



Research Article

## Weaponizing Civilians: Disrupting Strategic Mobility and Logistics

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**Abstract:** Strategic movement of forces and their sustainment often depend on civilian infrastructure (ports, airports, railways, and road networks). During developing crises, potential adversaries could exploit seams between military and civilian authorities and use civilians to restrict, delay, or completely prevent the movement of forces and disrupt supply chains. This can be achieved indirectly, by exploiting the information environment, or directly, for instance, by inserting agitators into crowds. Many civilians, especially vulnerable groups, appear susceptible to disinformation and manipulation, creating opportunities for adversaries to use them in pursuit of specific interests. However, civilians' legal rights and entitlements, particularly those enshrined under international humanitarian law, impose restrictions on Western militaries in coping with such situations. From NATO's perspective, this could further encourage adversaries to exploit these approaches.

The article provides several case studies from different countries where civilians have disrupted military power projection. It then outlines seven hypothetical scenarios in which adversaries exploit civilians to counter the logistics and mobility of military forces. The methodological framework for developing plausible future scenarios involves drawing on past events while also leveraging creativity in future considerations, including technological advances combined with human inventiveness. This approach enabled the authors to consider possible future developments and threats in terms of weaponizing civilians to contest military mobility. The findings

presented in this article provide incentives for testing military resilience in wargame scenarios and exercises simulating disruptions to strategic mobility and logistics.

**Keywords:** strategic mobility, weaponization of civilians, irregular warfare, scenarios, NATO.

## Introduction

In line with its member states' obligations under international humanitarian law, NATO recognizes the need to protect civilians from unnecessary harm during military conflicts. Its Policy for the Protection of Civilians includes "all efforts taken to avoid, minimize and mitigate the negative effects that might arise from NATO and NATO-led military operations on the civilian population."<sup>1</sup> In fact, NATO goes beyond taking responsibility for its own actions; it also requires its member militaries to strive to minimize the harm caused by others.<sup>2</sup>

Furthermore, hostilities do not always take the form of overt armed confrontation. Both state and non-state actors can pursue their objectives through hybrid means without overtly using lethal force or aggression.<sup>3</sup> This may include the weaponization of civilians, defined as civilians being deliberately (yet from their perspective often unwittingly) turned into "weapons" by an adversary to achieve specific strategic or operational objectives—such as disrupting NATO's freedom of movement—without resorting to the use of lethal means.<sup>4</sup> The term "weaponization" has been used in various contexts, along with the terms "hybrid" and "asymmetric" war. According to Galeotti,<sup>5</sup> "everything can be weaponized as part of the expanding array [...] of military metaphors all around us." Particularly relevant for this article is the weaponization of information to manipulate people's minds and influence them to think and act in a certain way. Hostile actors can thus use manipulated civilians even against their own state's strategic interests – for instance, by restraining the movement of their own or allied armed forces.

In this context, NATO research activity under the System Analysis and Studies (SAS) panel, designated SAS-151, conducted a series of six wargames, three of

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<sup>1</sup> NATO, "The Protection of Civilians, Allied Command Operations Handbook," SHAPE J9 Division, March 11, 2021, 7, <https://shape.nato.int/news-archive/2021/the-protection-of-civilians-allied-command-operations-handbook>.

<sup>2</sup> NATO, "The Protection of Civilians, Allied Command Operations Handbook."

<sup>3</sup> "Countering Hybrid Threats," NATO, May 7, 2024, [https://www.nato.int/cps/on/nato\\_hq/topics\\_156338.htm](https://www.nato.int/cps/on/nato_hq/topics_156338.htm).

<sup>4</sup> Peter Dobias, "Navigating the Challenge of the Weaponization of Civilians: Leveraging Intermediate Force Capabilities," *Canadian Army Journal* 21, no. 1 (2024): 64-73, <https://www.canada.ca/en/army/services/canadian-army-journal/articles/2024/21-1-dobias-weaponization-of-civilians.html>.

<sup>5</sup> Mark Galeotti, *The Weaponisation of Everything: A Field Guide to the New Way of War* (Yale University Press, 2022), 11.

which explicitly included crowds of civilians restricting NATO forces' mobility.<sup>6</sup> The games showed that such crowds can be very effective in slowing down the advance of military forces or blocking their movement entirely, often with significant strategic implications.<sup>7</sup> This kind of weaponization of civilians creates an additional challenge for the affected military in terms of how to act in such situations without violating domestic laws and regulations or international humanitarian law,<sup>8</sup> which grants protection to civilians during armed conflict.<sup>9</sup> Both inaction and the use of force against civilians carry the risk of high strategic costs. In the latter case, civilian casualties can undermine the broader legitimacy of NATO forces;<sup>10</sup> in the former, inaction can provide the adversary with the opportunity to seize the strategic initiative or weaken the credibility of NATO forces, thus undermining NATO's deterrence and defense.

While previous research, including the above-mentioned SAS-151 study, which explored the concept of operations for intermediate force capabilities primarily in the context of hybrid warfare,<sup>11</sup> and several related articles focused mainly on the counter-mobility capabilities of crowds,<sup>12,13</sup> there are other possibilities for using civilians to disrupt the mobility of military forces (sabotage, cyberattacks, pillaging, etc.). This article aims to contribute to the discussion from a broader perspective by developing hypothetical scenarios that elaborate

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<sup>6</sup> Research Task Group SAS-151, "Intermediate Force Capabilities Concept Development and Experimentation to Counter Adversary Aggression," NATO STO TR-SAS-151, December 2022.

<sup>7</sup> Research Task Group SAS-151, "Intermediate Force Capabilities Concept Development and Experimentation to Counter Adversary Aggression," Annex E: Draft Intermediate Force Capabilities Concept, NATO STO TR-SAS-151, December 2022.

<sup>8</sup> The role of civilians in armed conflicts from the perspective of international humanitarian law has been addressed by Michael N. Schmitt, "Deconstructing Direct Participation in Hostilities: The Constitutive Elements," *NYU Journal of International Law and Politics* 42, no. 3 (2010): 697-739, <https://nyujilp.org/wp-content/uploads/2012/04/42.3-Schmitt.pdf>; Michael N. Schmitt, "Military Necessity and Humanity in International Humanitarian Law: Preserving the Delicate Balance," in *Essays on Law and War at the Fault Lines* (The Hague: T.M.C. Asser, 2012), 89-129, [https://doi.org/10.1007/978-90-6704-740-1\\_3](https://doi.org/10.1007/978-90-6704-740-1_3).

<sup>9</sup> "NATO Policy for the Protection of Civilians, Endorsed by the Heads of State and Government participating in the meeting of the North Atlantic Council in Warsaw 8-9 July 2016," NATO, July 9, 2016, [https://www.nato.int/cps/en/natohq/official\\_texts\\_133945.htm](https://www.nato.int/cps/en/natohq/official_texts_133945.htm).

<sup>10</sup> Research Task Group SAS-094, "Analytical Support to the Development and Experimentation of NLW Concepts of Operation and Employment," NATO STO-TR-SAS-094, April 2017.

<sup>11</sup> SAS-151, "Intermediate Force Capabilities Concept Development and Experimentation to Counter Adversary Aggression," Annex E.

<sup>12</sup> Jessica Afara, Victoria Ajila, Hannah Macdonell, and Peter Dobias, "Use of Agent-Based Modeling to Model Intermediate Force Capabilities in (Counter)Mobility Crowd Scenarios," *The Journal of Defense Modeling and Simulation* 21, no. 4 (2022): 395-404, <https://doi.org/10.1177/15485129221141717>.

<sup>13</sup> Dobias, "Navigating the Challenge of the Weaponization of Civilians."

on the theme of exploiting civilians to disrupt the enemy's military power projection and to gain an advantage that would, in turn, help achieve broader strategic objectives.

To explore how civilians could be turned into such weapons, the article is organized as follows: first, it reviews real examples of civilians disrupting traffic, including military logistics, as well as cases of state actors using vulnerable groups to further their national strategic objectives. Afterwards, it develops seven scenarios outlining hypothetical cases of weaponizing civilians to counter an adversary's military mobility. Although the scenarios are rooted in identified trends and past incidents, they also consider alternative future developments that adversaries might exploit.

The article concludes by examining how trends in contested mobility and the risk of weaponizing civilians for such purposes could evolve. The authors believe that the presented scenarios may serve as a basis for follow-on research, experimentation, and testing in wargames and exercises, simulations of armed forces' reactions to civilians restricting their movement, and, more importantly, for identifying and testing effective ways and means to counter these challenges.

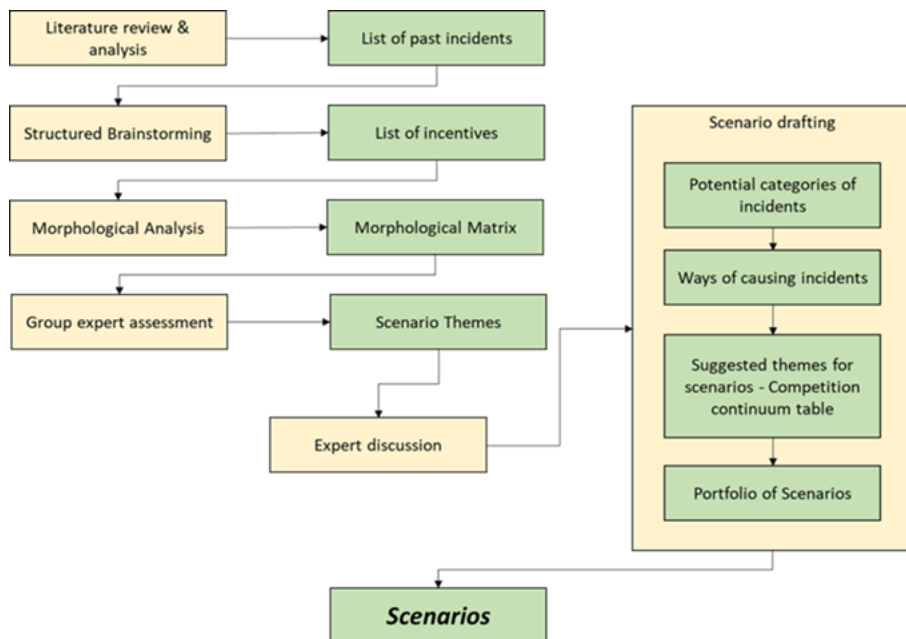
## Methodology

The methodological approach to developing a list of plausible future scenarios presented here is based on an analytical and creative process that uses data from past documented incidents to identify plausible themes for future cases in which actors seeking to weaponize civilians could benefit from both technological advances and traditional methods to influence target groups. Figure 1 outlines the methodological framework used for drafting hypothetical future scenarios. The white boxes represent the activities performed, while the darker boxes represent the outputs produced.

First, the literature review produced a list of sources documenting past incidents in which civilians interfered with military or governmental organizations, resulting in disruptions to government or military activities. Afterward, a preparatory open brainstorming session focused on discussing findings from past incidents, current hybrid activities worldwide, technological advances providing opportunities for manipulating and influencing masses, and the exploitation of human creativity. A subsequent structured brainstorming session generated a list of means, ways, and ends, sorted into the following categories:

- (1) Possible target audiences (*who* can be exploited/manipulated?)
- (2) Ways of manipulating civilians (*how*?)
- (3) Courses of action (*what* can manipulated people do to disrupt military mobility?)
- (4) Targets (*against what* can they act?).

The elements in each category were placed into the Morphological Matrix (Table 1) to identify plausible combinations as the foundation for scenarios. At



**Figure 1: Methodological Framework.**

the same time, two main actors—Red and Blue—were defined to represent a geopolitical context for future scenario considerations.

Finally, seven scenarios with different themes were drafted: pillaging of the railroad control systems, cyber sabotage of an electrical substation, poisoning of a water source on a military base, staged accidents on the railway during a strike, citizens protesting against the presence of foreign troops, refugees blocking borders, and conspiracy theorists disrupting aviation. These scenarios exploit cause-and-effect relationships and construct a roadmap toward achieving Red's objectives. They all address the following main points: Who are the target audiences? What are the targets? What are the possible means of manipulation? What is the resulting incident, and how does it impact military mobility? The scenarios also briefly outline the general context in which the events were set. The list is not exhaustive but rather illustrative, outlining plausible incidents relevant to the researched topic. It is also limited to methods (*means*) of weaponizing civilians that rely on influencing human behavior. This methodology is not intended to predict specific futures; rather, it identifies broader themes for future consideration.

The strength of this methodology lies in enabling the authors to build upon past incidents and project the identified patterns into future contexts, applying creative and critical thinking to produce scenarios (the strengths of which have

been described, for example, by Paul Shoemaker<sup>14</sup> or Peter Schwartz<sup>15</sup>) that may address weak or blind spots in ensuring freedom of action for NATO militaries. Although hypothetical, these scenarios advance anticipatory thinking and planning while leaving room for logic, creativity, and art in future research and planning to improve military resilience.

## Overview of Past Incidents

The ability of civilians to disrupt freedom of movement has been repeatedly demonstrated. Past incidents provide examples of various ways of achieving such disruptions. For example, this could happen through mobs using a variety of objects such as trees, barricades, or vehicles to block roads or railways, especially at choke points. Alternatively, civilians can damage key infrastructure and communication systems through sabotage and other forms of interference.

Crowds can easily disrupt traffic, as witnessed in Canada in 2020 (native protesters blocking railways),<sup>16</sup> Germany in 2023 (environmentalists gluing themselves to roads),<sup>17</sup> France (protesters blocking roads<sup>18</sup> and railways<sup>19</sup>), the United Kingdom (climate change protesters blocking bridges),<sup>20</sup> Slovakia (protesting carriers blocking border crossings with trucks),<sup>21</sup> and Lebanon (anti-government protesters blocking roads by practicing yoga),<sup>22</sup> to mention but a few examples. There have also been cases where mobs deliberately blocked military

<sup>14</sup> Paul J.H. Schoemaker, "Scenario Planning: A Tool for Strategic Thinking," *MIT Sloan Management Review* 36, no. 2 (Winter 1995): 25-40, <https://sloanreview.mit.edu/article/scenario-planning-a-tool-for-strategic-thinking/>.

<sup>15</sup> Peter Schwartz, *The Art of the Long View: Planning for the Future in an Uncertain World* (John Wiley and Sons, 1996).

<sup>16</sup> "The Wet'suwet'en Conflict Disrupting Canada's Rail System," *BBC News*, February 21, 2020, accessed January 12, 2024, [www.bbc.com/news/world-us-canada-51550821](http://www.bbc.com/news/world-us-canada-51550821).

<sup>17</sup> Euronews Green with Reuters, "Berlin Activists Glue Themselves to Roads Causing 'Massive' Disruption Across the City," *Euronews*, April 25, 2023, <https://www.euronews.com/green/2023/04/25/berlin-activists-glue-themselves-to-roads-causing-massive-disruption-across-the-city>.

<sup>18</sup> "Roadblocks and Fuel Blockades: What to Expect from Strikes If You're Driving in France," *The Local France*, March 6, 2023, <https://www.thelocal.fr/20230306/road-blocks-and-fuel-blockades-how-march-strikes-will-affect-driving-in-france>.

<sup>19</sup> "France Protesters Use Macron Effigy to Block Railway Tracks in Nice," *Global News*, March 22, 2023, <https://www.youtube.com/watch?v=biwKCwydKFc>.

<sup>20</sup> "Extinction Rebellion: Activists Block Four London Bridges," *BBC News*, April 15, 2022, <https://www.bbc.com/news/uk-england-london-61120179>.

<sup>21</sup> Pölös Zsófia, "Protest of the Slovakian Carriers: These Are the Blocked Border Crossings," *Trans.info*, January 13, 2020, <https://trans.info/protest-of-the-slovakian-carriers-these-are-the-blocked-border-crossings-170370>.

<sup>22</sup> AFP, "Lebanon Protesters Get Creative, Use Yoga to Block Roads," *Gulf News*, October 28, 2019, accessed January 31, 2024, <https://gulfnews.com/world/mena/lebanon-protesters-get-creative-use-yoga-to-block-roads-1.67447447>.

convoys or access to military bases. A French military supply convoy, for instance, was delayed by protesters in Burkina Faso and Niger opposed to French military involvement in the region.<sup>23</sup> In Italy, anti-war protesters blocked one of the access roads to the Naval Air Station in Sicily.<sup>24</sup> A military base in Turkey was blockaded with bulldozers and trucks deliberately parked outside its gates.<sup>25</sup> In 2022, Ukrainian civilians blocked a road to prevent Russian forces from accessing a nuclear power plant and slow their advance.<sup>26</sup> Looking further into the past, in 1993, military forces in Mogadishu were delayed by crowds of Somali civilians and roadblocks.<sup>27</sup>

Such incidents not only risk delaying military movements but also carry the danger of escalation into violent clashes between armed forces and civilians, as occurred when NATO peacekeeping soldiers were injured in clashes with protesters in Kosovo.<sup>28</sup> A specific example of civilians unwillingly influencing decisions on the use of force during an armed conflict comes from the Gulf War in 1990-1991, when hostages were used as human shields to protect strategic locations in Iraq from military attacks.<sup>29</sup>

Several past incidents involved migrants blocking border crossings. This happened in Mexico (3,000 migrants striving to reach the United States blocked a highway),<sup>30</sup> in Bosnia (the main road at the border crossing with Croatia was

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<sup>23</sup> "Deaths in Niger as Protesters Confront French Army Convoy," *Al Jazeera*, November 27, 2021, [www.aljazeera.com/news/2021/11/27/three-killed-in-niger-as-protesters-confront-french-army-convoy](https://www.aljazeera.com/news/2021/11/27/three-killed-in-niger-as-protesters-confront-french-army-convoy).

<sup>24</sup> Alison Bath, "Operations at US Naval Base in Sicily Unaffected by anti-NATO Crowd at Protest," *Stars and Stripes*, March 21, 2022, [www.stripes.com/theaters/europe/2022-03-21/base-operations-not-impacted-by-peaceful-protest-at-nas-sigonella-in-sicily-5422598.html](https://www.stripes.com/theaters/europe/2022-03-21/base-operations-not-impacted-by-peaceful-protest-at-nas-sigonella-in-sicily-5422598.html).

<sup>25</sup> The Associated Press, "Crowd Blocks Access to Turkish Military Base a Week after Failed Coup," *Global News*, July 22, 2016, <https://globalnews.ca/news/2841194/crowd-blocks-access-to-turkish-military-base-a-week-after-failed-coup/>.

<sup>26</sup> Mia Jankowicz, "Video Shows Crowd of Ukrainian Civilians Blocking Russian Army from Reaching Europe's Biggest Nuclear Power Plant," *Business Insider*, March 3, 2022, <https://www.businessinsider.com/video-ukrainian-civilians-in-block-russia-from-nuclear-power-plant-2022-3>.

<sup>27</sup> Bryan W. Olson and Gary L. Ortega, "The Battle of Mogadishu, 3 Oct 93," History Essay, Defence Technical Information Center, United States Army Sergeants Major Academy, June 30, 2009, <https://apps.dtic.mil/sti/trecms/pdf/AD1127031.pdf>.

<sup>28</sup> Niha Masih, "NATO KFOR Troops Injured in Northern Kosovo Clash. Here's What to Know," *Washington Post*, May 31, 2023, <https://www.washingtonpost.com/world/2023/05/31/kosovo-serbia-nato-kfor-troops/>.

<sup>29</sup> Matthew Gailani, "Saddam's Shields: The United States and Hostage-Taking During the First Gulf War," MA/MSc Diss. (Columbia University / London School of Economics, 2017), <https://worldhistory.columbia.edu/content/saddams-shields-united-states-and-hostage-taking-during-first-gulf-war>.

<sup>30</sup> "Mexico: Migrants Block Highway to Demand Permits to Reach US Border," *Sky News*, November 9, 2023, <https://news.sky.com/video/mexico-migrants-block-highway-to-demand-permits-to-reach-us-border-13003812>.



blocked by migrants trying to enter the European Union),<sup>31</sup> and at the Greek border with the Republic of North Macedonia (refugees lay down on the train tracks in protest against closed borders).<sup>32</sup>

However, it must be noted that large physical barriers can have the same effect as a crowd. In the Czech Republic, for instance, a pensioner blocked railway lines by cutting down trees next to them in a staged Islamist terrorist attack.<sup>33</sup> A car or train accident can also disrupt traffic for hours or even days. This recently occurred in Colorado, where a train derailment collapsed a bridge, seriously affecting railway and road traffic between Colorado Springs and Pueblo.<sup>34</sup> Accidents can also happen in the maritime realm, where a large ship can block a strait or access to a port, as evidenced in the Suez Canal in 2021.<sup>35</sup>

Traffic can be hindered not only by physical obstacles such as crowds, vehicles, or fallen trees, but also by disruptions to power, communications, and control lines. Such disruptions may result from a cyberattack<sup>36</sup> or be caused by physical damage to systems. For instance, there have been incidents of sabotage against the German rail system,<sup>37</sup> attacks on the U.S. power grid,<sup>38</sup> and damage to undersea telecommunication cables connecting Estonia to Finland and Sweden.<sup>39</sup> German environmentalists have even attempted to disrupt nuclear waste

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<sup>31</sup> Mladen Lakic, "Migrants, Refugees Block Bosnia-Croatia Border Crossing," *Balkan Insight*, October 24, 2018, <https://balkaninsight.com/2018/10/24/migrants-and-refugees-blocked-border-crossing-between-bosnia-and-croatia-10-24-2018/>.

<sup>32</sup> The Associated Press, "Refugees Lie Down on Rail Line to Protest Macedonia's Closed Border," *CBC News*, March 3, 2016, <https://www.cbc.ca/news/world/macedonia-migrants-rail-protest-1.3473864>.

<sup>33</sup> "Czech Pensioner Jailed for Terror Attacks on Trains," *BBC*, January 14, 2019, accessed January 13, 2024, <https://www.bbc.com/news/world-europe-46862508>.

<sup>34</sup> Chris Boyette and Elizabeth Wolfe, "Colorado's I-25 Is Partially Closed after a Coal Train Derailed off a Bridge and Killed a Semi-Truck Driver, Authorities Say," *CNN*, October 16, 2023, <https://www.cnn.com/2023/10/16/us/coal-train-derailment-driver-death-colorado/index.html>.

<sup>35</sup> Vivian Yee and James Glanz, "How One of the World's Biggest Ships Jammed the Suez Canal," *The New York Times*, July 17, 2021, <https://www.nytimes.com/2021/07/17/world/middleeast/suez-canal-stuck-ship-ever-given.html>.

<sup>36</sup> Ellen Nakashima and Joseph Menn, "China's Cyber Army Is Invading Critical U.S. Services," *The Washington Post*, December 11, 2023, <https://img3.washingtonpost.com/technology/2023/12/11/china-hacking-hawaii-pacific-taiwan-conflict/>.

<sup>37</sup> Rob Schmitz, "An Act of Sabotage Shut Down Parts of Germany's Rail System for Hours This Weekend," *NPR*, October 9, 2022, [www.npr.org/2022/10/09/1127739900/germany-trains-sabotage](http://www.npr.org/2022/10/09/1127739900/germany-trains-sabotage).

<sup>38</sup> Catherine Morehouse, "Physical Attacks on Power Grid Surge to New Peak," *Politico*, December 26, 2022, <https://www.politico.com/news/2022/12/26/physical-attacks-electrical-grid-peak-00075216>.

<sup>39</sup> Niklas Pollard and Anne Kauranen, "Sweden Says Telecom Cable with Estonia Damaged but Operating," *Reuters*, October 18, 2023, <https://www.reuters.com/world/europe/sweden-says-telecom-cable-with-estonia-damaged-2023-10-17/>.



shipments by damaging railways.<sup>40</sup> Such attacks may be covert or presented as accidents by adversaries.<sup>41</sup> Hostile actors can also use monetary incentives to encourage the theft of critical components from transit, power, and communication systems to disrupt or disable them.<sup>42</sup> Since both railway and road systems depend on these communication and control networks, damaging or stealing cables can significantly restrict traffic flow.

Finally, civilians can directly attack vehicles, trains, or other means of transport, thus influencing mobility. An extreme example comes from aviation. Recently, there has been a worrisome trend of people “looking for cheap thrills” by pointing lasers at commercial aircraft.<sup>43</sup> This idea has also been endorsed by the most extreme believers in the chemtrails conspiracy theory (which claims that planes are secretly spraying poison into the air), who have sought to blind pilots with lasers.<sup>44</sup> Highly efficient lasers are available for purchase online, facilitating this type of threat. In extreme cases, blinding a pilot can have serious consequences.

These examples demonstrate civilians’ ability to disrupt logistics routes or choke points, making them targets for possible exploitation by adversaries and representing a significant vulnerability to the flow of forces. Moreover, recent experiences in Europe prove that NATO adversaries have an interest in targeting critical infrastructure as part of their hybrid warfare. For instance, Russia has been blamed for incidents of sabotage across Europe, including attacks on traffic and military infrastructure, e.g., the attempt to set buses on fire in Prague, a plot to blow up a NATO facility in Germany, sabotage of Polish railways used to pro-

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<sup>40</sup> “Riot Police Fire Tear Gas and Water Cannon at Activists as Anti-Nuclear Protests Spill Over into Violence,” *Daily Mail*, November 7, 2010, accessed February 2, 2025, <https://www.dailymail.co.uk/news/article-1327469/Riot-police-tear-gas-anti-nuclear-activists-protest-gets-violent-Germany.html>.

<sup>41</sup> Georgi Kantchev and Drew Hinshaw, “Finland and Estonia See Likely Sabotage in Damage to Pipeline and Telecoms Cable,” *Wall Street Journal*, October 10, 2023, <https://www.wsj.com/world/europe/finland-sees-likely-sabotage-in-damage-to-pipeline-and-telecoms-cable-to-estonia-ad20630b>.

<sup>42</sup> Eva Grey, “Cable Theft Still Plagues the Rail Industry,” *Railway Technology*, September 24, 2017, [www.railway-technology.com/features/featurecable-theft-still-plagues-the-rail-industry-5932428/](http://www.railway-technology.com/features/featurecable-theft-still-plagues-the-rail-industry-5932428/); Shenzhen Clou, “Cable Theft: A Growing Problem Around the World,” *Smart Energy International*, May 31, 2023, [www.smart-energy.com/industry-sectors/energy-grid-management/cable-theft-a-growing-problem-around-the-world/](http://www.smart-energy.com/industry-sectors/energy-grid-management/cable-theft-a-growing-problem-around-the-world/).

<sup>43</sup> Robert Graves, “The Laser Threat to Airliners is Real (and Growing),” June 3, 2015, accessed February 22, 2024, <https://www.linkedin.com/pulse/laser-threat-airliners-real-growing-robert-graves/>.

<sup>44</sup> Mick West, *Escaping the Rabbit Hole: How to Debunk Conspiracy Theories Using Facts, Logic, and Respect* (New York, NY: Skyhorse Publishing, 2018).

vide military support to Ukraine, and possibly also sabotage at a munitions factory in Wales and derailments in Sweden.<sup>45</sup> These hybrid attacks have all allegedly been conducted by individuals hired by Russia.<sup>46</sup>

There are other examples of adversarial actors attempting to use civilians as a “weapon.” Poland accused Belarus and Russia of orchestrating an influx of Middle Eastern refugees to its borders,<sup>47</sup> while Finland made similar accusations against Russia.<sup>48</sup> Migrants and refugees appear to be particularly vulnerable groups in terms of possible manipulation. Even misinformation can significantly influence crowds of migrants, as was experienced at the U.S.-Mexican border, where migrants from Venezuela blocked the bridge between El Paso (U.S.) and Juárez (Mexico) because of a rumor of a temporarily open border.<sup>49</sup> A similar case occurred at Croatia’s borders with Serbia and Bosnia, where hundreds of migrants gathered after misinformation spread that Croatia would open its borders.<sup>50</sup>

All the cases mentioned above show how vulnerable civilians are to manipulation and how they can be mobilized even by simple misinformation or disinformation. This is especially worrisome when the false information relates to military objects. Slovakia, for instance, has repeatedly witnessed the online dissemination of hoaxes about military transfers – claimed to be either proof of Slovakia preparing for invasion or evidence of an alleged U.S. military invasion of Slovakia.<sup>51</sup> Similar hoaxes that fuel fear can potentially mobilize scared, frustrated, or angry citizens into action.

<sup>45</sup> Joe Barnes, “String of Mysterious Attacks across Europe Opens New Front in Russia’s War on the West,” *The Telegraph*, June 6, 2024, <https://www.telegraph.co.uk/world-news/2024/06/06/mysterious-attacks-across-europe-new-front-russia-war-west/>.

<sup>46</sup> Zdislava Pokorná, “Why the Police Have Strengthened Security: They Are Solving the Mysterious Case of a Telegram Agent, Russia Is Suspected,” *DeníkN*, June 9, 2024, <https://denikn.cz/1447550/proc-policie-posilila-bezpecnost-resi-zahadny-pripad-telegramoveho-agenta-podezira-rusko/>. – in Czech

<sup>47</sup> “Poland Says Belarus, Russia Behind New Migrant Influx,” *Deutsche Welle*, July 8, 2023, <https://www.dw.com/en/poland-says-belarus-russia-behind-new-migrant-influx/a-66463636>.

<sup>48</sup> Essi Lehto, “Facing Asylum Seeker Surge from Russia, Finland Mulls Curbing Access,” *Reuters*, November 15, 2023, [www.reuters.com/world/europe/facing-asylum-seeker-surge-russia-finland-mulls-curbing-access-2023-11-15/](https://www.reuters.com/world/europe/facing-asylum-seeker-surge-russia-finland-mulls-curbing-access-2023-11-15/).

<sup>49</sup> Corrie Boudreaux, “Hundreds of Frustrated Venezuelan Migrants Block Bridge Linking El Paso and Juárez,” *El Paso Matters*, March 12, 2023, <https://elpasomatters.org/2023/03/12/el-paso-juarez-bridge-blocked-by-venezuelan-migrants/>.

<sup>50</sup> Maja Zivanovic, Mladen Lakic, and Anja Vladislavljevic, “Migrants Gather on Serbian, Bosnian Borders to Enter Croatia,” *Balkan Insight*, October 23, 2018, accessed January 31, 2024, <https://balkaninsight.com/2018/10/23/migrants-and-refugees-gather-on-serbia-s-and-bosnia-s-border-with-croatia-10-23-2018/>.

<sup>51</sup> “Invasion of Slovakia? No, Nothing is Being Started, It’s Just Recycling Old Materials Again and Again,” *Hoaxy a podvody – Policia SR*, Facebook, January 27, 2022, <https://www.facebook.com/hoaxPZ/photos/a.317666309061243/1131560447671821>; TASR, “Bratislava Was Invaded by American Troops, a Hoax is Spreading on the

A specific case also occurred at a military barracks in Germany, involving a suspected attempt at water contamination by an external actor.<sup>52</sup> This illustrates another possible way of disabling the movement of soldiers – by making them sick.

The variety of past incidents outlined in this chapter created a starting point for the seven hypothetical scenarios. Table 1 summarizes the incentives from incidents and trends observed across four categories: possible target audiences, ways of manipulating civilians, courses of action, and targets. Individual elements (*in italics*) were selected and combined to develop the scenarios.

**Table 1. Morphological Matrix.**

Target audiences	Ways of manipulation	Course of action	Targets
<i>Migrants &amp; refugees</i>	<i>Disinformation &amp; hoax</i>	<i>Strikes</i>	<i>Military base</i>
<i>IDPs</i>	<i>Propaganda</i>	<i>Staged accidents</i>	<i>Military logistic convoys</i>
<i>Minorities</i>	<i>Material, ideological, or spiritual support</i>	<i>Sabotage</i>	<i>Rail transshipments</i>
<i>Frustrated people</i>	<i>Strategic communication</i>	<i>Demonstrations</i>	<i>Ports, straits</i>
<i>Environmentalists</i>	<i>Religious communication</i>	<i>Blockage</i>	<i>Roads, railway lines, airports</i>
<i>Women groups</i>	<i>Bribery</i>	<i>Pillaging</i>	<i>Border crossings</i>
<i>Youth</i>	<i>Deception</i>	<i>Cyber attack</i>	<i>Bridges</i>
<i>Religious groups</i>		<i>Poisoning</i>	<i>Tunnels</i>
<i>Alternative groups</i>			<i>Major logistic hubs</i>
<i>Violent Extremists</i>			<i>Electrical substation</i>
<i>Sects &amp; cults</i>			<i>Fixed radar stations</i>
<i>Antigovernmentalists</i>			<i>Early warning systems</i>
<i>Anarchists</i>			<i>A2AD systems</i>
<i>Pacifists</i>			<i>Cyber networks</i>
<i>Conspiracy theorists</i>			<i>Communication infrastructure</i>
<i>Petty criminals</i>			<i>GPS</i>
<i>Hostages</i>			<i>Food distribution systems</i>
			<i>Water distribution systems</i>
			<i>Means of transport</i>

Internet,” *Aktuality.sk*, June 28, 2021, [www.aktuality.sk/clanok/903368/bratislavu-nenapadli-americke-vojska-internetom-sa-siril-hoax/](http://www.aktuality.sk/clanok/903368/bratislavu-nenapadli-americke-vojska-internetom-sa-siril-hoax/). – in Slovak

<sup>52</sup> “Germany Investigates Possible Unauthorized Entry and Sabotage at a Military Barracks,” *AP News*, August 14, 2024, <https://apnews.com/article/germany-military-barracks-cologne-investigation-f82490feb81a44d41909b0367012af35>.

## Hypothetical Scenarios

The following scenarios portray different ways of manipulating civilians, targeting vulnerable groups, as well as actions undertaken by such civilians against specific targets: deceived civilians pillage railroad control systems, a cyber cell paid to sabotage an electrical substation, a worker unknowingly used to poison a water source on a military base, bribed individuals stage accidents on the rail during a strike, hoaxes mobilize citizens to protest against foreign troops, refugees deceived by disinformation block borders, and conspiracy theorists manipulated into attacking airplanes.

Unlike past incidents, these can all be regarded as developments provoked by an adversary yet executed by target audiences not directly associated with the adversary. They might thus be perceived as staged coincidences or accidents.

In the scenarios below, the friendly/allied forces are designated *Blue*, while the adversary is called *Red*.

### *Scenario 1: Pillaging of Railroad Control Systems*

Red starts massing forces on the border with Blue. As the crisis deepens, Blue begins reinforcing its forces along the border. To disrupt the Blue force flow, Red, using planted agents and bot networks, begins spreading rumors on Blue social media that recycling companies will pay a premium for copper. Posts repeatedly mention that railroad control systems contain a lot of copper. This leads to the pillaging of these systems by local petty criminals. The pillaging results in several close calls at railway crossings and railway transfers. Law enforcement units, reinforced by military police, attempt to stop the pillaging, but struggle to keep up with its geographical extent as well as with the number of people involved. The local criminals operate in well-organized groups, often involving minors, which severely limits law enforcement options.

Using the cover of the widespread pillaging, Red agents remove control wires at several key junctions. One particular location is in the vicinity of a local highway crossing just before a bridge on one of the major railways. This railway is a key enabler for Blue military transports toward the border. The Red agents select this site because visibility is reduced due to trees and a slight curve in the rails. They then stage a fuel truck in the way of a cargo train transporting fuel and other chemicals. When the train hits the truck, the result is a large explosion followed by a significant fire. The train's inertia pushes the burning fuel cars onto the bridge, causing considerable structural damage and leading to the complete closure of the affected section of the railway for several months. This, in turn, severely disrupts Blue force movements, forcing transport through the area to shift to road convoys alone. Given the circumstances, the incident appears to be an accident caused by widespread pillaging of control systems rather than an act planned and executed by Red.

### ***Scenario 2: Cyber Sabotage on an Electrical Substation***

A significant blackout has hit the northeastern border region in Blue. The railway network appears to be without a sufficient power supply: electric locomotives are without power, some level crossings remain closed, and traffic lights have ceased functioning. Since all rail traffic in the region has been halted, significant chaos has ensued on the roads, with traffic building up and numerous accidents occurring. The blackout also affects military transport moving towards the northeastern border (using both railways and roads). Transport carrying military equipment, personnel, and ammunition for the upcoming exercise must wait until the power supply is restored, or at least until the road traffic problems are resolved. Relying solely on the roads would require cross-loading between trains and trucks, which in turn would cause significant delays to the transport.

Indicators suggest that cyber sabotage may have caused the event. Suspicion falls on an eco-anarchist group known for its proficiency in cyber operations and its willingness to use them to create chaos and undermine the state's legitimacy. What is less known is that the group's most proficient cyber cell has been on the Red payroll for some time, serving as a convenient and deniable tool for conducting subversive and covert activities in pursuit of Red's interests. This time, Red appears to be instigating panic and chaos while also disrupting the planned military exercise through attacks on the power distribution system.

Recovery from the blackout and restart of all systems reliant on the substations' power are estimated to take about a week. This will cause significant disruption to the planned series of military exercises. Moreover, the situation plays into the hands of various criminals and criminal groups who see it as an opportunity for looting, which in turn creates additional disruption to internal security. Civilian authorities have requested military assistance, further draining military resources and diverting them from national defense tasks.

### ***Scenario 3: Poison in Water Source on Military Base***

Three military bases—simply referred to as One, Two, and Three—located in the northeastern region of the Blue country, have registered complaints about the quality of water and food provided to their military and civilian personnel. All three bases use water from a single source. In the past, there were occasional complaints about the purity of water and sanitation on these bases, but none led to serious findings regarding the quality of water, food, or sanitation. The initial complaints in this case are dismissed as unsubstantiated and attributed to the frustration of individuals caused by long working hours during preparations for a field exercise. This exercise is one in a series of high-readiness drills conducted annually to maintain the Blue armed forces' capabilities. As preparations for the exercise intensify and prolonged working hours are required of the staff, cases of vomiting, diarrhea, and nausea appear at Bases One and Three on day one. Base Two reports only a single case of vomiting. Over the following days, more cases of diarrhea and nausea are reported across all three bases.

The situation is reported through the Ministry of Defense, and the ministries of health and environment are also informed. Affected personnel on the bases are instructed to stay home and seek medical care if symptoms persist. Initial measures are discussed within the Civil Emergency Group and concurrently within the military chain of command. Commanders of the three bases order sanitary tests of water, food, and other potential sources of the reported problem. The tests confirm the presence of a poisonous agent in the water.

Further investigation reveals that the nearby water reservoir—the sole source of water for the bases—had undergone a routine inspection, including disinfection, just a few days earlier. The inquiry ultimately shows that the poison was unknowingly added to the water by a worker whose supplies were procured from a local company affiliated with an ultra-radical group opposed to the state's involvement in conflicts abroad. The group had mixed the disinfectants with poison. The ultimate objective was to disrupt the exercise and weaken the Blue military's operational readiness.

#### ***Scenario 4: Staged Accidents on the Railway During a Strike***

Red establishes a warm relationship with prominent figures in certain Blue newspapers and with unions across different sectors, including the Blue National Railway Company. As a sign of “goodwill,” Red secretly leaks fabricated information to one of the newspapers about planned cuts in the state budget allocated to the railways. After the information is published, the unions of the National Railway Company declare a one-day strike. As a result, only one-third of employees show up to work, leading to significant railway delays across Blue. To ensure sufficient pressure on the government, the strike coincides with the day a military train is scheduled to transport supplies and ammunition to units conducting a live-fire exercise. Despite certain risks of delay, the transport departs.

Concurrently, two more events occur on the rail line used by the military train. In the northeast, a truck transporting liquid gas crashes into a railway bridge, causing a fire that begins in the chassis and spreads, creating a considerable risk of gas explosion. The accident blocks both railway and road traffic at the intersection of the region's main railway and highway corridors. The location of the accident is directly on the military train's route. At the same time, a separate accident occurs at a railway crossing a few kilometers behind the train, where a truck delivering heavy metal parts overturns at a rail crossing, blocking both the road and the track. Consequently, the military train is trapped between the two accidents.

A joint investigation by civilian and military authorities indicates that Red agents may have staged both accidents. It appears they bribed two Blue citizens to cause the incidents simultaneously. Red's objective seems to have been to disrupt preparations for the exercise by interrupting the supply chain. With the National Railway Company already paralyzed by employee shortages, it is unable to respond effectively to the crisis.

### ***Scenario 5: Citizens Protesting Against the Presence of Foreign Troops***

Two countries, Blue and Yellow, establish a framework for bilateral defense cooperation. Within this framework, a military garrison of Blue's armed forces will be stationed on Yellow's territory to facilitate joint training. Red, which shares a border with Yellow, has tense relations with Blue and perceives the deployment of Blue's armed forces so close to its territory as a direct threat. Therefore, Red begins covertly supporting—financially and ideologically—a non-state actor in Yellow called the *Movement for Neutrality*. Traditionally presented as an initiative of engaged pacifists, the Movement claims that the presence of Blue's military on Yellow's territory will drag Yellow into a potential confrontation between Blue and Red.

Under Red's influence, the Movement launches a massive campaign against the presence of Blue's military and begins spreading hoaxes via social media. The Movement claims that Blue will store nuclear weapons at the base, thus posing a health risk to Yellow's citizens as well as a threat to the environment. They also refer to Blue as occupiers and warn of the violation of Yellow's sovereignty. Finally, the group attempts to construct a causal link between the presence of Blue's troops and the declining welfare of Yellow's citizens. This broadens the Movement's support base to include environmentalists (worried about the consequences of nuclear weapons on Yellow's territory), pacifists (afraid of being dragged into a war with Red), conspiracy theorists (accusing Blue of seeking world domination and the establishment of a New World Order by deploying troops abroad), and socially disadvantaged groups (accusing the Yellow government of favoring "guns over bread").

The situation escalates as the arrival of Blue's soldiers at the base approaches. On the announced date, the Movement calls for a series of protests under the slogans "AGAINST foreign troops – FOR a better life!" In doing so, it attempts to attract as many people as possible, including not only those who oppose the presence of foreign troops but also those demanding better living standards. Moreover, two days before the protests, pro-Red social media accounts widely spread a deepfake video of Yellow's prime minister claiming that the presence of foreign troops would be financed from the budget initially allocated to social programs. This further inflames public frustration and mobilizes more people to attend the protests.

Large demonstrations are organized at the border crossing—where the Blue convoy is expected to pass—as well as at the entrance to the base where the troops are expected to be stationed. The Movement secures several buses to transport as many protesters as possible. Their aim is to block the road and prevent the convoy from entering Yellow's territory, or at least block its access to the base. Some violent extremist groups sympathetic to the Movement even call for attacks on the convoy. Under these circumstances, Blue reevaluates the security of the military transfer and determines that the protests represent a significant risk. They consider alternatives, including using a different, albeit longer, route or postponing the transfer.



### ***Scenario 6: Refugees Blocking Borders***

Red invades neighboring Blue. Yellow, also one of Blue's neighbors, offers military assistance to help liberate Blue's territory from the aggressor. Given Yellow's significant military capabilities, this could be a turning point in the war that would favor Blue. The involvement of Yellow is therefore highly undesirable to Red, which is determined to delay it by all means available. Red decides to exploit the refugees seeking to flee the combat zones to safety.

Red begins funding smugglers within Blue to move as many refugees as quickly as possible to the Yellow-Blue border. At the same time, it spreads rumors via fake social media accounts and through agents who have infiltrated the refugee crowds. The rumors claim that Yellow has opened its borders and will accept all refugees. In addition, fake news stories spread alleging that the Yellow government is providing refugees with financial benefits and housing. As a result, refugees begin to move en masse toward the border crossings between Blue and Yellow, where kilometer-long columns of cars form, and thousands of refugees camp right on the road and along the adjacent railway.

The blocking of border crossings renders any military transfers, including the movement of military supplies, impossible by land. This results in a delay of several days in delivering military aid. At the same time, the Yellow armed forces now need to assist border guards in managing the chaotic situation at the borders, which in turn limits their ability to perform other tasks. Meanwhile, Red escalates its disinformation campaign by claiming that Yellow only pretends to assist Blue while secretly planning to exploit its weakened neighbor and annex border regions. Red agents infiltrated within the refugee groups at the borders begin mobilizing them against Yellow to prevent its military from entering Blue at all costs. In the meantime, Red fully exploits the delay of Yellow's military aid to its advantage on the battlefield.

### ***Scenario 7: Conspiracy Theorists Disrupting Aviation***

Blue and Red both aspire to establish an air base in Yellow. Although initially favoring Red, the Yellow government ultimately decides to rent the base to Blue. Subsequently, Blue deploys a small contingent to the base to conduct regular reconnaissance flights. The base is situated only ten kilometers from Yellow's second-largest city.

This makes Red angry and determined to force Blue to disengage from Yellow. Knowing that a non-negligible part of the Yellow population believes in various conspiracy theories, Red exploits the situation to its advantage. Through friendly media and social networks, it spreads the conspiracy theory about chemtrails, which claims that powerful elites conspire to secretly disperse various compounds to change the weather and spray people with mind-control chemicals. Fake news stories link the alleged secret plan and the new Blue air base, suggesting that Blue has begun executing the conspiracy. This resonates with people who already believe in the chemtrails theory, as well as with those suspicious of Blue and its true intentions. All these groups share a distrust of the

current Yellow government, considering it “a puppet” of Blue. Red also uses trolls in social media discussions to suggest that people need to take action against the Blue air units – the most extreme proposal being to blind pilots with lasers. This appeals to ultra-radical environmentalists who not only fear the effects of chemical dispersal on the environment but also blame planes for producing carbon dioxide, thus contributing to climate change. Consequently, all these groups become easy targets of manipulation by Red.

Manipulated civilians purchase powerful lasers and use them against military aircraft during landings and takeoffs from the base. This leads to several emergency landings, but also one tragedy, when a blinded pilot loses control of his plane, which then crashes in a nearby field. Blue decides to halt all flights to avoid further tragedies until a solution is found.

## Discussion

The above scenarios, while fictitious, are all based on documented incidents, many of which occurred in the past few years. The list of scenarios is by no means exhaustive. They were selected to present a range of possible threats rather than specific futures. Recent developments<sup>53</sup> since the original writing of this article support the credibility of the hybrid threats outlined in these scenarios, including the use of civilian infrastructure as a threat vector targeting military infrastructure in times of crisis. The increase in hybrid warfare across Europe could potentially lead to escalation between NATO and Russia.<sup>54</sup> For instance, in a recent statement, the head of German intelligence warned that ongoing Russian hybrid warfare may trigger NATO’s Article 5.<sup>55</sup> Furthermore, it is not unreasonable to assume that in the event of a major crisis or an open conflict, Russia would leverage hybrid means to disrupt NATO’s ability to project force.

The breadth of ongoing Russian actions against both NATO and other countries, such as Georgia and Moldova, is an indication of what may come should Russia escalate further against NATO. This is especially true in terms of leveraging disinformation to mobilize civilians to act on Russia’s behalf. Russia’s hybrid war against Georgia has demonstrated how effective such an approach can be. For

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<sup>53</sup> Charlie Edwards, “Russia’s Hybrid War in Europe Enters a Dangerous New Phase,” IISS Online Analysis, The International Institute for Strategic Studies, November 26, 2024, <https://www.iiss.org/online-analysis/online-analysis/2024/11/russias-hybrid-war-in-europe-enters-a-dangerous-new-phase/>; Arno Van Rensbergen, “Hybrid Threats: Russia’s Shadow War Escalates across Europe,” *The Parliament*, January 21, 2025, <https://www.theparliamentmagazine.eu/news/article/hybrid-threats-russias-shadow-war-escalates-across-europe>.

<sup>54</sup> Sam Clark, “Russia’s Hybrid Warfare Could Cause ‘Substantial’ Casualties, Senior NATO Official Says,” *Politico*, December 29, 2024, <https://www.politico.eu/article/russia-hybrid-warfare-defense-substantial-casualties-james-appathurai-nato/>.

<sup>55</sup> “Russian Acts of Sabotage May Lead to NATO Invoking Article 5, Says German Intel Chief,” *Reuters*, November 27, 2024, [www.reuters.com/world/europe/russian-hybrid-attacks-may-lead-nato-invoking-article-5-says-german-intel-chief-2024-11-27/](https://www.reuters.com/world/europe/russian-hybrid-attacks-may-lead-nato-invoking-article-5-says-german-intel-chief-2024-11-27/).

instance, in Georgia, Russian support for and encouragement of extremist groups to commit violence led to attacks against pro-Western groups, riots (e.g., burning European Union flags), and the recent victory of pro-Russian groups in elections.<sup>56</sup> Similarly, the violence incited in the United Kingdom in the summer of 2024 was driven by Russian disinformation.<sup>57</sup>

This aligns with Russia's concept of "New Generation Warfare," i.e., in order to achieve its objectives, Russia uses "a truly synchronized whole-of-government approach to warfare, where the lines between war and peace have become increasingly blurred."<sup>58</sup> This approach combines informational, psychological, political, and economic warfare, either as a substitute for or in support of direct military action. Given the breadth of the hybrid threat, the solution to this challenge cannot be limited to military capabilities and will require a whole-of-nation, and possibly even multilateral, response.<sup>59</sup> In many cases, NATO militaries will need to rely on local civilian authorities (e.g., police, firefighters) and the private sector (e.g., power and utilities) to support the continuity of military operations. This is the reverse of the more traditional pattern of military support to civilian agencies, which typically occurs in natural disasters such as fires, hurricanes, earthquakes, or terrorist attacks.<sup>60</sup>

Two points deserve a brief note. The first is the growing proliferation of generative artificial intelligence and its potential role in misinformation. In the past, conducting large-scale misinformation campaigns required significant resources to both create and spread fake content. However, with the widespread adoption of social media, the cost of disseminating misinformation has decreased. A single operator can now generate large numbers of bots to manipulate discussions on social media. More importantly, with the widespread adoption of generative AI

<sup>56</sup> Natia Seskuria, "Russia's 'Hybrid Aggression' against Georgia: The Use of Local and External Tools," Center for Strategic and International Studies, September 21, 2021, accessed January 29, 2025, <https://www.csis.org/analysis/russias-hybrid-aggression-against-georgia-use-local-and-external-tools>; Davit Gasparyan and Christina Harward, "Possible Russian Gains in Georgia and Moldova," Institute for the Study of War, October 27, 2024, <https://www.understandingwar.org/backgrounder/possible-russian-gains-georgia-and-moldova>.

<sup>57</sup> Eleni Courea, "Far-Right Disorder Had 'Clear' Russian Involvement, Says ex-MI6 Spy," *The Guardian*, August 11, 2024, <https://www.theguardian.com/politics/article/2024/aug/11/far-right-disorder-had-clear-russian-involvement-says-ex-mi6-spy>.

<sup>58</sup> Wiktor Andrzejewski, "Does Article 5 Still Work for Poland? NATO's Response to Hybrid Threats," Centre for International Policy Studies, November 13, 2024, <https://www.cips-cepi.ca/2024/11/13/does-article-5-still-work-for-poland-natos-response-to-hybrid-threats/>.

<sup>59</sup> Minna Ålander, "Death by a Thousand Paper Cuts: Lessons from the Nordic-Baltic Region on Countering Russian Gray Zone Aggression," Carnegie Endowment for International Peace, November 14, 2024, <https://carnegieendowment.org/research/2024/11/russia-gray-zone-aggression-baltic-nordic>.

<sup>60</sup> NATO, "Countering Hybrid Threats," May 7, 2024, [https://www.nato.int/cps/on/nato\\_hq/topics\\_156338.htm](https://www.nato.int/cps/on/nato_hq/topics_156338.htm).

models and their low cost, anyone with an internet connection can create plausible misinformation that may be difficult to identify at first glance.<sup>61</sup> Of particular concern to security are deepfakes,<sup>62</sup> which could be used to place NATO forces or governments into situations with which they had no connection, and subsequently employ this fabricated material to encourage actions in support of hostile objectives, as discussed in the scenarios above. These actions could include lone-actor terrorist attacks (such as poisoning water supplies or attacking military personnel), demonstrations blocking military movements, and more. Misinformation may also be used without any direct military reference, such as in the scenario where railway control systems were targeted. Since human detection is becoming increasingly difficult, more effort should be invested in detecting and countering generative AI-produced disinformation.<sup>63</sup> This lends further credibility to scenarios in which hostile actors employ misinformation or disinformation to influence local populations in pursuit of their objectives.

The second point concerns the role of civil society, which can act both in countering hybrid threats and, unfortunately, in serving the interests of hostile actors. As efforts to strengthen societal resilience against hybrid threats have shown, a whole-of-society approach is necessary to implement appropriate measures.<sup>64</sup> The tabletop exercise conducted by the Hybrid Centre of Excellence in 2022 demonstrated that the engagement of civil society must be at the core of building such resilience.<sup>65</sup> Since civilians are often both the target of hostile actions and a weapon exploited by hostile actors, proactive engagement with local organizations can help build trust between NATO militaries and local communities, as well as foster positive relations with local authorities.

However, many civilian organizations may pursue agendas that are, or may be perceived to be, at odds with military requirements or government policies.

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<sup>61</sup> Angus R. Williams, "Online Misinformation: How Generative AI and LLMs Are Changing the Game," The Alan Turing Institute, May 31, 2024, <https://www.turing.ac.uk/blog/online-misinformation-how-generative-ai-and-llms-are-changing-game>.

<sup>62</sup> Deepfakes are media manipulations where images, voices, videos, or text are altered or fully generated by AI. See Public-Private Analysis Exchange Program, "Increasing Threat of Deepfake Identities," Homeland Security, 2021, accessed January 29, 2025, [https://www.dhs.gov/sites/default/files/publications/increasing\\_threats\\_of\\_deepfake\\_identities\\_0.pdf](https://www.dhs.gov/sites/default/files/publications/increasing_threats_of_deepfake_identities_0.pdf).

<sup>63</sup> Abigail Edwards Di Cooke et al., "Crossing the Deepfake Rubicon: The Maturing Synthetic Media Threat Landscape," CSIS Briefs, Center for Strategic and International Studies, November 2024, <https://www.csis.org/analysis/crossing-deepfake-rubicon>.

<sup>64</sup> Mikael Wigell, Harri Mikkola, and Tapio Juntunen, "Best Practices in the Whole-of-Society Approach in Countering Hybrid Threats," European Parliament, Policy Department for External Relations, May 2021, accessed January 29, 2025, [www.europarl.europa.eu/RegData/etudes/STUD/2021/653632/EXPO\\_STU\(2021\)653632\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2021/653632/EXPO_STU(2021)653632_EN.pdf).

<sup>65</sup> Hanna Smith, "Civil Society Engagement at the Core of the 'Resilient Civilians' Exercise," *Hybrid CoE*, May 3, 2022, <https://www.hybridcoe.fi/news/civil-society-engagement-at-the-core-of-the-resilient-civilians-exercise/>.

These include environmentalist groups, protest movements focused on unrelated issues, or anti-war organizations. Such divergences may be exploited by hostile actors such as Russia, which can magnify existing tensions or create fake news to drive a wedge between the local population and the military. To counter such efforts, it is essential to encourage a diversity of credible news sources, improve online literacy, and strengthen resilience across society.

## Conclusions

In the past, civilians have proved capable of affecting military freedom of movement by physically blocking or otherwise disrupting civilian and military infrastructure. Although in most cases no manipulation by a hostile actor has been proven, in some instances—not strictly linked to military mobility—adversaries have exploited civilians to achieve their purposes. In general, some actors, including Russia, have already demonstrated both the will and the capability to use a variety of irregular warfare methods against NATO countries,<sup>66</sup> and they are likely to continue doing so in the future, especially if the political atmosphere becomes more confrontational. Among the options that adversaries could employ is the use of civilians to disrupt strategic mobility and logistics. This makes civilians a potential target of manipulation by hostile powers. As a result, civilians can unwillingly and unwittingly become an important tool—essentially “a weapon”—for the adversary.

Identified vulnerable audiences susceptible to exploitation include, in particular, people or movements dissatisfied with the government and its policies or with their socio-economic situation and status. Frustration, anger, or even fear can be easily exploited by adversaries, who can facilitate the manipulation of these emotions. Adversaries may employ various methods of manipulation, including financial incentives, bribery, disinformation, or deception, to utilize individuals as tools in their struggle. These manipulated individuals or groups may then act against specific targets (e.g., by stealing cables, carrying out sabotage, or conducting cyberattacks). At the same time, these actors may not be fully aware of the ultimate consequences of their actions for the defense of their own country. They might go on strike or organize a demonstration that, from the perspective of military power projection, occurs at the worst possible time and place. These are some of the identified elements that have been combined to develop hypothetical scenarios.

The scenarios in this article outline various ways of manipulation and courses of action that manipulated civilians could undertake. These include pillaging railroad control systems, cyber sabotage of electrical substations, poisoning a military base's water source, staging accidents on railways during strikes, organizing protests against foreign troops, blocking borders, and targeting airplanes with

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<sup>66</sup> Arsalan Bilal, “Russia’s Hybrid War against the West,” *NATO Review*, April 26, 2024, <https://www.nato.int/docu/review/articles/2024/04/26/russias-hybrid-war-against-the-west/index.html>.

lasers. The ultimate effect on military logistics may be profound, while the events and their timing may still appear coincidental. For instance, strikes or protests could occur at a specific time and place, or an accident could unintentionally lead to a road or rail blockage. However, in our scenarios, these actions were planned and provoked by an adversary and executed through manipulated target audiences. This allows the adversary to deny its involvement while still achieving desired outcomes. At the same time, the scenarios reflect the reality that technological progress will provide even more options for hostile actors in the future, both in terms of how to manipulate people (e.g., deepfakes) and how to affect military mobility, given that sophisticated technology is becoming increasingly accessible and affordable (e.g., lasers).

In summary, the article presents a representative set of scenarios in which civilians, exploited by hostile states, can impact NATO military mobility. In some cases, civilians may not even realize that they are being manipulated by hostile powers that skillfully leverage misinformation to exploit the frustrations of different groups. These scenarios provide an opportunity to test various situations and explore options for increasing the resilience of both the military and civil society. Consequently, based on this analysis, the following recommendations can be formulated for NATO and its member states.

First, NATO countries need to focus on societal resilience, including developing redundancy and hardening critical infrastructure—both civilian and military—to avoid single points of failure. Second, NATO should consider scenarios like those outlined here in its planning and exercises. This need is underscored by the dilemma faced by the military when countering such situations, given that international legal commitments restrict its scope of action when civilians are involved. Regular training in such scenarios would help avoid surprises, identify requirements for redundancies, and potentially drive capability requirements<sup>67</sup> that enable NATO militaries to deal with such situations within the limits of respective policies. Third, in line with previous work that identified the need to acquire active means that would enable NATO to counter hostile actions below lethal intent (dubbed intermediate force capabilities), NATO should consider formally adopting the Intermediate Force Capability Concept, currently in an advanced draft form within NATO Allied Command Transformation.<sup>68</sup> Fourth, and in conjunction with the previous recommendation, NATO needs to demonstrate resolve to counter these hybrid activities in order to re-establish deterrence in the gray zone.

Finally, further research should explore the range of possible countermeasures that NATO countries could adopt to prevent some of the outlined risks from materializing, while acknowledging the need to balance individual freedoms with security requirements in democratic societies. This work should include deeper

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<sup>67</sup> John Nelson, “Developing a NATO Intermediate Force Capabilities Concept,” *Connections: The Quarterly Journal* 21, no. 2 (2022): 67–84, <https://doi.org/10.11610/Connections.21.2.05>.

<sup>68</sup> Nelson, “Developing a NATO Intermediate Force Capabilities Concept.”

research into countering disinformation, such as the studies conducted by the Hybrid Centre of Excellence.<sup>69</sup> Legal research into the potential of military-civilian collaboration in law enforcement and the use of non-lethal capabilities would also be desirable, as it could prevent problems in operations. Lastly, far more research is required on countering threats in the cyber domain.

## Disclaimer

The opinions, findings, conclusions, and recommendations expressed in this publication are those of the authors and do not necessarily reflect the official policy or position of the Partnership for Peace Consortium, its participating institutions, or any governmental or international organizations affiliated with its governance structure.

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<sup>69</sup> Hybrid Centre of Excellence, Helsinki, [www.hybridcoe.fi/research-and-analysis/](http://www.hybridcoe.fi/research-and-analysis/).



### Bibliography

- "Countering Hybrid Threats," NATO, May 7, 2024, [https://www.nato.int/cps/on/natohq/topics\\_156338.htm](https://www.nato.int/cps/on/natohq/topics_156338.htm).
- "Czech Pensioner Jailed for Terror Attacks on Trains," *BBC*, January 14, 2019, <https://www.bbc.com/news/world-europe-46862508>.
- "Deaths in Niger as Protesters Confront French Army Convoy," *Al Jazeera*, November 27, 2021, <https://www.aljazeera.com/news/2021/11/27/three-killed-in-niger-as-protesters-confront-french-army-convoy>.
- "Extinction Rebellion: Activists Block Four London Bridges," *BBC News*, April 15, 2022, <https://www.bbc.com/news/uk-england-london-61120179>.
- "France Protesters Use Macron Effigy to Block Railway Tracks in Nice," *Global News*, March 22, 2023, <https://www.youtube.com/watch?v=biwKCwydKFc>.
- "Germany Investigates Possible Unauthorized Entry and Sabotage at a Military Barracks," *AP News*, August 14, 2024, <https://apnews.com/article/germany-military-barracks-cologne-investigation-f82490feb81a44d41909b0367012af35>.
- "Invasion of Slovakia? No, Nothing is Being Started, It's Just Recycling Old Materials Again and Again," *Hoaxy a podvody – Polícia SR*, Facebook, January 27, 2022, <https://www.facebook.com/hoaxPZ/photos/a.317666309061243/1131560447671821>.
- "Mexico: Migrants Block Highway to Demand Permits to Reach US Border," *Sky News*, November 9, 2023, <https://news.sky.com/video/mexico-migrants-block-highway-to-demand-permits-to-reach-us-border-13003812>.
- "NATO Policy for the Protection of Civilians, Endorsed by the Heads of State and Government participating in the meeting of the North Atlantic Council in Warsaw 8-9 July 2016," NATO, July 9, 2016, [https://www.nato.int/cps/en/natohq/official\\_texts\\_133945.htm](https://www.nato.int/cps/en/natohq/official_texts_133945.htm).
- "Poland Says Belarus, Russia Behind New Migrant Influx," *DW*, July 8, 2023, <https://www.dw.com/en/poland-says-belarus-russia-behind-new-migrant-influx/a-66463636>.
- "Riot Police Fire Tear Gas and Water Cannon at Activists as Anti-Nuclear Protests Spill Over into Violence," *Daily Mail*, November 7, 2010, <https://www.dailymail.co.uk/news/article-1327469/Riot-police-tear-gas-anti-nuclear-activists-protest-gets-violent-Germany.html>.
- "Roadblocks and Fuel Blockades: What to Expect from Strikes If You're Driving in France," *The Local France*, March 6, 2023, <https://www.thelocal.fr/20230306/roadblocks-and-fuel-blockades-how-march-strikes-will-affect-driving-in-france>.
- "Russian Acts of Sabotage May Lead to NATO Invoking Article 5, Says German Intel Chief," *Reuters*, November 27, 2024, <https://www.reuters.com/world/europe/>

russian-hybrid-attacks-may-lead-nato-invoking-article-5-says-german-intel-chief-2024-11-27/.

"The Wet'suwet'en Conflict Disrupting Canada's Rail System," *BBC News*, February 21, 2020, <https://www.bbc.com/news/world-us-canada-51550821>.

Afara, Jessica, Victoria Ajila, Hannah Macdonell, and Peter Dobias, "Use of Agent-Based Modeling to Model Intermediate Force Capabilities in (Counter)Mobility Crowd Scenarios," *The Journal of Defense Modeling and Simulation* 21, no. 4 (2022): 395-404, <https://doi.org/10.1177/15485129221141717>.

AFP, "Lebanon Protesters Get Creative, Use Yoga to Block Roads," *Gulf News*, October 28, 2019, <https://gulfnews.com/world/mena/lebanon-protesters-get-creative-use-yoga-to-block-roads-1.67447447>.

Ålander, Minna, "Death by a Thousand Paper Cuts: Lessons from the Nordic-Baltic Region on Countering Russian Gray Zone Aggression," Carnegie Endowment for International Peace, November 14, 2024, <https://carnegieendowment.org/research/2024/11/russia-gray-zone-aggression-baltic-nordic>.

Alison Bath, "Operations at US Naval Base in Sicily Unaffected by anti-NATO Crowd at Protest," *Stars and Stripes*, March 21, 2022, <https://www.stripes.com/theaters/europe/2022-03-21/base-operatons-not-impacted-by-peaceful-protest-at-nas-sigonella-in-sicily-5422598.html>.

Andrzejewski, Wiktor, "Does Article 5 Still Work for Poland? NATO's Response to Hybrid Threats," Centre for International Policy Studies, November 13, 2024, <https://www.cips-cepi.ca/2024/11/13/does-article-5-still-work-for-poland-natos-response-to-hybrid-threats/>.

Barnes, Joe, "String of Mysterious Attacks across Europe Opens New Front in Russia's War on the West," *The Telegraph*, June 6, 2024, <https://www.telegraph.co.uk/world-news/2024/06/06/mysterious-attacks-across-europe-new-front-russia-war-west/>.

Bilal, Arsalan, "Russia's Hybrid War against the West," *NATO Review*, April 26, 2024, <https://www.nato.int/docu/review/articles/2024/04/26/russias-hybrid-war-against-the-west/index.html>.

Boudreaux, Corrie, "Hundreds of Frustrated Venezuelan Migrants Block Bridge Linking El Paso and Juárez," *El Paso Matters*, March 12, 2023, <https://elpasomatters.org/2023/03/12/el-paso-juarez-bridge-blocked-by-venezuelan-migrants/>.

Boyette, Chris, and Elizabeth Wolfe, "Colorado's I-25 Is Partially Closed after a Coal Train Derailed off a Bridge and Killed a Semi-Truck Driver, Authorities Say," *CNN*, October 16, 2023, <https://www.cnn.com/2023/10/16/us/coal-train-derailment-driver-death-colorado/index.html>.

Clark, Sam, "Russia's Hybrid Warfare Could Cause 'Substantial' Casualties, Senior NATO Official Says," *Politico*, December 29, 2024, <https://www.politico.eu/>

article/russia-hybrid-warfare-defense-substantial-casualties-james-appathurai-nato/.

Clou, Shenzhen, "Cable Theft: A Growing Problem Around the World," *Smart Energy International*, May 31, 2023, <https://www.smart-energy.com/industry-sectors/energy-grid-management/cable-theft-a-growing-problem-around-the-world/>.

Courea, Eleni, "Far-Right Disorder Had 'Clear' Russian Involvement, Says ex-MI6 Spy," *The Guardian*, August 11, 2024, <https://www.theguardian.com/politics/article/2024/aug/11/far-right-disorder-had-clear-russian-involvement-says-ex-mi6-spy>.

Di Cooke, Abigail Edwards, et al., "Crossing the Deepfake Rubicon: The Maturing Synthetic Media Threat Landscape," *CSIS Briefs*, Center for Strategic and International Studies, November 2024, <https://www.csis.org/analysis/crossing-deepfake-rubicon>.

Dobias, Peter, "Navigating the Challenge of the Weaponization of Civilians: Leveraging Intermediate Force Capabilities," *Canadian Army Journal* 21, no. 1 (2024): 64-73, [www.canada.ca/en/army/services/canadian-army-journal/articles/2024/21-1-dobias-weaponization-of-civilians.html](http://www.canada.ca/en/army/services/canadian-army-journal/articles/2024/21-1-dobias-weaponization-of-civilians.html).

Edwards, Charlie, "Russia's Hybrid War in Europe Enters a Dangerous New Phase," *IJSS Online Analysis*, The International Institute for Strategic Studies, November 26, 2024, <https://www.ijss.org/online-analysis/online-analysis/2024/11/russias-hybrid-war-in-europe-enters-a-dangerous-new-phase/>.

Euronews Green with Reuters, "Berlin Activists Glue Themselves to Roads Causing 'Massive' Disruption Across the City," *Euronews*, April 25, 2023, [www.euronews.com/green/2023/04/25/berlin-activists-glue-themselves-to-roads-causing-massive-disruption-across-the-city](http://www.euronews.com/green/2023/04/25/berlin-activists-glue-themselves-to-roads-causing-massive-disruption-across-the-city).

Gailani, Matthew, "Saddam's Shields: The United States and Hostage-Taking During the First Gulf War," MA/MSc Diss. (Columbia University / London School of Economics, 2017), <https://worldhistory.columbia.edu/content/saddams-shields-united-states-and-hostage-taking-during-first-gulf-war>.

Galeotti, Mark, *The Weaponisation of Everything: A Field Guide to the New Way of War* (Yale University Press, 2022).

Gasparyan, Davit, and Christina Harward, "Possible Russian Gains in Georgia and Moldova," Institute for the Study of War, October 27, 2024, [www.understandingwar.org/backgrounder/possible-russian-gains-georgia-and-moldova](http://www.understandingwar.org/backgrounder/possible-russian-gains-georgia-and-moldova).

Graves, Robert, "The Laser Threat to Airliners is Real (and Growing)," June 3, 2015, [www.linkedin.com/pulse/laser-threat-airliners-real-growing-robert-graves/](http://www.linkedin.com/pulse/laser-threat-airliners-real-growing-robert-graves/).

Grey, Eva, "Cable Theft Still Plagues the Rail Industry," *Railway Technology*, September 24, 2017, <https://www.railway-technology.com/features/featurecable-theft-still-plagues-the-rail-industry-5932428/>.

- Jankowicz, Mia, "Video Shows Crowd of Ukrainian Civilians Blocking Russian Army from Reaching Europe's Biggest Nuclear Power Plant," *Business Insider*, March 3, 2022, <https://www.businessinsider.com/video-ukrainian-civilians-in-block-russia-from-nuclear-power-plant-2022-3>.
- Kantchev, Georgi, and Drew Hinshaw, "Finland and Estonia See Likely Sabotage in Damage to Pipeline and Telecoms Cable," *Wall Street Journal*, October 10, 2023, <https://www.wsj.com/world/europe/finland-sees-likely-sabotage-in-damage-to-pipeline-and-telecoms-cable-to-estonia-ad20630b>.
- Lacic, Mladen, "Migrants, Refugees Block Bosnia-Croatia Border Crossing," *Balkan Insight*, October 24, 2018, <https://balkaninsight.com/2018/10/24/migrants-and-refugees-blocked-border-crossing-between-bosnia-and-croatia-10-24-2018/>.
- Lehto, Essi, "Facing Asylum Seeker Surge from Russia, Finland Mulls Curbing Access," *Reuters*, November 15, 2023, <https://www.reuters.com/world/europe/facing-asylum-seeker-surge-russia-finland-mulls-curbing-access-2023-11-15/>.
- Masih, Niha, "NATO KFOR Troops Injured in Northern Kosovo Clash. Here's What to Know," *Washington Post*, May 31, 2023, <https://www.washingtonpost.com/world/2023/05/31/kosovo-serbia-nato-kfor-troops/>.
- Morehouse, Catherine, "Physical Attacks on Power Grid Surge to New Peak," *Politico*, December 26, 2022, <https://www.politico.com/news/2022/12/26/physical-attacks-electrical-grid-peak-00075216>.
- Nakashima, Ellen, and Joseph Menn, "China's Cyber Army Is Invading Critical U.S. Services," *Washington Post*, December 11, 2023, <https://img3.washingtonpost.com/technology/2023/12/11/china-hacking-hawaii-pacific-taiwan-conflict/>.
- NATO, "Countering Hybrid Threats," May 7, 2024, [https://www.nato.int/cps/on/natohq/topics\\_156338.htm](https://www.nato.int/cps/on/natohq/topics_156338.htm).
- NATO, "The Protection of Civilians, Allied Command Operations Handbook," SHAPE J9 Division, March 11, 2021, 7, <https://shape.nato.int/news-archive/2021/the-protection-of-civilians-allied-command-operations-handbook>.
- Nelson, John, "Developing a NATO Intermediate Force Capabilities Concept," *Connections: The Quarterly Journal* 21, no. 2 (2022): 67-84, <https://doi.org/10.11610/Connections.21.2.05>.
- Olson, Bryan W., and Gary L. Ortega, "The Battle of Mogadishu, 3 Oct 93," *History Essay*, Defence Technical Information Center, United States Army Sergeants Major Academy, June 30, 2009, <https://apps.dtic.mil/sti/trecms/pdf/AD1127031.pdf>.
- Pokorná, Zdislava, "Why the Police Have Strengthened Security: They Are Solving the Mysterious Case of a Telegram Agent, Russia Is Suspected," *DeníkN*, June 9, 2024,

<https://denikn.cz/1447550/proc-policie-posilila-bezpecnost-resi-zahadny-pripad-telegramoveho-agenta-podezira-rusko/>. – in Czech

Pollard, Niklas, and Anne Kauranen, "Sweden Says Telecom Cable with Estonia Damaged but Operating," *Reuters*, October 18, 2023, [www.reuters.com/world/europe/sweden-says-telecom-cable-with-estonia-damaged-2023-10-17/](https://www.reuters.com/world/europe/sweden-says-telecom-cable-with-estonia-damaged-2023-10-17/).

Public-Private Analysis Exchange Program, "Increasing Threat of Deepfake Identities," Homeland Security, 2021, [https://www.dhs.gov/sites/default/files/publications/increasing\\_threats\\_of\\_deepfake\\_identities\\_0.pdf](https://www.dhs.gov/sites/default/files/publications/increasing_threats_of_deepfake_identities_0.pdf).

Research Task Group SAS-094, "Analytical Support to the Development and Experimentation of NLW Concepts of Operation and Employment," NATO STO-TR-SAS-094, April 2017.

Research Task Group SAS-151, "Intermediate Force Capabilities Concept Development and Experimentation to Counter Adversary Aggression," NATO STO TR-SAS-151, December 2022.

Research Task Group SAS-151, "Intermediate Force Capabilities Concept Development and Experimentation to Counter Adversary Aggression," Annex E: Draft Intermediate Force Capabilities Concept, NATO STO TR-SAS-151, December 2022.

Schmitt, Michael N., "Deconstructing Direct Participation in Hostilities: The Constitutive Elements," *NYU Journal of International Law and Politics* 42, no. 3 (2010): 697-739, <https://nyujilp.org/wp-content/uploads/2012/04/42.3-Schmitt.pdf>.

Schmitt, Michael N., "Military Necessity and Humanity in International Humanitarian Law: Preserving the Delicate Balance," in *Essays on Law and War at the Fault Lines* (The Hague, The Netherlands: T.M.C. Asser Press, 2012), 89-129, [https://doi.org/10.1007/978-90-6704-740-1\\_3](https://doi.org/10.1007/978-90-6704-740-1_3).

Schmitz, Rob, "An Act of Sabotage Shut Down Parts of Germany's Rail System for Hours This Weekend," *NPR*, October 9, 2022, <https://www.npr.org/2022/10/09/1127739900/germany-trains-sabotage>.

Schoemaker, Paul J.H., "Scenario Planning: A Tool for Strategic Thinking," *MIT Sloan Management Review* 36, no. 2 (Winter 1995): 25-40, <https://sloanreview.mit.edu/article/scenario-planning-a-tool-for-strategic-thinking/>.

Schwartz, Peter, *The Art of the Long View: Planning for the Future in an Uncertain World* (John Wiley and Sons, 1996).

Seskuria, Natia, "Russia's 'Hybrid Aggression' against Georgia: The Use of Local and External Tools," Center for Strategic and International Studies, September 21, 2021, <https://www.csis.org/analysis/russias-hybrid-aggression-against-georgia-use-local-and-external-tools>.

- Smith, Hanna, "Civil Society Engagement at the Core of the 'Resilient Civilians' Exercise," Hybrid CoE, May 3, 2022, <https://www.hybridcoe.fi/news/civil-society-engagement-at-the-core-of-the-resilient-civilians-exercise/>.
- TASR, "Bratislava Was Invaded by American Troops, a Hoax is Spreading on the Internet," *Aktuality.sk*, June 28, 2021, <https://www.aktuality.sk/clanok/903368/bratislavu-nenapadli-americke-vojska-internetom-sa-siril-hoax/>. – in Slovak
- The Associated Press, "Crowd Blocks Access to Turkish Military Base a Week after Failed Coup," *Global News*, July 22, 2016, <https://globalnews.ca/news/2841194/crowd-blocks-access-to-turkish-military-base-a-week-after-failed-coup/>.
- The Associated Press, "Refugees Lie Down on Rail Line to Protest Macedonia's Closed Border," *CBC News*, March 3, 2016, <https://www.cbc.ca/news/world/macedonia-migrants-rail-protest-1.3473864>.
- Van Rensbergen, Arno, "Hybrid Threats: Russia's Shadow War Escalates across Europe," *The Parliament*, January 21, 2025, [www.theparliamentmagazine.eu/news/article/hybrid-threats-russias-shadow-war-escalates-across-europe](http://www.theparliamentmagazine.eu/news/article/hybrid-threats-russias-shadow-war-escalates-across-europe).
- West, Mick, *Escaping the Rabbit Hole: How to Debunk Conspiracy Theories Using Facts, Logic, and Respect* (New York, NY: Skyhorse Publishing, 2018).
- Wigell, Mikael, Harri Mikkola, and Tapio Juntunen, "Best Practices in the Whole-of-Society Approach in Countering Hybrid Threats," European Parliament, Policy Department for External Relations, May 2021, [www.europarl.europa.eu/RegData/etudes/STUD/2021/653632/EXPO\\_STU\(2021\)653632\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2021/653632/EXPO_STU(2021)653632_EN.pdf).
- Williams, Angus R., "Online Misinformation: How Generative AI and LLMs Are Changing the Game," The Alan Turing Institute, May 31, 2024, [www.turing.ac.uk/blog/online-misinformation-how-generative-ai-and-llms-are-changing-game](http://www.turing.ac.uk/blog/online-misinformation-how-generative-ai-and-llms-are-changing-game).
- Yee, Vivian, and James Glanz, "How One of the World's Biggest Ships Jammed the Suez Canal," *The New York Times*, July 17, 2021, [www.nytimes.com/2021/07/17/world/middleeast/suez-canal-stuck-ship-ever-given.html](http://www.nytimes.com/2021/07/17/world/middleeast/suez-canal-stuck-ship-ever-given.html).
- Zivanovic, Maja, Mladen Lakic, and Anja Vladislavljevic, "Migrants Gather on Serbian, Bosnian Borders to Enter Croatia," *Balkan Insight*, October 23, 2018, <https://balkaninsight.com/2018/10/23/migrants-and-refugees-gather-on-serbia-s-and-bosnia-s-border-with-croatia-10-23-2018/>.
- Zsófia, Pölös, "Protest of the Slovakian Carriers: These Are the Blocked Border Crossings," *Trans.info*, January 13, 2020, <https://trans.info/protest-of-the-slovakian-carriers-these-are-the-blocked-border-crossings-170370>.