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A Transatlantic Agenda for Homeland Security and Resilience Beyond COVID-19

Anna Wieslander (ed.)

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Table of Contents

Foreword

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More than a year after the start of the COVID-19 outbreak, it is clear that the pandemic has had devastating human, social, and economic consequences around the world. It affected every aspect of society and revealed a broad lack of resilience, as well as highlighted weaknesses in our ability to coordinate measures across sectors and national borders. While yet unexplored consequences of COVID-19 will emerge for many years to come, other societal threats are also surfacing, or reemerging, and becoming increasingly urgent. Simultaneously tackling trans-border threats, such as foreign influence, cyberattacks, violent extremism, and climate change, require strong and purposeful international cooperation. The transatlantic nexus is bound to lead in these wider, multilateral offensives.

On January 28, 2021, the Swedish Civil Contingencies Agency (MSB) and the Atlantic Council invited thought leaders and experts to a virtual roundtable, "A Transatlantic Agenda for Homeland Security and Resilience Beyond COVID-19," to discuss underlying and emerging challenges to resilience, security, and science and technology. The participants explored how the future of homeland security across borders will, should, and can be shaped.

The results from the workshop are documented in this report, which will form the basis for important transatlantic research and development projects in the coming years. With joint effort, the important work of reducing societal vulnerabilities, while working to strengthen societal resilience to novel threats, will continue. Many thanks to the contributors for the thought-provoking panel discussions, to the excellent moderators for their guidance, and to the Washington- and Stockholm-based staff of the Atlantic Council for their professionalism.

Introduction

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The ongoing COVID-19 pandemic has disclosed the importance of **resilient power**—a society's capability to absorb unexpected major shocks, handle and adapt to these, and then, most importantly, bounce back from them.

As the pandemic still rages, **endurance** has become a major challenge for individuals, institutions, companies, and societies. It emphasizes another dimension of resilience: it is not only about how fast society is able to bounce back and recover at a certain moment, but also how it can withstand repeated shocks over time. Strong resilience implies a high level of endurance.

The outbreak of COVID-19 challenged fundamental aspects of many established resilience strategies and highlighted previously overlooked vulnerabilities, such as global supply chains, especially in the health sector. At the start of the outbreak, these supply chains suffered critical disruptions, as they were designed for a global "just-in-time" approach and left no room for stockpiling.

The pandemic brought the notion of **solidarity** to the forefront and exposed the connection between strong resilience and solidarity in open societies. Solidarity was repeatedly tested within and between nations, as well as between different parts of society. Fragmentation and competition flourished amid weak resilience and discouraged tendencies toward cooperation, despite potential gains.

To successfully handle modern challenges to homeland security and resilience, there is no way around efficient cooperation. For resilience to be strong, it must be developed not only among states but also in partnership with the private sector, as resilience must be ensured for individuals, communities, private businesses, and public institutions, and at all levels of authority.

The pandemic is accelerating well-known threats and challenges that no actor can handle alone. For instance, according to the United Nations' World Food Program, there has been as sharp increase in people facing acute food insecurity due to COVID-19. Limited access to food, in combination with rising unemployment and a global economic recession, could in turn lead to conflict and violence. Food security is also closely connected to the greatest long-term threat to modern societies—climate change. Extreme weather driven by climate change, including droughts, fires, floods, heat waves, and hurricanes, continues to inflict severe consequences on society, generating enormous financial costs, forcing people to move or migrate, and overwhelming the capacities of many ecosystems.

Furthermore, the pandemic has heightened other threats to modern societies, including disinformation, cyber operations, attacks on election systems, and social media manipulation. Ultimately, these threats are targeted to undermine democracy itself. They differ in character, magnitude, and scope, but are often non-military.

As societies face the prospect of handling all these interrelated challenges simultaneously, traditional policies and strategies for homeland security and resilience must be reevaluated to address current conditions and incorporate lessons learned from COVID-19. The role of **science** is central in this regard, as it provides for a fact-based approach to policy solutions, and new policy must prioritize support for research, training, and enhanced practices in the scientific community.

This report is the result of a half-day online workshop, "A Transatlantic Agenda for Homeland Security and Resilience Beyond COVID-19," held on January 28, 2021. This report aims to help shape a transatlantic agenda on homeland security and resilience that encompasses everything from policy and capabilities to future science and technology in a time when the transatlantic relationship is ideally positioned to be revitalized and deepened.

The report comprises two parts. The first summarizes and highlights the key findings of the workshop, both in terms of possible focus areas for transatlantic cooperation and ideas for building and enhancing capabilities. The second draws inspiration from the workshop's discussion and provides more extensive analysis of consequences for the Science and Technology agenda from a transatlantic perspective.

1 Summary and Key Findings of the Workshop

By Anna Wieslander, Director for Northern Europe and Head of Northern Europe Office, Atlantic Council; Elin Schiffer, Project Coordinator, Northern Europe Office, Atlantic Council, and Marko Stankovic, Intern, Northern Europe Office, Atlantic Council

On January 28, 2021, the Atlantic Council, the Swedish Civil Contingencies Agency, and the Swedish Embassy in the United States collaborated on a half-day online workshop discussing the main issues that will shape homeland security and resilience in a post-pandemic world, what capabilities are needed to manage these challenges, and what role science and technology can play. The workshop, held under Chatham House rule, gathered strategy and policy experts, thought leaders, and industry from both sides of the Atlantic.

The major themes and key findings of the workshop discussions are summarized in this chapter.

Introductory remarks were delivered by **Mr. Damon Wilson**, Executive Vice President, Atlantic Council; **Ms. Sara Myrdal**, Head of Department for International Coordination, MSB; and **H.E. Karin Olofsdotter**, Ambassador of Sweden to the United States.

Mr. James W. McCament, Deputy Under Secretary for Strategy, Policy & Plans, US Department of Homeland Security, gave a keynote speech.

The first panel focused its discussion on how the current agenda for homeland security, resilience, and transatlantic cooperation would shift, given the challenges presented by COVID-19. The panel also debated which issues and security challenges should be prioritized in the coming years. It was moderated by **Ambassador Paula J. Dobriansky**,[1] Senior Fellow, Harvard University Belfer Center for Science and International Affairs; Vice Chair, Scowcroft Center for Strategy and Security, Atlantic Council; and Former Under Secretary of State for Global Affairs. The panelists were:

- **Secretary Michael Chertoff**,[2] Co-Founder and Executive Chairman, The Chertoff Group; Former Secretary of Homeland Security 2005–2009.

- **Secretary Janet Napolitano**, Professor of Public Policy, University of California, Berkeley; Former Secretary of Homeland Security 2009–2013

- **The Honorable Eleni Kounalakis**, Lieutenant Governor of California

The second panel put science at the core and discussed various aspects of capability building within the disciplines of homeland security and resilience, given key challenges and trends across the Atlantic. The panel was moderated by Mr. Thomas S. Warrick, Nonresident Senior Fellow, Middle East Programs and the Scowcroft Center for Strategy and Security's Forward Defense Practice, Atlantic Council. The speakers were:

- **Dr. David Nabarro**, Special Envoy on COVID-19 Preparedness and Response, World Health Organization (WHO); Co-Director, Institute of Global Health Innovation, Imperial College London; Strategic Director, 4SD

- **Ms. Kathy Baughman McLeod**, Senior Vice President and Director, Adrienne Arsht-Rockefeller Foundation Resilience Center, Atlantic Council

- **Dr. Robert Griffin**, Founding Dean and Professor, College of Emergency Preparedness, Homeland Security and Cybersecurity, University at Albany; Former Under Secretary (Acting) for Science and Technology

Professor Eric K. Stern, University at Albany (SUNY) College of Emergency Preparedness, Homeland Security, and Cybersecurity, and the Centre for Societal Security (CTSS) at the Swedish Defense University (SDU).

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1   Atlantic Council board director
2   Atlantic Council board director

1.1 The Future of Homeland Security and Resilience—Focus Areas for Transatlantic Cooperation

THE GEOPOLITICAL SETTING

The effects of increased global power competition are notable in most aspects of resilience, homeland security, and transatlantic cooperation, with China emerging as the major strategic challenge for the United States and Europe in the coming decade. For Europe, its geographical proximity to an assertive Russia poses a particular challenge that cannot be handled successfully without close collaboration with the United States. The Arctic is an area where both Russia and China are increasingly active, heightening the need for cooperation between like-minded transatlantic states on challenges in the region related to trade, travel, infrastructure, and climate change.

CYBERSECURITY AND EMERGING TECHNOLOGIES

The COVID-19 pandemic has revealed societies' dependency on the critical infrastructure that supports their cyber activity and exposed this infrastructure's vulnerability due to the


strain of heavy usage. Additionally, a growing number of sophisticated cyberattacks target this infrastructure, which highlights the need for more stringent action and transatlantic cooperation. Adversaries are acting across national borders and come in a variety of forms, from cyber criminals using malicious tactics to state actors, often in the shape of proxies.

On December 8, 2020, one of the largest cyberattacks targeting US government agencies was discovered—the "SolarWinds attack." It has been described as a sophisticated attack, since the hackers found a backdoor via third-party vendor SolarWinds instead of targeting government agencies directly. The United States determined that the Russian government was behind the attack and has, in retaliation, imposed sanctions and expelled Russian officials.[3]

The SolarWinds attack demonstrated the vulnerability of critical infrastructure in the West, specifically for third-party vendors, which are part of supply chains and therefore have access to sensitive information, but do not have government-level protection. Protecting critical infrastructure and the entire cyber security supply chain, from federal agencies to third-party vendors, requires an international effort focused on knowledge sharing, since an attack in one place can also have far-reaching and devastating effects on others. It also makes establishing common doctrines and rules necessary, in order to deter actors from exploiting vulnerabilities.

As cyber threats increase, the world is also in the midst of shifting to 5G networks. China's aggressive global expansion of 5G infrastructure that favors its national champions is a major challenge across the Atlantic. The transatlantic community could create a common market that supports various developing technologies from companies in like-minded countries, eliminating dependency on a single supplier. Such a market could encourage and strengthen Western values of democracy and multilateralism.

Critical infrastructure, cybersecurity, and emerging technologies are critical for a strong multilateral future and should therefore be central to the US-European Union (EU) relationship. Specifically, more work can be done to ensure that rules and

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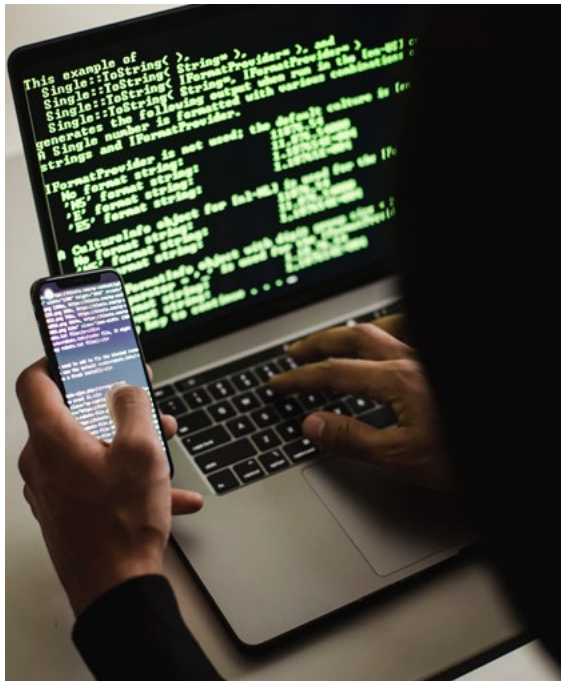
3   Antony J. Blinken, "Holding Russia to account," US Department of State, April 15, 2021, https://www.state.gov/holding-russia-to-account/.

regulations in these areas are compatible within the EU and the United States from the beginning, rather than aligning them through amendments over time.

Lastly, cyber vulnerabilities must be addressed through investment in human capital. Investment in training, capabilities, and talent in cyber security is of the utmost importance, as competent professionals are needed to keep national cyber infrastructure safe. Without strong human capital, the transatlantic community risks falling behind its competitors.

RESILIENCE TOWARD CLIMATE CHANGE

Countries around the world experience the severe impacts of climate change, as increasingly severe and frequent fires, hurricanes, and other disasters directly impact people's lives. Both Sweden and the United States recently endured their largest forests fires in modern times, with devastating effects on communities and ecosystems. California even experienced its worst wildfire season ever during the pandemic. The fires' impact underscore the need for collective work on the issue of climate change and the preservation of collective resources that cross national jurisdictions.

Climate change must be addressed in several dimensions: reducing carbon footprints, dealing with the effects of a changing climate on various communities, and increasing overall resilience.

With the Biden administration's focus on addressing climate change, including the United States reentry into the Paris Climate Agreement, the transatlantic community is once again working toward a shared goal of net zero emissions by 2050. The new administration is already taking steps to organize national and international action to combat climate change, for example having hosted a Global Climate Summit in April 2021. On a broader scale, the 2021 United Nations Climate Change Conference (COP26) in Glasgow will provide an opportunity for global leaders to meet and collaborate on climate commitments. With transatlantic unity on net zero emissions by 2050, there is even a possibility of convincing China to set a more ambitious goal than its current one, which is to achieve net zero emissions by 2060. The way in which the transatlantic community incorporates and works on a global climate agenda with China, an increasingly authoritarian regime, is a major challenge. For example, climate science relies on an open and honest global exchange of information and data, but states will also have to be

careful to protect intellectual property from probing adversaries. The transatlantic community needs to identify areas of opportunity and risk while keeping a lookout for areas of mutual interest and potential collaboration. Investment in recovery, green projects, and green jobs, among others, will be essential to maintaining a competitive advantage against countries like China and Russia.

Climate change also exacerbates other complex societal challenges. In Syria, severe drought caused mass migration that spurred civil unrest and contributed to the outbreak of a civil war. In Central America, droughts made it difficult for small-scale farmers to make a living, causing many to leave their homes and head for the United States in hopes of a brighter future. In addition to altering global migration patterns and increasing illegal migration, climate change also affects food security, as extreme weather damages crops and alters distribution channels. Limited access to food, in combination with rising unemployment and a global economic recession, could in turn lead to increased conflict and violence.

DEMOCRATIC RESILIENCE AND DEFENSE

On January 6, 2021, far-right nationalists stormed the US Capitol in Washington, DC, in what is considered the biggest recent domestic terrorist

attack on a Western democracy, illustrating that terrorist threats come not only from foreign actors but also from domestic forces. There is a growing need to identify the extent of the threat posed by domestic groups, as well as focus on the dissemination of disinformation and the abuse of social platforms that help spread extremist messages. Radicalization occurs across the world in many contexts and collective action is needed to identify the mechanisms supporting extremism.

Social media plays an important role in facilitating the spread of extremist messages all over the world. Extremism is fostered by the spread of disinformation on online platforms, which act as a breeding ground for ideas not accepted by wider communities. Growing evidence of international connections among and within these groups further indicates that they do not operate solely on a national basis. States must share actionable intelligence and jointly investigate the causal factors of extremism, extremist actors, and extremist groups. States must close the knowledge gap in identifying patterns and predictors of extremism in order to enact more proactive measures and prevent attacks like the one at the US Capitol.

Domestic terrorism can be difficult to counter because the line between protected free speech and unprotected threatening speech and planning is often blurry. Extremist views can exist within the realm of protected free speech, even if they are perceived as dangerous. Only when they progress to planned and executed acts of violence do they become domestic terrorism.

There are strong incentives for transatlantic cooperation in combatting terrorist networks, since attacks are often directed toward the common values of the foundation of democracy, openness, and the rule of law. They aim to disrupt social cohesiveness and the weaken or destroy state institutions. Fragmentation undermines the ability of external power projection and creates more space for adversaries to maneuver. Like-minded countries must share intelligence, especially real-time and actionable intelligence, with each other and learn from one other going forward.

PANDEMICS

What the COVID-19 pandemic has illustrated above all else is the need for the international community to work collectively and for a strengthened transatlantic relationship. The pandemic continuously proves that, to effectively deal with global challenges, each country cannot go it alone. This is perhaps best exemplified in the proliferation of mutated regional virus strains. A mutation in one part of the world is not limited by national borders and spreads indiscriminately, impacting distant communities. International cooperation is a vital component of addressing the current crisis and preparing future generations to effectively handle forthcoming pandemics.

While dealing with the ongoing pandemic, there must also be active preparation for the next one—the question is not if, but when a global pandemic will emerge again. With this in mind, existing research programs and funding levels must be examined to determine the optimal trajectory of scientific research and development (R&D) centers going forward. Science is critical to understanding and mitigating the damage of pandemic crises and support for the effective functioning of the scientific community must be prioritized.

In addition, what has become evident during the COVID-19 pandemic is the necessity of nationally coordinated plans, rather than fragmented regional approaches within countries. In the United States, the state of California mainly coordinated its COVID-19 response on a state level. Even where federal response protocols were in place, the state was left on its own to coordinate a response to a challenge that knows no borders. County officials filled in gaps left by the absent federal government. In the future, pandemic response must be coordinated at the national level and implemented across states and regions. Cooperation is the only way to ensure effective pandemic responses.

1.2 Building Capabilities to Better Handle Challenges

SYSTEMS LEADERSHIP

The global challenges which lie ahead (such as food, environment, health) involve an interplay of many different areas, as well as living creatures; humans, animals and spieces. Consequently, they should be considered as systemic challenges rather than linear issues. The key to handling these challenges is systems leadership. For example, when asked about New Zealand's successful response to the COVID-19 pandemic, Prime Minister Jacinda Ardern argued that it had been crucial for officials to level with the people. By creating conditions that allowed people, local organizations, and businesses to understand the gravity of the situation and adopt essential precautions, people in the community at large were encouraged to embrace necessary behavioral changes. The New Zealand case illustrates that effective engagement with populations is critical to building resilient societies.

In working with living systems, there are five essential aspects that leaders need to understand.[4] First, leaders cannot force populations into a single perception of an issue. Thus, the ability to identify and respond to varying perceptions at the same time is key. Second, leaders need to be able to see the big picture separate from its parts. Third, it is important to be responsive to the pace and the readiness of a community, rather than strictly follow an external timescale or plan. Fourth, leaders must understand context as fully as possible. As systemic challenges manifest across various environments, leaders must remember that conditions on the ground are not unitary. Finally, leaders should strive to meet others where they are and always look for find possible areas of cooperation.

Out of the COVID-19 pandemic, stories of incredible cooperation have emerged, demonstrating the world's capacity for innovation when communities work together. Societies must take the lessons learned during this pandemic to heart and encourage leadership that is collaborative, innovative, and forward-looking. The coming systemic challenges of the twenty-first century demand it.

EVIDENCE-BASED AND SCALABLE SOLUTIONS

A multi-stakeholder approach is needed to solve the systemic challenges ahead. Solutions need to be evidence-based and scalable, and science needs to be reintegrated into policy and operations. The current structure, in which policy makers must leave the operational space in order to find scientists to give input, is insufficient. Concrete mechanisms should be developed to involve academia and research in the foundations of existing systems. The Binational Industrial Research and Development (BIRD) research and development program between the United States and Israel, which brings together business and academia, is an example of such a mechanism that the transatlantic community could adopt.

The tactical element of emergency response is often overlooked before crises. Scientists tend to not be prepared for, nor able to respond quickly to, emergency situations and are usually only invited to participate in crisis management at a rather late stage. However, they could be brought into the process earlier and used to help operational staff connect with resources, gather data, and prepare for future developments. In addition, this would provide scientists with a realistic understanding of what is happening on the ground. Involving scientists at an early phase of emergency response would increase scientific understanding of early

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4   John Atkinson and David Nabarro, "Comfort in Complexity," 4SD, January 20, 2019, https://www.4sd.info/living-systems-leadership/comfort-in-complexity/

Case Study: How Insurance Can Rescue a Reef from Climate Impacts

Kathy Baughman McLeod, director and senior vice president (SVP) of the Atlantic Council's Adrienne Arsht-Rockefeller Resilience Center, tells the story of how innovative thinking, public-private partnerships, and the application of evidence-based solutions can build resilience toward climate impacts:

"In 2015, when I was director of climate risk and resilience at the Nature Conservancy, I asked myself: would it be possible to design an insurance policy for a coral reef?

I posed that question because of the situation off the coast in Quintana Roo, Mexico, where the second-longest barrier reef exists—the Mesoamerican Reef.

I believe for many, the question sounded absurd. A reef has no owner, so who would buy the policy to start with? And it is difficult to assess the damage to something which is underwater.

But the pieces fell into place quite naturally and willingly, by engaging a range of stakeholders within the state of Quintana Roo, as well as representatives of the tourism industry and civil society—all of whom share a common dependency on the reef.

I found a partner in Alex Kaplan, then senior executive at Swiss Re, a leading global insurer. By following traditional approaches to insuring an asset, we determined that the insurance policy could be purchased by those who benefitted from the reef, an asset in itself. The reef is an ecosystem connected to the beach, which in turn is connected to hotels and restaurants—the very foundation of the tourism economy of Quintana Roo, which includes Cancun and Tulum, estimated at more than 9 billion USD annually.

Hence, we found a purchaser in the state of Quintana Roo.

We also used a type of insurance policy called a parametric. This type of policy, known for its flexibility, kicks in when an event happens. Rather than basing the payout on assessed reef damage after a weather event, it triggers when a storm's wind speed reaches a specific number. One could assume that the stronger the wind, the more damage to the reef and the higher the payout, up to a predetermined maximum.

A brigade of volunteers from local beachfront communities was created in order to be first responders to restore the reef's protective capacity, and money from the payout would train and pay local tourism sector employees to do the work during periods in which tourists did not come.

It is not a perfect solution, but it is pragmatic, in a time when the planet's intertwined environmental emergencies are immense. The concept of an insurance policy for reefs is now being replicated in other parts of Mexico, as well as Australia, Belize, Hawaii, Indonesia, and Guatemala.

Read more: **https://www.nytimes.com/2020/12/05/climate/Mexico-reef-climate-change.html**

Link to the guidebook: **https://www.onebillionresilient.org/post/guide-on-how-to-insure-a-natural-asset**

crisis conditions on the ground, leading to better assessments of problems and more evidence-based solutions for building resilient societies in the long term.

Another obstacle to implementing evidence-based solutions is the long timeline for peer-reviewed work of relevance to policy making. It stands in sharp contrast to the urgency of emergency response and resilience measures. Mechanisms for more easily incorporating peer-reviewed work into policy making must be developed, as academia can play a role in providing input for solutions to mid- and long-term challenges. Scientists and academics can work to craft scalable solutions, which can easily grow in scope and be exported as concepts to other settings, ensuring cost-efficiency and mechanisms for learning through implementation of best practice.

MULTI-DISCIPLINARY AND EXPERIMENTAL EDUCATION AND TRAINING

For the next generation, experimental education and training will be essential to foster an appreciation for applicable knowledge and actionable research that focuses on realities on the ground in different communities. One way to expand experimental education and training is through simulations similar to war games, where, for example, pandemic responses could be tested in various situations and conditions.

The gap between operations and research must be bridged in order to properly address the needs

of both sides. In the public sector, cooperation between authorities responsible for homeland security and academia should deepen, and processes for expanded communication and coordination between different national agencies should be created. Additionally, R&D funding should be focused on multi-disciplinary work. Multi-disciplinary work in academia and at agencies is rarely promoted, which presents a fundamental problem when tackling systemic challenges with multi-disciplinary implications. Coordination will be key in this regard.

Finally, it is important to develop diversity within education and training. Diversity is both a moral and national security imperative. Having a diversity of thought, experience, and perspective creates a more vibrant and responsive policy and research community. Diversity at all levels builds societal capability and is necessary to deal with the systemic challenges ahead. Leaders and decision makers simply cannot afford missing valuable perspectives.

RENEWED SOCIAL CONTRACT FOR PUBLIC TRUST

Trust is a key element of the social contract between those that govern and the governed, and it is something that needs to be constantly nurtured and maintained. During the COVID-19 pandemic, the social contract has come under severe stress in many communities. In a renewed social contract, one that is sustainable in the long term, three focus areas are essential.

One, it is critical that people are engaged in the governing of their societies. True societal resilience stems from an engaged population that feels they are part of a collective whole and contribute in meaningful ways to building the capacities needed to improve their communities.

Two, a resilient and engaged population requires hope and optimism. A constant negative focus in discussions will not inspire many people to take action and contribute to building resilience. Framing a new transatlantic agenda for homeland security in terms of optimism and hope for our shared future is essential to build a sustainable social contract where people remain engaged in creating a more resilient society together.

Three, it is important to highlight fundamental shared values. An increased focus on and discussion

about the protection of common values, in conjunction with a discussion about threats, could help leaders direct focus and prioritize amidst a proliferation of threats, as well as ensure community buy-in for priorities. Emphasizing the shared values which a social contract is built upon will help build trust and, ultimately, more resilient societies.

PUBLIC-PRIVATE PARTNERSHIPS

Societies in general have difficulty dealing with long-term challenges and matters in which solutions tend to be ad hoc and reactive. Most homeland security problems have short-, mid-, and long-term challenges. Every timeline needs its own approach, and it is especially important to not ignore long-term challenges that often appear too distant to address. By putting preparedness at the core of policy making and working systematically to achieve it, more long-term perspectives can be addressed.

The mechanisms of incorporating longer-term perspectives into public-private collaboration on resilience and homeland security is a key issue. The private sector has more flexibility, and there is great potential for synergies between sectors. Instead of reaching out when a crisis is ongoing, discussion should start before a crisis to jointly identify gaps in capabilities

and remedy them. This is also necessary to account for the fact that companies may have responsibilities and objectives that do not align with that of a government in any given instance. Governments and their agencies need a vision of their ideal private business contribution and defined mechanisms through which the collaboration can be achieved. While this conversation may be complex, establishing a dialogue early on is crucial to encourage the cooperation of companies that might, for instance, have to first figure out how to deal with personal or proprietary information that is sensitive and difficult to share. In order to be better prepared to help in times of crisis, the private sector needs to take preemptive measures to allow them to respond quickly and effectively.

Companies can move rapidly to adjust innovation and technology to put new products on the market if they are given proper political signals and incentives that they should. Economic considerations are important as well—companies can shift parts of their operations more quickly if it can be done without hurting their profit margins and workforce. When it comes to creating more resilient supply chains, most companies would require enormous readjustments that would impose severe financial costs in the short term. Hence, it is important to find scalable changes that, in the long term, can lead to greater resilience.

2 Commentary: Homeland Security Research and Capacity Building: the Way Forward

By *Professor Eric K. Stern, University at Albany (SUNY) College of Emergency Preparedness, Homeland Security and Cybersecurity and the Centre for Societal Security (CTSS) at the Swedish Defense University (SDU).*

Recent events, as well as the evolving history of homeland security[5] since at least 9/11, indicate both significant progress and the need for renewed efforts in the development and dissemination of applicable knowledge to prevent, respond to, and recover from disruptive crises, public health emergencies, and disasters. The following agenda is a personal view, but one inspired by practical challenges and state-of-the-art R&D efforts by colleagues in the United States, Sweden, and third countries. It also draws upon an ongoing stock-taking and agenda-setting efforts underway in the context of the Oxford Encyclopedia of Crisis Analysis,[6] for which I serve as editor-in-chief. In the next section, seven challenges and collaborative opportunities for cooperative research and capacity building for the United States and Sweden will be presented, followed by a concluding reflection.

1. BUILDING A CULTURE OF ENGAGED LEADERSHIP AND EFFECTIVE COLLABORATION

Reviewing the experience of the COVID-19 pandemic within and across countries suggests that engaged leadership and the capacity to collaborate effectively across professions, the divide between elected officials and the civil service, different sectors of society (public, private, and non-profit), and international borders is critical to successful crisis management. The countries that have been most successful in coping with the pandemic have been those that displayed engaged leadership with a clear-eyed understanding of the difficult situation, as well as the ability to provide strategic and normative guidance, mobilization of national resources and leverage, and genuine respect for the competence and roles of other players.[7] This is an issue ripe for comparative research across jurisdictions and contingencies to place the COVID-19 experience in a broader perspective. Furthermore, as will be discussed further, there is great potential to develop new forms of homeland security education, training, and exercises to improve leadership preparedness and the capacity to collaborate during future events.

2. IMPROVING THE INCORPORATION OF EXPERT KNOWLEDGE, DATA, AND TECHNOLOGY

The history of homeland security in general, and crisis response in particular, demonstrates that, despite vigorous efforts to prepare and maintain vigilance, societies are regularly confronted with both relatively novel crises and old scourges that manifest in new ways in rapidly evolving socio-technical and political contexts. This means that response and recovery efforts are not a matter of mechanically implementing established strategies, doctrines, tactics, techniques, and procedures.

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5   In this piece, the US term "Homeland Security" is generally used, but this should be considered broadly and also as referring to "Societal Security"—a commonly deployed term in Sweden and other parts of Europe.

6   For more information, see: the Oxford Encyclopedia of Crisis Analysis, https://oxfordre.com/politics/page/crisis-analysis/the-oxford-encyclopedia-of-crisis-analysisstern.

7   Arjen Boin, Paul 't Hart, Eric Stern, and Bengt Sundelius, *The politics of crisis management: Public leadership under pressure* (Cambridge University Press, 2005); Leonard J. Marcus, Eric J. McNulty, Joseph M. Henderson, and Barry C. Dorn, *You're It: Crisis, Change, and How to Lead When it Matters Most* (New York: Public Affairs Hachette Book Group, 2019).

Rather, they are a matter of mobilizing expertise and data in an attempt to navigate dynamic and complex situations in which previous experience and established good practices may be of limited use at best—and directly misleading and counterproductive at worst.

COVID-19 is a prime example of a situation which was anticipated in a general sense (substantial planning for pandemics existed in many countries and at the international organization level), but was also novel in many respects and initially shrouded in profound uncertainties about the properties of the virus and how best to respond. Addressing the threat and its associated societal disruptions required drawing upon and balancing inputs from a variety of experts (e.g., medical, public health, economic, communications, educational, etc.). Again, leaders and jurisdictions varied greatly in their ability access and integrate expertise under crisis conditions and a variety of ad hoc and institutionalized mechanisms (e.g., the United Kingdom's Scientific Advisory Group for Emergencies, or UK SAGE) were used.

Awareness of the need to better enable decision makers to draw upon information and communications technology, data analytics and visualization, modelling and simulation, crowdsourcing and expert communities of practice, etc., preceded the COVID-19 pandemic.[8] Still, the pandemic response represents a breakthrough not only in terms of behind the scenes production of sense and decision making,[9] but also of data-enabled communication practices (e.g., "flattening the curve" and tracking vaccination rates) aimed at the general public.

It is critical to document and evaluate innovations associated with COVID-19 and continue to develop new ways to produce, present, share, and exploit expertise, information, and data in support of all hazards crisis management.

3. COMMUNICATING UNDER CONDITIONS OF UNCERTAINTY AND IN PROTRACTED CRISES

Communicating about risks and seeking to provide protective guidance to leaders and the public is particularly challenging in novel crises, in which there is great uncertainty at the outset and science and public health guidance develop rapidly over time. Much of the risk and crisis communication literature focuses either on long-term chronic threats or short-lived acute events.

COVID-19 presented as a situation that was novel and acute, but also long-lasting, creating significant challenges in terms of communicating consistent public health guidance, communicating the need to change guidance in response to new knowledge and changing conditions, and maintaining public motivation to comply with such guidance over extended periods of time. This challenge was made more difficult by differences in public health practices adopted in different, sometimes neighboring, jurisdictions and by populist leaders who found it expedient to politicize and galvanize opposition to the public health guidance advocated by national experts.

For a state-of-the-art, practically oriented research agenda in this area developed by a multi-disciplinary group supported by the US National Science Foundation, see Sutton et al (2020).[10] This is also an area of significant Swedish academic and practical strength, and thus particularly ripe for further research and development collaboration.

4. CONFRONTING DOMESTIC VIOLENT EXTREMISM AND HYBRID WARFARE THREATS

The United States and Sweden, like many other highly developed countries, face mounting and interconnected challenges from violent, or potentially violent, extremists at home and hybrid

8   "DHS Science & Technology Directorate Unveils New Visionary Goals," US Department of Homeland Security, October 22, 2014, https://www.dhs.gov/science-and-technology/news/2014/10/22/dhs-st-unveils-new-visionary-goals; *The Changing Face of Strategic Crisis Management*, Organisation for Economic Co-operation and Development, December 7, 2015, http://www.oecd.org/publications/the-changing-face-of-strategic-crisis-management-9789264249127-en.htm.

9   Boin, et al., *The politics of crisis management.*

10   Jeanette Sutton, et al., "Longitudinal Risk Communication: A Research Agenda for Communicating in a Pandemic," *Health Security* Volume 19, Number 4 (2020), https://www.liebertpub.com/doi/pdf/10.1089/hs.2020.0161.

warfare threats (e.g., disinformation operations and cyberattacks) from abroad.

The rise of the Internet and smart devices revolutionized the flow of information within and across societies. The benefits are profound, but these socio-technical changes have a dark side and can create vulnerability to bad actors at home and abroad. These actors can exploit both open society and differential user sophistication, with regard to critical selection and consumption of information and the protection of devices, networks, software, and data. Vulnerable populations are susceptible to a variety of forms of online exploitation, radicalization, online grooming, and recruitment. Such information operations and cyberattacks can lead to disruption, economic damage, and violence in both the physical and digital world.

These tactics can be weaponized by violent extremists and foreign adversaries seeking to sow conflict and division and undermine institutions, trust in government, and democracy. This raises some fundamental questions: How can open societies protect themselves from such threats without losing their fundamental freedoms? How can societies combat toxic narratives and build resilience to dangerous disinformation? Innovative research is needed to understand how to counter these threats and protect critical functions and vulnerable elements of society. Information about evolving threats, good practices, and technical innovations must be captured and shared across countries and sectors of society. Countermeasures should be evaluated, benchmarked, and disseminated. Sweden and the United States are both well positioned to collaborate and can add considerable value to each other's efforts in this area.

5. EMBRACING DIVERSITY AND INCLUSION

In recent years, nationalism, in both relatively benign and toxic forms, has been on the rise in Sweden, the United States, and many other countries, including the United Kingdom (UK), where it has been a key driver in the Brexit process. Some nationalists are inclined to frame demographic and cultural diversity as a societal vulnerability with regard to public safety, security, and resilience. On the whole, these arguments are misleading and tend not to stand up to empirical scrutiny. Rather, when societies face transnational threats and environmental hazards that do not respect national boundaries, in addition to the challenges of building and maintaining economic success, social welfare, and public health in a competitive global environment, diversity is far more likely to be an asset than a liability.

Furthermore, the interdependent nature of societies make it obvious that the chains of safety, security, and health can only be as strong as their weakest links, and it is dangerous and deeply unfair to leave groups behind. This is particularly true in the domain of societal resilience.

For example, a recent US Federal Emergency Management Agency (FEMA) Higher Education Task Force report, Building Cultures of Preparedness,[11] which built on existing FEMA Whole Community Emergency Management doctrine, found that culturally diverse communities in the United States exhibit different patterns of vulnerability and resilience. The key to moving the needle on community preparedness is not to use one-size-fits-all, uniform strategies across a diverse nation like the United States, but rather to build on local strengths and social capital armed with deep knowledge of the local culture and with the assistance of local "culture brokers." These findings reinforce the results of prior Swedish-US collaboration as part of a broader Multi-Nation Resilience Policy Group framework.[12] Future research and development efforts should build on these foundations and parallel good practices from realms such as public health and countering violent extremism (CVE).

11 Katherine E. Browne and Laura Olson, Building cultures of preparedness: a report for the emergency management higher education community, US Federal Emergency Management Agency (FEMA), February 13, 2019, https://www.hsdl.org/?abstract&did=820838.

12 Strategies for Supporting Community Resilience: Multinational Experiences, Robert Bach, ed., Swedish Defense University, 2015, https://www.preventionweb.net/publications/view/43699.

ATLANTIC COUNCIL

6. CONVERGING SCIENCE AND ACADEMIC-PRACTITIONER COLLABORATION TO ENHANCE CLIMATE CHANGE RESILIENCE

Recent experience, in the United States and Sweden alike, clearly demonstrates that societies are experiencing extreme weather events that are more frequent and severe in their consequences for life, property, critical infrastructure, and the broader functioning of society. As climate change accelerates and extremes of hot, cold, wet, and dry weather, as well as extreme winds, are more prevalent and widespread, these natural hazards are becoming more dangerous, disruptive, destructive, and, not least, costly.

Improving societal resilience to these escalating risks, as well as the development and deployment of short- and long-term risk mitigation strategies, will require continued and intensified investment in convergence science. It is imperative to build upon and further link the pioneering multi-disciplinary work of the University of Delaware Disaster Research Center (DRC), the Colorado Natural Hazards Research Center, and parallel Swedish efforts such as the multi-disciplinary and multi-university Center for Natural Disaster Science (CNDS), the Swedish Defense University Center for Societal Security (CTSS), and the Mid-Sweden University Risk and Crisis Research Center, among others.[13]

7. PREPARING THE RISK AND CRISIS WORKFORCE

The experience of the COVID-19 pandemic, as well as a host of other recent crises stemming from terrorism, cyberattacks, other forms of hybrid warfare, and climate change and extreme weather, illustrate the need to do more to prepare the current and future workforce, ranging from senior elected officials to civil servants to entry level workers to students preparing for careers in related fields. A scaling up to meet public, private, and non-profit sector needs will require better specification of qualifications (e.g., the FEMA Qualification System), pedagogical innovation, new program designs, and methods of harnessing and preparing students at all levels and stages of their careers to use state-of-the-art information and communications technology. Some of this work will take place as in-service or professional training, such as the in-person and online programs provided by FEMA's Emergency Management Institute (EMI) and that of other training providers, and corresponding functions at the Swedish MSB.

Accelerated development of new forms of training and exercises aimed at strategic leaders (e.g., top elected officials, first responder chiefs, and private and non-profit sector leaders) that harness best practices and emphasize emerging instructional designs and technologies is badly needed. For example, a previous pilot project under the US-Sweden Memorandum of Understanding (MoU)[14] demonstrated the potential for further collaboration and experience-sharing to develop next generation approaches and further cooperation in this area. Interestingly, one key theme of that project was exploring the potential of using information and communications technology to transcend geographical distance and overcome scheduling obstacles to physically gathering senior leaders to practice crisis management. This idea gained a real-world example during the COVID-19 pandemic, as physical distancing was critical and many leadership and collaborative functions had to be conducted remotely. Furthermore, the project identified a number of areas for further development, such as Red Teaming,[15] serious computer games and

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13   At the University at Albany (UA)—my primary academic home these days—innovative partnerships are emerging between the College of Emergency Preparedness, Homeland Security, and Cybersecurity (CEHC), the Atmospheric Sciences Research Center (ASRC), and Department of Environmental and Atmospheric Sciences (DAES). As of the summer of 2021, all three units will be co-located in a state of the art Emerging Technology and Entrepreneurship Complex (ETEC) building where we will share access to unique facilities including an operations center, decision theater, the nerve center of the New York State Mesonet, Crisis Informatics, Disaster Studies, and a number of other relevant labs, co-location with local offices of the National Weather Service, as well as relevant private sector organizations. This UA CEHC/ASRC/DAES partnership has already resulted in a variety of cutting-edge research and educational initiatives, a national RISE conference, and multiple innovative partnerships transcending the traditional academic-practitioner divide.

14   *Designing crisis management training and exercises for strategic leaders*, Eric Stern, ed., Swedish Defense University, 2014, http://vasco.diginext.fr/images/pdf/FULLTEXT01.pdf.

15   For an up to date overview of the emerging field of Red Teaming, see: "The Global Focal Point For Red Teaming Research, Training & Practice," University at Albany, accessed April 2021, https://www.albany.edu/cehc/cart.

virtual reality (key foci of University at Albany, College of Emergency Preparedness, Homeland Security, and Cybersecurity), case-based scenario generation (Swedish Defense University and CTSS), integrated modelling and simulation (Sandia National Labs), state of the art training programs for elected officials, and asynchronous policy gaming (Naval Post Graduate School, Center for Homeland Defense and Security (CHDS), and MSB/SDU), that promise to yield valuable results.

There is a need to further develop innovative degree-granting and other certificate or micro-credentialing programs delivered by universities and other higher education institutions. Preparing the future workforce for fluency in data analytics and its security and public safety applications is crucial, and is already demanded by forward-looking employers. Thus, it is critical that university-based programs are designed to prepare students for the practical challenges, work environments, and information technologies of today and tomorrow. Within each country, national networks (for instance the FEMA Higher Education Program in the United States and MSB-sponsored networks and conferences in Sweden) and cross-university

collaborations are developing and already providing significant value. Further transatlantic cooperation and cross-pollination of innovative programs and pedagogies are needed and should be facilitated by dedicated funding.

CONCLUSION

The threats, hazards, and risks identified in this workshop are daunting and, despite progress in recent decades with regard to risk and crisis management in Sweden and the United States, much more can be done to protect our societies and democracies. Much is at stake and neither country can afford complacency or succumbing to "not-invented-here" syndrome. Swedish-American experience sharing, collaborative research, and coordinated development efforts are badly needed and can help leverage scarce resources and provide more "bang" for the security buck for taxpayers in both countries. Furthermore, this successful bilateral collaboration in the homeland security domain stands out as a fruitful model for paving the way for broader transatlantic collaboration and accelerated innovation in this area.

Acknowledgements

About the Editor

ANNA WIESLANDER serves as director for Northern Europe at the Atlantic Council and head of the Atlantic Council office in Stockholm. She is also the president of the Institute for Security and Development Policy (ISDP). Ms. Wieslander concurrently serves as secretary general of the Swedish Defence Association, a non-political NGO which for more than 130 years has promoted knowledge on defence and security among the Swedish public. She is as a member of the Royal Swedish Academy of War Sciences and an Alumni Scholar at George C. Marshall European Center for Security Studies.

Wieslander is an experienced manager, speaker, moderator, and writer who has published extensively. Wieslander is a frequent commentator in both national and international media, such as the BBC, the New York Times, Reuters, Politico and the Atlantic. She analyzes international trends with a special focus on the security situation in the region and how it relates to transatlantic and global geopolitical developments. Her expertise covers security and defence policy, NATO, the transatlantic link, and European security and defence cooperation.

Wieslander has previously held positions as deputy director at the Swedish Institute of International Affairs, Head of Speaker's Office at the Swedish Parliament, Deputy Director at the Swedish Ministry of Defence, and Secretary of the Swedish Defence Commission. She started her career as a newspaper journalist in 1987 and has also served as Communication Director in the private sector.

Wieslander holds an IB exam from United World College of the American West (1987), a BA degree in journalism from Gothenburg University (1990), and a MA degree in political science from Lund University (1995). She is a Ph.D. candidate in international relations at Lund University and has pursued doctoral studies at University of California at Berkeley.

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