TRANSFORMATION OF THE SECURITY ENVIRONMENT

Overview of changes

WORKING GROUP
Otto Tähkäpää, Jukka Vahti, Rosa-Maria Mäkelä

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Sitra's foresight reviews present foresight work in progress. Their purpose is to stimulate a bold, constructive and multi-voiced debate on the future.

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Reader's guide

Dear Reader, you are holding Sitra's foresight review, which examines the transformation of the international security environment from the perspective of Finland and Finnish society. This review presents insights from the first phase of a broader foresight project launched in May 2024. The phase is based on background interviews with 15 experts from various fields, a workshop with Sitra's experts and a review of background literature.

The aim of this phase has been to identify the key developments in the transformation of the security environment and to outline a comprehensive view of these changes. The value of this review lies in examining these developments collectively and in relation to one another.

This is not a final report but an initial overview of the ongoing foresight work, intended to spark discussion. The review is aimed at decision-makers, organisations, businesses and individual citizens – **all of us**. Navigating the transformation of the security environment requires foresight capabilities as well as bold, constructive and inclusive discussions on security and the future.

"In times of crisis, it is easy to focus on the immediate and long for the past, better days. However, with no return to the 'old normal' in sight, we need new ways to comprehend the overall picture of the transformation of the security environment, as well as alternative – and desirable – futures."

Veera Heinonen
Director, Foresight and Training
Sitra

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Structure

At the beginning of the review, we will discuss the background, objectives and methods of our work. We will outline our approach to the transformation of the security environment and its foresight.

After this, we will present five key developments that define the transformation of the security environment and the overall picture they create. Each development is explored in detail using the futures triangle method. We will also highlight tensions related to these developments and pose "what if?" and "how?" questions that provide perspectives on alternative futures and invite reflection on our own role in shaping those futures.

Finally, we will consider the continuation of our work and offer a suggestion to help you delve deeper into the transformation of the security environment.

The review also includes a detailed explanation of the methods used, background literature and interviews with experts.

CONTENTS

1. Foundations
2. Overview of changes
3. **POWER:** The international system is crumbling
4. **TECHNOLOGY:** Technology is intertwining with security
5. **ECONOMY:** Economic power politics intensify
6. **NATURE:** Environmental crises fuel insecurity
7. **PEOPLE:** The social glue is losing grip
8. Conclusion
9. Methods
10. Literature

1. Foundations

Changes in the security environment

Unexpected crises such as the coronavirus pandemic and Russia's war of aggression have shaken the international security environment in the recent years. However, these events do not represent temporary disruptions to the security environment, after which a return to the old normal can be expected. Instead, the international security environment is undergoing its most significant transformation since the end of the Cold War.

Underlying this transformation are global change processes – megatrends – such as the ecological crisis, shifts in global power relations and intensifying great-power competition. These megatrends have been recognised for a long time, but previously it was possible to assume their effects would only be felt in the distant future.

We are now living in that future, as these megatrends materialise in the form of great-power struggles, wars, information influence and natural disasters occurring in various parts of the world.

The transformation of the international security environment represents a kind of rupture in historical continuity, with an intensifying global competition over the direction of the future that follows.

This transformation will also significantly affect the future of Finland and Finnish society in many ways. However, before we can anticipate these effects, we must first understand the transformation of the international security environment. What is changing, and what does the overall picture of these ongoing changes look like?

Security as a societal question

The transformation of the international security environment raises new questions and decision-making needs in Finland concerning societal priorities and resource allocation. We therefore approach the transformation of the security environment as a broader societal issue rather than merely as a matter of comprehensive security or supply chain resilience – it is a phenomenon interconnected with power, the economy, technology, nature and people.

Should we invest in defence, the green transition or healthcare? How do we strengthen inclusion and trust in democracy? These questions cannot be considered solely as issues of defence, foreign or security policy, nor in isolation from Finland's broader future challenges.

We do not aim to provide definitive or simple answers to these questions. Instead, our goal is to spark a multi-voiced and multi-perspective societal dialogue on security and the future. There is a positive feedback loop between a pluralistic democracy and security: the goal of security is not only to protect democracy, but democracy itself strengthens the resilience of society and individuals.

Megatrends 2023

Read more about the most significant future challenges of Finnish society in Sitra's Megatrends 2023 report

Sitra

Approach and methods

Multi-perspective analysis

Understanding the transformation of the security environment and its impacts requires a multi-perspective approach. We will therefore examine the topic through the PESTE framework, considering the perspectives of power, the economy, technology, nature and people. This analysis and interpretation are guided by Sitra's mission to promote Finland's well-being and drive economic growth within the limits of nature's carrying capacity.

Overall picture of changes

In the midst of transformation, understanding the big picture becomes crucial. We will analyse what we interpret as the most significant developments defining the transformation of the security environment as a whole, using the framework familiar from Sitra's megatrend reports. Because of this approach, we will not address all the trends influencing the transformation, nor will we delve into current issues such as the war in Ukraine or Donald Trump's rise to power.
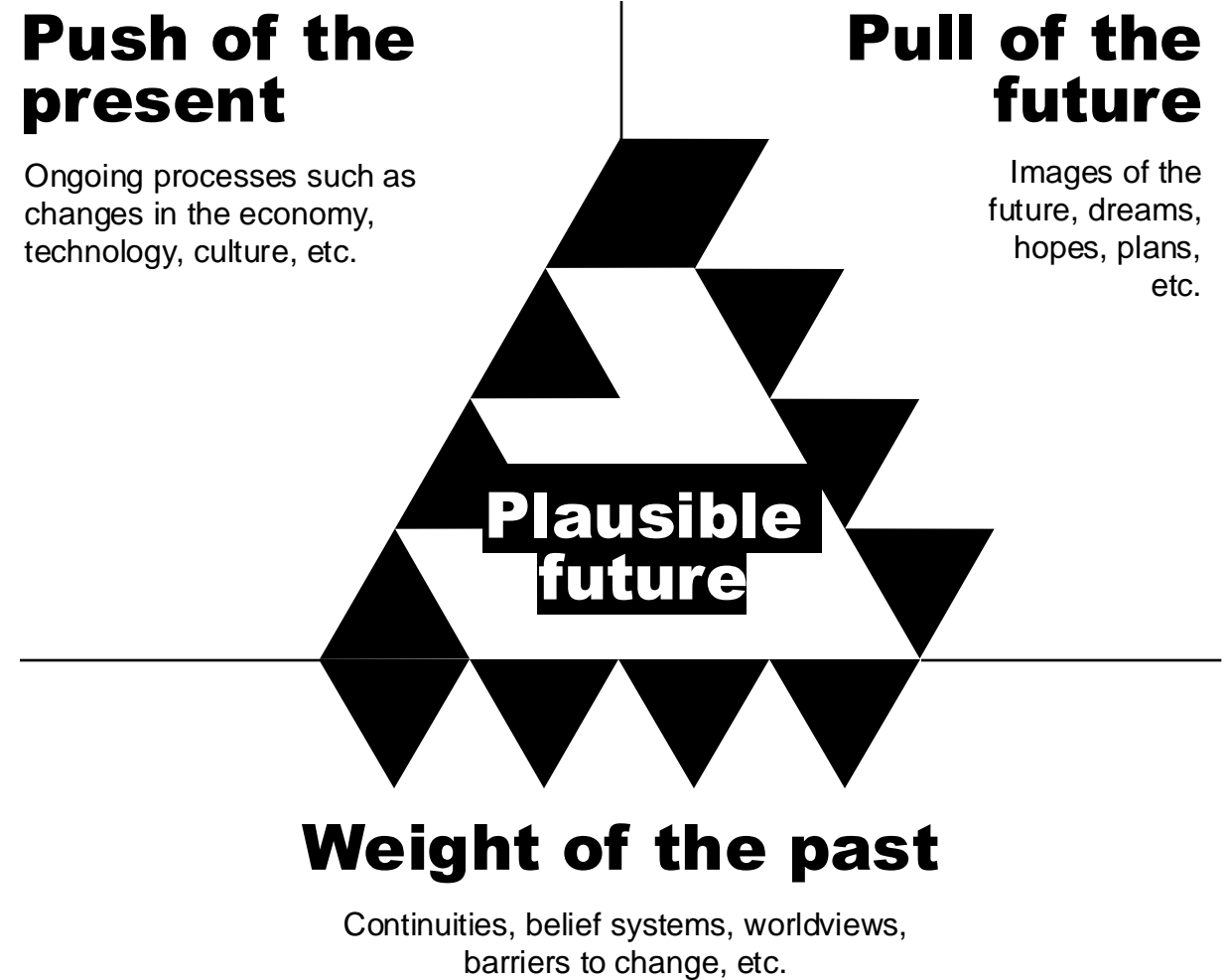
Critical and transformative foresight

The transformation of the security environment requires Finland not only to prepare but also to engage in comprehensive societal renewal. This demands critical and transformative foresight, which emphasises the identification and challenging of current assumptions, as well as the exploration of new opportunities and futures. For this reason, we have analysed the key developments shaping the transformation using the futures triangle method.

Futures triangle

We have applied the futures triangle method to analyse the developments defining the transformation of the security environment. This method considers ongoing changes and trends, as well as path dependences, mindsets and various visions of the future.

In this review, we will focus on the "push of the present" and the "weight of the past". We will touch upon the "pull of the future" which we will revisit more systematically as the project progresses.
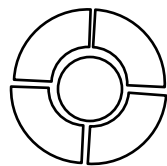
The futures triangle method is described in more detail in the "Methods" section at the end of the review.

Push of the present

Ongoing processes such as changes in the economy, technology, culture, etc.

Pull of the future

Images of the future, dreams, hopes, plans, etc.

Plausible future

Weight of the past

Continuities, belief systems, worldviews, barriers to change, etc.

Futures triangle. Adapted from Inayatullah 2008.

2. Overall picture of changes

"Predicting the future is difficult, but in hindsight, it is always easy to see the questions that were not discussed. . . . Looking towards the future, we must now be able to perceive not only different risks but also opportunities. Even fear can sometimes be a good thing because it prompts preparedness. We need a new kind of systemic thinking. This means not only adding another layer of security policy but truly delving into the changed operating logic in areas such as innovation policy and the whole broad field influenced by the transformation of geoeconomics."

Sinikukka Saari
Leading Researcher, Finnish Institute of International Affairs

SITRA
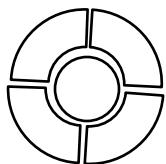
Intensifying and expanding struggles

The transformation of the security environment is characterised by multiple simultaneous developments that are interconnected, making the current state uncertain and grim. As a counterbalance to these distressing and undesirable trends, it is difficult to identify the "pull of the future" in the form of desirable futures in this transformation.

As we interpret it, at the heart of the transformation is the disintegration and dismantling of the international system. The intensifying struggle over the future direction of the international system is increasingly being fought in geopolitics, as well as in the realms of the economy, technology and people's minds. At the same time, interwoven environmental crises are pushing the world into an era of unprecedented insecurity and uncertainty.

There are numerous interdependences, tensions and challenges between the key developments, which are illustrated in the overall picture on the next page with black circles. This overall picture is an updated version of Sitra's corresponding picture of megatrends, viewed through the lens of the transformation of the security environment.

Five developments affecting the transformation of the security environment:
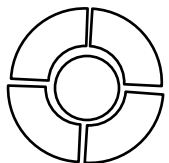
POWER: The international system is crumbling

TECHNOLOGY: Technology is intertwining with security

ECONOMY: Economic power politics intensify

NATURE: Environmental crises fuel insecurity

PEOPLE: The social glue is weakening

TECHNOLOGY
Technology is intertwining with security

ECONOMY
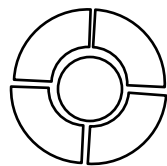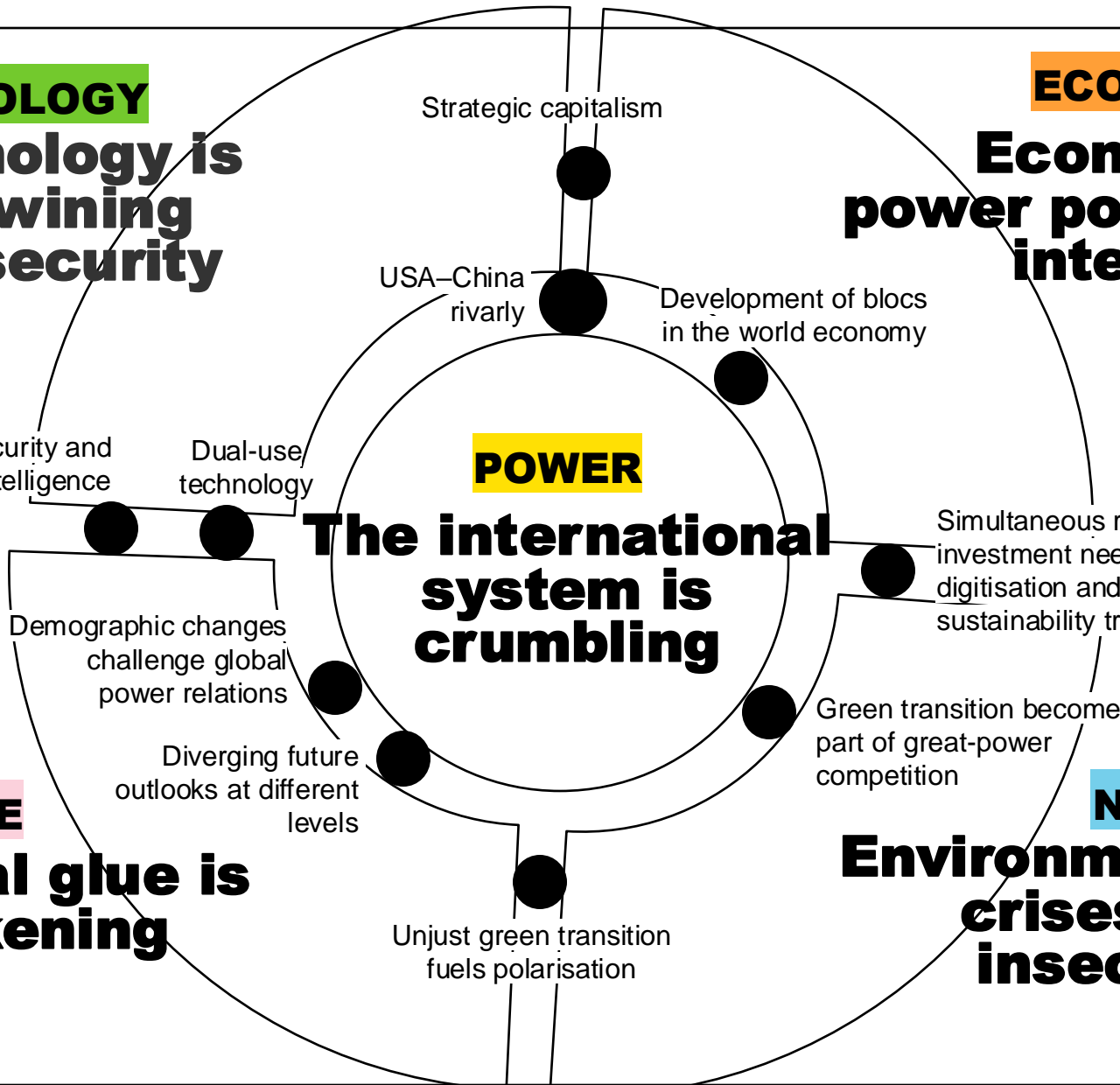# Economic power politics intensify

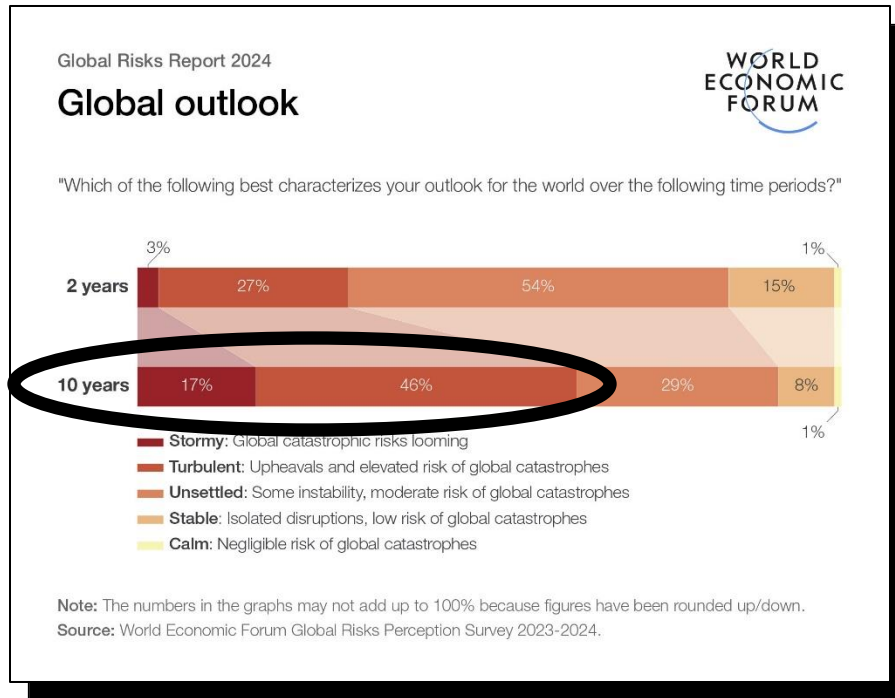**POWER**
The international system is crumbling

PEOPLE
Social glue is weakening

NATURE
Environmental crises fuel insecurity

Strategic capitalism

USA–China rivarly

Development of blocs in the world economy

Cybersecurity and artificial intelligence

Dual-use technology

Simultaneous resource and investment needs for security, digitisation and the sustainability transition

Demographic changes challenge global power relations

Diverging future outlooks at different levels

Green transition becomes part of great-power competition

Unjust green transition fuels polarisation
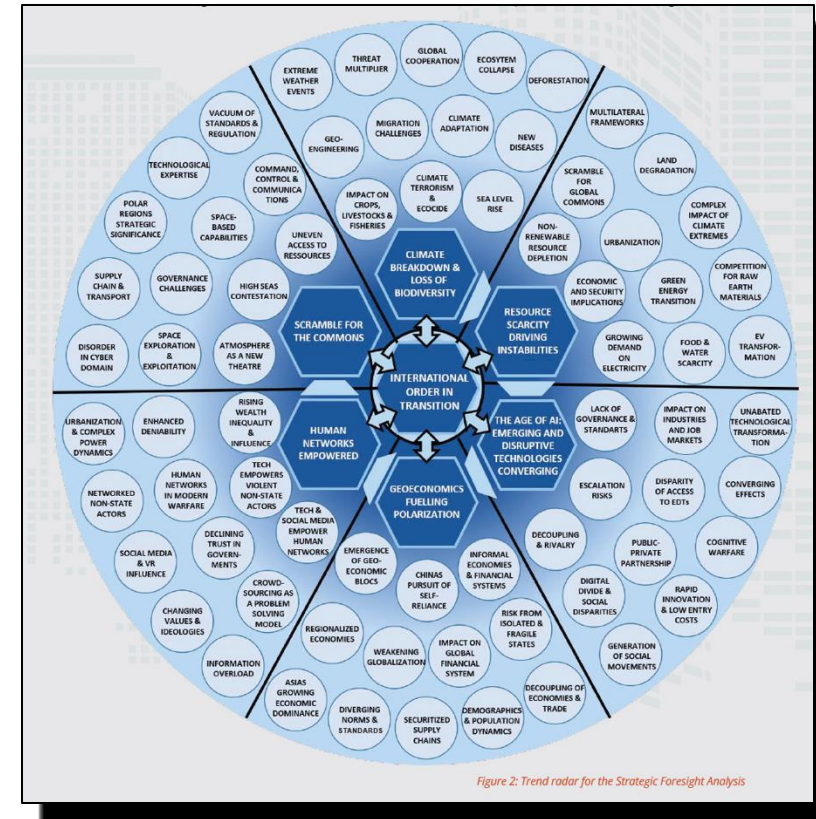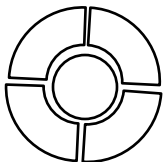
What does the data tell us?

Respondents to the World Economic Forum's risks report perceive the future as stormy and turbulent.
Source: World Economic Forum: Global Risks Report 2024

NATO foresight efforts identified 170 trends affecting the development of the security environment.
Source: NATO: Strategic foresight analysis 2023

Overarching tensions 1/2

Short term vs long term

Actions taken in the midst of an acute crisis to respond to changes in the security environment and enhance security in the short term may create new problems, undermine the foundations of security or establish harmful path dependences in the long run.

Preservative preparedness vs transformative preparedness

Preparedness for security threats is often preservative in nature. However, as the security environment is changing, it is insufficient to merely aim at preserving the current state. Addressing the challenge requires a more comprehensive and long-term societal renewal.
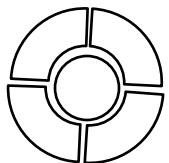
Overarching tensions 2/2

Certainty vs uncertainty

The era of overlapping crises has in many ways both increased uncertainty about the future and, conversely, reduced it.

For example, Russia's war of aggression has diminished uncertainty about the nature of the Russian state. The pandemic, in turn, provided us with a wealth of information about how society functions under exceptional circumstances.

Inevitability vs alternatives

The emphasis on security threats easily leads to the rhetoric and policies of necessity and the absence of alternatives.

On the other hand, the inherent uncertainty and unpredictability of the future require the ability to imagine and consider alternatives – and to make deliberate choices between them.
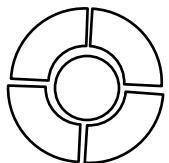
Glimpses into alternative futures

**WHAT IF** ensuring security in the short term conflicts with the prerequisites for long-term security?

HOW can we ensure security in the short term without simultaneously undermining the foundations of long-term security or creating path dependences that later hinder the building of security?

WHAT IF the transformation of the security environment requires not only preparedness but also comprehensive renewal?

HOW should society and businesses renew themselves to respond to the transformation of the security environment caused by factors such as the sustainability transition, economic power politics and the crumbling of the international system?
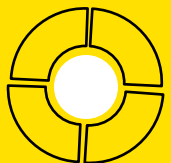
WHAT IF the lack of alternatives in security policy discussions weakens democracy and societal resilience?

HOW can we foster and strengthen the multi-voiced, multi-perspective and constructive security policy discussion essential in a democracy so that it enhances inclusion and societal resilience?
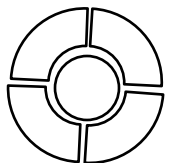
3. The international system is crumbling

POWER

"At the moment, Europe seems to be in a kind of liminal state. The post-Cold War system was based on continuous economic growth; expanding global markets; the strengthening of Western liberal values and democracy, as well as shared, though Western-led, institutions. It is now widely acknowledged that this order is undergoing a transformation, but a new era has not yet dawned, and the structures of the new order are still undefined."
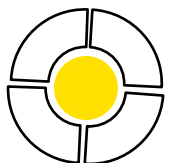
Sinikukka Saari
Leading Researcher, Finnish Institute of International Affairs

Vesa-Matti Lahti
Leading Specialist, Sitra

Millaisen EU:n haluamme? (What kind of an EU do we want?) – Sitra

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POWER

The international system is crumbling

The international rules-based system, which took shape after the end of the World Wars, is undergoing a fundamental transformation. Authoritarian states are actively working to undermine liberal democracy, and democracy is eroding globally.

The EU has adopted an adaptive role in the midst of this transformation. It navigates through great-power competition, seeks to operate in a world of risks and simultaneously aims to strengthen its global agency. International multilateral cooperation structures such as the UN and the OSCE, which have been instrumental in addressing international issues in recent decades, are losing their effectiveness.

On the other hand, the global order has heavily relied on the cooperation between Western countries and has not been equally just for all nations. Dissatisfaction with the current world order is growing outside the West.

The era of cooperation is giving way to an era of friction and competition, in which unilateral national interests dominate, multilateral institutions weaken, and global decision-making becomes increasingly fragmented. The weakening of international cooperation could lead to breakdowns in diplomacy, potentially escalating to armed conflicts. However, new organisations and state players such as Qatar, Saudi Arabia and Turkey have emerged on the diplomatic stage.

POWER

Push of the present

The international system is crumbling
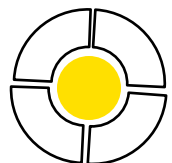
- Erosion of multilateralism, international law and rules-based systems continues.

- China seeks to establish an alternative world order.

- The USA–China great-power rivalry intensifies.

- Russia perpetuates spheres-of-influence thinking.

- The number of armed conflicts between states is increasing.

- Strategic competition is intensifying in a multipolar world.

- The significance of the Arctic, Pacific and Asian regions is growing.

- Populations are increasing significantly in African countries and India.

- Geopolitical influence of networks such as BRICS is expanding.

- The EU enlargement has become a geopolitical issue.

- Citizens in countries such as Georgia and South Korea are resisting authoritarian developments.

POWER

The international system is crumbling
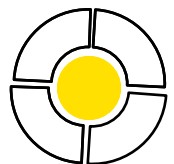
Weight of the past

- An unequal international system has favoured the victorious powers of the Second World War.

- Colonial history continues to strain relations between Western nations and the Global South.

- The West is inconsistent in defending its democratic values and ideals.

- Western actions are often inconsistent, with examples including climate measures and conflicts in different regions.

POWER

Pull of the future

The international system is crumbling
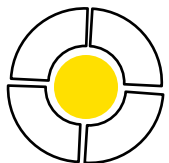
- The global order is being reshaped.

- Deals will dominate decision-making.

- Non-state actors will gain increasing power in global politics.

- In the West, there is fear of a third world war.

- Rising international crime may increase vulnerabilities of states.
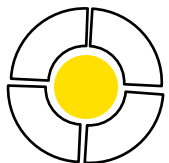
POWER

What does the data tell us?

Last year, 86 countries increased their relative military expenditure, while only 50 reduced it. Source: Global Peace Index (2024)

There have never been as many armed conflicts in the world as there are now. In 2023, the number of state-related conflicts totalled 59; the highest figure since 1946.
Source: UCDP (2024)
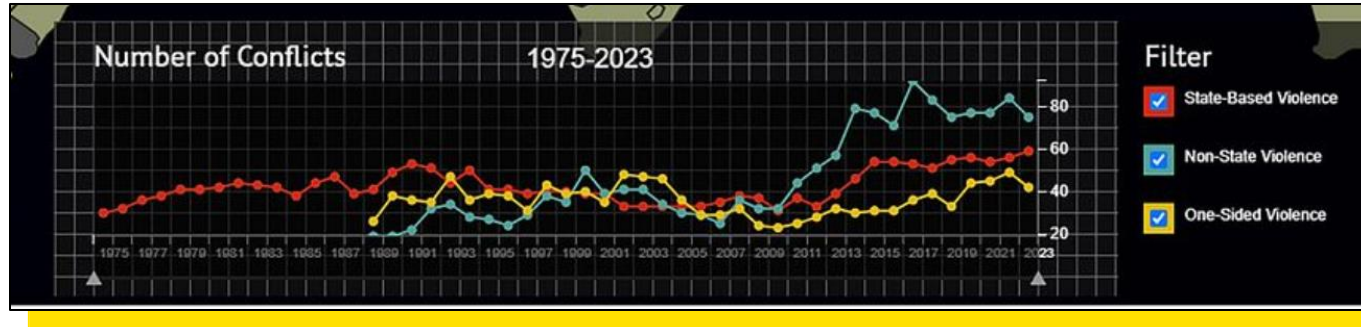
86 Increased **50** Decreased

Military expenditure (% of GDP) recorded the largest yearly deterioration since the inception of the GPI. 86 countries increased their relative military expenditure, compared to just 50 where it decreased.
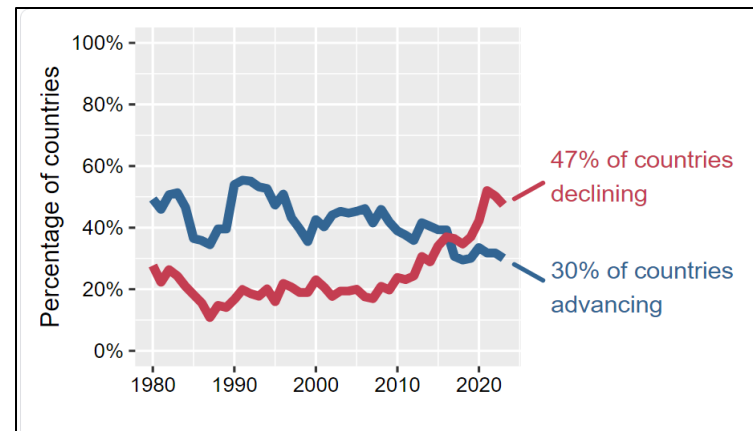
Among 173 assessed countries, nearly half (47%) have experienced significant declines in at least one of the four key indicators of democratic vitality over the past five years.
Source: IDEA (2024)
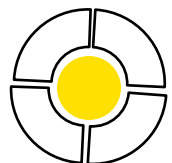
POWER

Tensions

Multilateralism vs new dividing lines

The international system is in a transition from multilateralism to a new global order, whose exact dividing lines remain unclear. The world may become bipolar, dominated by the United States and China, or it may become regionalised, with different regions and blocs competing for influence.

Values and ideologies may play an increasingly significant role in cooperation. Defending democracy and human rights has emerged as a key theme, while authoritarian models may attract some states.

State vs non-state players

Non-state players are becoming increasingly active in traditionally state-centric domains such as peace building, security and infrastructure. They can be useful in situations in which state-centric approaches have not been effective.

States face questions about how to interact with non-state players, and how to regulate their activities. At the same time, the multilateral system based on intergovernmental cooperation still provides a framework and mechanisms for addressing global challenges.
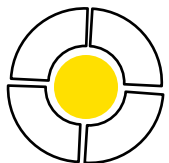
POWER
Glimpses into alternative futures

WHAT IF EU integration deepens in response to commonly recognised threats?

HOW will preparedness for shared threats be financed in the future, as the EU continues to expand?

WHAT IF an uncertain and fragmented EU is sidelined in the great-power competition between the US and China?

HOW can an ageing Europe ensure the well-being of its citizens and prevent brain drain to other continents?

WHAT IF the rules-based international system becomes paralysed?

HOW will common matters be addressed in the future if mutually agreed rules, norms and forums lose their significance?
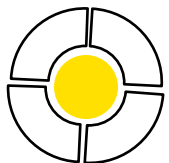
TECHNOLOGY

4. Technology is intertwining with security

TECHNOLOGY

"Digital technology cannot be seen as a force of nature because technology is not neutral – despite large technology companies trying to portray it as such. Technology platforms have authoritarian tendencies because they are designed to be addictive surveillance systems driven by profit-making. I want to state very clearly that digital platforms pose a threat not only to democracy but also to security. Instead of focusing solely on content, democracies should regulate the operating principles and design of platforms and devices. Otherwise, the response will be an endless game of firefighting."

Alice Stollmeyer
Founder and Executive Director, Defend Democracy

Technology is intertwining with security

Our era resembles the Industrial Revolution in the late 19th century. A transition has taken place from decentralised local small-scale businesses <u>towards the factories of the digital age</u>: data centres.

The struggle over technologies is increasingly intensifying <u>between states and technology companies</u>. Information technology firms such as Meta <u>exhibit</u> characteristics traditionally associated with state powers, such as the creation of currencies and cyber defence capabilities. At the same time, the competition for technological dominance is expected to escalate between states as well.

The key issues revolve around <u>how technologies are traded, how they are regulated</u>, and <u>where the digital infrastructure is located</u>. Countries such as China are actively promoting their digital platforms and infrastructure for use by others, as this not only expands their markets but also provides them with potential channels of influence.

The EU has sought to strengthen its position in this geoeconomic game by pursuing <u>strategic autonomy</u>, aiming to increase self-sufficiency and reduce dependences on external players, including in relation to critical raw materials.

TECHNOLOGY

Technology is intertwining with security

Push of the present

- The strong influence of technology giants challenges the role of states.

- The competition for data, natural resources and expertise is intensifying.

- Artificial intelligence is advancing at an astonishing pace, and its human rights implications are becoming an increasingly pressing societal issue.

- Cyberattacks challenge the functioning of societies.

- Information influence undermines societal trust.

- States have launched computing infrastructure projects.

- Information technology is becoming intertwined with geopolitics, the economy and security.

- The significance of space security and defence policy is growing.

TECHNOLOGY

Technology is intertwining with security

Weight of the past

- The democratic promise of social media has not been realised.

- Algorithms have reinforced affective polarisation and distrust.

- Digital power has been abused.

- Social media platforms were not regulated during the digital boom of the 2000s and 2010s.

- Data breaches and scams have raised concerns about how people's data are protected in the digital world.

- Online harassment challenges societal participation.

TECHNOLOGY

Technology
is intertwining
with security

Pull of the future

- Technology companies will expand into space.

- Humans and technology are becoming more deeply integrated.

- Technology will make independent decisions and act autonomously.

- The need to redistribute digital power will grow.

- Quantum computing will enable the decryption of encrypted data.

- 6G will enhance data transfer and utilisation capabilities.

- A demand for socially sustainable digital technology development will increase.

- The widespread use of digital technology is challenging the social contract between citizens and the state.

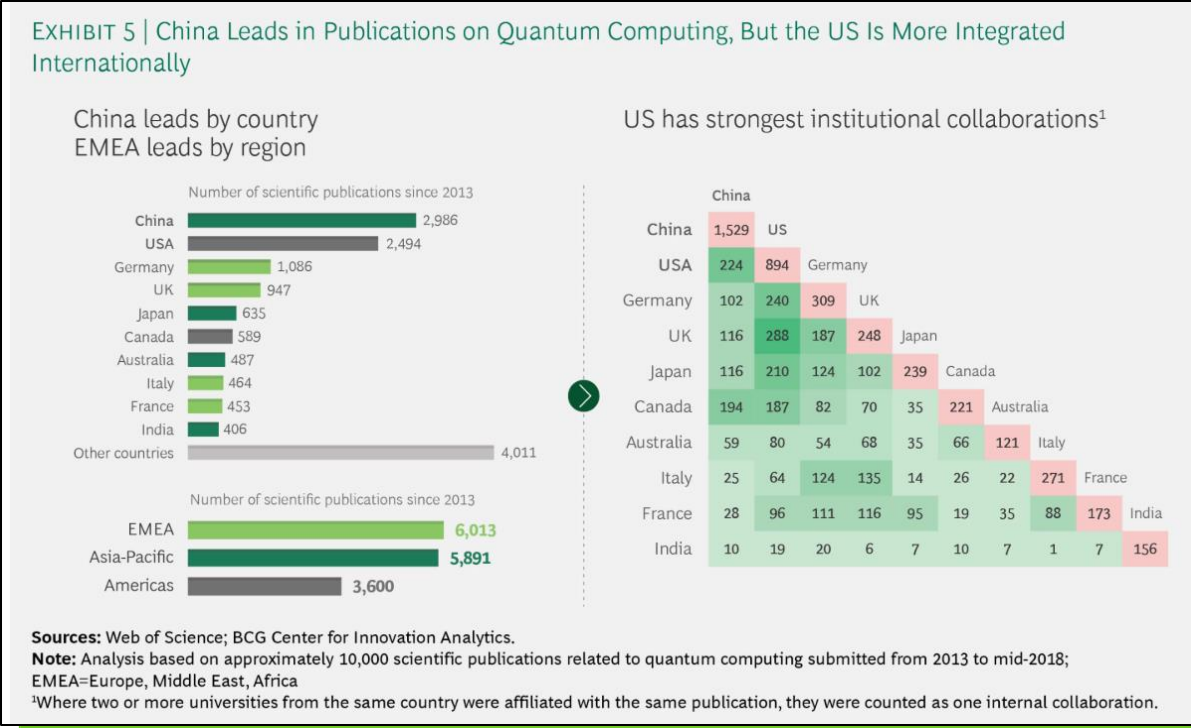- Fears of data misuse are intensifying.

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TECHNOLOGY

What does the data tell us?

Space is approaching a new frontier. The space economy is expected to be worth $1.8 trillion by 2035 as satellite and rocket-enabled technologies become increasingly prevalent, according to a new report.

Since 2018, China has led the world in the number of quantum computing publications with approximately 3,000 scientific papers. The United States follows closely with around 2,500 publications, but it also has a greater number of collaborations in quantum computing development. Source: Giles, M. (2019): MIT Technology Review

EXHIBIT 5 | China Leads in Publications on Quantum Computing, But the US Is More Integrated Internationally

China leads by country
EMEA leads by region

US has strongest institutional collaborations[1]

Number of scientific publications since 2013

China	2,986
USA	2,494
Germany	1,086
UK	947
Japan	635
Canada	589
Australia	487
Italy	464
France	453
India	406
Other countries	4,011

	China	US	Germany	UK	Japan	Canada	Australia	Italy	France	India
China	1,529									
USA	224	894								
Germany	102	240	309							
UK	116	288	187	248						
Japan	116	210	124	102	239					
Canada	194	187	82	70	35	221				
Australia	59	80	54	68	35	66	121			
Italy	25	64	124	135	14	26	22	271		
France	28	96	111	116	95	19	35	88	173	
India	10	19	20	6	7	10	7	1	7	156

Number of scientific publications since 2013

EMEA	6,013
Asia-Pacific	5,891
Americas	3,600

Sources: Web of Science; BCG Center for Innovation Analytics.
Note: Analysis based on approximately 10,000 scientific publications related to quantum computing submitted from 2013 to mid-2018; EMEA=Europe, Middle East, Africa
[1]Where two or more universities from the same country were affiliated with the same publication, they were counted as one internal collaboration.

The space economy is expected to be worth USD 1.8 trillion by 2035, as satellite- and rocket-enabled technologies become increasingly prevalent.
Source: World Economic Forum (2024)

Tensions

States vs digital oligarchy

The dominant position of information technology companies has granted them – and individuals like Elon Musk and Jeff Bezos – significant economic and political power. The EU's digital regulations counterbalance the growing power of information technology corporations. However, these regulations also create friction as tech companies strive to maintain their operating freedom and innovation capacity in the market.

At the same time, digital technological innovations often require access to vast amounts of data. Yet, people remain largely unaware of how their data are collected and used. As individuals have lost the ability to protect their privacy, states should establish structures that enable them to do so.

Interdependence vs technological sovereignty

Globalisation has led to interdependences among states, including in relation to the raw materials required for digital technologies. As technology increasingly becomes a geopolitical concern, these interdependences can turn into states' vulnerabilities.

Technological sovereignty offers a means to enhance resilience during global crises or trade wars because it enables states to access critical technologies and resources without external constraints. Striking a balance between the opportunities provided by globalisation and the pursuit of technological sovereignty creates a tension that challenges states to find new ways to safeguard their national interests.

TECHNOLOGY

Glimpses into alternative futures

WHAT IF digital technology is widely harnessed to solve societal problems and conflicts?

HOW can we finance technology that supports democratic principles?

WHAT IF the rapid increase in AI-generated information leads to people no longer knowing what is true and what is not?

HOW can we ensure that information literacy and access to relevant knowledge do not become privileges reserved only for the elite who can access information behind a paywall?

WHAT IF information technology giants become the most influential political actors in global politics?

HOW can states reduce their dependence on global technology giants?

ECONOMY

5. Economic power politics intensify

ECONOMY

"The logic of global economic relations is undergoing a significant shift, moving from interdependence towards autonomy, and from efficiency towards resilience. This transformation manifests as geoeconomics in which economic security is regarded as part of national security. . . Unlike geopolitics, which has traditionally been about military power struggles, geoeconomics involves competition between states through economic means. In this context, the economy is used to achieve political objectives, and economic policy is used as a means to enhance security."

Mikael Wigell
Research Director, Finnish Institute of International Affairs

Economic power politics intensify

The return of geopolitics and preparation for the threat posed by Russia require massive investments in defence and security from Finland and Europe, both of which are already struggling with public finance resilience. Europe must take on a greater responsibility for the continent's defence because it can no longer rely on US support, regardless of the domestic political fluctuations in the United States.

In the long term, the transformation of the international security environment will be shaped primarily by the geoeconomic great-power competition between the United States and China. Geoeconomics refers to the use of economic power politics to manage global relations through tools such as sanctions, tariffs and state aid policies. It emphasises economic resilience as a key component of national security, altering the operating logic and division of labour in the international economy. Instead of deglobalisation, world trade appears to be heading towards increasing bloc formation.

As geoeconomic competition intensifies, Europe must make major investments in competitiveness, the green transition, digitisation, economic resilience and strategic autonomy through measures such as reducing critical dependences on Chinese value chains.

ECONOMY

Push of the present

- The investment needs in defence and security are growing in Finland and the EU.

- Europe's economic influence is weakening, while the focus of the global economy is shifting towards Asia.

- The USA–China great-power rivalry intensifies.

- The importance of economic resilience is increasing, with both the EU and the US reducing dependences on China.

- Geoeconomics is reshaping the global division of labour, increasing trade barriers and fostering economic bloc formation.

- Competitiveness, the green transition and digitisation are becoming part of the geoeconomic power struggle.

- The role of the private sector in economic resilience and critical infrastructure is strengthening.

Economic power politics intensify

ECONOMY

Economic power politics intensify

Weight of the past

- Persistent hopes of returning to the old normal before the rise of economic power politics.

- A narrow perception of the state's role and available tools in ensuring economic security.

- The belief that globalisation and economic interdependence guarantee peace.

- An economic paradigm focused on efficiency and optimisation.

- The illusion maintained in the West that history had reached its endpoint.

- The belief in Europe's economic and political dominance.

ECONOMY

Pull of the future

Economic power politics intensify

- In strategic capitalism, the state assumes a strong role in ensuring economic security.

- Strategic autonomy will enhance the EU's independence and the ability to act.

- A war economy redirects the EU economy towards security and defence needs.

- The circular economy will promote the diversification of critical raw material supply chains and reduce dependences.
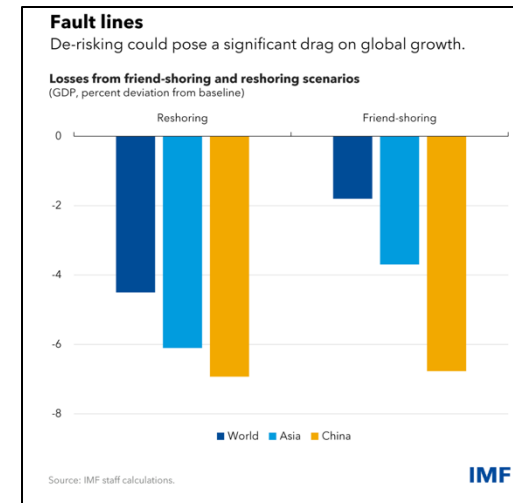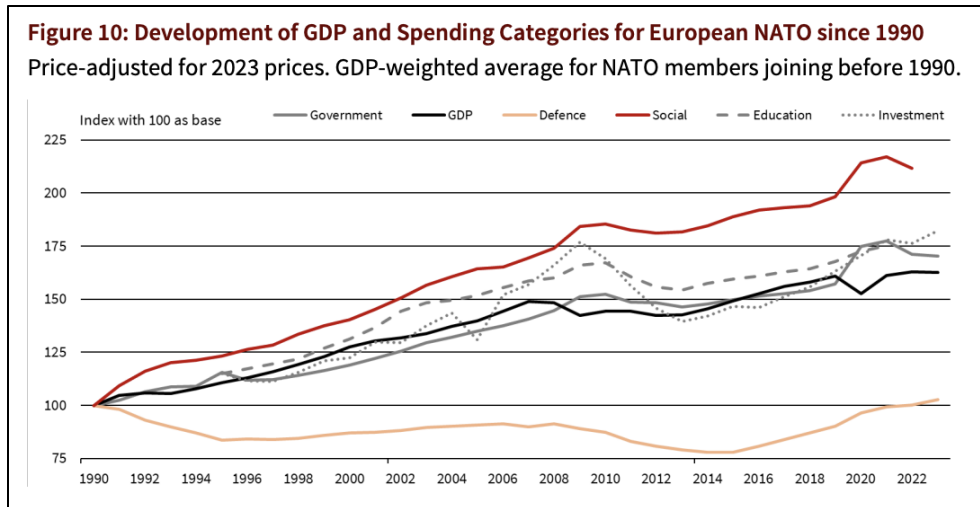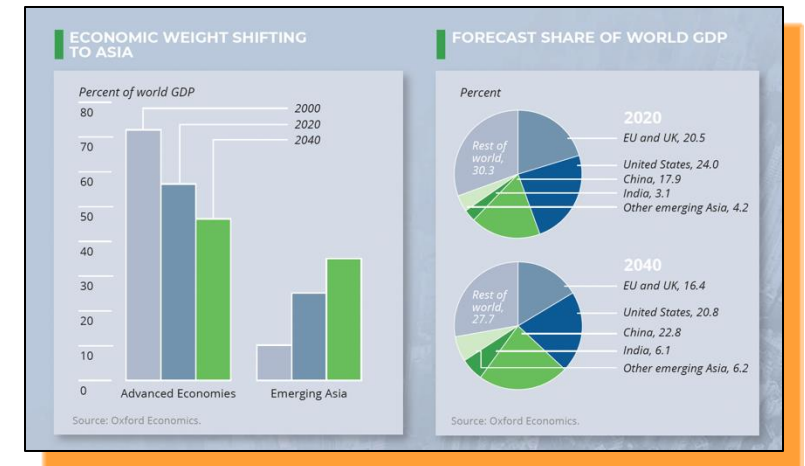
What does the data tell us?

The defence spending of the European NATO countries returned to 1990 levels as late as in 2022.
Source: CESifo Research Network (2024)

The focus of the global economy is shifting away from Europe.
Source: National Intelligence Council (2021)

ECONOMIC WEIGHT SHIFTING TO ASIA

Percent of world GDP — 2000, 2020, 2040 — Advanced Economies, Emerging Asia
Source: Oxford Economics.

FORECAST SHARE OF WORLD GDP

Percent

2020
Rest of world, 30.3
EU and UK, 20.5
United States, 24.0
China, 17.9
India, 3.1
Other emerging Asia, 4.2

2040
Rest of world, 27.7
EU and UK, 16.4
United States, 20.8
China, 22.8
India, 6.1
Other emerging Asia, 6.2

Source: Oxford Economics.

Figure 10: Development of GDP and Spending Categories for European NATO since 1990
Price-adjusted for 2023 prices. GDP-weighted average for NATO members joining before 1990.

Index with 100 as base — Government, GDP, Defence, Social, Education, Investment

Fault lines
De-risking could pose a significant drag on global growth.

Losses from friend-shoring and reshoring scenarios
(GDP, percent deviation from baseline)

Reshoring — Friend-shoring
World, Asia, China
Source: IMF staff calculations.   IMF

The reduction of economic interdependences could have severe negative effects on global economic growth.
Source: IMF (2023)

Tensions

Efficiency vs resilience

The rise of geoeconomics, the Covid-19 pandemic and the energy crisis following Russia's war in Ukraine have reshaped attitudes towards economic interdependences and exposed societies' dependence on fragile global supply chains.

In this new reality, economic interdependences are increasingly perceived as risks and threats, which shifts the focus from efficiency to economic resilience. However, the growing barriers to international trade and the weakening of the principle of comparative advantage could undermine global economic growth potential and lead to welfare losses.

Market vs the state

The growing emphasis on geoeconomics and economic resilience creates a tension between free-market economic thinking and a new, more state-driven strategic capitalism.

As a result of geoeconomic struggles, certain economic sectors are becoming too vital to national security to be left solely to market players. In strategic capitalism, states support such sectors critical to security, using economic tools such as sanctions, tariffs and investments.

Glimpses into alternative futures

WHAT IF geoeconomics permanently restructures the economy, making a return to the old normal impossible?

HOW should Finland, a small, "export-driven, open-economy", adapt to a situation in which great-power geoeconomic competition shapes the development and dynamics of global security, and the economy and economic interdependences become tools of foreign and security policy?

WHAT IF geoeconomic competition fragments the global economy into blocs?

HOW should Finland, the European Union and the single market evolve to strengthen their economy and security in a world where trade increasingly takes place within blocs?

WHAT IF economic interdependences in the new security environment bind states together more tightly instead of driving them apart?

HOW can the European value system or value-based foreign policy maintain its relevance?

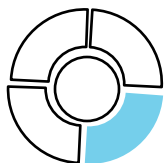# 6. Environmental crises fuel insecurity

NATURE

"We are in a situation in which society needs structural transformation and a more long-sighted approach to preparedness. There is an inherent contradiction in this: security of supply must account for long-term changes, yet at the same time, the National Emergency Supply Agency cannot be expected to lead the entire green transition. Climate change is altering the operating environment for all actors, and the sustainability transition must be a cross-cutting effort. The Finnish Defence Forces cannot rely on a specific type of fuel if it is no longer globally available. If different stakeholders truly acknowledged the severity of the need for change, it would have a significant overall impact."

Emma Hakala

Leading Researcher, Finnish Institute of International Affairs
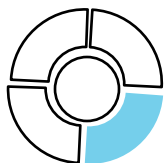
NATURE

Environmental crises fuel insecurity

Interwoven environmental crises are pushing the world into an era of unprecedented uncertainty and insecurity. At the same time, the deteriorating security situation complicates international cooperation, including efforts to mitigate climate change, which in turn exacerbates its effects and increases associated risks.

Environmental crises have direct, cascading and sustainability transition-related security impacts. Extreme weather events, the degradation of ecosystem services and competition for dwindling essential resources disrupt global food systems,

destabilise societies, fuel conflicts and drive climate and environmental migration.

The green transition is becoming increasingly important for national security and resilience. However, energy-related geopolitical security risks are not disappearing; rather, they are evolving. For instance, the EU's green transition remains entirely dependent on Chinese supply chains, and perceptions of an unjust transition provide actors such as Russia with opportunities to stoke societal divisions and weaken the West's ability to act.

SITRA

NATURE

Push of the present

Environmental crises fuel insecurity

- Environmental crises destabilise societies, increase the risk of regional conflicts and hinder international cooperation in addressing them.

- The intensity, frequency and unpredictability of the effects of environmental crises are increasing.

- The deterioration of ecosystem services threatens the security of supply.

- Competition over water and other dwindling essential resources is intensifying.

- Climate and environmental migration is on the rise.

- An unjust sustainability transition creates opportunities for disinformation operations.

- The green transition and competition for strategic natural resources are becoming part of geoeconomic struggles.

- Environmental crises and their mitigation efforts generate new security threats.

- The Arctic region's strategic importance is growing.

NATURE

Weight of the past

Environmental crises fuel insecurity
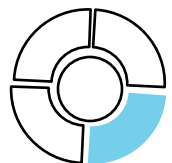
- Societies remain dependent on fossil fuels and the overconsumption of natural resources.

- A materialistic idea of progress and well-being still prevails.

- The illusion of self-sufficiency and security of supply is maintained.

- Efforts to delay climate and environmental action persist.

- There is no single dedicated policy or governance sector responsible for advancing environmental security.

- Climate and environmental awareness does not consistently translate into action.

- Naïve technological optimism slows down a comprehensive sustainability transition.

- Meters and statistics continue to prioritise harmful and unsustainable growth.
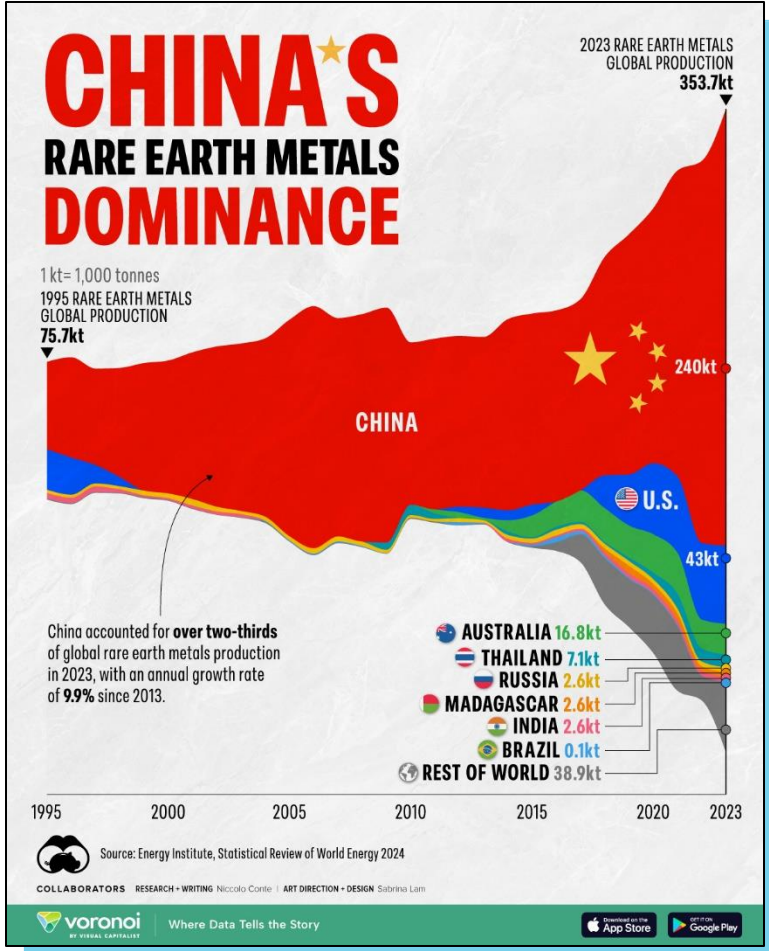
NATURE

Pull of the future

Environmental crises fuel insecurity
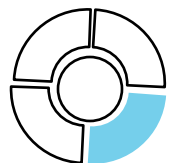
- The green transition and circular economy will enhance security of supply, crisis resilience and a peaceful sustainability transition.

- Ecological reconstruction will serve as a tool for advancing a just sustainability transition.

- Tripling plant-based protein production will safeguard Finland's supply security.
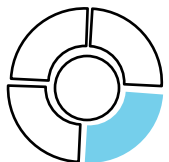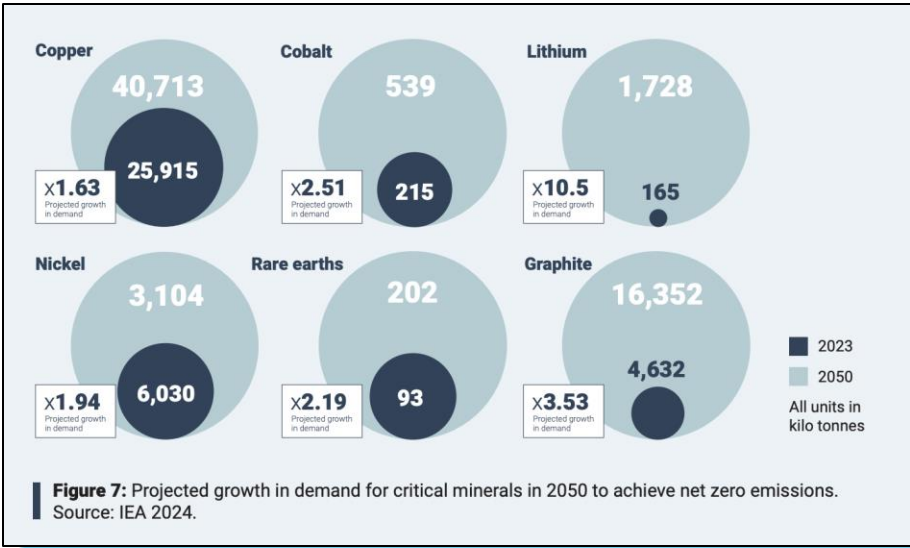
What does the data tell us?

1	External shocks	Natural disasters, pandemics, wars, mine accidents, etc.
2	Resource nationalism	Tax disputes, expropriation, foreign investment screening, etc.
3	Export restrictions	Export quotas, export taxes, obligatory minimum export prices, licensing, etc.
4	Mineral cartels	Co-ordination of production, pricing, market allocation, etc.
5	Political instability and social unrest	Labour strikes, violence, corruption, etc.
6	Market manipulation	Short squeezing, market cornering, spoofing, insider trading, etc.

Critical materials involve various geopolitical risks. Source: IRENA

Figure 7: Projected growth in demand for critical minerals in 2050 to achieve net zero emissions. Source: IEA 2024.

The green transition will increase the demand for critical minerals. Source: UNEP (2024)

CHINA'S RARE EARTH METALS DOMINANCE

1 kt= 1,000 tonnes
1995 RARE EARTH METALS GLOBAL PRODUCTION 75.7kt
2023 RARE EARTH METALS GLOBAL PRODUCTION 353.7kt

China accounted for **over two-thirds** of global rare earth metals production in 2023, with an annual growth rate of **9.9%** since 2013.

CHINA 240kt
U.S. 43kt
AUSTRALIA 16.8kt
THAILAND 7.1kt
RUSSIA 2.6kt
MADAGASCAR 2.6kt
INDIA 2.6kt
BRAZIL 0.1kt
REST OF WORLD 38.9kt

Source: Energy Institute, Statistical Review of World Energy 2024

COLLABORATORS   RESEARCH + WRITING Niccolo Conte   ART DIRECTION + DESIGN Sabrina Lam

voronoi   Where Data Tells the Story

China dominates the production of rare earth metals. Source: Visual Capitalist
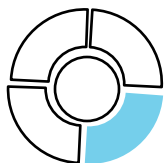
NATURE

Tensions

Rapid adaptation vs long-term reform

Societies must <u>simultaneously</u> adapt to sudden and urgent crises such as pandemics and wars while undergoing long-term transformation to address slowly escalating changes like environmental crises. However, there is a risk that long-term reforms are sidelined by urgent crises, or that the quick and improvised decisions made in the midst of a crisis create unforeseen problems or harmful path dependences. Balancing the tension between different types of crises and time frames requires both creative adaptation and strategic, long-term crisis management from societies.

Risks of fossil energy vs risks of renewable energy

The transition to a renewable energy system increases energy self-sufficiency, supply security and resilience, but it <u>does not eliminate energy-related geopolitical risks</u> – especially in a security environment characterised by low trust, competition and a lack of international cooperation. For instance, the EU's green transition is <u>currently</u> entirely dependent on Chinese supply chains. Similarly, many of the critical raw materials necessary for the transition come from unstable countries, which are likely to be among the most severely affected by the ecological crisis, which will further destabilise them in the future.

NATURE

Glimpses into alternative futures

**WHAT IF** the deteriorating environmental crisis makes global supply chains unreliable?

HOW should Finland prepare and adapt – as the environmental crisis advances – so that the cascading, unpredictable effects and systemic disruptions do not endanger societal security, access to critical resource and the fulfilment of basic needs?

WHAT IF a perceived unjust sustainability transition becomes a security threat?

HOW can we ensure that the sustainability transition, which will strengthen Finland's security of supply and self-sufficiency in the long run, is also fair in the short term – preventing domestic or foreign actors from exploiting it to fuel internal divisions?
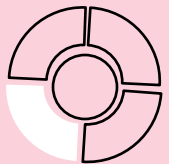
WHAT IF crossing climate tipping points pushes the world into an era of uncontrollable climate crisis?

HOW should Finland prepare and adapt to ensure access to critical raw materials and essential products, even in a world of out-of-control climate crisis?
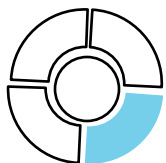
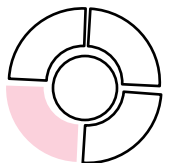# 7. The social glue is losing grip

PEOPLE

"During the Covid-19 pandemic, we observed that some people saw official guidelines as a dirty words while others demanded stricter regulations. It was a challenging situation. For some people, security is built on not perceiving or experiencing threats, or on trusting that authorities will handle the situation. For others, security means having their own capabilities, skills, motivation, and resources – financial or time-related – to prepare for something. Simply increasing awareness is not enough."

Päivi Tampere
Head of Communications, Prime Minister's Office

SITRA

The social glue is losing grip

Social cohesion refers to factors such as trust between individuals and groups, a sense of belonging and the ability to cooperate.

In terms of social cohesion, security is created at three levels:
1) Laws, norms and cultural practices – through actions – create structural security. 2) Social security emerges through interactions and relationships between people within the structural framework. 3) Perceived security arises from what people fear, and what alleviates their fears and uncertainties.

The transformation of the security environment appears to have accelerated the fragmentation of reality perceptions and challenged the foundations of trust.

This phenomenon affects different countries, regions and groups of people within countries.

In the era of hybrid threats, many security risks now reach individuals and organisations more directly than before – whether through sabotage of infrastructure, cyberattacks or disinformation operations. The evolving media landscape further amplifies these developments.

Today, children and young people spend so much time on social media platforms that for some, these environments and influencers have become more influential in shaping their thinking and socialisation than school or parents.

How will people integrate into society in the future?

SITRA

PEOPLE

Push of the present

The social glue is losing grip
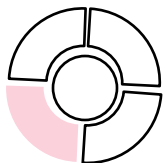
- Indicators of trust and social cohesion are declining.

- Social interaction between people and their integration into society are in transition.

- Future outlooks are becoming increasingly fragmented.

- Cultural conflicts are being stoked, and affective polarisation reduces people's willingness to participate.

- Our political culture is shifting.

- Society's information integrity is under growing pressure, e.g. through information warfare.
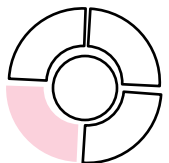
PEOPLE

Weight of the past

The social glue is losing grip
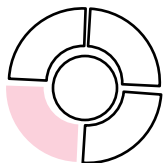
- Is Finland's national unity a myth or reality?

- Consensus has been an important tradition, particulary in the Finnish foreign and security policy.

- Has high societal trust been taken for granted?

PEOPLE

Pull of the future

The social glue
is losing grip
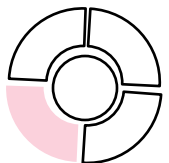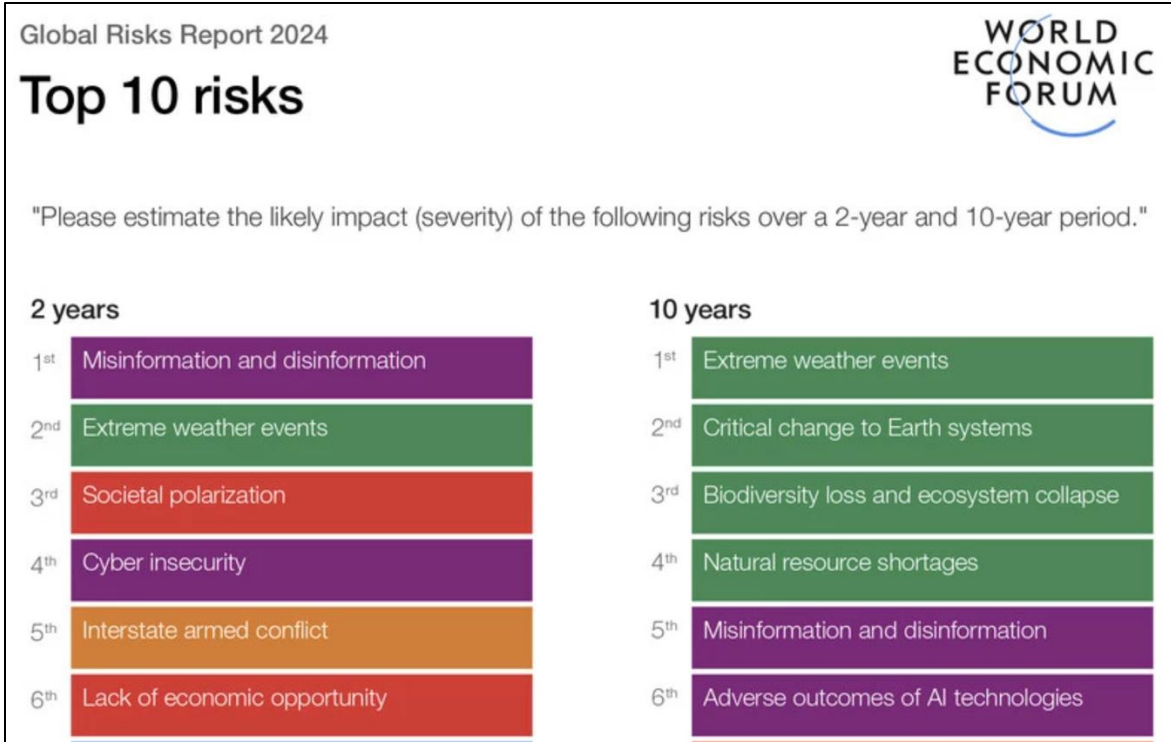
- Finland's demographic diversity is increasing.

- People and regions can use their unique strengths.

- Perceived intergenerational fairness will become stronger.

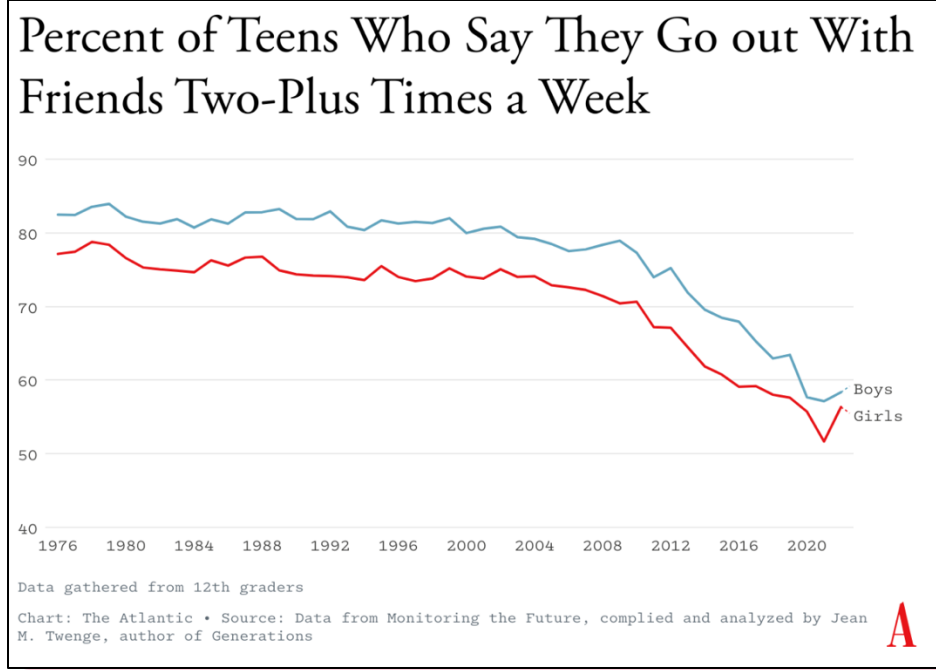- New communities and networks will foster trust.
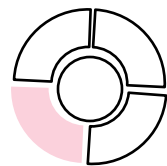
PEOPLE

What does the data tell us?

Global Risks Report 2024

Top 10 risks

WORLD ECONOMIC FORUM

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

2 years	10 years
1st Misinformation and disinformation	1st Extreme weather events
2nd Extreme weather events	2nd Critical change to Earth systems
3rd Societal polarization	3rd Biodiversity loss and ecosystem collapse
4th Cyber insecurity	4th Natural resource shortages
5th Interstate armed conflict	5th Misinformation and disinformation
6th Lack of economic opportunity	6th Adverse outcomes of AI technologies

Disinformation and societal polarization raise concerns both in the short and long term.
Source:WEF/Global Risks 2024

Percent of Teens Who Say They Go out With Friends Two-Plus Times a Week

Data gathered from 12th graders

Chart: The Atlantic • Source: Data from Monitoring the Future, complied and analyzed by Jean M. Twenge, author of Generations

A

The social interactions of young people in the United States have changed significantly over the decades. A similar trend can be observed elsewhere. Source: The Atlantic.

39%
trust their national government

37%
are confident that their government balances the interests of current and future generations

41%
believe their government uses the best available evidence when taking a decision

On average, less than half of people in OECD countries trust their governments and the fairness and evidence-based nature of decision-making. Source: OECD/Drivers of Trust Survey.
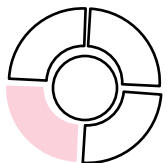
PEOPLE

Tensions 1/2

Knowledge-based vs experience-based thinking

Our political culture is shifting. Voters are no longer choosing between ideologies, values and political ideas alone. Increasingly, the competition is about different perceptions of knowledge, and whether traditional knowledge production and institutions can be trusted.

"Us" vs "them"

Finnish social networks and social cohesion were shaped after the World Wars in a world that was very different from today. Key questions include: What kinds of communities and networks will foster trust and a sense of security in the future? How will new modes of socialisation such as social media reshape people's connection to society? What will be the new cornerstones of the social contract?

Tensions 2/2

Trust vs distrust

Finland remains a high-trust society, and it is often assumed that this will continue to be the case. However, global trends suggest otherwise. Recent data supports this: according to a newly published survey by E2 Tutkimus, societal trust in Finland declined by 10 percentage points from 70% to 60% between years 2023 and 2024. As many as two in three Finns believe that people in Finland no longer work towards common goals.

People's perceived exclusion vs agency

According to the OECD's "Drivers of Trust" report (2024), the most important factor in building trust in decision-making is the feeling that individuals have the ability to influence decisions that affect them. Other key factors include decisions based on transparent and accessible information, the perception of fairness in decision-making, and the ability of policymakers to address complex societal problems.
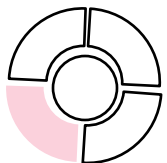
PEOPLE

Glimpses into alternative futures

WHAT IF social media transforms how young people integrate into society to the extent that it threatens societal continuity management?

HOW do increasingly divergent perceptions of reality affect the ability to make decisions that concern society?

WHAT IF inequality within society grows so large that it divides the nation in two?

HOW can we bridge the widening gaps in societal participation and inclusion?

WHAT IF young people's desire for collective participation was taken seriously?

HOW can Finland create a culture in which young people are not merely the target of policy measures but active participants and influencers?

8. Conclusion

SITRA
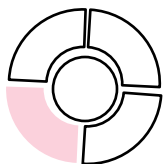
Concluding observations

The international security environment is undergoing its most significant transformation since the Cold War. It represents a kind of rupture in historical continuity whereby many of the defining features and principles of the security environment are eroding – and being deliberately dismantled.

As the old foundations are shaken, the future of the security environment appears very uncertain, making it uniquely open to various alternatives and influence. Currently, an intensifying struggle is taking place over the direction of the future of the security environment, and it concerns not only traditional geopolitics but also increasingly the economy, technology and people's minds.

From Finland's perspective, the transformation of the international security environment presents many distressing and undesirable developments. However, as a pioneer in foresight, preparedness and comprehensive security, Finland is well-positioned to safeguard society's ability to function, its security of supply and continuity management in the midst of various challenges, crises and surprises.

Beyond preparedness, Finland and Finnish society will also need the capacity for renewal, as this fundamental shift in the security environment challenges many prevailing mindsets and operating models. However, renewal cannot be solely based on risks and threats – it also requires a vision of the future and prospects of desirable and secure futures.

How will our work continue?

In 2025, we will continue our foresight efforts on the transformation of the security environment as follows:

Overall picture of changes: We will refine the overall picture of the security environment transformation outlined in this review based on feedback and stakeholder engagement.

Alternative futures: The ongoing profound transformations require that we identify and challenge existing assumptions while envisioning alternative futures. The next phase of our work will explore possible, desirable and overlooked security futures.

Impacts on Finland: The transformation of the global security environment will also have many unpredictable effects on Finland and Finnish society. What might these potential impacts be? What kind of preparedness and renewal will they require?

Psst...

You can follow the progress of our project on the transformation of the security environment
on the project website, or by subscribing to Sitra's foresight newsletter (in Finnish).
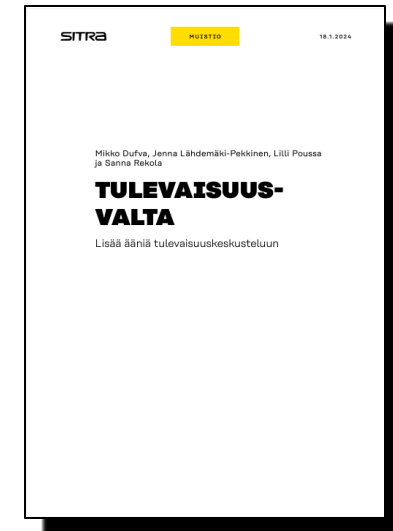
SiTRa

Expanding the power to define futures

The power to define futures refers to the ability to define what is considered possible or desirable in the future. When this power is too concentrated, foresight activities may occur within circles that are too narrow and like-minded.

This increases the risk of overly homogeneous perspectives, lower foresight quality, and a lack of inclusion and agency in shaping the future.

From the perspective of security and resilience, it is crucial that foresight efforts and societal discussions concerning security futures remain inclusive, multi-voiced and open to multiple perspectives.

On the next page, you will find five tips on how to engage in more inclusive discussions about security and the future.

The memorandum on the power to define futures

You can read more about the power to define futures and expanding it in Sitra's memorandum on the power to define futures (in Finnish; abstract available in English).

Five tips to get started

The transformation of the international security environment requires foresight, courage, and constructive and inclusive dialogue on security and the future.

In this report, we have outlined an overall picture of the transformation of the international security environment from the perspective of Finland and Finnish society. But what do these changes mean for you or your organisation?

These five steps will help you get started:

1. **Deepen your understanding.** What do the developments in the security environment mean for us?

2. **Challenge assumptions.** What aspects of the weight of the past should we let go of?

3. **Imagine alternatives.** What kind of different future do we want to build?

4. **Shift perspectives.** How does the future look from someone else's point of view?

5. **Take action.** What should we do right now, in this moment?

You will find more tools in the Futuremaker's toolbox on Sitra's website, which also includes a template for the futures triangle framework used in this review.

9. Methods

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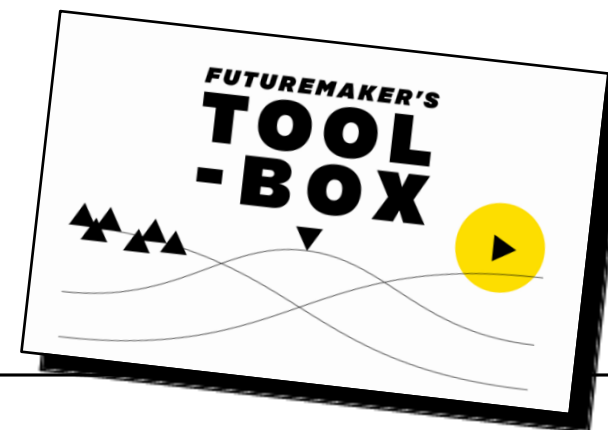
Foresight in times of surprises and crises

Foresight is not about predicting the future but rather about managing the present using knowledge about the future. It can support decision-making concerning the uncertain future by identifying drivers of change, mapping out alternative futures, and determining actions that move towards a preferred future.

Currently, foresight is taking place in a time of extraordinary uncertainty and unpredictability. This era has been described using terms such as polycrisis, permacrisis and the VUCA world. At Sitra, we have adopted the framework of postnormal times to analyse this era.

Traditionally, Finnish national foresight efforts have focused on anticipating probable developments. However, less attention has been given to surprising and unexpected events. There has also been a lack of foresight work that critically questions dominant future narratives and explores emerging phenomena.

In this era of overlapping crises, societies and individuals tend to focus on the immediate present, narrowing their future horizon. This is why we need foresight to provide a long-term perspective, an understanding of changes and a comprehensive view of their long-term effects.

Why do we need an overall picture of changes?

In this review, we have examined the transformation of the security environment using the big picture framework familiar from Sitra's megatrend reports. Sitra's megatrends represent one perspective on the most significant ongoing changes affecting Finnish society in terms of nature, people, power, technology and the economy.

These changes do not occur in isolation: they should be analysed and addressed together. There are tensions between trends, which can push developments in different directions. By identifying and addressing these tensions, we can influence the trajectory and formation of the future.

An overall picture helps build a shared understanding of ongoing changes and challenge our assumptions about the future.
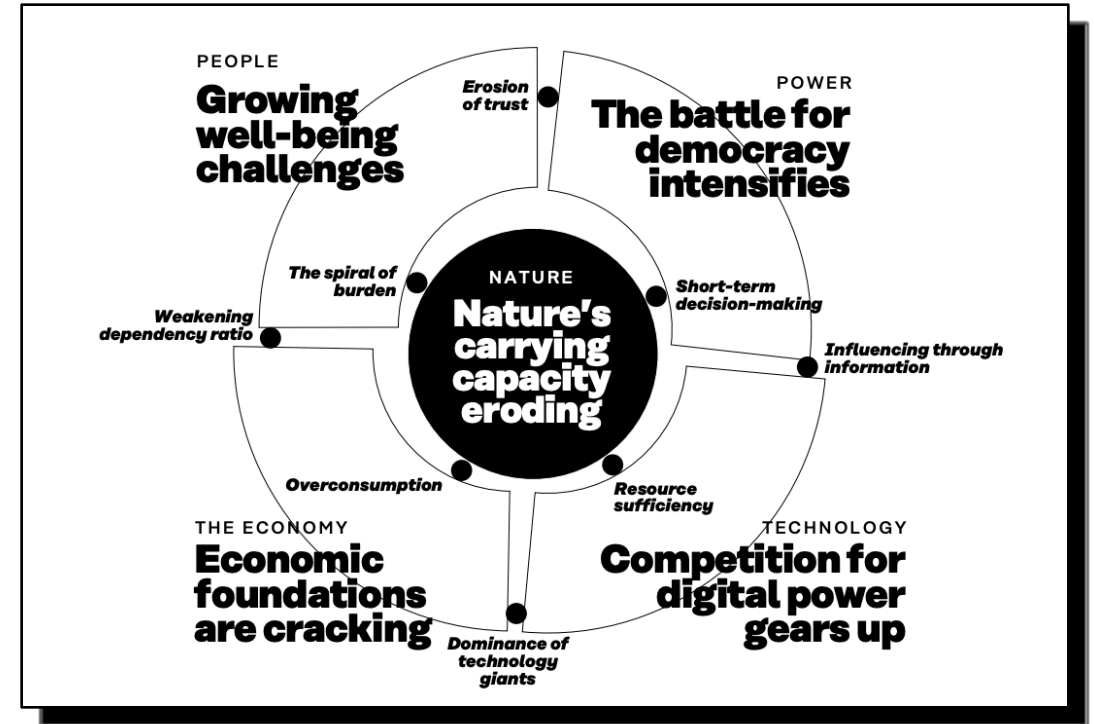
Read more: Sitra's Megatrends 2023

Futures triangle

We have analysed the developments underlying the transformation of the security environment using the Futures Triangle, developed by futures studies researcher Sohail Inayatullah.

The Futures Triangle is a framework for examining the factors shaping a possible future from three different perspectives: the push of the present, the weight of the past and the pull of the future.

The Futures Triangle helps us to understand the big picture of change, uncover underlying drivers, recognise obstacles to transformation and imagine desirable futures.

In this review, we have focused on the push of the present and the weight of the past. As the project progresses, we will delve deeper into the pull of the future.

1. **PUSH OF THE PRESENT:** What ongoing trends and transformation processes are driving the transformation of the security environment? In which direction is the security environment developing, and how can its trajectory be influenced?

2. **WEIGHT OF THE PAST:** What constraints and barriers does the past impose on our ability to understand and address security challenges? What path dependences, persistent beliefs and unsustainable worldviews, values or mindsets can we identify?

3. **PULL OF THE FUTURE:** What visions, plans or future scenarios are associated with the transformation of the security environment? What is the best possible outcome? What is the worst-case scenario?

PUSH

Push of the present

Ongoing processes such as changes in the economy, technology, culture, etc.

PULL

Pull of the future

Images of the future, dreams, hopes, plans, etc.

Plausible future

WEIGHT

Weight of the past

Continuities, belief systems, worldviews, barriers to change, etc.

Futures triangle.
Adapted from Inayatullah 2008.

Foresight concepts

Foresight: The process of identifying factors influencing the future, exploring alternative futures and defining measures to achieve the desired future. Foresight supports decision-making about the future, which inevitably involves uncertainty. Foresight does not aim to accurately predict the future.

Megatrend: A broad trajectory of change, encompassing multiple phenomena. Megatrends describe large-scale societal transformations, which often occur at a global level and do not change rapidly.

Transformative foresight: An approach that emphasises the identification and challenging of current assumptions, the exploration of new opportunities and futures, and being attuned to emerging phenomena. Rather than focusing on

preparedness or detailed future planning, transformative foresight aims to open new pathways forward and promote many voices and agency in shaping the future.

Trend: A direction of change, describing how things are currently developing. Trends can vary by region and shift over short periods.

Futures: Foresight uses the term "futures" (plural) because there are multiple possible and alternative futures. No single future is inevitable – we have the power to shape the future.

Futuremaker's toolbox

You will find more foresight tools in the Futuremaker's toolbox on Sitra's website.

The toolbox includes a template for futures triangle framework used in this review, as well as various tools for exploring megatrends.
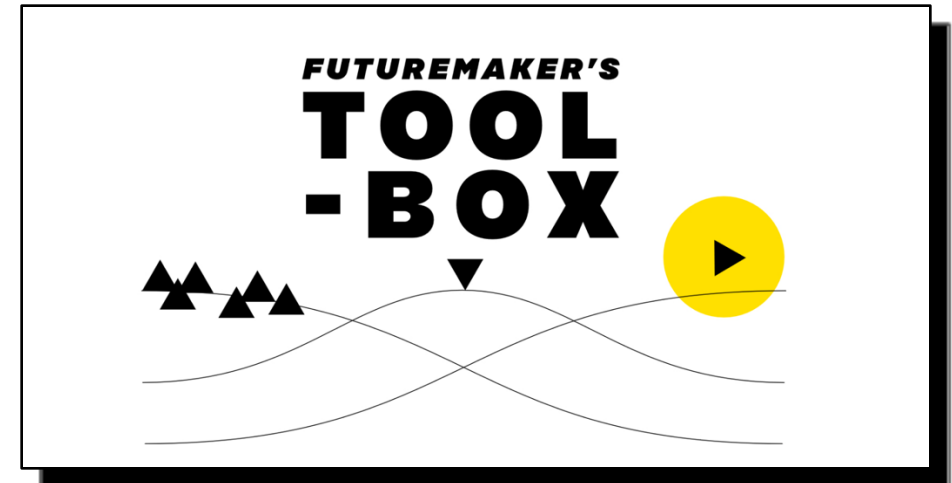
Read more: Futuremaker's toolbox

10. Important literature

SITRA

Foresight and security reports

European Commission: Joint Research Centre, Cagnin, C., Muench, S., Scapolo, F., Stoermer, E., and Vesnic Alujevic, L. 2024. Shaping and securing the EU's Open Strategic Autonomy by 2040 and beyond. Publications Office of the European Union, Luxembourg

European Strategy and Policy Analysis System (ESPAS) 2024. Global trends to 2040. Choosing Europes' future.

Iso-Markku, T. 2024. Millaisen EU:n haluamme? Näkymiä vaihtoehtoisiin tulevaisuuksiin [English summary available]. Sitra memorandum, 28 August 2024.

Ministry of Defence 2024. Global Strategic Trends: Out to 2055.

Minkkinen, M., Ahokas, I., and Auffermann, B. 2018. Kokonaisturvallisuuden ennakoinnin kehittäminen Suomessa [In Finnish]. From Failand to Winland.

Minkkinen, M., Auffermann, B., and Ahokas, I. 2019. Six foresight frames: Classifying policy foresight processes in foresight systems according to perceived unpredictability and pursued change. Technological Forecasting and Social Change Volume 149.

Muench, S., Whyte, J., Hauer, G., De Maleville, A., and Asikainen, T. 2024. Risks on the horizon. Insights from Horizon Scanning. Publications Office of the European Union, Luxembourg

National Intelligence Council 2021. Global Trends 2040. A More Contested World.

NATO 2024. Allied Command Transformation. Strategic Foresight Analysis 2023.

United Nations Environment Programme 2024. Navigating New Horizons: A global foresight report on planetary health and human wellbeing.

Vahti, J., Mäkelä, R-M., and Tähkäpää, O. 2024. President Niinistö's security report overlooks the following three tensions.

Publications of the Finnish Government 2024:54. Part 1 of the Government Report on the Future – Strategic Analysis of the Operating Environment [in Finnish, abstract available in English].

Publications of the Finnish Government 2022:18. Government report on changes in the security environment.

Publications of the Finnish Government 2024:33. Government report on Finnish foreign and security policy.

World Economic Forum 2024. Global Risks Report 2024

The international system is crumbling

European Commission: Joint Research Centre, Cagnin, C., Muench, S., Scapolo, F., Stoermer, E., and Vesnic Alujevic, L. 2024. Shaping and securing the EU's Open Strategic Autonomy by 2040 and beyond. Publications Office of the European Union, Luxembourg

Muench, S., Whyte, J., Hauer, G., De Maleville, A., and Asikainen, T. 2024. Risks on the horizon. Insights from Horizon Scanning. Publications Office of the European Union, Luxembourg

European Strategy and Policy Analysis System (ESPAS) 2024. Global trends to 2040. Choosing Europes' future.

Publications of the Finnish Government 2024:54. Part 1 of the Government Report on the Future – Strategic Analysis of the Operating Environment [in Finnish, abstract available in English].

European Strategy and Policy Analysis System (ESPAS) 2024. Global trends to 2040. Choosing Europes' future.

Ministry of Defence 2024. Global Strategic Trends: Out to 2055.

Merikallio, K., and Ämmälä, A. 2024. Näin syntyy rauha. Otava. Sanar, S. 1 November 2024. 5 geopolitical questions for 2025. World Economic Forum.

Uppsala University, Uppsala Conflict Data Program (UCDP) 2024.

Institute for Economics and Peace. Global Peace Index 2024: Measuring Peace in a Complex World, Sydney, June 2024.

International Institute for Democracy and Electoral Assistance (IDEA) 2024. The Global State of Democracy: Strengthening Legitimacy of Elections in a Time of Radical Uncertainty.

Technology is intertwining with security

Apostolicas, P. 2018. Silicon States: How TechTitans are Acquiring State-like Powers. Harvard International Review.

Digital and Population Data Services Agency 2023. Digiturvabarometri: Verkkorikollisuus on laskenut luottamusta digimaailmaan, mutta siitä huolimatta siedämme hyvin muuttunutta uhkatilannetta. (In Finnish)

Ellis, C., Ogden, T., and Black, J. 2024. China and space: How space technologies boost China's intelligence capabilities as part of hybrid threat. HybridCoE Paper 21.

Fingo 2024. Digivallan tasaajat project. (In Finnish)

Giles, R. 2019. MIT Technology Review. Explainer: What is a quantum computer?

Lehdonvirta, V. 2024. Digitaalinen maailma ei ole erillinen ulottuvuus jossain bittiavaruudessa. Aalto University. (In Finnish)

Ministry of Defence 2024. Global Strategic Trends: Out to 2055.

Koskinen, M. 2020. EU tavoittelee strategista autonomiaa, mutta sen sisällöstä ei ole yhteisymmärrystä. Ulkopolitiikka. (In Finnish)

Santaharju, T. 2024. Kybermaailman asevarustelukierre voi lopulta johtaa katastrofiin – asiantuntijat: Riski kasvaa koko ajan. Yle. (In Finnish)

Sivonen, L. 2023. Selvitys ihmisoikeusennakoinnista, resilienssistä ja varautumisesta yhteiskunnan murrosaikana. Publications of the Human Rights Centre. (In Finnish)

Publications of the Finnish Government 2024:54. Part 1 of the Government Report on the Future – Strategic Analysis of the Operating Environment [in Finnish, abstract available in English].

Plan 2023. Free to be online study.

World Economic Forum 2024. Global Risks 2024: Disinformation Tops Global Risks 2024 as Environmental Threats Intensify.

Economic power politics intensify

Ali-Yrkkö, J., Kuusela, O-P., and Kuusi, T. 2024. Geopolitics is Changing the Global Economy [in Finnish, abstract available in English]. ETLA Raportit – Reports 150.

Cerdeiro D., Kothari, S., and Muir, D. 2023. Harm From "De-Risking" Strategies Would Reverberate Beyond China. IMF blog: Chart of the week.

Choer Moraes, H., and Wigell, M. 2020. The emergence of strategic capitalism: Geoeconomics, corporate statecraft and the repurposing of the global economy. FIIA Working Paper 117.

Dorn F., Potrafke, N., and Schlepper, M. 2024. European Defence Spending in 2024 and Beyond: How to Provide Security in an Economically Challenging Environment. CESifo, EconPol Policy Report 45:2024.

Draghi, M. 2024. The future of European competitiveness – A competitiveness strategy for Europe.

European Commission: An EU approach to enhance economic security. Press release, 20 July 2023.

Filander, O., Homgren, M., Lukkaroinen, T., Mikkola, H., Sillanaukee, O., Teittinen, T., and Zhu, Y. 2024. Circular economy and resilience. The potential of circular economy to strengthen national crisis resilience [in Finnish, abstract available in English]. Publications of the Government's analysis, assessment and research activities 2024:18.

Kucik, J., and Menon, R. 2022. Can the United States Really Decouple From China? Probably not – but that doesn't mean it won't try. Foreign Policy, 11 January 2022.

Miettinen, T. 2024. EU kriisien aikakaudella. Unionin tulevaisuuden suuntaa etsimässä [English summary available]. Sitra memorandum, 20 January 2024.

Nyroos, S. 2024. Vaarallinen myytti. Helsingin Sanomat, 6 August 2024.

Pugnet, A. 2024. EU's von der Leyen assesses bloc's defence needs to €500 billion. Euractiv, 27 June 2024.

Saari, S. 2016. Column: Siintääkö edessämme geopolitiikan paluu ja EU:n tuho? (In Finnish) Yle, 14 December 2016.

Environmental crises fuel insecurity

European Environment Agency 2024. European Climate Risk Assessment. EEA Report No 1/2024.

Filander, O., Homgren, M., Lukkaroinen, T., Mikkola, H., Sillanaukee, O., Teittinen, T., and Zhu, Y. 2024. Circular economy and resilience. The potential of circular economy to strengthen national crisis resilience [in Finnish, abstract available in English]. Publications of the Government's analysis, assessment and research activities 2024:18.

Hakala, E., Berninger, K., Erkamo, S., Pyykönen, J., Tuomenvirta, H., Tynkkynen, O., and Vihma, A. 2021. Climate change and Finnish comprehensive security. Insights into enhanced preparedness. FIIA Briefing paper 325.

Strudwicke, I. J., and Grant, W. J. 2020. #JunkScience: Investigating pseudoscience disinformation in the Russian Internet Research Agency tweets. Public Understanding of Science, 29(5), 459–472.

International Energy Agency 2024. World Energy Outlook 2023.

International Energy Agency 2023. The State of Clean Technology Manufacturing An Energy Technology Perspectives Special Briefing.

IPCC 2022. Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

International Renewable Energy Agency (IRENA). Geopolitics of the Energy Transition.

Jansik, C., Karikallio, H., Kotilainen, T., Känkänen, H., Pihlanto, A., Rokka, S., and Vahvaselkä, M. 2024. Kasviproteiini kasvun tiellä. Tiekartta ruoan korkeampaan kasviproteiiniomavaraisuuteen [English abstract available]. Natural resources and bioeconomy studies 68/2024.

Lipke, A., Oertel, J., and O'Sullivan, D. 2024. Trust and trade-offs: How to manage Europe's green technology dependence on China. European Council on Foreign Relations, Policy Brief, 29 May 2024.

United Nations Environment Programme 2024. Navigating New Horizons: A global foresight report on planetary health and human wellbeing.

WISE project policy recommendation 2023. Luova sopeutuminen monikriisiin – oppeja koronapandemiasta (in Finnish).

Zhu, K. 2024. Visualizing Global Rare Earth Metals Production (1995–2023). Visual Capitalist, 13 November 2024.

The social glue is losing grip

E2 Tutkimus 2024. Miten meillä menee? survey.

Hantula, K., Lauha, H., Mäkelä, R.-M., Vahti, J. 2024. Democracy as a part of everyday life. A study on the barriers to social participation in the lives of young adults. Sitra studies. January 2024.

Ikäheimo, H.-P., and Vahti, J. 2021. Mediavälitteinen yhteiskunnallinen vaikuttaminen – murros ja tulevaisuus [English summary available]. Sitra studies. January 2021.

Johnson, S. 2023. WHO declares loneliness a "global public health concern". The Guardian, 16 November 2023.

Kaartinen, J., and Westinen, J. 2024. Eriytynyt Suomi. Suomi-käsikirja 2024 – Tilastollisia analyyseja Suomen alueellisesta jakautumisesta.

Kivinen, K. 2022. Digitaalinen informaatiolukutaito-opas. Faktabaari.

Association of Finnish Cities and Municipalities 2024. Kuntalaistutkimus 2024.

OECD 2024. Survey on Drivers of Trust on Public Institutions

Rydenfelt, H. 2023. Data, power and democracy. Sitra memorandum, 21 February 2023.

Sentimentti data tool for analysing people's sense of safety and security 2023. Ministry of the Interior.

Thompson, D. 2024. Why Americans Suddenly Stopped Hanging Out. The Atlantic, 26 October 2024.

Unlu, A., Truong, S., Sawhney, N,. and Tammi, T. 2024. Unveiling the Veiled Threat: The Impact of Bots on COVID-19 Health Communication. Social Science Computer Review. Sage Journals.

Interviewed experts

Sinikukka Saari, Leading Researcher, Finnish Institute of International Affairs

Mikael Wigell, Research Director, Finnish Institute of International Affairs

Toni Ahlqvist, Research Director and Professor, Finland Futures Research Centre, University of Turku

Pekka Ala-Pietilä, Chairperson of the SAP SE Supervisory Board, Chairperson of the Sanoma Board of Directors and Chairperson of the HERE Technologies Supervisory Board

Elina Pekkarinen, Ombudsman for Children

Suvi Uski, Doctor of Social Psychology and Co-Founder of Someturva

Kerttu Takala, Strategic Designer, Kela

Marja Nykänen, Deputy Governor, Bank of Finland

Päivi Tampere, Head of Communications, Strategic Communications Team, Prime Minister's Office

Kaisa Oksanen, Senior Researcher, Ministry for Foreign Affairs

Virva Viljanen, Dialogue Adviser, Demo Finland

Alice Stollmeyer, Founder and Executive Director, Defend Democracy

Emma Hakala, Leading Researcher, Finnish Institute of International Affairs

Jarna Hartikainen, Head of Preparedness Planning Unit, National Emergency Supply Agency

Timo Vuori, Director, Confederation of Finnish Industries

Contact us

Otto Tähkäpää
otto.tahkapaa@sitra.fi

Rosa-Maria Mäkelä
rosa-maria.makela@sitra.fi

Jukka Vahti
jukka.vahti@sitra.fi

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