk Survey

This sensemaking report highlights key data findings from the United Nation's 2024 Global Risk Survey (GRS), informing the publication of its inaugural Global Risk Report. It draws on the collective expertise of 83 UN Member State representatives, and 1,028 risk professionals across civil society organizations, businesses, and academia from all six regions of the world (these are valid responses that have been kept after data cleaning procedures, p.10 and p.95).

“Global risk” was defined throughout the survey as an uncertain event or condition that would have a significant negative impact on a large portion of humanity and the planet.

Risk Selection and Categorization

The Global Risk Survey is a comprehensive assessment of 28 selected risks (full list in Appendix, p.77) that have been identified as pivotal within a contemporary global landscape, encompassing both frequently-discussed and emerging risks. These risks were shortlisted through extensive literature review, expert consultations, and foresight exercises. These risks were determined to have a non-negligible chance of occurring and are large enough in scale to potentially harm a large portion of humanity and the planet. These risks have been categorized into five groups: Societal, Technological, Environmental, Economic, and Political (STEEP). These categories were selected to serve as a framework for comprehensively assessing the risk landscape, and to enable a nuanced understanding of the interconnected nature of risks.

Figure 1.1 Risk rankings by likelihood and severity, with percentile quadrants

Category	Definition
Societal	Risks that impact social stability, inequality, and population health. These include mass unemployment, diseases, misinformation, and cost of living crises.
Technological	Risks relating to the availability and security of technological infrastructure, including the proliferation of cybercrime and digital inequality.
Environmental	Risks that impact environmental sustainability and ecosystem health, and related changes to climate patterns. These include natural disasters, the over-exploitation of natural capital, and biodiversity loss.
Economic	Risks that impact economic stability and growth, including debt crises and commodity shocks.
Political	Risks that are detrimental towards geopolitical relations or intra-country political stability. These include the proliferation of weapons of mass destruction, interstate conflict, and civil conflict.

Stakeholder Groups

The survey targeted five main stakeholder groups that were chosen to capture diversity and expertise in risk perceptions.

Figure 1.2 Stakeholder group definitions

Stakeholder	Definition
UN Member States	Government officials from the 193 UN member states
Civil Society Organizations (CSOs)	Non-governmental organizations accredited with consultative status with the Economic and Social Council (ECOSOC), including non-profit organizations and under-represented communities such as women and youth groups
Private Sector Organizations	Members of private or for-profit organizations recognized by the UN Global Compact
Risk Experts and Academia	Includes civil society actors or members of private organizations specializing in risks across different industries (e.g., banking, political risk) and academic affiliates of tertiary education institutions specializing in risk across different disciplines
UN	Employees at the UN and its affiliated bodies

Survey Implementation

The GRS was conducted through the online survey platform, Qualtrics, between 22 February 2024 and 17 May 2024. The survey comprised three main sections: Respondent Demographics, Global Risk Outlook and Perception, and Global Risk Preparedness.

Section 1: Respondent Demographics

This section of the survey asked respondents to provide their demographic details, used primarily to compare stakeholder groups and regional differences. All responses were kept anonymous, de-identified, and confidential. Questions in this section included:

- Nationality and country based in or represented
- Domain(s) of expertise
- Type of organization (e.g., UN Member State, Private Sector Organization, CSOs, etc.)

Section 2: Global Risk Outlook and Perception

a. **Likelihood** asked respondents to rate how likely each of the 28 risks were to negatively impact a large portion of humanity by 2050. Respondents were provided with a Likert scale of 1 to 7 with the following anchors: (1) Extremely unlikely, (4) Neither likely nor unlikely, and (7) Extremely likely.

b. **Imminence** asked respondents when they believed that each of the 28 risks would have a significant negative impact on a large portion of humanity. Respondents were provided with the following options: (1) Currently occurring, (2) In 1-7 years, (3) In 8-15 years, (4) In 16-25 years, and (5) After 2050.

c. **Severity** asked respondents how severe the impacts of each of the 28 risks would be if the risk were to occur by 2050. Respondents were provided with a Likert scale of 1 to 7, with the following anchors: (1) No impact at all, and (7) Extremely severe impact.

d. **Risk Prioritization** asked respondents to pick and rank five risks in order of which they believed should receive highest priority for action by multilateral institutions.

e. **Risk Interconnections** presented 5 randomly-assigned risks from the total list of 28 risks to respondents and asked them to identify how each of those risks could be connected to other global risks. This same subset of risks would remain consistent for all lines of risk inquiry in Section 3. For each risk, respondents were asked to identify: (i) One other risk that is most likely to lead to or cause this risk, (ii) One other risk that would most likely worsen the impact of this risk, and (iii) One risk that is most likely to occur as a result of this risk.

Section 3: Global Risk Preparedness

a. **Risk Preparedness: Identification** asked respondents to rate the ability of multilateral institutions to identify the emergence of each of five randomly-assigned risks before it posed a significant threat using a Likert scale of 1 to 7, where: (1) Not at all, and (7) Very able.

b. **Risk Preparedness: Reduction** asked respondents to rate the ability of multilateral institutions to reduce the likelihood of each of their five assigned risks occurring on a Likert scale of 1 to 7, where: (1) indicates Not at all, and (7) Very able.

c. **Risk Preparedness: Mitigation** asked respondents to rate the ability of multilateral institutions to mitigate the negative impact of each of their five assigned risks and ensure timely recovery if the risk were to occur on a Likert scale of 1 to 7, where: (1) Not at all, and (7) Very able.

d. **Risk Governance: Actions** asked respondents to select up to two forms of stakeholder action that can best address each of their five assigned risks. Options included: Unilateral, bilateral and multilateral action by governments, action by civil society, private sector, individuals, and subnational governments. A full list of the 13 options and their abbreviations can be found in the Appendix (p. 79).

e. **Risk Governance: Barriers** asked respondents to select up to two top barriers that impede the effective addressing of each of their five assigned risks. Options included: Inadequate data and information, Insufficient finance options, and Lack of political consensus. A full list of the 16 options and their abbreviations can be found in the Appendix (p.79).

Data Cleaning

A total of 1,786 responses to the GRS were received. From these, 1,111 responses were retained for analysis, while 675 were removed using the following data cleaning criteria:

1. Responses were removed if respondents did not give consent to proceed with the survey. 144 responses were deleted from this step.
2. Responses with less than 53% completion rate— past the respondent demographics section— were removed. A pairwise deletion rule (i.e., keeping the response even if the respondent did not finish all survey questions) was applied to keep the maximum amount of information from all survey responses. 511 responses were deleted from this step.
3. As each member state should provide only one valid response, 6 duplicate member-state responses were removed. When multiple responses were received from the same member state, the response with highest completion rate was retained. Where duplicate responses had the same completion rate, the latest response was retained.
4. Responses with ambiguous stakeholder group classification were removed from the stakeholder comparisons as all responses needed to be classified into the five main stakeholder groups and six regions for their respective sub-group analyses. 14 responses were deleted from this step. See the Appendix for more details on stakeholder classification (p.95).

Respondent Profiles

The survey data encompassed a broad age distribution, ranging from individuals in their early 20s to those in their late 80s. The wide age range indicates that the survey captured perspectives across different life stages and experiences.

Gender representation in the survey was fairly balanced, with 658 respondents (59.2%) identifying as male, 445 respondents (40.1%) as female, and 8 respondents (0.7%) preferring not to specify. This gender distribution suggests that the survey results were not heavily skewed towards either gender.

The survey achieved fair geographical distribution, with 79 respondents from Central and Southern Asia (7.1%), 90 respondents from Eastern and South-Eastern Asia (8.1%), 514 respondents from Europe and Northern America (46.3%), 111 respondents from Latin America and the Caribbean (10.0%), 71 respondents from Northern Africa and Western Asia (6.4%), 27 respondents from Oceania (2.4%), and 219 respondents from Sub-Saharan Africa (19.7%).

The survey focused on five main groups of stakeholders, comprising the following breakdown: 83 official respondents from UN Member States (7.5%), 387 respondents (34.8%) from Civil Society Organizations, 106 respondents (9.5%) from the Private Sector, 436 respondents (39.2%) classified as Experts, and 86 respondents (7.7%) from the UN. There were 13 respondents (1.2%) who did not fall exclusively within any of the predetermined stakeholder groups and were therefore classified as “Others.” A full graphic depiction of respondent profiles can be found in the Appendix (p.80).

Data Analysis

The responses from the GRS were analyzed using appropriate statistical methods tailored to the design of each survey question. The table below offers a summary of the treatment methods applied to each survey question, along with references to their corresponding sections in this sensemaking report. More comprehensive information on the measures employed can be found at the outset of each respective section within this report.

Figure 1.3 Summary of data treatment by survey section

Survey Section	Question(s)	Analysis	Report Section
Demographics	<ul style="list-style-type: none"> Primary nationality/country based in or represented 	<ul style="list-style-type: none"> Descriptive statistics Used as variable for sub-group heterogeneity analyses 	Regional, Stakeholder, and Demographic Observations (on p. 63)
	<ul style="list-style-type: none"> Organization type 	<ul style="list-style-type: none"> Descriptive statistics Used as variable for sub-group heterogeneity analyses 	
Global Risk Outlook and Perception	<ul style="list-style-type: none"> Likelihood Severity 	<ul style="list-style-type: none"> Statistical analysis of continuous variables with scale 1 to 7 Compounded variable for defining "risk importance" 	Global Risk Landscape (p. 12)
	<ul style="list-style-type: none"> Imminence 	<ul style="list-style-type: none"> Descriptive analysis Used as a categorical variable to indicate the imminence of a risk We also used group mean to compute an alternative continuous measure of imminence 	
	<ul style="list-style-type: none"> Risk prioritization 	<ul style="list-style-type: none"> Computation of sum of votes, with weights (top 1 is given 5 points, top 2 is given 4 points, ..., and top 5 is given 1 point; any risk not selected will receive 0 point), as a proxy of risk priority measure 	
	<ul style="list-style-type: none"> Risk Interconnections 	<ul style="list-style-type: none"> Network analysis Computation of risk closeness measures (e.g., degree centrality) 	Risk Interconnectedness (p.37)
Global Risk Preparedness	<ul style="list-style-type: none"> Risk Preparedness: Identification Risk Preparedness: Reduction Risk Preparedness: Mitigation 	<ul style="list-style-type: none"> Statistical analysis of continuous variables with scale 1 to 7 We used the average of the 3 preparedness measures for defining "risk preparedness" 	Global Risk Landscape (p. 12)
	<ul style="list-style-type: none"> Risk Governance: Barriers 	<ul style="list-style-type: none"> Computation of sum of votes, statistical breakdown 	Barriers and Actions to Addressing Risks (p. 32)
	<ul style="list-style-type: none"> Risk Governance: Actions 	<ul style="list-style-type: none"> Computation of sum of votes, statistical breakdown 	

Section 2: Global Risk Landscape

What are the Most Pertinent Global Risks?

This section provides an overview of the top global risks and examines in more detail the likelihood, severity and imminence dimensions of risk perceptions. In keeping with a definition of risk as “probability x consequences,” we construct a measure of the relative **importance** of the 28 global risks as the product of likelihood and severity of impact. The top 10 most important global risks in the eyes of stakeholders include five environmental risks (**Climate Change Inaction, Large-Scale Pollution, Natural Hazard Risks, Biodiversity Decline, and Natural Resource Shortages**), three political risks (**Mis & Disinformation, Geopolitical Tensions, and Large-Scale War**), and two societal risks (**Rise in Inequalities and Mass Movement of People**). Strikingly, no economic or technological risks appear in the top 10 global risks of importance.

Figure 2.1 Risks by risk dimension values

Risk Ordered by Importance	Importance (Likelihood x Severity)	Likelihood* (1–7)	Severity* (1–7)	Imminence Current & 1–7 years (% of respondents^)
Climate Change Inaction	37.2	5.8	6.2	84.0
Large-Scale Pollution	36.0	5.8	6.0	79.4
Mis & Disinformation	35.4	6.0	5.7	93.5
Natural Hazard Risks	35.0	5.7	6.0	76.1
Rise in Inequalities	34.7	5.9	5.7	88.2
Biodiversity Decline	34.6	5.7	5.8	71.8
Geopolitical Tensions	34.5	5.9	5.7	89.8
Natural Resource Shortages	34.3	5.6	5.9	56.5
Mass Movmt. of People	33.2	5.7	5.7	72.0
Large-Scale War	32.6	5.1	6.3	65.1
Biorisks	32.3	5.4	5.8	70.6
New Pandemic	32.1	5.3	5.8	52.9
Rule of Law Collapse	32.0	5.2	5.9	72.2
Cybersecurity Breakdown	31.7	5.4	5.6	79.7
Global Financial Crisis	31.6	5.4	5.7	65.6
WMDs	31.1	4.9	6.2	63.6
AI and Frontier Tech	31.0	5.4	5.5	66.4
Proliferation of Non-State Actors	30.8	5.3	5.6	81.5
Tech-Driven Power Concentration	30.8	5.5	5.4	75.7
Social Cohesion Collapse	30.4	5.2	5.7	67.4
Widespread Debt Crisis	30.2	5.3	5.5	69.5
Economic Fragmentation	29.1	5.3	5.3	74.0
State Sovereignty Erosion	28.5	5.0	5.6	66.7
Global Economic Stagnation	27.9	5.0	5.3	64.4
Supply Chain Collapse	27.8	4.9	5.5	56.4
Geoengineering Disasters	27.5	4.8	5.5	47.4
Multilateral Institution Collapse	26.3	4.7	5.4	56.0
Space-Based Event	23.4	4.3	5.2	41.3

* Importance was computed by multiplying each respondent's severity rating by their likelihood rating, and taking the average of all respondents' importance scores

^ Excludes “don't know” responses

Relative values ***Color-coded by column**
Lower Higher

Risk Dimensions

Examining the two key components of risk importance—likelihood and severity—reveals that respondents clearly differentiated between the two for certain risks, although, overall, these dimensions were positively correlated.

Likelihood

Respondents were asked how likely they believed each risk was to manifest before 2050. On average, respondents perceived two political risks and one social risk to be the most likely to occur—**Mis & Disinformation**, **Rise in Inequalities**, and **Geopolitical Tensions**. These three risks were in the middle range in terms of severity. **Space-Based Event** was perceived to be the least likely and had the largest standard deviation (SD) value, signaling wide variation in respondents' views on this risk. A full breakdown of figures for this question can be found in the Appendix (p.81).

Severity

The severity question measured how severe, on average, respondents believe the impact of each risk would be if it were to occur between now and 2050. Political risks feature prominently on the severity dimension, notably **Large-Scale War** and **WMDs**. However, these two risks were considered to be comparatively less likely to occur than many of the other risks. **Climate Change Inaction**, on the other hand, was rated highly on both dimensions. A full breakdown of figures for this question can be found in the Appendix (p.81).

Graphic Representation of Risk Importance

The following scatterplot indicates the position of all risks on the two dimensions of likelihood and severity. To understand how a risk is classified, first identify where the risk is along the X-axis by referring to the quadrant labels on the bottom of the diagram (e.g., WMDs is in the “Low Likelihood” quadrant). Next, identify where the risk is along the Y-axis by referring to the labels to the right of the diagram (e.g., WMDs is in the “High Severity” quadrant). For risks that are on the border between two quadrants, please refer to the full classification on p.82 of the Appendix.

Figure 2.2 Risk rankings by likelihood and severity, with percentile quadrants



The following table provides a summary of the top 10 important risks grouped according to their likelihood and severity characteristics. A full list of risks by likelihood-severity grouping can be found in the Appendix (p.82).

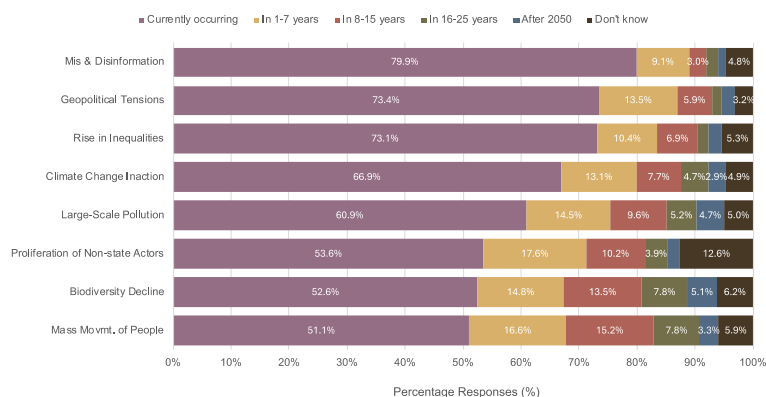
Figure 2.3 Top 10 important risks by characteristics

Risk	Characteristics	Description
Climate Change Inaction	High Likelihood, High Severity	High Likelihood, High Severity risks are both likely to manifest in the eyes of stakeholders, and are expected to have very severe consequences. However, these are often neglected risks which can have catastrophic consequences when they manifest.
Large-Scale Pollution		
Mis & Disinformation	High Likelihood, Moderate Severity	High Likelihood, Moderate/Lower Severity risks, while not uncommon, can pose a relatively high level of danger without the correct precautions. This is because their familiarity can sometimes lead to their impacts being under-estimated by decision-makers and other stakeholders.
Rise in Inequalities		
Biodiversity Decline		
Geopolitical Tensions		
Mass Movmt. of People	High Likelihood, Lower Severity	
Natural Hazard Risks	Moderate Likelihood, High Severity	Moderate/Lower Likelihood, High Severity risks are those that are known yet often-overlooked despite the magnitude of impact, due to perceptions of low probability or because they are seen as happening far in the future.
Natural Resource Shortages		
Large-Scale War	Lower Likelihood, High Severity	

When might risks have a significant negative impact?

The imminence question measures how soon respondents believe that a risk will have a significant negative impact on the world. As the **survey options were originally categorical** in nature (i.e., non-numeric and nominal), we first present visualizations of imminence as percentage breakdowns of responses by categories.

Figure 2.4 Risks that are perceived to be “currently occurring”



Here, a total of eight risks were perceived by respondents to be currently occurring (i.e., $\geq 50\%$ of responses were recorded for the “currently occurring” option). Of these, **Mis & Disinformation**, **Rise in Inequalities**, **Geopolitical Tensions**, and **Climate Change Inaction** recorded the highest percentages for the “currently occurring” option and were the same four risks occupying the top rankings in terms of likelihood. A full chart detailing risk imminence by categorical percentage breakdown can be found in the Appendix (p.83).

Average Imminence Score

To compare perceived imminence across the 28 risks more easily, we construct a summary **continuous variable**, Average Imminence Score. This is calculated using the mean year of each time-range category as the representative imminence to re-construct imminence as a weighted average of group means:

Figure 2.5 Assigned values for imminence mean tabulation

Category	Assigned Value
Currently occurring	0 years
In 1-7 years	4 years
In 8-15 years	11.5 years
16-25 years	20.5 years
After 2050	25 years (as a robustness check, a separate analysis assigned this category a value of 50 years, with consistent results)
Don't know	Two separate analyses were conducted to account for the contribution of "Don't know" to Average Imminence Score. <i>Analysis A</i> excluded “Don't know” from the calculation; <i>Analysis B</i> included “Don't know” and considered it as a missing value in the calculation.*

The figure on the next page displays average imminence scores following *Analysis A*. Figures for both analyses A and B can be found in the Appendix (p.84).

*Take **Mis & Dis information** for example, the corresponding frequencies of the 6 imminence categories were 888, 101, 33, 22, 14, and 53 respectively. Based on *Analysis A*, the total vote excluding "Don't Know" is 1,058, and Average Imminence Score = $0 * 888/1058 + 4 * 101/1058 + 11.5 * 33/1058 + 20.5 * 22/1058 + 25 * 14/1058 = 1.5$. Based on *Analysis B*, the total vote including "Don't Know" is 1,111, and Average Imminence Score = $0 * 888/1111 + 4 * 101/1111 + 11.5 * 33/1111 + 20.5 * 22/1111 + 25 * 14/1111 = 1.43$.

Figure 2.6 Mean risk imminence, represented as a continuous variable

Rank by Importance	Risk	Imminence score ¹	Rank by Imminence score	Rank by "Currently occurring" %	Rank change
3	Mis & Disinformation	1.5	1	1	
7	Geopolitical Tensions	2.2	2	2	
5	Rise in Inequalities	2.3	3	3	
1	Climate Change Inaction	3.2	4	4	
18	Proliferation of Non-state Actors	3.7	5	6	Up 1 rank
2	Large-Scale Pollution	4.1	6	5	Down 1 rank
4	Natural Hazard Risks	4.7	7	9	Up 2 ranks
14	Cybersecurity Breakdown	4.7	7	16	Up 9 ranks
19	Tech-Driven Power Concentration	5.0	9	11	Up 2 ranks
9	Mass Movmt. of People	5.2	10	8	Down 2 ranks
22	Economic Fragmentation	5.3	11	12	Up 1 rank
6	Biodiversity Decline	5.4	12	7	Down 5 ranks
13	Rule of Law Collapse	5.6	13	10	Down 3 ranks
11	Biorisks	5.7	14	15	Up 1 rank
21	Widespread Debt Crisis	6.0	15	18	Up 3 ranks
20	Social Cohesion Collapse	6.4	16	13	Down 3 ranks
23	State Sovereignty Erosion	6.5	17	17	
15	Global Financial Crisis	6.6	18	21	Up 3 ranks
24	Global Economic Stagnation	6.8	19	19	
10	Large-Scale War	6.9	20	22	Up 2 ranks
17	AI and Frontier Tech	7.1	21	23	Up 2 ranks
16	WMDs	7.5	22	20	Down 2 ranks
25	Supply Chain Collapse	8.4	23	25	Up 2 ranks
8	Natural Resource Shortages	8.5	24	14	Down 10 ranks
27	Multilateral Institution Collapse	8.5	25	24	Down 1 rank
12	New Pandemic	9.3	26	27	Up 1 rank
26	Geoengineering Disasters	10.2	27	26	Down 1 rank
28	Space-Based Event	11.8	28	28	

¹"Don't know" values were excluded from the calculation

The top four most imminent risks remain the same regardless whether they are ranked by the percentage share of "currently occurring" or by average imminence score. The "furthest" temporal risk to manifest remains **Space-Based Event**. Relatedly, we may infer that respondents tend to believe that all 28 risks will manifest sometime before 2050.

There are three risks with significant differences in imminence rankings when comparing the percentage of respondents who selected "currently occurring" to rankings based on expected imminence in years.

- **Cybersecurity Breakdown:** This risk has moved up 9 ranks, indicating that respondents believe it is more imminent than estimated by only percentage share of "currently occurring" selections.
- **Natural Resource Shortages:** This risk has moved down 10 ranks. Although more than a third of respondents perceived it as "currently occurring," a substantial portion also selected other categories. By measuring imminence in years, the overestimation based on the initial perception was corrected, resulting in a lower rank.
- **Biodiversity Decline:** This risk moved down 5 ranks. Similar to **Natural Resource Shortages**, a high percentage of people (53%) believed that it was "currently occurring." However, an almost equal number of respondents (41%) considered it to manifest later. This discrepancy was corrected when measuring imminence in years, resulting in a significant drop in its ranking.

Correlates of Risk Imminence

To understand which factors were most related to respondents' perception of risk imminence, we ran an ordered logistic regression model taking into account likelihood, severity, and how they ranked priority for multilateral action. Imminence was treated as an ordinal variable, ranging from 1 ("currently occurring") to 5 ("After 2050").

Figure 2.7 Risk imminence regression model coefficients, correct to 2 decimal places

Variable	Value	Std. Error
Likelihood	-0.32 ***	0.01
Severity	-0.10 ***	0.01
Priority: Top 1	-0.61 **	0.07
Priority: Top 2	-0.51 **	0.07
Priority: Top 3	-0.50 **	0.07
Priority: Top 4	-0.45 *	0.06
Priority: Top 5	-0.24 *	0.06

*** : Highly significant ($|t \text{ value}| \geq 10$), ** : Moderately significant ($7 \leq |t \text{ value}| < 10$), * : Marginally significant ($3 \leq |t \text{ value}| < 7$)

Interpretation

Likelihood: The coefficient for likelihood is -0.3192 and is statistically significant ($p < 0.001$). The negative coefficient suggests that higher likelihood perceptions are associated with higher risk imminence perceptions (i.e., closer to 1).

Severity: The coefficient for severity is -0.0979 and is also statistically significant ($p < 0.001$). Similarly, this indicates that higher severity perceptions are associated with higher risk imminence perceptions.

Priority (Top 1 to Top 5): All coefficients are negative and statistically significant, indicating that higher priority perceptions are associated with higher risk imminence perceptions.

In summary, risks perceived to be more likely, severe, and higher in priority for multilateral institutions, are perceived to also be more imminent.

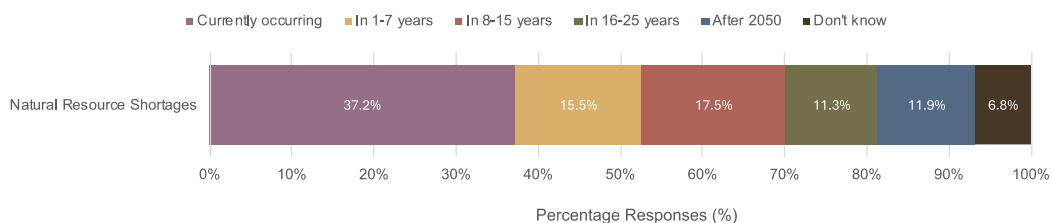
Risk Characteristics: High Likelihood/High Severity

High Likelihood/High Severity risks denote highly probable, high-impact dangers that may nevertheless escape attention until they escalate exponentially. **Climate Change Inaction** and **Large-Scale Pollution** exemplify this type of risk with their high risk-importance rankings. Respondents may have classified these risks here due to observable trends, scientific consensus, historical precedents of devastating consequences and even direct personal experience. These risks are also viewed as having the potential for cascading impacts, exacerbating existing vulnerabilities, and posing significant threat to global risk management frameworks (see Risk Interconnectedness, p.36).

It might be expected that other serious environmental risks—such as **Biodiversity Decline** and **Natural Resource Shortages**—would have been similarly classified as High Likelihood/High Severity risks given that they are often associated with the three other risks across extensive literature. However, respondents perceived the severity of **Biodiversity Decline** and the likelihood of **Natural Resource Shortages** to be somewhat lower. While awareness of declining biodiversity appears to be on the rise¹—also justified by the 52.6% of respondents who believe it is a “currently occurring” risk—it is distinctly possible that respondents are less aware of its potentially far-reaching consequences, therefore underestimating the severity of the risk.

Yet another interesting trend emerges for **Natural Resources Shortages**: respondents have rated it as being somewhat high in likelihood but are divided on *when* its impacts will manifest (i.e., lower imminence value). The risk has one of the highest percentages of respondents believing that it will occur “after 2050” (11.9%) out of the 28 risks. In other words, respondents believe that **Natural Resource Shortages** are very likely to happen but are divided on whether this risk will occur in the short, medium, or long-term, likely contributing to the risk being classified as a Moderate Likelihood/High Severity risk instead. The inherent difficulty of predicting resource depletion and uncertainty in sustainable resource governance may help to explain this.

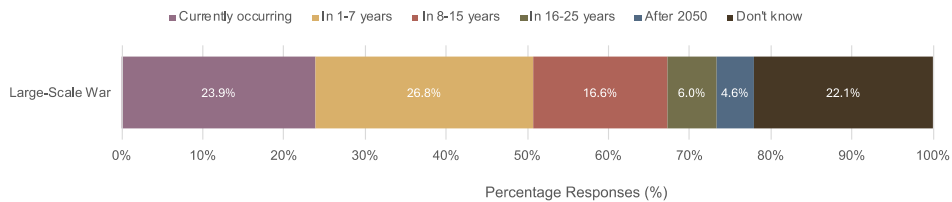
Figure 2.8 Risk imminence of Natural Resource Shortages, by category



Risk Characteristics: Moderate-Lower Likelihood/High Severity

Moderate Likelihood/High Severity risks represent lower likelihood but potentially catastrophic threats. In the context of **Natural Hazard Risks**, **Natural Resource Shortages**, and **Large-Scale War**, these risks share the characteristic of being perceived by respondents as less probable yet potentially catastrophic events. Despite their severe potential impacts, people may find it difficult to assess the underlying probability of the risk as they may have no direct or indirect experience of the risk manifesting. However, these risks have similarities in their potential to cause widespread disruption, humanitarian crises, and geopolitical instability on an international scale.

Figure 2.9 Risk imminence of Large-Scale War, by category

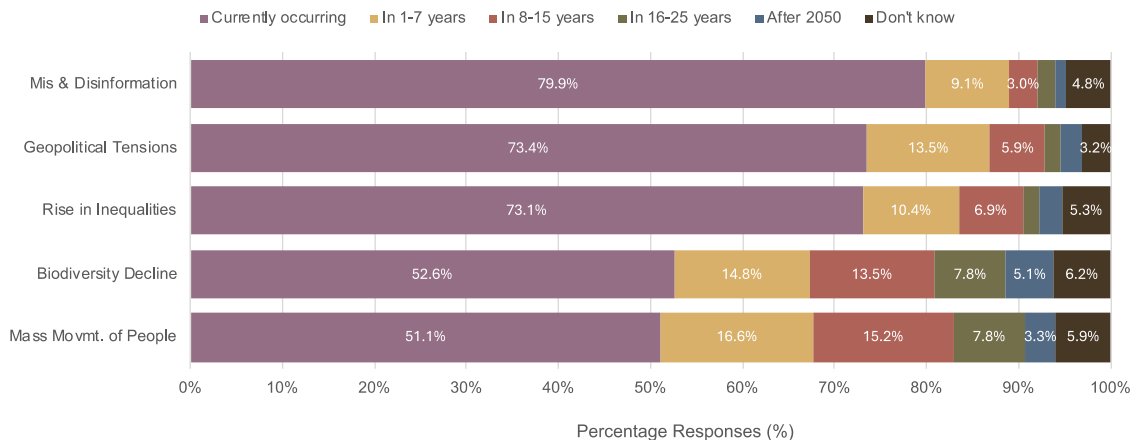


Large-Scale War may however be worthy of additional discussion. Despite ongoing conflict including the war in Ukraine,¹ and the conflict in the Middle East,² respondents perceived this as a threat of 'moderate likelihood' and less than a quarter (23.9%) perceiving this risk to be currently occurring. This perception may be due in part, to some normalization of conflict among regions with high geopolitical tensions, the perception of conflict containment, or optimism bias.³

Risk Characteristics: High Likelihood/Moderate-Lower Severity

This group of risks are considered to be more likely but are associated with less harm. While they can be dangerous, encounters with them do not tend to result in significant harm *when* appropriate precautions are taken. The risks classified as High Likelihood/Moderate Severity risks are: **Mis & Disinformation**, **Geopolitical Tensions**, **Rise in Inequalities**, **Biodiversity Decline**, and **Mass Movement of People**. These risks may be more familiar to people, and respondents may have direct or indirect personal experience of these risks manifesting. Their familiarity and their gradual, cumulative nature may result in an underestimation of total impact. **Mis & Disinformation**, for instance, has become pervasive in the digital age and accelerated by the advent of artificial intelligence⁴, but its immediate consequences may not appear to be particularly severe. Similarly, **Geopolitical Tensions**, **Rise in Inequalities**, **Biodiversity Decline**, and **Mass Movement of People** have been ongoing issues,^{5,6,7} often progressing slowly over time lending the impression that society is able to manage these risks.

Figure 2.10 Risk imminence of High Likelihood/Moderate Severity risks, by category



All five risks are similar in that they have been perceived by the majority of respondents to be risks that are "currently occurring", with **Mis & Disinformation** as the highest-rated risk across all risks in terms of imminence. These risks may have moderate severity ratings as respondents have a perception that their impacts are tolerable in the short term, possibly leading to complacency or underestimation of their long-term consequences.

Box: Recommendations Based on Risk Categorization – For Reference Only

High Likelihood/High Severity Risks

Strategies for these risks generally advocate for a proactive and holistic risk management approach that is fit-for-context, emphasizing the importance of risk recognition, preparation, and effective collaboration.¹

1. **Anticipate and assess:** Given that these risks are highly probable, significant investments should be made in identifying and evaluating them over time. Implementing early warning systems for the escalation of these risks can help stakeholders prepare for their potential impact.
2. **Build adaptive capacity:** Developing resilience plans and contingencies is imperative for mitigating the probable and severe impact of High Likelihood/High Severity risks. Investing in innovation and incorporating flexibility can enable a greater number of stakeholders to adapt effectively to how these risks manifest in their local contexts.
3. **Adopt a whole-of-ecosystem approach:** High Likelihood/High Severity risks can have severe ripple effects across communities, making it essential for stakeholders to coordinate and engage with one another. Increased collaboration and communication among stakeholders can lead to synergies in risk management and mitigation efforts, enhancing overall resilience.

Moderate Likelihood/High Severity Risks

Overall, while these risks share similarities with High Likelihood/High Severity risks in needing proactive risk management, the strategies to address them may vary based on factors such as perception, timing, and the nature of the risk itself:

1. **Strong crisis response planning:** Moderate Likelihood/High Severity risks often emerge more unpredictably than High Likelihood/High Severity risks, meaning that they need robust crisis response strategies in place to prevent further risk contagion—however improbable they are deemed to be.
2. **Focus on rapid crisis management:** Although both Moderate Likelihood/High Severity risks and High Likelihood/High Severity risks stand to benefit from strong stakeholder collaboration, the former may benefit greater from rapid response efforts as opposed to sustained/persistent stakeholder negotiations and longer-term resilience-building efforts.

High Likelihood/Moderate Severity Risks

These risks are pervasive and systemic in nature, and therefore accumulate impact over time, rather than presenting as “shocks”. As such, they may warrant specific considerations in the context of risk mitigation:

1. **Enhancing regulatory compliance:** These risks, distinguished by their gradual societal impact, could be better managed through heightened regulatory compliance. Such measures serve to mitigate the extent of their influence on society, thereby preventing escalation over time. This may best apply to High Likelihood/Moderate Severity risks rather than shocks that occur unexpectedly.
2. **Need for continuous monitoring:** Similar to High Likelihood/High Severity risks, High Likelihood/Moderate Severity risks can benefit from heightened vigilance. Establishing mechanisms to monitor the progression and/or impact of these risks will better inform risk mitigation strategies and adapt them to different societal conditions.

Section 3: Risk Priority and Multilateral Preparedness

Multilateral Institutions: Priorities & Preparedness

Multilateral institutions have an important role to play in addressing global risks. The survey included specific questions to gauge respondents' perceptions of the role of multilateral institutions: where multilateral institutions should prioritize efforts (i.e., priority for multilateral action or "priority"), and how ready respondents thought these institutions were to address the different risks (i.e., preparedness).

Top Priorities for Multilateral Institutions

From the full set of 28 risks, respondents were asked to select and rank 5 top risks which they thought should be prioritized by multilateral institutions, with the topmost priority ranked at number one, etc. Respondents' rankings were used to construct a measure of priority by weighting each response by its rank (i.e., first rank was given a weight of 5, second rank a weight of 4, etc.) and then summing up the weighted scores. A full chart of the risks and this tally can be found on p.86.

Figure 3.1 Top risks of priority for multilateral institutions compared to top risks of importance

	Risk	Rank by Priority for Multilateral Action	Rank by Importance
	Climate Change Inaction	1	1
	Large-Scale War	2	10
	Rule of Law Collapse *	3	
	Rise in Inequalities	4	5
	Geopolitical Tensions	5	7
	Mis & Disinformation	6	3
	Natural Hazard Risks	7	4
	WMDs *	8	
	Biodiversity Decline	9	6
	New Pandemic *	10	
	Large-Scale Pollution *		2
	Natural Resource Shortages *		8
	Mass Movement of People *		9

* Denotes risks that only appear once, either by Multilateral Priority or by Importance

Climate Change Inaction stands out as the top perceived priority for multilateral institutions and as the most important global risk. However, there is variation between the two lists, indicating that stakeholders do not simply take the view that multilateral institutions should direct most efforts to the most important risks. Rather, stakeholders regard multilateral institutional efforts as best directed towards political risks, including **Rule of Law Collapse** and **WMDs**, which do not appear in the top 10 most important global risks. Top risks which stakeholders do not think of as top priorities include **Large-Scale Pollution**, **Natural Resource Shortages** and **Mass Movement of People**.

These variations in rankings hint at diverse perspectives among respondents regarding the role of multilateral institutions in global risk management. The shared prominence of certain risks suggests a consensus on the necessity for multilateral action in addressing severe and probable threats. Conversely, the inclusion of risks like **WMDs** and **Rule of Law Collapse**—despite their lower likelihood and high severity—may underscore the perceived need for multilateral intervention due to their inherently cross-border nature and broad implications for global stability.

How prepared are multilateral institutions to deal with important global risks?

Comparing prioritization for multilateral institutions, and the preparedness of these institutions provides an indication of where additional efforts by multilateral institutions may be needed in the eyes of stakeholders. This can be observed by comparing the “Multilateral Priority Rank” and “Preparedness Rank” of a risk in Figure 3.2; a large difference between the former and the latter may suggest a lower level of preparedness relative to how much more respondents believe a risk should be prioritized by multilateral institutions. To note, the “Preparedness Rank” is based on the “Average Preparedness” value of how respondents perceived multilaterals to be effective at identifying, reducing and mitigating a risk. The color scales offer a relative comparison of how each dimension was rated relative to all other risks, and offers insight into where multilateral efforts may be focused.

Among the top 10 risks which respondents thought should be priorities for multilateral institutions, **Mis and Disinformation**, **New Pandemic** and **WMDs** were the three risks that these institutions were perceived as being less prepared to deal with.

Figure 3.2 Dimensions of risk preparedness, sorted by risk priority

Multilateral Priority Rank	Risk	Preparedness Rank	Average Preparedness	Identify (1–7)	Reduce (1–7)	Mitigate (1–7)
1	Climate Change Inaction	1	4.82	5.5	4.6	4.4
2	Large-Scale War	15	4.34	5.0	4.1	4.0
3	Rule of Law Collapse	7	4.54	5.0	4.3	4.4
4	Rise in Inequalities	4	4.57	5.3	4.2	4.1
5	Geopolitical Tensions	2	4.63	5.3	4.2	4.4
6	Mis & Disinformation	25	3.99	4.3	3.8	3.8
7	Natural Hazard Risks	11	4.40	4.7	4.0	4.4
8	WMDs	18	4.21	4.8	4.1	3.8
9	Biodiversity Decline	9	4.41	4.9	4.2	4.1
10	New Pandemic	19	4.17	4.3	4.0	4.2
11	Natural Resource Shortages	16	4.31	5.0	4.0	4.0
12	Mass Movmt. of People	13	4.34	5.0	4.0	4.2
13	Global Financial Crisis	6	4.56	5.0	4.2	4.4
14	AI and Frontier Tech	21	4.13	4.2	4.0	4.1
15	Large-Scale Pollution	5	4.57	5.2	4.2	4.3
16	Social Cohesion Collapse	20	4.16	4.5	4.0	4.1
17	Multilateral Institution Collapse	3	4.61	4.9	4.6	4.4
18	Proliferation of Non-state Actors	26	3.94	4.4	3.7	3.7
19	Cybersecurity Breakdown	27	3.91	4.1	3.7	3.9
20	Biorisks	17	4.28	4.5	4.1	4.2
21	Widespread Debt Crisis	10	4.41	4.8	4.1	4.3
22	Global Economic Stagnation	8	4.54	5.0	4.3	4.4
23	State Sovereignty Erosion	24	4.00	4.5	3.8	3.7
24	Economic Fragmentation	12	4.37	4.8	4.1	4.2
25	Tech-Driven Power Concentration	23	4.10	4.4	3.9	4.0
26	Supply Chain Collapse	14	4.34	4.7	4.1	4.3
27	Geoengineering Disasters	22	4.10	4.1	4.2	4.0
28	Space-Based Event	28	3.55	3.8	3.4	3.6

Preparedness *Color-coded by column

Higher Lower

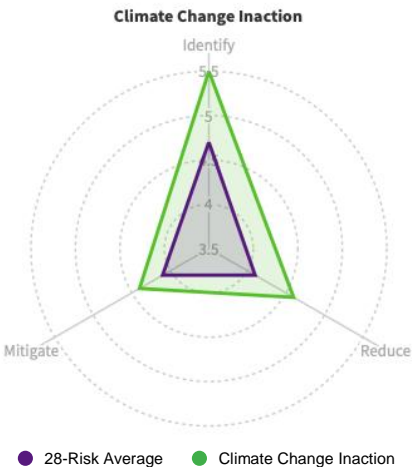
Risk Category Societal Technological Environmental Economic Political

Multilateral preparedness comprises three dimensions:

- **Risk identification:** Refers to the ability of actors to identify emerging risks and when the risks pose a significant threat
- **Risk reduction:** Refers to the ability of actors to reduce the likelihood of a risk occurring
- **Risk mitigation:** Refers to the ability of actors to reduce negative impacts of a risk and to ensure timely and full recovery after a risk occurs

While an overall preparedness score offers a broad preparedness assessment, distinguishing between dimensions of preparedness provides useful nuance into the multilateral system’s perceived strengths and weaknesses across critical aspects of risk management. Further, identifying specific areas of perceived deficiencies informs priority areas for addressing potential vulnerabilities and enables targeted improvements to ensure proactive prevention and suitable response measures. The following sections provide a general overview of perceived multilateral preparedness for the top ten ranked risks by priority.

Figure 3.3 Risk preparedness chart, climate change inaction



Rank by Priority	1
Risk Preparedness Rank	1
Risk Preparedness Average ^a	4.82
Relative Preparedness ^b	▲▲▲

Climate Change Inaction was ranked the highest in terms of multilateral preparedness among all risks. Respondents believed that multilateral institutions demonstrate notable strength in identifying **Climate Change Inaction**, likely pointing towards efforts in drawing public attention to the risk. However, respondents perceived multilateral institutions to struggle with mitigating climate change inaction, leaving a gap between awareness and action.

Figure 3.4 Risk preparedness chart, large-scale war



Rank by Priority	2
Risk Preparedness Rank	15
Risk Preparedness Average ^a	4.34
Relative Preparedness ^b	▲▲

Large-Scale War ranks with medium preparedness, placing 15th out of 28 risks in overall preparedness. Despite its lower ranking in importance, respondents prioritized it higher for multilateral action, indicating a perceived central role of multilateral institutions on this issue. Respondents perceived multilateral institutions to excel in identifying the threat of **Large-Scale War** but may face challenges in reducing likelihood and mitigating impacts.

^a Risk preparedness average: refers to average score out of 7, across all three dimensions

^b Relative preparedness score, compared across all risks: ▲ less prepared (3.5–4.0), ▲▲ somewhat prepared (4.1–4.5), ▲▲▲ more prepared (>4.5) 25

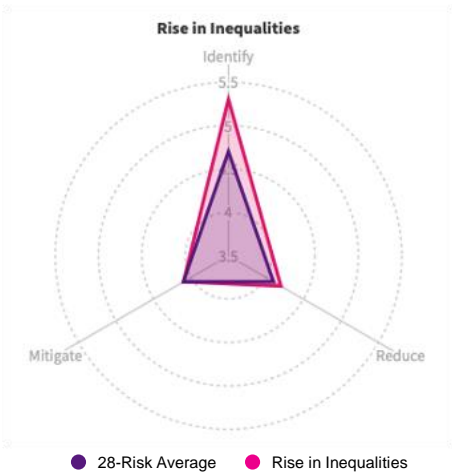
Figure 3.5 Risk preparedness chart, rule of law collapse



Rank by Priority	3
Risk Preparedness Rank	7
Risk Preparedness Average ^a	4.54
Relative Preparedness ^b	▲▲▲

Rule of Law Collapse ranked 7th in terms of multilateral preparedness among all risks. While not a top risk in terms of importance, it was highly prioritized for multilateral action, indicating that respondents perceived multilateral institutions to have a leading role in addressing this risk. Respondents believed that multilateral institutions excel at identifying this risk but may face challenges in reducing the likelihood of this occurring.

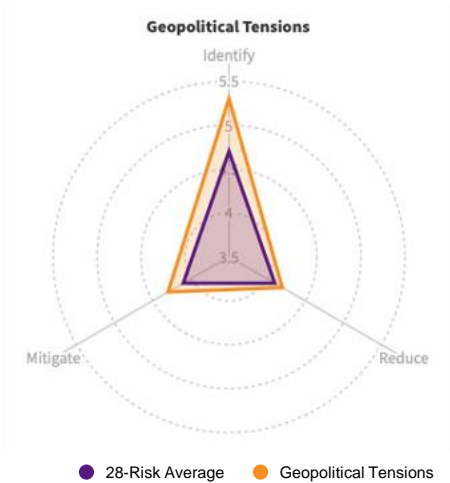
Figure 3.6 Risk preparedness chart, rise in inequalities



Multilateral Priority Rank	4
Risk Preparedness Rank	4
Risk Preparedness Average ^a	4.57
Relative Preparedness ^b	▲▲▲

Rise in Inequalities ranked 4th in multilateral preparedness among all risks. Respondents perceived that multilateral institutions excel in identifying the risk, possibly benefitting from decades of data gathering, analysis and policy development. However, respondents also perceived these institutions to struggle with effective risk mitigation, indicating a gap between recognition and multilateral action.

Figure 3.7 Risk preparedness chart, geopolitical tensions



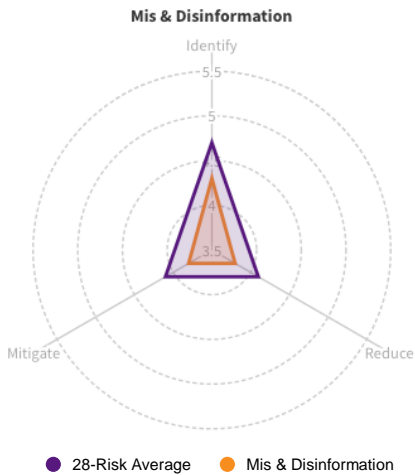
Rank by Priority	5
Risk Preparedness Rank	2
Risk Preparedness Average ^a	4.63
Relative Preparedness ^b	▲▲▲

Geopolitical Tensions ranked 2nd highest in multilateral preparedness, with respondents expressing greater confidence in multilateral institutions' readiness to address this risk compared to the average risk. It also ranked 2nd highest in terms of average risk identification scores, highlighting respondents' belief in multilateral institutions' adeptness at detecting emerging tensions. However, multilateral institutions fared poorer in perceived risk reduction.

^a Risk preparedness average: refers to average score out of 7, across all three dimensions

^b Relative preparedness score, compared across all risks: ▲ less prepared (3.5–4.0), ▲▲ somewhat prepared (4.1–4.5), ▲▲▲ more prepared (>4.5) 26

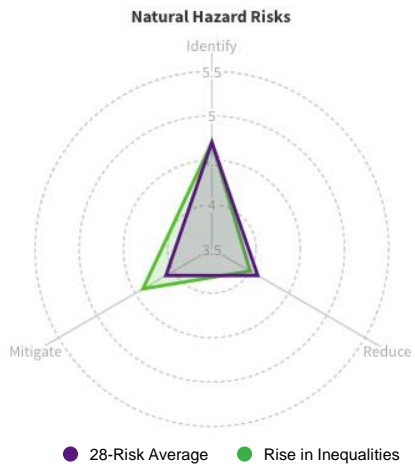
Figure 3.8 Risk preparedness chart, mis & disinformation



Rank by Priority	6
Risk Preparedness Rank	25
Risk Preparedness Average ^a	3.99
Relative Preparedness ^b	▲

Mis & Disinformation ranked 25th in multilateral preparedness, but was still perceived to be a top priority by respondents. It had the largest gap in rankings between these two factors than any other risk (i.e., 19). Respondents noted strength in risk identification, but perceived weakness in reduction and mitigation.

Figure 3.9 Risk preparedness chart, natural hazard risks



Multilateral Priority Rank	7
Risk Preparedness Rank	11
Risk Preparedness Average ^a	4.40
Relative Preparedness ^b	▲▲

Natural Hazard Risks ranked 11th in multilateral preparedness. Respondents believed that multilateral institutions were limited in their ability to identify these risks, despite massive strides in scientific research in this domain. Respondents also perceived limitations in reducing the likelihood of this risk.

Figure 3.10 Risk preparedness chart, weapons of mass destruction



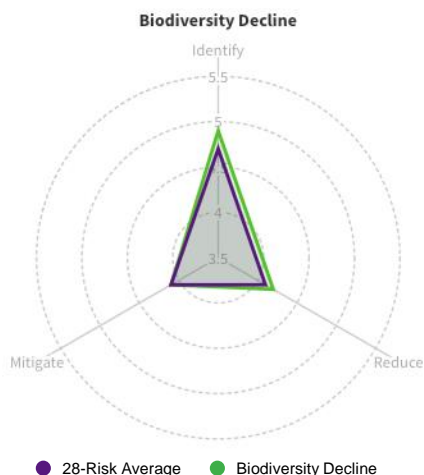
Rank by Priority	8
Risk Preparedness Rank	18
Risk Preparedness Average ^a	4.21
Relative Preparedness ^b	▲▲

WMDs ranked 18th in multilateral preparedness, and only appeared in the top ten list in terms of priority. Similar to **Large-Scale War**, this may indicate respondents' perception of an outsized role that multilaterals play in addressing **WMDs**. Respondents believe multilaterals are stronger at identifying the risk, but much weaker in mitigating its impacts if it were to occur.

^a Risk preparedness average: refers to average score out of 7, across all three dimensions

^b Relative preparedness score, compared across all risks: ▲ less prepared (3.5–4.0), ▲▲ somewhat prepared (4.1–4.5), ▲▲▲ more prepared (>4.5)

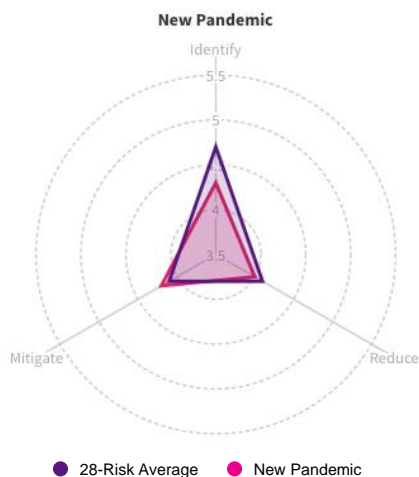
Figure 3.11 Risk preparedness chart, biodiversity decline



Rank by Priority	9
Risk Preparedness Rank	9
Risk Preparedness Average ^a	4.41
Relative Preparedness ^b	▲▲

Biodiversity Decline ranked equally in terms of priority and multilateral preparedness. Respondents perceived multilateral institutions to be more adept at identifying the risk than reducing or mitigating this risk.

Figure 3.12 Risk preparedness chart, new pandemic



Multilateral Priority Rank	10
Risk Preparedness Rank	19
Risk Preparedness Average ^a	4.17
Relative Preparedness ^b	▲▲

New Pandemic ranked 19th in multilateral preparedness, but ranked higher in priority. Respondents perceived that multilateral institutions were somewhat more adept at identifying the risk and mitigating it compared to reducing the likelihood of its occurring.

^a Risk preparedness average: refers to average score out of 7, across all three dimensions

^b Relative preparedness score, compared across all risks: ▲ less prepared (3.5–4.0), ▲▲ somewhat prepared (4.1–4.5), ▲▲▲ more prepared (>4.5) 28

What factors are statistically associated with respondents' perceptions of priority?

Figure 3.13 on the following page presents the results of several regression models that examine factors associated with the perception of a risk being ranked as a top multilateral priority.¹ Each model includes different combinations of variables in order to identify the factors that consistently emerge as statistically significant across the models. Explanatory factors are listed in the leftmost column of the table. Coefficients that are statistically significant are indicated with asterisks. The directionality of the coefficients explain how these factors influence priority—a positive coefficient indicates that an increase in the explanatory factor increases the likelihood that a risk would also be ranked higher in priority, and vice-versa.

The key takeaways from this model include:

- **Imminence (currently occurring) had a statistically significant relationship with multilateral priority.** Compared with the baseline group, if a respondent believed that a risk was "currently occurring," the more likely they were to rank it as a top priority for multilateral action.
- **Imminence (don't know) had a significant negative relationship with priority.** Compared with the baseline group, if a respondent was uncertain about when a risk would occur, the less likely they would rank the risk as a multilateral priority.
- **Both severity and likelihood had statistically significant relationships with multilateral priority.** The more severe and/or likely a respondent perceived a risk to be, the higher the chance of them considering the risk as a top priority for multilateral action.
- **Similarly, risk importance also had a statistically significant relationship with multilateral priority.** The more important a risk was perceived to be, the higher the chance of it being considered a priority for multilateral action.
- **Interestingly, multilateral preparedness was not significantly correlated with priority.** Respondents' beliefs about whether multilateral institutions were prepared to address a risk did not significantly affect whether it was considered a top priority for multilateral action.

¹ Outcome variable used in the regression models: whether a risk was ranked among the top 5 risks for multilateral priority (1 = yes, 0 = no)

Figure 3.13 Perceptions of priority regression coefficients, to 3 decimal places

Explanatory Factors¹	Model 1 Coefficients	Model 2 Coefficients	Model 3 Coefficients	Model 4 Coefficients
Intercept	-0.140***	0.008	-0.164***	-0.168***
Imminence ² (Currently occurring)	0.075***	0.063***	0.079***	0.081***
Imminence (Don't know)	-0.036***	-0.029**	0.001	0.006
Imminence (In 1–7 years)	0.009	0.003	0.02	0.021
Imminence (In 16–25 years)	-0.012	-0.015	0.015	0.016
Imminence (In 8–15 years)	-0.016	-0.019	-0.012	-0.013
Severity	0.042***	0.042	0.042***	0.043***
Likelihood	0.011***	0.012	0.012**	0.011**
Importance (Likelihood x Severity)		0.005***		
Preparedness: Overall			0.004	0.004
Preparedness: Identify				0.004
Preparedness: Reduce				0.003
Preparedness: Mitigate				-0.003
Num of Observations	28130	28130	4803	4660
R ²	0.053	0.051	0.050	0.050
R ² Adjusted	0.053	0.051	0.048	0.048

*** Highly significant ($p \leq 0.001$), ** Moderately significant ($0.001 < p \leq 0.01$), * Marginally significant ($0.01 < p \leq 0.05$)

¹ Explanatory factors: unstandardised measures used in analyses

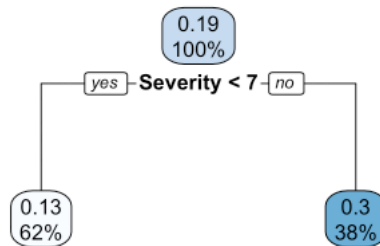
² Imminence is a categorical variable and the baseline group chosen is "after 2050." Other variables are continuous, unstandardized risk measures.

What is the strongest factor predictive of priority?

The regression analyses identified the factors significantly associated with respondents' rated priorities for multilateral action. To understand the relative importance of how each of these factors contributed to whether a risk was ranked in respondents' top 5 priorities, we employed a machine learning model called a *decision tree*.

The decision tree model was configured with the outcome variable being whether or not a risk was ranked among the top 5 risks for multilateral priority (1 = yes, 0 = no). The explanatory factors included combinations of raw, unstandardized risk measures for severity, likelihood, and preparedness. Since the decision tree algorithm aims to make splits on continuous predictors to maximize the predicted outcomes after the splits, only continuous risk measures were included as predictors in the model. On this basis, the categorical variable *imminence* was excluded from the decision tree analysis.

Figure 3.14 Dominant role of severity in predicting priority



Key Findings

The decision tree's initial and most significant split was based on the severity measure. This split indicates that severity was the most crucial factor in determining whether a risk was prioritized. Further splits in the decision tree were not based on other risk factors such as likelihood or preparedness. This suggests that these other factors were significantly less influential in contributing to the perceived priority of risks for multilateral action. (The importance of each risk factor was determined based on the reduction in impurity achieved by the splits they caused within the decision tree. The more a risk factor contributed to reducing impurity, the higher its importance.)

Figure 3.15 Importance of risk measures in determining priority ranking

Risk Measure	Importance Value
Severity	30.40
Likelihood	8.75
Preparedness: Identify	3.31
Preparedness: Reduce	3.02
Preparedness: Mitigate	2.81

Summary

The decision tree analysis confirmed severity to be the most critical factor in determining whether a risk was selected as one of the respondents' top five priorities for multilateral action. Perceived likelihood also played a role, although to a lesser extent. Together, these findings highlight the need for a focused approach to addressing risks that are high in perceived severity, as these are the risks that respondents believed should receive the most attention and resources.

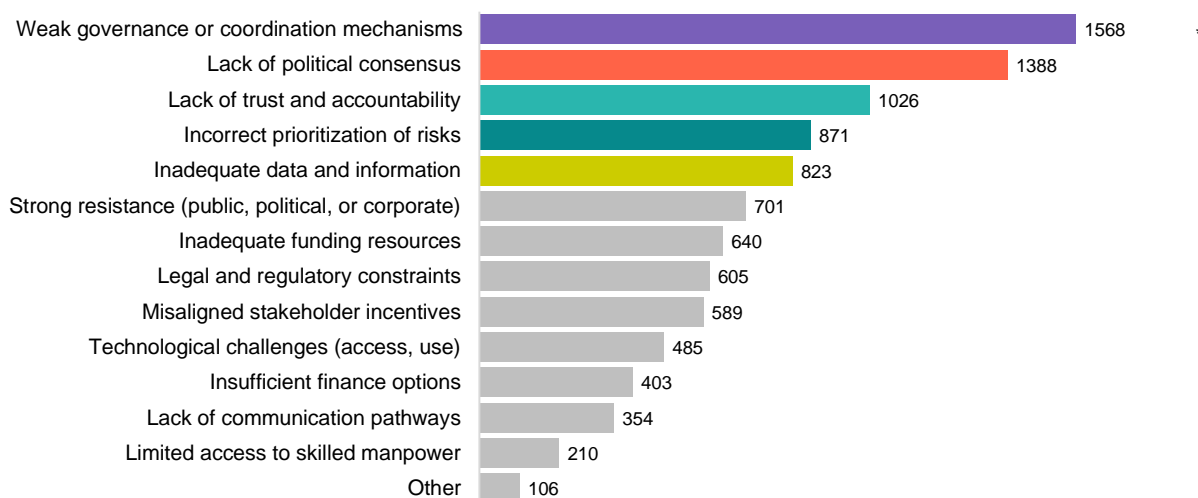
Section 4: Barriers and Actions to Addressing Risks

Barriers to Addressing Global Risks

This section identifies the barriers that inhibit effective risk management. Respondents were asked about a wide range of potential barriers, from those relating to limitations in motivation or coordination (incorrect prioritization of risks, lack of political consensus, strong resistance from influential groups), to issues of governance and regulation (weak governance or coordination mechanisms, legal and regulatory constraints) to insufficient resources or capacities (financial, skills, technological etc.). The findings on perceived barriers provide a basis for recommendations to confront existing gaps, alleviate inefficiencies and obstacles, and inform more coordinated efforts to better address global risks.

Across the 28 global risks surveyed, the top five barriers that impede risk management were *weak governance or coordination mechanisms*, *lack of political consensus*, *lack of trust and accountability*, *incorrect prioritization of risks*, and *inadequate data and information* (see Figure 4.1).

Figure 4.1 Barriers that inhibit global risk management, ranked by frequency of barrier selected



*Frequency count

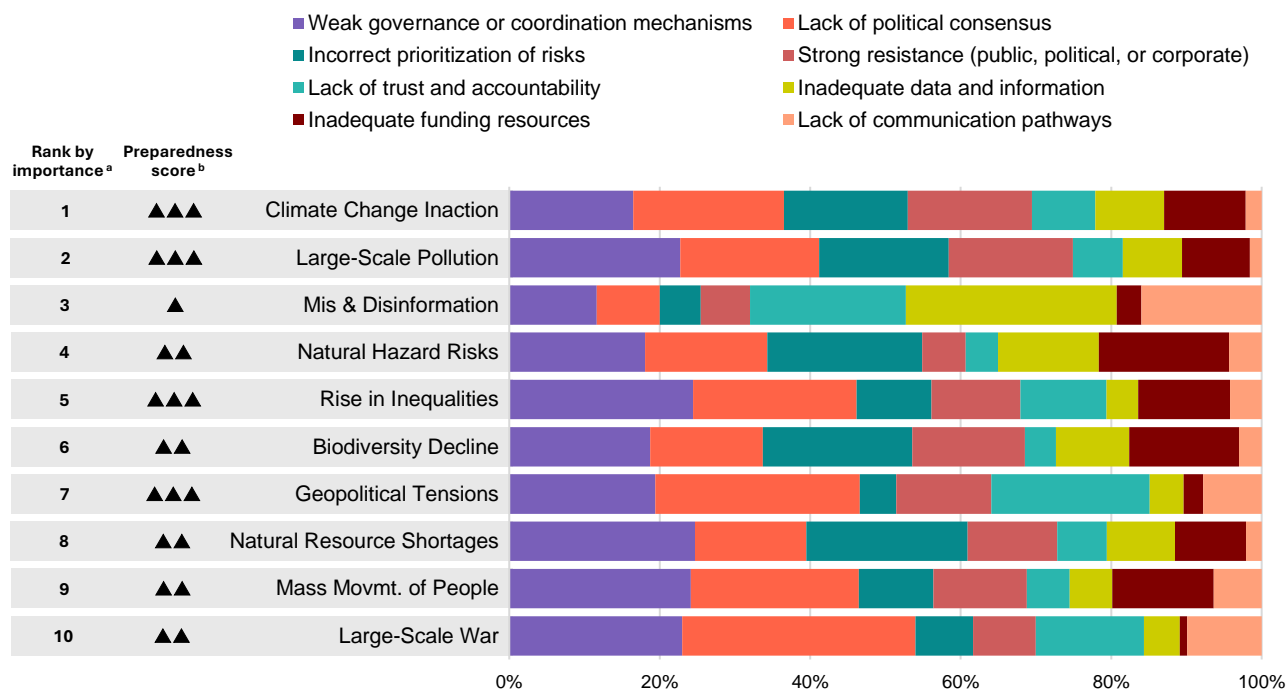
Respondents perceived *institutions and governance to be critical* in managing global risks, demonstrated by the prominence of weak governance as the foremost barrier across the 28 risks. Addressing this barrier may necessitate strengthening or reforming existing governance mechanisms or establishing new ones. The second and fourth barriers point to failures on the part of decision-makers. Leaders could choose to give greater priority to managing important risks but do not, perhaps out of self-interest, risk myopia, or a lack of awareness. The third most frequently cited barrier was *lack of trust and accountability*. This raises important questions about how leaders and organizations can become more trustworthy, potentially through strengthening accountability mechanisms. The fifth barrier most often chosen by respondents was *inadequate data and information*. This barrier may seem more straightforward to address by allocating additional resources to data collection and analysis, but it also exposes the complexities in addressing the “deep uncertainty”—aleatory and epistemic uncertainty and ambiguity—inherent in some global risks. Decision-making under such uncertainty requires alternative approaches such as scenario analysis, counter-factual analysis, and adaptive planning and policy-making, emphasizing resilience-building as a core priority in navigating uncertain futures.

These barriers manifest differently across the top 10 global risks of importance (see Figure 4.2), indicating nuanced impediments and priorities. Among the top 10 global risks by importance, *weak governance or coordination mechanisms* feature as the top barrier hindering action on **Large-Scale Pollution**, **Rise in Inequalities**, and **Mass Movement of People**. *Lack of political consensus*, although less of a barrier for **Mis & Disinformation**, is a particularly striking barrier in addressing **Geopolitical Tensions**, **Rise in Inequalities**, **Large-Scale War**, and **Mass Movement of People**. This indicates that divergent political agendas and interests may be impeding the collaborative actions needed to address these potentially catastrophic scenarios.

Top barriers to addressing **Mis & Disinformation** comprise *inadequate data and information* and *lack of trust and accountability*, underscoring the need for transparency and access to reliable information in combating the proliferation of inaccurate and/or deceptive information. *Incorrect prioritization of risks* also emerges as one of the top barriers—notably for the five environmental risks among the top 10 risks of importance, rather than risks in the other STEEP categories. This observation implies a potential mismatch between perceived priorities and the actual magnitude of risks, highlighting the need for alignment of urgency and action to address the current and impending environmental challenges facing the global community.

Figure 4.2 Top barriers to addressing the top 10 global risks of importance*

*Featured barriers include the top 3 barriers of each respective risk



^a Importance: Severity x Likelihood

^b Relative preparedness score:

▲ less prepared (3.5–4.0)

▲▲ somewhat prepared (4.1–4.5)

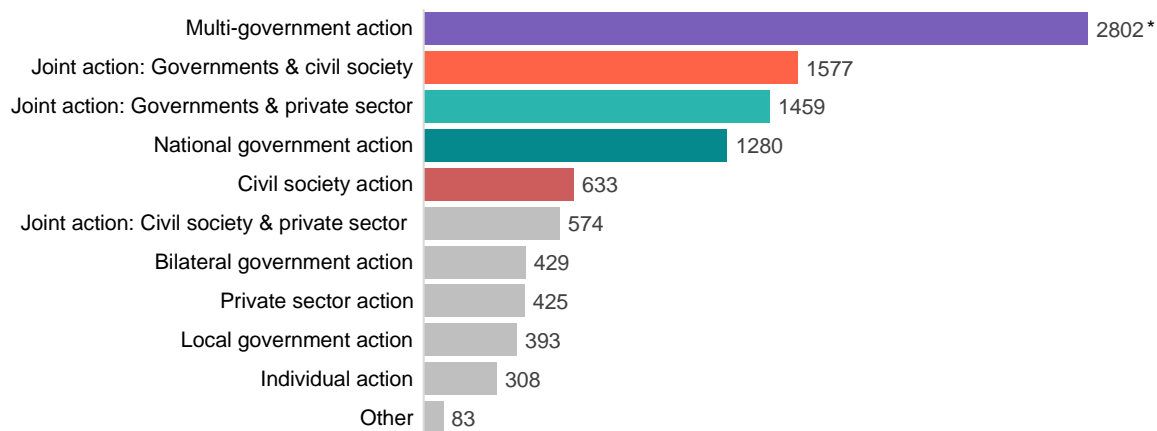
▲▲▲ more prepared (>4.5)

Actions for Addressing Global Risks

This section presents respondents' views on which stakeholders are best placed to take action to address global risks. Respondents were asked to choose between action by a single stakeholder group (e.g., national governments; civil society organizations; private sector, etc.) and joint action by two or more stakeholders (e.g., bilateral government; governments and civil society; governments and private sector etc.). These findings provide a basis for recommendations on actions to increase accountability of key stakeholders and better guide resource allocation to address global risks.

Across the 28 global risks surveyed, joint action by multiple governments (**multi-government action**), **joint action by governments and civil society**, and **joint action between governments and the private sector** were viewed as most effective to address global risks (see Figure 4.3). The prominence of government involvement in risk management actions—whether in coordination with other governments or with other stakeholder groups—underscores the pivotal role of national governments in tackling global risks and managing their impacts on citizens. These three stakeholder actions also feature prominently in 7 of the 10 top global risks of importance (see Figure 4.4).

Figure 4.3 Actions to address global risks, ranked by frequency of action selected



*Frequency count

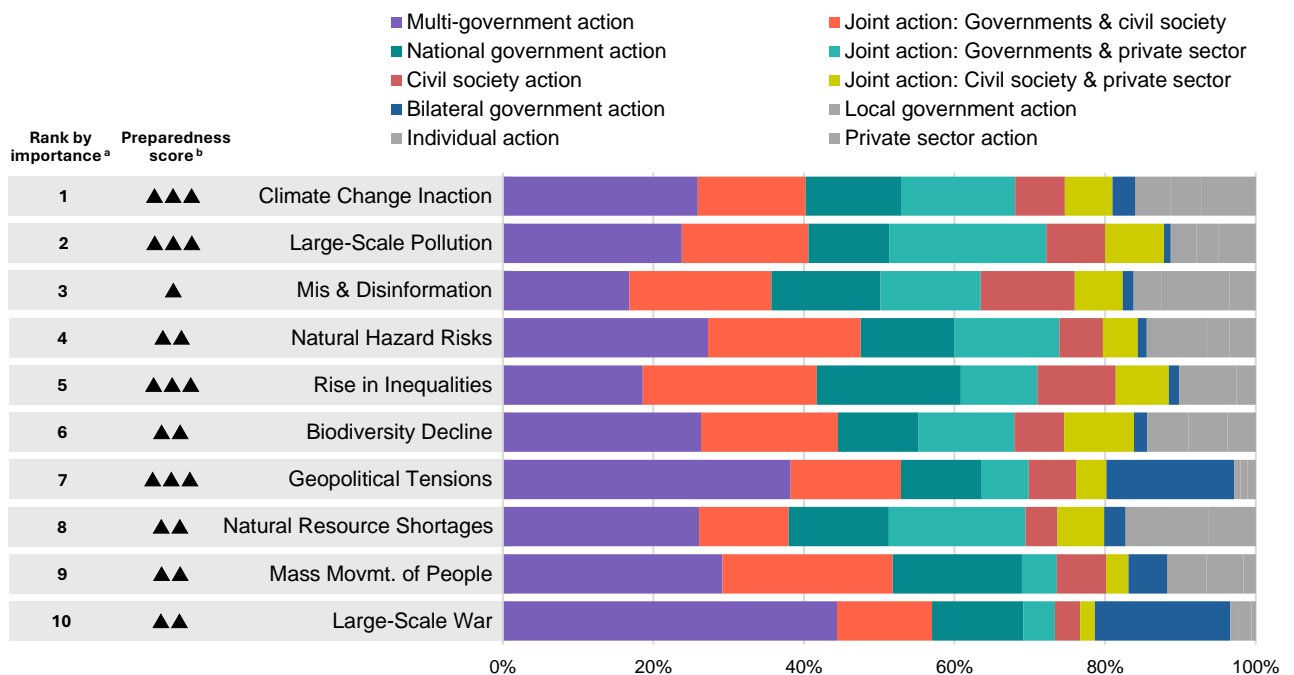
Among the top 10 global risks of importance, actions by two or more national governments (**bilateral and multi-government actions**) were considered to be more effective than other stakeholder actions, notably for addressing Geopolitical Tensions and Large-Scale War. However, bilateral action between two government was not considered to be particularly effective in managing other top 10 important risks. This observation extends to non-top 10 important risks such as Economic Fragmentation and Technology-Driven Power Concentration, where bilateral “decoupling” have been known to arise to reduce mutual dependencies.

Unilateral action by **national governments** was considered among the most effective forms of action to address Rise in Inequalities and Mass Movement of People. Yet, across all the 28 global risks surveyed, such unilateral action was considered less effective compared to action involving two or more governments working together.

Actions by *civil society organizations*, working independently from other stakeholder groups, were viewed to be more comparatively more effective in addressing **Rise in Inequalities** and **Mis & Disinformation** than the other top global risks of importance. Their prominence is observed more markedly in collaboration with government(s): across all top global risks of importance, *joint action between government and civil society* rank among the top voted action, particularly for addressing **Rise in Inequalities** and **Mass Movement of People**.

Among the top global risks of importance, actions by the *private sector* independently were observed to be less effective than unilateral actions by governments or civil society for managing risks. Comparably, *joint action between civil society and private sector* was deemed more effective in addressing the 10 top risks, which in turn was outranked when in collaboration with government(s)—*joint action between government and private sector* were considered to have a comparative advantage in managing risks of **Large-Scale Pollution** and **Natural Resource Shortages**, although least suited to addressing Geopolitical Tensions, Large-Scale War, and Mass Movement of People.

Figure 4.4 Stakeholder actions to address the 10 top global risks of importance



^a Importance: Severity x Likelihood

^b Relative preparedness score:

▲ less prepared (3.5–4.0)

▲▲ somewhat prepared (4.1–4.5)

▲▲▲ more prepared (>4.5)

Section 5:

Risk Interconnectedness

Interconnectedness

Connection Strength

This section discusses the strongest relationships between risks, as identified by respondents. **Connection strength** is a staple measure in network analysis that sums the number of times respondents make a causal link between two risks; it is represented by the thickness of the arrows between two risks on a network map.¹ Meanwhile, each risk node on the network map is sized by **degree centrality**, which illustrates how connected a risk is to all other risks across the map. Risks with higher degree centrality can be considered important because they are directly influenced by, and influence, other risks. To increase the readability of the map, Figure 5.1 below shows only those connections in the top 5% in terms of connection strength. Focusing on risks with the strongest connections in the interconnections map allows for the targeted management of core risks that are most explicitly linked to others, facilitating efficient resource allocation to reducing risk mitigation barriers and early action, ultimately enhancing overall resilience and preparedness.

Figure 5.1 Overall network map, filtered by 95th percentile connection strength

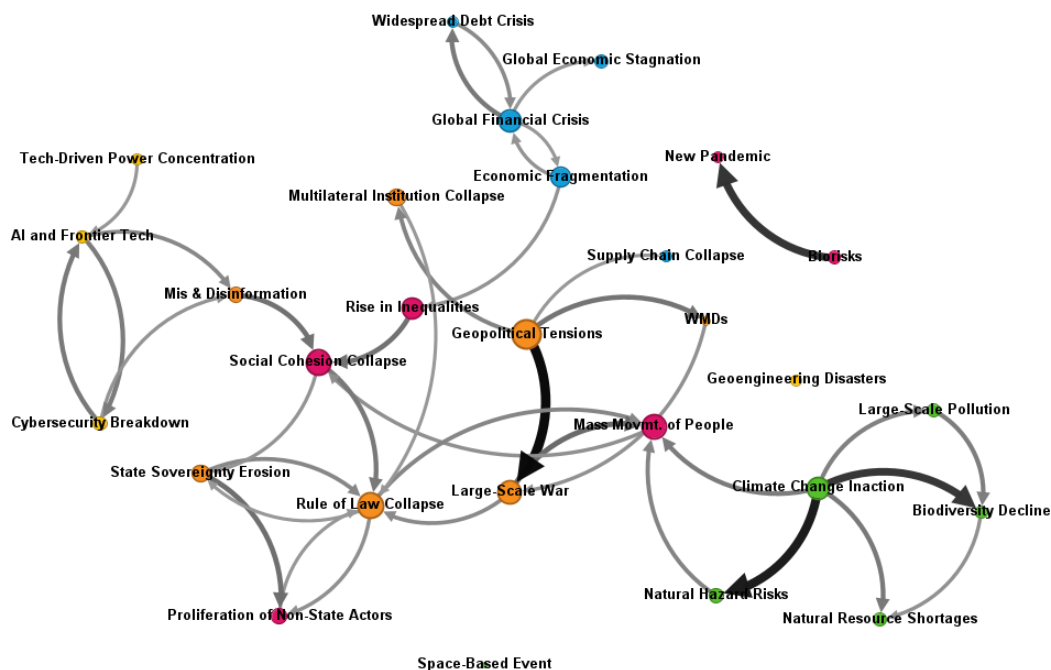


Figure 5.2 highlights the top ten risk relationships by connection strength (full list in Appendix, p.91), without repeated 'cause' risks as these are captured within the specific causal chains in the deep dive for each risk. For example, Climate Change Inaction has two of the strongest relationships of all 28 risks— one to Natural Hazard Risks and another to Biodiversity Decline; although only the former is represented in the table, the latter is represented on p.42. This method of exploring risk interconnections is unique to this Global Risk Report and ensures that each of the strongest risk relationships is explored in detail.

* **Importance:** Severity x Likelihood

Figure 5.2 Top ten risks by connection strength

Rank by Importance	Rank by Connection Strength		Focal Risk		Top Connection	Connection Strength
7	1	Orange	Geopolitical Tensions	Orange	Large-Scale War	155
1	2	Green	Climate Change Inaction	Green	Natural Hazard Risks	143
11	3	Pink	Biorisks	Pink	New Pandemic	125
10	4	Orange	Large-Scale War	Pink	Mass Movmt. of People	87
23	5	Orange	State Sovereignty Erosion	Pink	Proliferation of Non-state Actors	84
5	6	Pink	Rise in Inequalities	Pink	Social Cohesion Collapse	82
3	6	Orange	Mis & Disinformation	Pink	Social Cohesion Collapse	82
20	8	Pink	Social Cohesion Collapse	Orange	Rule of Law Collapse	77
15	8	Blue	Global Financial Crisis	Blue	Widespread Debt Crisis	77
14	8	Yellow	Cybersecurity Breakdown	Yellow	AI and Frontier Tech	77

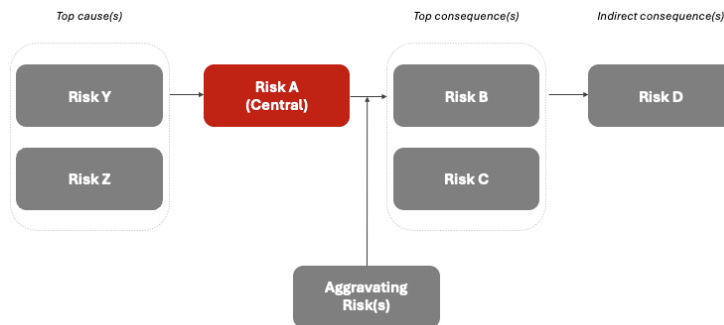
* All risks only appear once in the “focal risk” column. However, there are repeated risks in “Consequences”, as these are the risks that are strongest linked to the corresponding “cause”.

Navigating Interconnections: Risk Clusters

In this section, interconnections of specific risks are discussed, accompanied by a focused risk interconnections map that allows readers to visualize the formation of risk clusters. The risk map depicts interconnections both within the same risk category (STEEP) and with risks in other categories. These **within/outside category interactions** of a risk capture important system dynamics and can help to predict how changes in one area may propagate throughout the system. Understanding these dynamics can significantly reduce information asymmetries in resilience planning, enabling multilateral institutions to identify and reduce interdependencies in the risk chain.¹

Navigating Interconnections: Links & Chains

Figure 5.3 Causal chain framework

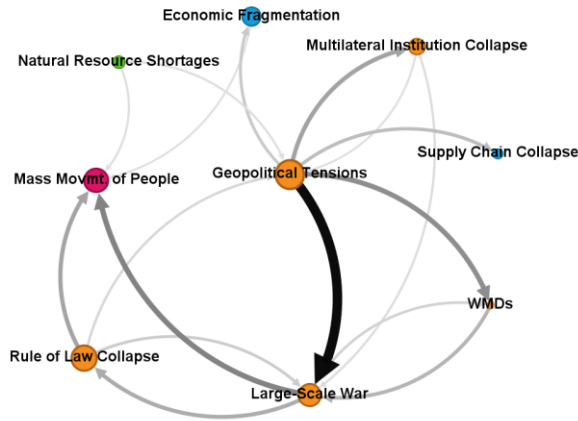


Each risk will also feature a simplified causal risk chain that highlights the following:

- **Main causes**, as identified by connection strength
- **Main consequences**, as identified by connection strength
- **Aggravating risks**, as risks that exacerbate the impact of the central risk on its consequences
- **Indirect consequences** that are linked to the central risk’s immediate consequences
- **Causal loops**, or cycles of risk occurrence, will be included where applicable

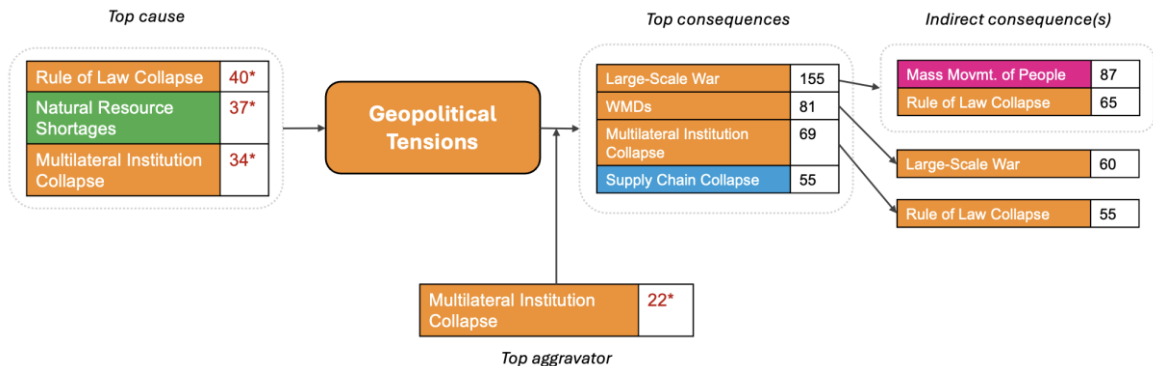
To avoid presentation of spurious connections, only connections that are equal to or above the top 5th percentile of all strengths will be discussed in depth. Using this benchmark yields a value of 55 for direct risk connections, and 24 for aggravating risks. Additionally, discussions will be kept within two steps of the risk-in-focus (i.e., chains will be no longer than two-risks long in either direction).

Geopolitical Tensions



Clustering

Although **Geopolitical Tensions** is mostly nested among other political risks, it is also linked to economic and societal risks. Notably, it also has the highest degree centrality value, meaning that it is perceived to be the most connected risk out of the 28-risk set, and has high influence on risk contagion.



* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Rise in **Geopolitical Tensions** is a risk that does not have strong drivers among the risks included in the survey but is a top cause of numerous other risks. The cause/consequence relationship between **Geopolitical Tensions** and **Large-Scale War** is the strongest among all risk relationships. Other risks that are seen to be directly triggered by Geopolitical Tensions include **WMDs**, **Multilateral Institution Collapse**, and **Supply Chain Collapse**.

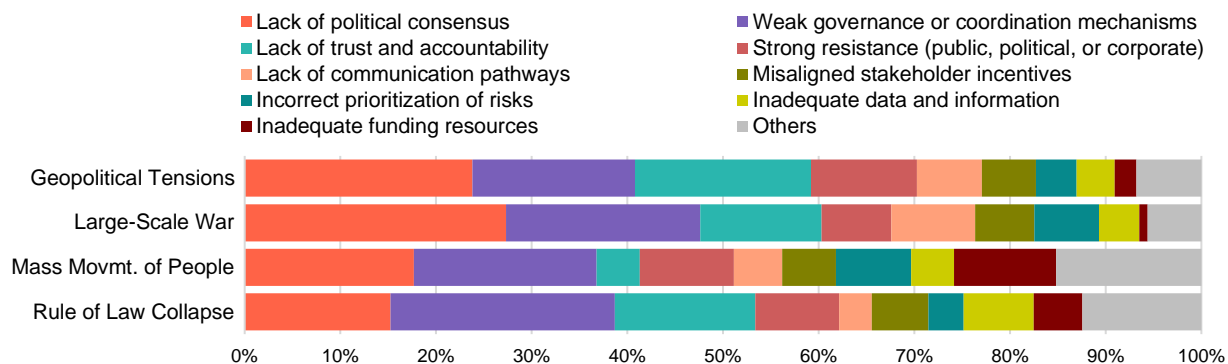
Main Causal Chain



The connection between **Geopolitical Tensions** and **Large-Scale War** is apparent; historical records consistently reflect that conflicts among major powers often originate from a culmination of smaller-scale disputes, such as clashes in political ideologies, resource competition, and security dilemmas.¹ **Large-Scale War** was perceived by respondents to be a key precursor to both **Rule of Law Collapse** and **Mass Movement of People**. This effect may be amplified given that **Rule of Law Collapse** was also perceived to be a driver of **Mass Movement of People**, in a secondary causal chain.

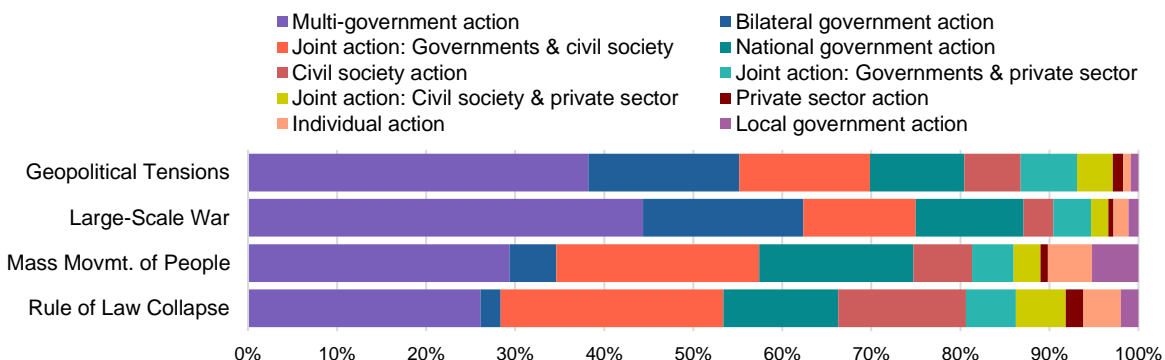
Addressing Geopolitical Tensions

Figure 5.4 Barriers to addressing causal-chain risks involving Geopolitical Tensions



Three common barriers impeding the management of the causal-chain risks linked to **Geopolitical Tensions** comprise the "lack of political consensus," "lack of trust and accountability," and "weak governance or coordination mechanisms." These barriers, which account for at least 40% of responses for risks in this causal chain, especially reflect perceptions where gaps in political cooperation as well as governance and coordination may markedly hinder risk management efforts. Although the "lack of trust and accountability" is perceived to be less of a barrier in addressing the downstream risk of Mass Movement of People, its prominence as a barrier for **Geopolitical Tensions**, **Large-Scale War**, and **Rule of Law Collapse** highlights the critical need for building reliable international relations and transparent institutions when dealing with political threats. Conversely, the prominence of "inadequate funding resources" only for **Mass Movement of People** out of the four-risk chain indicates salient concerns over the substantial financial resources involved in managing this risk. This distinction is significant because addressing political barriers requires diplomatic efforts and policy changes, whereas inadequate funding necessitates financial allocations, highlighting different approaches to overcoming obstacles in addressing these respective risks.

Figure 5.5 Actions for addressing causal-chain risks involving Geopolitical Tensions

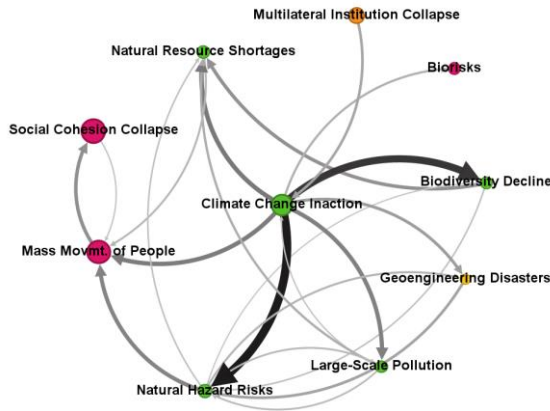


Shared consensus on the actions to address the four-risk **Geopolitical Tensions** chain comprise "multi-government action," "joint action: governments & civil society," and "national government action." Notably, "multi-government action" along with "bilateral government action" feature most prominently for **Geopolitical Tensions** and **Large-Scale War**, seemingly in response to the top two barriers for these risks being "lack of political consensus" and "weak governance." **Geopolitical Tensions** often manifest in complex challenges that transcend national borders, often requiring coordinated actions from multiple governments to effectively address and mitigate risks.

Naturally, multi-governmental action is critical in such contexts because no single nation can independently resolve the underlying issues of international conflicts or the geopolitical ambitions that drive them. Such collaborative efforts can take various forms, including diplomatic negotiations, economic sanctions, and collective security arrangements. For instance, strategies for preventive diplomacy and conflict resolution have emphasized the importance of early intervention and coordinated responses to prevent conflicts from escalating.¹ Additionally, international peacekeeping and preventive diplomacy by multilateral organizations and alliances can deter the onset of conflicts and stabilize regions before tensions lead to warfare.² In general, these cooperative mechanisms enable countries to share resources, intelligence, and strategies, ultimately leading to more effective management and resolution of global crises and enhancing international security.

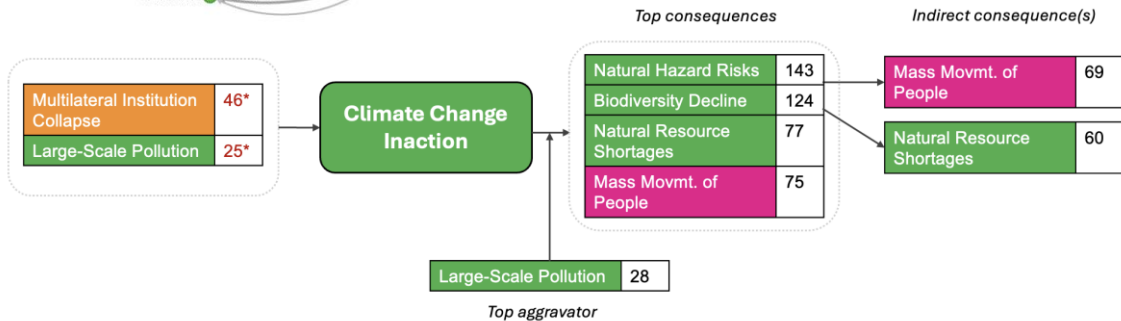
Meanwhile, “joint action: governments and civil society” has a larger presence for **Mass Movement of People** and **Rule of Law Collapse**. This observation suggests that these two stakeholder groups—national governments and civil society organizations (CSOs)—hold important roles in governing the realms of immigration, social welfare, and social integration. Across many contexts, CSOs have played pivotal bridging roles in providing direct support for displaced communities, typically through advocacy, awareness-raising, enforcing government accountability, and the distribution of essential services. Jointly, governments may collaborate with CSOs to prioritize supporting community-based initiatives to enhance cohesion between displaced and host communities, involving the broader civil society in the process.³

Climate Change Inaction



Clustering

Climate Change Inaction is a central bridging risk between all other environmental risks and other categories—it is the 6th highest risk in terms of degree centrality. Its causal relationship with **Natural Hazard Risks** is the 2nd strongest overall. **Climate Change Inaction** is both a direct and indirect driver of **Mass Movement of People**, a societal risk that is nested among political risks.

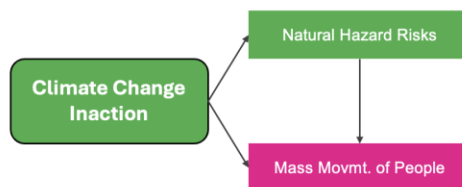


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Respondents appear to be divided on the causes of **Climate Change Inaction**; while **Multilateral Institution Collapse** and **Large-Scale Pollution** were linked to the risk, neither met the cut-off threshold and were not perceived to be strong causal drivers. Nevertheless, **Climate Change Inaction** was perceived to be a cause of other environmental risks like **Natural Hazard Risks** – which is the second strongest connection amongst all risk relationships. **Large-Scale Pollution** was also perceived by respondents to exacerbate the impact of **Climate Change Inaction** (e.g., pollution worsening the resultant impacts on **Natural Hazard Risks**, **Biodiversity Decline**, etc.).

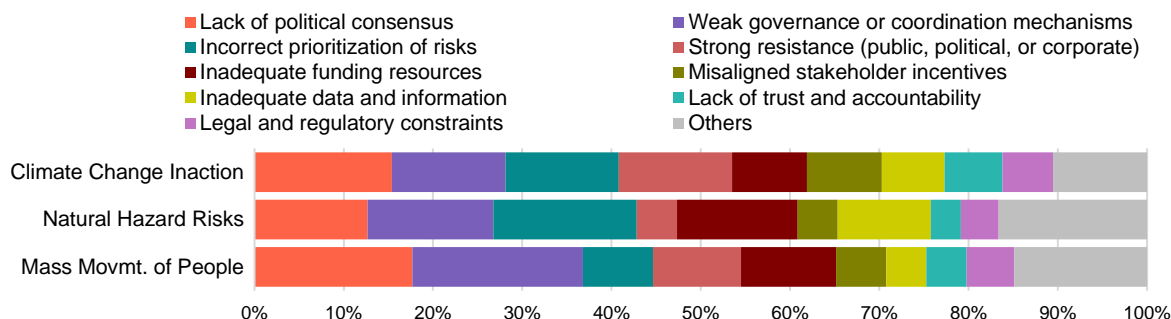
Main Causal Chain



The interplay between **Climate Change Inaction**, increasingly severe **Natural Hazard Risks**, and **Mass Movement of People** has been well-documented across time. Between 2008 and 2016, the UNHCR reported an average of 21.5 million people being displaced by extreme weather events (including natural hazards such as storms and floods)¹, and the Institute for Economics and Peace (IEP) estimates that this figure may soar to a total of 1.2 billion people by 2050.²

Addressing Climate Change Inaction

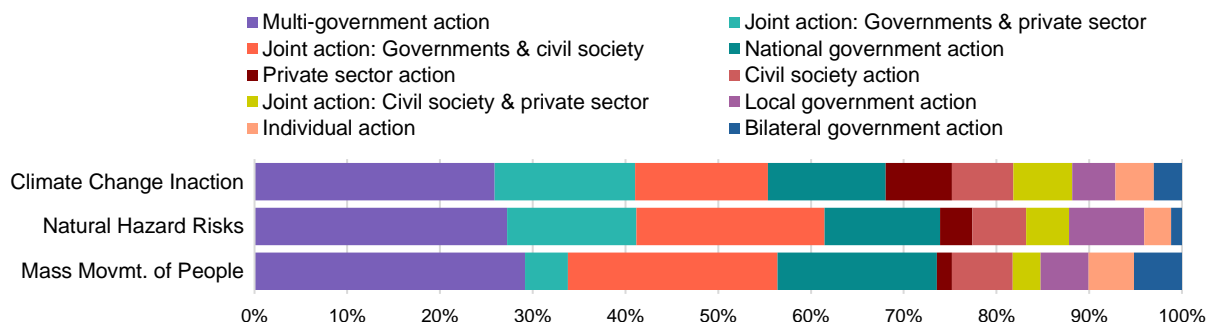
Figure 5.6 Barriers to addressing causal-chain risks involving Climate Change Inaction



The “lack of political consensus” and “weak governance or coordination mechanisms” are notably prominent barriers to managing the three risks. This suggests the perception of a systemic issue in political and administrative structures that may be hindering effective risk management. Additionally, the “incorrect prioritization of risks” was perceived to be particularly high for **Climate Change Inaction** and **Natural Hazard Risks**, indicating that environmental risks may be often undervalued or misunderstood. Research on World Bank clients have highlighted this trend especially among low-income and developing countries (LIDCs), which do not tend to place climate change among their top priorities despite the outsized impact of environmental risks on LIDCs. Many of these countries instead focus on securing development funding for projects with more immediate results (e.g., economic growth, rural job creation, infrastructure, transportation, etc.).⁴

The “lack of political consensus” barrier appears especially pronounced for **Mass Movement of People**, signaling a perception that institutions are unable to agree on policy decisions involving displacement. For example, this may involve political parties within a country failing to come to an agreement on migration policy due to rising anti-migrant sentiments,⁵ the high costs of community integration,⁶ or failure to determine the legal rights of migrants in a new country.⁷ “Weak governance or coordination mechanisms” also features prominently here, where fragmented or contradictory approaches to managing mass influxes of migrants can exacerbate tensions among both host and migratory communities.

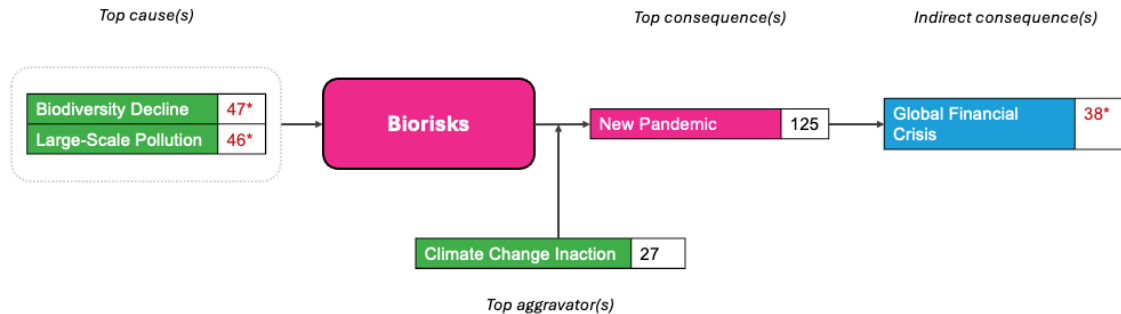
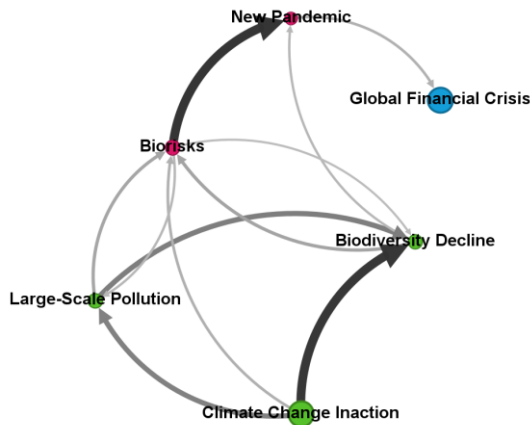
Figure 5.7 Actions for addressing causal-chain risks involving Climate Change Inaction



Top actions for addressing the three-risk causal chain include “multi-government action” and “joint action: governments & civil society.” Respondents also emphasized the role of “joint action: governments & private sector” for **Climate Change Inaction** and **Natural Hazard Risks**. The emphasis on multi-government and joint actions is crucial as it reflects the perceived necessity for coordinated efforts across different sectors and levels of governance to tackle the far-reaching impacts of climate change. Moreover, the role of the private sector in addressing environmental risks underscores its importance in not only the development and deployment of infrastructure, technologies, and funding necessary for environmental risk mitigation, but also its part in reducing emissions.

When **Natural Hazard Risks** occur, addressing downstream **Mass Movement of People** (i.e., climate-driven displacement) may require a more nuanced multi-governmental approach, and greater cooperation between governments and CSOs. In managing mass movements triggered by climate-related disasters, multi-government cooperation is essential for handling cross-border migration and providing humanitarian assistance. This might include regional agreements to facilitate the safe, orderly movement of displaced populations, resource and information sharing, and joint efforts to build adaptive capacities in vulnerable regions.⁵ Civil society organizations are crucial at the grassroots level, providing relief, advocating for vulnerable populations, and ensuring that adaptation and mitigation efforts are equitable. Collaboration between governments and CSOs can enhance community resilience, ensure culturally appropriate adaptation measures, and mobilize local resources effectively. These partnerships are vital for maintaining social cohesion in the face of climate-induced stress, helping to bridge the gap between government policies and community needs.⁶

Biorisks

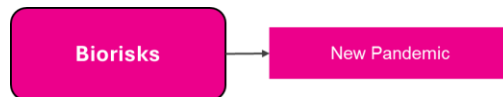


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

While the top causes of **Biorisks** were perceived to be **Large-Scale Pollution** and **Biodiversity Decline**, these risks did not meet the cut-off threshold and were not considered to be significant drivers. **Climate Change Inaction** was perceived to be an aggravator of the impact of biorisks, while the top impact was found to be **New Pandemic**. **Global Financial Crisis** was found to be the top consequence of a new pandemic, but this relationship was not deemed to be strong as well.

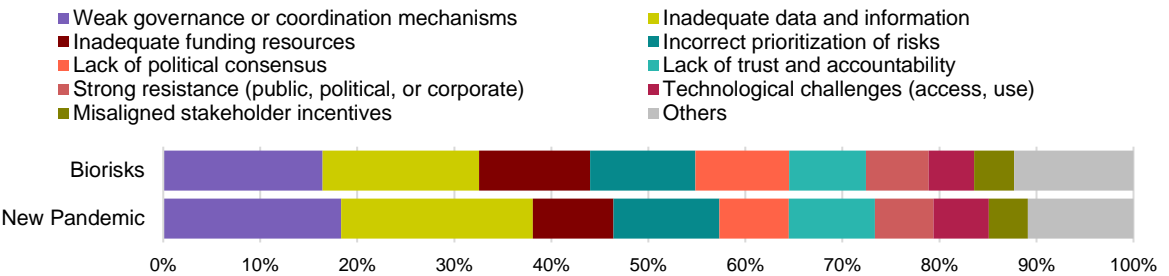
Main Causal Chain



The relationship between **Biorisks**—the outbreak of disease—and **New Pandemic** is an intuitive one, especially considering that many pandemics across history have zoonotic origins including the recent COVID-19 pandemic, the Black Death, and the Spanish flu.¹ It may also be unsurprising that respondents believe **Climate Change Inaction**, an environmental risk, to exacerbate the effects of **Biorisks** given widespread evidence linking deforestation and uncontrolled urbanization leading to zoonotic spillovers where pathogens can more easily and frequently spread between animals and humans.² Inadequate climate action and rising temperatures have also raised concern for the thawing of permafrost, which has the potential to release ancient strains of bacteria and viruses into the ecosystem, potentially leading to new disease outbreaks.³

Addressing Biorisks

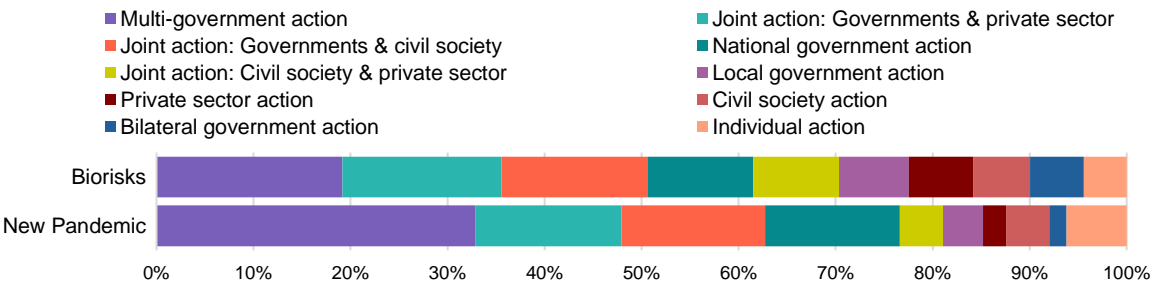
Figure 5.8 Barriers to addressing causal-chain risks involving Biorisks



“Weak governance or coordination mechanisms” and “inadequate data and information” were perceived to be the top two barriers unique to **Biorisks** and its closely related consequence, **New Pandemic**. These barriers may be particularly detrimental given that effective management of these risks relies heavily on robust governance structures and accurate, timely information. Poor leadership, insufficient collaboration among different agencies, and fragmented policies can lead to slow and ineffective responses to biological threats. Inadequate and/or unreliable data and information may further compound the problem, leading to misinformed decisions, delayed interventions, and inadequate resource allocation.

The next two most important barriers are “inadequate funding resources” and “incorrect prioritization of risks.” Clearly, having sufficient funds to implement health surveillance, treatment, and prevention is necessary to contain Biorisks and (potential) pandemics. The former was observed during the COVID-19 pandemic, where there were great disparities between high-income and low-income countries. High-income countries were able to spend almost 300 times that of low-income countries.^{1,2} As concerns over the COVID-19 pandemic subside, there are signs that governments are now on the retreat,³ reflecting shifts in the prioritization of risks.

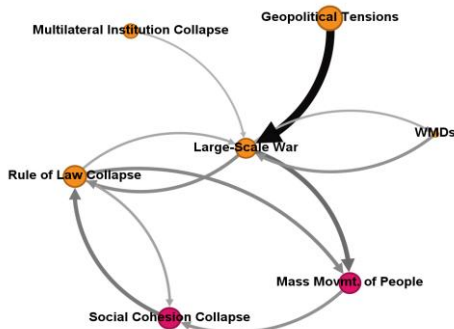
Figure 5.9 Actions for addressing causal-chain risks involving Biorisks



Top actions for addressing these risks include “multi-government action,” “joint action: governments and the private sector,” and “joint action: governments and civil society.” The emphasis on multi-government action indicates the importance respondents placed on international cooperation in managing biological threats, which often transcend national borders. Coordinated efforts can facilitate the sharing of resources, expertise, and information, thereby enhancing the overall effectiveness and speed of response strategies. Collaboration with the private sector can further accelerate the development and distribution of vaccines and necessary interventions, enhance the resilience of supply chains, and provide sustainable investments in post-crisis recovery.⁴

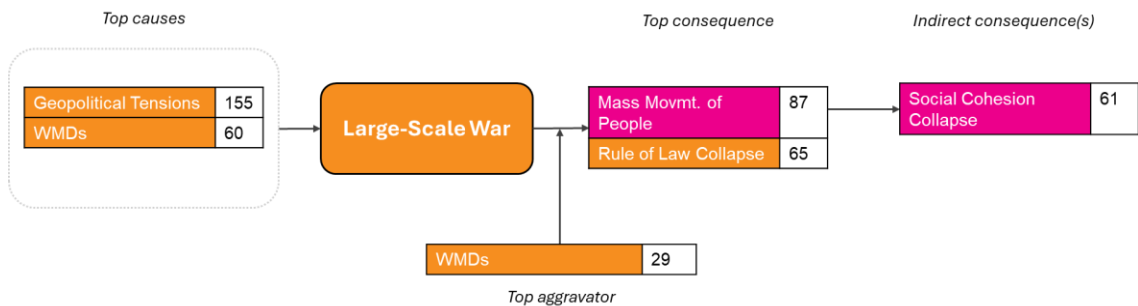
CSOs may also play a crucial role in bridging between policy and practice. CSOs typically have access to local communities, enabling them to advocate for underreported issues, as well as provide valuable information of the needs and challenges faced by the population. Jointly with the government, CSOs can help enhance public trust and compliance with health measures, which are critical during a pandemic.

Large-Scale War



Clustering

Large-Scale War is nested between both political risks (i.e., its own category) and societal risks. Notably, its causal connection to **Mass Movement of People** is the 4th strongest of all risk relationships.

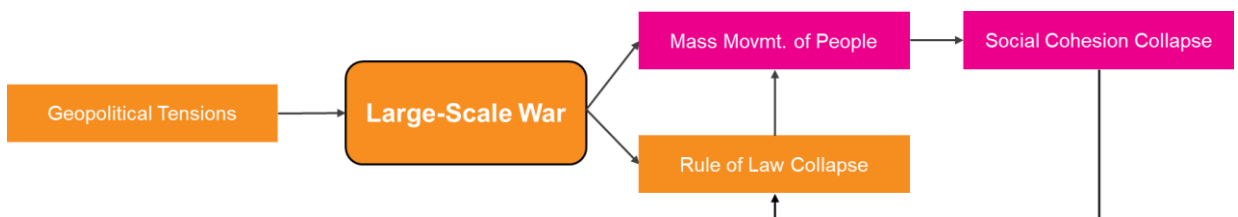


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Large-Scale War is considered by respondents to be caused primarily by political risks; in particular, **Geopolitical Tensions** are the strongest driver. Furthermore, **WMDs** are a direct driver, as well as a risk that worsens its impact. Respondents believe that **Large-Scale War** has the strongest impact on **Rule of Law Collapse**, and **Mass Movement of People**—which, in turn, leads to **Social Cohesion Collapse**.

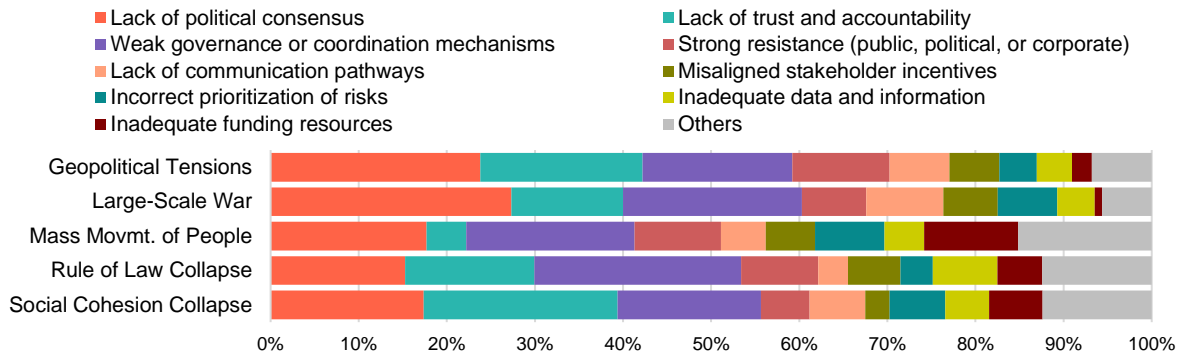
Main Causal Chain



In addition to the causal chain described in “Interconnections: Geopolitical Tensions” (p.39), this causal chain further identifies an important downstream consequence of **Large-Scale War**. Specifically, the resultant **Mass Movement of People** fleeing conflict can, in turn, result in **Social Cohesion Collapse**. Evidence suggests that inflows of asylum-seekers can often lead to anti-immigrant sentiments, violence, and social unrest.¹ Additionally, fears about security, perceived loss of cultural identity, and anti-immigrant rhetoric can continue to undermine social cohesion.²

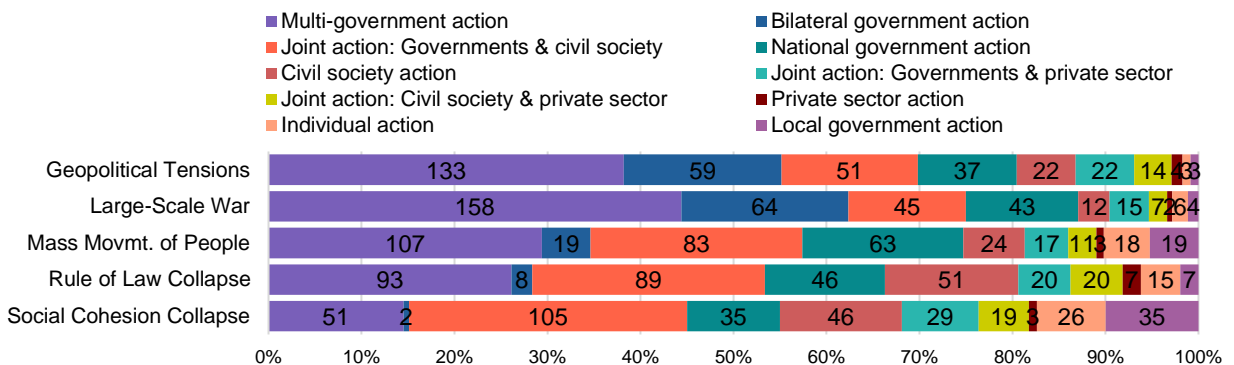
Addressing Large-Scale War

Figure 5.10 Barriers to addressing causal-chain risks involving Large-Scale War



The top common barriers to these interconnected risks were perceived to be a “lack of political consensus” and “weak governance or coordination mechanisms.” The consensus of these being top barriers across different risk categories—political for **Geopolitical Tensions**, **Large-Scale War**, and **Rule of Law Collapse**, and social for **Mass Movement of People** and **Social Cohesion Collapse**—suggests a perceived pervasive problem in political and administrative structures. Challenges in fostering political consensus and building robust governance frameworks may hamper the coordinated effort required to manage these risks effectively. Further, the prominence of “lack of trust and accountability” as a barrier in addressing political risks highlights the critical need for transparent and reliable institutions.

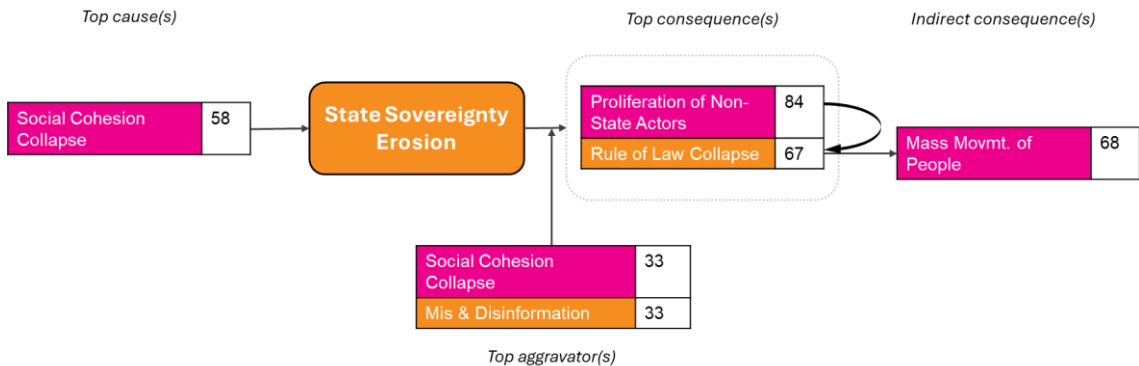
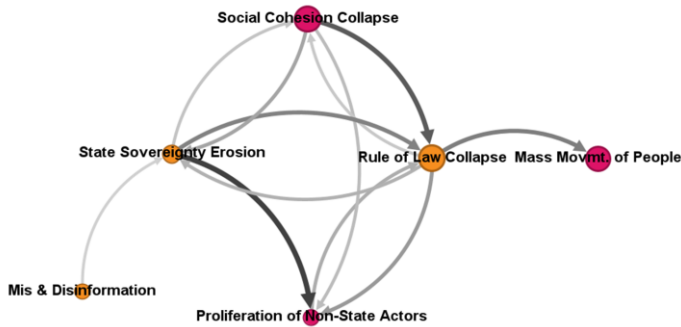
Figure 5.11 Actions for addressing causal-chain risks involving Large-Scale War



The top actions common across addressing these risk include “multi-government action,” “joint action: governments & civil society,” and “national government action.” However, the prominence placed on multi-government action especially highlights the necessity for international cooperation in mitigating the risks associated with large-scale conflicts. Joint action with CSOs were also acknowledged as crucial stakeholders in risk management, particularly in addressing risks from **Social Cohesion Collapse**. CSOs facilitate efforts in bridging social capital between intra-societal groups¹ and provide opportunities for citizen-to-citizen contact across divides, which can increase social cohesion².

“Bilateral government action” also featured as a top strategy—but only for **Geopolitical Tensions** and **Large-Scale War**. This observation is significant because bilateral engagements can directly address the root causes of geopolitical tensions through diplomacy and targeted agreements, potentially preventing conflicts from escalating. Bilateral government actions, however, were not perceived by respondents to be critical for addressing Mass Movement of People, Rule of Law Collapse, and Social Cohesion Collapse. These latter risks may require broader, multilateral approaches and grassroots interventions.

State Sovereignty Erosion



* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Social Cohesion Collapse was perceived as being both the strongest cause of **State Sovereignty Erosion**, and its top aggravator (tied with **Mis & Disinformation**). In other words, it simultaneously drives the erosion of state sovereignty and worsens its impact. The top perceived consequences of State Sovereignty Erosion are the **Proliferation of Non-State Actors** and **Rule of Law Collapse**, which are further engaged in a secondary causal loop as the latter is also a consequence of the former.

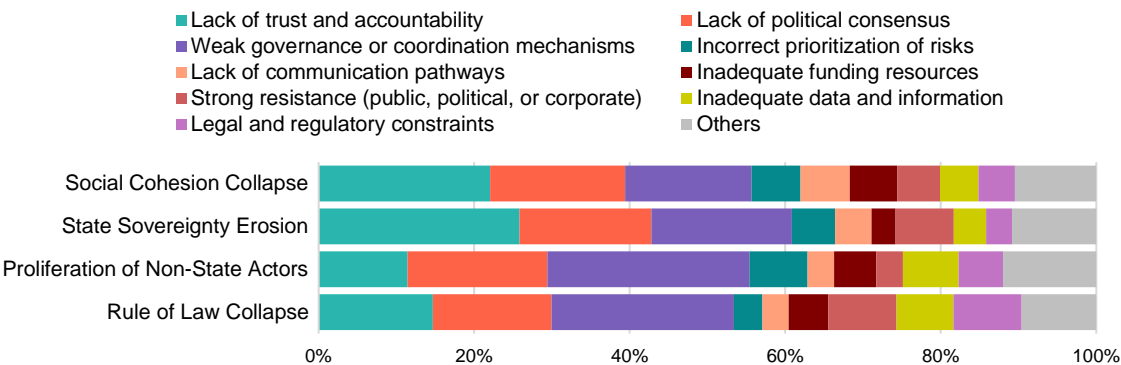
Main Causal Chain



Social Cohesion Collapse can manifest in different ways depending on their causes (e.g., Interconnections: Rise in Inequalities); these can be linked to internal conflicts, declining trust in government institutions, or fragmentation of social networks.¹ These disruptions can render governance mechanisms more difficult to coordinate, weakening a state's capacity to maintain order and provide services (i.e., **State Sovereignty Erosion** and **Rule of Law Collapse**).² As state sovereignty erodes, power vacuums may form, encouraging the **Proliferation of Non-State Actors**—such as armed groups and militia.³ Some non-state actors may seek to undermine central authority or engage in violent activities contributing to lawlessness and insecurity.⁴

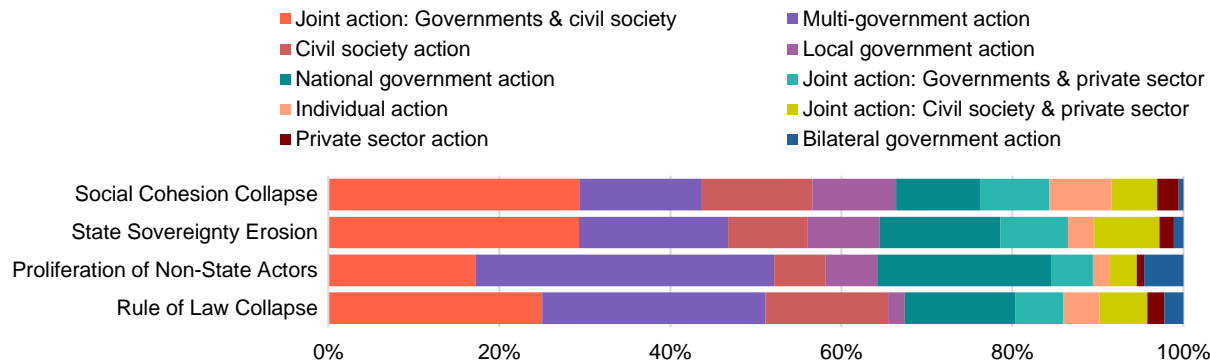
Addressing State Sovereignty Erosion

Figure 5.12 Barriers to addressing causal-chain risks involving State Sovereignty Erosion



It is perhaps unsurprising that **Social Cohesion Collapse** and **State Sovereignty Erosion** share the same top barrier—“lack of trust and accountability”—because these risks tend to be underpinned by a loss of trust in institutions. Social cohesion, for example, relies heavily on trust and a sense of shared accountability among community members and between the populace and their leaders. When trust erodes, cooperation diminishes, making it difficult to implement policies or actions effectively. Similarly, state sovereignty hinges on the legitimacy and accountability of governance structures. When citizens perceive their government as untrustworthy or unaccountable, they are less likely to support its initiatives, weakening the state's ability to enforce laws and maintain order.

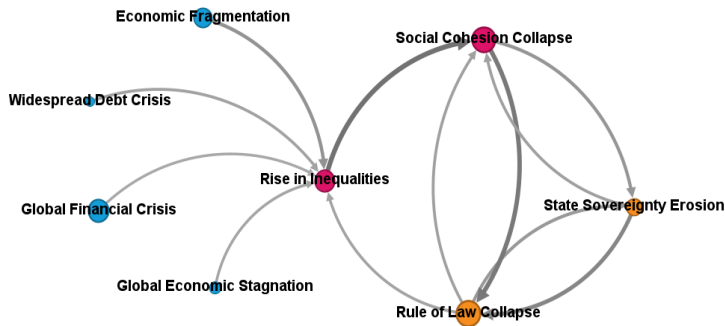
Figure 5.13 Actions for addressing causal-chain risks involving State Sovereignty Erosion



Interestingly, the most effective actions for addressing the causal chain involving **State Sovereignty Erosion** place heavy emphasis on collaborative efforts: “Joint action: governments & CSOs,” “Multi-government action,” and “Civil society action.” “Multi-government action” takes up a larger share of responses than any other action, possibly emphasizing the outsized role that international relationships can have on mitigating the erosion of state sovereignty from different sources (e.g., political shifts, internal conflict, etc.).

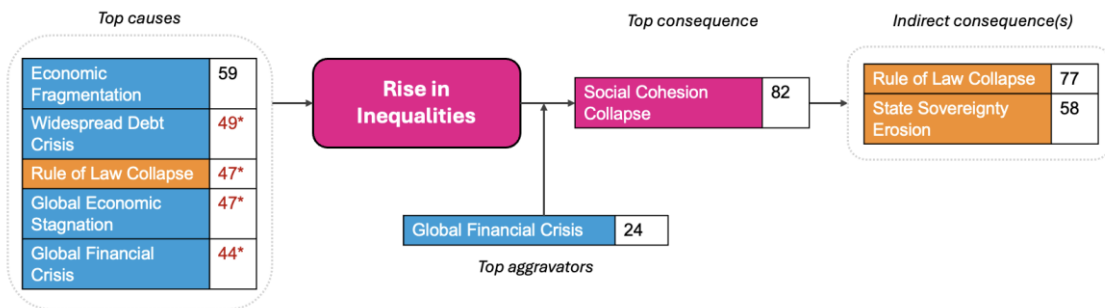
Nevertheless, the uniformity of these actions across the risks indicates a recognition of the need for holistic and cooperative approaches between two primary stakeholder groups: governments and CSOs. The involvement of both groups are crucial because it leverages the strengths of different societal sectors. For instance, governments can provide resources, authority, and coordination, to mitigate and overcome turbulent political and social currents. CSOs, on the other hand, can offer grassroots insights, local trust, and community engagement where most needed. This collaboration is essential in rebuilding trust and accountability, addressing the root causes of **Social Cohesion Collapse**, and subsequently reinforcing trust and state sovereignty.

Rise in Inequalities



Clustering

Rise in Inequalities is nested between both societal risks (i.e., its own category) and economic risks, while also influencing other political risks. Notably, it ranks 8th in terms of degree centrality, meaning that it is perceived to be well-connected to and has sizeable influence over other risks.

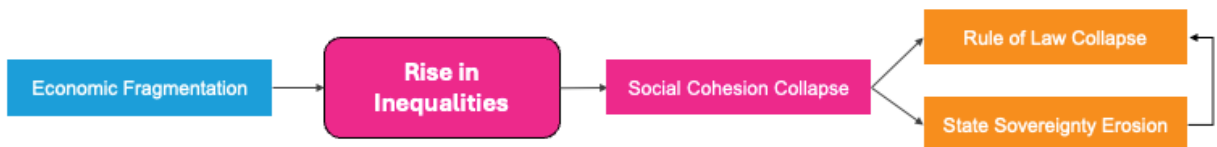


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Rise in Inequalities was considered by respondents to be caused primarily by economic risks; in particular, **Economic Fragmentation** is the strongest economic driver of inequality. Not only is **Global Financial Crisis** (besides **Global Debt Crisis** and **Widespread Economic Stagnation**) a direct driver of rising inequalities, it is also a risk that worsens its impact. Respondents largely believed that this impact was most strongly felt in **Social Cohesion Collapse**, with the strength of this relationship ranking the 6th highest among all risk relationships.

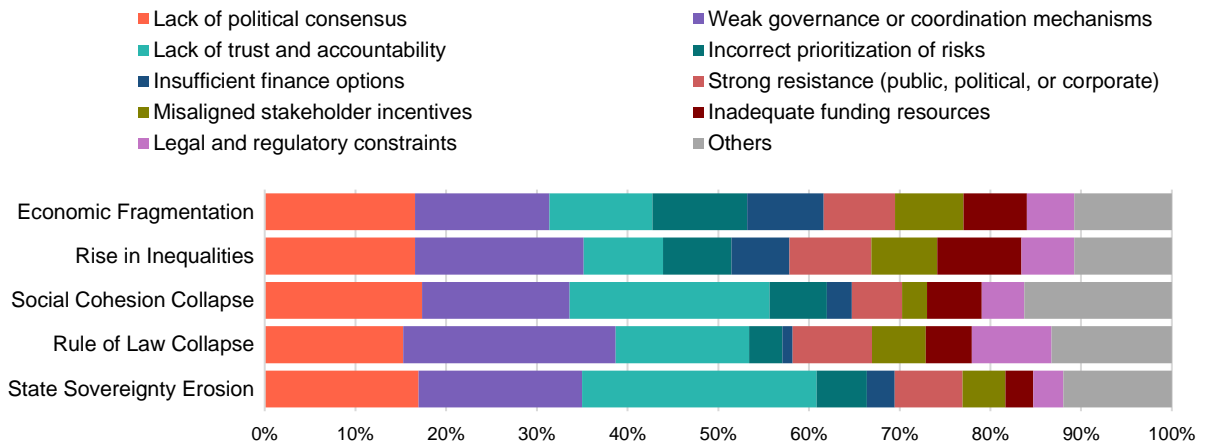
Main Causal Chain



Economic Fragmentation is often linked to a breakdown in global economic cooperation and a rise in trade barriers, which can weaken the global economy by up to 7% in the long term, or about US\$7.4 trillion.¹ **Economic Fragmentation** can increase costs of living, leading to a **Rise in Inequalities**.^{2,3} In turn, economic and social inequality has been shown to negatively impact a host of factors, including poorer physical and mental health outcomes,⁴ a reduction of interpersonal trust and a poorer sense of social cooperation and belonging⁵—factors linked to **Social Cohesion Collapse**. Diminished perceptions of the fairness of socio-economic systems can lead to decreased confidence in government institutions,⁶ which can trigger further political unrest and decreased state authority (i.e., **Rule of Law Collapse** and **State Sovereignty Erosion**).^{7,8} Experience suggests that a reduction in state sovereignty can further exacerbate **Rule of Law Collapse**.⁹

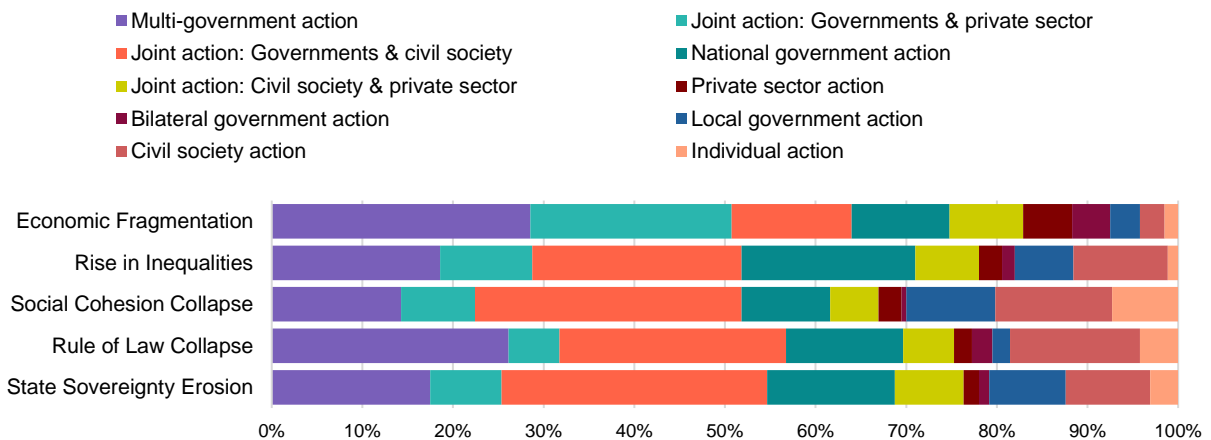
Addressing Rise in Inequalities

Figure 5.14 Barriers to addressing causal-chain risks involving Rise in Inequalities



The top barriers to addressing the risks closely connected to Rise in Inequalities include a "lack of political consensus," "weak governance or coordination mechanisms," and "lack of trust and accountability." The rather proportionate prominence of the first two barriers across all five interconnected risks suggests pervasive issues in political collaboration and governance structures perceived by the respondents, whereby systemic challenges in political agreement and administrative capacity may pose a marked impediment in managing these risks. While the "lack of trust and accountability" also ranked among the top barriers, it notably featured in **Social Cohesion Collapse** and **State Sovereignty Erosion**. This observation suggests that addressing the wide-ranging impacts of Rise in Inequalities requires not only improved political and coordination mechanisms but also efforts to (re)build public trust and ensure accountability.

Figure 5.15 Actions for addressing causal-chain risks involving Rise in Inequalities



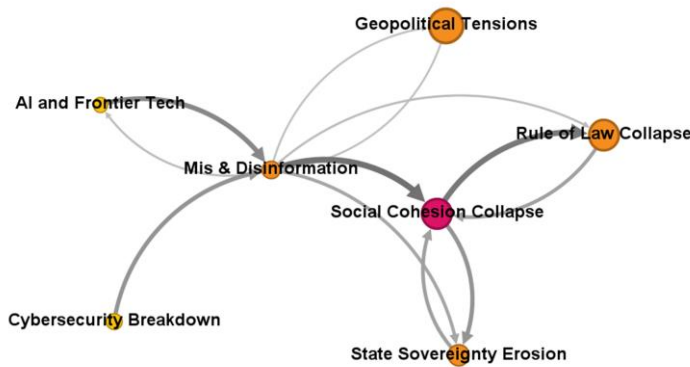
Overall, one of the most effective measures for addressing these five interconnected risks seems to be "multi-government action," which is unsurprising given its importance in addressing economic disparities, facilitating international cooperation, and establishing strategic alignment and transnational dialogue. When it comes to addressing **Rise in Inequalities**, however, respondents perceived that "joint action between governments and civil society" may be the most effective channel for mitigating this risk.

This may be because governments are seen to have the power to implement widespread policies and provide funding for social welfare programs, while CSOs are uniquely equipped to mobilize within communities. CSOs can also better tailor programs to the specific needs of different groups, facilitating even resource distribution and reducing disparities.

The importance of joint action between governments and CSOs also appears to be the top strategy for mitigating **Social Cohesion Collapse**, **Rule of Law Collapse**, and **State Sovereignty Erosion**. This further underscores how these two stakeholder groups can leverage their complementary strengths and resources: governments have the capacity to implement widespread changes and enhance community trust and resilience, while CSOs have a unique understanding of community needs and can quickly direct resources to address disparities before they escalate into further risks. Robust collaboration between the two stakeholders can ensure a holistic and responsive approach to managing and mitigating these interconnected risks.

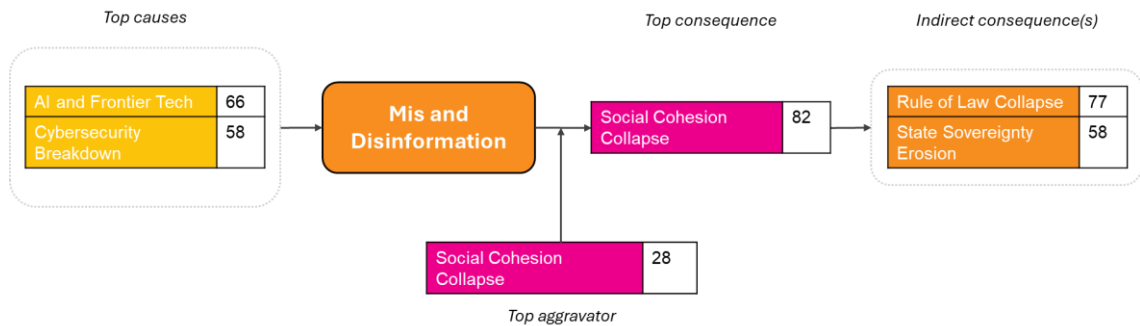
Interestingly, “joint action between governments and the private sector” is perceived to be most effective for addressing Economic Fragmentation, but less so for the other risks. This distinction is important because the private sector plays a crucial role in economic activities and can drive innovation, investment, and economic stability.

Mis & Disinformation



Clustering

Mis & Disinformation is predominantly nested amongst political risks (i.e., within category), while also linked to other societal and technological risks. It is a strong cause of **Social Cohesion Collapse**, and this relationship is the 6th strongest relationship among all risks (tied with the link from **Rise in Inequalities** to **Social Cohesion Collapse**).



* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Respondents perceived the primary causes of **Mis & Disinformation** to be two technological risks—**AI and Frontier Tech**, and **Cybersecurity Breakdown**. **Social Cohesion Collapse** is both a top aggravator for Mis & Disinformation, and a top consequence; put differently, it exacerbates the impact of Mis & Disinformation and is also a main outcome of the risk. In turn, Social Cohesion Collapse is linked to **Rule of Law Collapse** and **State Sovereignty Erosion**.

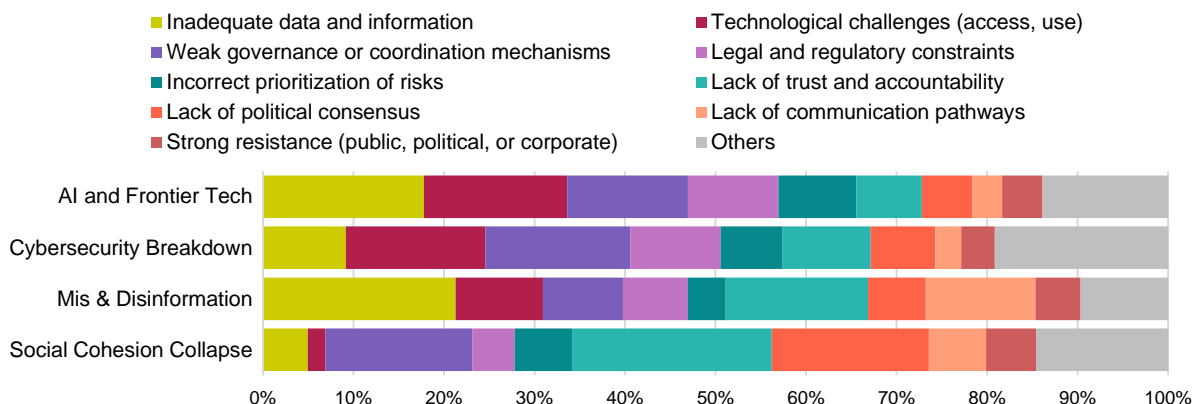
Main Causal Chain



The proliferation of **AI and Frontier Tech**, especially generative AI, has enabled highly convincing false information to spread more efficiently and cheaply than ever before.^{1,2} Meanwhile, **Cybersecurity Breakdown** represents the erosion of mechanisms that can slow or stop the propagation of false information.^{3,4} Not only are these two risks mutually-enforcing, but they are also top causes of Mis & Disinformation. This can result in **Social Cohesion Collapse** by fostering distrust among people, polarizing political views, and sowing discord among socio-cultural communities.⁵ **Mis & Disinformation** is perceived to be the most imminent risk out of all 28 risks, which is particularly concerning given that over 60 countries have elections in 2024 and many have already attested to the adverse impact of false information on the perceived legitimacy of their elections.⁶

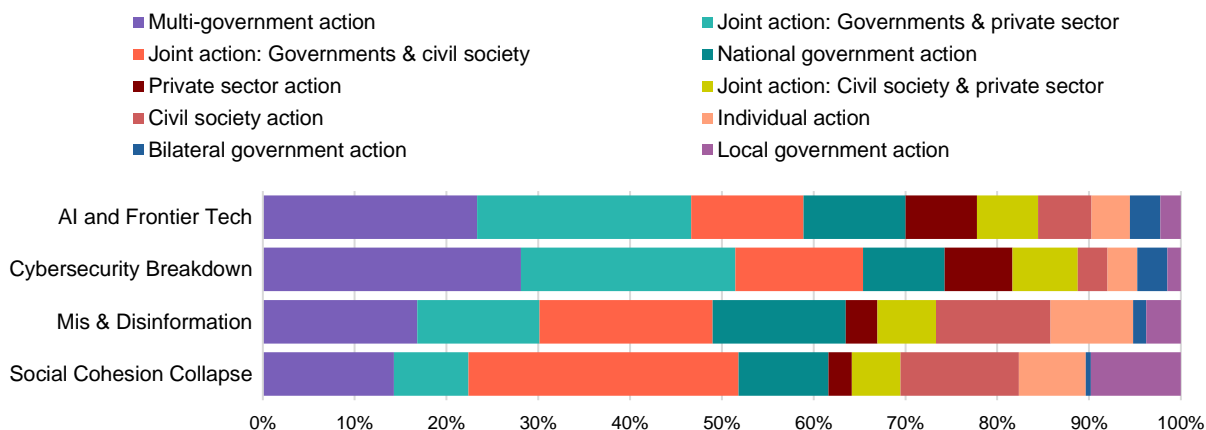
Addressing Mis & Disinformation

Figure 5.16 Barriers to addressing causal-chain risks involving Mis & Disinformation



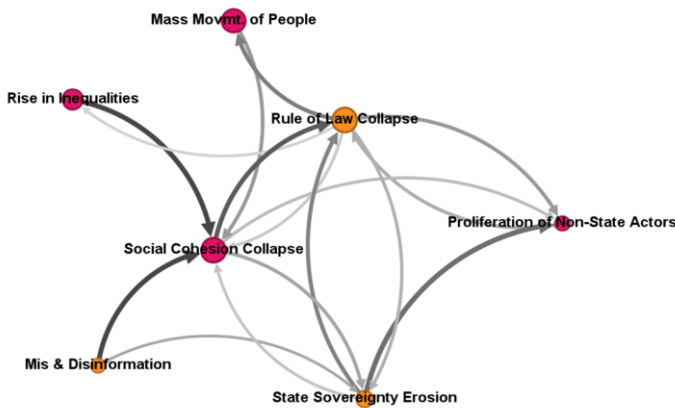
The top barriers to addressing **Mis & Disinformation** and its causes—**AI and Frontier Tech** and **Cybersecurity Breakdown**—are “inadequate data and information” and “technological challenges (access, use)”. These barriers are understandably more common to technological risks than any other category (see: Barriers, p.32), because effective management of these risks relies heavily on accurate, timely data and access to technologies that can effectively counter malicious attacks. In the case of **AI and Frontier Tech**, inadequate data hampers the development and deployment of robust systems capable of detecting and mitigating disinformation. Similarly, **Cybersecurity Breakdown** exacerbates the situation by creating vulnerabilities that can be exploited to spread false information. Technological challenges further complicate efforts, as access to and proficiency in using advanced technologies vary widely, leading to uneven capabilities in addressing these risks.

Figure 5.17 Actions for addressing causal-chain risks involving Mis & Disinformation



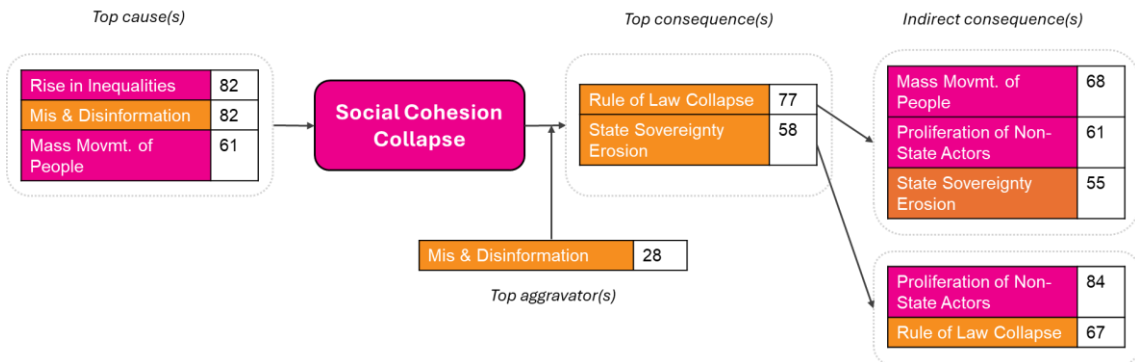
The top actions for addressing the causal chain involving **Mis & Disinformation** include “Multi-government action” and “Joint action: governments & private sector.” These actions are interesting and important because they reflect the perceived need for coordinated efforts at both national and international levels. **Mis & Disinformation** is a global issue that transcends borders, requiring governments to work together to develop and enforce regulations, share intelligence, and create unified responses. The involvement of the private sector is crucial because technology companies often possess the tools and platforms where disinformation spreads. Collaborative efforts between governments and the private sector can lead to more effective monitoring, reporting, and removal of false content. “Joint action: Governments & civil society” is another item that stands out particularly for **Mis & Disinformation** and **Social Cohesion Collapse**. Civil society organizations (CSOs) play an added role by fostering community resilience, promoting media literacy—crucial for curbing the spread of **Mis & Disinformation** at the individual level through awareness raising.

Social Cohesion Collapse



Clustering

Social Cohesion Collapse is mainly nestled between other societal and political risks. It is the 3rd highest risk in terms of degree centrality. Notably, its connection with **Rise in Inequalities** and **Mis & Disinformation** as their consequence are the joint-6th strongest connections among all risk relationships, while its effect on **Rule of Law Collapse** is the 8th strongest.

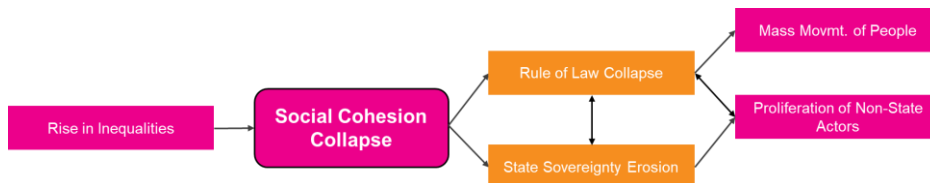


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Social Cohesion Collapse is perceived to be the result of **Rise in Inequalities**, **Mis & Disinformation**, and the **Mass Movement of People**. Aggravated by **Mis & Disinformation**, **Social Cohesion Collapse** then leads to **Rule of Law Collapse** and **State Sovereignty Collapse**, which not only affect each other, but also result in the **Proliferation of Non-State Actors**.

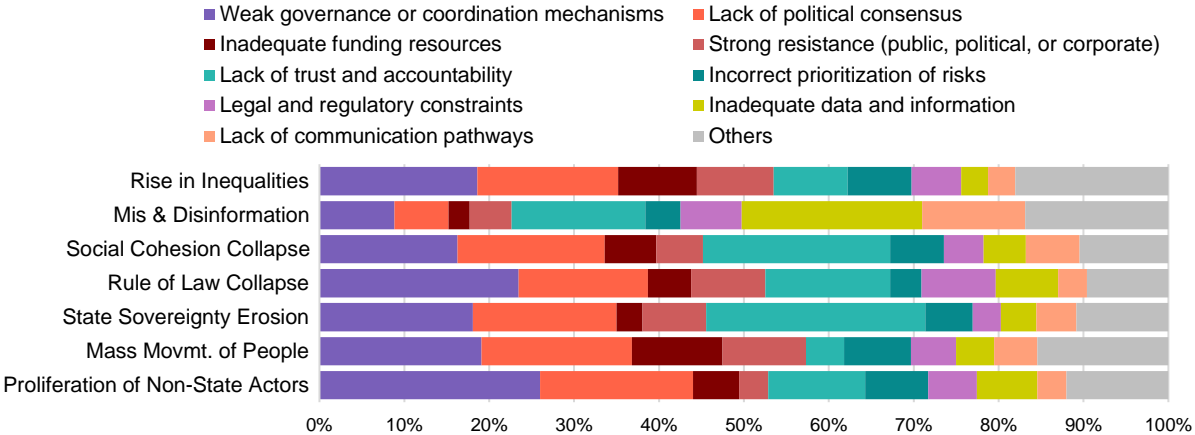
Main Causal Chain



Social cohesion requires members of the same society to agree and accept that they are part of a shared moral community¹ with a shared social identity². The **Rise in Inequalities** undermines such solidarity by further increasing and highlighting differences among members¹. The collapse of social cohesion also implies a loss of trust, which is associated with **Rule of Law Collapse**³ and **State Sovereignty Erosion**, as trust in government enables governments to govern and act without having to resort to coercive measures⁴. Each reinforces the other and leaves a vacuum for the **Proliferation of Non-State Actors**. As the rule of law collapses, people tend to seek opportunities to migrate, leading to the **Mass Movement of People**. For example, countries which rank low in terms of rule of law are important sources of out-migration.⁵

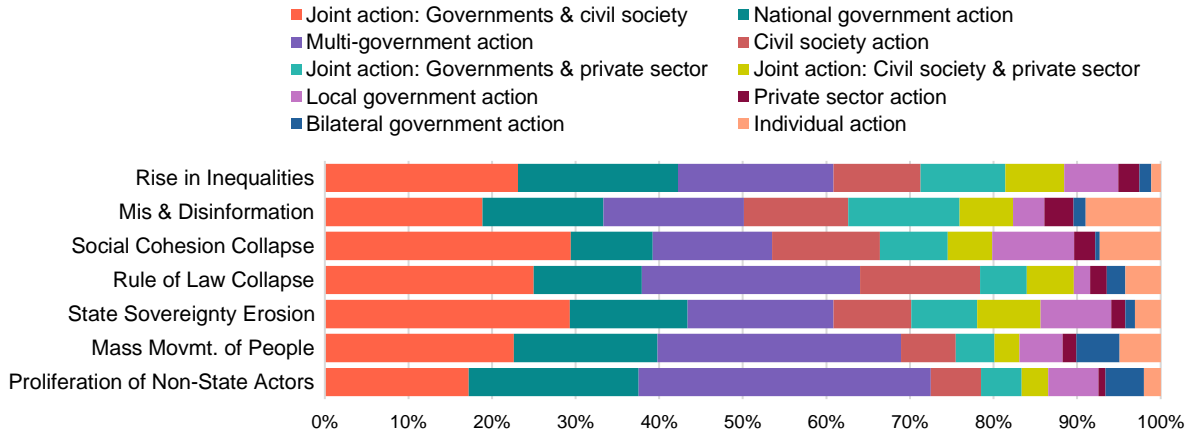
Addressing Social Cohesion Collapse

Figure 5.18 Barriers to addressing causal-chain risks involving Social Cohesion Collapse



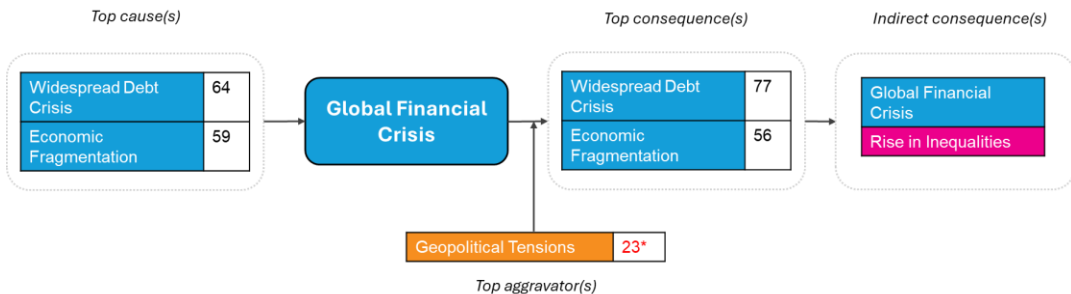
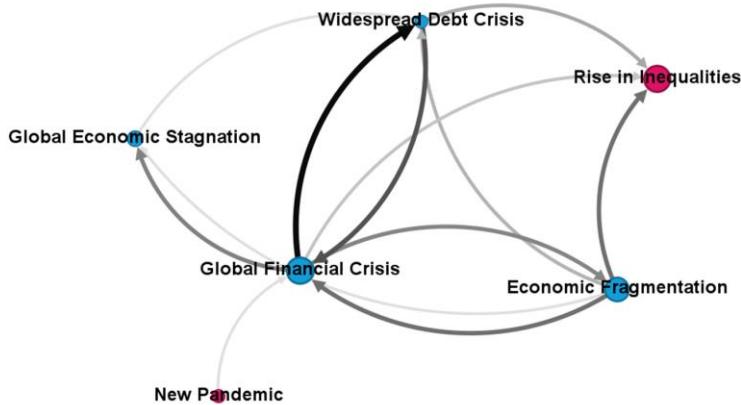
The barriers of "weak governance or coordination mechanisms" and "lack of political consensus" likely resonate with respondents due to the nature of social cohesion, inequality, and mis and disinformation. For **Social Cohesion Collapse**, effective governance is crucial to maintaining societal trust and unity. Without strong coordination, efforts to address social fragmentation fall short. In the case of **Rise in Inequalities**, political consensus is vital for enacting policies that reduce disparities, as conflicting agendas can stall progress. **Mis & Disinformation** requires robust governance and unified political will to counteract false narratives effectively. "Incorrect prioritization of risks" may also be particularly high for **Social Cohesion Collapse** because it underscores the complexity of addressing societal issues that are often overshadowed by more immediate or tangible concerns, leading to inadequate responses.

Figure 5.19 Actions for addressing causal-chain risks involving Social Cohesion Collapse



The top actions for addressing the causal chain involving **Social Cohesion Collapse** are "Joint action: Government & civil society," "National government action," and "Multi-government action." The inclusion of both governments and civil society indicates a recognition that restoring social cohesion requires efforts at various levels of governance. Government actions, both national and multi-government, are crucial for establishing policies and frameworks to address the root causes and impacts of **Social Cohesion Collapse**—such as **Mis & Disinformation** (see p.54) and **Rise in Inequalities** (see p.51). Civil society's involvement is also essential for fostering grassroots-level trust and engagement, providing a bottom-up approach that complements top-down government actions, ensuring that they translate efficiently into governance contexts.

Global Financial Crisis



* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Global Financial Crisis is perceived to be simultaneously the result and cause of **Widespread Debt Crisis** and **Economic Fragmentation**, suggesting a reinforcing cycle, a societal consequence of which is **Rise in Inequalities**. At the same time, respondents perceived this cycle to be aggravated by **Geopolitical Tensions**, although this relationship is not significant.

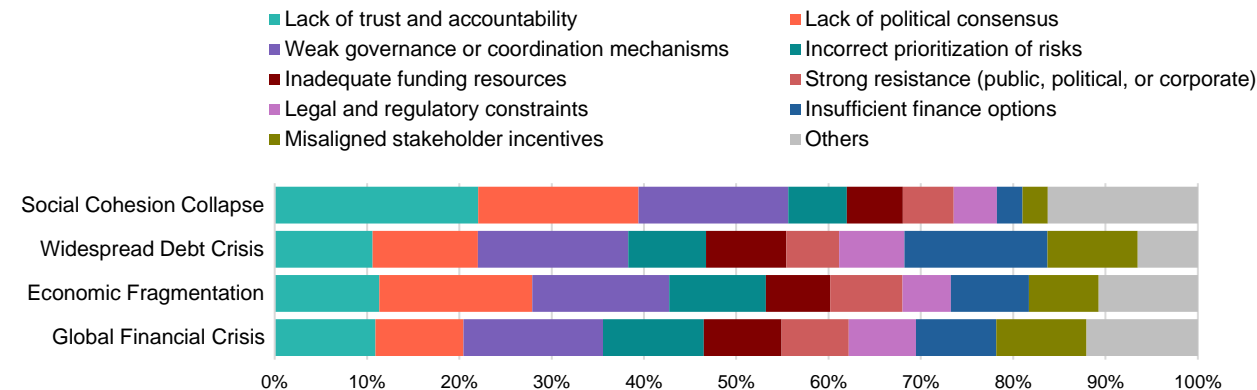
Main Causal Chain



Global Financial Crisis (GFC) is seen to be bidirectionally linked to other economic risks, including **Widespread Debt Crisis**. Historically, external debt accumulation often precedes banking crises,¹ with three out of the four debt accumulation waves in the past fifty years culminating in financial crisis in both emerging and developing economies.² The 2008 GFC, for instance, was triggered by banks issuing excessive debt to subprime borrowers who subsequently defaulted.³ In turn, GFCs can exacerbate widespread debt risks by increasing borrowing costs, diminishing investor confidence, and depreciating currencies, further hampering debt repayment capabilities. Similarly, **Economic Fragmentation** is bidirectionally related to GFC, evidenced in the 2008 GFC which prompted governments to decelerate economic globalization.^{4,5} This shift towards economic fragmentation undermines financial stability by restricting cross-border investments and international payment systems, further constraining lending abilities. In turn, both **Widespread Debt Crisis** and **Economic Fragmentation** can lead to **Social Cohesion Collapse**⁶ through heightened economic inequality, reduced public trust in financial systems, and increased social unrest.

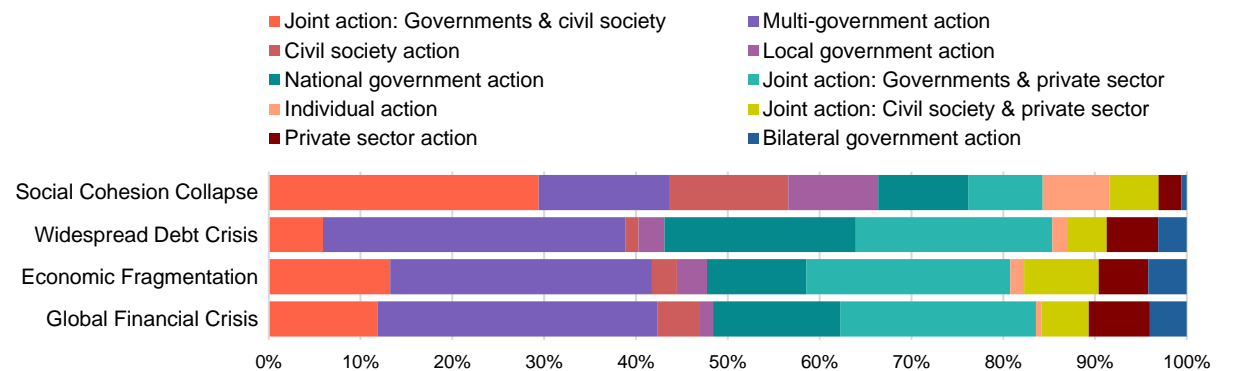
Addressing Global Financial Crisis

Figure 5.20 Barriers to addressing causal-chain risks involving Global Financial Crisis



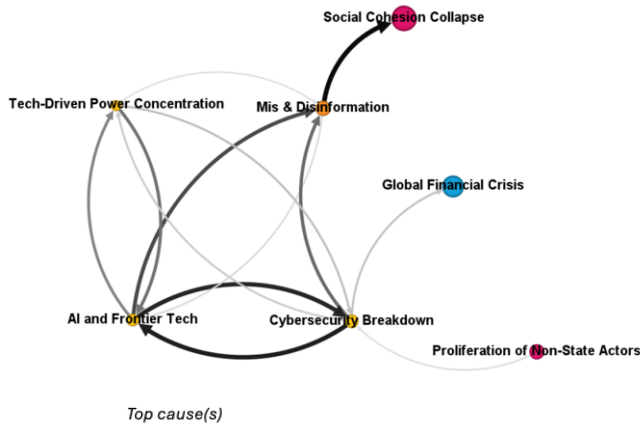
Respondents perceived that addressing **Global Financial Crisis** and its causes—**Economic Fragmentation** and **Widespread Debt Crisis**—are hampered by “weak governance or coordination mechanisms” and “lack of political consensus”. These barriers are particularly significant given the economic nature of these risks. Weak governance and poor coordination can lead to inconsistent policies and fragmented regulatory frameworks, which undermine efforts to stabilize the economy and manage debt effectively. Without strong coordination, individual countries’ measures may conflict, reducing overall efficacy. The lack of political consensus further complicates this, as divergent political views can stall necessary reforms and create uncertainty, weakening investor confidence and economic stability. While not a majority proportion, “misaligned stakeholder incentives” stand out for the three risks, which may be linked to how government austerity measures may conflict with private sector imperatives (e.g., government bailouts reducing risk and encouraging risky market behavior).

Figure 5.21 Actions for addressing causal-chain risks involving Global Financial Crisis



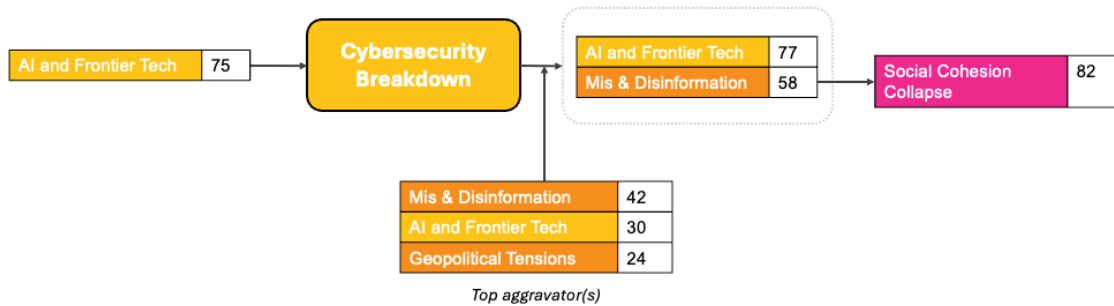
The top actions for addressing the **Global Financial Crisis** causal chain are “Multi-government action,” “National government action,” and “Joint action: Governments & private sector.” These actions are vital due to the interconnectedness of the global financial system. “Multi-government action” is crucial because financial crises have global repercussions, requiring coordinated international efforts for consistent regulations, shared best practices, and financial support to stabilize the economy. “National government action” highlights the need for strong domestic policies, including sound fiscal and monetary measures, debt management, economic diversification, and social safety nets to protect vulnerable populations. Finally, “Joint action: Governments & private sector” emphasizes the importance of collaboration, leveraging private sector innovation and resources for more resilient financial systems, effective regulation, and crisis management.

Cybersecurity Breakdown



Clustering

Cybersecurity Breakdown is a key intermediate risk between technological risks such as **Tech-Driven Power Concentration** and **AI and Frontier Tech**, leading to other risks such as **Mis & Disinformation**, **Global Financial Crisis**, and **Proliferation of Non-State Actors**.

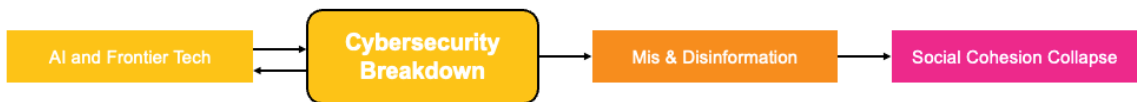


* Denotes risks that do not meet the 95th percentile cut-off value of 55 for main risks, and 24 for aggravators

Causes & Consequences

Cybersecurity Breakdown is both a cause and consequence of **AI and Frontier Tech** risk, which in turn aggravate its effects. Cybersecurity Breakdown also leads to **Mis & Disinformation** which also aggravates its negative effects, in addition to **Geopolitical Tensions**. Finally, AI and Frontier Tech and Mis & Disinformation then lead to **Social Cohesion Collapse**.

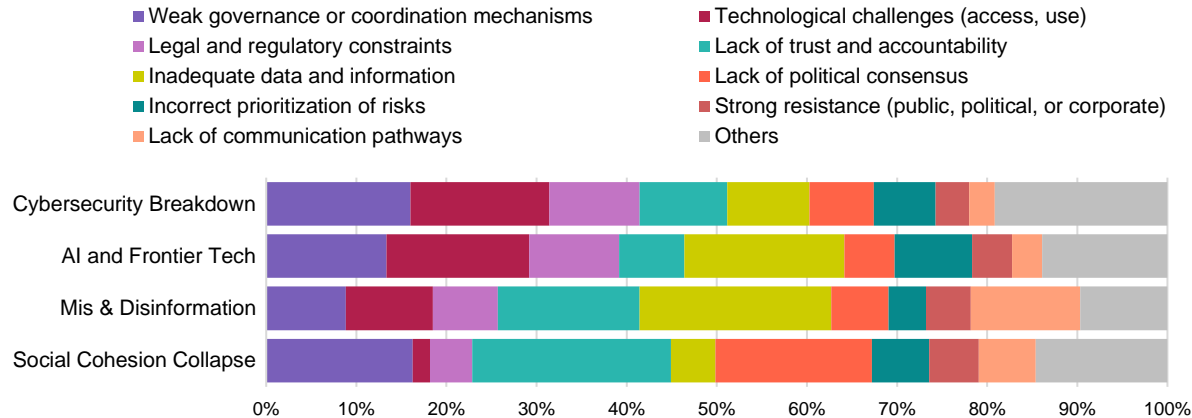
Main Causal Chain



Cybersecurity Breakdown is intricately linked with **AI and Frontier Tech** through a bidirectional relationship, where each risk both causes and is caused by the other. Advanced technologies, including AI, introduce new vulnerabilities in cybersecurity, making systems more susceptible to breaches.^{1,2} Conversely, a cybersecurity breakdown can compromise AI and other frontier technologies, undermining their integrity and functionality. This vulnerability cascade leads to **Mis & Disinformation** as compromised systems and platforms become conduits for spreading false information. As misinformation proliferates, it erodes trust within societies, further polarizes group divisions, and can incite violence, leading to **Social Cohesion Collapse**.

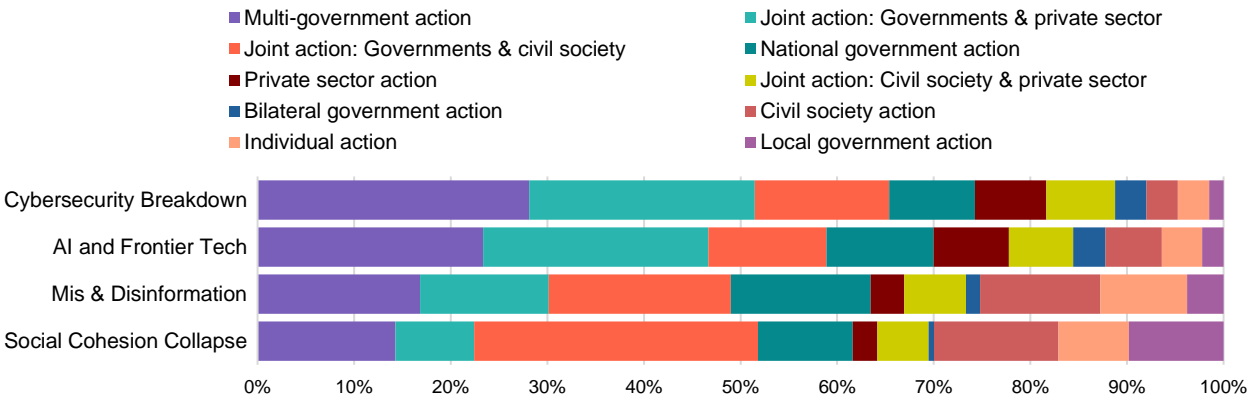
Addressing Cybersecurity Breakdown

Figure 5.22 Barriers to addressing causal-chain risks involving Cybersecurity Breakdown



The top barriers to addressing **Cybersecurity Breakdown** and **AI and Frontier Tech** include "technological challenges (access, use)," "weak governance or coordination mechanisms," and "inadequate data and information." Technological challenges arise due to the rapid pace of innovation, making it difficult for policies and practices to keep up. Access to and effective use of cutting-edge technologies require significant resources and expertise, often lacking in many organizations. Weak governance and coordination mechanisms hinder the establishment of comprehensive security frameworks and collaborative efforts needed to tackle these risks. Inadequate data and information impede the ability to understand and respond to evolving threats, as timely and accurate data is crucial for effective cybersecurity measures and technological advancements.

Figure 5.23 Actions for addressing causal-chain risks involving Cybersecurity Breakdown



The top actions for addressing the causal chain involving **Cybersecurity Breakdown** are "Multi-government action," "Joint action: Governments & private sector," and "Joint action: Governments & civil society." These actions are particularly important in the context of technological risks, misinformation, and social cohesion. Multi-government action underscores the necessity of international cooperation to develop standardized regulations and share intelligence, which is crucial for managing global cybersecurity threats. Joint action between governments and the private sector leverages the technological expertise and resources of private enterprises, fostering innovation and improving the resilience of cybersecurity measures. Lastly, collaboration with civil society is essential for building public awareness, promoting digital literacy, and fostering trust within communities.

Section 6: Regional, Stakeholder, and Demographic Observations

Nuances in Global Risk Perception: Regional and Stakeholder Comparisons

The analyses and findings thus far have been based on the full sample, which reveal patterns on a global scale. This section uncovers further insights at the sub-group level, with especial focus on regional observations and stakeholder perspectives. Assessing variations in risk perception among different regions and stakeholder groups offers a more granular understanding of the global risk landscape and highlights important areas of consensus and divergence.

Regional Comparisons

Regional perspectives in risk perception are informed by a myriad of factors, including socioeconomic conditions, political dynamics, environmental contexts, and geographical characteristics. Examining risk perception across regions identifies the important and urgent risks that warrant necessary advocacy and prioritization. The regions captured in the GRS are categorized as follows:

- Central and Southern Asia (CSA)
- Eastern and South-Eastern Asia (ESEA)
- Europe and Northern America (ENA)
- Latin America and the Caribbean (LAC)
- Northern Africa and Western Asia (NAWA)
- Oceania
- Sub-Saharan Africa (SSA)

Stakeholder Comparisons

Each stakeholder group brings distinct interests and priorities to the discourse on global risks. Recognizing which risks various stakeholders deem to be severe in consequences, likely to result in negative impact, and therefore important for mitigation is essential for facilitating dialogue, consensus-building, and collective action. The stakeholder groups who took part in the GRS include government representatives of UN Member States, Civil Society Organizations, Private Sector Organizations, Risk Experts and Academia, and UN employees.

Regional Highlights

Regional-level findings from the GRS revealed common global concerns as well as regional variation in the top 10 global risks of importance (i.e., severity x likelihood). Across all seven regions, the environmental risks of **Climate Change Inaction**, **Natural Hazard Risks**, and **Large-Scale Pollution** consistently ranked in the top 10 (see Figure 6.1). The prominence of these risks indicates a shared recognition of the urgency and impact of environmental issues across all regions (see Figure 6.5). **Natural Resource Shortages**, meanwhile, emerged as the most critical risk in Latin America and the Caribbean (LAC) but was absent from the top 10 risks in Sub-Saharan Africa (SSA).

The political risks of **Mis & Disinformation** and **Geopolitical Tensions** were ranked highly in almost all regions. **Mis & Disinformation** emerged as the second most important in Europe and Northern America (ENA), and third in LAC and SSA, highlighting pressing concerns over the spread and impact of false information. **Geopolitical Tensions** ranked in the top 10 global risks of importance in all regions except LAC. **Large-Scale War**, however, featured among the top 10 risks of importance only in SSA, ENA and Northern Africa and Western Asia (NAWA). While geopolitical instability appears to constitute a shared global concern, the potential for large-scale conflict was perceived as a greater threat in these regions.

Figure 6.1 Top 10 global risks according to importance, by region

Rank by importance	Central and Southern Asia (CSA)	Eastern and South-Eastern Asia (ESEA)	Europe and Northern America (ENA)	Latin America and the Caribbean (LAC)	Northern Africa and Western Asia (NAWA)	Oceania	Sub-Saharan Africa (SSA)
N =	79	90	514	111	71	27	219
1	Large-Scale Pollution	Climate Change Inaction	Climate Change Inaction	Natural Resource Shortages	Large-Scale Pollution	Climate Change Inaction	Large-Scale Pollution
2	Natural Resource Shortages	Biodiversity Decline	Mis & Disinformation	Large-Scale Pollution	Natural Resource Shortages	Natural Hazard Risks	New Pandemic
3	Biodiversity Decline	Natural Hazard Risks	Large-Scale Pollution	Mis & Disinformation	Natural Hazard Risks	Large-Scale Pollution	Mis & Disinformation
4	Climate Change Inaction	Natural Resource Shortages	Rise in Inequalities	Rise in Inequalities	Climate Change Inaction	Rise in Inequalities	Climate Change Inaction
5	Natural Hazard Risks	Mis & Disinformation	Geopolitical Tensions	Biodiversity Decline	Large-Scale War	Biodiversity Decline	Natural Hazard Risks
6	Rule of Law Collapse	New Pandemic	Natural Hazard Risks	Climate Change Inaction	Geopolitical Tensions	Natural Resource Shortages	Geopolitical Tensions
7	Geopolitical Tensions	Large-Scale Pollution	Biodiversity Decline	Natural Hazard Risks	Rule of Law Collapse	Rule of Law Collapse	Rise in Inequalities
8	Rise in Inequalities	Geopolitical Tensions	Mass Movmt. of People	Biorisks	Cybersecurity Breakdown	Geopolitical Tensions	Global Financial Crisis
9	Mis & Disinformation	AI and Frontier Tech	Natural Resource Shortages	Global Financial Crisis	AI and Frontier Tech	Mis & Disinformation	Proliferation of Non-state Actors
10	Cybersecurity Breakdown	Biorisks	Large-Scale War	Proliferation of Non-state Actors	WMDs	Mass Movmt. of People	Large-Scale War

Societal risks were present among the top 10 global risks of importance across all regions. In particular, the risk of **Rise in Inequalities** placed in the top 10 in all regions apart from Eastern and South-Eastern Asia (ESEA) and NAWA. New Pandemic was a top concern in SSA, where it ranked in second place, and in Central and Southern Asia (CSA). **Mass Movement of People** featured in the top 10 for ENA and Oceania. However, the nature of this risk in these two regions may be different, with ENA risk perceptions possibly focusing on in-migration, and perceived risks in Oceania pertaining more to out-migration. **Proliferation of Non-State Actors** ranked in the top 10 in LAC and SSA but not in other regions.

Economic risks—specifically, the risk of **Global Financial Crisis**—featured in the top 10 in only two regions: SSA and LAC. This distinct regional patterns may reflect a perception of greater vulnerability to macroeconomic shocks in economies with high levels of international debt, budgetary or trade deficits, and potential for more damaging impacts given pre-existing high rates of inflation or unemployment that may exacerbate poverty and social unrest.

Technology-related risks were found in the top 10 only in Asia and Northern Africa (CSA, ESEA and NAWA). Tech risks had greatest prominence in ESEA where **Cybersecurity Breakdown** and **AI and Frontier Tech** were both in the top 10, perhaps reflecting the fast pace of technology development in the region and ensuing impacts on the economy and society.

Statistical differences between regions: Top 10 global risks of importance

To examine whether the observed differences between regions (as seen in Figure 6.1) are statistically significant, linear regressions were used to analyze pairwise differences between regions, for each risk. The results are reported in Figures 6.2–6.3.

For a large number of risks, differences between respondents from LAC and respondents from ENA were statistically significant. This was notably the case for many economic risks (**Global Financial Crisis**, **Economic Fragmentation**, **Global Economic Stagnation**, and **Supply Chain Collapse**). Respondents from SSA and LAC perceived all of these risks to be of significantly higher risk importance compared to respondents from ENA. Respondents from LAC also perceived **Supply Chain Collapse** to be of significantly greater importance than respondents from SSA. In addition, respondents from LAC perceived **Mis & Disinformation**, **Tech-Driven Power Concentration**, and **State Sovereignty Erosion** to be more significantly important than respondents from CSA.

Significant Differences between Regions

Statistical tests for significance of pairwise differences (between two regions)—on the perceived importance of each risk—were conducted using linear regression. Statistically significant differences (significant at $\alpha = .001$ ^{Note1}) are presented below, controlling for respondent stakeholder group, age, and gender; all other differences were not statistically significant^{Note2}.

The numbers (regression coefficients) indicate the difference in perceived importance, on average, between two regions; a positive (negative) number indicates that the baseline region has a significantly lower (higher) perceived importance than the region to which it is compared.

To avoid repetition, each unique pairwise difference is reported only once; regions are assigned as the baseline in alphabetical order. All pairwise differences and their statistical significance (or lack thereof) for all risks can be found in the Appendix (p.96-99).

Figure 6.2 Significant differences between Central and Southern Asia and other regions

Global Rank by Importance	Risk	Latin America and the Caribbean
3	Mis & Disinformation	7.38***
19	Tech-Driven Power Concentration	7.23***
23	State Sovereignty Erosion	7.86***

Figure 6.3 Significant differences between Europe and Northern America and other regions

Global Rank by Importance	Risk	Latin America and the Caribbean	Sub-Saharan Africa
8	Natural Resource Shortages	4.96***	
12	New Pandemic		5.35***
14	Breakdown in Cybersecurity	5.35***	
15	Global Financial Crisis	7.22***	4.87***
16	WMDs		4.34***
18	Proliferation of Non-State Actors	7.45***	5.72***
22	Economic Fragmentation	5.38***	
23	State Sovereignty Erosion	5.86***	
24	Global Economic Stagnation	7.62***	4.18***
25	Supply Chain Collapse	6.98***	
26	Geoengineering Disasters	7.05***	4.76***
28	Space-Based Event	6.61***	4.70***

Figure 6.4 Significant differences between Latin America and the Caribbean and other regions

Global Rank by Importance	Risk	Sub-Saharan Africa
25	Supply Chain Collapse	-5.42***

Note 1: Due to the multiple comparisons problem, we correct for the family-wise error rate, by dividing the standard alpha = .05 with the total number of potential comparisons. Given there are 7 regions, there $(7*6)/2 = 21$ possible pairwise comparisons. Using Bonferroni correction, the corrected alpha is now = $.05/21 < .002$. Hence pairwise differences whose p -value $< .001$ could be considered a statistically significant difference.

Note 2: While these differences are not *statistically* significant, based on the current dataset, that does not necessarily and definitively mean there is no such actual difference. The lack of statistical difference could be due to an actual lack of difference, or the limited sample size.

Figure 6.5 Standard deviation and range across regions for top 10 global risks by importance











Rank by importance	Risk	Standard Deviation	Range
1	 Climate Change Inaction	2.8	7.9
2	 Large-Scale Pollution	1.5	3.6
3	 Mis & Disinformation	2.4	7.4
4	 Natural Hazard Risks	2.2	7.0
5	 Rise in Inequalities	3.0	7.5
6	 Biodiversity Decline	2.5	5.8
7	 Geopolitical Tensions	1.3	3.8
8	 Natural Resource Shortages	2.0	5.8
9	 Mass Movmt. of People	1.9	5.5
10	 Large-Scale War	1.9	5.9

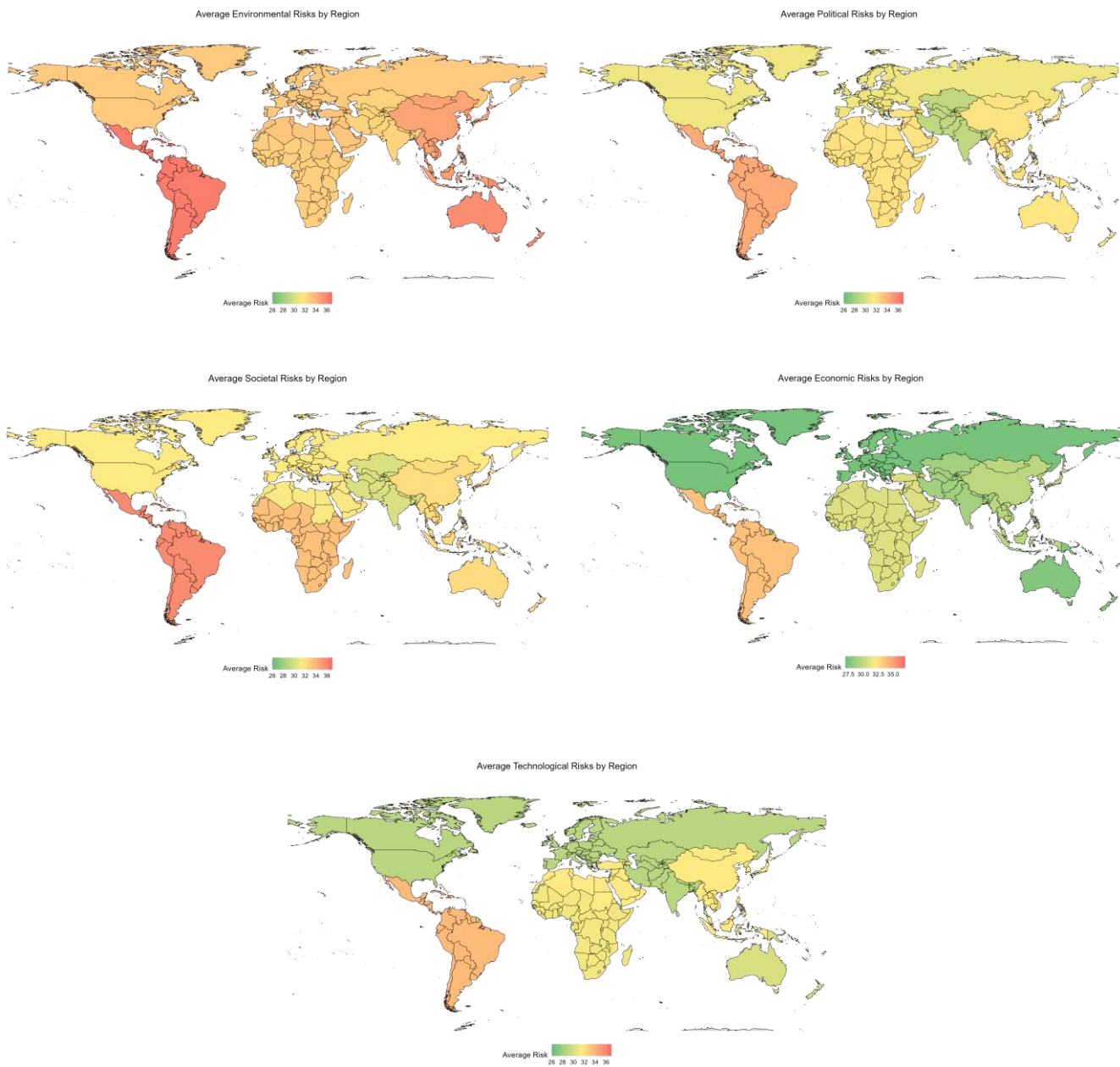
Figure 6.4 presents the standard deviations and ranges of the average risk importance scores across regions for the top 10 global risks of importance. A full list of these figures for all risks can be found on p.93 in the Appendix. These measures provide indications of consensus and divergence of perceived risk importance among the seven regions. Among all 28 global risks, the greatest cross-regional consensus on risk importance was observed for **Geopolitical Tensions**, **Social Cohesion Collapse**, and **Large-Scale Pollution**. The strong agreement on these issues as significant global threats may, in turn, serve as a basis for future cooperation between regions given their shared perception of high likelihood and severity. Divergence was greatest for **Space-Based Event**, **Rise in Inequalities** and **Proliferation of Non-state Actors**.

Looking specifically at the top 10 global risks of importance, divergence was greater for **Rise in Inequalities**, **Climate Change Inaction** and **Biodiversity Decline**. For instance, as indicated in Figure 6.1, **Climate Change Inaction** was viewed as the top risk of importance in ESEA, ENA and Oceania, but only sixth in LAC. Even greater divergence was observed for **Rise in Inequalities**—while it ranked as the fourth most important risk in ENA, LAC and Oceania, its perceived importance varied markedly in other regions, ranking between seventh and eighth respectively in CSA, and SSA, and not perceived among the top 10 global risks of importance in ESEA or NAWA (see Figure 6.1).

The regional divergence on perceived risks of importance intuitively points to differences in risk prioritization. The importance placed on the risks of **Climate Change Inaction** in most regions indicates a widespread acknowledgment of its urgency. However, its comparatively lower ranking in LAC suggests that immediate socioeconomic challenges in these regions might currently overshadow the perceived threat of climate change. This region may prioritize other risks due to pressing economic and social issues, even though climate change remains a long-term concern.

Relatedly, the notable divergence on the perceived importance of **Rise in Inequalities** highlights varying regional socioeconomic conditions and policy priorities. The varied importance of global risks suggests that multilateral institutions need to adopt flexible strategies that accommodate and respect diverse regional priorities and challenges while striving towards common global goals.

Figure 6.6 Average risk importance across regions by STEEP category*



* **Risk Importance:** Severity x Likelihood

Stakeholder Highlights

Environmental risks emerged as a prominent theme across all five stakeholder groups, dominating half of the top 10 global risks of importance. Specifically, the unanimity of **Climate Change Inaction**, **Natural Resource Shortages**, **Natural Hazard Risks**, **Large-Scale Pollution**, and **Biodiversity Decline** as important top risks indicates a shared recognition among stakeholders of the urgency and impact of environmental concerns. Particularly striking is that of Climate Change Inaction, which ranked within the top 3 across all stakeholder groups, highlighting its existential threat and the imperative for critical action. **Geopolitical Tensions**, **Rise in Inequalities**, and **Mis & Disinformation** were also ranked among the top 10 risks of importance across stakeholder groups, signaling their pervasive impact on global stability and societal cohesion.

Greater stakeholder variation in perceived risk importance was observed for other specific risks. Namely, Member States identified **Global Financial Crisis** and **Cybersecurity Breakdown** among their top concerns, while Experts uniquely prioritized **Biorisks** and **New Pandemic**, reflecting heightened awareness within the expert community about biological and population health threats.

Figure 6.7 Top 10 global risks according to importance, by stakeholder group

Rank by importance	Member States	Experts	Private Sector	Civil Society Organizations	UN
N =	83	436	106	387	86
1	Climate Change Inaction	Climate Change Inaction	Natural Resource Shortages	Mis & Disinformation	Climate Change Inaction
2	Geopolitical Tensions	Large-Scale Pollution	Large-Scale Pollution	Large-Scale Pollution	Geopolitical Tensions
3	Natural Hazard Risks	Biodiversity Decline	Climate Change Inaction	Climate Change Inaction	Natural Hazard Risks
4	Mis & Disinformation	Mis & Disinformation	Mis & Disinformation	Rise in Inequalities	Rise in Inequalities
5	Natural Resource Shortages	Natural Hazard Risks	Natural Hazard Risks	Mass Movmt. of People	Biodiversity Decline
6	Large-Scale Pollution	Rise in Inequalities	Biodiversity Decline	Geopolitical Tensions	Mis & Disinformation
7	Rise in Inequalities	Geopolitical Tensions	Geopolitical Tensions	Natural Hazard Risks	Large-Scale Pollution
8	Biodiversity Decline	Natural Resource Shortages	Mass Movmt. of People	Natural Resource Shortages	Mass Movmt. of People
9	Large-Scale War	New Pandemic	Biorisks	Rule of Law Collapse	Natural Resource Shortages
10	Cybersecurity Breakdown	Biorisks	Large-Scale War	Biodiversity Decline	Large-Scale War

Civil Society Organizations identified the **Rule of Law Collapse** among their top risks of importance, while the Private Sector and the UN prioritized **Large-Scale War** among their top 10. Although the ravages of war are catastrophic to all stakeholders, their comparative importance for the other stakeholder groups appears to be overshadowed by other more pressing threats.

Mass Movement of People ranked among the top 10 global risks of importance for the Private Sector, Civil Society Organizations, and the UN. This shared concern among these specific stakeholder groups may be explained by humanitarian challenges that arise with displacement, economic disruptions to business operations and workforce management, and social cohesion tensions from mass migration.

Stakeholder Consensus and Divergence

Figure 6.8 Standard deviation across stakeholder groups for top risks by importance

Rank by importance	Risk	Standard Deviation	Range
1	Climate Change Inaction	2.0	4.8
2	Large-Scale Pollution	2.1	5.1
3	Mis & Disinformation	0.8	1.9
4	Natural Hazard Risks	0.5	1.2
5	Rise in Inequalities	1.2	2.9
7	Biodiversity Decline	1.4	3.7
6	Geopolitical Tensions	0.8	2.1
8	Natural Resource Shortages	2.6	6.6
9	Mass Movmt. of People	1.6	4.1
10	Large-Scale War	1.1	2.9

Figure 6.8 presents the standard deviations and ranges of average risk importance scores (i.e., likelihood x severity) across stakeholder groups for the top 10 global risks of importance. A full list of this information for all risks can be found on p.94 in the Appendix.

These measures provide indications of the consensus and divergence of perceived risk importance among the five predetermined stakeholder groups. Higher standard deviations and wider ranges were observed for **Large-Scale Pollution** and **Natural Resource Shortages**, indicating greater variability in how stakeholders perceive these top risks of importance. This variability suggests divergent priorities and levels of exposure to these environmental risks, signaling the need to build mutual understanding and develop unified strategies for mitigation and management.¹ In contrast, risks like **Natural Hazard Risks**, **Mis & Disinformation**, and **Geopolitical Tensions** show much lower standard deviations and narrower ranges, indicating less divergence on their importance. While such risks are more uniformly perceived as critical, possibly because of the widespread amplification or experience of their negative impact, others may require more alignment through inclusive dialogue, improved trust, and appropriate mechanisms for collaboration and coordination.

Significant Differences between Stakeholders

Statistical tests for significance of pairwise differences (between two stakeholder groups)—on the perceived importance of each risk—were conducted using linear regression. Statistically significant differences (significant at $\alpha = .001$ ^{Note1}) are presented below, controlling for respondent region, age, and gender; all other differences were not statistically significant^{Note2}.

The numbers (regression coefficients) indicate the difference in perceived importance, on average, between two stakeholder groups; a positive (negative) number indicates that the baseline stakeholder group has a significantly lower (higher) perceived importance than the stakeholder group to which it is compared.

To avoid repetition, each unique pairwise difference is reported only once; stakeholder groups are assigned as the baseline in alphabetical order. All pairwise differences and their statistical significance for all risks can be found in the Appendix (p.100-101).

Figure 6.9 Significant differences between CSOs (baseline) and other stakeholder groups


Global Rank by Importance	Risk	Member States
20	 Social Cohesion Collapse	-7.50***
27	 Multilateral Institutions Collapse	-7.41***

Figure 6.10 Significant differences between Experts (baseline) and other stakeholder groups

Global Rank by Importance	Risk	Member States
20	 Social Cohesion Collapse	-6.49***
27	 Multilateral Institutions Collapse	-5.91***

Note 1: Due to the multiple comparisons problem, we correct for the family-wise error rate, by dividing the standard alpha = .05 with the total number of potential comparisons. Given there are 5 stakeholder types, there $(5*4)/2 = 10$ possible pairwise comparisons. Using Bonferroni correction, the corrected alpha is now = $.05/10 = .005$. Hence pairwise differences whose p -value < .001 could be considered a statistically significant difference.

Note 2: While these differences are not *statistically* significant, based on the current dataset, that does not necessarily and definitively mean there is no such actual difference. The lack of statistical difference could be due to an actual lack of difference, or the limited sample size.

Gender

For a large number of risks considered in the survey, female respondents perceived risks to be of higher importance than male respondents—controlling for respondent age, region, and stakeholder type—which is consistent with extant research¹. A smaller number of risks observed no significant differences between genders. On average, in no case did male respondents rate a global risk more highly than female respondents. Figure 6.11 highlights these differences in risk perception by gender, using the female group as a reference. Statistically significant comparisons are denoted by asterisks (*) signifying *p*-values. The positivity or negativity of the coefficients signify the directionality of influence; a negative value denotes that males perceive a risk as being less important than females (on average) and vice-versa.

Significant differences in risk perception by gender were found for **Geoengineering Disasters**, **New Pandemic**, **Natural Resource Shortages**, and **Rise in Inequalities** (very high statistical significance). On the other hand, no significant differences were observed between respondents of different genders for **Geopolitical Tensions**, and **Tech-Driven Power Concentration**.

Figure 6.11 Difference in means between genders for each risk

Risk (Ordered by Importance)	Gender difference (Male vs. Female; Baseline category: female)
Climate Change Inaction	-1.58+
Large-Scale Pollution	-2.62**
Mis & Disinformation	-2.63**
Natural Hazard Risks	-2.67**
Rise in Inequalities	-2.95***
Biodiversity Decline	-2.61**
Geopolitical Tensions	-0.19
Natural Resource Shortages	-3.26***
Mass Movmt. of People	-2.67**
Large-Scale War	-1.51+
Biorisks	-2.68**
New Pandemic	-3.36***
Rule of Law Collapse	-2.48**
Cybersecurity Breakdown	-2.47**
Global Financial Crisis	-1.73*
WMDs	-1.74+
AI and Frontier Tech	-2.54**
Proliferation of Non-State Actors	-2.77**
Tech-Driven Power Concentration	-1.23
Social Cohesion Collapse	-2.30**
Widespread Debt Crisis	-1.93*
Economic Fragmentation	-2.12*
State Sovereignty Erosion	-1.49+
Global Economic Stagnation	-1.45+
Supply Chain Collapse	-1.97*
Geoengineering Disasters	-3.39***
Multilateral Institution Collapse	-2.16*
Space-Based Event	-2.37*

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Age

We tested for differences in risk perceptions by age using a regression. We used linear and quadratic terms for age to allow for the possibility of a non-linear effect of age on risk perceptions (for example, young and elderly respondents might perceive higher risks than middle-aged respondents). However, age was not found to be statistically significant in explaining risk perceptions for any global risk, consistent with prevailing risk literature.^{1,2}

Conclusion

This report has explored stakeholder perceptions of global risks and appropriate responses, providing insights for global risk management. While these perceptions sometimes differ from professional risk assessments, it is crucial to understand why these differences exist. Perceptions reflect what individuals and organizations truly value, including intangibles like identity, attachment to place, or a way of life—factors often not captured in professional assessments. Furthermore, stakeholders must navigate a complex risk landscape where societal, economic, technological, political, and environmental risks interact. This requires them to make difficult trade-offs, considering the costs and benefits of protective actions. In contrast, professional assessments tend to focus on specific risks in isolation. Thus, understanding and respecting stakeholder perceptions is essential for collective decision-making on risk management.

Building on the findings of this analysis, it is worth exploring various multilateral actions tailored to specific risk characteristics:

- **Risks well-known to specialists but not to the broader public:** For these risks, there is extensive scientific knowledge, but stakeholders often lack access or fail to use this information. This results in varied perceptions of the seriousness, likelihood, or imminence of these risks. The multilateral system can help by gathering and synthesizing global scientific knowledge on these issues, similar to how the IPCC has raised awareness about climate change. The UN and other organizations could consider applying and adapting this model to other risks to increase stakeholder awareness of scientific consensus.
- **High-impact, low-likelihood risks:** These risks are often neglected by individuals and decision-makers who prioritize short-term concerns. The turnover of officials further diminishes incentives to address low-probability risks, even if their impacts could be devastating. Multilateral institutions can advocate for greater attention to these risks and elevate them on policy agendas at all levels. They might also consider establishing or strengthening governance mechanisms to encourage long-term planning and investment.
- **Emerging risks with limited evidence:** These include novel technologies like AI or geoengineering, as well as dynamic societal and political phenomena involving non-state actors. For these risks, multilateral institutions can contribute by building an evidence base, which is essential for forming informed perceptions and attitudes. Subsequently, they can consider governance mechanisms to support ongoing research and evidence gathering.

In summary, understanding the diverse perceptions of global risks and addressing them through tailored multilateral actions can enhance global risk management and preparedness.

Appendix

Appendix

Definitions of Global Risks

The following table presents the list of 28 global risks and definitions used in the United Nations 2024 Global Risk Survey (GRS). The names of some risks have been abbreviated in the report and accompanying figures to facilitate legibility.

Global Risks (abbreviations in non-bold text where used)	Definition
Biorisks	The risk posed to human, animal, plant, or environmental health, by outbreaks of disease of natural, accidental, or deliberate origin.
Collapse of Social Cohesion Social Cohesion Collapse	Heightened social discord, surge in violent criminal activities, victimization of minority groups, breaches of human rights, and, in the end, the eruption of violent confrontations.
Mass Movement of People Mass Movmt. Of People	Large scale movement of people driven by factors like economic pursuits, escaping poverty, violence, war, persecution, climate change, and natural disasters, includes both voluntary and forced movement.
New Pandemic	The global spread of a pathogen or variant that infects human populations with limited or no immunity through sustained and high transmissibility from person to person, overwhelming health systems with severe morbidity and high mortality.
Proliferation of Non-State Actors (incl. criminal and terrorist groups) Proliferation of Non-State Actors	Widespread growth in the number, influence, and activities of entities that operate outside the control or governance of traditional nation-states, could include civil society, private corporations, terrorist groups, criminal organizations, exerting considerable influence in various sectors, such as politics, security, and the economy, beyond the conventional structures of national governments.
Rise in Inequalities	Rise in disparity in opportunity and access based on income, sex, age, disability, sexual orientation, race, class, ethnicity, religion, and capacity to use digital assets.
Breakdown in Cybersecurity Cybersecurity Breakdown	Widespread and systemic failures in safeguarding digital systems, infrastructure, networks, and data from unauthorized access, attacks, malicious use and exploitation.
Geoengineering Disasters	Large-scale manipulation of planetary processes to control/modify earth's climate or weather.
Negative Outcomes of AI and Frontier Technologies AI and Frontier Tech	Adverse effects, whether intentional or unintentional, resulting from progress in AI and associated technological capabilities, including generative AI, on societies and ecosystems, including among others increasing inequality, bias, conflicts and misinformation issues.
Technologically-Driven Geopolitical Power Concentration Tech-Driven Power Concentration	The growing centralization and consolidation of influence, control, and authority facilitated by advancements in technology, as well as the control over resources, influence and power that can be accumulated in the hands of private companies.

Global Risks (abbreviations in non-bold text where used)	Definition
Inaction on Climate Change Climate Change Inaction	Failure or reluctance of individuals, governments, or organizations to implement substantial measures or policies aimed at mitigating and adapting to the adverse impacts of climate change, such as rising temperatures, extreme weather events, and environmental degradation.
Large-Scale Natural Hazard Risks Natural Hazard Risks	For example, large scale floods and droughts are threats posed by changing meteorological conditions as well as natural phenomena like earthquakes and volcanic activities.
Large-Scale Pollution	Large-scale pollution occurs when the volume of unwanted waste is so extensive that it would demand significant financial resources, human effort, and time to remove from the environment (ambient air pollution, chemical pollution, physical waste, or radioactive isotopes, as well as space waste and debris).
Rapid Decline in Biodiversity Biodiversity Decline	Swift and significant reduction in the variety and abundance of species within a specific ecosystem or across the planet, often resulting from human activities, habitat destruction, pollution, and other factors.
Shortages of Natural Resources Natural Resource Shortages	This includes high-value natural resources like oil, gas, minerals and timber, as well as mismanagement and competition over diminishing renewable resources, such as land and water, aggravated by environmental degradation, population growth and climate change.
Space-Based Extreme Event Space-Based Event	Natural or technological occurrences originating in or affecting outer space (i.e., solar flares, geomagnetic storms, or asteroid impacts) that have a significant and potentially severe impact on Earth or its systems substantial disruption to satellite communications, power grids, or other critical infrastructure on Earth.
Economic Fragmentation	The breakdown of an economy into smaller, relatively independent and isolated components or segments, can manifest in the separation of markets, industries, or regions, leading to reduced integration and cohesion within the overall economic system.
Global Financial Crisis	Severe disruption in the international financial system characterized by widespread banking and financial sector distress, currency devaluations, and economic downturns affecting multiple countries or regions simultaneously.
Supply Chain Collapse	Collapse of availability of businesses, people and activities involved in the procurement, logistics, transformation and delivery of finished goods.
Sustained Global Economic Stagnation Global Economic Stagnation	Prolonged period of minimal or no growth in the worldwide economy, marked by sluggish or stagnant economic activity, high unemployment, limited expansion across multiple sectors, deepening inequalities and mounting pressures of indebtedness.
Widespread Debt Crisis	Occurs when a significant number of entities, such as countries, regions, or sectors, experience a high level of financial distress due to an inability to meet their debt obligations. It can result from economic downturns, fiscal mismanagement, external shocks, or a combination of these.
Collapse of Multilateral Institutions Multilateral Institutions Collapse	Weakening and degradation of organizations and their collective action to resolve problems that are bigger than their individual efforts could tackle (e.g., global challenges like climate change and health crises), that have been pillars of the international system in the post-WW2 order.
Collapse in the Rule of Law and Massive Violations of Human Rights Rule of Law Collapse	Breakdown in international legal regimes and widespread disregard for basic human rights.

Global Risks (abbreviations in non-bold text where used)	Definition
Erosion of State Sovereignty State Sovereignty Erosion	The breakdown or failure of a government or political system to fulfill its basic functions, such as maintaining law and order, providing essential services, or representing its citizens effectively.
Geopolitical Tensions	Significant changes in the global political landscape, involving alterations in power dynamics, alliances, and strategic interests among nations.
Large-Scale War	Refers to a conflict of significant magnitude involving widespread and substantial military engagements, it could be waged within a country or between nations or coalitions, with extensive geopolitical, economic, and societal consequences.
Mis and Disinformation	False or misleading information, with misinformation being inaccuracies spread without harmful intent, and disinformation being intentionally false or deceptive information circulated with the aim of causing harm or manipulating perceptions.
Weapons of Mass Destruction WMDs	Atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which might have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above. (UNODA, UNRCPD)

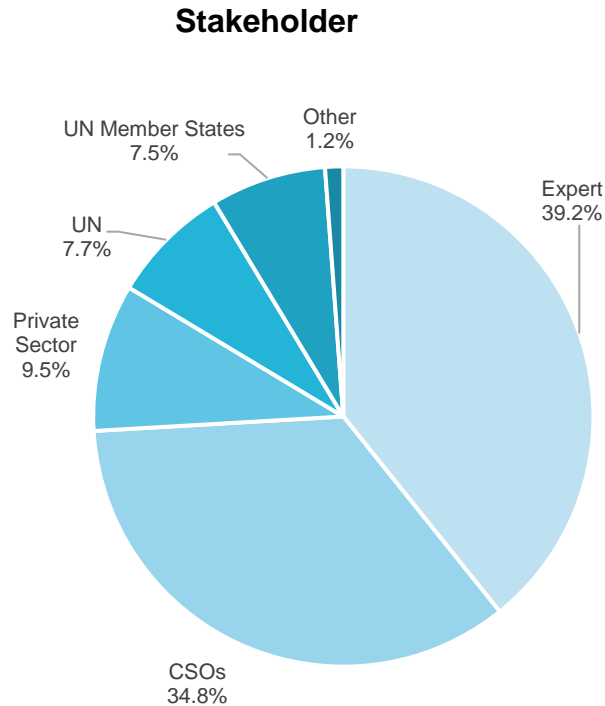
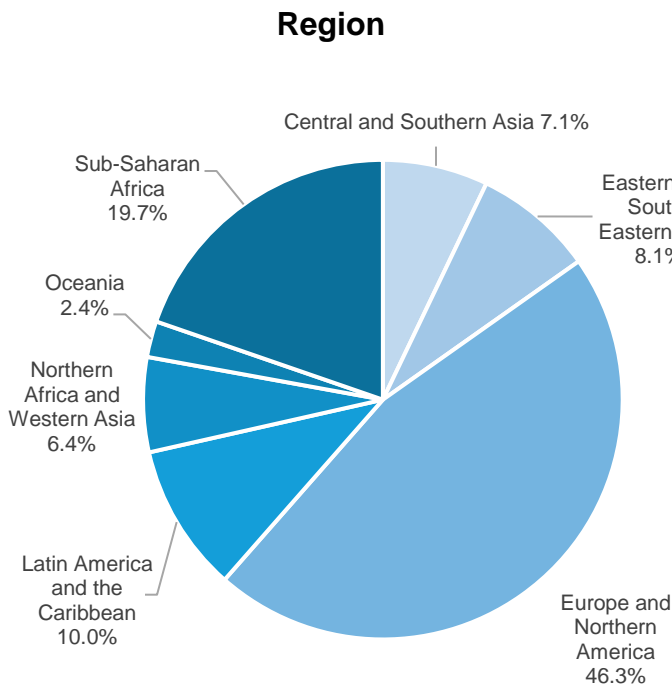
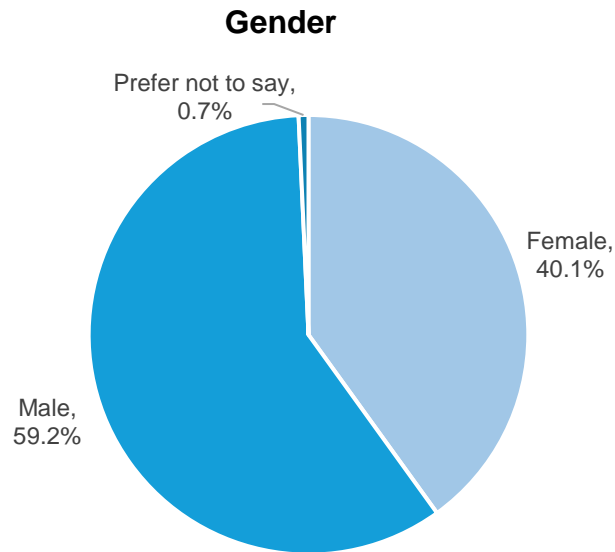
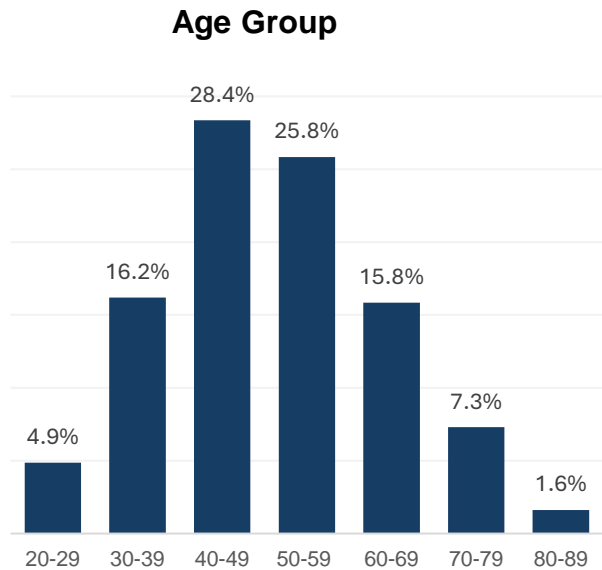
List of Barriers

- Inadequate data and information
- Incorrect prioritization of risks
- Weak governance or coordination mechanisms
- Technological challenges (access, use)
- Insufficient finance options
- Inadequate funding resources
- Misaligned stakeholder incentives
- Lack of communication pathways
- Lack of political consensus
- Limited access to skilled manpower
- Strong resistance (public, political, or corporate)
- Lack of trust and accountability
- Legal and regulatory constraints
- None
- Don't know
- Other: Please specify _____

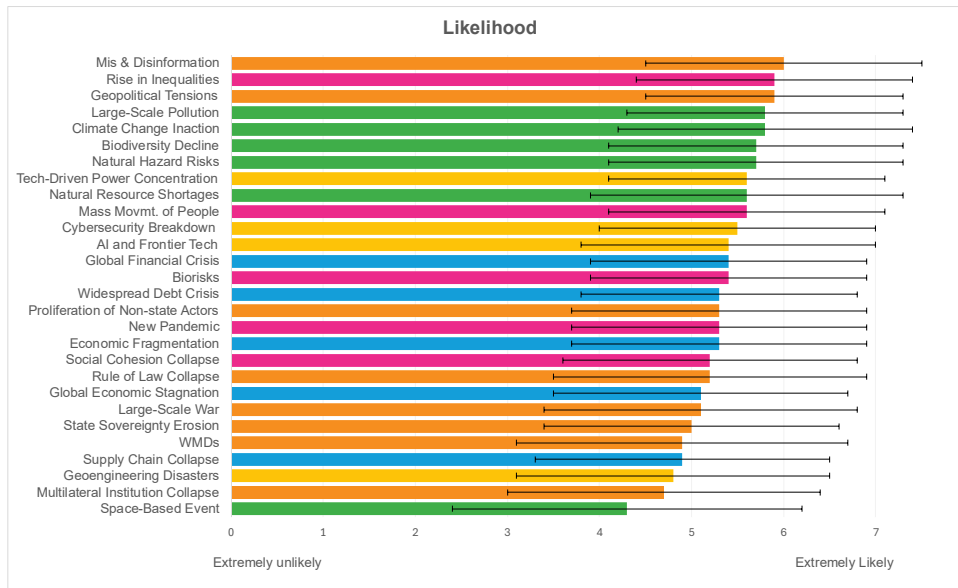
List of Actions

- Action by individuals
- Local government action
- National government action
- Bilateral action (i.e., between two governments)
- Multilateral action (i.e., between three or more governments)
- Action by private sector organisations
- Action by civil society organizations
- Joint action between governments and private sector organisations
- Joint action between governments and civil society organisations
- Joint action between civil society and private sector organizations
- None
- Don't know
- Other: Please specify _____

Respondent profiles

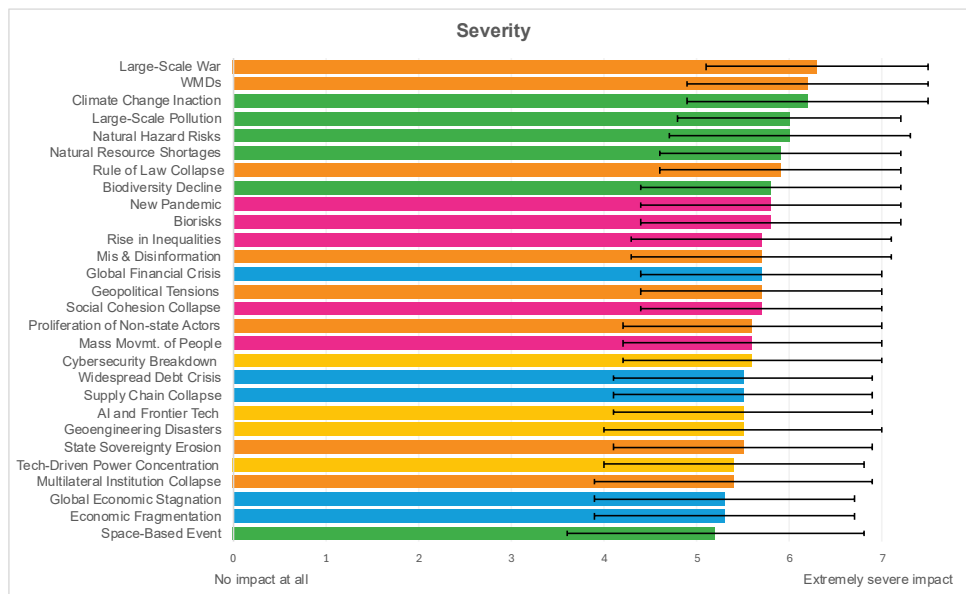


Likelihood overview



Likelihood asked respondents to rate how likely each of the 28 risks were to negatively impact a large portion of humanity by 2050. Respondents were provided with a Likert scale of 1 to 7 with the following signposts: (1) Extremely unlikely, (4) Neither likely nor unlikely, and (7) Extremely likely. This bar chart highlights the average response for each risk, accompanied by their respective standard deviation (SD) values.

Severity overview



Severity asked respondents how severe the impacts of each of the 28 risks would be if they were to occur by 2050. Respondents were provided with a Likert scale of 1 to 7, with the following signposts: (1) No impact at all, and (7) Extremely severe impact. This bar chart highlights the average response for each risk, accompanied by their respective standard deviation (SD) values.

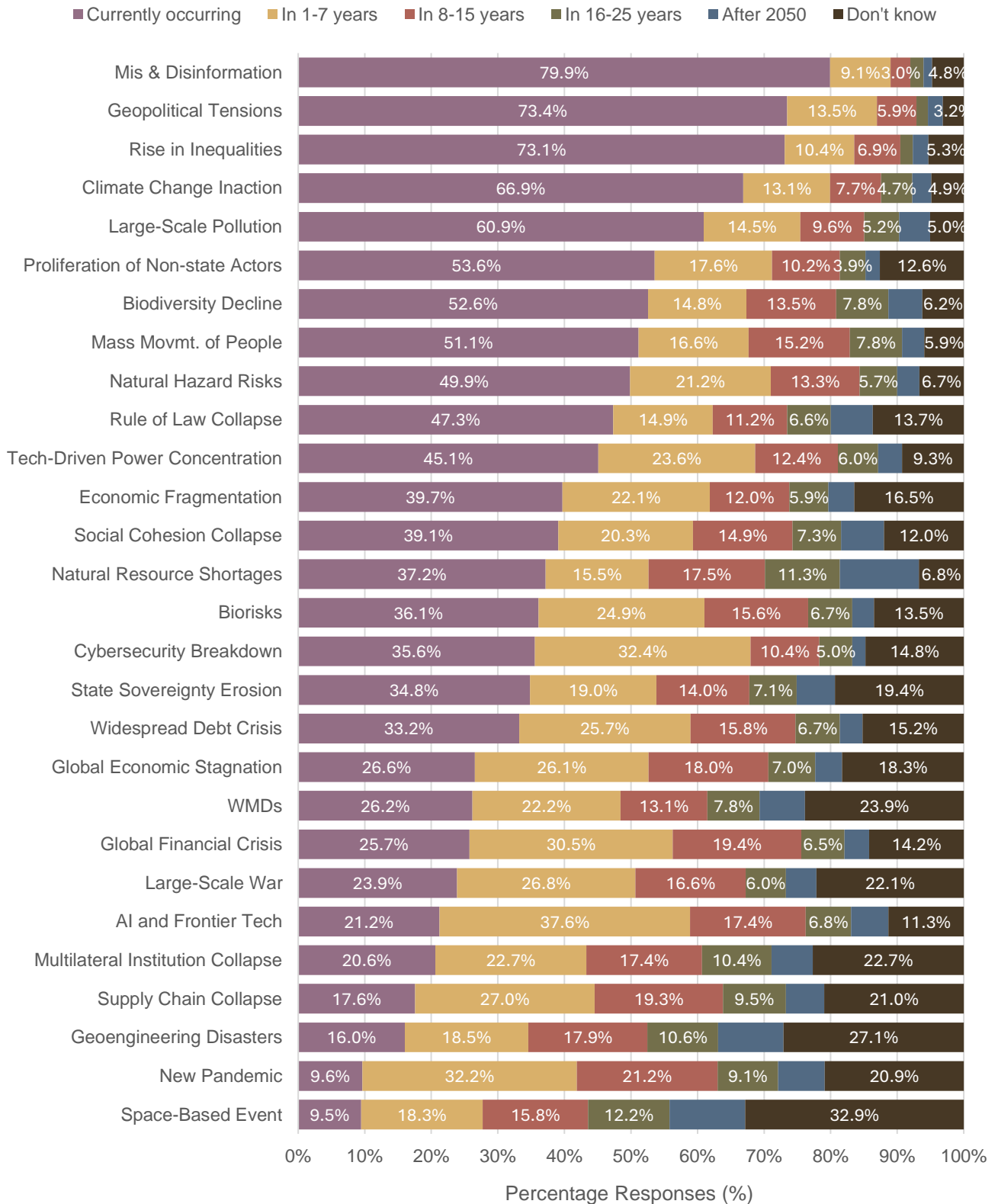
Likelihood and severity categorizations

The following are the corresponding likelihood and severity categories, according to likelihood and severity percentiles.

Categorization	Percentile Range	Likelihood	Severity
Low	Below 25 th	< 5.07	< 5.50
Lower	Between 25 th and 75 th	$5.07 \leq x < 5.35$	$5.50 \leq x < 5.70$
Moderate	Between 50 th and 75 th	$5.35 \leq x < 5.70$	$5.70 \leq x < 5.87$
High	Equal to and above 75 th	≥ 5.70	≥ 5.87

Rank by Importance	Risk	Category
1	 Climate Change Inaction	High Likelihood, High Severity
2	 Large-Scale Pollution	High Likelihood, High Severity
3	 Mis & Disinformation	High Likelihood, Moderate Severity
4	 Natural Hazard Risks	Moderate Likelihood, High Severity
5	 Rise in Inequalities	High Likelihood, Moderate Severity
6	 Biodiversity Decline	High Likelihood, Moderate Severity
7	 Geopolitical Tensions	High Likelihood, Moderate Severity
8	 Natural Resource Shortages	Moderate Likelihood, High Severity
9	 Mass Movmt. of People	High Likelihood, Lower Severity
10	 Large-Scale War	Lower Likelihood, High Severity
11	 Biorisks	Moderate Likelihood, Moderate Severity
12	 New Pandemic	Lower Likelihood, Moderate Severity
13	 Rule of Law Collapse	Lower Likelihood, High Severity
14	 Cybersecurity Breakdown	Moderate Likelihood, Lower Severity
15	 Global Financial Crisis	Moderate Likelihood, Lower Severity
16	 WMDs	Low Likelihood, High Severity
17	 AI and Frontier Tech	Moderate Likelihood, Lower Severity
18	 Proliferation of Non-state Actors	Lower Likelihood, Lower Severity
19	 Tech-Driven Power Concentration	Moderate Likelihood, Low Severity
20	 Social Cohesion Collapse	Lower Likelihood, Moderate Severity
21	 Widespread Debt Crisis	Lower Likelihood, Low Severity
22	 Economic Fragmentation	Lower Likelihood, Low Severity
23	 State Sovereignty Erosion	Low Likelihood, Lower Severity
24	 Global Economic Stagnation	Low Likelihood, Low Severity
25	 Supply Chain Collapse	Low Likelihood, Low Severity
26	 Geoengineering Disasters	Low Likelihood, Lower Severity
27	 Multilateral Institution Collapse	Low Likelihood, Low Severity
28	 Space-Based Event	Low Likelihood, Low Severity

Imminence



Mean imminence

	Risk	Rank by Importance	Mean Imminence (Analysis A) ¹	Mean Imminence (Analysis B) ²
	Mis & Disinformation	3	1.50	1.43
	Geopolitical Tensions	7	2.21	2.14
	Rise in Inequalities	5	2.31	2.19
	Climate Change Inaction	1	3.24	3.08
	Proliferation of Non-state Actors	18	3.67	3.21
	Large-Scale Pollution	2	4.14	3.93
	Natural Hazard Risks	4	4.69	4.37
	Cybersecurity Breakdown	14	4.69	4.00
	Tech-Driven Power Concentration	19	4.97	4.51
	Mass Movmt. of People	9	5.16	4.85
	Economic Fragmentation	22	5.30	4.43
	Biodiversity Decline	6	5.36	5.03
	Rule of Law Collapse	13	5.56	4.80
	Biorisks	11	5.74	4.96
	Widespread Debt Crisis	21	5.97	5.06
	Social Cohesion Collapse	20	6.41	5.64
	State Sovereignty Erosion	23	6.52	5.26
	Global Financial Crisis	15	6.64	5.70
	Global Economic Stagnation	24	6.81	5.57
	Large-Scale War	10	6.89	5.36
	AI and Frontier Tech	17	7.11	6.30
	WMDs	16	7.49	5.71
	Supply Chain Collapse	25	8.44	6.67
	Natural Resource Shortages	8	8.48	7.90
	Multilateral Institution Collapse	27	8.53	6.60
	New Pandemic	12	9.28	7.34
	Geoengineering Disasters	26	10.19	7.43
	Space-Based Event	28	11.76	7.90

¹“Don’t know” values treated as a missing value and EXCLUDED in analysis

²“Don’t know” values treated as a missing value and INCLUDED in analysis

Risk ranking by importance (likelihood x severity)

Rank by Importance		Risk	Importance (Likelihood x Severity)
1	Environmental	Climate Change Inaction	37.2
2	Environmental	Large-Scale Pollution	36.0
3	Political	Mis & Disinformation	35.4
4	Environmental	Natural Hazard Risks	35.0
5	Societal	Rise in Inequalities	34.7
6	Environmental	Biodiversity Decline	34.6
7	Political	Geopolitical Tensions	34.5
8	Environmental	Natural Resource Shortages	34.3
9	Societal	Mass Movmt. of People	33.2
10	Political	Large-Scale War	32.6
11	Societal	Biorisks	32.3
12	Societal	New Pandemic	32.1
13	Political	Rule of Law Collapse	32.0
14	Technological	Cybersecurity Breakdown	31.7
15	Economic	Global Financial Crisis	31.6
16	Political	WMDs	31.1
17	Technological	AI and Frontier Tech	31.0
18	Societal	Proliferation of Non-State Actors	30.8
19	Technological	Tech-Driven Power Concentration	30.8
20	Societal	Social Cohesion Collapse	30.4
21	Economic	Widespread Debt Crisis	30.2
22	Economic	Economic Fragmentation	29.1
23	Political	State Sovereignty Erosion	28.5
24	Economic	Global Economic Stagnation	27.9
25	Economic	Supply Chain Collapse	27.8
26	Technological	Geoengineering Disasters	27.5
27	Political	Multilateral Institution Collapse	26.3
28	Environmental	Space-Based Event	23.4

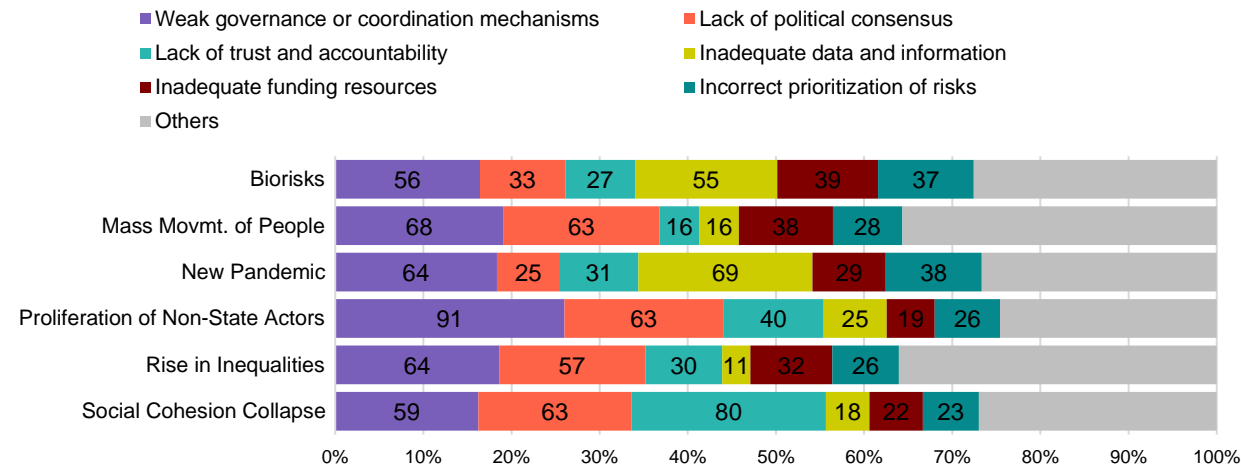
Risk ranking by priority

Rank by Importance	Rank by Priority	Risk	Priority (Cumulative Value)
1	1	Climate Change Inaction	2498
10	2	Large-Scale War	1303
13	3	Rule of Law Collapse	1113
5	4	Rise in Inequalities	971
7	5	Geopolitical Tensions	847
3	6	Mis & Disinformation	728
4	7	Natural Hazard Risks	724
16	8	WMDs	714
6	9	Biodiversity Decline	698
12	10	New Pandemic	673
8	11	Natural Resource Shortages	662
9	12	Mass Movmt. of People	627
15	13	Global Financial Crisis	619
17	14	AI and Frontier Tech	564
2	15	Large-Scale Pollution	561
20	16	Social Cohesion Collapse	415
27	17	Multilateral Institution Collapse	397
18	18	Proliferation of Non-State Actors	372
14	19	Cybersecurity Breakdown	367
11	20	Biorisks	346
21	21	Widespread Debt Crisis	299
24	22	Global Economic Stagnation	267
23	23	State Sovereignty Erosion	204
22	24	Economic Fragmentation	192
19	25	Tech-Driven Power Concentration	180
25	26	Supply Chain Collapse	172
26	27	Geoengineering Disasters	122
28	28	Space-Based Event	30

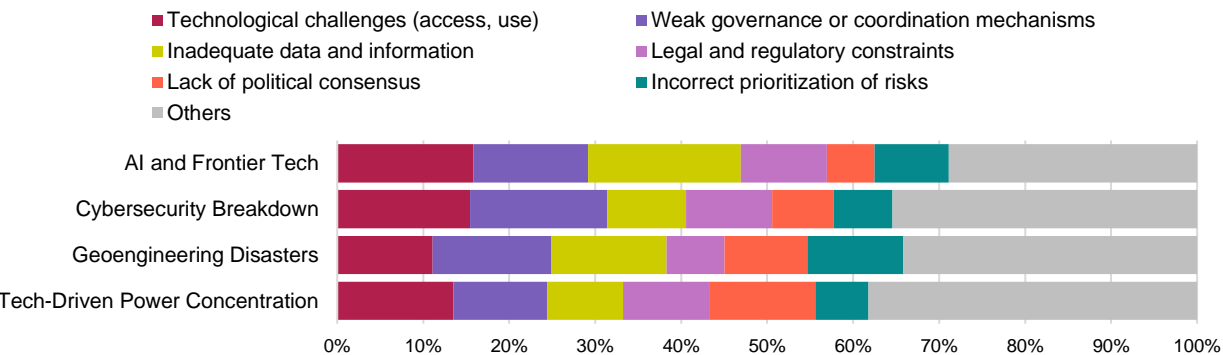
Barriers to managing global risks (by STEEP)

Risks are ordered alphabetically within each STEEP category. Figures highlight only barriers that were among the top 3 most frequent responses for one or more of the risks in each category; all other non-top barriers are indicated in the “Others” block. Barriers ordered from left to right, with the most frequently chosen barrier within each STEEP category on the left.

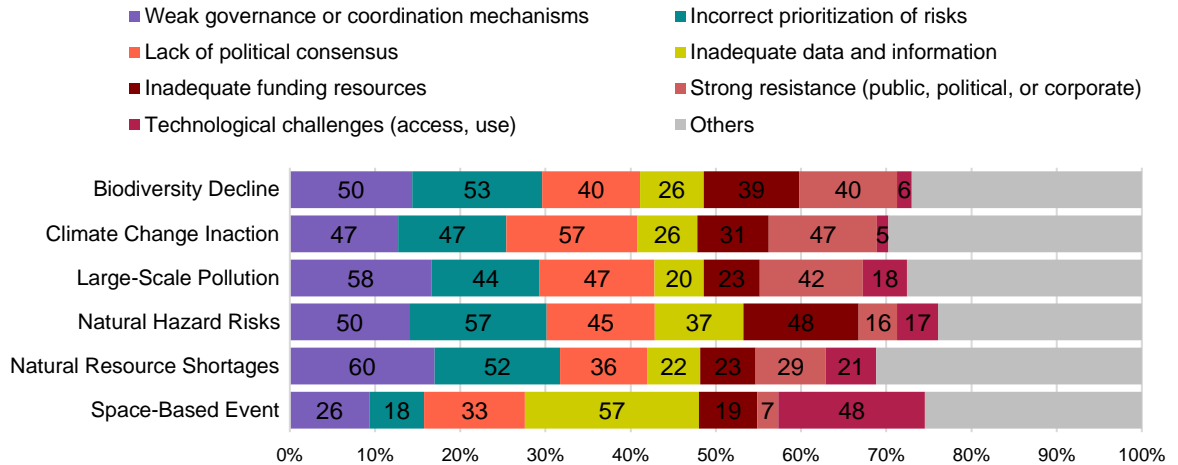
1. Top barriers to managing SOCIETAL risks



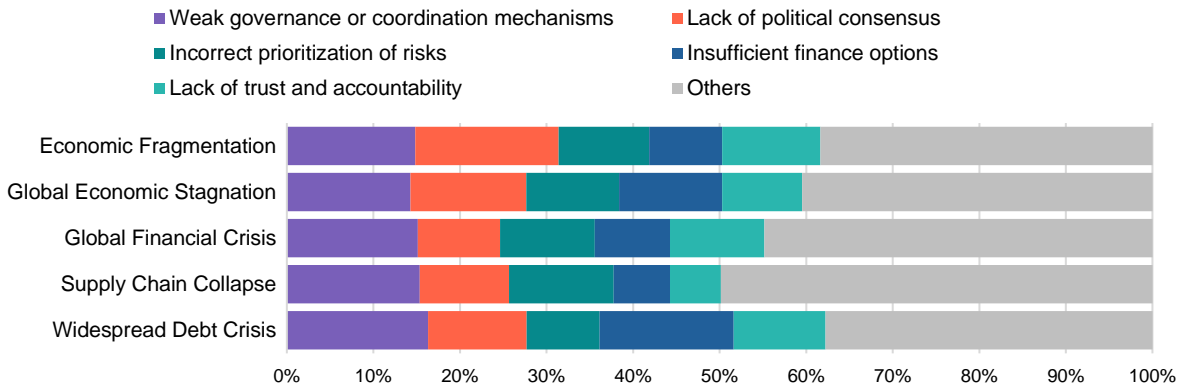
2. Top barriers to managing TECHNOLOGICAL risks



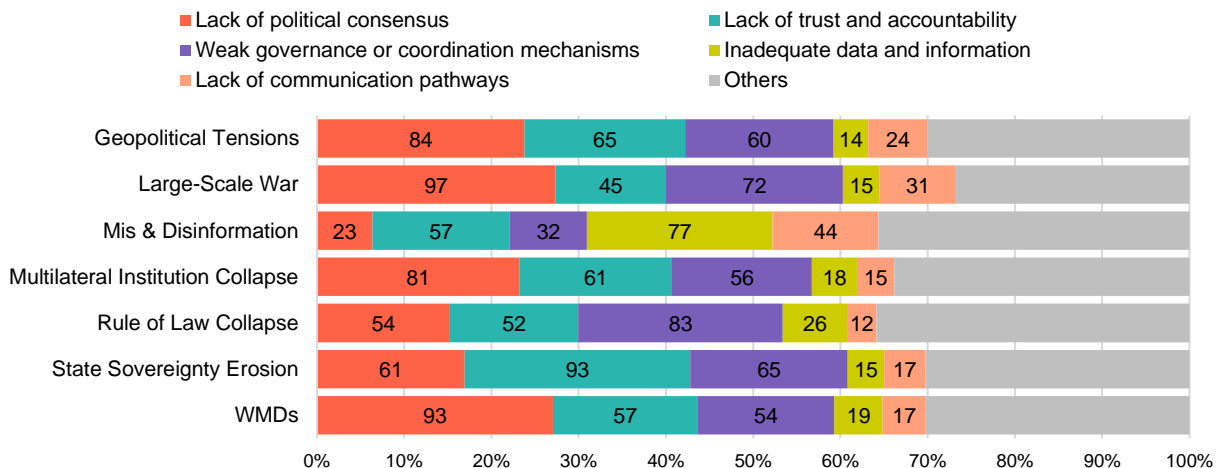
3. Top barriers to managing ENVIRONMENTAL risks



4. Top barriers to managing ECONOMIC risks



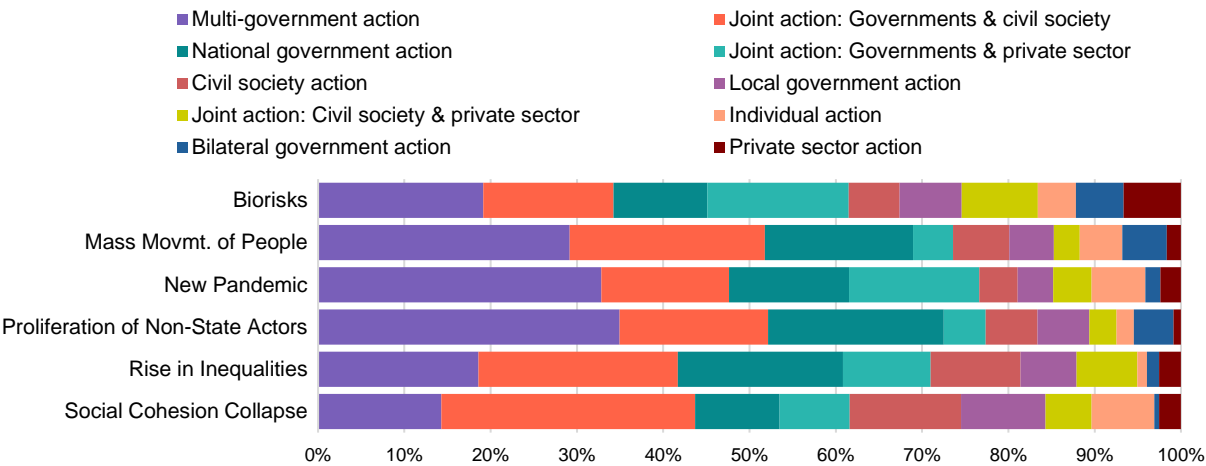
5. Top barriers to managing POLITICAL risks



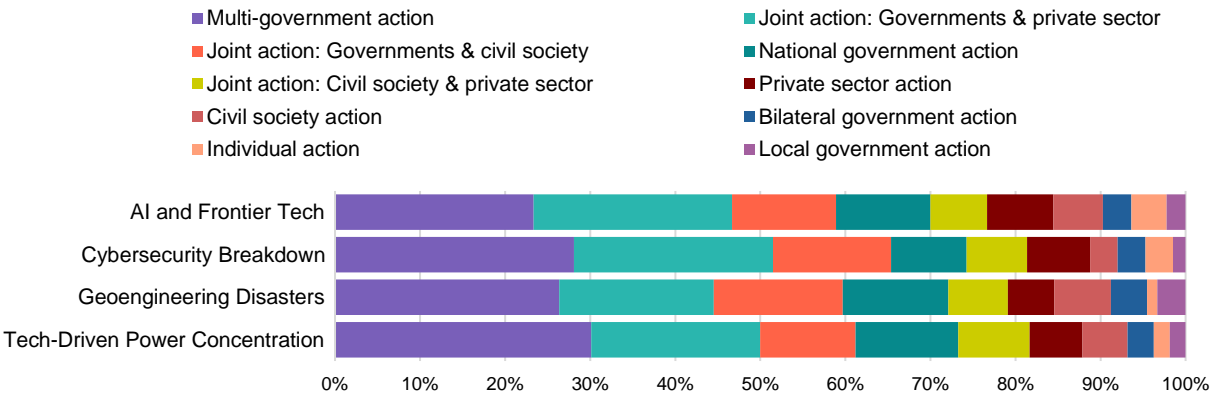
Stakeholder actions to address global risks (by STEEP)

Risks are ordered alphabetically within each STEEP category. Actions ordered from left to right, with the most frequently chosen action within each STEEP category on the left.

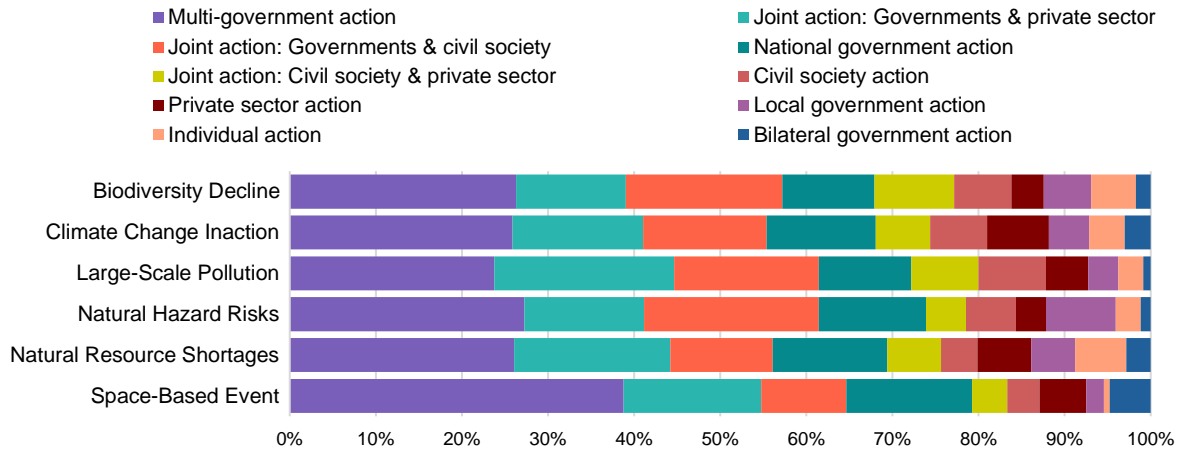
1. Stakeholder actions to address SOCIETAL risks



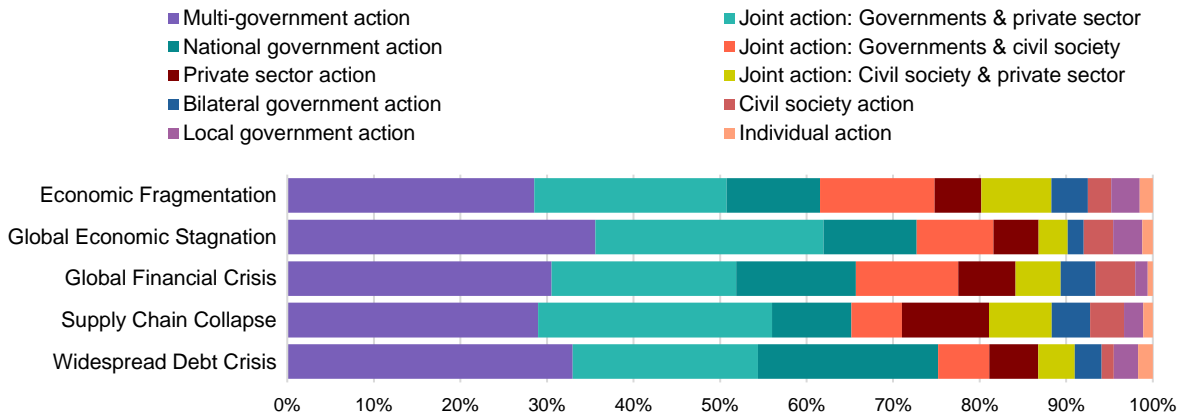
2. Stakeholder actions to address TECHNOLOGICAL risks



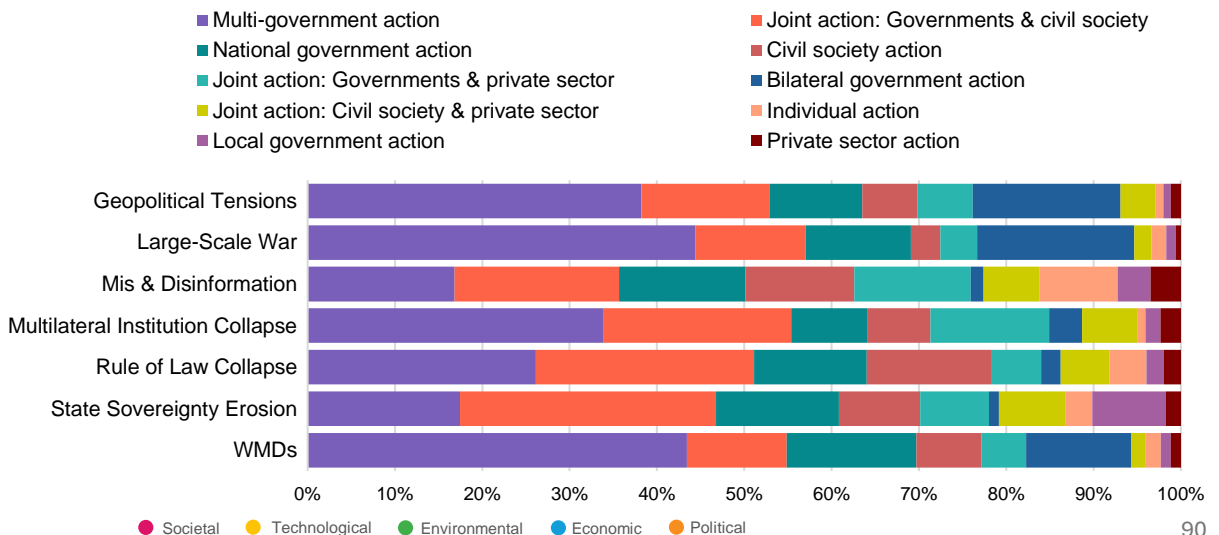
3. Stakeholder actions to address ENVIRONMENTAL risks



4. Stakeholder actions to address ECONOMIC risks



5. Stakeholder actions to address POLITICAL risks



Interconnections: Risk relationships by connection strength

Rank by Connection Strength		Cause		Consequence	Connection Strength
1		Geopolitical Tensions		Large-Scale War	155
2		Climate Change Inaction		Natural Hazard Risks	143
3		Biorisks		New Pandemic	125
4		Large-Scale War		Mass Movmt. of People	87
5		State Sovereignty Erosion		Proliferation of Non-State Actors	84
6		Rise in Inequalities		Social Cohesion Collapse	82
6		Mis & Disinformation		Social Cohesion Collapse	82
8		Social Cohesion Collapse		Rule of Law Collapse	77
8		Global Financial Crisis		Widespread Debt Crisis	77
8		Cybersecurity Breakdown		AI and Frontier Tech	77
11		AI and Frontier Tech		Cybersecurity Breakdown	75
12		Large-Scale Pollution		Biodiversity Decline	74
13		Natural Hazard Risks		Mass Movmt. of People	69
14		Rule of Law Collapse		Mass Movmt. of People	68
15		Widespread Debt Crisis		Global Financial Crisis	64
16		Mass Movmt. of People		Social Cohesion Collapse	61
17		WMDs		Large-Scale War	60
17		Biodiversity Decline		Natural Resource Shortages	60
19		Economic Fragmentation		Global Financial Crisis	59
20		Tech-Driven Power Concentration		AI and Frontier Tech	56
20		Proliferation of Non-State Actors		Rule of Law Collapse	56
22		Multilateral Institution Collapse		Rule of Law Collapse	55
23		Geoengineering Disasters		Natural Hazard Risks	48
24		Global Economic Stagnation		Rise in Inequalities	47
25		Supply Chain Collapse		Global Economic Stagnation	40
26		New Pandemic		Global Financial Crisis	38
27		Natural Resource Shortages		Geopolitical Tensions	37
28	N/A	None		Space-Based Event	29
29		Space-Based Event		Large-Scale War	23

* All risks only appear once in the “Cause” column. However, there are some repeated risks in “Consequences”, as these are the risks that are strongest linked to the corresponding “Cause”.

Interconnections: Risks by degree centrality

Rank by Degree Centrality		Risk	Degree Centrality
1		Geopolitical Tensions	1239
2		Rule of Law Collapse	1120
3		Social Cohesion Collapse	1113
4		Mass Movmt. of People	1071
5		Large-Scale War	1037
6		Climate Change Inaction	995
7		Global Financial Crisis	988
8		Rise in Inequalities	967
9		Economic Fragmentation	894
10		State Sovereignty Erosion	819
11		Multilateral Institution Collapse	799
12		Proliferation of Non-state Actors	743
13		Mis & Disinformation	723
14		Natural Hazard Risks	702
15		Cybersecurity Breakdown	666
16		Natural Resource Shortages	656
17		Global Economic Stagnation	646
18		AI and Frontier Tech	639
18		Large-Scale Pollution	639
20		Biorisks	638
21		Biodiversity Decline	626
22		Tech-Driven Power Concentration	580
23		Supply Chain Collapse	577
24		Geoengineering Disasters	567
25		New Pandemic	563
26		Widespread Debt Crisis	559
27		WMDs	476
28		Space-Based Event	370






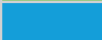






















Standard deviation and range across regions for all risks

List ordered by standard deviation (highest to lowest)

Rank by Importance	Risk	Standard Deviation	Range
28	Space-Based Event	3.1	7.9
5	Rise in Inequalities	3.0	7.5
18	Proliferation of Non-state Actors	2.9	7.8
1	Climate Change Inaction	2.8	7.9
6	Biodiversity Decline	2.5	5.8
24	Global Economic Stagnation	2.4	7.2
22	Economic Fragmentation	2.4	6.8
12	New Pandemic	2.4	5.9
3	Mis & Disinformation	2.4	7.4
26	Geoengineering Disasters	2.3	6.7
15	Global Financial Crisis	2.3	6.9
4	Natural Hazard Risks	2.2	7.0
25	Supply Chain Collapse	2.2	7.0
23	State Sovereignty Erosion	2.1	6.6
18	Tech-Driven Power Concentration	2.0	6.4
17	AI and Frontier Tech	2.0	5.2
16	WMDs	2.0	4.7
21	Widespread Debt Crisis	2.0	5.4
8	Natural Resource Shortages	2.0	5.8
9	Mass Movmt. of People	1.9	5.5
11	Biorisks	1.9	5.9
10	Large-Scale War	1.9	5.9
13	Rule of Law Collapse	1.9	4.6
14	Cybersecurity Breakdown	1.7	4.9
27	Multilateral Institution Collapse	1.6	4.3
2	Large-Scale Pollution	1.5	3.6
20	Social Cohesion Collapse	1.5	4.4
7	Geopolitical Tensions	1.3	3.8

Standard deviation and range across stakeholder groups for all risks

List ordered by standard deviation (highest to lowest)

Rank by importance	Risk	Standard Deviation	Range
20	 Social Cohesion Collapse	3.0	7.7
27	 Multilateral Institution Collapse	2.8	7.2
26	 Geoengineering Disasters	2.7	6.7
28	 Space-Based Event	2.7	7.6
8	 Natural Resource Shortages	2.6	6.6
25	 Supply Chain Collapse	2.3	6.2
18	 Proliferation of Non-state Actors	2.2	5.4
2	 Large-Scale Pollution	2.1	5.1
1	 Climate Change Inaction	2.0	4.8
13	 Rule of Law Collapse	1.9	4.9
15	 Global Financial Crisis	1.8	4.9
16	 WMDs	1.7	4.1
9	 Mass Movmt. of People	1.6	4.1
24	 Global Economic Stagnation	1.5	4.0
14	 Cybersecurity Breakdown	1.5	4.0
11	 Biorisks	1.5	3.8
12	 New Pandemic	1.5	3.5
19	 Tech-Driven Power Concentration	1.4	3.2
6	 Biodiversity Decline	1.4	3.7
23	 State Sovereignty Erosion	1.2	3.2
5	 Rise in Inequalities	1.2	2.9
10	 Large-Scale War	1.1	2.9
22	 Economic Fragmentation	1.1	2.9
21	 Widespread Debt Crisis	1.1	2.5
3	 Mis & Disinformation	0.8	1.9
7	 Geopolitical Tensions	0.8	2.1
17	 AI and Frontier Tech	0.5	1.2
4	 Natural Hazard Risks	0.5	1.2

Data Cleaning Procedure – Stakeholder Discrepancy Reconciliation

Stakeholder group identification for each respondent was derived from two sources: the distribution channel predetermined by the UN or self-identified through questions at the beginning of the survey. In most cases, respondents' self-identified stakeholder group matched the predetermined distribution channels. However, 105 responses—which completed at least 50% of the survey—had discrepant stakeholder groups between these two sources.

To reconcile these discrepancies, three independent raters used the organization name (and country) to objectively determine the correct stakeholder group. Any inter-rater disagreements were resolved through discussion until full consensus was reached.

Discrepant cases potentially involving government representatives from Member States (n = 13) were individually verified through their unique response IDs.

For cases where:

- (a) the self-reported organization name contained limited or ambiguous information such that it was not possible to determine a reasonable classification (n = 5),
 - (b) the respondent indicated multiple organization names that belong to more than 1 stakeholder group (n = 2), or
 - (c) respondents indicated belonging to *associations* of governments (n = 2),
- these were conservatively classified as “Other.” Such cases were not assigned to any stakeholder group for comparison but were retained for all overall pooled analyses.

Additionally, specific stakeholder classifications were made for the following respondents: 10 respondents who specified a university under the organization name were classified as Experts; 5 respondents representing a UN Global Compact network were classified under Civil Society Organizations.

Pairwise differences between regions for all risks (1/4)

Statistical tests for significance of pairwise differences (between two regions) – on the perceived importance, of each risk – were conducted using linear regression, controlling for stakeholder group, age, and gender. The values (regression coefficients) indicate the magnitude of difference, on average, between two regions, controlling for the other factors aforementioned; a positive value indicates that the baseline region has a lower perceived importance than the region to which it is compared, and vice versa. To prevent repetition, each unique pairwise difference is reported only once; regions are assigned as the baseline in alphabetical order.

Rank by Importance	Risk	Baseline: Central and Southern Asia					
		Eastern and South-Eastern Asia	Europe and Northern America	Latin America and the Caribbean	Northern Africa and Western Asia	Oceania	Sub-Saharan Africa
1	Climate Change Inaction	3.941+	4.316*	3.282	1.403	5.594+	0.630
2	Large-Scale Pollution	-1.429	-1.543	1.540	-0.765	1.524	0.465
3	Mis & Disinformation	4.489*	4.817**	7.376***	1.397	2.251	3.811*
4	Natural Hazard Risks	3.209	1.784	4.252*	2.434	5.818+	1.606
5	Rise in Inequalities	1.428	3.539*	6.598**	1.134	6.191+	2.969
6	Biodiversity Decline	1.958	-0.231	3.351	-1.749	2.646	-0.983
7	Geopolitical Tensions	3.855+	3.878*	4.424*	2.792	3.583	3.363+
8	Natural Resource Shortages	0.454	-1.663	3.292	-0.903	1.820	-2.075
9	Mass Movmt. of People	2.214	4.405*	6.813**	3.381	4.396	4.619*
10	Large-Scale War	2.665	2.601	5.410*	4.423+	1.645	4.320*
11	Biorisks	1.352	-0.671	4.188+	0.768	-1.032	2.755
12	New Pandemic	4.039+	-1.192	2.791	1.423	-2.134	4.159*
13	Rule of Law Collapse	1.496	0.327	4.806*	3.635	3.451	1.002
14	Cybersecurity Breakdown	2.798	-0.279	5.068*	2.626	2.536	2.644
15	Global Financial Crisis	2.568	-0.657	6.565**	2.103	1.757	4.208*
16	WMDs	2.553	0.064	4.455+	3.358	-0.799	4.400*
17	AI and Frontier Tech	3.051	-1.158	3.226	2.270	-2.949	0.734
18	Proliferation of Non-State Actors	2.032	-0.839	6.616**	0.262	-2.406	4.883*
19	Tech-Driven Power Concentration	4.954*	4.093*	7.225***	5.209*	6.163+	4.444*
20	Social Cohesion Collapse	0.710	0.307	4.451*	0.304	0.073	1.673
21	Widespread Debt Crisis	1.974	-0.816	4.316*	2.899	-1.191	2.345
22	Economic Fragmentation	1.137	-0.479	4.905*	3.257	-2.379	3.343+
23	State Sovereignty Erosion	3.048	2.009	7.864***	3.803	3.697	3.383+
24	Global Economic Stagnation	1.035	-2.065	5.553**	0.837	-1.896	2.115
25	Supply Chain Collapse	0.269	-1.369	5.606*	0.480	0.318	0.188
26	Geoengineering Disasters	1.915	-1.832	5.218*	0.673	-1.618	2.923
27	Multilateral Institution Collapse	4.436*	0.536	4.770*	3.120	1.237	3.023
28	Space-Based Event	0.240	-5.202*	1.406	-1.336	-6.562+	-0.506

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Pairwise differences between regions for all risks (2/4)

Rank by Importance	Risk	Baseline: Eastern and South-Eastern Asia				
		Europe and Northern America	Latin America and the Caribbean	Northern Africa and Western Asia	Oceania	Sub-Saharan Africa
1	Climate Change Inaction	0.375	-0.658	-2.538	1.653	-3.311+
2	Large-Scale Pollution	-0.114	2.969	0.663	2.953	1.893
3	Mis & Disinformation	0.328	2.887	-3.092	-2.237	-0.678
4	Natural Hazard Risks	-1.426	1.042	-0.776	2.609	-1.603
5	Rise in Inequalities	2.111	5.170**	-0.294	4.763	1.541
6	Biodiversity Decline	-2.189	1.393	-3.707+	0.688	-2.941+
7	Geopolitical Tensions	0.023	0.569	-1.063	-0.272	-0.492
8	Natural Resource Shortages	-2.117	2.838	-1.357	1.366	-2.529
9	Mass Movmt. of People	2.190	4.599*	1.167	2.181	2.405
10	Large-Scale War	-0.064	2.744	1.757	-1.020	1.655
11	Biorisks	-2.024	2.835	-0.585	-2.385	1.403
12	New Pandemic	-5.232**	-1.248	-2.617	-6.173+	0.119
13	Rule of Law Collapse	-1.169	3.310+	2.139	1.955	-0.494
14	Cybersecurity Breakdown	-3.077*	2.270	-0.172	-0.262	-0.154
15	Global Financial Crisis	-3.225*	3.997*	-0.466	-0.811	1.640
16	WMDs	-2.489	1.903	0.805	-3.352	1.847
17	AI and Frontier Tech	-4.209**	0.175	-0.781	-6.000+	-2.317
18	Proliferation of Non-State Actors	-2.871+	4.583*	-1.770	-4.438	2.851
19	Tech-Driven Power Concentration	-0.861	2.271	0.255	1.210	-0.510
20	Social Cohesion Collapse	-0.403	3.741+	-0.407	-0.637	0.963
21	Widespread Debt Crisis	-2.790+	2.342	0.925	-3.165	0.371
22	Economic Fragmentation	-1.615	3.769+	2.120	-3.516	2.206
23	State Sovereignty Erosion	-1.039	4.816*	0.755	0.649	0.335
24	Global Economic Stagnation	-3.100*	4.518*	-0.198	-2.931	1.080
25	Supply Chain Collapse	-1.638	5.337**	0.211	0.049	-0.081
26	Geoengineering Disasters	-3.747*	3.303	-1.242	-3.533	1.007
27	Multilateral Institution Collapse	-3.900*	0.333	-1.317	-3.200	-1.414
28	Space-Based Event	-5.442**	1.166	-1.575	-6.801+	-0.746

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Pairwise differences between regions for all risks (3/4)

Rank by Importance	Risk	Baseline: Europe and Northern America			
		Latin America and the Caribbean	Northern Africa and Western Asia	Oceania	Sub-Saharan Africa
1	Climate Change Inaction	-1.034	-2.913	1.278	-3.686**
2	Large-Scale Pollution	3.083*	0.778	3.067	2.007+
3	Mis & Disinformation	2.559+	-3.420*	-2.565	-1.006
4	Natural Hazard Risks	2.468+	0.650	4.034	-0.178
5	Rise in Inequalities	3.059*	-2.405	2.652	-0.570
6	Biodiversity Decline	3.582*	-1.518	2.876	-0.752
7	Geopolitical Tensions	0.545	-1.086	-0.295	-0.516
8	Natural Resource Shortages	4.955***	0.760	3.483	-0.412
9	Mass Movmt. of People	2.409+	-1.023	-0.009	0.215
10	Large-Scale War	2.808+	1.821	-0.956	1.719
11	Biorisks	4.859**	1.439	-0.361	3.427**
12	New Pandemic	3.984**	2.615	-0.942	5.351***
13	Rule of Law Collapse	4.480**	3.309+	3.124	0.675
14	Cybersecurity Breakdown	5.347***	2.905	2.815	2.923*
15	Global Financial Crisis	7.222***	2.759	2.414	4.865***
16	WMDs	4.392**	3.294+	-0.863	4.336***
17	AI and Frontier Tech	4.384**	3.428+	-1.791	1.892
18	Proliferation of Non-State Actors	7.454***	1.100	-1.567	5.722***
19	Tech-Driven Power Concentration	3.132*	1.116	2.070	0.351
20	Social Cohesion Collapse	4.144**	-0.003	-0.233	1.366
21	Widespread Debt Crisis	5.132***	3.715*	-0.375	3.161**
22	Economic Fragmentation	5.384***	3.735*	-1.901	3.821**
23	State Sovereignty Erosion	5.855***	1.794	1.688	1.374
24	Global Economic Stagnation	7.619***	2.902+	0.170	4.180***
25	Supply Chain Collapse	6.975***	1.849	1.687	1.557
26	Geoengineering Disasters	7.050***	2.505	0.214	4.755***
27	Multilateral Institution Collapse	4.234**	2.583	0.701	2.487*
28	Space-Based Event	6.608***	3.866+	-1.359	4.696***

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Pairwise differences between regions for all risks (4/4)

Rank by Importance	Risk	Baseline: Latin America and the Caribbean			Baseline: Northern Africa and Western Asia		Baseline: Oceania
		Northern Africa and Western Asia	Oceania	Sub-Saharan Africa	Oceania	Sub-Saharan Africa	Sub-Saharan Africa
1	Climate Change Inaction	-1.880	2.311	-2.653	4.191	-0.773	-4.964+
2	Large-Scale Pollution	-2.306	-0.016	-1.076	2.290	1.230	-1.060
3	Mis & Disinformation	-5.979**	-5.125+	-3.565*	0.854	2.414	1.560
4	Natural Hazard Risks	-1.818	1.566	-2.646	3.384	-0.828	-4.212
5	Rise in Inequalities	-5.464*	-0.407	-3.629*	5.057	1.835	-3.222
6	Biodiversity Decline	-5.100*	-0.705	-4.334**	4.395	0.766	-3.628
7	Geopolitical Tensions	-1.631	-0.841	-1.061	0.791	0.570	-0.220
8	Natural Resource Shortages	-4.195*	-1.472	-5.367**	2.723	-1.172	-3.896
9	Mass Movmt. of People	-3.432	-2.418	-2.194	1.014	1.238	0.224
10	Large-Scale War	-0.987	-3.764	-1.090	-2.777	-0.103	2.674
11	Biorisks	-3.420	-5.220+	-1.432	-1.800	1.988	3.788
12	New Pandemic	-1.369	-4.925	1.367	-3.557	2.736	6.293*
13	Rule of Law Collapse	-1.171	-1.356	-3.805*	-0.185	-2.634	-2.449
14	Cybersecurity Breakdown	-2.442	-2.532	-2.424	-0.090	0.018	0.108
15	Global Financial Crisis	-4.463*	-4.808+	-2.357	-0.345	2.105	2.451
16	WMDs	-1.097	-5.255+	-0.055	-4.158	1.042	5.200+
17	AI and Frontier Tech	-0.956	-6.175*	-2.492	-5.219	-1.536	3.683
18	Proliferation of Non-State Actors	-6.354**	-9.021**	-1.732	-2.668	4.621*	7.289*
19	Tech-Driven Power Concentration	-2.016	-1.062	-2.781+	0.954	-0.765	-1.719
20	Social Cohesion Collapse	-4.147+	-4.378	-2.778+	-0.230	1.369	1.599
21	Widespread Debt Crisis	-1.417	-5.507+	-1.970	-4.090	-0.554	3.536
22	Economic Fragmentation	-1.648	-7.284*	-1.563	-5.636+	0.086	5.722+
23	State Sovereignty Erosion	-4.060+	-4.167	-4.481**	-0.107	-0.420	-0.314
24	Global Economic Stagnation	-4.716*	-7.449*	-3.438*	-2.733	1.278	4.011
25	Supply Chain Collapse	-5.126*	-5.288+	-5.418***	-0.162	-0.292	-0.130
26	Geoengineering Disasters	-4.545+	-6.836*	-2.295	-2.291	2.250	4.541
27	Multilateral Institution Collapse	-1.650	-3.533	-1.747	-1.883	-0.097	1.786
28	Space-Based Event	-2.742	-7.967*	-1.912	-5.226	0.829	6.055+

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Significances	Positive coefficient (focal region perceived risk to be of higher importance than baseline region)	$p < .10$	$p < .05$	$p < .01$	$p < .001$
	Negative coefficient (focal region perceived risk to be of lower importance than baseline region)	$p < .10$	$p < .05$	$p < .01$	$p < .001$

Risk Category Societal Technological Environmental Economic Political

Pairwise differences between stakeholders for all risks (1/2)

Statistical tests for significance of pairwise differences (between two stakeholder groups)—on the perceived importance of each risk—were conducted using linear regression, controlling for respondent region, age, and gender. The values (regression coefficients) indicate the magnitude of difference, on average, between two stakeholder groups after controlling for the aforementioned factors; a positive value indicates that the focal stakeholder group has a *higher* perceived importance than the baseline stakeholder group to which it is compared, and vice versa. To avoid repetition, each unique pairwise difference is reported only once; stakeholder groups are assigned the baseline in alphabetical order.

Rank by Importance	Risk	Baseline: Civil Society Organizations			
		Expert	Member States	Private Sector	UN
1	Climate Change Inaction	2.393*	0.870	0.031	3.094+
2	Large-Scale Pollution	1.501	-1.897	3.771*	-0.624
3	Mis & Disinformation	-0.403	-0.974	0.270	-2.343
4	Natural Hazard Risks	0.408	-0.518	0.395	0.147
5	Rise in Inequalities	0.129	-1.550	-1.664	-1.095
6	Biodiversity Decline	2.074*	-1.140	1.134	0.540
7	Geopolitical Tensions	-0.666	0.923	-0.606	1.037
8	Natural Resource Shortages	-0.299	-1.092	4.693**	-0.975
9	Mass Movmt. of People	-2.664**	-3.319+	-0.296	-1.485
10	Large-Scale War	0.281	-0.705	0.120	-1.760
11	Biorisks	2.135*	0.002	2.486	-0.324
12	New Pandemic	2.479*	-0.685	0.004	0.802
13	Rule of Law Collapse	-1.841+	-3.427+	-4.462**	-2.784
14	Cybersecurity Breakdown	-1.842+	-1.096	0.150	-2.839
15	Global Financial Crisis	-2.198*	-2.586	0.136	-2.937+
16	WMDs	-0.327	-1.575	0.465	-2.300
17	AI and Frontier Tech	0.027	-0.714	-0.090	-0.025
18	Proliferation of Non-State Actors	-1.826+	-0.367	-2.647	-1.991
19	Tech-Driven Power Concentration	-1.705	-1.726	-3.171+	-3.424*
20	Social Cohesion Collapse	-1.010	-7.498***	-2.117	-3.150+
21	Widespread Debt Crisis	-2.170*	-0.904	-0.032	-1.106
22	Economic Fragmentation	-1.275	-3.228+	-0.599	-1.051
23	State Sovereignty Erosion	-1.082	-3.126+	-0.361	-1.266
24	Global Economic Stagnation	-1.951+	-0.775	-0.167	-2.034
25	Supply Chain Collapse	-1.599	-1.188	1.552	-3.716*
26	Geoengineering Disasters	-1.952+	-4.244*	0.887	-4.396*
27	Multilateral Institution Collapse	-1.496	-7.407***	-3.357*	-3.166+
28	Space-Based Event	-3.652**	-3.123	-5.610**	-1.624

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Pairwise differences between stakeholders for all risks (2/2)

Rank by Importance	Risk	Baseline: Experts			Baseline: Member States		Baseline: Private Sector
		Member States	Private Sector	UN	Private Sector	UN	UN
1	Climate Change Inaction	-1.523	-2.362	0.701	-0.839	2.224	3.063
2	Large-Scale Pollution	-3.398*	2.269	-2.125	5.667**	1.273	-4.394*
3	Mis & Disinformation	-0.571	0.673	-1.939	1.244	-1.368	-2.612
4	Natural Hazard Risks	-0.925	-0.013	-0.260	0.913	0.665	-0.247
5	Rise in Inequalities	-1.679	-1.793	-1.224	-0.114	0.455	0.568
6	Biodiversity Decline	-3.214+	-0.941	-1.534	2.274	1.680	-0.594
7	Geopolitical Tensions	1.589	0.060	1.703	-1.529	0.114	1.643
8	Natural Resource Shortages	-0.792	4.992**	-0.676	5.785**	0.117	-5.668**
9	Mass Movmt. of People	-0.654	2.369	1.179	3.023	1.834	-1.189
10	Large-Scale War	-0.986	-0.161	-2.041	0.825	-1.055	-1.880
11	Biorisks	-2.132	0.351	-2.459	2.484	-0.327	-2.810
12	New Pandemic	-3.164+	-2.475	-1.677	0.689	1.488	0.798
13	Rule of Law Collapse	-1.586	-2.620+	-0.942	-1.035	0.643	1.678
14	Cybersecurity Breakdown	0.747	1.992	-0.997	1.245	-1.743	-2.989
15	Global Financial Crisis	-0.388	2.334	-0.738	2.722	-0.351	-3.073
16	WMDs	-1.248	0.792	-1.973	2.040	-0.725	-2.765
17	AI and Frontier Tech	-0.741	-0.117	-0.052	0.624	0.689	0.065
18	Proliferation of Non-State Actors	1.459	-0.820	-0.165	-2.280	-1.625	0.655
19	Tech-Driven Power Concentration	-0.021	-1.466	-1.719	-1.445	-1.698	-0.253
20	Social Cohesion Collapse	-6.489***	-1.108	-2.140	5.381*	4.348*	-1.033
21	Widespread Debt Crisis	1.267	2.138	1.065	0.871	-0.202	-1.073
22	Economic Fragmentation	-1.953	0.676	0.225	2.629	2.178	-0.452
23	State Sovereignty Erosion	-2.044	0.721	-0.184	2.765	1.860	-0.905
24	Global Economic Stagnation	1.176	1.784	-0.083	0.608	-1.259	-1.867
25	Supply Chain Collapse	0.411	3.151*	-2.117	2.740	-2.528	-5.268*
26	Geoengineering Disasters	-2.292	2.839+	-2.444	5.131*	-0.152	-5.283*
27	Multilateral Institution Collapse	-5.911***	-1.861	-1.670	4.050+	4.241+	0.191
28	Space-Based Event	0.528	-1.959	2.028	-2.487	1.499	3.986

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$

Significances	Positive coefficient (focal stakeholder group perceived risk to be of higher importance than baseline stakeholder group)	$p < .10$	$p < .05$	$p < .01$	$p < .001$
	Negative coefficient (focal stakeholder group perceived risk to be of lower importance than baseline stakeholder group)	$p < .10$	$p < .05$	$p < .01$	$p < .001$

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Box: Recommendations Based on Risk Categorization – For Reference Only

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