

# National Security Trend Analysis 2024

Main Report

Accumulation of threats in times of uncertainty

**National Network of Safety and Security Analysts** 



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## Essence

We proudly present to you the National Security Trend Analysis 2024: Accumulation of threats in times of uncertainty. In this publication, the National Network of Safety and Security Analysts (ANV) identifies relevant, recent developments with regard to national security. On the one hand, developments have been identified from the perspective of the threats discussed in the National Risk Assessment (NRA). It concerns developments that may lead to changes in the threat assessment outlined in the NRA. On the other hand, developments have been looked at from a more overarching perspective. The Trend Analysis serves as input for the upcoming update of the implementation of the Security Strategy for the Kingdom of the Netherlands (hereinafter: the Kingdom). Two interrelated tasks can be formulated on the basis of the Trend Analysis:

- 1. How to deal with a worsening situation concerning threats discussed in the NRA;
- 2. How to anticipate structural challenges to the Kingdom due to a world in transition.
- 1. How to deal with a worsening situation concerning threats discussed in the NRA.

The NRA identifies a large number of safety and security threats, subdivided according to nine different threat themes. In the past two years, (elements of) seven of the threat themes discussed in the NRA have seen developments that have had a negative impact on the threats in question. This worsening situation will be an important challenge for national security in the coming years.

In terms of safety threats, this situation concerns all threats (with the exception of earthquakes) that fall under climate and natural disasters, i.e. wildfires, floods and extreme weather events. From a security perspective, a worsened situation is observed for all relevant threat themes analysed in the NRA. However, a distinction should be made in this regard. On the one hand, there are five threat themes where developments are to a large extent allready affecting the threats in question. These themes are: international and military threats; economic threats; foreign subversion of the democratic constitutional system, with the connected topics of espionage, organised crime, hybrid operations and foreign interference; the theme of threats to critical

infrastructure and, finally, social polarisation, extremism and terrorism (with the exception of the polarisation component). On the other hand, developments are identified for a number of threats that are predominantly relevant for the future. This concerns the theme of cyber threats (including cybercrime) and the polarisation component mentioned above. Although there are no significant developments with regard to these themes at the moment, there are indications that the situation may change in the coming years.

For only a limited number of threats, few changes have been observed compared to the NRA. This is true for the two threat themes of infectious diseases and major accidents as well as for the aforementioned earthquakes. However, the absence of major changes does not mean that these threats are not important to national security or that they cannot present an unexpected surprise to the Kingdom of the Netherlands. This is evidenced by the social consequences of the COVID-19 pandemic, among other things.

How to anticipate structural challenges to the Kingdom due to a world in transition.

The above, mostly negative developments concerning the different threats are indicative of the current times. The Kingdom is part of a world in transition. The existing systems to which society is accustomed are changing, with all of the consequences that come with it. Although the general trend of these transitions for the most part is not new, the shift toward a new order is becoming more pronounced every day and its effects are becoming more and more evident as well. An important challenge in this regard is to anticipate these systemic changes and their possible effects in time. Specifically, transitions are being observed in four domains:

- The increasingly noticeable direct and indirect effects
  of ever-accelerating climate change. How do we deal
  with a near future characterized by more frequent and
  severe extreme weather events, rising sea levels and
  (inter)national tensions due to a changing climate?
   This applies to both the Caribbean and the European
  part of the Kingdom.
- 2. The major impact of technological developments on the future security environment. Not only are states involved in a technology race and not only do we see a growing influence of non-state actors, we are also witnessing a transition to a world with widely accessible and available advanced technology. How do we safeguard access to and control over new knowledge and technologies, while at the same time keeping an eye on their potentially disruptive effects?
- 3. A new geopolitical era characterized by an increase in (violent) conflict and conflict potential, in which both conventional and hybrid (as well as new) weapons are deployed. For the first time in a long while, it seems more plausible that the Kingdom will become directly involved in a large-scale, armed conflict between centres of power. This raises fundamental questions on how society's resilience can be strengthened in this context. At the same time, issues such as climate change, strategic dependencies and social tensions are also increasingly taking on a geopolitical component. How is the Kingdom, in collaboration with its allies, preparing for a time of increasing competition and conflict? And how is it dealing with this increasing geopolitisation?
- 4. Increasingly urgent (structural) economic challenges, such as a tight labour market and scarcity in a broader sense. This requires making choices regarding (or between) different (security) interests, including the provision of (quasi-)public goods such as healthcare, education and defence. How do we deal with the ongoing transitions in a world where, from an economic perspective, not everything is possible anymore and certainly not all at the same time?

A world in transition means that the various domains mentioned above are not only changing independently of each other, but also interact to create a cumulative effect. At the same time, fundamental questions concerning the prioritisation of the issues arising from these transitions are a source of social polarisation.

Conclusion & implications for strategy development

The worsening situation concerning a multitude of threats and the aforementioned transitions create a cumulative pressure on national security. There are more threats and systemic issues than before that require attention in the relatively short term and in connection with one another. As a result, there is a growing need to make (often difficult) strategic choices regarding the deployment of limited

resources and the relative prioritisation of different national security interests. All of this against the backdrop of a world in transition and the need to maintain enough flexibility to respond to unforeseen events and strategic shocks. This uncertainty underscores the importance of strengthening the resilience of society as a whole, for instance through strong institutions or a self-reliant population. This will help not only to face known threats, but also to deal with (strategic) surprises. Given the cumulative pressure of threats, it remains important to take a holistic approach to concrete threats and structural challenges. Considering the degree of interconnectedness of the various national security challenges, a 'compartmentalisation' of strategy and policy will not result in an approach that is effective in the long run. Moreover, the complexity of the challenges to national security means that collaboration between public and private organisations and between citizens and government is essential. This is true in particular for complex threats with large potential cascading effects such as the more frequent occurrence of climate and natural disasters as well as the increasingly plausible scenario of direct involvement in armed conflict. Indeed, for many threats, available capabilities in terms of preparation, response and recovery are spread across society as a whole. The issues mentioned above translate into the following implications for future strategy-making:

- Find the right balance between developing a longterm vision and maintaining a degree of adaptability.
   This adaptability can be ensured by explicitly taking uncertainty into account from the very beginning when developing strategy. This can be done, for instance, by paying sufficient attention to the resilience of society in a generic (broad) sense. It is also important to structurally keep a close eye on changes in the threat landscape and their consequences, so that they can be incorporated in a better and more timely manner into the broader strategy.
- 2. Make the different lines of action as concrete as possible. In the Security Strategy, and when translating this strategy into policy, choices will have to be made regarding implementation and prioritisation. Given the relevance of the various lines of action, making these choices will not be easy. It will help to make the lines of action, the corresponding uncertainties and the connections between them as concrete as possible.
- 3. Maintain a whole-of-society perspective during the different phases of strategy development. To create a strategy that anticipates difficult and sometimes painful choices, it is important to involve public and private partners both in its design and implementation.

Finally, the Kingdom finds itself in a fundamentally uncertain time period in which the threat to national security is growing, threats are accumulating and we can and will be surprised by (strategic) shocks. A period like this requires a certain degree of flexibility, collaboration and resilience, as well as a vision and the courage to make difficult choices. Choices that sometimes also may involve acknowledging that some things cannot be done. However, such choices can only be made if there is sufficient insight into (emerging) developments, uncertainties and the links between them. There is also an apparent contradiction here: we should invest in shaping a long-term vision and the ability to anticipate, but at the same time recognise that it is impossible to anticipate everything.

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## 1 Introduction

This is the main report of the National Security Trend Analysis 2024. This document has been compiled by the National Network of Safety and Security Analysts (ANV) at the request of the National Coordinator for Counterterrorism and Security (NCTV). The Trend Analysis charts the most important developments for national security and thus serves as a foundation for updating the implementation of the Security Strategy for the Kingdom of the Netherlands.

The Trend Analysis builds on the findings of the National Risk Assessment of the Kingdom of the Netherlands, or NRA, that was prepared by the ANV in 2022 (ANV, 2022). The NRA is a risk assessment of a wide range of threats to the national security of the Kingdom of the Netherlands, covering safety and security themes.<sup>1</sup>

### 1.1 Objective and question

In 2023, the Security Strategy for the Kingdom of the Netherlands (hereinafter 'the Security Strategy'; Government of the Netherlands, 2023a) was drawn up. The Security Strategy is partly based on the threat assessment outlined in the aforementioned NRA and translates it into strategic themes, objectives and lines of action.

This National Security Trend Analysis aims to serve as substantive input for the upcoming update of the implementation of the Security Strategy. The Trend Analysis thus focuses mainly on two questions: (1) what new developments that are relevant to national security have been identified since the NRA was prepared? and (2) what developments are expected to have an impact on national security for the Kingdom of the Netherlands in the coming years? Specifically, the Trend Analysis investigates to what extent the NRA's threat assessment is still current and which trends, developments and game changing events<sup>2</sup>

have affected the threats in question or may affect it them the coming period.<sup>3</sup>

# 1.2 Framework for the Trend Analysis

The Trend Analysis is explicitly not a risk assessment like the NRA, which maps the impact and likelihood of various threats. However, it does provide a starting point for the next risk assessment. Indeed, the Trend Analysis identifies and assesses developments that inherently (will) influence threats whose impact and likelihood will be assessed in future risk assessments. It is also important to mention that this Trend Analysis is not meant to replace the NRA. Indeed, many of the analyses, developments and determinations included in the NRA are still valid. The Trend Analysis therefore only looks at issues that are relatively new or where change has been identified since the NRA's preparation in the first quarter of 2022. Although some threats are still relevant, the Trend Analysis does not discuss them when no (substantial) changes are observed. For the most complete picture possible of the current national security threat landscape, we therefore advise to read both the NRA and this Trend Analysis.

Like the NRA, the National Security Trend Analysis covers the entire Kingdom of the Netherlands. When reading the Trend Analysis, it is important to be aware that the same developments may have different effects in the Caribbean and European parts of the Kingdom. Indeed, the islands in the Caribbean part of the Kingdom are relatively vulnerable to a wide range of threats due to their small size, dependencies, and low level of redundancy of their (critical) infrastructure. These characteristics can also mean that the developments highlighted in this Trend Analysis could have relatively large implications for local communities.

<sup>&</sup>lt;sup>1</sup> A brief explanation of both documents can be found in section C of the In-Depth Exploration of the Trend Analysis.

Here, game changing events refers to events that fundamentally change how we view a certain threat from a national security perspective.

In principle, the Trend Analysis looks at developments that may be significant during the term of the current Security Strategy. For some long-term topics, such as climate change, a (partly) longer time horizon has been chosen.

### 1.3 Reading guide

The National Security Trend Analysis consists of two parts:

- The Main Report;
- The In-Depth Exploration of the Trend Analysis.

#### **Main Report**

This Main Report starts out with an overview of the developments for national security in chapter two. The purpose of this overview is to provide a summary and integral picture of relevant developments. Chapter two first considers the significance of developments for national security and briefly discusses their implications for threats discussed in the NRA (2.1). For an extensive overview of the developments per threat theme and a more comprehensive interpretation of their implications, we refer the reader to the In-Depth Exploration of the Trend Analysis. Subsequently, developments are examined from a number of broader domains, i.e. social, technology, ecology, economy and international politics (2.2 to 2.6). Chapter three describes the cross-thematic, strategic insights that emerge from the Trend Analysis. Finally, chapter four discusses the implications for further strategy development.

#### **In-Depth Exploration of the Trend Analysis**

The In-Depth Exploration of the Trend Analysis contains an overview of the developments for each of the ten threat themes discussed in the NRA. Additionally, an overview is given of the developments in seven different technology areas with potential implications for national security. The document also includes a further exploration of the methodology used and a short explanation about the National Network of Safety and Security Analysts.

# 2 Overview of national security developments

The threats facing the Kingdom of the Netherlands are subject to change, given the convergence of various developments. These developments tend to have a negative impact viewed from the perspective of concrete threats, but also from the perspective of broader social domains. We are entering a period of increasing, cumulative pressure on national security.

The National Security Trend Analysis looks at developments relevant to national security from different perspectives. First, it maps out how different developments affect the various threats that are discussed in the NRA. Section 2.1 contains a brief summary of the main results based on this perspective. For a comprehensive overview, we refer the reader to the In-Depth Exploration of the Trend Analysis. Second, we look at developments from a broader perspective, aggregating and interpreting developments from a number of domains. Sections 2.2 to 2.6 discuss the developments as seen from the following domains:

- Ecology (2.2);
- Technology (2.3);
- Geopolitics (2.4);
- Economy (2.5);
- Societal (2.6).

Many of the developments described here have both a direct and an indirect effect on specific threats to national security, but also on the ability of politics and society to cope with them in a generic sense. The findings highlighted in this chapter form the basis for the strategic analysis and insights discussed in chapter three.

# 2.1 Main findings: cumulative pressure on national security

The Trend Analysis identifies several developments that affect the threats presented in the NRA. Some of these developments are specifically linked to the threats in question, while others are more overarching in nature and thus affect multiple threats. Based on the In-Depth

Exploration of the Trend Analysis, this section contains a brief synthesis of how the various threat themes discussed in the NRA are evolving. The In-Depth Exploration will discuss this in more detail for each threat theme. This Trend Analysis does not aim to re-evaluate the NRA (after all, it is not a full-fledged risk assessment). Instead, it identifies developments with a positive or negative impact on the various threats.

Many of the threats presented in the NRA show negative developments that, should they continue, could have a negative impact on the threat assessment in a new risk analysis. This is true for both safety and security threats.

Trends with a negative impact in the area of safety

Regarding climate and natural disasters, several trends have a negative impact on the threats mentioned in the NRA. Higher temperatures and changing weather patterns are expected to translate increasingly into more extreme weather events, such as extreme heat, drought and rainfall. Climate change thus increases the impact and likelihood of, for example, wildfires and floods. Interestingly, an increase in heatwaves and droughts is expected on the one hand, whereas very heavy rainfall is expected to occur more often on the other. The Dutch water management system needs to be able to handle these two extremes. In the Caribbean part of the Kingdom, climate change causes damage to (economically important) ecosystems such as coral reefs, for instance, and climate-related natural disasters may occur more frequently. Climate change causes health damage (e.g. due to heat stress), disruption of daily life, and economic damage to people in both the European and Caribbean parts of the Kingdom.

Trends with a negative impact in the area of security

When it comes to the security themes, the observed trends also negatively impact the threats in question. Topics such as climate and migration are of increasing political, economic and social importance. Social polarisation around these topics will therefore (continue to) increase rather than decrease. Although the threat related to social polarisation has not fundamentally changed yet, there is great

potential that it will do so in the coming years. Influencing and disinformation campaigns by malicious actors can capitalise on this, potentially also increasingly helped by the ever-greater accessibility of generative AI. The terrorist threat level for the Netherlands has been raised<sup>4</sup> as a result of the war in Gaza, Quran vandalism and calls for violence, whereas other forms of extremism (including anti-institutional, right-wing and Islamic extremism) also remain a national security concern.

If we look at the topic of organised crime, it continues to exert high pressure on the institutions associated with the functioning of the democratic constitutional system. The use of facilitators by organised crime in various sectors remains as well. Many of the dynamics described in the NRA are still current. The most prominent development in this specific area is a very sharp increase in the use of explosives (among other things) as a means of intimidation. It is likely that the widespread use of explosives will result in more (innocent) victims and more (economic) damage due to organised crime than previously anticipated. The use of explosives has also made organised crime and the threat that it poses visible to a larger portion of the population than anticipated. This may affect, among other things, people's confidence in some of the institutions associated with the democratic constitutional system.

When looking at international and military threats, it can be concluded that instability and fragility in the vicinity of the Kingdom and the European Union have increased in recent times. This is not only due to the ongoing war in Ukraine, but also to increasing geopolitical competition in the Arctic, the war in Gaza and instability in other regions such as Latin America and Central and North Africa. At the same time, there is growing competition between great powers in general. This results in additional escalation potential - for instance in the form of proxy wars or intrastate conflict. This ongoing competition between great powers not only results in new and renewed arms races, but also increases the number of situations in which hybrid instruments are deployed, including influencing and disinformation, espionage and cyber-attacks. Although the nature of various forms of hybrid conflict has not changed, hybrid instruments are used in more ways and against more targets. The scale and frequency at which they are deployed is becoming more assertive and aggressive as well. Finally, increasing tensions on the world stage also continue to erode the effective functioning of multilateral (security) organisations.

Cyber-attacks, both by state and non-state (criminal) actors, are the order of the day. Threat assessments from recent years show that the digital threat remains high and is subject to constant change. At the same time, the Kingdom has not yet been hit by any cyber-attacks with a highly disruptive impact on national security. However, due to the increase in scale and automation of attacks, new technologies used and increased dependencies, national security interests could increasingly be at risk.

Economic threats still pose a risk to society. Geopolitical turmoil and associated (economic) competition and conflict represent the largest contribution to new uncertainties and a worsening situation. The biggest shock was caused by the war in Ukraine, which resulted in sanctions and higher energy prices and indirectly in broader inflation and higher interest rates. The initial shock has largely been absorbed, but the war still incurs costs (aid and shelter). There has also been an increased focus on geopolitical risks, e.g. surrounding strategic dependencies and knowledge security. Manifestations of this are, for instance, export restrictions and new industrial policies, especially targeting high technology and aimed at China. Infrastructure, and thus trade, also remains susceptible to disruptions of a deliberate (sabotage, hacks) and non-deliberate (extreme weather events due to climate change) nature. In financial markets, credit risks have increased due to higher interest rates, among other things. This has resulted in several high-risk events such as the bank failures of Silicon Valley Bank and Credit Suisse, but has had no major financial consequences.

#### Threats showing relatively few developments

There are a few threats for which the situation doesn't seem to have changed compared to what is described in the NRA. These are earthquakes, infectious diseases and major accidents. For infectious diseases, there are no indications of significant changes. However, a large-scale infectious disease outbreak would still pose health risks and could have major societal effects, as in the case of the COVID-19 pandemic. A number of developments can be seen, though, that could imply an increased risk in the longer term. They include the growing number of animal species susceptible to avian influenza, a decreasing willingness to vaccinate, or developments in bioinformatics and Al. Similarly, earthquakes and major accidents may still occur, but there are no indications that the situation as outlined in the NRA has changed.

<sup>4</sup> This rise has been incorporated in the Terrorist Threat Assessment for the Netherlands (DTN) of December 2023 (NCTV, 2023).

# 2.2 Ecology: the increasing impact of climate change

The ecology component looks at developments that have an effect on or have their origins in the natural environment. Through biodiversity, climate and different landscape types, among other things, the natural environment plays an important role in a wide range of processes and systems such as transport, food security, drinking water supply and water level management. Developments in this field therefore have a broad impact.

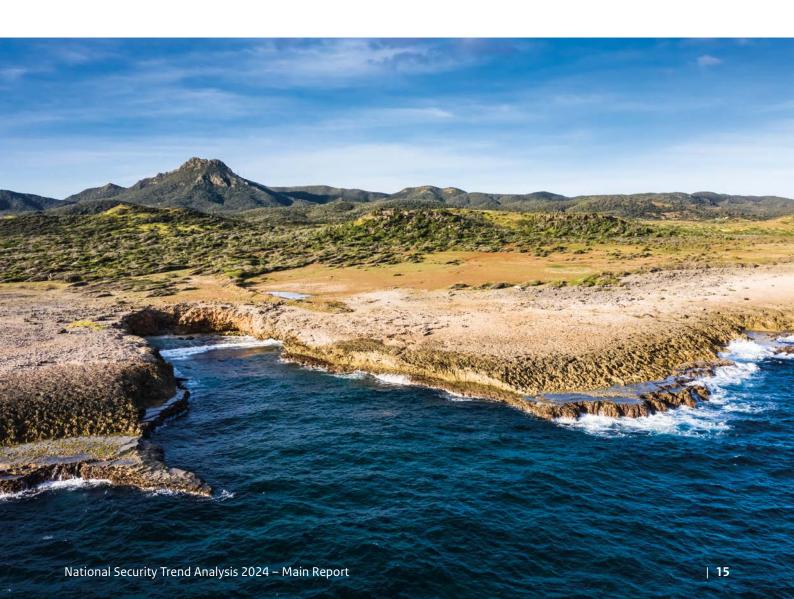
#### Climate change continues to accelerate

One of the most important phenomena to consider is climate change. Previous ANV analyses have repeatedly identified climate change as an important factor for national security and as a trend that is accelerating. This Trend Analysis reaffirms that climate change continues to take place at an ever-increasing pace and will have even more severe effects than previously thought (KNMI, 2023).

Based on climate models, the IPCC expects that an average global temperature increase of 1.5 degrees may already be reached around 2033 (IPCC, 2023). Global temperature has increased by 1.2 degrees on average since the pre-industrial period (1850-1900) (KNMI, 2023). In the European Netherlands it is now 2.3 degrees warmer than around 1900, a warming-up effect that is about twice as big as the worldwide average (KNMI, 2023). This means that we are faced already with serious, direct and indirect consequences of climate change and we will continue to do so in the coming years (PBL, 2024).

### The effects of climate change are becoming increasingly tangible

In terms of direct effects, summers will become significantly drier and average temperatures will continue to rise. In a world that is 2 degrees warmer, summer heat in the European Netherlands could reach 45 degrees around the year 2100 (KNMI, 2023). Experts expect 2024 to be the world's warmest year to date, helped in part by the effects



of El Niño.<sup>5</sup> The increasingly rapid rise in temperature coincides with an ageing population and thus a growing group of people who are vulnerable to heat stress. As the Netherlands continues to warm up it will also offer an increasingly more attractive climate for carriers of tropical diseases such as dengue (tiger mosquito), which will therefore become more common. Besides the average temperature, the number of heavy showers with a lot of rainfall is also increasing. These types of extreme weather events can become so extreme that the water system will no longer be able to cope, resulting in more frequent floods. In addition to extreme precipitation and its impact on river water levels, sea levels will also rise at an increasingly rapid rate (PBL, 2024). This is about 3.7 millimetres per year at present, but the projected cumulative sea level rise by 2050 is 16 to 38 centimetres, depending on the amount of greenhouse gas emissions. If the Antarctic ice sheet becomes unstable, this rise could even be as high as 2.5 metres by 2100 (KNMI, 2023). If the sea level rises a few decimetres, storm surge barriers will have to be closed more often and rivers will have increasing difficulty discharging water into the sea. Polders in the coastal provinces will get to deal with saline groundwater and ecologically important sandbanks will disappear under water (Schuttenhelm, 2019).

The developments mentioned above lead to an increase in extreme weather events, floods, extreme heat or drought, wildfires and (tropical) infectious diseases. In other words, the acceleration of climate change is directly linked to a worsening situation for a number of threats (see the In-Depth Exploration of the Trend Analysis). At the same time, a situation is emerging in which we need to prepare ourselves to deal with opposite extremes. For example, we need to prepare both for more rainfall in a short period of time, and for longer periods of heat and drought. The functioning of (critical) processes and infrastructure will also experience increased pressure within the entire Kingdom. Examples include the effects of prolonged drought on drinking water supplies or, specifically for the European Netherlands, on freight transport via inland waterways.

It is important to stress that both the European and Caribbean parts of the Kingdom will be faced with the direct effects of climate change. For instance, there is an increased likelihood that Sint Eustatius, Saba and Sint Maarten will be hit by severe hurricanes with high rainfall. At the same time, the more southerly islands of Aruba, Curaçao and Bonaire will increasingly frequently experience the effects of passing hurricanes and tropical storms (KNMI, 2023). Although the chance remains small that these storms will come close to the islands, they bring heavy rainfall, among other things.

Changing precipitation patterns with periods of both drought and extreme rainfall can not only lead to increased erosion, but also pose a challenge to local infrastructure, which usually is not designed to cope with large amounts of rainfall. In general, the pressure on (critical) processes and infrastructure will also increase in the Caribbean part of the Kingdom as a result of climate change.

Because of the increased frequency of natural disasters due to climate change, citizens who travel abroad are also more likely to become victims of natural disasters in the countries that they visit (Lachmeijer, 2023). The summer of 2023 already saw several examples of this, such as the extreme hailstorms in Italy, the severe weather conditions in Slovenia and Norway and the forest fires in Greece. In practice, this leads to increased pressure on consular assistance and the capacity to carry out evacuations (in an international context).

At both the national and international levels, there are tensions and disagreements about how to deal with (the consequences of) climate change. Different groups in society experience the usefulness and need for mitigation measures differently. Particularly now that the consequences of climate change are getting more tangible, the perceived need for climate mitigation and adaptation policies is becoming an increasingly divisive issue both nationally and internationally.

Climate change is increasingly becoming a threat multiplier Besides the direct effects mentioned earlier, climate change also has several international cascading effects that will indirectly affect the Kingdom. The process of everaccelerating climate change creates not only new threats and dynamics but also reinforces existing ones. It is a threat multiplier.

For a start, climate change will more frequently be a source of geopolitical tensions in various ways (Townend et al., 2023). As the effects of climate change become more frequent and severe, the issue of who has the 'rights' to particular emissions and possible climate offsets will also become more pressing. The same applies to tensions based on the (in)equality of countries with regard to the severity of the climate change impact experienced (Townend et al., 2023). Also, vulnerabilities to climate change of smaller countries (such as the CAS countries within the Kingdom) can be exploited to gain local influence, for instance under the guise of infrastructure investments. If global climate policy doesn't produce the desired results, countries are more likely to use geoengineering on a larger scale (e.g. artificially generating rain). If no proper agreements are reached on this issue, it could also become a source of

<sup>&</sup>lt;sup>5</sup> An extreme El Niño will also amplify global warming in the two years that follow.

inequality and conflict.<sup>6</sup> Other sources of future conflict are newly created opportunities for resource exploitation and shipping routes that are freed up as a result of the melting of polar ice caps.<sup>7</sup>

Whereas the melting of the polar ice caps may lead to new shipping routes, other important international trade routes come under pressure. For instance, the capacity of the Panama Canal is experiencing pressure due to longer periods of drought caused by changing rainfall patterns (Foreign Policy, 2024). In particular when disruptions such as climate change coincide with geopolitical factors such as attacks on merchant shipping in the Red Sea or accidents such as the 2021 blockade of the Suez Canal by a stranded cargo ship, international trade can potentially be severely disrupted. This not only affects the role of the Netherlands as a major transit country, but also fuels inflation and leads to higher greenhouse gas emissions due to longer shipping routes. The implications of climate change for global supply chains are also particularly relevant for the islands in the Caribbean part of the Kingdom, given their dependence on imports of food and other goods.

Accelerating climate change will also put the liveability and food security in some parts of the world under pressure sooner than anticipated. As a result of rapidly rising temperatures, among other things, parts of Northeast India and Southeast Asia could experience a situation where people's health and well-being are severely compromised due to the combination of ever-increasing temperatures and high humidity as early as the late 21st century. In addition, temperatures in the Middle East and North Africa are expected to be so high by the end of this century (above 56 degrees Celsius) that about half of this area's population (about 600 million people) could face health-threatening conditions. Moreover, the combination of heat and more frequent extreme weather events will make growing important crops like wheat impossible in some parts of the world and will more likely lead to crop failures in general (IFRC & OCHA, 2022). This potentially affects not only local populations, but also global prices and food availability. Although this could obviously affect the entire Kingdom, it is an issue for the Caribbean part in particular, given its high dependence on imported food.

The combination of the above developments will have a subsequent cascading effect of climate change: an increase in migration towards parts of the world where liveability, food security and safety are under less pressure, relatively speaking. For the European Netherlands, this will probably not only mean additional demographic pressure on facilities and available space, but it will also create a further breeding ground for social tensions and polarisation surrounding the issue of how to deal with this situation.

### Uncertainty regarding climate mitigation and a shift to adaptation

Some direct and indirect effects of ever-accelerating climate change have been briefly described above. Generally speaking, global climate policy affects the amount of greenhouse gases emitted worldwide and thus the speed of climate change. If effective global climate policies will not be implemented in the future, there is an increased likelihood that, on top of the effects described earlier, some natural tipping points8 could be reached, such as the cessation of the Gulf Stream, which has a major impact on global temperatures, sea levels and precipitation patterns (Lenton et al., 2023; KNMI, 2024).9 Accelerated climate mitigation is not a realistic expectation at the moment, partly due to geopolitical tensions and economic pressures in other areas. The outcome of the upcoming elections in the United States is one of the uncertain factors in this regard. Given the uncertainty surrounding climate mitigation and the already increasingly tangible effects of climate change, it is becoming more and more important to look at adaptation options. For example, what measures can be taken to minimise heat stress in densely built-up areas and the impact it might have on physical safety? What are suitable sites for constructing new housing developments in the face of rising sea levels? Answering questions like these will become increasingly important in the coming years.

## A decrease in the quality and quantity of nature due to cumulative pressure

On the whole, nature in the European Netherlands is in dire straits. Particularly in dunes, heathland and agricultural areas, nature continues to deteriorate. Excess nitrogen, fragmentation of natural areas and climate change are important contributing factors to this decline. Extreme weather events and temperature and precipitation changes are major causes of biodiversity loss. A decline in biodiversity disturbs the balance between various plant and animal species, potentially increasing nuisance from pests and the spread of animal diseases (WUR, 2023). Changing weather patterns further disrupt this balance and create favourable conditions for various invasive species.

So far, there are very few international agreements on what is allowed in the atmosphere and what is not. At the same time, current geoengineering practices such as cloud seeding have not yet proved to be verifiably successful.

Because of global warming, the Arctic shipping routes remain ice-free and navigable for increasingly longer periods of time, for example.

<sup>8</sup> Tipping points are thresholds or values that can be reached within a system (e.g. a certain seawater temperature), resulting in a significant and often irreversible change in the way the system operates.

<sup>9</sup> For the Netherlands and Northern Europe this will translate, among other things, into a very rapid and strong drop in temperature.

For instance, large quantities of washed-up seaweed (Sargassum) will become a more frequent occurrence in the Caribbean part of the Kingdom due to climate change and rising water temperatures (Central Bank of Curaçao and Sint Maarten, 2023). Coral quality is also under pressure. Both of these developments can have a major effect on the appeal of the islands as a tourist destination and thus have serious consequences for the local economy. Also, the quality of life of the population itself is under pressure, due to the declining quality of natural areas.

In itself, the poor state of nature is nothing new. And although success is being achieved in some places with the reintroduction of animal species, for instance, the cumulative effects of climate change, nitrogen emissions and fragmentation of natural areas are becoming increasingly apparent at the same time. Moreover, especially in the European Netherlands, preserving (the quality of) natural areas will only become harder in the coming years due to an increased competition for scarce space and nitrogen emissions caused by a growing population and major housing challenges, among other things. In the Caribbean part of the Kingdom, too, nature and biodiversity suffer from overdevelopment, as is the case in Sint Maarten, for example.

In addition to the current situation regarding nitrogen emissions and their social, ecological and economic consequences, poor water quality may also become a source of friction in the coming years as European standards are currently not being met. Although this is also nothing new, this situation is identified as the potential new 'nitrogen crisis', where economic interests and (legal) enforcement of standards aimed at the protection of nature will come into conflict.

#### Implications for national security

Climate change, together with its consequences, is the most important development for national security within the ecology component. Although climate change itself is a long-term process, based on the current developments we will have to deal with its effects earlier than expected. These effects appear to be increasingly severe and will also affect various national security interests more frequently and severely than anticipated. A wide range of threats to national security will be adversely affected. In particular, it concerns threats linked to weather phenomena such as wildfires, extreme weather events (heat, drought and extreme precipitation), flooding (by both sea and rivers), the functioning of critical infrastructure, and the presence of infectious diseases that are new to the Kingdom. At the same time, climate-related developments can also have a more indirect impact on threats such as polarisation, extremism and international and military threats. Developments in climate change will thus increasingly have an indirect effect not only on the security interest of social and political stability, but also on the international legal order and stability.

# 2.3 Technology: technology race with technology as an instrument of power, weapon and vulnerability

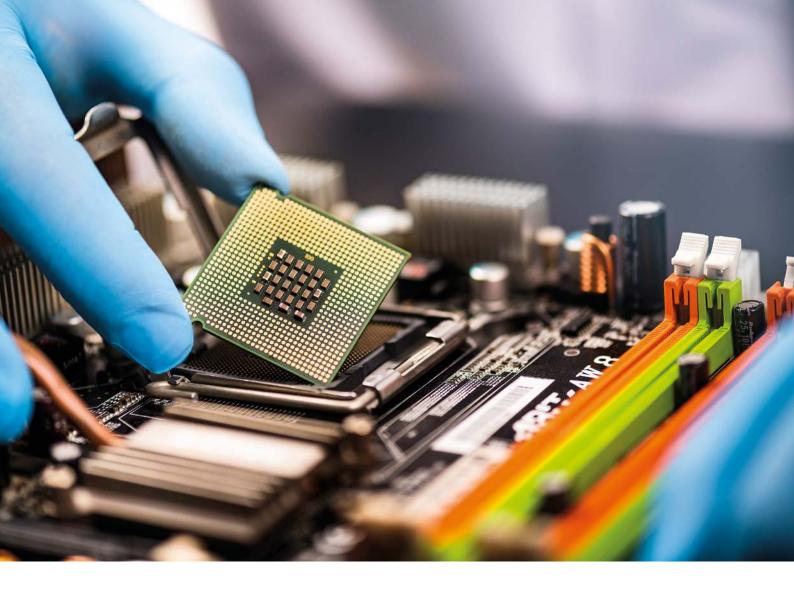
Technological developments will greatly affect the future security environment. Technology offers opportunities, but also carries threats. Not only when technologies are applied in weapon systems, for example, but technology in a generic sense also impacts national security in many ways. The need to get control over the speed, impact and future of technological developments is reflected by the growing number of strategies, policy documents and scientific analyses.<sup>10</sup>

The In-Depth Exploration contains a concise technology watch and assessment of seven technology areas deemed relevant to national security. The following technology areas are covered: artificial intelligence, space technology, quantum technology, robotics and autonomous systems, photonics technology, energy technology and biotechnology. The outlined developments and implications for national security result in a number of overarching observations that are identified below.

#### **Technology race**

First, the current era is clearly characterised by a highly competitive technology field. In a sense, we are witnessing a technology race between actors that aim to gain a technological edge over one another. This applies to many of the technologies covered, but competition is particularly high in the areas of AI, quantum technology and space technology. This competition is reflected by economic measures by states that are aimed at protecting their own market and knowledge position, but also by boasts about the latest technological breakthroughs. Another tactic used, for instance by China, is to influence international agreements on technical standards in order to improve the competitive position of Chinese companies (Sheehan & Feldgoise, 2023).

<sup>10</sup> The Nationale Technologiestrategie was published in early 2024, for example, but reports on technology trends are also published internationally on a continuous basis.



In the field of space technology, we witness the militarisation of space as a continuation of geopolitical competition on Earth. States like China, the United States and Russia are moving from passive military use of space to actively integrating space into conventional military operations. These states claim their presence in space and develop their assets in, and technologies related to, the space domain, especially in the field of counterspace (Reding, 2023; Projectteam Statelijke Dreigingen, 2021). Counterspace technologies are directed at gaining dominance in space over other actors, with offensive actions targeting satellites, ground systems or the communications between them (Secure World Foundation, 2024). Outdated international space law (originating from 1960-1980) is no longer fit to deal with the large number of active (non-state) actors and new activities in space (Goguichvli et al., 2021).

Many technologies are dual-use, meaning that there are both civilian and military applications of the technology (under development). In the civil domain, the predominant trend is that academic collaboration and exchange with international partners (both Western and non-Western) is important to promote knowledge of the technology, its possible applications and potential further development. At the same time, such academic activities may well

have military applications, in which case transfer of such knowledge is considered undesirable. For example, export controls for military and dual-use goods have long been in place. However, such export control mechanisms have a limited reach, as the risk to national security manifests itself only through end-use of a product across the border. In line with the European approach to enhance economic security, the European Commission has drawn up a proposal in early 2024 on, among other things, the tightening of export controls and screening of foreign investments (European Commission, 2024).

In recent years, a growing number of states have started to develop laws and regulations focused on controlling broader risks to national security of 'sensitive technology'. In the Netherlands, for example, a bill on screening knowledge security is in the works and the Act on Security Screening of Investments, Mergers and Acquisitions (Vifo Act) has been drafted. The latter covers not only dual-use goods and military goods (both of which are subject to EU export control), but also designated sensitive technologies, such as quantum technology and photonics technology. Acquisitions of companies that are active in the field of a sensitive technology thus are subject to investment screening (Government of the Netherlands, 2023b). These developments are a reflection of the technology race as they recognise the potential risks of knowledge transfer in the technology field and try to mitigate those risks through legislation.

#### Increasing accessibility of technology

Moreover, in a number of technology areas, such as robotics and autonomous systems, we see a trend of increasing technology proliferation. Whereas in the past, state actors were primarily the ones that had access to the means to develop and actually deploy technology, nowadays these means are also available to non-state actors. This means that potentially disruptive technologies can be deployed by small groups with a criminal, extremist or terrorist intent, for example. In addition to commercially available unmanned systems (drones), do-it-yourself kits for genetic modification (biotechnology) are available at low cost (McDonnell et al., 2022). Within the field of (generative) AI, potentially anyone has easy access to techniques to influence people (through, for example, deepfakes).<sup>11</sup> Not only states can use these techniques to exert influence as part of, for example, a hybrid campaign; non-state actors such as criminal, terrorist, extremist and criminal organisations have the same capability.

In the context of national security, the emergence of generative AI is an important development. Generative AI enables, among other things, the automatic generation of texts and (moving) images based on input from the user. One application of generative AI is a Generative Adversarial Network (GAN), where one neural network judges the realism of the output of another neural network (Gonzalez et al., 2024). Popular generative AI applications are OpenAI's ChatGPT (text generation) and Sora (video generation). While generative AI offers many opportunities (e.g. for the further development of chatbots), this development also has significant downsides. The same technology can be used to produce disinformation, for instance. Not only can it increase the amount of disinformation, but also its quality, since fake images and text are hardly distinguishable from real ones. Deepfakes can also offer interaction, for example, instead of just presenting a video of a talking person. In addition, the technology offers possibilities to combine real images with synthetic images. Moreover, disinformation is increasingly adapted to the target audience, in order to have greater impact (Janjeva et al., 2023). At the same time, Al applications offer enhanced capabilities for disinformation detection, perpetuating the cat-and-mouse game between attackers and defenders (Janjeva et al., 2024).

#### Commercial power

Not only is technology becoming more widely accessible, also when it comes to technology development, nonstate (commercial) parties are becoming increasingly important. Large technology companies such as SpaceX, Meta and Alphabet (Google) have great geopolitical and therefore geo-economic power. An example is the Starlink satellite constellation used by Ukraine for (secure) communications, without any guarantees that SpaceX will continue to provide this service on an ongoing basis. NATO countries also heavily rely on the private sector as a number of tasks and capabilities have been outsourced to commercial parties after the Cold War, for instance in the area of military transport (commercial companies provide 90% of transport for major military operations) (NATO, 2023). In addition, the increasing power of large technology companies creates increasing dependencies on technology, which can create single points of failure.

#### Vulnerabilities due to technology

Such vulnerabilities do not only exist when it comes to single points of failure, but in a generic sense there is little awareness of how technology exposes existing vulnerabilities and creates new ones. For several years, there have been concerns about 'backdoors' in software that would allow governments or companies to have remote access and circumvent encryption and security measures (Ministry of Economic Affairs and Climate Policy, 2024). That such concerns are justified was proven in April 2024 when a backdoor was discovered in Linux software, a widely used operating system (Digital Trust Center, 2024). Also, technology such as Al can look for vulnerabilities in digital systems of critical infrastructure, which can be used to carry out cyber-attacks, for instance (Hazell, 2023).

High-risk strategic dependencies on technology can be seen in various areas. Examples include the access to (raw) materials (for energy technology, for example) and knowledge (qualified personnel, research institutions and data to properly train AI systems). A number of important dependencies also exist in the field of quantum technology, for instance when it comes to hardware components that are needed for quantum computing (dependent on the US and Japan), but also when it comes to raw materials from China (Mans et al., 2023). Quantum technology has been selected by the European Commission as one of the four technology areas (alongside advanced semiconductors, Al and biotechnology) that are considered most likely to carry the most sensitive and immediate risks in terms of knowledge and technology leakage. Member states are advised to conduct a joint risk assessment for these technology areas (European Commission, 2023a). This example shows once more that states and international organisations are attempting to keep up with the

<sup>11</sup> The NRA, which was drawn up in 2022, also flags this accessibility as a development. Recently, it has become increasingly clear what this accessibility actually looks like in practice now that public, simpleto-use services such as ChatGPT have become available to the general public.

technology race by preventing the undesired transfer of knowledge and technology.

For all these 'strategic' technologies, it may be desirable for the EU countries to join forces more often and more closely, to at least become less dependent on non-EU parties, and perhaps even compete with them. At the same time, capacity is limited and the challenge is potentially huge, given the variety of technological developments for which the EU wants to be less dependent on others.

Vulnerabilities can be identified in the field of energy technology, among other things. On the one hand, energy supply itself is used as a strategic weapon by Russia, for example. On the other hand, there is dependency in the area of the actual development of and research on renewable energy sources, especially on China (Reding, 2023; Government of the Netherlands, 2024). In addition to such investments, China is also dominant in the value chain of rare earths that are crucial for, among others, new battery technology (Government of the Netherlands, 2023c). Apart from investments in emerging technologies such as sodium ion batteries, which require fewer critical raw materials, the Nationale Technologiestrategie states, among other things, that we should "strive for a sustainable and resilient supply chain for critical raw materials to minimise potential risks and promote the energy transition in a reliable and stable manner" (Government of the Netherlands, 2024, p.81). A key initiative in response to the finding that the EU is highly dependent on foreign countries for critical raw materials is the EU's Critical Raw Materials Act (2023/0079) (European Commission, 2023). This act includes a set of actions to ensure that the EU has and maintains access to a secure, diversified, affordable and sustainable supply of critical raw materials.

#### Implications for national security

Technological developments influence various threat themes and therefore have a broad impact on national security. For example, within the Economic threat theme, the technology race mentioned earlier and the resulting economic measures to protect the Kingdom's market and knowledge position affect various threats. The increasing importance of commercial parties (such as SpaceX, Meta and Alphabet) in the development of technology and thus the increasing dependence on such parties also relates to the Economic threat theme. The increasing accessibility of technology (e.g. through the use of deepfakes) means that different actors can deploy such technology, for different purposes. Within various threat themes, such as social polarisation, extremism and terrorism, foreign subversion

of the democratic constitutional system, and international and military threats, a multiplicity of actors that can harm national security will have to be taken into account. Finally, the described vulnerabilities in the technology field influence the threat themes of cyber threats and threats to critical infrastructure, for example because of new possibilities for finding and exploiting vulnerabilities in digital systems and thereby affecting critical processes. Despite the threats that technological applications can pose, technology can also be used precisely to defend against (digital) attacks, as an economic growth engine and as part of the solution for major societal challenges (such as climate adaptation).

# 2.4 Geopolitics: the geopolitical conflict and escalation potential increases substantially

The Kingdom and Europe in geopolitical shock The Russian invasion of Ukraine two years ago surprised many and caused a geopolitical shock in the Kingdom, Europe, and large parts of the world. In a sense, the invasion and the West's response to it ushered in a new geopolitical era. So far, the war has resulted in widespread destruction, tens of thousands of civilian deaths and 6 million refugees (OCHA, 2024). For the Kingdom and many other Western countries, the Russian invasion of Ukraine was not only a strategic shock but also a turning point in their view of Russia and its role in the global system. The blatant Russian attack on European soil brought war literally and figuratively to our doorstep, and the fact that a military conflict between NATO and Russia is now more plausible than several years ago has been a game changer in the thinking about (inter)national security in the Netherlands and beyond. In addition, Russian nuclear rhetoric has made a comeback. The value of strategic autonomy, the importance of NATO and a robust European security industry – none of them are novel insights, but the Russian invasion has given them a new sense of urgency.

#### An increase in (violent) conflict, far and near

The war in Ukraine is not an isolated incident but fits into a broader trend of increased (violent) conflict and of a wider conflict and escalation potential (United Nations, 2023; UCDP, 2024). Several latent or 'dormant' conflicts have developed into (more) manifest conflicts. Examples include the border conflict between Venezuela and Guyana over the Essequibo region, the war in Sudan and increased jihadist violence in the Sahel region or the conflict between Azerbaijan and Armenia over Nagorno-Karabakh. In addition, we see an increased use of other means to settle



conflicts. This keeps the warring parties below the violence threshold, but creates an ongoing state of so-called hybrid conflict, where national security interests are (or may be) affected across the board. This trend towards increased conflict in the world can partly be explained by the transition to a new geopolitical system.

#### Towards a new world order

The world order is in transition. It now notably has the characteristics of a multipolar world order, where multiple centres of power coexist on the geopolitical stage. The power of the West has declined in recent years, even though the relative power of the United States and its allies is still great. In the process, the (Western) 'democratic model' is also losing influence globally (EIU, 2024). In this global competition, spheres of influence and proxy actors play an increasingly important role. We see this, among other things, in the way that Russia responds to political instability and the growing anti-Western sentiment in Africa. This geopolitical power struggle is often fought in third-world countries. There is a growing risk, though, that the European continent and the Caribbean part of the Kingdom of the Netherlands will also become more of a geopolitical battleground.

#### Assertive powers and new players

Medium-sized states ('middle powers') and emerging players are gaining influence in a period that is

characterised by great-power competition. Aware of their increased strategic importance, these states are taking advantage of the rivalry and power struggle between great powers. They do so partly to put themselves on the map and organise themselves, and partly to strengthen their economic position and increase their strategic autonomy. We see this, for example, in the way India is maintaining a delicate balance (of interests) in the geopolitical turmoil surrounding the war in Ukraine, seizing economic opportunities and intensifying strategic partnerships (Stacey, 2023; ASEAN, 2023). The increasingly important role of emerging players on the global stage and new partnerships became evident, for instance, when in 2023 more than 40 countries expressed interest in joining BRICS, an economic alliance aimed at counterbalancing Western hegemony over the global economy (Cocks, 2023).12 The alliance, now expanded by five countries, has continued to gain strategic importance in recent years, not only because the BRICS countries have growing economic weight, but also because they increasingly find common ground in an anti-Western sentiment, despite their political, geographical and cultural differences (Ashby, 2023). At the same time, the differences of interest and animosity between various BRICS countries are still prominent.

<sup>12</sup> The original BRICS countries were Brazil, Russia, India and China.

The changing geopolitical relations are also clear from the way in which states organise themselves in regional alliances. In early 2024, for instance, the leaders of Burkina Faso, Mali and Niger announced their withdrawal from the Economic Community of West African States (ECOWAS), partly in protest to the West's 'colonial influence' on the alliance (ECOWAS, 2024). The competition between great powers and the growing importance of spheres of influence and strategic partnerships thus also present opportunities to smaller players to claim their place on the world stage.

Apart from more assertive state actors, the multipolar world order is also characterised by a growing role and influence of non-state actors in international (security) politics. State actors are increasingly taking advantage of this situation by deploying non-state actors as foreign policy instruments or as (covert) proxy actors in hybrid conflicts. This can include so-called private military companies or commercial intelligence organisations. The growing role and influence of big tech also merits attention. The largest technology companies now have the capital, geopolitical influence and a degree of strategic independence that were traditionally reserved for state actors. In recent years we have seen that these large technology companies (and their CEOs) also increasingly play a decisive role in international security issues, operating de facto as political actors (Kitchen, 2021). The influence of technology companies on geopolitical developments, however, is growing not only because of their economic weight, but also because of growing technological dependencies and the increasing importance of the information domain as an arena of (modern) conflict.

#### Hybrid means and conflicts

In the current geopolitical era we not only see an increase in violent conflict, but also an increased use of so-called hybrid means in conflict.<sup>13</sup> Cyber-attacks and information manipulation are playing an increasingly important role in this regard. Partly due to rapid technological developments, sophisticated cyber-attacks on government organisations and critical infrastructure have increased in recent years. In addition, we see more information manipulation and disinformation campaigns, and more foreign influencing (Clingendael Institute, 2024; AIVD, 2023). This can directly impact both our democratic processes and our open society, increasing social tensions and fault lines in our society. The instrumentalisation of migration must also be viewed within this context of hybrid conflict. Russia and Belarus use refugee flows as a political instrument to destabilise Europe. In addition, countries in North Africa use their geographical position and the threat of uncontrolled migration as leverage to secure large-scale (financial)

support. Furthermore, developments in the Middle East and specifically the war in Gaza show how our society can be affected by - and divided about - developments abroad and the Dutch policy approach to them. This divided society can be used by (state) actors for (dis)information campaigns. In addition, the sabotage of the Nord Stream II pipeline in 2022, the actions of Russian 'spy ships' in the North Sea, and the recent attacks on underwater internet cables in the Red Sea show that our (critical) infrastructure is also vulnerable to the use of (hybrid) means. In addition, there have been several reports in recent months of Russian sabotage (attempts) in Europe (Jones et al., 2024; NAVO, 2024).

Strategic dependencies and geographical vulnerabilities In recent years we have seen how economic and strategic dependencies can be used as geopolitical instruments of power. Russia's energy policy, for instance, is clear evidence of how these dependencies can be instrumentalised. However, strategic dependencies also come to the fore elsewhere in the world. In (South) East Asia, tensions between China, Taiwan and the US have grown strongly in the past two years, leading to an increase in security incidents and diplomatic crises (International Crisis Group, 2023; Stratfor, 2024). Besides its political-strategic importance in the competition between the US and China, Taiwan's key role in the global chip industry is a significant factor. The global dependence on Taiwan's chip industry, for instance for essential manufacturing processes, is very high. Therefore, geopolitical escalation in this region could also have major consequences for the Kingdom

Strategic competition for essential raw materials but also, for example, for scarce semiconductors is on the rise. Again, strategic and geographical dependencies can also be used for political purposes. In our globalised world, conflicts and crises occurring on the other side of the globe can have a direct impact on our national security. Escalation of tensions between the US and China in the South China Sea, one of the world's most important crossroads of maritime trade routes, for example, would cause serious damage to our national economy as well as the wider global economy. Our geographical dependence on maritime trade routes in the Red Sea has been turned into a powerful weapon by the Houthis, who attack ships with a political objective (Denamiel et al., 2024).

#### Implications for national security

(The Economist, 2023).

The new geopolitical era is characterised by an increasing number of wars on the one hand, and the emergence of new forms of competition and conflict on the other, the impact of which we are beginning to feel with greater intensity. The potential for conflict and escalation is thus increasing. This new geopolitical reality leads to growing

<sup>&</sup>lt;sup>13</sup> See the In-Depth Exploration of the Trend Analysis



uncertainty and unpredictability on the world stage and the need for a constant re-calibration of our international security policy. Not only our traditional understanding of security will be a central element in this regard; other security dimensions also play a growing role. The new emerging world order will also bring about a certain degree of global disorder and will pose new and complex challenges and dilemmas, some of which we cannot (yet) foresee and oversee. The Kingdom's various (security) interests will thus become increasingly (geo)politicised. As a result, our physical safety, our digital and territorial security as well as our economic security and social and political stability will experience increased pressure from geopolitical trends and (unexpected) developments. Developments in areas such as climate change, emerging and disruptive technologies, strategic dependencies, geographical vulnerabilities and societal tensions are all increasingly acquiring a geopolitical component.

# 2.5 Economy: urgent structural challenges call for choices regarding scarcity and facilities

A well-oiled, resilient economy is important for citizens, businesses and government. It makes it possible to provide public services, absorb shocks, and safeguard other

national security interests. At the same time, an open, international economy also comes with risks related to, for instance, strategic dependencies, hostile trade policies and knowledge security.

## Geopolitical shocks cool down the economy, limiting policy freedom

The economies within the Kingdom have recovered strongly after the COVID-19 crisis because the government intervened quickly and generously, and (international) trade and tourism picked up again. In 2020, the Dutch economy was down 3.9 percent, but in the following years it recovered by 6.2 and 4.3 percent, respectively (CPB, 2024a). The shock of the COVID-19 crisis, along with the war in Ukraine, caused disrupted supply chains, sharply rising (energy) prices and a disrupted demand from households and governments. A delayed response through collective labour agreements caused citizens' purchasing power to (temporarily) decrease, which also made socio-economic security a major socio-political issue. 14 Meanwhile, inflation has fallen sharply from its peak of 10 percent in 2022 to 3.8 percent in 2023. However, recent estimates indicate that it will remain above pre-COVID-19 levels and the

<sup>14</sup> If the decrease is structural, this may also be a breeding ground for institutional distrust and, in the long run, crime and extremism.

target of 2 percent for now. 15 As a countermeasure, interest rates have been raised, which also contributes to financial risks: it increases credit risk and worsens governments' debt sustainability.<sup>16</sup> During the pandemic, for instance, the Dutch budget deficit was 3.7 percent of GDP in 2020 whereas it was 2.2 percent in 2021. According to recent estimates, the deficit will increase in the coming years and reach a level of more than 4 percent by 2029 (CPB, 2024a). Stagnation in other countries, such as China and Germany (especially its manufacturing sector), further contributes to a cooling down of the Dutch economy. Nevertheless, the labour market remains tight due to structural market developments (such as ageing). Partly for this reason, the three quarters of economic contraction in 2023 are deemed only a 'technical recession'. Moderate growth of around 1.0 to 1.5 percent is expected for the coming years (CPB, 2024a).

Society still vulnerable to (international) financial shocks In a global context, the Netherlands remains a small and open economy in the eurozone with a relatively large financial sector. The economy's small and open nature is even more prominent in the Caribbean part of the Kingdom. Banking crises or other problems among financial market participants, fiscal crises (in the eurozone), trade disputes or the geopoliticisation of global trade can thus have a relatively large impact on the Kingdom. Many such shocks need not be of Dutch origin. Warning signals in the past two years include, for instance, several instances of bank failure in the US and Switzerland (e.g. Silicon Valley Bank and Credit Suisse) and the forced liquidation of Chinese real estate giant Evergrande. Vulnerabilities in the Netherlands exist through the link between the housing market and climate change, among other things.<sup>17</sup> Moreover, entrepreneurs have fewer reserves after the COVID-19 and energy crises, and deferred tax liabilities are still outstanding.<sup>18</sup> On top of this, European businesses are struggling due to higher costs of energy, raw materials and labour – in addition to increased (geo)political uncertainty. Previously established vulnerabilities of the Caribbean part

of the Kingdom are still present, caused by the small size of the population and economy.<sup>19</sup>

### Structural challenges have become more pressing and their effects are increasingly evident

This is the case in a number of areas, which we summarise below as productivity, labour, capital, and other production factors (energy, raw materials, intermediate products, etc.).<sup>20</sup>

#### Productivity growth is stagnating

Productivity growth has been stagnating for years, both in the public and private sectors. In the Netherlands, for example, productivity growth, measured as the annual increase in value added per hour worked, has dropped from six to eight percent in the 1970s to around one percent in the most recent decade. This trend can be seen in many regions.<sup>21</sup> The decline in productivity growth is considered a puzzle for which several explanations have been put forward. Innovation has become more difficult, leading to a decline in productivity growth.<sup>22</sup> Other challenges in the Netherlands are the business population (with relatively many small businesses and self-employed people) and sector composition (with a relatively large service sector and collective sector, where productivity growth is harder to achieve).<sup>23</sup> Furthermore, there are opportunities to support human capital development, for instance through education (see, among other things, the declining PISA scores for reading literacy) and by addressing the mismatch between required and offered skills (such as the continuing shortages of technical professionals).

Tight labour market complicates the realisation of social objectives. The labour market is tight and will remain so due to an ageing population. For instance, the number of job vacancies per thousand people in the labour force has increased from 13 in 2003 to 43 in 2023. And the so-called 'grey pressure' is increasing from one person over 65 for every five people between 20 and 65 years old in 2000 to one person over 65 for only two people between those ages in 2070. Finding personnel is becoming harder, which is inhibiting growth. Social challenges also arise, for instance in the provision of (quasi-)public goods (such as healthcare, education, defence and housing) or in realising social

<sup>&</sup>lt;sup>15</sup> This applies to the European Netherlands (see figure) as well as Bonaire with 3.5 percent inflation, Sint Maarten with 3.7 percent, Curaçao with 3.0 percent and Aruba with 4.5 percent (CBS, 2024a; Amsterdam Bureau for Economics, 2024).

<sup>16</sup> Higher interest rates contribute around 1 percentage point to the government deficit each year and at least 1 percent economic growth is required annually to keep it from decreasing further (CPB, 2024b). Within the Kingdom, the starting point varies greatly: for instance, in 2023, Sint Maarten, Curaçao and Aruba had a debt ratio of 51, 81 and 83 percent of GDP, respectively, while in the Netherlands it was 47 percent (Amsterdam Bureau for Economics, 2024).

<sup>&</sup>lt;sup>17</sup> See, for instance, International Monetary Fund (2024).

<sup>&</sup>lt;sup>18</sup> Over time, this may lead to more bankruptcies, some of which have been postponed as a result of the support received during the COVID-19 crisis (referred to as 'zombie companies' in the media).

<sup>19</sup> Both an external financial-economic shock (e.g. a financial crisis, loss of tourism) and the failure of critical infrastructure thus have a potentially large impact on a society of limited size.

<sup>&</sup>lt;sup>20</sup> See, among others, CPB (2024a), estimates for 2024 and beyond; CBS StatLine (n.d.-a; n.d.-b); CBS StatLine (n.d.-c), forecast for 2024 and beyond for the figures on labour productivity, labour market tightness and ageing population.

<sup>&</sup>lt;sup>21</sup> Also in the Caribbean Netherlands, where the GDP per capita has been weak for a decade now (CBS, 2024b).

<sup>&</sup>lt;sup>22</sup> See, for instance, Nicholas et al. (2020).

<sup>&</sup>lt;sup>23</sup> Productivity at government implementing organisations has declined by 9 percent between 2015 and 2021 (PwC, 2023).

objectives (such as making the economy more sustainable). Migration is a temporary solution to this problem, but not a structural solution one.<sup>24</sup> However, capital intensification and productivity growth are. Insufficient success in solving these problems leads to a further increase in clashing interests (and thus the need to choose between them). In turn, this can result in declining trust in government.

Capital market (too) small and insufficient investments made in future earning power

Dutch (SME) companies tend to be self- or debt-financed, with limited input of external equity (which plays a more prominent role in the US). This is an inhibiting factor for the start-up and continued growth of (new) (innovative) companies. The Dutch venture capital market is small, and so is the European one to some extent - compared, for example, to the US or to countries with greater state support for 'strategic' companies.<sup>25</sup> The European capital market develops only slowly and more rapid growth is not expected.<sup>26</sup> In addition, investments in research and development (R&D) in the Netherlands are lagging behind the European target and the figures of surrounding countries. Given the technology race in which the Kingdom currently finds itself and the increasing importance of technological developments, this shortfall could eventually become problematic.

Scarcity of production factors such as land, energy, raw materials and intermediate products is a challenge

Due to the country's limited size, various interests in the Netherlands are increasingly competing for the same space: (different forms of) economic production (including agriculture), liveable space (including housing, recreation, etc.), and climate (nature, 'Room for the River', etc.). In addition, preferences are changing, for instance because the number of single-person households has grown or because there is an increased focus on environmental and health aspects. This means that choices have to be made, also because the legal framework can be prescriptive and thus can paralyse the action perspective (nitrogen, Urgenda, and as of 2027, possibly the European Water Framework Directive).<sup>27</sup> Social and economic transitions further require accompanying infrastructure, such as a well-maintained mobility network, sufficient housing and an adequate grid for (renewable) energy. As the electrification of the economy continues and the share of renewable energy increases (almost 17 percent in the Netherlands in 2023),

<sup>24</sup> See Staatscommissie Demografische Ontwikkelingen 2050 (2024).

grid congestion problems also get bigger.<sup>28</sup> Accessibility and reliability of the energy system are prerequisites for further sustainability of the economy, as well as for the functioning of critical infrastructure, among other things.

## International relations and geopolitical competition have knock-on effects on the functioning of the Dutch economy

Manufacturing companies in the Netherlands make full use of global value chains. This creates a strong competitive position, but due to dependencies it also creates risks for continuity of production and/or price power. Buyers and end users of world-wide deliveries are sensitive to disruptions in the free flow of goods and services, including those required for maintaining critical processes and/or the supply of (quasi-)public goods. A clear turnaround can be seen in recent years where further liberalisation of global trade has been negated by disruptive measures, also partly due to the COVID-19 crisis, the war in Ukraine and the subsequent energy crisis. In the EU, for instance, the amount of state aid has increased from over 0.5 percent of European GDP in 2011 to almost 1.0 percent in 2019 and as much as 2.2 to 2.3 percent in 2020-2021 because of the COVID-19 support.<sup>29</sup> The US government supports domestic industry through the Inflation Reduction Act, whereas the European internal market is distorted by the fact that the various member states offer different levels of support to compensate for higher energy costs.30

The (perceived) strategic importance of various industries (such as the chip industry or production of solar panels and electric cars) is given greater emphasis, causing governments to increasingly use state aid or erect trade barriers. According to the IMF, the number of trade restrictions introduced annually has grown globally from less than 500 in 2009 to nearly 3,000 in 2022.<sup>31</sup> An example are the ever more severe restrictions on ASML exports to China. Similarly, sanctions imposed on Russia and Belarus have disrupted existing trade and production chains – although goods are sometimes diverted via 'third' countries such as Kazakhstan or 'neutral' countries such as India.<sup>32</sup> Moreover, companies are trying to diversify their supply chains by moving Chinese production to countries such as Vietnam and Mexico.<sup>33</sup> Apart from the fact that this involves one-off investments for

<sup>&</sup>lt;sup>25</sup> In this regard, also see the recurring calls for Dutch financial institutions to make greater investments in domestic interests, such as the housing market, defence industry and (technology) start-ups.

<sup>&</sup>lt;sup>26</sup> See Instituut voor Publieke Economie (2024).

<sup>&</sup>lt;sup>27</sup> In addition to legal reasons for nurturing the environment, the Netherlands also benefits from its geography (river delta, North Sea), biology (fertile soil) and available resources.

<sup>&</sup>lt;sup>28</sup> See Nationaal Klimaat Platform (2023). In the period from July 2023 to early 2024, the waiting list for a connection has increased from 6,000 companies and institutions to around 9,400 — partly caused by 'zombie applications' brought on by the uncertain situation (Volkskrant, 2024; FD, 2024). When it comes to feed-in power, we are now talking about tens of thousands of organisations compared to 8,000 in July 2023.

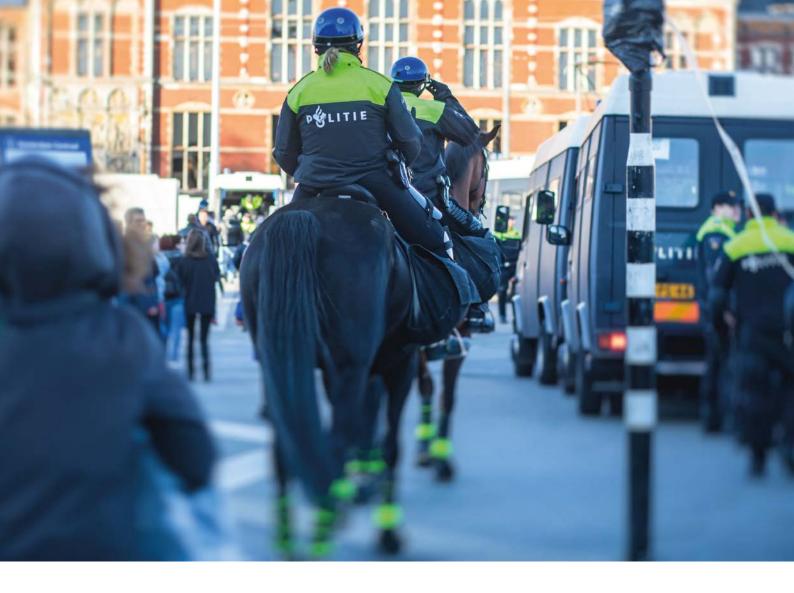
<sup>&</sup>lt;sup>29</sup> See European Commission, 2023.

<sup>&</sup>lt;sup>30</sup> See, for instance, Foy and Johnston (2023).

<sup>&</sup>lt;sup>31</sup> See IMF (2023).

<sup>&</sup>lt;sup>32</sup> See, for instance, Rademakers et al. (2024).

<sup>&</sup>lt;sup>33</sup> See, for instance, The Economist (2023) and Elgenraam (2024).



production relocation and possibly higher marginal costs, it is questionable whether this really reduces dependence on China when raw materials and intermediate products are still (indirectly) sourced from China.

#### Implications for national security

Structural economic challenges are becoming more urgent and hinder the realisation of social transitions. This also limits the effectiveness of policies aimed at containing risks to national security or reducing the impact of shocks. Examples where this slow-down effect has become evident are the strengthening of defence (personnel shortages), countering climate change (grid congestion) and building and maintaining housing and infrastructure (nitrogen, water quality). This directly affects various security interests, such as territorial and ecological security as well as critical infrastructure. In addition, the aforementioned developments and events are also direct risks to the economic security interest, which is defined as "the undisturbed functioning of the Kingdom of the Netherlands as an effective and efficient economy". In recent years, economic risks have increased due to geopolitical competition, structural challenges and increased uncertainty.

## 2.6 Societal: extremism, crime and social challenges

The societal component not only focuses on concrete developments, such as the pressure on the democratic constitutional system, but also on more long-term developments, such as those relating to demographics. It also looks at how previously identified developments in areas such as ecology and geopolitics affect society.

#### Pressure on the democratic constitutional system

The actions of various non-state extremist and criminal actors put pressure on the functioning of the democratic constitutional system as well as on the functioning of an open society. An important development in this area is that the (violent) threat posed by various forms of extremism and terrorism is increasing. Global jihadism has been the main source of the terrorist threat in the Netherlands in recent years. The Gaza conflict and other events, such as Quran vandalism, have had a mobilising effect on the use of violence by jihadists. This was one of the reasons why the NCTV decided to raise the terrorism threat level at the end of 2023. The war in Gaza is also causing an increase in expressions of anti-Semitism and related incidents. Meanwhile, it should be noted that the message conveyed by right-wing extremist groups seems to be increasingly anti-Semitic in nature as well (AIVD, 2024).

With regard to extremism it is also important to mention that a small minority in the Netherlands increasingly opposes the government, or the established order in a broad sense. In some cases, we are talking about antiinstitutional extremism. The size of the anti-institutional extremist movement seems to have grown, even now that COVID-19 and related measures have become a less prominent issue. Anti-institutional extremists are increasingly withdrawing into their own circles (AIVD, 2023a; 2024). Some members of this movement call themselves 'sovereign', reject the authority of the government and believe they do not have to abide by the applicable laws and regulations. Although the exact size of this group is difficult to pinpoint, the AIVD estimates that at least several tens of thousands of people currently identify as sovereign. Their numbers are expected to increase further in the coming years. A very small subgroup believes in the inevitability of a violent struggle with the government. Although the number of violent incidents that can be traced back to anti-institutionalism has been limited so far, this threat is becoming more realistic (AIVD, 2023b).

At the same time, both trust in and the functioning of institutions associated with the democratic constitutional system are also under pressure as a result of organised crime. The pressure exerted by organised crime in the form of (violent) threats to journalists, public administrators, politicians and public prosecutors, among others, remains as high as ever. As previously flagged in the NRA, the consequence of this may be that people are increasingly unwilling to do these types of jobs, are hampered in their functioning or possibly give in to criminal interests. Recently, manifestations of organised crime have become more visible and frequent. For instance, a growing number of (homemade) explosives has been used for intimidation purposes and deployed at both residential and business premises.34 Apart from the effect on those who are directly targeted, an increasing number of people are confronted with these practices in their own neighbourhood or street. Besides obvious dangers to physical safety and additional repair costs, this trend may also affect confidence in the ability of the democratic constitutional system (and the institutions associated with it) to handle the situation.

Overall, the broader population's trust in politics is low compared to that in the past 15 years (SCP, 2023). This stems mainly from the perception that politicians are unable to solve an increasing number of (perceived) social issues, for example on the topics of climate and housing. On the other hand, trust in other institutions associated with the democratic constitutional system, such as the judiciary, remains relatively high and fairly stable (Rathenau

Instituut, 2023). Also, Dutch people indicate in surveys that they consider the democratic constitutional system important. 83 percent of them consider it important that the country is governed democratically, which is higher than the European average of 78 percent. Satisfaction with the functioning of democracy has declined in recent years, though, partly as a result of the aforementioned diminished trust in politics (SCP, 2024a). At the same time, pressure is mounting both within and outside the EU on the functioning of democratic institutions due to the growing influence of political actors that are willing to compromise fundamental democratic norms, values and freedom. Furthermore, the policies pursued by these parties may not only impede the functioning of international partnerships (such as the various EU institutions), but may also serve as a source of inspiration for similar actors within the Kingdom (see, for instance, Freedom House 2021; 2024).

#### Societal challenges as a polarising factor

In the coming years, a number of social issues and challenges will play an ever-greater role in social polarisation and people's trust in the government or politicians to deal with them. Especially (the effects of) developments in the areas of migration and climate change are topics that can increasingly lead to social and political polarisation in the future. For instance, there are widely diverging opinions on the usefulness, necessity and perceived inequality of measures aimed at climate mitigation or compensation for the damage caused by climate change (SCP, 2023). It is important to stress here that polarisation need not be a problem in itself and can be part of the broader functioning of democracy. It is a problem, though, when it escalates to a situation where the boundaries of the democratic constitutional system and open society are crossed.

Frustration and tensions regarding climate change and migration can not only be directed at (groups of) people with different opinions, but also at the government. This can be due to policies that are inconsistent with one's own worldview or to the perceived absence of policies that are seen as necessary. Seeing the expected increasing share of various forms of migration in the Netherlands' population growth and the ever more tangible and serious consequences of climate change, these issues are likely to become even bigger points of disagreement in society in the coming years, possibly leading to social and political instability. Moreover, these issues are not just limited to the European Netherlands, but also play a role in the Caribbean part of the Kingdom. For example, the population of some of the islands is discontent with the changing ratio between 'locals' and people from elsewhere.

A similar dynamic can be seen in the way in which foreign conflicts are 'imported' into our own society. Currently this is true primarily for the war in Gaza and, to some extent,

<sup>34</sup> This can partly be ascribed to actual organised crime and partly to copycat behaviour (see, for instance, Netherlands Police, 2023).

the war in Ukraine. When it comes to Gaza, society is deeply divided about the two parties involved and what policy the Kingdom should follow with respect to the war. Moreover, as mentioned earlier, the war has led to a resurgence in the West of both anti-Semitism and Islamophobia. This has resulted in many incidents of public unrest, which was one of the reasons for raising the terrorism threat level in the Netherlands to 'substantial' (NCTV, 2023). Seeing the increased conflict potential and possibility of more simultaneous conflicts and geopolitical tensions, in the future we will be confronted more often with clashing views about the actions of the various parties involved as well as how to respond (policy-wise). Again, this will put more pressure on the social and political stability within the Kingdom.

More generally, the Kingdom is increasingly facing changes and challenges such as those surrounding climate, international cooperation and (trade) conflicts, internal economic constraints and the need to make choices (e.g. trade-offs regarding scarce space). As these issues become more pressing and more visible, so do the different emotions, interests and preferences regarding these issues as well as preferences regarding our own society's role and stance in these matters. This is a situation that can lead to polarisation and tension between different groups, towards the government or towards other organisations, such as universities and the business community.

National tensions are of course not unique to the Kingdom, but also emerge in other countries within the European Union, for example. These tensions can trickle down to the decision-making process at the European level. This can further complicate the response and decision-making at this level too, when it comes to issues such as climate change and emerging conflicts. In extreme situations, the functioning of international organisations and regimes that are important to the Kingdom may be compromised and along with it the functioning of the international legal order.

Given their potential effects on national security, issues surrounding developments in the areas of migration, climate and international conflicts are therefore important potential entry points for both state and non-state extremist actors seeking to undermine the Dutch democratic legal order. This can take the form of, for instance, disinformation campaigns and the instrumentalisation of irregular migration flows as a means of political pressure. The activities of these actors, such as the spreading of disinformation, will be further facilitated in the coming period due to the fact that 'generative Al' aimed

at creating highly realistic image and audio fragments has become widely accessible.<sup>35</sup>

#### **Growing population**

It is expected that the Dutch population will continue to grow in the coming decades, with a projected population of 19 million in 2034 and 20.7 million in 2070.<sup>36</sup> This growth is mainly due to various forms of migration and a rising life expectancy. The latter also means that the proportion of people aged 65 and over will increase to a quarter of the population in 2040 (CBS, 2023). Many uncertainties surround the share of migration in expected population growth in particular. For instance, climate change, unbalanced population growth and increased conflict potential are expected to increase the number of migrants worldwide. However, it is more difficult to predict exactly where and when this will be the case.

A growing and ageing population puts increasing pressure on available services, such as healthcare and education. Although developments related to migration can contribute to the available labour force and thus also to capacity in the field of some services, their net effect strongly depends on the extent to which migrants also use or can contribute to the services in question (SCP, 2024b). The pressure on services manifests itself not only in the form of staff shortages, but also in the form of shortages of space and facilities such as housing. This is true even more so if – because of nature conservation and climate change, for example – limits need to be set on how much can be built where in order to avoid being confronted in the (medium-) long term with the consequences of, for example, an increasingly rapid sea level rise.

#### Implications for national security

Developments within the societal domain are twofold. On the one hand, they concern more defined developments within the domain itself, such as the growing number of people can be labeled as sovereign and the pressure exerted on the constitutional system by organised crime. On the other hand, many developments actually have their origins in changes in other domains. Examples include the mobilising effect of the war in Gaza and the potentially polarising effects of continuing climate change. In both cases, threats that fall under the categories of social polarisation, extremism and terrorism or organised crime in particular will be negatively affected by the developments identified here. Also, some of the developments mentioned here are entry points for foreign interference and influencing. In all cases, social and political stability will be affected in particular.

<sup>35</sup> The supporting document's section on technology areas contains more information on the operation and implications of AI in the area of disinformation, among other things.

<sup>&</sup>lt;sup>36</sup> As a point of reference: this figure was just below 18 million in February 2024.

# 3 An accumulation of threats to national security in a world in transition

Many of the developments discussed in this Trend Analysis indicate that we find ourselves in a world in transition. Fundamental changes in areas such as climate and geopolitics may have major implications for national security. This is also reflected by a worsening situation for a large number of threats identified in the NRA (see the In-Depth Exploration of the Trend Analysis). These changes are often closely interrelated and result in cumulative pressures on national security. Given the magnitude of these issues and the resources required to address them, strategic choices will have to be made. These are difficult choices to make at a time when many of the issues associated with the transitions are becoming more pressing and when conflicts of interest are becoming increasingly evident. At the same time, a period of transition also means a period characterised by both known and unknown uncertainties. This chapter takes a closer look at this world in transition and the associated strategic insights.

#### 3.1 A world in transition

The Kingdom is part of a world in transition. The world around us is structurally changing. Although the general direction of these changes mostly is not new, we do see an ever stronger shift towards a new order, and the Kingdom is therefore increasingly confronted with its consequences. Looking at the developments in chapter two from a systems perspective, cross-cutting developments emerge in several domains that point to a world in transition as well as the challenges that come with it.

The direct and indirect effects of climate change are becoming increasingly noticeable. The pace of climate change continues to accelerate, as does the transition to a new (global) climate. This also means that the Kingdom will be confronted earlier than previously expected with

an increase in extreme weather events and the effects of sea level rise. At the same time, climate change will also increasingly affect geopolitical tensions, global migration flows, the course of international trade flows and national tensions and polarisation. In this respect, climate change will more and more show itself to be a threat multiplier.

Technological developments will greatly affect the future security environment. There is a global technology race going on between actors that want a technological edge over one another in order to capitalise on the many opportunities that technology provides. Where states used to be leading in the further development and application of technology in most cases, we now see a shift. Technology is not only becoming more widely available and accessible, but an increasing number of actors of all sorts are entering the race for that technological lead. Besides technology being an instrument of power, the emphasis on (rapid) further development of technology also means that vulnerabilities arise. These are caused by high-risk dependencies on raw materials and technology (in critical infrastructure, for instance), as well as the access to knowledge in order to continue to play a role in the further development of technology.

The potential for *geopolitical* conflict and escalation is increasing substantially. The new geopolitical era that we find ourselves in is characterised by an increase in (violent) conflict in which both conventional as well as hybrid (and new) means are deployed. Developments in areas such as climate change, emerging and disruptive technologies, strategic dependencies and societal tensions all are increasingly taking on a geopolitical component. There is a shift towards a so-called *geopoliticisation of everything*. The multipolar world within which this shift asserts itself is defined not only by great-power competition but also by assertive medium-sized states and by the emerging influence of non-state actors such as big tech corporations.

#### Structural economic challenges are becoming more urgent.

The labour market is tight and will continue to be so due to an ageing population. This hinders the realisation of social transitions such as increasing sustainability, the government's ability to provide (quasi-)public goods and the growth potential of companies. Productivity growth has been structurally low for quite a long time and the ecological space for economic activity (land use, nitrogen emissions) is scarcer than ever. Thus, we increasingly find ourselves in a world where not everything is possible and certainly not all at the same time.

#### Transitions and social challenges as a polarising factor.

The Kingdom's population will continue to grow in the coming years as a result of migration, among other factors. Not only this topic, but also issues such as how to deal with climate change and the spillover of international conflicts into our own society will be a major and potentially polarising social challenge in the coming period. These complex social issues will be seized upon by (state) actors attempting to undermine the Kingdom of the Netherlands and other countries.

## 3.2 The accumulation and interrelatedness of transitions

The abovementioned shifts in different domains are taking place simultaneously, are closely interrelated and **influence each other.** For instance, currently a geopolitical transition is taking place towards a world order and, as part of this, we are increasingly facing geopolitical and economic competition and crises. This poses challenges to, for example, how the Kingdom wants to shape international cooperation and how it can and wants to position itself in a general sense within this changing global system. This geopolitically-driven transition also raises fundamental economic and social issues. For instance, in a new geopolitical context, do we choose to further reduce undesirable strategic dependencies by boosting our own production of certain goods, even if that would be at the expense of our climate and environmental ambitions? Structural economic challenges, where scarcity of resources contributes to a situation where no longer everything is possible (at the same time), complicate such considerations but also underscore the need to make choices.

## Another example of mutual interaction between transitions can be seen in the area of climate change.

Also in this case, there is a transition towards a future in which we will increasingly experience the direct and indirect consequences of climate change. This leads to fundamental questions regarding the design of both the economy and society in a broader sense. The structural economic challenges mentioned previously mean that

the possibilities for sustainability and climate adaptation, among other things, are increasingly facing limitations. Especially if we don't want investments in this area to be at the expense of available resources and capacities for other areas or of lifestyle adjustments. This, in turn, provides a source of social tensions and disagreement regarding the perceived usefulness and necessity of measures aimed at climate mitigation and adaptation.

Finally, the above examples of geopolitical and ecological transitions are linked as well. Climate change, for instance, necessitates the creation of and compliance with international climate agreements, which is something that will only become more difficult at a time of deteriorating geopolitical relations and increasing competition and conflict. Interacting transitions as described here create cumulative pressures on national security. Not only do these pressures reveal different interests, they also lead to difficult choices and dilemmas.

## 3.3 Dealing with interests and dilemmas

In times of transition(s), conflicts of interest will become visible more clearly than before. These include not only the different interests of (groups of) citizens, state and non-state actors, but also potential conflicts between the six national security interests. Conflicting interests and the corresponding dilemmas result in complex, multidimensional challenges that require strategic trade-offs to be made.

### Recently, we have seen conflicting (security) interests come to the fore in practice on many occasions.

An example is the debate around the future of polluting, yet also strategically important industry in the European Netherlands. Economic interests and physical health are both considered important and relevant. However, these interests seem to conflict and thus create a dilemma. mainly with regard to the relative prioritisation of both interests (after all, public health is not necessarily at odds with economic development and vice versa). Another example is the debate about how scarce space should be used: for housing in view of a growing population, for nature, for industry (especially agriculture) or for military training grounds. The theme of knowledge security is also characterised by clashing interests. For instance, how do academic freedom, the (economic) benefits of collaboration and the dangers of espionage relate to each other and which one of them should be prioritised? Finally, such issues obviously also play out in the Caribbean part of the Kingdom. For instance, foreign investments in the region's ports or storage and transhipment facilities can provide a significant economic boost. However, at the same time they carry the danger of unwanted foreign state interference and dependencies in a period of increasing geopolitical and economic competition. Also, giving space to tourism to boost economic growth can in some cases negatively affect the natural environment.

Balancing such diverse interests is challenging due to differences of opinion and scarcity of means. Topics with conflicting interests tend to be the subject of public debate as well. This can take the form, for instance, of demonstrations (such as the farmers' protests regarding limiting nitrogen emissions and protests aimed at abolishing fossil fuel subsidies), online social debates and lawsuits against the government or large companies (Urgenda, Shell, etc.). This can lead to increased polarisation on these issues and a declining trust in the government and institutions. Furthermore, the means to tackle social challenges with clashing interests are not unlimited (financial, implementation capacity, etc.). An investment for the benefit of one challenge often limits the investment possibilities for the benefit of other challenges. This requires a systemic view of different threats and challenges, and underscores the need to make strategic choices that are often difficult.

# 3.4 Uncertainty as a challenge to national security

In addition to sometimes clashing interests, dilemmas, and the need to make strategic choices, a world in transition also creates increasing uncertainty.

The Trend Analysis identifies a number of known uncertainties. Our economy is open by nature, historically with a transatlantic outlook and dependence on the US security umbrella. The political course followed by the United States therefore has a major impact on the Kingdom. The outcome of the United States presidential elections in November 2024 will be very important for several issues, including international (military) cooperation and international free trade. The geographical proximity of the Caribbean part of the Kingdom to the United States and its dependence in areas such as the import of goods and tourism make this uncertainty extra relevant. Another variable in the same region is the (future) attitude of the United States towards various Latin American countries. Similarly, the outcomes of the international political jousting about Taiwan are also important but uncertain unknowns for the Kingdom.

Another important uncertainty is the extent to which broadly respected agreements on greenhouse gas emissions can be achieved globally in the coming years. An additional question is whether and to what extent the current acceleration of climate change can be halted

or mitigated. Should this fail to happen, in addition to the much-mentioned more gradual consequences of climate change such as temperature increases, more sudden and uncertain tipping points such as the collapse of the Gulf Stream could be reached. Furthermore, there are uncertainties regarding how our society will adopt technologies, for instance. This has to do not only with laws and regulations, but also in a more generic sense with the extent to which we set up a framework for technological applications of, for instance, AI on the basis of meaningful human control.

The future cannot be predicted, especially in a time of transition where developments are interconnected and there is a high degree of uncertainty. The past few years have shown that (strategic) shocks can occur (COVID-19, large-scale Russian invasion of Ukraine). In a world with coinciding and interacting transitions, this will happen more often and the factor of uncertainty will thus become more prominent for national security. This makes it important to take into account known uncertainties and developments when making strategic choices, but also to leave room for dealing with unforeseen circumstances. Herein lies a major challenge in particular for the countries and public bodies within the Caribbean part of the Kingdom. The small scale of these islands means that they generally lack sufficient (over)capacity to absorb more unforeseen strategic shocks in addition to coping with the increasing pressure of known threats and developments.

# 4 Conclusion and implications for strategy development

This Trend Analysis shows an accumulation of interconnected challenges to national security. Challenges in the shape of developments with negative effects on most of the threats listed in the NRA on the one hand, and in the shape of transitions that affect the Kingdom on the other. Consequently, there is a growing need to make difficult strategic choices. Choices that we must make in a period of uncertainty, without losing sight of the importance of strengthening social resilience in a generic sense. Moreover, it remains important to consider and address both concrete threats and more structural challenges holistically. Collaboration between public and private organisations and between government and citizens is essential in this respect. The above means that a balance must be struck between a long-term vision and adaptability. A strategy must provide insight into where choices can be made and what their consequences are, and at the same time keep both a whole-of-government and a whole-of-society perspective.

#### 4.1 Conclusion

For most of the national security threats outlined in the NRA, the situation has worsened in recent times. Many threats have become more urgent or have the potential to do so in the coming years. Even those threats which show relatively little change, remain as relevant as ever. At the same time, the current era is characterised by transitions in areas such as climate and geopolitics. Transitions that not only have an impact on the various threats discussed in the NRA, but also come with their own fundamental challenges to the Kingdom as a whole. In other words, we witness an accumulation of threats and challenges to national security. We see an increasing number of threats and systemic issues that require considerable attention in the relatively short term.

As a result, there is a **growing need to make strategic choices that are often difficult**. Choices that must be made in the context of a period in which scarcity of means is itself becoming an increasingly pressing issue. This scarcity

does not limit itself to the obvious financial domain, but also includes scarcity of knowledge and capacity. Strategic choices regarding the deployment of these means are further complicated not only by the complexity of threat-specific considerations and the multiplicity of threats and systemic issues that demand attention, but also by the uncertainty and sometimes conflicting interests involved. These conflicting interests refer to the different interests or views of (groups of) citizens and other actors as well as to the relative prioritisation of different national security interests. The uncertainty inherently associated with a world in transition as well as the need to have enough flexibility to respond to unforeseen circumstances and strategic shocks such as the war in Ukraine adds another layer of complexity.

This uncertainty underscores the importance of paying sufficient attention to strengthening the overall societal resilience of society as a whole, both in the European and Caribbean parts of the Kingdom. This can be achieved, for example, by investing in strong institutions and in the population's degree of self-reliance in times of disasters and crises. This will not only help in a broad sense when facing known threats, but also in dealing with (strategic) surprises due to the transitions that we are currently experiencing. Events like the Russian invasion of Ukraine raise fundamental questions on shaping our own resilience. In this regard we have to consider the fact that creating resilience can 'hurt'. Choices will have to be made that will not always enjoy broad public support. Strengthening the armed forces, for instance, will require more time and space for exercises. This will in turn cause more (noise) nuisance and will also take up scarce space. Promoting citizens' selfreliance will also require citizens to take a certain degree of responsibility themselves, including putting in the time and effort that is needed. All in all, strengthening broad societal resilience is explicitly a task of society as a whole, with an emphasis not only on the ultimate benefits but sometimes also the burdens.

Apart from the resilience of society as a whole, it is also important to **consider and tackle concrete threats as** 

well as more structural challenges holistically. The degree of interconnectedness is often high, meaning that 'compartmentalised' strategy and policy-making will not result in a sustainably effective approach to the various challenges to national security. Finally, the complexity of these challenges also means that responsibility for them cannot lie solely with government parties. Collaboration between public and private organisations as well as between citizens and government is essential to meet complex national security challenges. Collaboration is indispensable, especially within the context of existential threats such as increasingly frequent climate and natural disasters, and the ever greater plausibility of our direct involvement in armed conflict. For many threats, available capabilities with regard to preparation, response and recovery are spread across society as a whole. Employing a whole-of-society approach is and remains an important starting point for further strategy development and implementation. Naturally, attention should also be paid to the international community of which the Kingdom is a part as well as to sustainable collaboration with known and new partners. Most of the threats described in the NRA and this Trend Analysis are not limited to the confines of the Kingdom.

# 4.2 Implications for strategy development

The Security Strategy provides an important basis for responding to the situation as described above. The lines of action defined in the strategy will continue to be important even in a changing world. At the same time, the above conclusions result in a number of challenges.

To start with, a balance needs to be struck between creating and subsequently sticking to a long-term vision in the form of the Security Strategy and its detailed specification on the one hand, and maintaining a certain degree of adaptability on the other. The accumulation of threats to national security and the transitions that we are going through, will in many cases require a structural approach with a longerterm perspective. The basis of such an approach is a sound, multi-year strategy. The adaptability of this multi-year strategy can be secured in two ways. First, by explicitly taking uncertainty into account from the very beginning of the strategy-making process. This can be done, for instance, by paying sufficient attention to the resilience of society as a whole when it comes to the more well-defined lines of action. Second, in order to pursue robust and timeresistant policy, it is important to identify changes in the threat assessment early on, so that these changes can be anticipated strategically. By regularly keeping tabs on the state of affairs, changes can be taken into account more proactively and can be fitted better and more timely into

the broader strategy. Ideally a multitude of parties, both inside and outside the government, will be responsible for spotting developments and interpreting their significance from multiple perspectives.

Second, even within the Security Strategy and especially when converting this strategy into policy, choices will inevitably have to be made regarding implementation and prioritisation. Given the continued relevance of the various lines of action defined in the current Security Strategy, this will not be easy. It may be helpful to define the lines of action, the corresponding uncertainty and the connection between the various lines as specific as possible. This helps to provide insight into potentially conflicting interests as well as the implications if a particular line is implemented or not. This is true especially for a Security Strategy that must help the Kingdom navigate various transitions and the clashing interests, dilemmas and uncertainties that come with them.

Third, it is important to keep the whole-of-society perspective in mind during the various phases of strategy development. For a strategy that requires making difficult and sometimes painful choices to be successful, it is important that public and private partners are involved in both its drafting and implementation. As mentioned earlier, the government alone does not have the needed capacity to safeguard the Kingdom's national security in a changing world. Collaboration between government, the private sector, civil society and citizens is therefore essential. Including different perspectives and capabilities by taking a whole-of-society approach when creating a strategy also facilitates support in its implementation.

In summary, we find ourselves in fundamentally uncertain times where the threat to national security is increasing. Times where we will increasingly face simultaneous threats and a decline in our capacity to deal with those threats, and where we can be surprised by strategic shocks. A time like this requires not only a degree of flexibility, collaboration and resilience, but also the vision and courage to make difficult choices. Choices that sometimes also require acknowledging that some things cannot be done. However, these choices can only be made on the basis of the most accurate assessment possible of (emerging) developments, uncertainties and their interconnectedness. There is also an apparent contradiction here: invest in shaping a long-term vision and anticipatory capacity, but at the same time recognise that it is not possible to anticipate everything.

## References

- AIVD (General Intelligence and Security Service). (17 April 2023a). AIVD-jaarverslag 2022. Available at: https://www.aivd.nl/documenten/jaarverslagen/2023/04/17/aivd-jaarverslag-2022
- AIVD (General Intelligence and Security Service). (25 May 2023b). Anti-institutioneel extremisme in Nederland. Available at: https://open.overheid.nl/documenten/323255f4-55ef-438b-aa4e-657b24d4d2ce/file
- AIVD (General Intelligence and Security Service). (23 April 2024). AIVD-jaarverslag 2023. Available at: https://www.aivd.nl/documenten/jaarverslagen/2024/04/22/jaarverslag-2023
- Amsterdam Bureau for Economics. (2024). *Caribbean* Analytics & Statistics. Available at: https://economisch-bureau.shinyapps.io/caribbean-analytics-statistics/
- ANV (National Network of Safety and Security Analysts). (26 September 2022). *Hoofdrapport*
- Rijksbrede Risicoanalyse Nationale Veiligheid 2022.

  Available at: https://www.rivm.nl/documenten/rijksbrede-risicoanalyse-nationale-veiligheid-2022
- Ashby, H. (30 August 2023). What BRICS Expansion Means for the Bloc's Founding Members.
  United States Institute of Peace. Available at: https://www.usip.org/publications/2023/08/what-brics-expansion-means-blocs-founding-members
- Association of SouthEast Asian Nations (ASEAN).

  (29 March 2023). ASEAN, India intensify comprehensive strategic partnership. Available at: https://asean.org/asean-india-intensify-comprehensive-strategic-partnership/
- Bekkers, F., Aartsma, K., Sweijs, T. (13 February 2024). Strategische Monitor 2023: Barsten en Blokken. Clingendael. Available at: https://www.clingendael.org/ publication/strategische-monitor-2023-barsten-en-blokken
- Bloom, N., Jones, C., Van Reenen, J., Webb, M. (April 2020). Are Ideas Getting Harder to Find?. American Economic Review. Available at: https://www.aeaweb.org/articles?id=10.1257/aer.20180338
- CBS (Statistics Netherlands). (2023). Bevolking in de toekomst. Available at: https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/bevolkingsgroei/toekomst
- CBS (Statistics Netherlands). (2024a). Caribisch Nederland; bruto binnenlands product (bbp) per inwoner. CBS StatLine. Available at: https://opendata.cbs.nl/statline/#/CBS/nl/dataset/84046NED/table?dl=A4DC6

- CBS (Statistics Netherlands). (2024b). Caribisch Nederland; consumentenprijsindex (CPI) 2017=100. CBS StatLine. Available at: https://opendata.cbs.nl/statline/#/CBS/nl/dataset/85251NED/table?dl=A4DCD
- CBS (Statistics Netherlands). (n.d.-a). Arbeidsdeelname en werkloosheid per maand. CBS StatLine. Available at https://opendata.cbs.nl/#/CBS/nl/dataset/80590ned/table?dl=A11C2
- CBS (Statistics Netherlands). (n.d.-b). Vacatures; seizoengecorrigeerd, SBI2008. CBS StatLine. Available at https://opendata.cbs.nl/#/CBS/nl/dataset/80474ned/table?dl =1E0D2&ts=1716993395295
- CBS (Statistics Netherlands). (n.d.-c). Kerncijfers van diverse bevolkingsprognoses en waarneming. CBS StatLine. Available at https://opendata.cbs.nl/#/CBS/nl/dataset/70737ned/table?dl=A6D3E
- Central Bank of Curaçao and Sint Maarten. Winds of Change: Adapting to Climate Change. Economic bulletin December 2023. Available at: https://exch.centralbank.cw/publications/economic-bulletins/2023
- Clingendael Institute. (2024).
  Strategische Monitor 2023: Barsten en Blokken.
  Available at: https://www.clingendael.org/publication/strategische-monitor-2023-barsten-en-blokken
- Cocks, T. (20 July 2023). More than 40 nations interested in joining BRICS, South Africa says. Reuters. Available at: https://www.reuters.com/world/more-than-40-nations-interested-joining-brics-south-africa-2023-07-20/
- CPB (Netherlands Bureau for Economic Policy Analysis) (22 February 2024a). Raming februari 2024 (CEP 2024). Centraal Planbureau. Available at: https://www.cpb.nl/raming-februari-2024-cep-2024
- CPB (Netherlands Bureau for Economic Policy Analysis) (28 February 2024b). Centraal Economisch Plan (CEP) 2024 Verantwoording. Centraal Planbureau. Available at: https://www.cpb.nl/raming-februari-2024-cep-2024#docid-161334
- Csaky, Z. (2021). Nations in Transit 2021. Freedom House. Available at: https://freedomhouse.org/report/nations-transit/2021/antidemocratic-turn.
- Dahl, M.H. (15 January 2024). The Panama Canal is running Dry. Foreign Policy. Available at: https://foreignpolicy. com/2024/01/15/panama-suez-canal-global-shipping-crisis-climate-change-drought/

- Denamiel, T., Schleich, M., Reinsch, W.A., Todman, W. (22 January 2024). The Global Economic Consequences of the Attacks on Red Sea Shipping Lanes. Center for Strategic & International Studies (CSIS). Available at: https://www.csis.org/analysis/global-economic-consequences-attacks-red-sea-shipping-lanes
- Economic Community of West African States (ECOWAS). About ECOWAS. Available at: https://www.ecowas.int/
- Economist Intelligence Unit (EIU). (15 February 2024).

  Democracy Index: conflict and polarisation drive a new low for global democracy. Available at: https://www.eiu.com/n/democracy-index-conflict-and-polarisation-drive-a-new-low-for-global-democracy/
- Elgenraam, A. (28 January 2024). Monogame handelsrelatie tussen China en de VS is nu driehoeksrelatie. FD. Available at: https://fd.nl/economie/1504294/monogame-handelsrelatie-tussen-china-en-de-vs-is-nu-driehoeksrelatie
- European Commission. (3 October 2023a). Commission recommends carrying out risk assessments on four critical technology areas: advanced semiconductors, artificial intelligence, quantum, biotechnologies. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip\_23\_4735
- European Commission. (16 March 2023b). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) 168/2013, (EU) 2018/858, 2018/1724 and (EU) 2019/1020. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0160
- European Commission. (24 January 2024). Commission proposes new initiatives to strengthen economic security. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip\_24\_363.
- Foreign Policy (2024). The Panama Canal is running Dry. Available at: https://foreignpolicy.com/2024/01/15/panama-suez-canal-global-shipping-crisis-climate-change-drought/
- Foy, H., Johnston, I. (5 November 2023). The EU's plan to regain its competitive edge. Financial Times. Available at: https://www.ft.com/content/124b4cdb-deb9-49a0-b28d-d97838606661
- Freedom House. (2021). Nations in Transit 2021. Available at: https://freedomhouse.org/report/nations-transit/2021/antidemocratic-turn
- Freedom House. (2024). Nations in Transit 2024. Available at: https://freedomhouse.org/report/nations-transit/2024/region-reordered-autocracy-and-democracy#key-findings
- Geurkink, B., Miltenburg, E., Den Ridder, J. (24 October 2023). Burgerperspectieven 2023 Extra verkiezingsbericht. SCP. Available at: https://www.scp.nl/publicaties/publicaties/2023/10/24/burgerperspectieven-2023-extra-verkiezingsbericht

- Goguichvli, S., Linenberger, A., & Gillette, A.
  (1 October 2021). The Global Legal Landscape of Space:
  Who Writes the Rules on the Final Frontier. Wilson
  Center. Available at: https://www.wilsoncenter.org/article/
  global-legal-landscape-space-who-writes-rules-final-frontier
- Gonzalez, S., Kant, M., Miikkulainen, R. (2024). Evolving GAN formulations for higher-quality image synthesis. Artificial Intelligence in the Age of Neural Networks and Brain Computing. Available at: https://www.sciencedirect.com/science/article/abs/pii/B9780323961042000142
- Government of the Netherlands. (2023a).

  Veiligheidsstrategie voor het Koninkrijk der Nederlanden.

  Available at: https://www.rijksoverheid.nl/onderwerpen/
  veiligheidsstrategie-voor-het-koninkrijk-der-nederlanden
- Government of the Netherlands. (2023b). Besluit toepassingsbereik sensitieve technologie. Available at: https://wetten.overheid.nl/BWBR0048201/2023-06-01.
- Government of the Netherlands. (17 October 2023c).

  Agenda Digitale Open Strategische Autonomie.

  Available at: https://www.rijksoverheid.nl/documenten/rapporten/2023/10/17/bijlage-agenda-dosa-tgpdfa
- Government of the Netherlands. (19 January 2024).

  Nationale Technologiestrategie. Available at: https://www.rijksoverheid.nl/documenten/beleidsnotas/2024/01/19/de-nationale-technologiestrategie#:~:text=De%20
  Nationale%20Technologiestrategie%20geeft%20
  bouwstenen,Nederlandse%20positie%20op%20
  mogelijk%20is
- Hazell, J. (2023). Spear Phishing with Large Language Models. Oxford Internet Institute, University of Oxford. Available at: https://arxiv.org/pdf/2305.06972.
- IFRC & OCHA. (October 2022) Extreme Heat Report. Available at: https://www.ifrc.org/sites/default/files/2022-10/Extreme-Heat-Report-IFRC-OCHA-2022.pdf
- International Crisis Group. (27 October 2023).

  Preventing War in the Taiwan Strait. Available at:
  https://www.crisisgroup.org/asia/north-east-asia/
  taiwan-strait-china/333-preventing-war-taiwan-strait
- International Monetary Fund. (9 February 2024).

  The Netherlands: Staff Concluding Statement of the 2024
  Article IV Mission. Available at: https://www.imf.org/en/
  News/Articles/2024/02/08/cs020824-the-netherlandsstaff-concluding-statement-of-the-2024-article-ivmission#:~:text=Bernardin%20Akitoby%2C%20met%20
  with%20the,continues%20to%20show%20remarkable%20
  resilience
- IPCC (Intergovernmental Panel on Climate Change). (2023). Climate Change 2023 Synthesis report. Available at: https://www.ipcc.ch/report/sixth-assessment-report-cycle/
- Janjeva, A., Harris, A., Mercer, S., Kasprzyk, A., Gausen, A. (December 2023). The rapid rise of Generative Al. Centre for Emerging Technology and Security (CETAS). Available at: https://cetas.turing.ac.uk/publications/rapid-rise-generative-ai

- Jones, S., Rathbone, J., Milne, R. (7 May 2024). Russia plotting sabotage across Europe, intelligence agencies warn. Available at: https://www.ft.com/content/c88509f9-c9bd-46f4-8a5c-9b2bdd3c3dd3.
- Kitchen, K. (6 January 2021). Technology companies as geopolitical actors. GIS. Available at: https://www.gisreportsonline.com/r/technology-geopolitics/
- KNMI (Royal Netherlands Meteorological Institute). (9 October 2023). KNMI'23-klimaatscenario's voor Nederland. Available at: https://www.knmi.nl/research/publications/knmi-23-klimaatscenario-s-voor-nederland
- KNMI (Royal Netherlands Meteorological Institute). (20 February 2024). Is het mogelijk dat de Golfstroom plotseling sterk verzwakt? Available at: https://www.knmi.nl/over-het-knmi/nieuws/is-het-mogelijk-dat-de-golfstroom-plotseling-sterk-verzwakt%20/
- Lachmeijer, R. (10 August 2023). Volop extreem weer: Is het tij te keren of moeten we er maar aan wennen. Nu.nl. Available at: https://www.nu.nl/klimaat/6276020/volop-extreem-weer-is-het-tij-te-keren-of-moeten-we-er-maar-aan-wennen.html
- Lenton, T.M., Armstrong McKay, D.I., Loriani, S., Abrams, J.F., Lade, S.J., Donges, J.F., Milkoreit, M., Powel, T., Smith, S.R., Zimm, C., Bailey, E., Buxton, J.E., Dyke, J.G., Ghadiali, A. & Layborun, L. (2023). Global Tipping Points summary Report 2023. Available at: https://globaltipping-points.org/
- Mans, U., Rabbie, J., Hopman, B. (2023). Critical Raw Materials for Quantum Technologies: Towards European technology sovereignty in an emerging industry. Quantum Delta NL. Available at: https://assets.quantum-delta.prod.verveagency.com/assets/white-paper-crms-for-qt.pdf/
- McDonnell L, Moore A, Micou M, Day C, Grossman E, Meaders C. (28 March 2022). CRISPR in Your Kitchen: an At-Home CRISPR Kit to Edit Genes in Saccharomyces cerevisiae Used during a Remote Lab Course.

  Journal of microbiology & biology education. Available at: https://journals.asm.org/doi/10.1128/jmbe.00321-21?url\_ver=Z39.88-2003&rfr\_id=ori:rid:crossref.org&rfr\_dat=cr\_pub%20%200pubmed
- Ministry of Economic Affairs and Climate Policy. (2023). Kamerbrief over aanbieding Agenda Digitale Open Strategische Autonomie. Available at: https://www.rijksoverheid.nl/documenten/kamerstukken/2023/10/17/kamerbrief-aanbieden-agenda-digitale-open-strategische-autonomie-coco-5-oktober.
- Ministry of Economic Affairs and Climate Policy. (2024). Achterdeur ontdekt in veelgebruikte Linux-software. Available at: https://www.digitaltrustcenter.nl/nieuws/achterdeur-ontdekt-in-veelgebruikte-linux-software
- Moons, S., Van Veldhuizen, S. (April 2023). Productiviteit Uitvoeringsorganisaties. PwC. Available at: https://www.pwc.nl/nl/actueel-publicaties/assets/pdfs/productiviteit-publicatie.pdf

- Nationaal Klimaat Platform (28 December 2023). 2023: Hernieuwbaar verder gegroeid. Meerdere doelen gehaald. Available at: https://nationaalklimaatplatform. nl/nieuws12/2627274.aspx?t=2023-Hernieuwbaar-verdergegroeid-Meerdere-doelen-gehaald
- NATO. (2023). Resilience, civil preparedness and Article 3. Available at: https://www.nato.int/cps/en/natohq/topics\_132722.htm.
- NATO. (2 May 2024). Statement by the North Atlantic Council on recent Russian hybrid activities. Available at: https://www.nato.int/cps/en/natohq/official\_texts\_225230.htm.
- NCTV (National Coordinator for Counterterrorism and Security). (12 December 2023). Dreigingsbeeld Terrorisme Nederland. Available at: https://www.nctv.nl/onderwerpen/dtn/documenten/publicaties/2023/12/12/dreigingsbeeld-terrorisme-nederland-december-2023
- Netherlands Police. (2023). Mogelijke verdubbeling explosieincidenten. Available at: https://www.politie.nl/nieuws/2023/ juli/16/mogelijke-verdubbeling-explosie-incidenten.html
- Nicholas, B., et al. (2020). Are Ideas Getting Harder to Find?. American Economic Review, 110(4), 1104-1144.
- OCHA (United Nations Office for the Coordination of Humanitarian Affairs). (21 February 2024). Ukraine: 42 civilian casualties every day in two years of war. Relief web. Consulted on 21 March 2024, Available at: https://reliefweb.int/report/ukraine/ukraine-42-civilian-casualties-every-day-two-years-war-enuk
- PBL (Netherlands Environmental Assessment Agency). (2024). Klimaatrisico's in Nederland; De huidige stand van zaken. The Hague: PBL (Netherlands Environmental Assessment Agency). Available at: https://www.pbl.nl/system/files/document/2024-05/pbl-2024-klimaatrisicos-in-nederland-5359.pdf
- Projectteam Statelijke Dreigingen. (9 November 2021).

  Eindrapport state-of-the-art onderzoek Statelijke
  Dreigingen. Ministerie van Defensie. Available at: https://
  www.rijksoverheid.nl/documenten/rapporten/2021/11/09/
  tk-bijlage-wodc-rapport-state-of-the-art-statelijkedreigingen-fase-1#:~:text=Rapport%20van%20het%20
  Wetenschappelijk%20Onderzoek,het%20gebied%20van%20
  statelijke%20dreigingen
- PwC (PricewaterhouseCoopers) (April 2023). Productiviteit uitvoeringsorganisaties. Available at: https://www.pwc.nl/nl/actueel-en-publicaties/diensten-en-sectoren/publieke-sector/hogere-productiviteit-uitvoeringsorganisaties-is-noodzakelijk.html
- Rademakers, R., et al. (22 February 2024). Abnormale toename export van sanctiegoederen naar 'uitwijklanden'. ESB, 109(4830), 68-71.
- Rathenau Instituut. (22 November 2023). Vertrouwen in de wetenschap. Available at: https://www.rathenau.nl/nl/wetenschap-cijfers/impact/vertrouwen-de-wetenschap/vertrouwen-de-wetenschap

- Reding, D. et al. (March 2023). Tech Trends report 2023-2043. NATO Science & Technology Organization. Available at: https://www.nato.int/nato\_static\_fl2014/assets/ pdf/2023/3/pdf/stt23-vol2.pdf
- Rooijers, E. (26 February 2024). Wachtlijsten stroomnet staan vol met 'zombieaanvragen'. Financieel Dagblad. Available at: https://fd.nl/bedrijfsleven/1508521/wachtlijsten-stroomnet-staan-vol-met-zombieaanvragen
- Schuttenhelm, R. (25 September 2019). Vijf gevolgen van de zeespiegelstijging waar je niet snel aan denkt. Nu.nl. Available at: https://www.nu.nl/klimaat/5996618/vijf-gevolgen-van-zeespiegelstijging-waar-je-niet-snel-aan-denkt.html
- Schuttenhelm, R. (9 October 2023). Nederlands klimaat wordt extremer: nattere winters, drogere en hetere zomers. Nu.nl. Available at: https://www.nu.nl/klimaat/6284004/nederlands-klimaat-wordt-extremernattere-winters-drogere-en-hetere-zomers.html
- SCP (The Netherlands Institute for Social Research). (2023). Burgerperspectieven 2023 Extra verkiezingsbericht. Available at: https://www.scp.nl/publicaties/publicaties/2023/10/24/burgerperspectieven-2023-extra-verkiezingsbericht.
- SCP (The Netherlands Institute for Social Research). (2024a). Burgers over democratie en rechtsstaat. Kennisnotitie voor de Staatscommissie rechtsstaat. Available at: https://www.scp.nl/publicaties/publicaties/2024/01/22/kennisnotitie-scp-voor-de-staatscommissie-rechtsstaat.
- SCP (The Netherlands Institute for Social Research). (2024a). Koersen op kwaliteit van de samenleving. Sociale en Culturele Ontwikkelingen 2024. Available at: https://www.scp.nl/publicaties/publicaties/2024/03/27/sociale-en-culturele-ontwikkelingen-2024.
- Secure World Foundation. (April 2024). Global Counterspace Capabilities. Available at: https://swfound.org/counterspace/
- Sheehan, M., Feldgoise, J. (2023). What Washington Gets Wrong About China and Technical Standards. Carnegie endowment for International Peace. Available at: https://carnegieendowment.org/research/2023/02/whatwashington-gets-wrong-about-china-and-technical-standards?lang=en.
- Smeltzer, M., Karppi, A. (2024). Nations in Transit 2024. Freedom House. Available at: https:// freedomhouse.org/report/nations-transit/2024/ region-reordered-autocracy-and-democracy#key-findings
- Staatscommissie Demografische Ontwikkelingen. (12 March 2024). Rapport Staatscommissie Demografische Ontwikkelingen 2050: Gematigde Groei. Available at: https://www.staatscommissie2050.nl/documenten/rapporten/2024/03/12/rapport-staatscommissiedemografische-ontwikkelingen-2050-tweede-druk

- Stacey, K., Ellis-Petersen, H. (8 December 2023).

  No 10 team arrives in Delhi to revive talks over free trade deal. The Guardian. Available at: https://www.theguardian.com/politics/2023/dec/08/no-10-team-arrives-in-delhi-to-revive-talks-free-trade-deal-sunak-modi
- Stratfor. (22 February 2024). A Deadly Incident at Sea Heightens China-Taiwan Tensions. Available at: https://worldview.stratfor.com/article/deadly-incident-sea-heightens-china-taiwan-tensions.
- The Economist. (6 March 2023). Taiwan's dominance of the chip industry makes it more important. Available at: https://www.economist.com/special-report/2023/03/06/taiwans-dominance-of-the-chip-industry-makes-it-more-important
- The Economist (8 August 2023). How America is failing to break up with China. Available at: https://www.economist.com/finance-and-economics/2023/08/08/how-america-is-failing-to-break-up-with-china
- Townend, R., Aylett, C. and Benzie, M. (23 November 2023). Cascading climate risks: strategic recommendations for European resilience. CASCADES. Available at: https://www.cascades.eu/publication/cascading-climate-risks-strategic-recommendations-for-european-resilience/
- United Nations. (26 January 2023). With Highest Number of Violent Conflicts Since Second World War, United Nations Must Rethink Efforts to Achieve, Sustain Peace, Speakers Tell Security Council. Available at: https://press.un.org/en/2023/sc15184.doc.htm
- Uppsala Conflict Data Program (UCDP). (12 June 2024). Encyclopedia. Available at: https://ucdp.uu.se/encyclopedia.
- Van den Berg, J., De Graaf, P. (21 February 2024). Stroom? Over een paar jaar misschien. De krapte op het net begint ook scholen en sportclubs te raken. De Volkskrant. https://www.volkskrant.nl/binnenland/stroom-over-een-paarjaar-misschien-de-krapte-op-het-net-begint-ook-scholen-ensportclubs-te-raken~b99b5fc4/
- Wageningen University & Research (WUR). (7 July 2023). Zes vragen over de natuur in Nederland. Available at: https://www.wur.nl/nl/show/zes-vragen-over-de-natuur-in-nederland.htm



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