RESEARCH ARTICLE

Policymaking to support resilience in democratic countries: an examination of Sweden, Israel, and Australia

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Abstract

The term 'resilience' has increasingly featured in foreign and security policy discourse, appearing in the 2016 European Union Global Strategy, the 2017 US National Security Strategy, and most recently in the UK's 2021 Integrated Review. These strategies note the importance of preparing for, responding to, and recovering from crises that could affect civilian society. While these strategies agree on the importance of building resilience, they do not specify the concrete policies that would be required to do so. Through a comparison of three democratic countries that refer to resilience in their national security documents, Sweden, Israel, and Australia, this article will identify measures that contribute to resilience in democracies. It will also discuss how policymakers in democratic countries should anticipate emerging trends and future threats to enhance their resilience in an increasingly complex and dangerous security environment.

Keywords: Resilience, Democracy, Crisis response, Sweden, Australia, Israel, National security, Policy, Policymaking

Introduction

A central role of democratic governance is protecting citizens, while ensuring the provision of essential goods and services. However, the way democratic states carry out this role has faced new challenges in the last two decades [1]. Rising complexity and uncertainty, as a result of changing power dynamics between countries, the digital revolution, and climate change, have forced policymakers to consider new approaches to national security [2, 3].

One approach to dealing with these challenges is to strengthen a country's 'resilience'. Resilience has been defined as 'the capacity to prepare for, to respond to, or to bounce back from problems or perturbations and disturbances, which cannot necessarily be predicted or foreseen in advance' [4]. It supports democratic policymakers' ability to respond to unexpected and destabilising events that arise from the rise in chaos and complexity experienced since the beginning of the twenty-first century

[4]. For national security policymakers, resilience could be a useful organising framework that could emphasise anticipatory governance and long-term planning to prevent and mitigate a range of threats to their citizens [2]. Recent (inter) national security strategies published by democratic regimes, including the 2016 European Union Global Strategy, the 2017 US National Security Strategy, and the UK's 2021 Integrated Review, all feature resilience as an organising principle.

But beyond the academic and policy debates about resilience, how can an overarching resilience framework be applied to enhance national security in democratic countries? What concrete policies and approaches can be implemented? And how might futures methods be applied to support this? In this paper, we consider three example countries, Sweden, Australia, and Israel. Each cites resilience as a principle in its national security documents. We apply a four-level framework that considers four different levels of action, individual, governmental, defence, and civil society, to consider measures that may increase a country's resilience.

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This article proceeds as follows: it first considers the evolution of the concept of 'resilience' and its increasing popularity, before discussing why it is increasingly relevant in democratic countries, especially for national security policymakers. It then considers three example countries, Sweden, Australia, and Israel, to identify ways in which resilience principles can be applied in practice to enhance national security. Finally, it considers the role of futures methods in helping policymakers to identify appropriate resilience-enhancing measures, and outlines the circumstances in which resilience-enhancing measures should be implemented.

Background and definition

Academic discussion of 'resilience' began in the 1970s in the field of systems ecology [5], when Crawford Holling presented the concept as a way of moving away from traditional models of ecological systems that focused on equilibrium and stability. Instead, Holling stated that we should view them as complex systems that successfully continue to function despite disturbances, which he called 'ecological resilience' [6]. Holling therefore defined resilience as a property which 'determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist' [6].

The concept gained widespread prominence in academic and policy discussions in the 2000s, in what Jon Coaffee describes as the 'resilience turn' [7]. Walker and Cooper state that the malleability of the term has enabled it to become ubiquitous across global governance, including fields like finance, defence, and urban infrastructure [5]. Coaffee, meanwhile, describes the 'resilience turn' turn as a response to the September 11 attack, which saw resilience being applied to questions of national security and emergency preparedness [7]. Chandler and Coaffee state that the resilience turn reflected a decreasing global confidence in the ability of states and governments to control events, and an increasing perception that the world is full of increasingly complex and interconnected systems [4]. They therefore define resilience as 'the capacity to prepare for, to respond to, or to bounce back from problems or perturbations and disturbances, which cannot necessarily be predicted or foreseen in advance', [4] a definition that we will adopt in this paper.

However, a caveat should be added to Chandler and Coaffee's suggestion that the increasing interest in resilience stems from a decreasing confidence in the ability of governments to control events. Democratic governments[1] are said to be under threat from illiberalism and authoritarianism [8], and polling shows that trust in democratic institutions has declined in recent years in western countries [8]. This suggests that the decreasing confidence in governments applies specifically to democratic governments, rather than all governments. Merkel and Luhrmann refer specifically to 'democratic resilience': 'the ability of a political regime to prevent or react to challenges without losing its democratic character' [8]. Regime type affects the nature and aims of policymaking [9]; therefore, discussions about resilience and policy must consider regime type. All regimes other than democratic regimes fall outside of the scope of this paper.

Academic concepts of resilience have been adopted into policy circles, including national security policymaking [2]. Recent national security strategies and policy documents give prominence to resilience, including the UK's 2021 *Integrated Review of Security, Defence, Development and Foreign Policy* (henceforth referred to as the Integrated Review); the European Union's 2016 *Global Strategy* (EUGS); the United States' 2017 *National Security Strategy* (NSS); and the North Atlantic Treaty Organisation (NATO)'s *Strengthened Resilience Commitment.*

The Integrated Review focuses on preparation measures that can be adopted in advance of a crisis to enhance society's ability to recover. It names multiple factors that are required to build resilience, including 'effective and trusted governance, government capabilities, social cohesion, and individual and business resilience' [10]. The US 2017 National Security Strategy similarly focuses on preparedness but does not discuss specific precursors to the same extent: it states that 'We must … build a culture of preparedness and resilience across our governmental functions, critical infrastructure, and economic and political systems' [11].

In contrast, the EU Global Strategy (EUGS) discusses resilience as an immediate need: it defines resilience as 'the ability of states and societies to reform, thus withstanding and recovering from internal and external crises' [12]. In comparison to the Integrated Review, which aims to strengthen precursors to resilience, the emphasis of the EUGS is on responding to a specific shock, and not only recovering, but reforming to minimise the effect of future similar shocks [13].

Unsurprisingly, given NATO's mission, NATO's *Strengthened Resilience Commitment* discusses resilience in a more overtly militaristic sense than the EUGS or the Integrated Review. It defines resilience as 'individual and collective capacity to resist armed attack … by means of

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1 Namely, 'political regimes that were established in free and fair multiparty elections taking place in a context where freedom of speech, association, and universal suffrage were guaranteed'. As cited in [8]

continuous and effective self-help and mutual aid' [14]. It states that the capacity to resist armed attack is underpinned by seven baseline requirements: government and critical services, energy supplies, food and water resources, communications, transport systems, ability to deal with the mass movement of people, and the ability to deal with casualties [15].

Overall, the concept of 'resilience' is closely associated with crisis management. Walker and Westley state that crisis management can learn from resilience thinking: understanding the total amount of change a system can absorb and recover from (level of resilience) is critical in preparing for and responding to emergencies, as the longer a community remains in a disturbed state after a disaster, the less likely the community will be to recover [16]. Equally, Walker and Westley state that resilience thinking can learn from crisis management, by noting that approaches to resilience need to be both driven by personal responsibility (bottom-up) and driven by higher authorities (top-down), in order for society to respond appropriately to crises [16].

Another potential cause of the rise in the resilience paradigm, which is linked to decreasing confidence in democratic governments to control events, is that democratic governments struggle to address 'Grand Challenges' like climate change and ageing societies—issues which are interrelated, cross cutting, and open-ended [17]. These issues pose a risk to national security and may cause public disillusionment. In order to overcome these challenges, Gudowsky and Peissl suggest that democratic governments need to develop long-term strategies using futures methods [17]. Resilience could be an appropriate paradigm through which to do so, given its emphasis on planning and preparation.

Policymakers have built on academic concepts and have identified the importance of resilience in supporting national security. However, strategic documents, by their nature, do not describe concrete policies and measures. Democracies in particular can benefit from resilience measures, but also face particular challenges in doing so. In this paper, we seek to answer how policymakers can increase national 'capacity to prepare for, to respond to, or to bounce back from problems or perturbations, which cannot necessarily be predicted or foreseen in advance' [4], by considering the measures implemented by three example countries. Additionally, in order to better consider the applicability of resilience to the problem of modern democracies, we consider the suggestion of scholars including Gudowsky and Peissl that democratic governments need to develop long-term resilience strategies using futures methods [17].

Illustrative examples

We selected Sweden, Australia, and Israel, as illustrative examples because they are democratic regimes that refer to resilience in their national security documents, and which each face very different national security concerns. To collect data on the measures implemented in each country, we analysed publicly available information relating to each country, including national security documents, broader government policy documents, academic literature, and research reports by think tanks and international organisations.[2] Measures were considered relevant if they contributed to a country's ability to 'prepare for, respond to, or to bounce back from' [4] a crisis.

We used a four-part framework to structure our examples, based on the bottom-up and top-down approaches to resilience referred to by Walker and Westley [16]. This framework categorises each country's resilience-enhancing measures according to the group at which the measures are aimed. The first two categories are 'bottom-up' actors [1], the individual and civil society groups. The second two are 'top-down' actors [4], the (civilian) government and the Ministry of Defence and Armed Forces.[3] Not every country will necessarily have resilience approaches that fit into each of the four categories; indeed, some countries' approaches may almost exclusively be concentrated on one type, such as military-led initiatives.

It should be noted that there is a tension between this paper's focus on policy measures—inherently a 'top-down' approach—and the categorisation of some measures as 'bottom-up'. However, the aim of this paper is to identify measures that could be implemented by policymakers. There are a variety of measures that could be initiated and implemented by individuals or civil society groups, such as self-initiated community groups or volunteering, but they fall outside the scope of this paper.

Sweden

Background   Sweden's increased focus on resilience is a response to its forecasting of its future security situation.

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[2] These findings are based on research conducted in a RAND study for the UK Ministry of Defence. The authors draw on some of those findings in this paper, with the aim of drawing the attention of the academic community to the policymaking debate, to foster a discussion between academics and policymakers on this topic. For a further elaboration of the findings, please see Caves B, Lucas R, Dewaele L, Muravska J, Wragg C, Spence T, Hernandez Z, Knack A, Black J (2021) Enhancing Defence's Contribution to Societal Resilience in the UK: Lessons from International Approaches. Santa Monica, CA: RAND Corporation. Accessed 28/11/2021 at: https://www.rand.org/pubs/research_reports/RRA1113-1.html.

[3] Having the Ministry of Defence as an actor reflects this study's focus on national security policymaking. It will also not necessarily be the case that a single country would have resilience approaches that fit into each of the four categories, and indeed, some countries' approaches may almost exclusively be concentrated on one type, such as military-led initiatives.

In 2015, it re-instated its 'Total Defence' policy, a Cold War-era whole-of-society response to a crisis, following Russia's annexation of Crimea in 2014 [18]. The Total Defence policy had been allowed to lapse after the Cold War ended, during a period of increased regional stability and security, but the government was forced to reconsider its approach to national security following increasing Russian aggression in the mid-2010s. There have been societal changes since the Cold War era that have further increased Sweden's (and many other countries') vulnerability to attack or disruption, such as a shift towards just-in-time supply chains that make the country vulnerable to supply disruptions [18], and the widespread digitisation of systems that make critical infrastructure vulnerable to cyber- and physical attacks [18]. Based on its assessment of these vulnerabilities and potential future scenarios, Sweden has therefore moved to implement or re-instate measures to prepare for and respond to a crisis.

Individual responsibility

Through ongoing communications campaigns, the Swedish government is educating the public about what to do in the event of a crisis [19]. The government is transparent and proactive in sharing information. For example, every Swedish household receives the pamphlet 'If Crisis or War Comes', informational videos and podcasts have been created, and the Swedish Civil Contingencies Agency (known by its Swedish acronym, MSB) runs a dedicated website with a wealth of regularly updated information [20]. These resources inform the public of their responsibility to ensure they have sufficient supplies on hand to survive several days without access to fresh food, water, or energy. They also provide packing checklists in case of evacuation and inform citizens of the location of their nearest emergency shelter [20].

Civil society structures

The public is encouraged to participate in activities that contribute to Total Defence preparation, such as learning first aid or joining voluntary organisations supporting civil defence [21]. To provide clear opportunities for participation, Sweden has 19 voluntary civil defence organisations independent from the Armed Forces and intended to contribute to peacetime preparedness [22]. The government considers them to be an 'important part of society's crisis preparedness' [22].

Government structures

As mentioned previously, Sweden has a civilian body, the MSB, dedicated to informing the public about how to prepare for a crisis. The MSB oversees civil preparation, emergency management, and civil defence, and plays a key role in implementing the Total Defence policy. In addition to educating the public, the MSB runs exercises and coordinates between stakeholders including municipalities, councils, and the private sector. Another of its main activities has been to develop dual roles for civilians in critical sectors, whereby civilian roles have an alternate, wartime designation: in the event of a crisis, civilians in designated roles will adopt a predetermined alternate wartime role [18].

Sweden also distinguishes between the responsibilities of local and national government and has made the public aware of this. For instance, the national government will make strategic decisions about how to respond to the threat facing the country in the event of a crisis, while municipalities will ensure care for the elderly, access to food and water for the population, and the operation of the emergency services [23]. Public awareness helps individuals know where responsibility lies for different aspects of resilience, enabling them to hold the appropriate public bodies accountable or request help.

The Swedish government has stated that its main objective for Total Defence in 2021 to 2025 is to enable society to continue functioning for 3 months in the event of a crisis that diverts government resource and attention [24]. To this end, as part of the Total Defence policy, the private sector is compelled to participate in crisis planning with local government and the MSB [25]. The national government also retains the power to compel the private sector to manufacture or stockpile certain goods, although this power has not been used since the Cold War [25].

Defence structures

A key way of involving Swedish citizens in resilience is partial conscription. All Swedish citizens over the age of 18 are eligible to participate, although only 6000 young adults are invited to try-outs each year [26]. This results in an average conscripted force of 1500 people each year [26]. The government aims to increase this to 8000 per year by 2025 [22].

Sweden also regularly runs large-scale Total Defence exercises: in 2019–2020, the MSB and the armed forces together ran a year-long exercise involving all of the organisations that play a role in Total Defence, including parliament, government agencies, municipalities, operators of critical infrastructure, selected private companies, and the general public. Exercises ranged from table-top to live-play exercises [27].

Summary

Driven by an assessment of future security needs, Sweden has developed a robust civil security apparatus to help enhance the resilience of the civilian population. Key aspects of this policy include free information sharing, nation-wide exercises, and clear opportunities to participate in relevant organisations. While led by a civilian agency, Defence also plays a key role, training civilians for

military service through partial national conscription and working closely with MSB to run the nationwide Total Defence exercises.

Australia

Background   Like Sweden, the Australian government has sought to implement resilience-enhancing measures in response to a perceived increase in threat level; one that is forecast to increase further. These threats emanate from a perceived intensification of strategic competition in the Indo-Pacific, and adversaries' increasing use of 'grey-zone' tactics, like state-sponsored cyber-attacks, that do not cross the threshold of conventional physical war [28]. It is also responding to the increasing risks posed by extreme weather as a result of climate change [29].

Australia faces many of the same challenges to its resilience as Sweden: it is dependent on just-in-time supply chains; imports the vast majority of critical goods like food, fuel, and medicines; and has limited domestic industrial capacity [29]. It is also a highly decentralised country, similarly to Sweden, making it harder to coordinate resilience efforts in a crisis [29]. Australia has thus far placed an emphasis on government-led approaches to enhancing resilience, for example by creating new government agencies and legislative powers [30].

Resilience practices   Individual responsibility

Australian approaches to resilience emphasise federal- and state-led responses to crises. Limited mention is made of the personal responsibility of individuals to plan for a crisis, and the country has not considered the psychological aspect of resilience [29].

Civil society structures

No strategies in this regard.

Government structures

Much power for crisis management and planning lies with the states, which have their own emergency management committees and have the power to request aid from the armed forces [31]. State governments have their own state emergency management committees that ensure tailored emergency management [32]. These have created state-specific resilience strategies, including the *Queensland Strategy for Disaster Resilience*, which is being implemented through the *Resilient Queensland 2018 – 2021* plan [33]. The strategy aims to identify risks and manage those risks, as well as to improve preparation, response, and recovery from disasters [33].

However, since 2018, the federal government has been creating national strategies and agencies with the aim of creating a more coordinated response to crises and to building resilience. Currently, the federal government response to the changing threat assessments facing the country is in part mediated through its existing central, civil emergency planning department, Emergency Management Australia (EMA). EMA coordinates between other federal agencies and activates emergency response plans such as COMDISPLAN and NATCASDISPLAN [34]. However, the government has also established a dedicated national resilience, relief and recovery agency in 2021 to build national resilience, as well as 'Resilience Services', a climate and disaster risk information service that will assist EMA [35].

In order to further enhance resilience, the federal government has announced that it will institute new legislation, including laws that will give the federal government the ability to declare a national emergency [35]. In addition to formal legislation, the federal government has also published a national Cyber Security Strategy and committed $1.67b in cyber security over the next 10 years [36]; it is also promoting and supporting the development of certain critical technologies to increase resilience in crisis situations [37].

Defence structures

Through the Defence Assistance to the Civil Community (DACC) initiative, states can request aid from the armed forces when their resources are insufficient [38]. There are several types of situations to which Defence can respond, including emergencies like bushfires or pandemics, or non-emergencies such as large-scale public events. Defence cannot act without its help being requested by the states. Defence also does not currently have its own resilience planning or response strategies [29].

Summary

Though power to respond to crises currently rests primarily with the states, recent developments in the threat environment—as well as the expectation that these will continue to increase in the future—have caused Australia to begin to develop structures and legal powers that enable the central government to better support resilience. This has included the establishment of dedicated agencies, as well as legislative and strategy preparation.

Defence currently plays a relatively minor role, only able to assist the states upon request in certain circumstances.

Israel

Background   Unlike Sweden and Australia, Israel has not implemented new measures that enhance resilience following a recent update to its threat forecasting: Israel has always faced significant challenges to national security, and thus has had certain resilience-enhancing measures in place for decades [29]. These measures have not always been implemented with the stated aim of increasing resilience, but can be classified as resilience-enhancing following Chandler and Coaffee's definition: namely that these measures allow 'the capacity to prepare for, to respond to, or to bounce back from problems or perturbations' [4]. The frequency of conflict in Israel's history, including a series of wars, Palestinian uprisings, armed conflicts, and terrorist attacks, has led to Israel's emergency management being highly military-centric [39].

Resilience practices   Individual responsibility

In Israel, individuals are educated from an early age on their responsibilities during crises [39]. The Home Front Command (HFC) (discussed below) educates the public about their role before and during crisis, namely, knowing the location of their nearest shelter and seeking shelter when needed [40]. Individual involvement in preparing for and responding to a crisis is typically mediated through the Israeli Ministry of Defence (IMOD) and Israeli Defense Forces (IDF) [39].

Civil society structures

Following an increase in terrorist attacks in the 2000s, certain regions in Israel began to further develop civil defence to incorporate 'resilience'. At a state and municipal level as well, civil society has started to play an important role in supporting resilience, including supporting psychological resilience of citizens [41]. This has led to the establishment of regional resilience centres (RCs) manned by social workers [41]. RCs work with local councils to prepare them for emergencies, reinforce community resilience, and provide individual mental health treatments. They provide access to therapists, nurses, and social workers for the local community [42].

Civil society, with the support of the central government together with local councils, also runs local emergency teams (known as CERTs), set up by, and staffed by volunteers [41]. CERTs support communities during emergencies and provide medical, psychological, and social assistance to the local community [42].

Government structures

Israel established a National Emergency Authority (NEMA) in 2007, following the Second Lebanon War [43]. NEMA aims to improve interagency cooperation and to emphasise a non-military response to emergency management. It plans for emergency situations and coordinates with national and local authorities in order to maintain national resilience [43].

In addition to NEMA, several other government agencies contribute to resilience in Israel. The Ministry of Economy's Emergency Food Supply Division advises civilians about appropriate individual stockpiling and does contingency planning, including recommendations for stockpiling certain key food items [44]. The Ministry of Health also has an Emergency Department that stockpiles imported medical products in case of an emergency [44].

Defence structures

Civil defence and crisis management in Israel are the responsibility of the HFC, which is overseen by the IMOD [39]. The HFC has two main roles: providing citizens with shelter when the country is under attack, and planning and preparing so that citizens know in advance what to do in an emergency [39]. The HFC works closely with the IDF, ensuring that communication and operations networks between the civilian and military sides are well-maintained, such that they can easily be activated in the case of a crisis [42]. The HFC also operates early warning sirens that all citizens receive on their mobile phones, warning them to go to a shelter [42].

From age 18, citizens (barring certain exempt groups) are required to complete relatively lengthy national service: 32 months for men between ages 18 and 26, and 24 months for women in the same age group [45]. A total of 14,000 people take part in national service annually [46]. Compared to Sweden, which conscripts approximately 1,500 individuals annually, this is a high level of conscription and reflects the high level of security threat Israel faces in its neighbourhood.

Summary

Israel's unique situation has resulted in resilience being heavily sponsored by the armed forces; however, multiple national government agencies, as well as municipal and regional government, play key roles. This includes clear

guidance about individual responsibility. Further, Israel has demonstrated an interest in a more comprehensive definition of resilience than is often used in its establishment of RCs focused on psychological resilience and support.

Discussion

The illustrative examples above demonstrate the types of measures that national security policymakers can implement to enhance a nation's resilience. Some of these threats can be predicted or foreseen. Futures research can play a key role in the robust identification of potential threats, informing strategic long-term thinking, and helping policymakers to adopt appropriate threat-specific resilience policies [47]. In crafting national security policy, methods such as scenario development, roadmapping, and horizon scanning can help decision-makers to understand the future threats their country will face, and to implement resilience-enhancing measures accordingly, as shown in the Sweden and Australia examples.

However, a crucial part of Chandler and Coaffee's definition is the second clause: 'which cannot necessarily be predicted or foreseen'. This alludes to a complex relationship between resilience and futures research. A key part of resilience is that it enables a country to have threat-agnostic response capabilities, in order to enable a response to events that futures methods have failed to predict.

Policymakers should therefore ensure they do both: use a variety of futures methods to understand the changing nature of the threats they face, and implement resilience-enhancing measures to respond to these threats. Many of the measures outlined in the illustrative examples could theoretically be applied in any democratic country, depending on the actual and predicted threats it faces. However, there may need to be variation in which measures are applied, and how. Governments may not have the resources, political will, or public support to implement these measures—measures like stockpiling and national service may be unpopular and unsuitable in some cases, for instance.

This paper seeks to provide insights into a range of approaches to resilience at different levels (e.g. government, Defence, individual), which are followed by different countries facing varying types of threats. In this way, it aims to provide an overview of measures that national security policymakers in any country should consider, based on their own current and future threat assessments and capability assessments. Building on this baseline assessment, policymakers could consider implementing some of the measures outlined above.

The implementation of such resilience-enhancing measures will only be effective in contributing to a country's capacity to prepare for and respond to crises if it is appropriate for the country in question. Policymakers need to have a solid understanding of their capabilities, strategic objectives, and current and future threats they face, before they attempt to implement such measures. Further, countries that already have resilience-enhancing measures in place should continually re-assess the situation. Futures methods play a critical role here, in helping policymakers understand what new measures may need to be implemented, and how existing measures may need to be adapted.

Finally, as noted in the Background and definition section, democratic governments have adopted resilience approaches in part because they have been struggling to meet interdisciplinary, large-scale challenges that impact national security (although perhaps indirectly), such as climate change. Using some of the futures methods detailed throughout this paper, like horizon scanning and scenario development, to govern long-term planning could also help policymakers to overcome these challenges and hence strengthen their resilience.

Conclusions and limitations

This paper has sought to outline concrete ways in which national security policymakers can enhance resilience. The concept of resilience has gained prominence in academic and policymaking circles since Holling introduced it in the 1970s, as it offers a new way of thinking about systems that allows for dynamism and unpredictability. It has been seen as a useful concept in policymaking to enhance national security in the post-9/11 era, as a way of responding to threats have become increasingly amorphous (cyber-attacks) and complex (supply chain crises). For democracies, having the ability to 'prevent or react to challenges without losing their democratic character' [8] is essential to their survival. The measures outlined in this paper could go some way to supporting this.

The measures that we identify in this paper will only contribute to national resilience if they are based on an accurate assessment of the country's capabilities, strategic aims, and the current and future threats it is facing. A key part of establishing this assessment is the continuous application of futures methods; building up futures research capability is also an important measure that policymakers could implement in order to increase national resilience.

There are limitations to our approach. These findings are based on openly accessibly data regarding a limited number of countries. There may be further measures that these countries have taken to enhance resilience

and national security that we have not been able to identify due to their sensitive and non-public status. A wider sample of countries would likely also have yielded a greater, or more refined, range of potential measures. While further research could not overcome issues relating to sensitive information, it could seek to survey a greater range of countries and to employ comparative case study techniques to better understand why and how each country employs the measures it does. Future research could also benefit from using future scenarios, in order to understand what the effects of the measures might be in different situations.

Abbreviations

CERT: Community Emergency and Resilience Teams; COMDISPLAN: Disaster Response Plan; DACC: Defence Assistance to the Civil Community; EMA: Emergency Management Australia; EU: European Union; EUGS: European Union Global Strategy; HFC: Home Front Command; IDF: Israeli Defense Forces; IMOD: Israeli Ministry of Defense; IR: Integrated Review; MSB: Swedish Civil Contingencies Agency; NATCASDISPLAN: Nature Catastrophic Disaster Plan; NATO: North Atlantic Treaty Organisation; NEMA: National Emergency Authority; RC: Resilience centre; UK: United Kingdom; US: United States; 9/11: September 11, date of terrorist attacks carried out by al-Qaeda.

Authors' contributions

Both authors collaborated on the research and writing of this article. All authors read and approved the final manuscript.

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Availability of data and materials

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare they have no competing interests.

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