



The Hague Centre
for Strategic Studies

Annual Report 2021

December 2021



HCSS Annual Report 2021

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A Message from our Founder

Geopolitics focuses on the dynamics of political power usually linked to geographic space. Deep knowledge of those complex international dynamics is essential for policy makers. Without it, it is impossible to adapt a country or a major company to global change.

The famous English naturalist, geologist, and biologist Charles Darwin talked about the survival of the fittest. The species who can adapt to changing circumstances will survive. The same holds true for states and companies. Leaders capable of steering a steady course through turbulent times will be the most successful. This requires an outside – in approach that is usually lacking.

I have devoted much of my life to understanding the complex dynamics of international relations. And I am proud that HCSS has developed into a leading centre in this field. Over the fourteen years of its existence, the complexity of the international arena has only increased. The rise of China, Russia's new assertiveness, and the relative decline of the United States have created a completely new playing field. Climate change and the pandemic accelerated change. The thinking about the use of power instruments is undergoing major changes. At the same time, in the West, the rise of populism has become an obstacle to adaptation.

I proudly present this annual report. When you go through it, you will find a wealth of studies, including on global trends in geopolitics, geo-economics and technology, national and international stability and defense, the impact of geopolitical change on climate security, the supply of energy and resources, cyber security, and contributions by our data lab. All studies have in common that they are written from a deep knowledge of global changes.

In 2022 HCSS will be 15 years old. 2022 will not only be a festive year, but also a year in which the consequences of the major political changes will become more visible than ever.



[Rob de Wijk](#)

Introduction from our CEO

As we find ourselves on the threshold of the year 2022, it is time to assess some of the transitions that are reshaping our geopolitical order. The great power competition between the US and China is taking shape and will force countries to make difficult choices. To contain China's geopolitical ambitions new coalitions have emerged (e.g., the Quad and AUKUS). The growing absence of the US as a fulcrum for the world is being felt, and China is willing and able to exploit the power vacuum in order to achieve its own strategic priorities. We will have to pay close attention to geopolitical flashpoints including Taiwan, North-Korea, the South and East China Sea, Ukraine, Iran, the Indo-Pacific but also within cyberspace.



At the same time, great power competition is also about securing access and gaining leverage on strategic 'dual-use' technologies and resources including space-technologies, quantum, semiconductors, biotech, 5G and 6G, rare earth minerals, AI, and robotics. How can Europe maintain a strong position in these strategic industrial sectors as geopolitical spheres of influence emerge? Businesses and financial institutions can no longer afford to ignore geopolitics. They will have to take on social responsibility by securing energy supplies, restraining inflation, ensuring supply chain resilience, guaranteeing security, rebuilding the economy after COVID-19, and rebalancing the distribution of wealth while also achieving sustainability.

Climate change will become a national security threat. Resource scarcity will likely further aggravate great power competition. We started on the long and complex journey of decarbonizing the economy. The geopolitical implications of reshaping the world's energy supply chains are at this point underappreciated. Climate change will trigger resource conflicts, food and energy shortages and will cause migration and lead to extremism. Climate change can also trigger unexpected cooperation because of mutual interest.

Transitions lead to insecurity and instability. They put pressure on the way we relate to each other, who we identify with, and on our social contract. At the same time, we are approaching Christmas. A time to get together with friends and family, share food and drinks, and to celebrate past, present, and future. This Annual Report contains food for thought, as we focus on some of 2021's highlights and on future developments in the world. This can help us to look ahead to a brighter future beyond the gloom of the daily headlines.

At HCSS we do not pretend to know the future, to solve all highly complex problems with our analysis, nor to provide a miracle cure that instantaneously improves the relations between nations in an age of great-power competition, technology breakthroughs, and climate change. But we expect that our fact-based analysis contributes to an increased understanding of the world's future path and to provide ideas on how governments, businesses, civil society, and all of us can help to make this world a better and safer place to live in.

The HCSS team wishes you a merry Christmas and a happy new year!

Paul Sinning

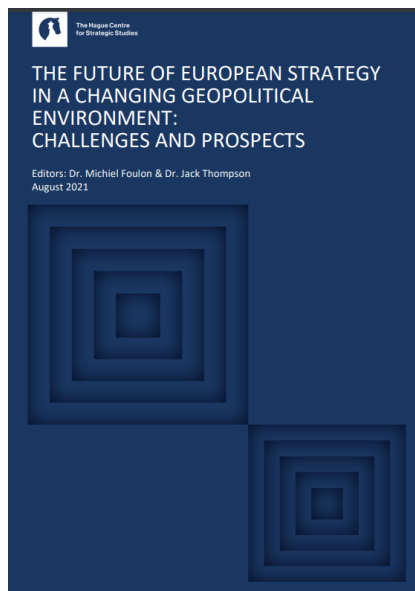
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1. Global Trends

Geopolitics, Geo-economics and Technology

HCSS research areas of geopolitics, geo-economics and technology encompass a number of overlapping themes that are integral to the interests and values of the Netherlands and the European Union. It considers the changing landscape of the international system, including factors such as the rise of China, the pivot of the United States to the Indo-Pacific, Europe's role as a global actor, the instrumentalization of international trade and the degradation of the multilateral order. These trends all continued in 2021 and included notable events such as the US withdrawal from Afghanistan, the announcement of the AUKUS security pact, ongoing discussions about the feasibility of European strategic autonomy, several initiatives from the Biden administration designed to bolster US-EU cooperation and to limit China's growing political and economic influence. Many of our directors, analysts and subject matter experts, namely [Han ten Broeke](#), [Tim Sweijs](#), [Michel Rademaker](#), [Paul van Hooft](#), [Jack Thompson](#), [Hugo van Manen](#), [Joris Teer](#), [Paul Verhagen](#), [Dorith Kool](#), [Friso Stevens](#) and others, contributed to this research pillar.



Transatlantic Relations

1.1.1. Initiative on the future of Transatlantic Relations

Europe and the United States must adapt to a new reality, one in which the geopolitical centre of gravity has moved from the Atlantic to the Pacific. The transatlantic relationship will irreversibly change in the coming decade due to a series of converging trends. The [HCSS Initiative on the Future of Transatlantic Relations](#) (IFTAR), with its Program 2021-2030: Transatlantic Relations in the Age of Sino-American Competition, aims to ensure that both sides continue to enjoy the benefits of the shared interests and values on which the

transatlantic relationship is based. This initiative is led by its co-directors, Senior Strategic Analysts [Paul van Hooft](#) and [Jack Thompson](#). In an [op-ed for NRC](#), Senior Strategic Analyst Paul van Hooft offered some specific pointers on how more balanced military burden-sharing can be achieved. Director of Research [Tim Sweijds](#) and [Jack Thompson](#) contributed to a masterclass for the Defence committee of the Dutch House of Representatives focusing respectively on [the Future of War](#) and the [Future of Transatlantic relations](#).

1.1.2. Hotspots in the Indo-Pacific

In the morning of 29 November HCSS organized a conversation on the past, present and future of Taiwan with the island republic's Deputy Minister of Foreign Affairs Harry Tseng and BNR's Bernard Hammelburg at the HCSS office. The interview was [publicly broadcasted](#). After the interview minister Tseng engaged with representatives from the worlds of politics, journalism, civil society and HCSS-staff during a round table discussion.

1.1.3. Dutch and European relations with China and Russia in an era of “extreme competition”

Geopolitics is back. In 2021, two resurgent authoritarian powers – China and Russia – dominate key elements of European trade and security considerations. What does this mean for the Netherlands and the European Union? To answer this question, on Thursday June 17th, HCSS hosted a symposium on: “[Engagement, Dependence, Competition and Conflict: Dutch and European relations with China and Russia in an era of ‘extreme competition’](#).”

[Renée Jones-Bos](#) – Former Ambassador of the Netherlands to Russia and the United States; [Lucia van Geuns](#) – Strategic Advisor Energy, HCSS; [Valérie Hoeks](#) – Managing Partner, China Inroads; [Maurice Fermont](#) – EU-China Trade Expert, Political Secretary, VVD-delegation European Parliament; [Jaap van Etten](#) – CEO, [Datenna](#); [Ruben Brekelmans](#) – Foreign Affairs Spokesperson, VVD Parliamentary Party and [Henk Schulte Nordholt](#) – Sinologist, author of “Is [China nog te stoppen?](#)” all spoke in panels moderated by [Han ten Broeke](#), Director of Political Affairs at HCSS. [Joris Teer](#) organized the event.

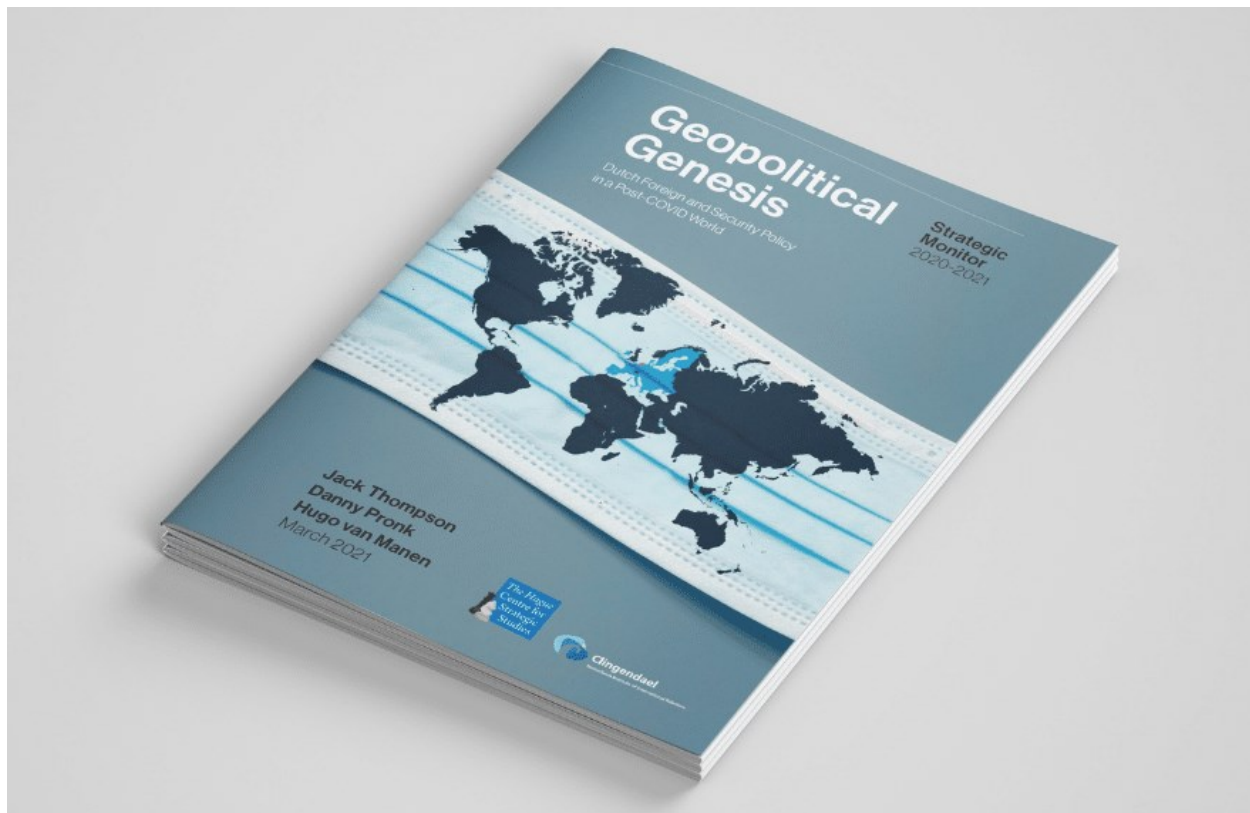
Strategic Monitor

The Hague Centre for Strategic Studies (HCSS) and the Clingendael Institute annually complete the Strategic Monitor, a foresight project in the form of a series of research papers, as part of a four-year research framework commissioned by the Dutch Ministry of Foreign Affairs and the Ministry of Defence. The Strategic Monitor highlights trends and developments in the international order and presents a risk analysis on the national security of the Netherlands.

1.1.4. Strategic Monitor 2020-2021 (March)

In March, HCSS, in cooperation with the Clingendael Institute, published the “[Geopolitical Genesis: Dutch Foreign and Security Policy in a Post-COVID World](#)”. The report led to several public presentations and talks, including a [meeting with Minister of Defense Ank Bijleveld](#). Senior Strategic Analyst [Jack Thompson](#) was the lead author of the report. Strategic Analyst [Hugo van Manen](#) also contributed to the report.

The main theme of the 2020-2021 Strategic Monitor is that now is the time for the European Union to consolidate its status as a nascent global power, and that the Netherlands must play an active role in this. In spite of the election of President Biden, transatlantic relations will not return to the pre-2016 status quo, the researchers argue. Europe will have to take more responsibility for its own defense and pursue a more assertive and strategic foreign policy. As a relatively small country, the Netherlands can play a bridging and facilitating role in a few key areas, but a more unified European approach will also be necessary to be able to resist the divide-and-conquer tactics of countries such as China and Russia. While China will remain an important trading partner, it poses significant economic and political challenges.



1.1.5. Report: Taming Techno-Nationalism (September)

Authors: [Hugo van Manen](#), Tobias Gehrke (Egmont Institute), [Jack Thompson](#) and [Tim Sweijds](#).

Contributors: [Rob de Wijk](#), Benedetta Girardi and Sneha Mahapatra

In September 2021, HCSS published “[Taming Techno-Nationalism: a Policy Agenda](#).” Strategic Analyst [Hugo van Manen](#) was the lead author of the report, which also included work by Senior Strategic Analyst [Jack Thompson](#) and Director of Research [Tim Sweijds](#). As recognition of the economic, military, and strategic relevance of access to and control over the distribution of modern technologies has grown, so, too, has the prevalence of the sentiment that a nation’s technological innovation and capabilities are directly linked to its national security, economic prosperity, and social stability. This is creating incentives for states to treat access to sensitive technologies as a zero-sum game and to pursue policies to expand national control over and international influence through sensitive technologies. We look at how techno-nationalists operate, what the Netherlands can do to protect its sizeable R&D infrastructure from their advances, and to what degree The Hague should look to Brussels for guidance and support. The report’s findings were presented to a group of policymakers during an in-person session on HCSS’ premises. The event was attended by representatives of the Dutch Ministries of Foreign Affairs, Defence, and Economic Affairs.

1.1.6. Strategic Alert: Towards a Space Security Strategy (March)

Authors: [Hugo van Manen](#), [Tim Sweijjs](#), [Patrick Bolder](#).

Contributions: Jens Emmers and Benedetta Girardi.

The world is entering a new and highly consequential phase of the Space Age. This brings with it many threats and opportunities. The Netherlands boasts a productive and innovative space industry. Globally, launch costs have been reduced dramatically. Yet this democratization of space access also brings with it many challenges. Increased access means increased congestion, risk of collisions, space debris and a growing dependence by the Netherlands on space-based infrastructure. [Our Strategic Alert](#) delved into the challenges and opportunities of the Space Age and how the Netherlands, and the world, should deal with them. The space alert was presented to a broad audience including experts and members of the Dutch House of Representatives.

Forum: The Future of European Strategy in a changing Geopolitical Environment

Europe's geopolitical environment is evolving. China is rising, Russia is a challenge to NATO, and the United States is increasingly prioritizing the Indo-Pacific region. In response to such changes, the European Union is inclined to pursue a more independent and assertive international role, but many questions remain about the future of European strategy. In [this forum](#), thirteen scholars, from a wide variety of national and disciplinary backgrounds, came together and address key challenges for European strategy. The collection was co-edited by Senior Strategic Analyst [Jack Thompson](#) and by Senior Strategic Analyst [Paul van Hooft](#).

	Title	Authors
1.	How do we start thinking about European strategy?	Dr Michiel Foulon and Dr Jack Thompson
2.	Do we need a new vocabulary for talking about European strategy?	Prof Dr Shaun Breslin , University of Warwick (United Kingdom)
3.	The transatlantic relationship: Radical reform is in the U.S. national interest	Prof Barry R. Posen Massachusetts Institute of Technology (United States)
4.	NATO allies' offensive cyber policy: A growing divide?	Dr Max Smeets Center for Security Studies, ETH Zürich (Switzerland)
5.	The EU Strategic Compass' three principles: Inclusivity, integration and implementation	Dr Monika Sus , Polish Academy of Sciences (Poland) and Hertie School in Berlin (Germany)
6	European defense and the demands of strategic autonomy	Dr Daniel Fiott , EU Institute for Security Studies (France)
7	Russia's challenge to European security	Dr Brian G. Carlson , Center for Security Studies, ETH Zürich (Switzerland)

8	Normative power and EU strategic autonomy	Assist Prof Dr Trineke Palm , Netherlands Defence Academy (Netherlands)
9	An ambidextrous EU approach to transatlantic relations	Dr Jack Thompson , The Hague Centre for Strategic Studies (Netherlands), The Hague Centre for Strategic Studies (Netherlands)
10	The United States may be willing but no longer able: The need for transatlantic burden sharing in the Pacific Century	Dr Paul van Hooft , The Hague Centre for Strategic Studies (Netherlands)
9.	European Trade Strategy: Striking a balance between liberalism and nationalism	Dr Michiel Foulon , Center for Security Studies, ETH Zürich (Switzerland)
11	China's technological challenge to European Strategic autonomy	Dr Henrik Larsen , Center for Security Studies, ETH Zürich (Switzerland)
12	Energy Transition, Europe and Geopolitics	Assoc. Prof. Dr. David Criegemans , University of Antwerp (Belgium) and Egmont, the Belgian Royal Institute for International Relations in Brussels
13	EU Strategy: Resolutely moderate	Prof Dr Sven Biscop , Egmont Royal Institute for International Relations (Belgium) and Ghent University (Belgium)

Peace and Conflict

1.1.7. Report: Armenia and the Future of the South Caucasus (October)

Produced under the auspices of [Michel Rademaker](#) and [Han ten Broeke](#)

In September 2020, the decades-long Nagorno-Karabakh conflict flared up, leading to the worst violence the area has seen since the early 1990s. The six-week war, reportedly killing around 7000 soldiers and civilians in the disputed territory and along the Armenia-Azerbaijan border, ended in military victory for Azerbaijan. The report sheds light on Armenia's position in this region and the world more broadly. It advances an understanding of the various ways in which Armenia, Azerbaijan, Russia, Turkey, the European Union, and the United States and other actors could work towards peaceful resolution. In the absence of conflict ripeness, resolution of the dispute remains very unlikely. However, steps can be taken by parties directly and indirectly involved to manage the conflict, argues HCSS in a [report](#) on the conflict.

RuBase

Russia is back. After two decades of attempts at rapprochement between the West and Russia, the Russian leadership has opted for a more confrontational and assertive foreign and security policy. All along Europe's periphery, Russia is once again a factor to be reckoned with, also for the Netherlands. The epistemic backbone of Russia-knowledge relied upon by Western decisionmakers during the Cold War needs to be rebuilt and possibly rethought and retooled. To shed new light on Russia's international thinking and acting, HCSS not only uses "tried and tested" methods but also examines new tools and techniques such as natural language processing and machine learning.

This multi-year research project explores new text- and number-based datasets, tools and methods, using a corpus systematically compiled through relevant search queries, combined with different additional data sets like elite opinion surveys, event data sets (GDELT, ICEWS, Phoenix, TERRIER), economic, demographic, military, and political datasets. The result, [a knowledge base on Russia called RuBase](#), will serve as a platform for Russian experts to explore new collaborative ways of cumulative knowledge-building. The project is spearheaded by Georgia-Tech and HCSS Principal Scientist [Stephan De Spiegeleire](#), and funded by CCNY.

Additional Reports, Papers and Snapshots

1.1.8. Report: Digital Education in Africa: Conditions and Opportunities for Support and Collaboration (June)

Authors: [Hugo van Manen](#), [Paul Verhagen](#), Joris van Schie, [Michel Rademaker](#).

Contributions: Benedetta Girardi.

The roll-out of digital education in sub-Saharan Africa brings with it a host of opportunities and challenges. As the number of secondary school graduates is set to increase substantially in the coming years, the demand for tertiary education is expected to increase in parallel. Currently, African universities have a student-teacher ratio that is 50% higher than the global average. This lack of institutional capacity is compounded by the region's economic and environmental challenges. Poverty, gender inequality, the stigmas associated with disease, and in some cases the uncertainty brought on by conflict and political instability form significant hurdles to the realization of African students' educational potential. Digital education offers a potential pathway for improving access to and increasing the macro-level quality of tertiary education in Africa.

Because it bypasses or partially mitigates several of the challenges faced by the region's education system, and because it creates financial opportunities for both students and educators, it promises to make a positive contribution to both access to and macro-level quality of tertiary education in those countries which preside over the digital infrastructure (or state of digitalization) to allow for its in-earnest rollout and applicability. [This report](#) outlines a set of potential interventions capable of expanding digital education in Sub-Saharan Africa.

1.1.9. Snapshot: Turkey's Recalcitrance and NATO's Nuisance (February)

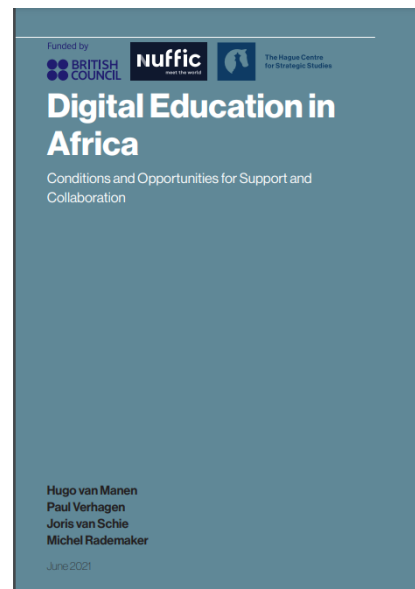
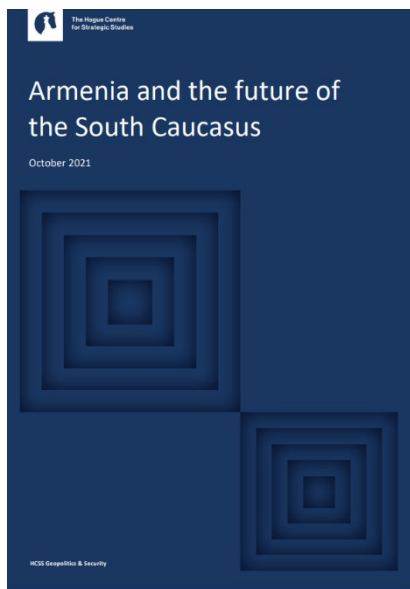
Authors: [Dorith Kool](#), [Patrick Bolder](#) and Colonel (ret.) Murat Dogan (Turkish Army).

As the US retreats from its leadership role in Europe, Turkey has pursued an increasingly independent defense policy, attempting to position itself as a regional power and producing tensions with fellow NATO allies. While strong interdependencies remain, conflict, not just of values, but also of interests, has made the relationship between Turkey and NATO a tenuous one. The absence of European defense on the Biden agenda means that even in a post-Trump era, frictions between Turkey and NATO are set to remain. In [this snapshot](#) we ask: what does this mean for the future of NATO-Turkey relations?

1.1.10. Essay: We Lost – But Who *Won* the War in Afghanistan? (October)

Author: [Friso Stevens](#)

This past year, Western states withdrew their troops from Afghanistan. In this essay we look back on this year-long conflict. After another disgraceful Western intervention failure, the question we may ask is who won America's Longest War? What lessons did the West learn from the Afghan war? And how should these be applied in future security challenges such as the great power competition with China? HCSS subject matter expert Friso Stevens takes an in-depth look in [this essay](#).



2. Defence and Security

International and Dutch External and Internal Security

The new paradigm in the international arena, competition between the superpowers, China and the United States, has further settled in 2021. Geopolitics, geo-economics, and the military dimension have become more and more intertwined. NATO and the EU are in need for and able to reinforce one another. This interdependence is decisive for the re-evaluation of the Transatlantic relationship. It goes without saying that Europe as a 'strategically autonomous' geopolitical player requires not only economic and soft power, but also a credible military force. In the Netherlands, the 2021-coalition agreement promises additional investment that will bring defense spending up to the EU-NATO average. A substantial transformation of the armed forces, as an integral part of a broader toolbox of power instruments, is required to address contemporary security challenges. In this external environment, the essential function of a thinktank is to help governments and businesses to understand the international and national security environment, assess the risks and opportunities, think through the implications for foreign and security policies, and then help formulate and design of strategy, concepts, and capabilities.

Through a range of publications in 2021, HCSS helped contribute to these aims. It has informed the public, political, and departmental debates on the changing Dutch and European comprehensive security posture, together with old Transatlantic allies and potential new allies in the Indo-Pacific region. The former is addressed through the [HCSS Initiative on the Future of Transatlantic Relations \(IFTAR\)](#), with its Program 2021-2030: Transatlantic Relations in the Age of Sino-American Competition (see "Global Trends"). The latter is the subject of several studies, of which [Guarding the Commons: Multilateralizing Maritime Security in the Indo-Pacific](#), is one of the most prominent. In [China's Military Rise and the Implications for European Security](#), HCSS maps one central, indirect challenge to European security: the growing ambitions and capabilities of China's People's Liberation Army.

Some additional high-profile studies in 2021 were the following. With the study [High Value of the North Sea](#) HCSS has drawn extensive public and political awareness of the security risks associated with the exploding value-creation in the North Sea. Together with PwC, HCSS has elaborated [Kansrijke integratie mens-technologie binnen Defensie](#) as part of the armed forces development process that elaborates the Defence Vision 2035 into actionable plans. The study [Integrated Air and Missile Defence 2021-2035](#) was a first for HCSS, in the sense that the three strategy departments of the air force, the navy, and the army acted as joint clients. Then there were multiple studies on the development of [Robotic-Autonomous Systems \(RAS\)](#). Director of Research [Tim Sweijs](#) edited and published a [book on the future of war](#). Finally, with the future of the Netherlands Special Operations Forces, HCSS produced an [in-depth study](#) on a crucial element of future-proof armed forces.

Many of HCSS' Directors, Analysts and Subject Matter Experts, like [Rob de Wijk](#), [Frank Bekkers](#), [Tim Sweijs](#), [Michel Rademaker](#), [Paul van Hooft](#), [Jack Thompson](#), [Stephan De Spiegeleire](#), [Joris Teer](#), [Lotje Boswinkel](#), [Juliëtte Eijkelkamp](#) (Assistant Analyst), [Friso Stevens](#), [Patrick Bolder](#), [Dorith Kool](#) and [Bianca Torossian](#), worked on this topic this year.

International Security

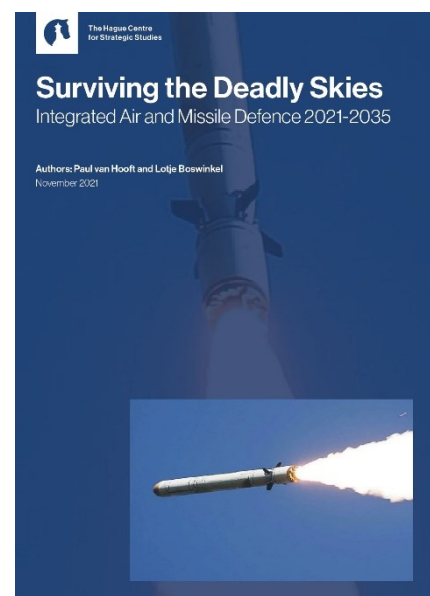
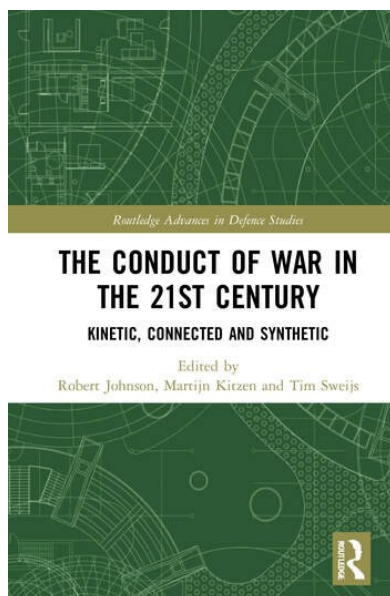
2.1.1. Book: The Conduct of War in the 21st Century (Q1)

Editors: [Tim Sweijs](#) together with Rob Johnson and Martijn Kitzen

This book examines the key dimensions of 21st century war, and shows that orthodox thinking about war, particularly what it is and how it is fought, needs to be updated.

Accelerating societal, economic, political and technological change affects how we prepare, equip and organize for war, as well as how we conduct war – both in its low-tech and high-tech forms, and whether it is with high intensity or low intensity. [This book](#) examines changes in warfare by investigating the key features of the conduct of war during the first decades of the 21st century. Conceptually centered around the terms 'kinetic', 'connected' and 'synthetic', the analysis delves into a wide range of topics. The contributions discuss hybrid warfare, cyber and influence activities, machine learning and artificial intelligence, the use of armed drones and air power, the implications of the counterinsurgency experiences in Iraq, Afghanistan and Syria, as well as the consequences for law(fare) and decision making.

Relatedly, [Tim Sweijs gave a key note presentation at the OSCE's High-Level Military Doctrine Seminar \(HLMDS\)](#) to 200 high-level military officials and experts.



2.1.2. Report: China's Military Rise and the Implications for European Security (November)

Authors: [Joris Teer](#), [Tim Sweijs](#), [Paul Van Hooft](#), [Lotje Boswinkel](#), [Juliëtte Eijkelkamp](#), [Jack Thompson](#).
Contributors: [Rob de Wijk](#), [Friso Stevens](#), Benedetta Girardi, John Michaelis, Neill Bo Finlayson, Sarah Ojukwu, Benedetta Girardi, John Michaelis, Neill Bo Finlayson, Sarah Ojukwu

China is following a typical trajectory for rising great powers in terms of its increased willingness and ability to project power outside its region. What is the People's Liberation Army capable of today and what will likely be its capabilities by 2035? [This new HCSS report](#) makes a broad assessment of China's military modernization and the implications for the security of European states, providing 20+ policy recommendations to deal with China's military rise. These are presented in Chapter 6 of the report.

In both [NRC](#) and [the Diplomat](#), [Joris Teer](#) and [Tim Sweijts](#) presented one of the report's scenarios and show that a Chinese-American conflict in East Asia would seriously hurt the US ability to credibly deter Russia in Europe. If China Attacks Taiwan, What Will Europe Do?, the authors ask. Further assessing the geopolitical position of Taiwan, Director of Research [Tim Sweijts](#) participated in [Taipei Security Dialogue](#) focusing on how to counter hybrid threats and implications for small states.

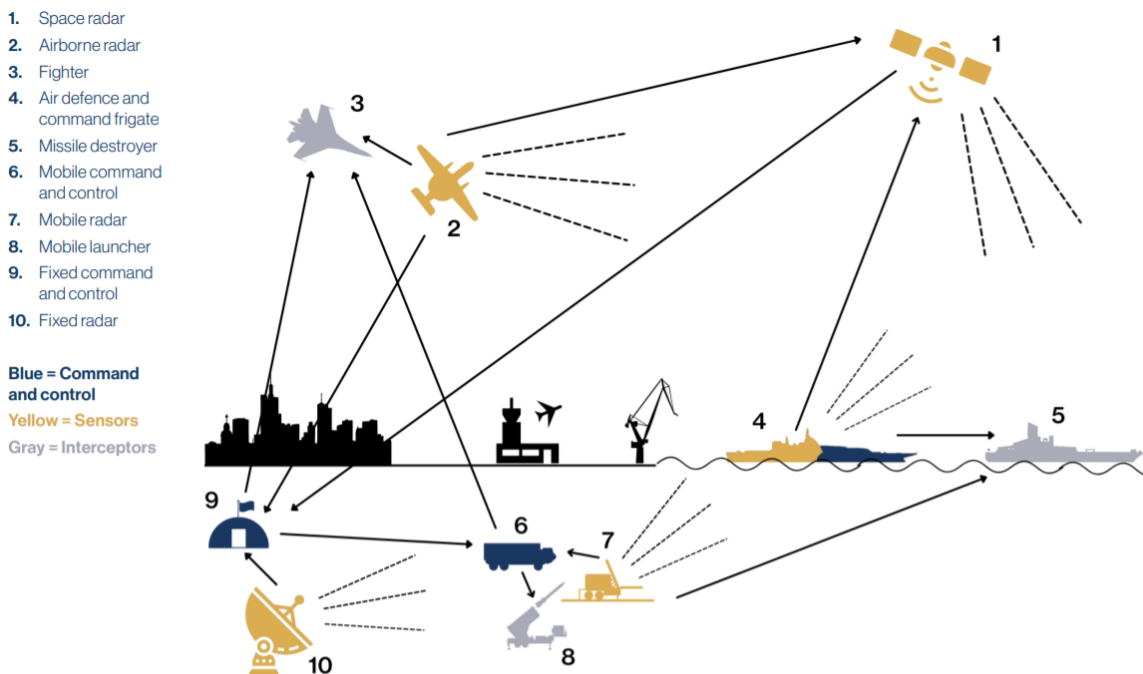
[Joris Teer](#) presented some of the report's policy recommendations during [a round table in the Dutch House of Representatives on knowledge cooperation with unfree countries](#), at a [workshop organized by the International Institute for Strategic Studies](#) and during [a meeting with Prime Minister of the Netherlands Mark Rutte](#). The report also received attention from the [India-based Economic Times](#) as well as [Sweden-based media](#).

2.1.3. Report: Surviving the Deadly Skies: Integrated Air and Missile Defence 2021-2035 (December)

Authors: [Paul van Hooft](#), [Lotje Boswinkel](#).

Contributors: [Frank Bekkers](#), [Tim Sweijts](#), [Patrick Bolder](#), Benedetta Girardi, Niklas Hintermayer and Gaia Gamaggio; vignettes by Frederik Mertens.

European states are facing an increasing threat from missiles and aircraft. Interacting geopolitical and technological trends have both made these weapons more effective and increased the scenarios in which aggressors could find use for them. Consequently, there is now an increasingly complex, precise, and dangerous combination of ballistic missiles, cruise missiles, hypersonic weapons, manned and unmanned aircraft, and other weapon systems that can be used against European states. This underlines the need for better and more integrated air and missile defense, this [HCSS report](#) concludes.



2.1.4. Research Project and Report: Guarding the Maritime Commons: multilateral European engagement in the Indo-Pacific (Upcoming)

Authors: [Paul van Hooft](#), Benedetta Girardi (Assistant Analyst), [Tim Sweijjs](#), [Jack Thompson](#)

The weight of global economics has shifted to Asia. Yet tensions between China on the one hand and its neighbors and the United States on the other hand are increasingly dominating regional politics. Maintaining a stable, secure, and open Indo-Pacific is crucial to European prosperity and values. Europeans are therefore looking for a role in the region, but which one can and should they play? Multilateral cooperation is the preferred European approach, but with which regional partners? Europeans have increased their naval presence in the region, but is it sufficient? To answer these questions, HCSS Senior Strategic Analyst [Paul van Hooft](#) is running the [Guarding the Maritime Commons project](#) in 2021 and 2022. International experts from across the Indo-Pacific region and Europe, namely Patrick Porter (University of Birmingham), Johannes Peters (Center for Maritime Strategy and Security, Kiel University), Melissa Levallant (French Institute of Higher National Defence Studies), Yuki Tatsumi (Stimson Center), Kuyoun Chung (Kangwon National University), Jagannath Panda (MP-IDSA), and Stephan Fruehling (Australia National University) participated in a two-day workshop on 16 and 18 November. The final report as well as the collection of contributions from the experts will be published in Q1 2022.

2.1.5. Snapshot: Did AUKUS Torpedo Transatlantic Relations in the Indo-Pacific? (December)

Authors: Benedetta Girardi (Assistant Analyst) and Paul van Hooft

Despite the Biden administration's statements of support for multilateralism, the AUKUS security pact reveals that the US is using a minilateral approach to balance against China in the Indo-Pacific. However, this type of approach is ill-fitted to accommodate European goals and interests in the region, which Europeans prefer to achieve through an inclusive multilateral system. What are the implications of this divergence for European states? The US approach to minilateralism poses a threat to transatlantic cooperation in the Indo-Pacific, but also undermines European engagement in the region and creates dissent among European states. [This snapshot](#) analyses the consequences of American minilateralism for European engagement in the Indo-Pacific and proposes a set of next steps that European states could take to stay relevant in a region dominated by great power competition.

External and Internal Dutch Security

Security at Sea

2.1.6. Report: The High Value of the North Sea (November)

Authors: [Frank Bekkers](#), [Joris Teer](#), [Dorith Kool](#), [Lucia van Geuns](#), [Patrick Bolder](#), [Irina Patrahau](#) and Max Sarel

As the number of sea-based assets rises, be it wind turbines, undersea cables or offshore rigs, they increasingly become targets for both state & non-state actors. This necessitates a new approach to security in the North Sea. How can we guarantee the security of structures and processes in the North Sea leading up to 2035? And how will activities on the North Sea develop towards 2050? First author [Frank Bekkers](#) completed an interview with news outlet [EenVandaag](#). He spoke about growing security challenges the Netherlands and neighboring countries face in the North Sea and stressed that we must take action now, as indicated in the [North Sea report](#). So did Joris Teer, when he spoke in [BNR De Strategie](#).

The Armed Forces

2.1.7. Report: Behavior Oriented Operations in the Military context (February)

Authors: [Frank Bekkers](#) and Klaudia Klonowska (University of Amsterdam, TMC Asser Institute)

[The report](#) delineates behavior-oriented methods to improve the capacity of the armed forces to accurately interpret human behavior in a military context and efficiently anticipate conflict situations. It reveals that behavior-oriented operations, in the context of the Dutch military operations, are side-lined or misunderstood as a separate sphere of actions, independent from physical capabilities.

2.1.8. Report: The future of the Netherlands Special Operations Forces (July)

Authors: [Rob de Wijk](#), [Frank Bekkers](#), [Tim Sweijjs](#), [Stephan De Spiegeleire](#) and [Dorith Kool](#).

Contributor: Max Sarel.

Special Operations Forces (SOF) are designed, organized, equipped, and trained to achieve critical objectives that typically combine (potentially) high risks and high payoffs through low-visibility operations in politically sensitive and militarily risky environments. [This study](#) focuses on identifying and describing the functional requirements for a future proof NLD SOF, thereby contributing to a better informed and more articulate debate on the utility and use of SOF.

2.1.9. Report: Kansrijke integratie mens-technologie binnen defensie (Promising integration of human-technology within defence operations) (February)

Authors: [Frank Bekkers](#) and Sanne Maas (PwC).

Contributors: Naveen Srivatsav (PwC) and [Dorith Kool](#).

A structural shortage of personnel is one of the main risks for the Dutch Defence organization. Automation, digitization, and robotization offer a possible answer here. [This report](#) by [Frank Bekkers](#) and [Dorith Kool](#) (HCSS) and Sanne Maas and Naveen Srivatsav (PwC) identify the promising areas where technological solution can most increase labor productivity.

2.1.10. Capstone Report: Robotic and Autonomous Systems in a Military Context (February)

Authors: [Michel Rademaker](#), [Frank Bekkers](#), [Tim Sweijts](#), [Bianca Torossian](#), [Patrick Bolder](#), Esther Chavannes, Michel Roelen, Amit Arkhipov-Goyal, Salma Atalla, Alen Hristov, Hugo Klijn, Klaudia Klonowska, Maaïke Okana-Heijmans

Militaries around the world are developing, integrating, and using robotic and autonomous systems (RAS) in line with the evolution of warfare. After a two-year research period, [the report consists of all HCSS research papers](#) covering military applicability, ethical considerations, legal discourse, requirements for cooperation and the implementation of RAS in a military context.

In collaboration with the Dutch Army, HCSS also developed [a documentary that explains the phenomenon of Robotic and Autonomous Systems \(RAS\)](#).

2.1.11. Paper: The Implementation of Robotics and Autonomous Systems: The future is Now, prepare for 2045 (February)

Authors: [Patrick Bolder](#), [Michel Rademaker](#) and [Bianca Torossian](#)

Throughout this paper on the implementation of RAS, we hope to inspire thinking and stimulate the reader to reflect on the future use of RAS, draw recommendations and consider recommendations for the implementation of RAS towards the year 2045. [The paper](#) assesses some relevant elements for the implementation of RAS into the armed forces and especially the Army. It raises questions regarding the formulation of concepts and doctrines, how command & control over RAS is organized, and the consequences of these changes for personnel (including their training), logistics, infrastructure, organizational processes, and leadership.

Internal Security

2.1.12. Report: Eén Nationale Politie – twee taken en twee gezagsdragers (One National Police - Two tasks and two authorities) (May)

Authors: Prof. Pieter van Vollenhoven and Dr. Lodewijk Gunther Moor

Traditionally, the Dutch police has always had the same tasks in all police organizations: to maintain public order and provide assistance with the mayor as the authority, as well as to investigate with the Public Prosecutor as the authority. The question is, however, what authority do these authorities still have? Do they determine the size and deployment of the police or is the latter determined by the police themselves? Does the central management, which arose with the arrival of the National Police undermine local authority?

[This memorandum](#) shows that this is indeed the case in medium-sized and/or smaller municipalities. The Netherlands still has about 351 municipalities, of which 32 are relatively large, but 319 municipalities belong to the medium-sized or smaller municipalities. In these municipalities, the local authorities are not well able to give substance to their tasks. As a result, the gap between citizens on the one hand and the police on the other may grow.

3. Climate, Energy & Resources

Resource Scarcity, Energy (Transition) and Climate-related Security

According to the 2021 Global Risks Report of the WEF, the three highest likelihood risks of the next ten years are extreme weather, climate action failure, and human-led environmental damage. Climate change lies at the heart of these risks, which – according to the IPCC, is rapidly increasing average global temperatures. This is already leading to massive disruptions to freshwater availability, food supplies, and energy availability in many parts of the world. The World Bank projects more than 216 million people will be displaced or forced to migrate as a result of climate-related impacts by 2050. Given these alarming projections, climate-related risks are increasingly recognized as national security risks. In 2021, more progress was made in raising global awareness and understanding about the security implications of climate change, and how to address them. The European External Action Service already presented its climate change and defense roadmap in November 2020, and NATO released its climate and security action plan in June. The United States under the newly elected Biden Administration doubled down on climate in 2021, and released several key policy papers, including the US DoD climate adaptation plan and the US National Intelligence Estimate on climate change. All these efforts point to one key insight: improving, prevention, preparedness, and response capabilities to climate-related security risks, will be essential and should be a long-term priority for governments, businesses, and society.

In 2020, HCSS launched its [Climate and Security Program \(CASP\)](#) in response to the urgent and growing need for a better understanding of the geopolitical and other security implications of climate change. In 2021, HCSS worked on further consolidating its position in the climate and security domain – both in the Netherlands and internationally. Following the launch of its inaugural annual [World Climate and Security Report in 2020](#), the [International Military Council on Climate and Security \(IMCCS\)](#), of which HCSS is a founding member, focused its [2021 report](#) on actions to further climate proof international security – by providing tools for policymakers to address climate-related risks and opportunities. This included the presentation of the HCSS climate risk assessment methodology and to better prepare for and prevent climate security risks.

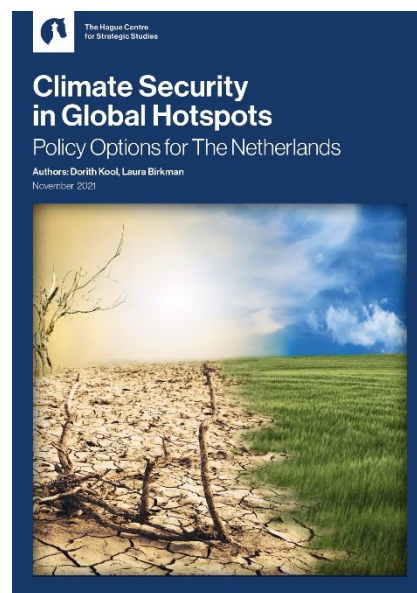
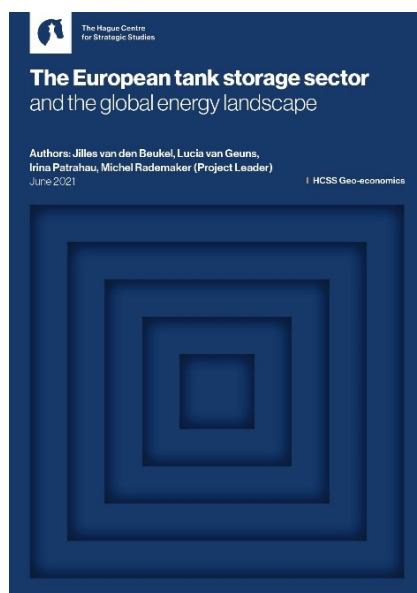
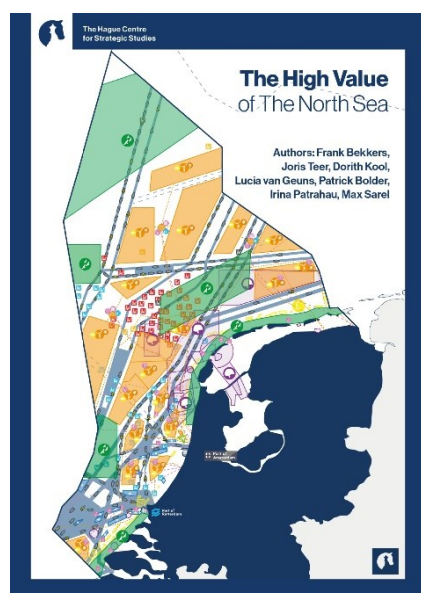
In 2021, HCSS deepened its [Water, Peace and Security \(WPS\)](#) engagement in Iraq, delivering a number of in-depth research papers and conducting four trainings and two workshops for up to 30 high level national and provincial government representatives. A big milestone was the completion of a causal model that provides data-driven explanatory power to the water-conflict nexus. This WPS work was further boosted by a [grant award from the UK government \(FCDO\)](#) to explore the causal pathways between climate change and conflict – aiming to extend the causal model prototype to a policy intervention model. Further data-driven outputs of interest include the [Climate Security Risk Assessment](#) developed for the 2021 IMCCS World Climate and Security Report.

Other climate-related projects in 2021 include the work HCSS completed for the [PROGRESS strategic monitor](#), which focused on developing a data- and game-driven approach that supports Dutch policy makers

to mainstream, manage, and monitor existing policies and programs relevant for addressing climate-related security challenges in hotspot countries of risk. HCSS also delivered results for “[Crowds and Machines](#)” – a demonstration project for the European Space Agency focused on using satellite imagery to develop and combine game-driven and machine learning methods and gain new insights into the relationship between observable trends from space on food security and political (in)stability. A follow-up project focused on scaling the “Crowds and Machines” approach in more locations was recently approved by the ESA and will be implemented in the first half of 2022. Finally, HCSS developed several updates to its climate security strategic game – allowing for the original tabletop version to be played online by up to hundreds of people. [Laura Birkman](#), [Ninoslav Malekovic](#), [Michel Rademaker](#), [Maarten Vonk](#), [Dorith Kool](#), [Irina Patrahau](#) and [Hugo van Manen](#) have all done extensive work on this topic this year.

Energy and resource scarcity are two other key research themes at HCSS. The world's distribution of natural resources impacts relations between countries and international companies, as energy security of supply is a priority for each government. Resource scarcity is becoming increasingly intertwined with the energy transition. As many countries around the world move toward a climate neutral energy system, the next decades will be characterized by a high degree of uncertainty driven by both a rapidly changing geopolitical landscape and the transition from an old fossil-fuel based energy system to a new low-carbon one. The increasing demand for critical raw materials within the energy transition has been a research theme of HCSS for over a decade. The minerals required for wind turbines in the North Sea and electric vehicles are often part of value chains largely controlled by China, leaving Europe in a vulnerable position.

The consequences of an increasingly integrated international gas market, extreme weather events and a rapid recovery after COVID-19 became apparent in 2021. The extreme price volatility led to security of supply concerns across the world. The first month of the winter came with record high gas prices. Such concerns will likely become a recurring theme over the next decades, as these will be dominated by the quick phase out of fossil fuels and slow development of sufficient renewable energy sources. HCSS analyzed the [natural gas supply security in Europe and in the Netherlands](#), focusing on increasing dependence on international markets, lack of strategic storage and a more assertive Russia. The latter's [unsustainable business model](#) brings uncertainty for Russia's role as an energy supplier in the long term. [Lucia van Geuns](#), [Jilles van den Beukel](#), [Irina Patrahau](#), [Michel Rademaker](#), [Joris Teer](#) and [Jeff Amrish Ritoe](#) all have done important work on these topics this year.



Climate Security: Reports, Papers and Snapshots

3.1.1. Report: Climate Security in Global Hotspots: Policy Options for the Netherlands

Authors: [Dorith Kool](#) and [Laura Birkman](#).

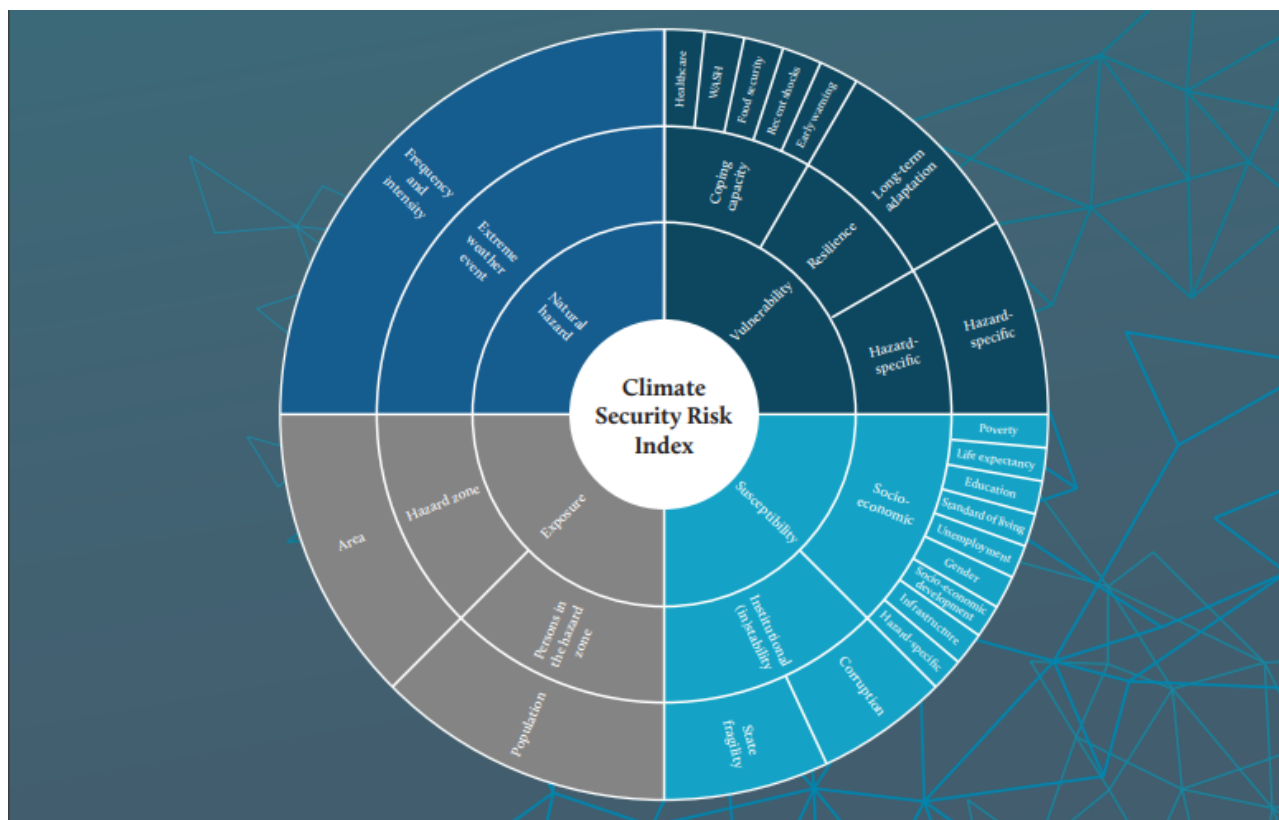
Contributors: Juliette Eijkelkamp and Marleen de Haan.

Historically, the security policy landscape was reserved for policies focused on protecting and enhancing national security, such as defense and border control. Today, security risks are not limited to traditional 'nation state' concerns but also include 'people' concerns: i.e., the social, economic, political, and environmental aspects of human life. Part of these new security risks are also those brought on by the global climate crisis. [The report](#) addresses these new and upcoming risks we face. It analyses from a Dutch perspective where the most relevant and feasible opportunities for international cooperation on climate-related security lie.

3.1.2. Report: Climate security assessment: A methodology and assessment of the nexus between climate hazards and security of nations and regions (January)

Authors: [Femke Remmits](#), Elisabeth Dick and [Michel Rademaker](#)

Climate Change is widely being recognized as a matter of national and international security as well as human security. Climate-related disasters such as floods, tropical storms, landslides and other extreme weather events are likely to occur more often as well as increase in scope. Natural hazards can and will pose substantial risks to overall human suffering, societal stability and security. [This report](#) presents a unique and innovative methodology for assessing climate hazards and security of nations and regions: the Climate Security Risk Index.



3.1.3. Snapshot: The Widening Arsenal of Terrorist Organizations: Environmental Terrorism on the Rise in the Middle East and North Africa (January)

Authors: Assistant Analyst [Femke Remmits](#) and [Bianca Torossian](#)

Environmental resources and related infrastructure have long been used as both an instrument and strategy of military conflict and terrorism. However, due to global trends, the unlawful use of environmental resources or systems to function as both a target and an instrument of armed conflict is growing in frequency and efficiency. [This snapshot](#) sheds light on the risk environmental terrorism poses in the Middle East and North Africa (MENA).

3.1.4. Essay: Acting Collectively: Why Climate Change Calls for Innovative Military Contributions and Collaboration (November)

Authors: [Femke Remmits](#) and [Michel Rademaker](#)

Even though NATO Allies are individually responsible for adapting to climate change impacts, there is consensus that the Alliance must also act collectively. Originally written for the [Atlantische Commissie](#), the [brief](#) explains why and how multilateral military cooperation has a critical role to play in a comprehensive response to climate change and its adverse impacts.

3.1.5. Snapshot: India's Climate Conundrum: Addressing the climate-food-poverty nexus in Odisha province (November)

Authors: Sneha Mahapatra and [Laura Birkman](#)

India is considered one of the most exposed and vulnerable countries to climate change and its devastating impacts in the world. Extreme heatwaves, drought, tropical cyclones, floods, irregular rainfall, and shifting monsoon patterns could lead India to deal with a myriad of social, political, economic and security challenges. Odisha province – one of India's poorest and most agriculture-dependent regions hit the hardest by climate change – is a case in point. [This snapshot](#) explains how the climate-food-poverty nexus in Odisha may be better managed to build resilience and avert disaster.

3.1.6. Completed reports under review – publication tentative in January 2022:

1. Water challenges and conflict dynamics in Southern Iraq: an in-depth analysis of an under-researched crisis*
2. Opportunities for change: Water governance and allocation in Iraq*
3. The Climate Change Security Nexus: Understanding the Pathways that Lead to Violent Conflict*

* note: titles are tentative

3.1.7. Video Pitches:

- [Climate & Security online game](#) – [Irina Patrahau](#) and [Michel Rademaker](#)
- [Crowds & Machines project pitch](#) – [Laura Birkman](#)
- [Climate & Security pitch](#) – [Dorith Kool](#)

Climate Security: Events and Conferences

HCSS experts participated in panels in the following conferences and events dedicated to the security implications of climate change in 2021:

- [Laura Birkman](#), EU Frontex: “Understanding the influence of climate change on Justice and Home Affairs, online, 16 February
- [Michel Rademaker](#), Climate Change, Intelligence, and Global Security Conference: Panel 2: The Role of Intelligence in Addressing Climate Change”, 23 March
- [Laura Birkman](#), WPS High-Level Climate and Security Roundtable, online, 22 April
- [Laura Birkman](#), 30th Economic Forum: “Influence of Climate Policy on Security Policy”, Karpacz, Poland, 8 September
- [Michel Rademaker](#), Warsaw Security Forum: Climate Security Strategic Game, Warsaw, Poland, 5-6 October
- [Laura Birkman](#), Azure Forum for Contemporary Security Strategy: Roundtable Climate Security, online, 28 October
- [Michel Rademaker](#), Dag van het Klimaatakkoord - Kritieke metalen voor de energietransitie: een circulaire aanpak
- [Laura Birkman](#), Sofia Security Forum / NATO: “Addressing Global Challenges: NATO’s approach to climate change”, Sofia/online, 17 November
- [Laura Birkman](#), International Institute for Security Studies: “Green Defence: Implications and Options for European Armed Forces”, Berlin/online, 9 December



Partnerships and Consortia

3.1.8. International Military Council on Climate and Security (IMCCS)

IMCCS World Climate and Security Report 2021 (June)

This past year, the International Military Council on Climate and Security (IMCCS) released its second [annual World Climate and Security Report](#), which warns of the compound security threats posed by the convergence of climate change with other global risks. The report reveals that the increasing pace and intensity of climate hazards will strain military and security services around the world as they are called on to respond to climate-driven crises, while also facing direct climate threats to their own infrastructure and readiness.



The authors also call on security institutions around the globe to act as “leading voices urging significantly reduced greenhouse gas emissions, given recent warnings about the catastrophic security implications of climate change under plausible climate scenarios.”

The report includes new and improved tools for tackling climate security – including a new risk methodology for tracking the change in global climate risks and an evaluation of nascent best practices for confronting these risks, within defense, diplomatic, and development entities.

3.1.9. Water, Peace and Security (WPS) partnership

The Hague Roundtable on Climate & Security

The 11th meeting of [The Hague Roundtable on Climate & Security](#) was held online on 22 April 2021, co-hosted by the Water Peace and Security partnership (WPS) and the Netherlands Ministry of Foreign Affairs. Some 150 participants joined the 1.5-hour panel discussion on Building a transatlantic coalition for climate action on water and security challenges in countries of risk.



Report: The Impact of COVID-19 on water stressed Iraq (March)

Authors: [Laura Birkman](#), [Dorith Kool](#) and Giorgio Berti

The consequences of the COVID-19 pandemic in Iraq, in parallel with the country's water issues, are exacerbating existing health, economic, socio-political, and security challenges. [This brief](#) outlines the ways in which COVID-19 interacts with and impacts these four pressing and interrelated challenges. The analysis focuses on the impacts on Iraq as a whole and the four provinces selected for further engagement by the WPS partnership: Basrah, Dhi-Qar, Wasit, and Missan. It also looks at the broader set of considerations on the need for an integrated approach for addressing water, security and health challenges in the country.

Energy, Food and Resources

3.1.10. Report: Energie en Geopolitiek (“Energy and Geopolitics”) (June)

Author: [Rob de Wijk](#)

Even if all sustainability policies are implemented, global gas consumption will still increase by 30 percent, with the largest increase in South and East-Asia, [this report](#) analyzes. This growing dependence on gas also has geopolitical consequences. In addition, global oil use will only decline after 2030. This means that the consequences of the energy transition in Europe will be limited until 2030. Even the successful deployment of green technologies entails new dependencies, for example on rare earth minerals from China. The Netherlands cannot escape the geopolitics of the energy transition. In fact, the scaling down of gas extraction in Groningen has only increased the dependencies and made the Netherlands more vulnerable to political pressure from outside.

3.1.11. Report: Internationale Ontwikkelingen en de Nederlandse Energietransitie (“International Developments and the Dutch Energy Transition”) (June)

Authors: [Jilles van den Beukel](#) and [Lucia van Geuns](#)

As more countries move towards green energy, they will also face challenges, including security of supply and the need for a reliable backup system, the authors warn in [this report](#). At the same time, during the transition, Europe will enter a phase where it is highly dependent on foreign fossil fuels, while producing very little itself. But even if the dependence on foreign fossil fuels decreases, that on rare earth metals, for example from China, will increase. All these factors paint an uncertain picture of the future energy transition in which energy and geopolitics remain closely linked, even in a fossil-free future.

3.1.12. Paper: Gas Supply Security in the Netherlands (March)

Authors: [Lucia van Geuns](#) and [Irina Patrahau](#)

The decline in domestic gas production has resulted in the Netherlands, once a self-sufficient country, becoming increasingly dependent on imports of natural gas from Russia and of LNG from the US and Qatar, among others. While the economic consequences of Dutch import dependency have been widely discussed, [this paper](#) gives particular attention to geopolitical and environmental concerns from the perspective of the Netherlands. A purely economic approach fails to consider a significant array of risks associated with gas dependence, necessitating a multi-vector approach to analyzing gas security in the Netherlands.

3.1.13. Paper: De Afnemende Leveringszekerheid van Aardgas (The declining security of supply of natural gas in the Netherlands) (October)

Authors: [Jilles van den Beukel](#) and [Lucia van Geuns](#)

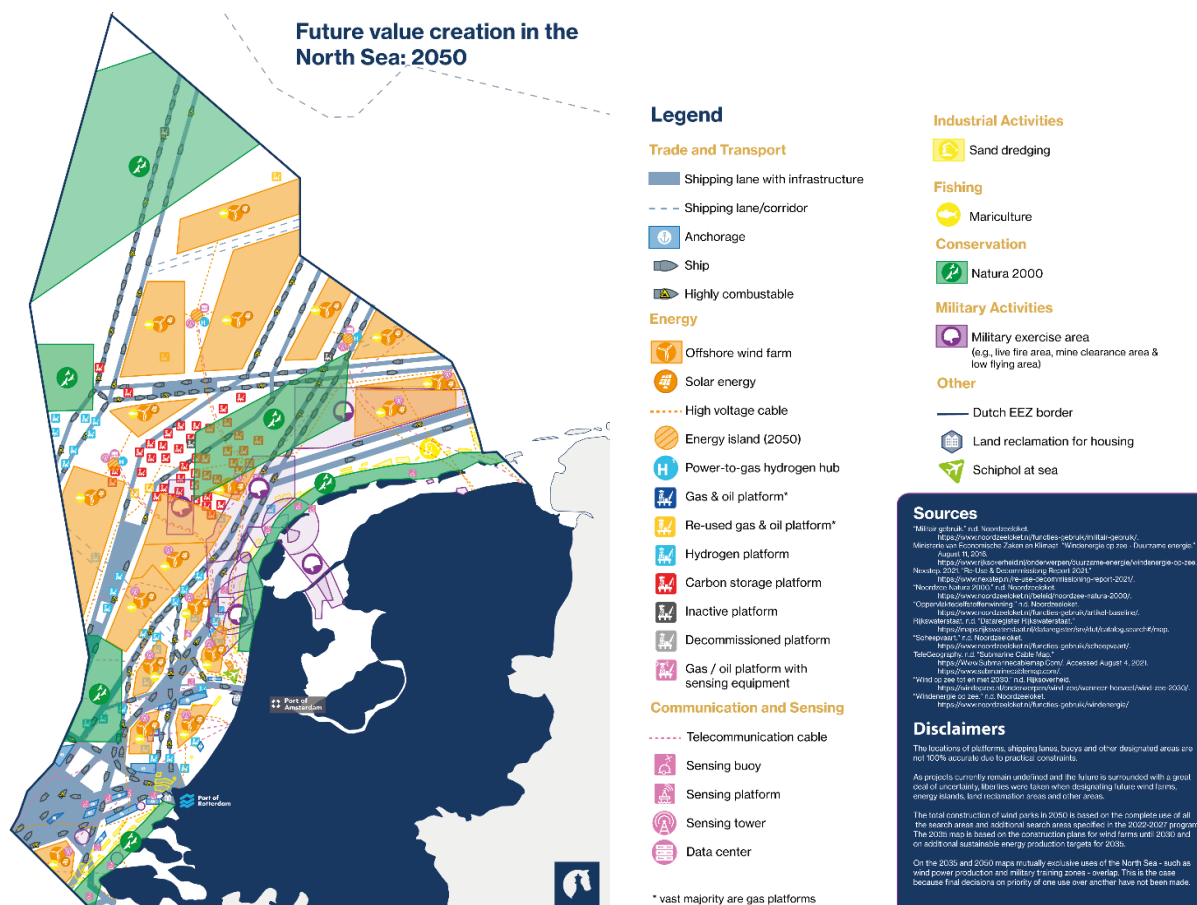
By taking out gas production in Groningen, security of gas supply is no longer a given, especially during tight gas markets. In this new [HCSS study](#), [Jilles van den Beukel](#) and [Lucia van Geuns](#) present several recommendations on how the government could respond to this.

The release of the short paper on the declining supply security gained significant media attention: Dutch news outlet [NOS](#) referenced the publication. The article reiterates the main message of the HCSS publication. The authors conclude: if no action is taken, there will not be enough gas to get through the winter. In an interview with [NPO Radio1 Jilles van den Beukel](#) discusses the far-reaching consequences of ending gas extraction in Groningen.

3.1.14. Report: The High Value of the North Sea

Authors: [Frank Bekkers](#), [Joris Teer](#), [Dorith Kool](#), [Lucia van Geuns](#), [Patrick Bolder](#), [Irina Patraha](#) and Max Sarel (Assistant Analyst).

Towards 2035 and especially to 2050, the North Sea will become even more integral to the functioning of the Dutch economy. With the proliferation of wind parks, undersea high-voltage and telecommunication cables, the continued importance of pipelines, the growth and diversification of highly combustible and autonomous shipping, and the construction of energy-islands the value of the North Sea continues to rise. In BNR De Strateeg, author of [the North Sea report](#) Joris Teer outlined the changes and challenges that will determine our exploitation of the North Sea in decades ahead.



3.1.15. Report: Russia's Unsustainable Business Model (January)

Authors: [Jilles van den Beukel](#) and [Lucia van Geuns](#)

From a political point of view Putin's position may look strong. Within Russia no major challenges to his administration have appeared yet. From an economic point of view Putin's position does not look strong at all. Over the last decade, Russia's share of the global GDP has almost halved. Its economy remains heavily dependent on oil and gas revenues. Whilst the western world is moving away from fossil fuels, Russia is doubling down on oil and gas. Over the last decade upstream investments in Russia have tripled and as a result the decline of Western Siberian giant oil fields was temporarily halted. This business model, going all in on oil and gas, is not sustainable, [this report](#) concludes.

3.1.16. Report: Tank storage and global energy landscape (September)

Authors: [Jilles van den Beukel](#), [Lucia van Geuns](#), [Irina Patrahau](#) and [Michel Rademaker](#) (Project Leader)

The Dutch Association of Tank Storage Companies (VOTOB) is engaging in a broad set of activities to strengthen its strategic capacity. The changing energy landscape and the push for decarbonization is likely to shift international value chains of fuels and chemicals. At the same time, the increasing use of renewable energy sources is likely to create its own dependencies, for instance on rare earth minerals from China.

The tank storage sector has a role to play in this transition, but this depends on a number of social, political, and financial factors, and the extent to which governments can fulfil the goals set by international climate agreements. The purpose of [this paper](#) therefore is to provide a better understanding of how the rapidly changing global context will impact the (European) tank storage sector and draw some first conclusions for the way forward.

3.1.17. Essay: The new Great Game: Securing critical minerals today for a clean energy system tomorrow (August)

Author: [Jeff Amrish Ritoe](#) (Guest Author). Editor: [Michel Rademaker](#)

The energy transition will require a 400% increase in demand for critical minerals to meet green energy demands, with the vast majority of that demand coming from clean energy applications like electric vehicles and stationary energy storage using batteries. This has set in motion a "New Great Game" to secure critical minerals for the energy transition. [This paper](#) details the steps Europe needs to take to secure an undisrupted supply of the raw materials that are needed to produce clean energy applications and the geo-economic and geopolitical complications that arise from this "New Great Game."

3.1.18. Essay: Batteries require battery minerals, should Europe ramp up its efforts to secure them (April)

Author: [Jeff Amrish Ritoe](#) (Guest Author)

In order to meet the targets it has committed itself to under the Paris Climate Agreement, the EU aims to produce 10 million electric vehicles for the EU market by 2030. In order to achieve this goal however, it must drastically ramp up its efforts to secure the rare earth minerals required for batteries. This brings with it a host of geo-economic and geopolitical challenges. [This paper](#) describes the impact that battery minerals have on the production costs of Lithium-ion battery (LiB), how this echoes through the entire LiB supply chain and eventually the EU's chances to create a mass market for electric vehicles on European soil.

3.1.19. Report: De Nederlands-Chinese Agri-Food praktijk (Dutch-Chinese Agri-Food Practice) (September)

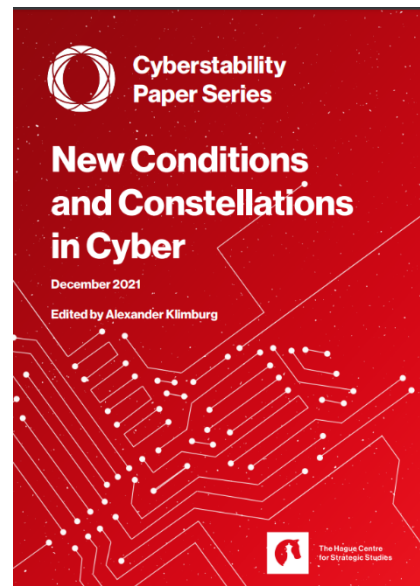
In close collaboration with the Ministry of Agriculture, Nature and Food Quality, HCSS organized two round tables on the relationship between the Dutch agri-food business and China. The results of the discussion have been processed anonymously in [this paper](#) and several observations have also been made. The results are described in such a way that they are expected to contain action-oriented perspectives for the participants and the ministry.

4. Cyber Policy and Resilience

Bridging Cybersecurity and Statecraft

The Cyber Policy and Resilience Program bridges the rapidly evolving field of cybersecurity with traditional statecraft, drawing on a strong academic foundation merged with professional experience. Cyberspace is increasingly a key domain for both domestic and international policy making, with cybersecurity being one of the most versatile and pressing challenges. Cyber operations are taking a leading role in conflicts between states and recently the risk of major cyber incidents between nation states has been described as a major threat in national security strategies. Throughout 2021, cyberattacks against critical infrastructure continued to take place, such as the one against U.S. Colonial pipeline thereby disabling a large share of the oil supply to the American East Coast.

Both bilateral and multilateral interstate discussions have attempted to address some of the risks involved in advertent escalation as well as loss of escalation control. Most notably the United Nations Open-Ended Working Group and the Group of Governmental Experts managed to re-establish interstate consensus on responsible state behavior and incorporated proposals from the [Global Commission on the Stability of Cyberspace \(GCSC\)](#) – an HCSS initiative that issued eight norms that proscribe responsible behavior. Finally, digital technologies also offer adversaries tools to disseminate disinformation and conduct large-scale influence operations that continued to undermine democratic processes and the roll-out of the Covid-19 vaccines. The focus areas for 2021 include cyber diplomacy, through the [GCSC](#) and the [Sino-European Cyber Dialogue \(SECD\)](#), cyber deterrence, digital strategic autonomy, and European counter-disinformation measures. The following directors, analysts and subject matter experts contributed to the cyber program: [Tim Sweijts](#), [Michel Rademaker](#), [Louk Faesen](#) and [Alexander Klimburg](#).



4.1.1. The Global Commission on the Stability of Cyberspace (GCSC)

The [Global Commission on the Stability of Cyberspace](#) is an HCSS initiative that develops proposals for norms and policies to enhance international security and stability and guide responsible state and non-state behavior in cyberspace. After the launch of its final report “[Advancing Cyberstability](#)” in November 2019, HCSS and the GCSC members continued to promote its proposals at international organizations, capitals of government, industry, and civil society.

To this end, the GCSC norms have already achieved success. [The Paris Call for Trust and Security in Cyberspace](#) - a high-level declaration of President Macron with over 1000 supporters from state, industry and civil society actors - endorsed six of the eight GCSC norms, including the flagship norm to protect the public core of the Internet. This norm has also been [embedded into EU policy and law through the Cybersecurity Act](#), which extends the mandate of ENISA to include the protection of the public core of the internet. Furthermore, the GCSC norms were heavily featured in the UN norm-making processes, aimed at advancing responsible state behavior in cyberspace. In particular, the 2020-2021 final reports of the [UN Open-Ended Working Group](#) (OEWG) and [UN Group of Governmental Experts](#) (GGE) incorporated two GCSC norms, namely the protection of the public core of the internet and electoral infrastructure. In view of ambiguous interpretations of the public core norm suggesting that states must act as guarantors of the public core, the GCSC issued a [statement](#) in which it clarified that this is a norm of restraint or non-intervention largely oriented towards states and their affiliates, whose activities pose the greatest risk to the public core.

The GCSC and its work have also been highlighted by former [German Chancellor Angela Merkel](#), father of the Internet [Vint Cerf](#), the latest [EU Cybersecurity Strategy](#), the [2020 Internet Governance Forum](#), and by [academia](#). This is just a small sample of its success and references – to find out more, visit www.cyberstability.org.

4.1.2. Cyberstability Paper Series

In 2021, the Hague Centre for Strategic Studies and the Secretariat of the GCSC, launched the first [Cyberstability Paper Series on "New Conditions and Constellations in Cyber"](#) - a series of twelve papers from leading experts that were released on a rolling basis throughout the year, culminating in an [edited volume](#). Since the release of the final GCSC report in November 2019, the concept of cyberstability has continued to evolve. A number of new ‘conditions’ are emerging: new agreements on norms, capacity building and other stability measures. The constellation of cyber initiatives is expanding, underlining the need to connect the traditional state-led dialogues with those of the Internet communities. Gaps continue to close, not only between the global north and south and between technology and policy, but also between the stability in and of cyberspace.

	Title	Authors
1.	The Evolution of the UN Group of Governmental Experts on Cyber Issues: From a Marginal Group to a Major International Security Norm-Setting Body	Heli Tiirmaa-Klaar, Ambassador for Cyber Diplomacy at the Estonian Ministry of Foreign Affairs
2.	From Confrontation to Consensus: Taking Stock of the OEWG process	Ambassador Jürg Lauber, Chair of the first UN Open-ended Working Group on developments in the field of information and telecommunications; and Lukas Eberli, Second

		Secretary for Cybersecurity at the Permanent Mission of Switzerland to the United Nations
3.	Cybersecurity, Internet Governance, and the Multistakeholder Approach: The Role of Non-State Actors in Internet Policy Making	Wolfgang Kleinwächter, Professor Emeritus from the University of Aarhus, and GCSC Commissioner
4.	When Internet Governance Meets Digital Cooperation: Navigating IGF Growth and Development in the Context of an Evolving Internet Governance Ecosystem	Anriette Esterhuysen, Chair of the Multistakeholder Advisory Group of the United Nations Internet Governance Forum; and Wim Degezelle, Internet Policy Analyst and Consultant
5.	Routing Without Rumor: Securing the Internet's Routing System	Danny McPherson, Executive Vice President & Chief Security Officer at Verisign
6.	Prioritizing Capacity Building as a Foundation for Cybersecurity and Stability	Christopher Painter, President of the Global Forum on Cyber Expertise
7.	Disconnecting from Cyberstability: An Assessment of how Internet Shutdowns in the Democratic Republic of Congo, Tanzania and Uganda Undermine Cyberstability	Moses Owiny, Founder and CEO of the Centre for Multilateral Affairs; and Sheetal Kumar, Senior Programme Lead at Global Partners Digital
8.	Digital Transformation and Cyberstability: Effects on Economic Development in Africa	Prof Bitange Ndemo, Professor of Entrepreneurship at the University of Nairobi
9.	Is There Space for a Digital Non-Aligned Movement?	Latha Reddy, Co-Chair of the Global Commission on the Stability of Cyberspace, Former Deputy National Security Advisor of India; and Anoushka Soni, National University of Juridical Sciences, Kolkata
10.	Closing the Gap: Expanding Cyber Deterrence	Michael Daniel, CEO of the Cyber Threat Alliance
11.	A Chinese Perspective on the Future of Cyberspace	Peixi Xu, Professor & Director of Global Internet Governance Studies Center, The Communication University of China
12.	Pro and Contra: The Incidents at Sea Agreement is a Poor Model for Cyberspace	Benjamin Bahney Senior Fellow, Lawrence Livermore National Laboratory's Center for Global Security Research (CGSR); Jonathan Reiber, Senior Director for Cybersecurity Strategy and Policy, AttackIQ; and Brandon Williams, Cybersecurity postdoctoral Fellow, Lawrence Livermore National Laboratory's Center for Global Security Research (CGSR)
13.	Pro and Contra: Transposing the Incidents at Sea Agreement - A Thought Experiment	Dr. Alexander Klimburg, Director of the Global Commission on the Stability of Cyberspace Initiative and Secretariat

4.1.3. Sino-European Cyber Dialogue (SECD)

The Ninth meeting of the Sino-European Cyber Dialogue (9SECD) was convened in a hybrid format on 12 and 13 October 2021 in Berlin. The meeting was hosted by The Hague Centre for Strategic Studies (HCSS) and the [China Institutes of Contemporary International Relations \(CICIR\)](#), with the support of the German Federal Foreign Office. The ninth meeting represented an important milestone as one of the longest-running track-2 meeting format on cyber policy worldwide. SECD is a track-2 dialogue on cyberspace issues supported by the Chinese and several European governments, as well as the European External Action Service (EEAS). The dialogue is a confidence-building measure that increases transparency and mutual understanding on the European and Chinese cyber policies. Previous meetings have taken place in Beijing, Geneva, Hangzhou, Oslo, and The Hague. Despite the challenging Covid-19 circumstances, the meeting in Berlin was attended by more than 50 Chinese and European academics and government officials, including many European Cyber Ambassadors, the EEAS, as well as a number of Chinese ministries and organizations.

4.1.4. Paris Call for Trust and Security in Cyberspace

HCSS, as the GCSC Secretariat, has initiated a Community of Interest on protecting the public core of the Internet under the auspices of the [Paris Call for Trust and Security in Cyberspace](#). This concerted multistakeholder initiative gathered committed supporters for the general principle of protecting the public core in a regular working group ([RightsCon Online 2020 Webinar \[video\]](#) and [2020 Internet Governance Forum Panel \[video\]](#)).

In 2021, HCSS, together with [CyberPeace Institute](#) and [Geopolitique de la datasphere \(GEODE\)](#), also co-chaired the Paris Call for Trust and Security in Cyberspace Working Group 5 "Building a Cyber Stability Index". The [final report](#) presents a methodology to evaluate the evolution of cyberstability and identify best practices that could contribute to global cyberstability. HCSS will continue its work on cyberstability and cyber transparency through the forthcoming Cyber Arms Watch project, which will seek to identify how transparent states are about their offensive cyber capabilities.

4.1.5. Consortium supporting the EU Cybersecurity Certification Framework

HCSS is a partner in a consortium selected by ENISA to offer support for the European Union Cybersecurity Certification Framework that is set out in the EU Cybersecurity Act. The consortium provides both an understanding on how to best segment markets with the technical expertise to guide best practice and on how to best harmonize standards to various markets.

4.1.6. Cybersecurity Summer Schools

HCSS is an active partner of consortiums organizing summer schools specifically dedicated to cybersecurity, including the [International Cybersecurity Summerschool](#) and [Indo-Dutch Cybersecurity School \(IDCSS\)](#). In October 2021 the 4th edition of the IDCSS took place with a record 1150 students and young professionals participating in 20 lectures on a wide array of cybersecurity subjects such as Accountability for Cyber Security, Cybersecurity and AI or Ransomware. The students also had the chance to work on one of six challenges in a team, which allowed them to gain a deeper knowledge and understanding of complex cybersecurity issues such as the prevention of ransomware attacks or deepfakes. The IDCSS 2021 was concluded by each team presenting their solution, and each student was rewarded a certificate for their participation or achievements in the Cyber School. The next edition of the IDCSS will take place in autumn 2022.

Counter-Disinformation

4.1.7. Report: Red Lines & Baselines: Towards a European Multistakeholder Approach to Counter Disinformation

Authors: [Louk Faesen](#), [Alexander Klimburg](#), Simon van Hoeve (Assistant Analyst), [Tim Sweijs](#).

Introductions by Dennis Broeders, [Alexander Klimburg](#), Frederick Douzet, Chris Marsden and Trisha Meyer.

Disinformation continues to exacerbate existing political polarizations with effects ranging from discrediting measures against the COVID-19 pandemic to inciting mass violence against the very institutions of democracy itself. Governments, industry, and civil society are struggling to find effective ways to respond to this challenge. Nonetheless, 'rules of the road' are needed. Given the relative success that cyber norms have had in establishing a common standard of acceptable behavior, [this report](#) asks what kind of international norms can be developed to counter disinformation. And finally, how can these norms be advanced? In this report we propose a coregulation model and a Disinformation Sharing and Analysis Center (DISINFO-ISAC) at the European level.

Shortly after the report release, HCSS hosted a virtual panel discussion on the report with a [video address from Věra Jourová](#), Vice President of the European Commission for Values and Transparency. The research gained further attention on the EU level as [Louk Faesen](#) presented on the role of norms and countermeasures to shape hybrid conflict during the Council of the EU Horizontal Working Party on Enhancing Resilience and Countering Hybrid Threats. Additionally, the European Parliament Special Committee on Foreign Interference in all Democratic Processes in the EU, including Disinformation (INGE), hosted a hearing on economic damage of foreign interference. [Louk Faesen](#) was invited to present a concrete proposal for better public-private cooperation to counter disinformation: A European Information Sharing and Analysis Center for disinformation (or a DISINFO-ISAC).



Strategic Digital Autonomy

4.1.8. Report: Sovereiniteit en Digitale Autonomie ("Sovereignty and Digital Autonomy") (February)

Authors: [Louk Faesen](#), Tom van Schie (TNO), [Michel Rademaker](#), Paul Timmers (European University Cyprus) and Matthijs Veenendaal (TNO)

Europe's dependence on foreign technology has led to a discussion about sovereignty and digital autonomy, which includes multiple perspectives: legal protection, security, education and economics. While this discussion was enthusiastically held in Brussels, the debate seemed to be lacking in the Netherlands. For this reason, in January 2021, The Hague Center for Strategic Studies and TNO organized a workshop with experts from industry, academia and government to address this discussion. The findings and recommendations of that workshop are explained in detail [in this report](#).

4.1.9. Report: Whitepaper Strategische autonomie op cybersecurity ("White Paper on Strategic Autonomy in Cybersecurity") (January)

Authors: Matthijs Veenendaal (TNO), Tom van Schie (TNO), [Michel Rademaker](#) (HCSS) [Louk Faesen](#)

The increasing geopolitical instability in the world have led to Europe realizing its dependence on foreign raw materials, products and services. This has led to many EU initiatives to strengthen its strategic autonomy, especially in the field of digital technologies. However, underinvestment threatens the strategic position of the Netherlands and the EU as the future of the digital domain is largely shaped and managed by non-EU parties. In order to continue to guarantee strategic autonomy for the long term, the Netherlands must invest heavily in its own innovation and competitiveness. This should be developed as much as possible in an EU context, [this report](#) concludes.

Cyber Policy: Events and Conferences

- [IGF 2021 Open Forum "Non-interference with the Public Core of the Internet: Next Steps after the OEWG and GGE"](#)

The event explored the adoption of the GCSC norm on non-interference with the public core of the internet in the OEWG and GGE reports. In particular, the OEWG interim consensus amounted to an acceptance that a basic "critical information infrastructure" existed that was common to all, and that could be described as global public good. Some might say that this was a potential redefinition of the public core away from its former heritage of mankind role. The session questioned whether the OEWG report represents a step forward, sideways or back, and explored potential next steps to capture the spirit of the norm and what the Internet governance community can do to this end.

- [Advancing Norms to Counter Disinformation: From Formulation to Implementation](#)

This virtual event convened European stakeholders from government, industry and civil society to launch the new HCSS report on the role of norms to counter disinformation. After a video address from Věra Jourová, Vice President of the European Commission for Values and Transparency, the panelists discussed the viability of intergovernmental norm proposals and an industry charter with standards for social media platforms to counter disinformation. We asked how a European

coregulation model can advance an industry charter from formulation to implementation. To this end, a European Disinformation Information Sharing and Analysis Center (DISINFO-ISAC) is considered to facilitate treat information sharing and capacity building across social media platforms, with government and civil society involvement.

- [Louk Faesen presents DISINFO-ISAC before European Parliament Special Committee on Foreign Interference](#)

The European Parliament Special Committee on Foreign Interference in all Democratic Processes in the EU, including Disinformation (INGE), hosted a hearing on economic damage of foreign interference. In line with the mandate of the Special Committee to investigate foreign interference and suggest remedies, Strategic Analyst [Louk Faesen](#) was invited to present a concrete proposal for better public-private cooperation to counter disinformation: A European Information Sharing and Analysis Center for disinformation (DISINFO-ISAC). The DISINFO-ISAC is proposed as a distinct instrument to facilitate information exchange primarily between social media platforms, but also with government agencies, and civil society, as well as to improve the capacity of smaller industry members.

- [Louk Faesen presents on the role of norms and countermeasures in shaping hybrid conflict before the Council of the EU Working Party on Hybrid Threats](#)

The Council of the EU Horizontal Working Party on Enhancing Resilience and Countering Hybrid Threats hosted a meeting during which Strategic Analyst [Louk Faesen](#) presented on the role of norms and countermeasures to shape hybrid conflict. This presentation was based on HCSS the report series "[From Blurred Lines to Red Lines: How Countermeasures and Norms Shape Hybrid Conflict](#)".

- [De Strategie: Het Europese gevecht tegen desinformatie \("The Strategist: Europe's fight against disinformation"\)](#)

Brexit and the election of Donald Trump showed the impact that the spread of disinformation can have on society. Over five years later, nothing seems to have changed. This is evident in the corona pandemic, among other things, during which Russia and China, in particular, made frantic attempts to spread disinformation about the virus, especially about how to deal with it. In the podcast's episode, Strategic Analyst [Louk Faesen](#) and MEP for RENEW Europe Bart Groothuis expanded on what Europe can do about it and explored whether the ball should be put in the court of governments or big tech companies. Are the latter two part of the solution or are they actually the problem?

- [DEF CON 29 - Policy Panels - "Hackers Into the UN Cyber Discussions on War and Peace" and "Rebooting Critical Infrastructure Protection"](#)

In 2021, Cyber Policy and Resilience Program Director [Alexander Klimburg](#) participated in two DEF CON Panels. In *Hackers Into the UN Cyber Discussions on War and Peace*, the panelists explored the outcomes of cyber diplomacy efforts at the UN, notably those of the OEWG and GGE, and attempted to investigate the role of non-state actors in these processes. The internet is not run by states, but rather by non-governmental volunteers, such as private companies, and civil society groups. The panel sought to identify how these actors can be further involved. In *Rebooting Critical Infrastructure Protection*, the evolution of Critical Infrastructure Protection is explored. Despite the number of institutions and processes encouraging more public-private cooperation and enhanced incident management and supply-chain protection, the number of cyberattacks has not decreased. Panelists investigate what are the lessons learned, what could be done and how the community can help.

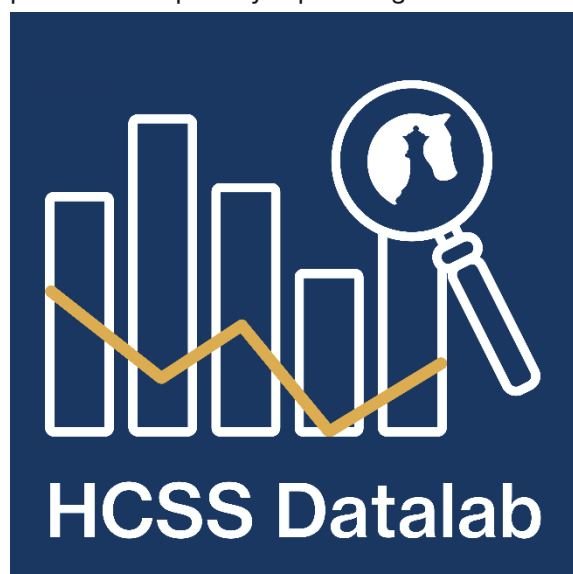
More on the work of the Cyber Policy and Resilience Program can be found [here](#).

5. HCSS Datalab

Strategic decision making is inherently subject to significant risk. Uncertainty makes it difficult to engage in long-term decision making, preventing your organization from taking bold action and from realizing its desired impact or potential. [The HCSS Datalab](#) allows clients to model complex phenomena, quantify and compare the impact of decisions, and understand risk. The Datalab's analytical capabilities are relied on and inform the decision making of hundreds of organizations.

Causal, Policy-Intervention & Predictive Models

In 2017 Artificial Intelligence researcher Ali Rahimi coined the term 'alchemy' when referring to his field. The idea behind the comparison is that current machine learning advances rely on 'trial and error' to the same degree as alchemists used to do in their time. With artificial intelligence becoming more important to us every day and now being integrating in the most crucial systems, the lack of understanding of the technical specifications and the missing interpretability underneath the produced algorithms could pose a real threat. In the context of international relations and geopolitical dynamics the explicability of artificial intelligence products is especially important given the sensitive nature of the results. One of the recent advances within



machine learning that addresses this concern is causal modelling. In causal modelling, unlike predictive modelling, models are developed to uncover the causal relations between variables. This gives rise to not only interpretability results of how causal mechanisms lie within geopolitical domains, but it also opens the door to create policy-intervention models. These policy-intervention models aim to find the optimal policy available to achieve policy objectives in multidisciplinary fields.

Given the importance of explicability and interpretability of artificial intelligence for policymakers, HCSS has started to build a framework for causal modelling in addition to continuous efforts of predictive modelling and monitoring. The goal of this framework is to open the 'blackbox' that normally lies underneath these predictive models and

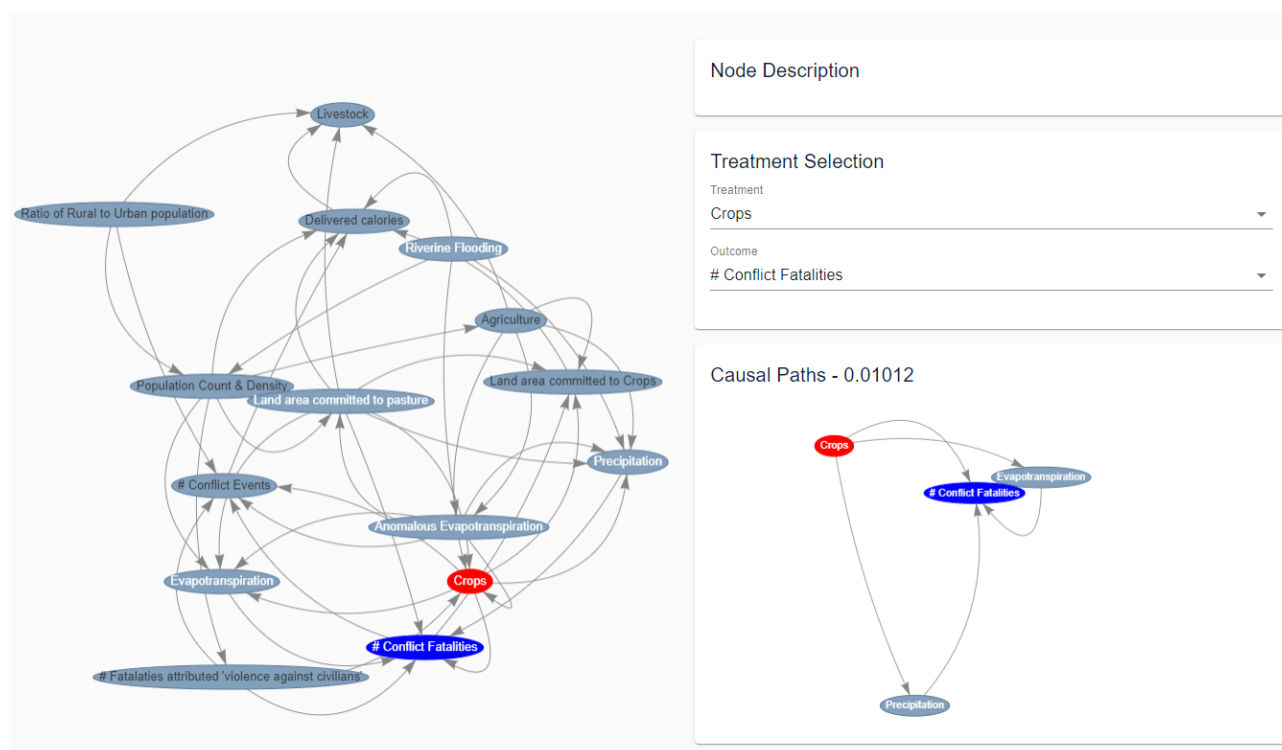
uncover the causal pathways that lead to predictive results. Together with Leiden University of Advanced Computer Science (LIACS), HCSS has made advances in developing these models even in the case of missing data (latent variables) and currently works on a multidisciplinary applicable model for policy interventions that can play a role in the future of geodynamics. To bolster the effectiveness of these models, [the HCSS Datalab](#) has acquired the competency to retrieve data from satellite images and geo-encoded maps.

The following directors, analysts and subject matter experts contributed to this program: [Tim Sweijjs](#), [Laura Birkman](#), [Hugo van Manen](#), [Ninoslav Malekovic](#) and [Maarten Vonk](#).

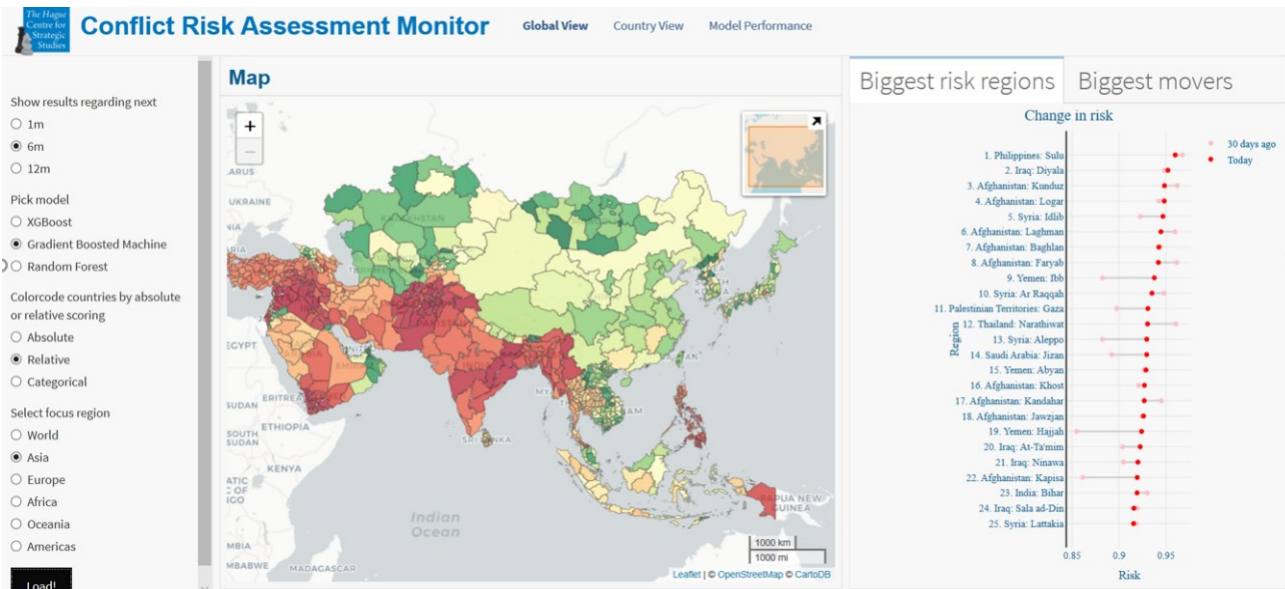
5.1.1. Application of models

The causal models have already been introduced in the realm of Water Peace and Security (WPS) project where the causal pathways that lead from water to conflict are uncovered. The causal effects of each of the water related variables on conflict outbreak and onset can be calculated. Analysts [Hugo van Manen](#), [Laura Birkman](#), [Ninoslav Malekovic](#) and [Maarten Vonk](#) worked on this.

Another application of these models is in the context of the International Military Council on Climate and Security seen in two reports ([Report 1](#) & [Report 2](#)). In this application an interactive monitor has been developed with on the one hand a prediction of the risk of several natural hazards based on impact and probability per country, but on the other hand also a quantification of the causal impact of these natural hazards on the outbreak and fatalities of conflict, exposing the water and food mediating variables that play a role in this causal pathway. With contributions by [Ninoslav Malekovic](#), Saskia Heyster, James Levell and [Maarten Vonk](#).



Currently, using data obtained from satellite images and geo-encoded maps, HCSS is working on a specific [causal model for Iraq](#). Together with local policymakers the Datalab will look for methods to extend the causal modelling models to a policy intervention model. HCSS analysts [Ninoslav Malekovic](#), [Maarten Vonk](#), [Hugo van Manen](#), [Laura Birkman](#), and [Tim Sweijjs](#) contributed to this.



Predictive models challenge the perceptions of policymakers and can help to combat groupthink.

With various machine learning techniques (XGBoost, Gradient Boost, Random Forest) a prediction is made of the risk of a conflict outbreak and onset on subnational level.

5.1.2. Where to next?

Although the policy intervention models are currently developed in the context of climate security, they are especially instrumental to describe the causal dynamics in cross disciplinary systems. The idea behind this is that causal pathways that lead to a policy-makers objective may vary over different disciplines. For example, if a policymaker goal is to have access to quantum computing related resources, he can achieve this by exerting economic pressure, while the policy intervention model may indicate that there is a causally more optimal way to access these resources by exploiting the adversary's strategic dependencies. In this way, the causal pathways of economy and strategic dependency are combined to derive optimal policies.

HCSS is happy to share its knowledge and expertise. Our analysts are available to provide commentary on geopolitics and international security for media and at events. You can regularly hear the insights of HCSS experts on national radio and TV programs such as *EenVandaag*, *Nieuwsuur*, *WNL*, *RTL Nieuws*, *Dit Is De Dag*, *Bureau Buitenland*, *BNR Nieuwsradio* and national newspapers and magazines such as *NRC*, *De Volkskrant*, *Algemeen Dagblad*, *Trouw*, *Financieele Dagblad*, the *Telegraaf*, *NU.nl* and *Elsevier*.

In 2021, Founder [Rob de Wijk](#) continued to write weekly columns in newspaper [Trouw](#) and co-hosted a popular [podcast](#) for BNR Nieuwsradio called Boekestijn and De Wijk. De Wijk regularly made appearances in Dutch Media such as [RTL News](#) and [WNL](#). Subject Matter Expert [Paul Verhagen](#) published an article in June in newsmagazine [Elsevier](#) on how the era of big corporations has come to an end. Strategic Advisor [Patrick Bolder](#) and Senior Strategic Analyst [Paul van Hooft](#) frequently contributed to interviews and opeds in [NRC](#), such as an article on the new arms race that is underway and how Europe is lagging behind.

In July, HCSS Strategic Analyst [Lotje Boswinkel](#) published an article [in International Affairs Today](#), the No. 1 ranked academic journal of international relations, together with Florence Gaub, Deputy Director of the EU Institute for Security Studies (EUISS). In “How the Gulf States are using their air space to assert their sovereignty”, Gaub and Boswinkel challenge the assertion that the Gulf States are lacking sovereignty. 2021 marks the end of the Afghan war.

During the process of recalling the Western troops from Afghanistan, [Han ten Broeke](#) spoke with [The Volkskrant](#) on the Dutch political position. Expert Peter Wijninga talked with [BNR Newsradio](#) on the situation in Afghanistan. [Joris Teer interviewed the Beijing Bureau Chief at the Economist](#) on the Future of European Businesses in China.

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If China Attacks Taiwan, What Will Europe Do?

Any decisions made in the event of a Chinese attack on Taiwan are likely to determine Europe's place in the world for decades to come.

By [Joris Teer and Tim Sweijs](#)
October 28, 2021

Image the following scenario: It's April 10, 2024 at 2:30 a.m. Dutch Prime Minister Mark Rutte convenes his cabinet to discuss an emergency request from the United States. After years of provocations, President Xi Jinping has acted: China is attacking Taiwan. President Joe Biden backs Taipei and sends the U.S. Seventh Fleet to the Taiwan Strait.

The risks are great. The situation is different from the crisis in 1996, when Bill Clinton ordered two carrier battle groups – at the time, the symbol of U.S. military dominance – sail through the Taiwan Strait to deter China. Beijing could do nothing but watch from the sidelines. This time, China has a home game advantage with its sophisticated missile arsenal threatening to sink U.S. aircraft carriers.



A Chinese J-16 fighter jet aircraft flies in Taiwan's ADIZ on October 4, 2021.
Credit: Republic of China (ROC) Ministry of National Defense

In both [NRC](#) and [the Diplomat](#), [Joris Teer](#) and [Tim Sweijs](#) presented a scenario to show that a Chinese-American conflict in East Asia would seriously hurt the US ability to credibly deter Russia in Europe. *If China Attacks Taiwan, What Will Europe Do?* the authors ask.

6.1.2. High-level Conferences and Meetings

Throughout 2021, HCSS directors, experts and analysts like [Han ten Broeke](#), [Tim Sweijts](#), [Jack Thompson](#), [Joris Teer](#) and [Paul van Hooft](#) engaged in conversations with the Dutch parliament and European government officials. In March, Senior Strategic Analyst [Jack Thompson](#) handed over the [Strategic Monitor](#) publication to Former Dutch Defence Minister Ank Bijleveld.

Further highlights include HCSS giving a [masterclass](#) for the Defence committee of the Dutch parliament. Director of Research [Tim Sweijts](#) and Senior Strategic Analyst [Jack Thompson](#) presented on the changing dynamic of conflict, its trends and implications and on the future of transatlantic relations. In June, Director Political Affairs [Han ten Broeke](#) interviewed French Defense Minister [Florence Parly](#) on what France, The Netherlands and Europe should derive from the NATO-summit, that was marked by a press release of a mere 79 paragraphs and American President Biden reassuring that the United States “are back”.

In November, Senior Strategic Analyst [Paul van Hooft](#) spoke at the [Tweede Kamer](#) on Open Strategic Autonomy, a theme that receives much attention from the Ministry of Foreign Affairs.

Our analysts frequently participated in conferences this past year. In February, [Tim Sweijts](#) presented at the [OSCE High-Level Military Doctrine Seminar](#). Later in the year, he delivered a keynote at [NATO Hybrid Threat Symposium](#) on “*Deterring Hybrid Threats – what do we need?*”. In September, Principal Scientist [Stephan De Spiegeleire](#) spoke at the [15th NATO Operations Research and Analysis Conference](#). In December [Joris Teer](#) participated in a panel on Taiwan as part of a workshop organized by the International Institute of Strategic Studies.



6.1.3. Documentary: Robotics and Autonomous Systems in the Dutch Army

HCSS), in collaboration with the Dutch Army, has developed [a documentary that explains the phenomenon of Robotic and Autonomous Systems \(RAS\)](#). We look at the way in which the Army is experimenting with RAS, how it can be applied in practice and the dilemmas and ethical issues involved. We show a nuanced and objective picture of the developments and the deployment of RAS within the Army, while also offering some counterbalance to the framing that RAS are all “Killerbots”. This documentary is part of a [two-year project](#) led by HCSS, which has led to various studies (including on Operational deployment, Ethical issues, Proliferation and Short-cycle innovation and Implementation) and numerous expert sessions and several podcasts in collaboration with BNR.

The documentary has been nominated for a *Gouden Reiger* Award for best commissioned film of the year. The winner will be announced in March 2022 during a red carpet event in Utrecht.

6.1.4. HCSS Digest

Every week, [the HCSS Digest](#) offers an easy-to-read roundup of all our latest publications and everything our analysts and experts had to say in the (inter) national media on the on geopolitics, global challenges and international security issues worldwide.



6.1.5. Studio HCSS

HCSS has developed a professional studio, with access to [broadcasting](#), [long-distance interviews](#), [high quality camera and sound recording](#), as well as prime studio lighting. It provides the ideal video spot in the political and administrative centrum of The Hague.

Over the past year we have welcomed Dutch media outlets such as *Empanada*, *Nieuwsuur*, *Goedemorgen Nederland* and *RTL Nieuws* in our office to record the expertise of our analysts, in addition to providing the space to additional outside organizations for the recording of their podcasts or video messages.

Once again, Studio HCSS welcomes you in 2022, and we look forward to creating more content with the stately Lange Voorhout lane in the background, creating a recognizable and iconic HCSS-setting.



6.1.6. BNR Nieuwsradio podcast “De Strateeg”

The new HCSS podcast series “[De Strateeg](#)” has been produced since March 2020 in collaboration with BNR Nieuwsradio. In this bi-weekly podcast, host Paul van Liempt discusses the latest developments in the field of geopolitics and international security with HCSS experts and other guests.

In 2021 we produced 24 episodes of De Strateeg. Topics discussed range from the COP26 climate conference to robotics and autonomous systems, from cyber security to the energy crisis, from the fall of Afghanistan to the new German Chancellor, and more.



6.1.7. HCSS in Numbers

This year, The Hague Centre for Strategic Studies published over 70 reports, snapshots and essays. Our analysts and experts appeared in the media more than 500 times. We produced 24 episodes of our podcast De Strategie, and appeared in many other podcasts, webinars and online seminars. Our staff and interns currently make up 10 different nationalities.

The publications with the most downloads in 2021 are (as of 21 December):

1. [De afnemende leveringszekerheid van aardgas in Nederland](#)
2. [China's Military Rise and the Implications for European Security](#)
3. [Russia's Unsustainable Business Model: Going All In on Oil and Gas](#)
4. [The Future of NLD SOF: Towards an All-Domain Force](#)
5. [Energie en Geopolitiek](#)
6. [Red Lines & Baselines: Towards a European Multistakeholder Approach to Counter Disinformation](#)
7. [Strategic Monitor 2020-2021 : Geopolitical Genesis](#)
8. [Taming Techno-Nationalism: A Policy Agenda](#)
9. [The High Value of The North Sea](#)
10. [EU Forum: The Future of European Strategy in a Changing Geopolitical Environment: Challenges and Prospects](#)

The most popular podcasts (excluding De Strategie) featuring our analysts in 2021 are:

1. [Bokestijn en De Wijk](#): Brexit, Next? Zwest!
2. [Jason Institute Podcast](#) with [Patrick Bolder](#): Autonomous Weapons: The Intricacies of Armed Drones
3. [Breekt BNR Podcast](#) with [Rob de Wijk](#): De EU moet Belarus genadeloos hard afstraffen
4. [Studio Energy Podcast](#) with [Jilles van den Beukel](#): Blik op Olie en Gas
5. [EY Podcast](#) with [Paul Verhagen](#): Quantum Computing and Cybersecurity
6. [Podcast Pallas Athena A](#) with [Tim Sweijts](#): Deterrence
7. [Podcast In Retrospect](#) with [Rob de Wijk](#): "Techno-Nationalism" and the US-China Technological Battle
8. [Bokestijn en De Wijk](#): Het decadente westen
9. [Podcast "Naar het Osten!"](#) with Helga Salemon: Eigen volk laatst, spoetnikvaccin moet EU platspuiten
10. [De Atlantische Blik](#) with [Dorith Kool](#): China and Peacekeeping in Africa

6.1.8. About HCSS

The Hague Centre for Strategic Studies (HCSS) was established in 2007 as an independent think tank with a small team of senior experts. It is now an established research institute in Europe with over 25 researchers that cover global governance and geopolitics; international security and defense; climate, energy and resources; and cyber security. Our mission is to transform global challenges of today into solutions for tomorrow.

HCSS works with clients from both the public and private sectors. We conduct research commissioned by both national and international organizations but also carry out research projects with the financial support of grant giving foundations. In addition to being trusted advisor to various governments, HCSS provides analysis to international organizations including the European Commission and NATO.

HCSS conducts its activities independently and in collaboration with its global network of affiliated experts. HCSS products are diverse: [full-fledged reports](#), issue briefs, quick topic reports, serious games. Our products often consist of strategic surveys, trend and scenario analyses, risk assessments, geopolitical and regional security analyses, operational evaluations, and policy briefs. We create [models and monitors](#) for public and private organizations to improve their situational awareness and provide them with a better understanding of their strategic environment. We also compile, collate and generate new datasets, design tailor-made analytical frameworks and build fully interactive web interfaces. Our in-house competencies include predictive modelling using both structural and dynamic data, web scraping, text mining, advanced internet search techniques and data visualization. HCSS experts are regularly asked to offer commentaries in global media outlets.

HCSS is also a platform for the exchange of ideas and development of new concepts and strategic insights. It regularly hosts symposia and roundtables where experts and stakeholders from government, research, society and industry convene to discuss pressing issues along different areas of interest. A recent example of a larger initiative is [the Global Commission for the Stability of Cyber Space](#).

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