Annex

Australia

1	Erosion of Multilateralism & Liberal World Order[1]
Threat area(s)	International Security, Human Security, Economic Security
Threat causality	The Australia defence white paper introduces the erosion of the international world order as a threat for Australia, as the growing international interdependences make threats in other regions of the world affect Australian security environment. To this regard, **"unhelpful" power competitions and the rise of violent non-state actor** are seen as the cause for such erosion, as such developments create further uncertainty towards the International world order.
Actors / description	Throughout the threat, several manifestations are portrayed, they follow; • **Russian** approaches towards Ukraine, disregarding international law. • **North Korea** increases uncertainty by the development of WMD creating further instabilities in the region and in the international order. • **Increasing presence of non-state terrorist attacks**, through coordinated actions such as Paris 2015, Moreover, the white paper acknowledges the detrimental role of the use of Coercive economic actions, as well as military power, which can diminish Australian strategic autonomy.

2	Cyber
Threat area(s)	Economic security, physical security (e.g. disruption of the security of information networks and communications systems), sociopolitical security, national security (espionage).
Threat causality	Cyber threats produce a direct threat toward the ADF, along with warfighting abilities. Beyond defense, both government agencies and non-government sectors also face cyberattacks, wherein 2015, over 1,200 cybersecurity incidents targeted the aforementioned. Such attacks are given great consideration as they affect the security of information and communications systems, as well as banking services and the transport and energy sectors. **The threat assessment is based on the notion that in the next 20 years the strategic environment will be shaped by complex non- geographic threats within the cyber and space domains.**
Actors / description	The Australian strategy does not specify nor single out any specific actors which it regards as a threat to its cybersphere. Instead, the policy generalizes cyber threats as coming from 'state and non-state actors' that now possess access to highly capable and technologically advanced tools that can be used to target others through internet-connected systems. The strategy, however, does outline that greater use of offensive cyber operations is becoming more and more notable recently.

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1   Department of Defence, '2016 Defence White Paper' (Australian Government, 2016), 45–46, http://www.defence.gov.au/WhitePaper/Docs/2016-Defence-White-Paper.pdf.

3	Space
Threat area(s)	National security (espionage), physical security (communications interference).
Threat causality	Space threats are perceived in space-based capabilities, which can offer advanced information gathering opportunities, such as imagery gathering, to potential state adversaries. Australia sees threats arising in the space domain in the next 20 year, namely space-based and space-enabled capabilities, which encompass military capabilities.
Actors / description	Again, no specific actors are mentioned. The policy refers to '**some countries'** developing capabilities that target space-based satellite systems (that support communication, particularly perceived as a threat during fight, when deployed on operations) to destroy them or to degrade their capabilities, thus resulting in a threat to the Australian network(ed capabilities).

4	Terrorism and Foreign Terrorist Fighters[2]
Threat area(s)	Physical security.
Threat causality	In the case of terrorism, the **anti-western narrative pushed by extremism, the rapid proliferation of terrorist group across the Middle East and East & South East Asia and the state fragility are contributing factors, creating a further concerning terrorist threat**. At the same time, the returnee of foreign fighters with new skill and networks are a clear manifestation of how this threat is being manifested in Australia. This threat is seen as **raising.**
Actors / description	Terrorism constitutes a major threat towards Australia in the form of extremism that is perpetrated or advocated by terrorist groups such as ***Daesh,*** **Al-Qa'ida, *and Boko Haram,*** among others, that violently act under the name of Islam. While ***Iran, Syria, Afghanistan*** are identified as countries that are likely to sprout terrorist organizations and terrorist actors, the paper further declares that North African countries, such as **Libya**, as well as states in **Sub-Saharan Africa, the Middle East and Asia**, which foster "state fragility, weak borders and an increasing number of ungoverned spaces", provide support for the development of terrorist organizations, operations and propaganda.[3] Moreover, the threat from terrorism sets as manifestations of the threat, the returnee of foreign fighters with new skills, and the number of foreigners going to Iraq and Syria to join terrorist ranks. It also portrays that Islamic terrorism includes "**individuals motivated and radicalized by extremist narratives, often via the internet, who do not themselves travel overseas**".[4] However, it **does not include right or left-wing terrorism concerns.**

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2   Department of Defence, 46–48.

3   Department of Defence, 48.

4   Department of Defence, 47.

5	Military Modernisation
Threat area(s)	Physical Security, International Security
Threat causality	A looming threat identified by the Australian defence white paper is that of the increasing military spending by different countries in the region, which they do not address as "arms race" but they openly understand that the increasing military modernization may lead to an arms race pushes by instability and power competition. Under such a scenario, the white paper understands that Australia must increase its spending and development not to lose the technological edge.
Actors / description	The threat arises mainly from the regional competitions which may escalate to an arms race, which can then escalate to an actual conflict in the region. The report presents developments such as longer-range precision-guided missiles, ballistic missiles, and potential new technologies such as quantum computing, innovating manufacturing, hypersonic, directed energy weapons and unmanned systems. Moreover, it expresses manifestations of such potential arms race, i.e. by presenting its expectation that by 2035, half of the world submarines are going to be operated by countries in the region.

6	Illegal Criminal Activities in Australian Borders[5]
Threat area(s)	Human Security, Public Security
Threat causality	While the threat from military attacks to Australian territorial borders is not of pressing concern, the threat from illegal activities in the Australian borders is referred to as of prime concern, as its understood be increasing in frequency and intensity. Moreover, the increasing presence of international criminal networks is considered as a concern given the role of Australia in the illegal migration smuggler networks.
Actors / description	The abundance of Australian fishery resources is considered as a structural factor which motivates illegal fishing fleets to attempt to violate Australian maritime borders, such abundance is also considered the reason why the threat intensity and frequency is expected to rise. With regards to criminal smuggling threat, the main element identified as a contributing factor is the presence of international criminal networks. Such networks are expected to have a role in the smuggling of illegal migrants, drugs and weapons. It also highlights the ongoing efforts, such as Operation Sovereign Borders, and the relationship with other government agencies such as the Department of Immigration and Border Protection.

7	Climate Change[6]
Threat area(s)	Human Security, Environmental Security, Economic Security,
Threat causality	While being the threat least described in this report, Climate change appears an important challenge for the countries in the immediate neighborhood. To this extent, it presents higher temperatures, increases sea levels, increases in frequency and intensity of extreme weather events, as manifestations of the threat.
Actors / description	The impacts of the threat are understood to follow, human security by proliferating the challenges to demographic growth, and food security. At the same time, economic development is also expected to be negatively impacted. The manifestations, as mentioned before, are expected to be higher temperatures, increase sea levels and increases in frequency and intensity of extreme weather events.

5   Department of Defence, 54–65.

6   Department of Defence, 55–56.

8	Regional Instability[7]
Threat area(s)	Economic security, cooperation security, environmental security,
Threat causality	For Australia, the most prominent factors for peace and stability exist in the presence of "**a stable Indo-Pacific region and a rules-based global order**." Such threats to stability and peace are characterized mainly in tensions that can arise in territories such as between East China and South China Seas. Another significant potential cause of the threat is observable in tensions and frictions between the US and China.
Actors / description	• **North Korea** is considered to be a major factor for instability in the region, especially for South Korea and Japan, on the basis of the constant threat that arises from its nuclear weapons program, its proliferation of WMD, ballistic missile test and their delivery systems. • Another factor of instability is the *unresolved disputes over territories*, such as the **East China Sea territory** where tensions rose due to the existence of numerous *overlapping Air Defence Identification Zones.* • **China** is also implicitly mentioned as a potential threat due to its continuous advancements in military modernization and thus its accordingly growing responsibility to support global and regional stability (e.g. peacekeeping, humanitarian relief, antipiracy operations). In addition to this, Australia points out to the threat that can arise as a consequence to **friction between the US and China**, in particular within the East China and South China Seas territory as well as the airspace above those seas, and in the rules that govern international order/behaviour, especially in the realms of cyber and space.[8]

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7   Department of Defence, 54–65.

8   Department of Defence, 44–45.

Center for Strategic & International Studies

1	Demographics[9]
Threat area(s)	Sociopolitical Security
Threat causality	Countries which are at different stages of industrialization are experiencing different rates of population growth, ageing and rural/urban population growth.
Actors / Description	Regardless of nation, the world population is set to increase by the year 2045 with United Nation (UN) estimates of low fertility predicting 8.6 billion, medium fertility 9.4 billion and high fertility 10.2 billion. • Much of the developed world will see a decrease in population. Particularly within Europe, where Eastern European countries have been experiencing net emigration since the 1990s. • Japan & China's populations will decrease by 16million and 108 million by 2045. • Africa is the region that will see the greatest population growth until 2045. Medical advances, improved sanitation, cultural changes, urbanization, declining fertility, and a baby boom following World War II have all contributed to an increasingly ageing population. The global mean age in 2015 was 29.6 years, by 2045 it will 35.4 years. In the US it will be 41,5 years; Europe 46.6 years; China 49.2 years and Japan topping the list with the oldest age of 53.3 years. The year 2007 marked the first year in which urban populations grew larger than rural populations, and it set to grow from 53% in 2015 to 65% in 2045. Furthermore, the number of megacities (>10million) is set to increase with there being 29 current ones to 41 by 2030. Since most megacities are coastal, they are at risk of rising sea levels due to climate change. Not only that, the effects of slums and shanty-towns without access to basic sanitation will create serious economic, social, political and physical insecurities that can spread.

2	Economics and National Power[10]
Threat area(s)	Economic Security, Physical Security, Cyber Security
Threat causality	The divergence in Gross Domestic Product (GDP) growth for all nations up to 2045 will influence how much they will be able to spend on defence. Moreover, the levels of debt and spending will constrain or grow a nation's GDP, with developed societies particularly feeling the brunt due to an ageing population, causing less money to be spent on defence. Military hegemony is supplemented by economic hegemony, with the world reserve currency of the US $ set to be contested by the Chinese Renminbi and possibly cryptocurrencies.

9   Miller and Nye Jr, 'Defense 2045', 5–9.

10   Miller and Nye Jr, 10–17.

2	Economics and National Power[10]
Actors / description	Regarding the military expenditure of the top 20 defence countries and top 20 GDP countries, the average was approximately 2.4% in 2014. This average is increased by US spending 3.5%. Meanwhile, **Japan**, **Germany** and **China** are all light defence spenders, recording rates below the average.
	By 2045, by most accounts, the **US** will have the second-largest economy to **China**. As its economy is falling further behind **China**'s, the % GDP likely to match **Chinese** defence expenditure will continue to increase. However, due to the **US**' overwhelming military equipment stocks, it will maintain at least a 10:1 advantage over **China**.
	In the **developed world**, public sector debt has been on the rise since the '08 financial crisis, stemming from social programs (retirement and health benefits) and is set to increase even more with their typically ageing populations. Rather than deleveraging after the '08 financial crisis, **all major economies** have a higher debt burden relative to GDP before 2007, posing financial instability and undermining economic growth. This will likely impact defence spending.
	The status of the **US $** being the world reserve currency has reduced the **US** borrowing rate by 50/60 basis points in recent years, generating a financial benefit of $90billion. However, the **$**' status as a world reserve currency has trended down since 1976 due to growing budget deficits, excess money creation and persistent current account deficits.
	The **Euro** stands as the second-largest proportion of the world's allocated reserves 22.6%, yet **China** has been aggressively pursuing expanded use of its currency, the **Renminbi** (RMB), surpassing the euro as the second most used currency in trade finance. If **China** increases transparency in its economy and capital markets, reduced capital control requirements, whilst providing additional liquidity of the RMB, more countries will seek to purchase RMB-denominated services.
	Geopolitical reasons bolster the position of the **RMB**, as the slide of the **Russian Ruble** after 2014 sanctions and the **BRICS** countries establishing a $50billion **New Development Bank in Shanghai** with $100 billion reserves which rival the **World Bank**. By 2045, the RMB will rival but will unlikely replace the US$ as the reserve currency.
	Stateless, virtual cryptocurrencies such as **Bitcoin** may rival the **US$** because of their ability to "bypass emergency capital controls or other measures taken by governments in the wake of the financial crises".

3	Power Diffusion[11]
Threat area(s)	Physical Security,
Threat causality	Since the 1648 Peace of Westphalia, nation-states have been the only political actors able to finance large militaries and maintain the integrity of international treaties. However, the increase in wealth of multi-national corporations (MNCs), non-governmental organizations (NGOs) and terrorist groups has led to their ability to wage war and peace.
Actors / description	Two corporations, **Wal-Mart** and **Sinopec Group** rank amongst the top 30 global entities by output (GDP for countries, revenue for companies). Furthermore, private security contractors, such as **Academi**, are predicted to generate half their revenue from corporations by 2045, with the **UN** estimating that the soldier-for-hire business will reach $244 billion by next year, making it clear that the nation-state's monopoly on military power will wane in the future. The frequency of intra-state conflicts along with the employment of new technologies, such as cyber-weapons, pose a threat to the power of the nation-state. NGOs and other charitable foundations are also better prepared in combating global ills, having better knowledge and access to the conflict areas in question. The power diffusion has resulted in an insufficient understanding of the "ground-truth" making it harder to influence events. This may give legitimacy and power to religious groups, powerful business leaders, or even illicit actors. The diffusion of global hegemony from uni-polarity to multi-polarity has meant that the G-20 has supplanted the G-8. However, since the interest and values of these members are so varied, it will only be effective in providing resolutions for problems, rather than pre-empting them (G-Zero). The nature of power is decaying, in which a new form of international politics will form.

4	Emerging and Disruptive Technologies[12]
Threat area(s)	Cybersecurity, Physical Security
Threat causality	The rapid technological development in advanced computation and synthetic biology poses new modes of living for each person in a developed society. Simultaneously, these new technologies have an alarming to the ability to be used by nefarious actors to manipulate, control or harm a population due to how advanced these technologies are, with little ability to effectively defend against them.

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11   Miller and Nye Jr, 17–21.

12   Miller and Nye Jr, 22–27.

4	Emerging and Disruptive Technologies[12]
Actors / description	Artificial general intelligence (AGI) has paved the way for human-equivalent intelligence in computers. Yet the development of artificial super-intelligence (ASI) may completely render the AGI environment as obsolete due to its increased computing power. Powered by quantum computers, AGI has the leverage to de-crypt most current encryption technologies. **D-Wave Systems**, a Canadian firm, sell he only quantum computer on the market. Yet, companies like **Google, IBM**, **Microsoft** and different nation-states are funding research to make their own. According to Nick Bostrom, there is a 10% probability that AGI will be developed by 2022, 50% by 2040 and 90% by 2075. However, one of the drawbacks from AGI is that it will create wide-spread, mass unemployment. Advancements in the field of synthetic biology will allow the design and construction of new "biological parts, devices and systems...and the re-design of existing, natural biological systems for useful purposes." The ability to edit, replace and changes the most fundamental systems of life, DNA, may have unintended and harmful repercussions such as the accidental release of artificially created organisms on ecosystems and the environment and bioterrorism from biohacking.

5	Connectedness[13]
Threat area(s)	Cyber Security
Threat causality	The increased size of people's digital footprint has drastically increased the level of connectivity and access to the world's information. However, the power of the internet has and will continue to diminish the integrity of geographical borders, forming new cyber-nations which will exist outside the control of the current nation-state.
Actors / description	The Internet of Things (IoT) and Big Data (BD) cultivation can track the behavioural patterns of people. For example, **corporations** harvest data from consumer purchases and search history to tailor advertisements whilst people browse. Also, **governments** have been reported to 'micro-target' individual voters. At the same time, their cybersecurity is equally as exposed, with 52% of the **US'** data that needs to be encrypted and protected currently not protected. Therefore, the **government** which withholds private data regarding medical records, credit reports and personal identifiable information (PII) will be liable if hackers successful breach cybersecurity defences. Some authoritarian nations, like **China** and **Russia**, will fight to re-assert their sovereignty and control internet freedoms, whilst **liberal democracies** may see citizens redefine their relationship between citizen and the state in important ways. However, a growing lack of faith with the political elite of nation-state governments may result in the organization of communities no longer bounded by geography, sharing a goal, identity, value or interest online with anonymity. Indeed, the virtual state built by 'sympathetic engineers could build online applications and databases to facilitate essential life services, eg. Cryptocurrency. One way this has manifested itself is by the online radicalization of individuals to **terrorist groups**, not only acting as an 'echo chamber' of beliefs but also instigating the recruitment of individuals.

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13   Miller and Nye Jr, 35–37.

6	Geopolitics[14]
Threat area(s)	Physical security
Threat causality	Given the diffusion of power from the single hegemon of the US to the multipolar model, the extent to which liberal democratic and free markets values will decrease due to contesting with other ideological systems.
Actors / Description	During the 20th century, the reason why liberal democracies had their advantage in being adopted by countries all over the world was due to the economic power of the **US**, not necessarily because of the political and moral principles of the ideology. Many academics view authoritarian states are most efficient that democracy, and with the rise of **China**, whilst having its drawbacks, being 'led by a reasonably enlightened group of people' can wield lots of geopolitical influence. **China**'s growing cooperation with **Russia**, as well political efforts to stifle any pro-democratic / social movement seeds are challenging the 'rule-based institutions that have served as the glue for the post-Cold War liberal order', re-thinking our approach to democracy. Furthermore, the rise of nationalism and religion in the **Islamic world** poses a very large security threat to the **US**. A tribal-ethnic nationalistic spur compounded with a greater emphasis on religion between the different **Islamic sects** has resulted in a growing instability within the Middle East. 2014 RAND Corporation analysis concluding that the number of both **Salafi-jihadist** groups and individuals had increased, along with a dramatic rise in attacks conducted globally by **Al Qaeda**. The yield from cereal crops has been steadily declining due to soil degradation. This is a major cause for concern as demand for staple crop will grow 1-1.5% annually to 2040, with the UN Food and Agriculture Organization (FAO) estimating that 'satisfying the expected food and feed demand will require a substantial increase of global good production of 70% by 2050'. With the effects of climate change will reduce arable land and disrupt crop yields further. Ironically, the health problems from over-eating will become more exacerbated, with a 130% increase in severe obesity which equates to an additional $549.5 million in healthcare expenditure. The **Organization for Economic Cooperation and Development (OECD)** has estimated that by 2050, 40% of the global population will live in river-basins as the scarcity of water increases unless new policies are passed.

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14   Miller and Nye Jr, 42–45.

China

1	Separatism & Terrorism[15]
Threat area(s)	Political Security, Physical security (Territorial unity)
Threat causality	Consider as one of the main threats to China, is that of the separatism in regions such as Taiwan, Tibet and Xinjiang. The white paper presents the separatism as a threat to the political unity of the country, and a potential threat to territorial unity, particularly if there is interference by foreign states.
Actors / description	• The main actor addressed is the **DPP**, the **Democratic Progressive Party**. The DPP is accused of refusing to recognize the 1992 Consensus. At the same time, the white paper defines them as a small group of Taiwanese, ignoring their hold on power, i.e. the presidency. They also blame them from the involvement of foreign influences. • **The US** is seen as the main threat in this regard, as a provider of arms and support for the Taiwanese government. • The White paper also mentions the **rise of separatism and terrorism in Xinjiang.** – There is an initial mention of **Tibet,** but it's only mentioned once, and never appears. An Interesting element in this regard is that the official position of the White Paper is to find a "peaceful reconciliation" through the "one country, two systems" solution. However, it states that if necessary, it will employ the use of force against those "very small number of separatists" and foreign forces. This can not be considered an escalation as it's a long understanding of Chinese policy; nevertheless, these statements are relevant for the current developments in Asia.

2	Unresolved Regional Hotspots and Disputes[16]
Threat area(s)	Political Security, Economic Security
Threat causality	While the scenario in the region is portrayed as a stable one, the white paper does not fail to acknowledge the presence of unresolved conflicts. There is no explanation on the causes of this hotspots. These regional hotspots seem not to portray a deterministic threat to the region; however, they are considered as problematic and deserving of attention.
Actors / description	The main hotspots mentioned are: • **Korean Peninsula:** Positive progress is identified, but there is still uncertainty. The main preoccupation of China seems to be with the double standards and lack of pragmatisms applied to find solutions. • **India and Pakistan:** Catalogued as a conflict which flares up from time to time but is generally stable. • Un-mentioned quarrels between countries over territorial disputes, however, they are not given the same importance as the two previously mentioned.

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15 The State Council Information Office of The People's Republic of China, 'China's National Defense in the New Era', 6.

16 The State Council Information Office of The People's Republic of China, 7.

3	Violations of Territorial integrity (Disputed territories)[17]
Threat area(s)	Physical security.
Threat causality	The threat from foreign influences violating territorial waters, space, or airspace, are considered as threats and acts of provocation against China. To this regard, the White Paper presents different violations of territory, i.e. Diaoyu Islands[18] or South-East China Sea islands. Moreover, the white paper considers some of this threat as destabilizing the strategic balance of the region.
Actors / description	• The White Paper presents preoccupation over the illegal incursions by external actors, conducting close-in reconnaissance on China, air and sea violations. While there is no name brought upon, it can be inferred of it refereeing to the **US**. • With regards to the **Diaoyu Islands**, the white paper does not mention Japan at all. Nevertheless, it mentions the islands as "**Inalienable parts of Chinese Territory"**, where the Chinese army will carry out protective missions and surveillance in the area, as it is part of the national sovereignty. China proposes the solution of territorial disputes by Negotiations with the related parties, **only** if they base the resolution of disputes over **historical facts and international law**.

4	Global Military Competition & Innovation[19]
Threat area(s)	Physical security, Political Security
Threat causality	The White Paper watches with concern the developments in the International Scene, where states are pushing for reformation of structures and strategies as well as pursuing more destructive technologies. The preoccupation is not on the lethality or the collateral damage of such race and technologies, but instead, **falling behind the military competition and being surprised with new technologies**.
Actors / description	• **The US** is seen as engaging in technological and institutional innovation in pursuit of absolute military superiority. This could refer to the development of Multi-Domain Multi-Level operations and technologies by the US Pacific Fleet. • **Russia** is advancing the New Look military reform. • **UK, France, Germany , Japan , India and Australia**. They are seen as rebalancing and optimizing military forces, as well as pushing for strategic military alliances to boost their relevance in regional affairs. The white paper also presents the internal weaknesses in this regard, and **pressures for increases in military spending.** The main areas of innovation are those of **Mechanization** and **Informationization.** Informationization is understood as the trend towards long-range precision, intelligent, stealthy or unmanned weaponry and equipment. The white paper calls for a continuation of the **Revolution in Military Affairs with Chinese Characteristic**; the "revolution" must close the gap with the **world's leading militaries**.

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17   The State Council Information Office of The People's Republic of China, 5;7.

18   Disputed with Japan, which calls them Ryukyu islands

19   The State Council Information Office of The People's Republic of China, 'China's National Defense in the New Era', 5;8.

European Strategy and Policy Analysis System

1	Climate Change[20]
Threat area(s)	Environmental, Physical, Economic security
Threat causality	Given mistakes from the past[21], we are must deal with a conflicting scenario when it comes to climate change. With this mega-trend, the report indicates several threats which arise from it. First and foremost, climate change will represent higher temperatures in Europe, resulting in both losses of productivity and potential human loses. At the same time, the report raises a second threat to this, the reaching of a "point of no return" on climate change.
Actors / description	Interestingly, this is the first mega-trend and threat address in the report. Climate change is seen as a wide combination of opportunities (covered below), and threats. The **main threats** to point out are, **increase in temperature**, and **reaching a point of "no return".** If **temperatures** continue to **increase**, **past 1.5% by 2030**¸ the report assess we will not be prepared to deal with the **consequences such as hotter summers and increase of extreme weather problems**, resulting in **loss of production** – the report assesses €1.7 trillions globally- , **and costing human life's**, mainly older populations which will get stroke harder. Secondly, the report raises the **threat of reaching the point of no return**. The report describes the **mechanism** as, that point where climate change direst scenarios start happening, mainly because of mistake and scenarios, to which economic and human hardship start kicking in; however, to reverse the situation, painful tools such as shifting to greener conditions or cutting fuels, are so painful to economy and quality of life in the short term, that populist leaders are not willing to do it; and because of inefficiency or incomplete solutions, the original threat becomes harder to deal with. The actors mentioned in this threat are **China** and **Asia**, **US**, **Europe** and **Africa**. **Africa** and **Asia**, as the continents which will see the deepest hardships because of rising temperatures. The **US**, **China** and **Europe**, are in turn, mentioned as the biggest greenhouse-gas producers. *Interestingly, Latin America is not mentioned at all throughout the entire mega-trend description.*

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20   Gaub, 'Global Trends to 2030', 8–9.

21   Interestingly, the report does not mention the natural cycles of the earth as a complement to this.

2	Urbanization – Unpreparedness of Cities[22]
Threat area(s)	Societal Security, Economic Security, Public
Threat causality	The threat comes from the unpreparedness and the rapid urbanization that may come with the transfer from megacities to cities. If this would occur, the report expects, cities will be dealing with the rise in criminality, social discontent, homelessness.
Actors / description	Urbanization is seen in this report as a double-edged mega-trend. Urbanization is a trend which proposes several opportunities for the EU; however, if done inefficiently, the report suggests it may constitute a threat. There are no particular actors involved, although the report uses "City" as an actor in itself. The report mentions the possibility of urbanization constituting a threat if it does not manage to prepare itself accordingly. A massive influx of population towards cities will require job creation and housing opportunities to be in pair to that influx. However, **if the city does not manage to secure funding or does not plan for this influxes**, the report suggests the **public crisis is due**. The main elements which the report rises, in this case, are **urban sprawl**, **lower productivity**, **segregation**, **congestion** and **crime**.

3	Economic Growth – Risk of a Financial Crisis & Stagnation[23]
Threat area(s)	Economic, Societal security
Threat causality	While Economic growth is expected throughout the following decade, a severe financial crisis or even a slowdown of the US or Chinese economy could produce a trickle-down effect towards Europe. If this is so, combined with the perception of stagnation could be deeming for the EU.
Actors / description	Although Europe is expected to continue to grow, and stay as a prime economy in the world, and even reach the third global economy; Europe may be dealing with a hard economic turn if a crisis is expected. The main risk the report brings is that of a financial crisis. While the causes may be unpredictable, the report presents other signs which show unpreparedness in the Member States, such as **public debt to GDP levels remaining high, incomplete financial regulation, and global trade tensions.** This factors, if a financial crisis would come up, could make it even deeper and troubling for European economies. At the same time, the report presents an "unusual" threat or trend, that of the perception of stagnation as a result of higher equality. The report understands that as a mechanic of higher equality rates, there is an often perception of citizens feeling they are not making any progress, even if their quality of life continues to increase. Interestingly, the report could be seen as rather optimistic in the economic side, different from reports which suggest the contrary. [24]

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22 Gaub, 'Global Trends to 2030', 12–13.

23 Gaub, 13–16.

24 Ian Bremmer and Cliff Kupchan, 'Top Risks 2018' (Eurasia Group, 2 January 2018).

4	Energy Consumption – Increasing Energy Competitiveness & Climate Change[25]
Threat area(s)	Environmental, economic, Political security
Threat causality	Increasingly connected to economic growth and demographic change, the report suggests that there will be an increase in energy consumption, which in turn would raise the demand of fossil fuels, pushing prices up and creating energy competitiveness under a false impression of scarcity.
Actors / description	While energy consumption constitutes a threat to climate change, it also brings a threat towards the economic security and political security of Europe. The report understands that, given the increasing amount of population, with an increase in the middle class, the accessibility for fuels will be more open, thus, increasing the demand, which in turn leads to two effects, increase in the price of fuels, and energy competitiveness. This constitutes a threat to Europe as, according to the report, EU countries will not have finished their transition to green economies by 2030, making them still somehow dependable on this demand. However, it is also worth noting that the report brings the energy competitiveness between states, as a problem arising from the false belief in scarcity. While the report does not bring this element as a threat *per se*, we can assume this would also constitute a threat, as further geopolitical tensions would impact the EU as a player in the international order.

5	Demographic – Ageing Population[26]
Threat area(s)	Public Health, Economic Security
Threat causality	It is common knowledge that the EU faces a problem with an increasingly ageing population. To this regard, the report includes it as one of the areas where the EU must take action, particularly to reduce costs to healthcare. This threat, however, it is not conceived because of Europe potential loss in workforce numbers.
Actors / description	Inside the mega-trend of demographic changes, the report presents a threat to Europe, which must be addressed in the "Game-Changers", which is ageing. The threat is mainly from, the way Europe is ageing, which requires it to consume much more age-related products, as well as , the unhealthy ageing of Europe population. Moreover, the report presents that if this goes unchecked, this will bring a burden of €46.5 billions per year in healthcare and be a "burden" in the welfare system as ageing populations get excluded from the workforce. If such threat would be address, the report believes that ageing populations could play a more important role in the workforce as they can stay productive for longer times, the overall population could stay healthier for 80% of their lives instead of 63% today[27]. Important factors to also mention are; the report downplays the threat ageing can have to the shrinking of the workforce, as it understands that new economies will be less manpower-intensive and so they education will be more relevant. This threat is considered to be a **mega-trend**, and so its believed to be a 10-year trend.

25   Gaub, 'Global Trends to 2030', 16–17.

26   Gaub, 9-11;35.

27   Gaub, 40.

6	Technology Growth – Securing Innovative role[28]
Threat area(s)	Political Security, Economic Stability
Threat causality	With regards to the **catalyst** of technologic growth, the report presents the need to manage the incoming technologic innovations. The report presents as a threat an unactive role of the EU in securing technology innovation, which could lead to automatization, loss of influence in the international arena and economic disruptions.
Actors / description	Technology and connectivity are presented as a double-edge trend. Thus, the report presents a pressing need to manage the rise of technologies to be advantageous for the EU. The **US** and **China** are presented as **actors** which are shaping the digital market and futures markets, given their lead in Research and Development. The report presents the need to boost education and to increase the number of patents and developments done by Europe. To this regard, the EU already has the capacity (education levels, connectivity and disposable income) to boost this area, and the report argues for using it. It is also interesting to point out that the report presents the fourth scenarios with regards to automatizations and graphs concerning the tipping points for technological development. The former can be found in the annex.

7	International Trade System & Internal hampering of EU Digital integration[29]
Threat area(s)	Political & Economic security
Threat causality	Considering the importance of the global trade system for the EU, instability at the international trade system is seen as a logical threat. To this regard, the cause of the threat comes from recent international developments, mainly the trade war between the **US** and **China,** complemented by Brexit's uncertainty. The report also presents internal trends which constitute a threat to EU leadership in this area, such as the **fragmentation of service markets**
Actors / description	The report acknowledges that it would be **highly unlikely to the global trade system to collapse**; nevertheless, it presents its instability as problematic. However, the report also mitigates the importance of this threat, as it considers international trade to be a trend going upwards, creating more dependency from other states to develop an international trade system, either the one today or plurilateral agreements of trade. If we are to combine this aspect, with the threat from a financial crisis, we will find that there is an underlying threat from international trade disruptions which could spark a financial crisis, *something which the report seems to ignore.* Moreover, ESPAS concerns as a threat, the **lack of internal development towards the harmonization of the services market**, as well as the integration of digital markets. The report predicts an increase in the data flows and access to the service markets in the future, however, the lack of harmonization is seen as a trend which could hamper EU international trade potential. This threat is part of the *Catalysts*, thus being of concern for 5 years, but with a potential to come into effect even sooner.

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28   Gaub, 28–30; 35–36.

29   Gaub, 22–24.

8	Terrorism
Threat area(s)	Political, Physical and Human Security
Threat causality	The continuous presence of terrorist networks in Europe brings a threat from terrorist attacks in the near future. Supported by the ISIS returnees from Syria, and by the increasing radicalization inside Europe, terrorism represents a threat with an increasing likelihood.
Actors / description	The ESPAS' report in global trends presents a well-known trend in Europe, which is that of radicalization and the increasing likelihood of terrorist networks. This trend represents a clear security threat to Europe, which is being supported by the developments in the aftermath of the war on terror, as well as the internal radicalization and increase in white-supremacist terrorist attacks in the world. One of the causes for concern is the return of many ISIS fighters of EU nationality, to which in average received 5-year prison sentences. The report is concern over the likelihood of returnees and released convicts to conduct further terrorist attacks. At the same time, the report argues that after the territorial defeat of ISIS, terrorism models, such as the diffusive approach from Al-Qaeda, are likely to be sedimented and utilized by current or future terrorist networks. At the same time, the report raises concerns over the increasing presence of third-wave terrorist attacks and white supremacist terrorism. Referring to it as a rising problem which is not proportionally covered in the news, but that it is even more pressing. The urgent nature of this threat is captured by its position under the ***Catalyst*** section; however, because of the volatility and diffusiveness of this threat, the potential impact could be far sooner.

9	Intra-state & Inter-state conflict[30]
Threat area(s)	Political & Physical Security
Threat causality	While the presence of intrastate wars is increasingly less likely, according to the report, is expected to see at least one intrastate conflict per decade. The causes for this war are likely to be augmented by other trends presented here, such as demographics, migration, economic growth, and so for. Internal preparation is demanded; however, conflicts in the neighbourhood are considered equally as a threat, given its indirect impacts.

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30   Gaub, 25–27; 36–37.

9	Intra-state & Inter-state conflict[30]
Actors / description	The report addresses changes in the nature of conflict, and the intra-state conflict as a ***catalyst***, which is interesting given the time-lapse it gives to this threat. This threat is also addressed as a game-changing question, to which the report raises concerns over the preparation of the EU for third party influence, as well as the defence integration across the Union. Developments in the neighbourhood are also considered as important, given the effects they may have inside the EU, such as it was seen in the conflicts in Syria. To this extent, the report argues for the EU to focus on conflict stabilization, and to reconsider its peacekeeping stance. Furthermore, the report expresses the concern over the lack of preparedness for 360-degree conflicts, to which other states are prepared for. Interestingly, on this regards, the ESPAS report does not share the same language, or the same understanding as to the EU Global Strategy 2016, where it pushes for resilience building, and pragmatic resilience, where the EU stance is on peacebuilding rather than peacekeeping.[31]

10	Foreign Influence & Risks on Democratic Stability[32]
Threat area(s)	Political Security, Cyber-Security, Public Security,
Threat causality	Across the entire report, there are rising concerns over the role of Cyber influence and foreign influence. These threats are of particular concern as they threat the democratic values of the EU as well as stability inside the member states.
Actors / description	As a threat, foreign influence is seen across different mega-trends and catalysts. It is present on the sections of connectivity, technology growth and intra and interstate conflict. The concern seems to be involved over the new capabilities which rise form the technological advances, where cyber influencing is more accessible as it can make discovering the original perpetrators more challenging, and could have a deeper influence by targeting economic sectors and spreading disinformation. Interestingly, the rise of foreign influence is also connected to explain some of the threats of populism. Populism is presented as a threat to the democratic stability of the EU. The report, however, connects populism as a threat which appears from different threats towards the political system of the EU, such as, election meddling, populist parties, challenges to the rule of law, unrest over reforms, inequality and migration. At the same time, both threats are interconnected, where one fuels the other one.

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31 European External Action Service, 'Shared Vision, Common Action: A Stronger Europe: A Global Strategy for the European Union's Foreign and Security Policy' (2016).

32 Gaub, 'Global Trends to 2030', 25–26; 36–37.

European Council on Foreign Relations

1	Economic and Financial Sovereignty [33]
Threat area(s)	Economic, Political Security
Threat causality	As geopolitical tensions rise, China and the US wage economic warfare against each other. The ECFR is concerned over the effects this could have towards the EU, by any of the aforementioned players "attacking" the EU or unilateral actions of either player affect Markets where the EU have invested interests.
Actors / description	• **US-China trade war**. The EU is one of the top economies in the world; a fight between the two biggest economies in the world would naturally raise concern. The main concern here is that the "spat" between the US and China, could impact either the EU directly through **tariffs**, or reduce the **capacity of action for the EU**. Moreover, the series seems to infer that the intensification of great power politics, and the instability of the global market, is closely related to this. • **US' Secondary Sanctions**. While sanctions towards the EU are a reason for concern, sanctions towards invested interests of the EU are also a threat. The series makes the case of **Iran** where the **EU** had invested interests through companies such as **Airbus**; once the sanctions kicked in, the **SWIFT** system sided with the **US**, the **EU was left without any capacity to act.** Finally, there are concerns over the **inactiveness of towards AI**. The **ECFR** is concerned over the lack of action of the **EU** towards the **AI & Digital Markets**, which it could leave the EU without the opportunity to shape the regulations in this matter as well as get the advantage early on. **If not**, the ECFR worries that the EU will get **shadowed by the US and China.**

2	United States Unpredictability[34]
Threat area(s)	Political, Social, Economic Security
Threat causality	Across the three ECFR reports, the US is not seen as a necessarily positive out-look. The reports raise the concern over the **Trump administration's** intentions to wage economic warfare against Europe, or as a potential superpower which may shadow the EU when it comes down to new multilateralism rules, or even the US as a player which intentionally creates instability inside Europe.

33 Mark Leonard and Jeremy Shapiro, 'Empowering EU Member States with Strategic Sovereignty', Strategic Sovereignty (Brussels, Belgium: European Council for Foreign Relations, June 2019), 4, https://www.ecfr.eu/page/-/1_Empowering_EU_member_states_with_strategic_sovereignty.pdf; Pisani-Ferry et al., 'Redefining Europe's Economic Sovereignty', 12.

34 Pisani-Ferry et al., 'Redefining Europe's Economic Sovereignty', 3; Mark Leonard and Carl Bildt, 'From Plaything To Player: How Europe Can Stand Up For Itself in The Next Five Years', Strategic Sovereignty (Brussels, Belgium: European Council for Foreign Relations, July 2019), 2, https://www.ecfr.eu/page/-/From_plaything_to_player_ECFR.pdf; Leonard and Shapiro, 'Empowering EU Member States with Strategic Sovereignty', 2.

2	United States Unpredictability[34]
Actors / description	Throughout the Strategic Sovereignty series, the ECFR is not shy about mentioning the **US** as a threat. The threats from the **US** are a combination of Global Economic and Political Tools. The main threat that the ECFR seems to find is **potential US economic warfare against the EU**. Moreover, the pull-out and antagonism towards multilateral institutions are also perceived as a threat; however, this is also presented as an opportunity. **Political "warfare" from the US** is also a sense of concern, given the **US willingness to sway EU' Member States against the EU.** The ECFR considers this late threat as one waged **intentionally** towards the EU, as an aggressive stance of negotiations. It is worth mentioning that the ECFR considers the **Trump administration as a significant part of the threat.** There is no mention of a long-term strategy of the US in this regard, and there appears to be no certainty by the ECFR with regards to the US situation. At the same time, it is worth mentioning that this approach or "threat" from the US goes **unmentioned in the ECFR 2016 Foreign Policy Flashcard**, this should speak to the development of the understanding towards the US by the EU Academic and professional spheres.

3	Hybrid Threats[35]
Threat area(s)	Societal, Political, Economic security
Threat causality	Similar to EU's Member States, and other organizations such as the Hybrid CoE, the ECFR finds the use of hybrid threats by other states and organization, as a threat to the stability of Europe. The main danger comes from the use of Hybrid Threats to influence populations domestically and creating breaches within society, similar to the concept of **Hybrid Influencing** from **Finland**.
Actors / description	As part of the intensification of global power politics and the developments of new technologies son the realm of warfare and political influencing, the ECFR finds the use of Hybrid threats as one of the main issues. Their capacity to "**exploit societal divisions to sow instability or simply confusion"**, limiting EU capacity of action. To this point, the ECFR finds the threat so acute that the EU must help to create a multilateral platform to deal with the accountability and action of the threat. The **ECFR** mentions **Russia** as an actor who may employ cyber capabilities and disinformation campaigns. At the same time, one of the reports presents the possibility of a **multi-domain** threat by Russia.

4	Multilateral Domain Challengers[36]
Threat area(s)	Political & Economical security
Threat causality	With the rise and intensification of great power competition and the increasing instability in world affairs, the ECFR reports identify at least three challenges and competition in the Multilateral domain, which can either **run against EU's Interest in the International Order or directly threat EU stability and security.**

35   Leonard and Shapiro, 'Empowering EU Member States with Strategic Sovereignty', 2,4.

36   Anthony Dworkin and Richard Gowan, 'Rescuing Multilateralism', Strategic Sovereignty (Brussels, Belgium: European Council for Foreign Relations, June 2019), https://www.ecfr.eu/page/-/7_Rescuing_multilateralism.pdf.

4	Multilateral Domain Challengers[36]
Actors / description	The International Order's developments are seen as concerning by the ECFR. The main concern is related to the EU's foreign policy interests, basing it in three pillars, **Multi-lateral rule-based order, Security Alliance with the US as global order pillars, and free and "fair" global trade"**. Thus, the ECFR finds three challengers to this aspect, and their existence as **"challengers"** is the threat. • **The US.** In this sense, the US is seen as the **most immediate threat and cause of the disruption**[37]**.** The position of the advantage of the US, and how it manipulates its stand to go against multilateral institutions they mistrust, is seen as a growing concern, i.e. WTO. At the same time, the use of **veto against European initiatives** is also particularly worrisome. • **China.** Aside from the economic warfare, which also is seen as threatening, China is seen as a challenger mainly because it is **aiming for the leadership gap** which the US is leaving. In particular, the threat is the Chinese approach to **divide & conquer** towards the EU, where China is already targeting individual member states to break the unity of the EU for a foreign policy decision. • **Russia.** Russia is mentioned several times not as a multilateral challenger *per se*, although it is referred to be a challenger in this domain mainly because of its position at the UNSC. Its capacity of **veto** makes it a challenger because of the necessity to deal with Russia in this setting, which the series seem to understand as the pillar of the international order.

5	Loss of EU's Power Projection Capabilities[38]
Threat area(s)	Political security
Threat causality	The threat which concerns the ECFR is the incapacitation of the EU on taking action in such a changing time in International relations. The threat comes from the inaction of the EU to take a more significant role in the International Order, which could result in denying the EU of playing an active role to secure Member States' interests in key areas and markets.
Actors / description	**This threat is the main concern of the series.** The EU's lack of operational capacity in a world dominated by power competition intensifying leads to the need for strategic sovereignty. This threat creates the discursive frame of this series. If the EU is unable to have a strong stand at the world order, it will represent a **weakness of the EU to be able to safeguard member states interests.** All of the threats above represent one way or another this threat. While those threats coming from abroad are of more concern, the series also brings concerns over the **internal capabilities of the EU,** such as the un-decisiveness of either to push(not) for Qualified majority voting not or the lack of unity for certain political matters inside the EU. The ECFR is then the concern of EU geopolitical stance, and how that would translate into a threat for Europeans and the Member States.

37   Dworkin and Gowan, 2.

38   Leonard and Shapiro, 'Empowering EU Member States with Strategic Sovereignty', 2.

6	Climate Change[39]
Threat area(s)	Human, Environmental & Political Security
Threat causality	While the report series does not dive deep into Climate Change, as other ECFR reports do, the report does not fail to mention the threat of inaction in the arena of climate changes. The threat which the ECFR report seems to elevate is the fact of **the EU not having a climate change strategy**, and that could have adverse political effects given the recent elections, as well as, diminish EU power globally.
Actors / description	N/A

7	Migration[40]
Threat area(s)	Human & Political Security
Threat causality	For an active global stand, the EU needs to bring new solutions to the Migration threat. The series does not present concerns over the actual direct risks over massive immigrant flux, but instead, on the lack of harmonization between Member States' stand on the matter, as well as, the negative image that the EU's inaction towards the UN Global Compact for Migration (GCM) brought.
Actors / description	The threat in this regard is more concern about the discursive loss of the EU in this regard. In this sense, the source of concern is not with the African or Middle Eastern states, but instead with the **Member states which failed to back the GCM.** The direct concern of the ECFR is that a lack of homogenous European stance towards migration hurts the EU image globally and brings toxicity to domestic politics.

Finland

1	Inter-state conflict – Territorial defence & Integrity
Threat area(s)	Physical security (deterrence, prevention of armed conflict)
Threat causality	Recent developments from Finland's vicinity, as well, as new developments in the international environment bring a threat towards both the security of Finland as well as its ability to respond faster to crisis. ***"A conflict in the Baltic Sea Region would inevitably impact Finland's Security."***[41]

39   Leonard and Bildt, 'From Plaything To Player: How Europe Can Stand Up For Itself in The Next Five Years', 4.

40   Dworkin and Gowan, 'Rescuing Multilateralism', 5.

41   Prime Minister's Office, 'Government's Defence Report', Prime Minister's Office Publications (Helsinki: Prime Minister's Office, 2017), 13, https://www.defmin.fi/files/3688/J07_2017_Governments_Defence_ Report_Eng_PLM_160217.pdf.

1	Inter-state conflict – Territorial defence & Integrity
Actors / description	To this extent, the main mentioned actor in **Russia**. It's "aims to strengthen its great-power status" brings worries in light of the "Sphere of influence regime" it tries to create. To this extent, Finland would be affected by this "regime". [42] Furthermore, the deployment of new technologies such as A2AD in the near borders, bring further preoccupation in Finland. One of the preoccupations follows the highly developed technologies Russia has been manufacturing, such as long-range strike capabilities and precision-guided weapons, unmanned aircraft, robotics, Nuclear weapons, air and space defences, as well as C4ISR. At the same time, the potential capacity of Russia to make a swift attack and setting A2AD exclusion zones are mentioned. [43] This threat is seen as the most worrisome for Finland. This sprung from the fact that for the Finnish ministry of interior, a military threat would be a severe threat to every vital function of the state, to which they prepare their strategies. The likelihood was estimated to increase. It is also worth mentioning that, Finland includes the rising importance of both Baltic Sea and Arctic region of being of particular relevance for the Military threats involving the country. The Baltic Sea is mainly seen through the build-up of forces from both NATO and Russia. With regards to the Arctic, Finland presents the Arctic military footprint to be increasing, particularly because of the strategic importance of the Kola Peninsula for Russia.[44] With these regards, it is important to consider that the policy of the state is that of avoid to become party to any conflict[45]. Thus, an increase of tensions between neighbour states would bring threats to the Finland Government as it would enter into questions with regards to its international commitments, such as the Mutual Assistance Clause of the EU. Connected to this last concern, military build-up in countries such as Sweden & Lithuania are offered as examples of a dire development of this threat.

2	Hybrid Influencing[46]
Threat area(s)	Socio-Political, Economical, Physical security
Threat causality	The underline threat rises from the deterioration of Europe security, and the development of hybrid tools by terrorist and criminal networks; as well as states. ***"Hybrid influencing aims to drive a wedge between different interest groups, create a poisonous atmosphere within the population and weaken the people's trust in public institutions."*** This threat, it is going to be composed of two other threats which are explicitly mentioned at the NRA 2019.

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42   Prime Minister's Office, 8.

43   Prime Minister's Office, 9.

44   Prime Minister's Office, 9.

45   Prime Minister's Office, 15.

46   Prime Minister's Office, 'Government Report on Finnish Foreign and Security Policy', Prime Minister's Office Publications (Helsinki: Prime Minister's Office, 17 June 2016), 11–12, https://vnk.fi/julkaisu?pubid=12503; Ministry of Interior, 'National Risk Assessment 2018', 20 January 2019, 29–31.

2	Hybrid Influencing[46]
Actors / description	With regards to actors, the report does not include any in particular. Nevertheless, because of its context, it could be understood as non-state actors as well as other international actors, such as Russia. The Government Foreign and Security Policy report provides a definition for Hybrid Influencing, ***"Hybrid influencing is generally understood to mean deliberate action where a state or a non-state actor can simultaneously utilise different kinds of military means or, for example, economic or technology-based instruments of pressure as well as information operations and social media"***[47] On this regard, the National Risk Assessment (NRA) mentions the threat from Information Operations as not only a **medium-effect** threat but also an increasingly likely threat. Information Operations are a crucial aspect of hybrid influencing, both as a part of a strategy for Hybrid influence, but also as an objective on its end. To this extent, the NRA brings as **targets** from these operations, the Media as well as the general population. Finally, this threat is further complemented by the rise of different methodologies of pressure against Finland, including military (described below), financial and political. This combined threat is of great worrisome for Finnish authorities, as they recognize that the **direct effect from this threat is relatively low**. However, indirect effects incurred from forced errors from vital parts of the state could have widespread effects. It should be mentioned that the likelihood of both sub threats (Information Operations & Combined Pressure) is growing, assessed by the NRA. At the same time, the approach of hybrid influencing as a threat is mention as well as an augmentation for the Military threat, as it can come during "normal times" and closely followed by a conventional military manoeuvre. The following quote is provided as an example of the volatility of the threat. ***"The goal is to instigate pressure, damage, uncertainty and instability on the target. The line between internal and external security becomes blurred, and the early-warning period becomes shorter."***[48]

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47 Prime Minister's Office, 'Government Report on Finnish Foreign and Security Policy', 13.

48 Prime Minister's Office, 14.

3a	Public Security – Terrorism & Crime Organizations [49]
Threat area(s)	Political Security, Physical Security, Public Security
Threat causality	Threats related to public security are threefold, thus the break of the domain in Public Security into three categories. One of the most relevant threats is that of Terrorism acts targeting large sections of society. The causes can be found in violent radicalization as well as connections between, according to the NRA, Islamic Terrorist and Crime networks. The main concerns are the direct effects in internal security and psychological resilience this acts would entail.
Actors / description	There is no mention of a specific actor connected to the rise of non-state actors, although **ISIL** is presented as an example through the Foreign and Security Policy report[50], and inferred from the NRA[51]. The main concern with these groups is the threats they bring to the lives of the individual citizens in different countries, Finland included. To this extent, the FFSP report refers to threatening non-state actors, terrorism and crime networks, which can present cross-border problems. The report adds as potential causes for the rise of these groups not only the operational advantages provided by new technologies but also, the lack of individual economic prospects for the future. At the same time, when the previous elements get in touch with extremist ideologies, this gives rise to these groups. To illustrate this, the report uses ISIL as an example. This description is further complemented by the NRA report, as it provides more strategic-relevant information. The main **targets** included are the leadership of society, critical infrastructure, public places or large crowds. With regards to its effect, the report considers more troubling the long-term effects; particularly on the psychological resilience, however, it acknowledges the potential eminent effects from an attack. Finally, the methods which are mentioned in the report are those related to the use of unsophisticated tools, such as vehicles, as well as conventional explosive attacks[52]. This last aspect is combined with the report from the Foreign and Security Policy report, which brings the notion of potential usage of Cyberweapons.

3b	Public Security – Large Scale Migration[53]
Threat area(s)	Political Security, Public Security, Economic Security
Threat causality	Complementing the threat towards Public Security is that of Large-Scale Migration. This threat is mainly perceived as thread, which can impact the internal security directly, through the manifestation of public disturbances, as well as the psychological reliance[54]. The causes for the threat are to be found on the growing disparity of living conditions and internal conflicts in poorer regions, such as Africa[55].

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49   Ministry of Interior, 'National Risk Assessment 2018', 20 January 2019, 35–36.

50   Prime Minister's Office, 'Government Report on Finnish Foreign and Security Policy', 14.

51   Ministry of Interior, 'National Risk Assessment 2018', 20 January 2019, 35.

52   Ministry of Interior, 36.

53   Ministry of Interior, 32–34.

54   Ministry of Interior, 32–33.

55   Prime Minister's Office, 'Government Report on Finnish Foreign and Security Policy', 10.

3b	Public Security – Large Scale Migration[53]
Actors / description	The threat of immigration is located in the large-scale migration, with a particular mention on immigration caused by wars, environmental and climate change problems, as well as the look for better living conditions. However, large scale immigration becomes so when refugee reception centers become overcrowded, and with higher incoming immigrants compared to the outgoing. Thus, this generates problems with the registration of the refugees as well as rendering border arrangements ineffective. By the assessment of the Ministry of Interior, the presence of this threat is only expected to increase. This threat aims directly towards the psychological resilience of the population as if the government is unable to cope with the influx of immigration, it would result in negative political effects, which can, in turn, compromise public order and security[56]. Finally, this threat would also have indirect effects on the economic infrastructure of the country. With a higher number of migrants, the funding of welfare systems will be put up to the test. At the same time, the educational system and the judicial system will see incremental costs. This economic stress could leave a long-term impact on the economy of the country.

3c	Public Security – Public Order Disruptions[57]
Threat area(s)	Political Security, Public Security, Economic Security
Threat causality	This threat comes from the rise of similar long-lasting public-order disruptions in European Countries, such as the *gilets jaunes* in France. These disruptions can overwhelm and collapse the public security authorities, while it could also lead to psychological implications for the "feeling" of security, as well as financial disruptions.
Actors / description	There is no particular actor mentioned with connection to these threats. However, the National Risk Assessment mentions the potential presence of violent groups trying to make protests violent. As far as the causes which would exacerbate the likelihood of this threat, this includes disruptions to the living conditions of the society. This would include, but not limit, power supply disruptions, economic disruptions, increasing social exclusion as well as information operations. With regards to the methodology from which this threat would materialize, the report includes purposely and continuous agitation of people's dissatisfaction. This includes the use of Social media, hate speech and fake news as a channel to do so.

4	Erosion of Multi-lateralism[58]
Threat area(s)	Political Security
Threat causality	The rise of great power politics and the spread of unresolved crisis around the glove create a precedent for the erosion of multilateral mechanisms. Given how reliant the Finland Foreign policy is to the international organizations, such as the EU, erosion in these multilateralist organizations and constructs represents a threat to Finland Foreign policy capabilities

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56   Ministry of Interior, 'National Risk Assessment 2018', 20 January 2019, 33.

57   Ministry of Interior, 36–37.

58   Prime Minister's Office, 'Government Report on Finnish Foreign and Security Policy', 15–16.

4	Erosion of Multi-lateralism[58]
Actors / description	The main institutions which are mentioned to represent the threat to the rule-based, multilateralist order, are those of the **UN**, mainly the **UNSC**, and the financial institutions such as the **IMF** and **World Bank.** On the organization's aspect, the UN is the one who gets the bigger share of the problem in the report. The report recognizes the lack of power the organization has when one of the Security Council members get involved in a conflict. At the same time, it brings the example of Arms Control, presenting it as a topic which worked better when it came outside of the UN instead of inside. This is further supported by the MFA report, which brings the lack of commitment to UN Charter values, to which it follows "***Without reform, the UN is not able to respond to global challenges***"[59]. On the financial institutions, the report mentions the success of the IMF and the World Bank to keep the international financial system stable, however, that it still requires further cooperation and robust supervision as well as crisis management solutions.

5	Economic and Financial Security [60]
Threat area(s)	Economic Security, Political Security, Human Security.
Threat causality	Economic and Financial disruptions can bring dislocating effects to either the public sphere, as the funding of the government becomes compromised, or to the private sphere, as markets collapse and capital is lost, and general productivity decays. The causes of the threats are generally unforeseen, and they may come from either internal disruptions or external disruptions. Any of the threats in this document could be causes for it.
Actors / description	The National Risk Assessment puts both threats as highly problematic for the vital functions of the state. The main threat perceived is that of a Financial disruption, as they can originate debt vortexes, and compromise the private institutions funding. Moreover, these disruptions may come both from the materialization of market risks, but also from the disruptions in the financial infrastructure through, i.e. disruptions on digital security, or power supply disruptions. Finally, there may be two channels where financial crisis can be expected to arise, either from internal market dislocations which spread to every sector and vital function of the state; or, through the contagion of external developments, such as external international financial crises, or an unfavorable conflict eruption. Following a similar logic, the National Risk Assessment brings the economic threat equally as broad, but with a less degree of negative direct effect. The National Risk Assessment presents the economic threat mainly as a disruption in the funding of the government, which could lead to the loss of creditworthiness and subsequent loss in funding capabilities. Shall an economic disruption extend for a long period of time, it could bring both political tensions. Both of these tensions are assessed to increase. However, it is important to mention the dependency on the bank sector, i.e. with comparison to GDP, which would mean there could be a higher risk for public debt vortexes in the economy. This aspect is mentioned through the financial threat; however, this would also affect the macroeconomic reality of Finland.

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59   Prime Minister's Office, 11.

60   Ministry of Interior, 'National Risk Assessment 2018', 20 January 2019, 38–42.

6	Energy Security[61]
Threat area(s)	Political, Environmental, Economic Security
Threat causality	As there is an increasing dependency by the economy on the stable and timely supply of energy and fuels, disruption on the supply on any of these elements would result in a deeply negative effect on several vital functions of the state. This threat may raise from either intentional, i.e. cyber-attacks, or unintentional sources, i.e. environmental disruptions.
Actors / description	Disruptions of the power supply may come from different sources. The National Risk Assessment finds environmental disruptions, climate policy or economic decisions to be also part of the possible causes, as well as cyber-attacks to the critical infrastructure. If a disruption of this sort appeared, it would compromise not only the economic sector but also the wellbeing of the population and the vital functions of the state. At the same time, the report acknowledges that there is close dependency from the population to electric power; thus, even a 10-second disruption could be problematic to some industries. Finally, the economic infrastructure and the wellbeing of the population are assessed as the most directly affected by this event, followed by indirect effects throughout the country leadership, internal security and psychological resilience.

7	Digital and Telecommunications disruptions[62]
Threat area(s)	Political Security, Physical Security, Public Security, Economic security, Human security
Threat causality	The disruption in digital and telecommunications is seen by the National Risk Assessment as one of the most pressing and widespread risks. A disruption in digital and telecommunications could have important negative effects on the psychological resilience, functioning of the population, economy, internal security, defence capabilities and the leadership of the country.
Actors / description	Because of the necessity for most of the sectors with regards to digital and telecommunication networks, a disruption in these services would compromise several elements. This threat rises from the potential crisis it could bring to different sectors, such as IT and Communication sector. A problem with these services would cause a direct effect into other relevant sectors, such as the Economy, the Government, the population and even the Military. At the same time, this threat could raise from different sources, such as Power Supply disruptions, Cyberattacks, technical malfunctions, as well as economic and labor disruptions. The report also mentions the presence of extreme weather conditions, which could affect the stability of the infrastructure for telecommunications. It is worth mentioning that the report acknowledges that while this threat could have widespread effects in the society, it would be particularly damaging if this would be targeted at the healthcare system, energy production or industrial control systems, as it would have material and human costs.

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61 Ministry of Interior, 42–44.

62 Ministry of Interior, 47–50.

8	Public Health Disruptions[63]
Threat area(s)	Public Health
Threat causality	Several contributing elements are observed as threats on this domain: Antimicrobial drug resistance, Pandemics, Highly Infectious animal disease, plant disease epidemics. The common denominator across these threats is the toll that they would take on the wellbeing of the population. While Antimicrobial drug resistance is seen as the most threatening of these developments given its lethal potential as well as likelihood.
Actors / description	The report brings out the combination of the aforementioned threats as threats to public health. The most preoccupying being that of Antimicrobial drug resistance. The reason for this logic is that there is no actual drug which could be effective against organisms which developed resistances to these cures. At the same time, this is augmented by the fact that there is already the presence of these organisms. This also presents problems for the productivity and food supply, as there could be resistance microbes in production animals, and there is no proper stockpiling for these scenarios. Following the same logic, an influenza pandemic is also considered as a high-risk trend, given that if it would materialize, the mortality rate would also become worrisome, as there is no resistance to it throughout the population, and it's a deeply contagious disease. At the same time, two other threats are brought up on the report, that of infectious animal disease and plant disease epidemics. These two threats would aim the food supply as well as the production capabilities of the country.

9	Water and Food Supply[64]
Threat Area(s)	Public Health, Human Domain
Threat Causality	The National Risk Assessment enlist both Water and Food disturbances as threats to the vital functioning of the state. To this extent, water supply is presented as a threat that if it is to become severe, it would have ramifications in the economy through the loss of profit and population through the potential human cost. To the extent of food supply, the main targets and consequences of this would be that of loss of profit and food shortages, and this threat could be materialized by a broad number of actors.

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63   Ministry of Interior, 52–59.
64   Ministry of Interior, 60–63.

9	Water and Food Supply[64]
Actors / description	With regards to the presence of the water threat, the report presents the causes for the threat as that of natural phenomenon's, as for example climate change developments concerning droughts, as well as human activities, either by a human factor or by malicious intent. At the same time, the report indicates that the threat would target Large cities, production plants, food industry, social and health care establishments as well as other critical services. Finally, it presents the definition for when this threat becomes severe and setting the threshold at disruptions for more than 12 hours. With regards to the presence of food supply threats, the threat cause is much more widespread. The report finds that the causes may be found on international food supply disruptions, plant diseases, animal diseases, weather threats, as well as malicious human intent. It is worth mentioning the explanation the report presents with regards to cyberattacks, and how could attacks aimed at stopping production plants, as well as payment systems, may affect the stable supply of food.

10	Disruption at Supply Chains[65]
Threat Area(s)	Economic Security, Human Security
Threat Causality	The National Risk Assessment brings a disruption of Supply chains as a serious threat to the economy and the general population. The threat would rise from either extreme weather or from International Political crisis, which could disrupt maritime routes or the air space of neighboring countries.
Actors / description	The report does not go into depth with any outstanding actor. On the other side, the report goes in-depth to explain the graveness of the threat. Finland 90% of exports depends on maritime routes, and 70% of its imports depend on them. At the same time, energy supply is transported through maritime routes to a considerable extent. Therefore, a disruption at Supply Chains may break havoc in the economy, and the daily lives of citizens, soon to be followed by indirect effects in other sectors of the Government. Moreover, the Finnish Government does not present any alternative as it considers the amount transported in maritime routes way too considerable as to find a viable alternative. For these reasons, the Finnish Government presents the threats as estimating to increase, but also, of important direct seriousness for both its economy and its population.

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65   Ministry of Interior, 50–52.

11	Large Scale Accident[66]
Threat Area(s)	Human Security, Public Security, Economic Security, Environmental Security
Threat Causality	The National Risk Assessment allows for the presence of two large scale accidents as threats. This is a "Maritime Multi-Sector Accident", focusing on how the rise of maritime transport increased across the last years, and how this increases the likelihood of an accident in Maritime routes. Most preoccupying for the Finnish government is the risk of a Nuclear plant catastrophe in Finland or the near borders. This is because of the potential human cost, as well as widespread damage across the country.
Actors / description	With regards to the Maritime accident threat, there are no further actors mentioned. Nevertheless, the report presents the Baltic Sea as the most relevant area for this threat. At the same time, the threat is more targeted toward an environmental crisis, i.e. Oil spill. However, the report mentions the potential risk of human life from other maritime accidents which are not that large scale. The potential for a Nuclear accident is one much more concerning to Finland. Throughout the description of this threat, the National Risk Assessment presents a potential threat from a technical failure at a nuclear plant, either inside Finland, Sweden, or Russia. The threat is expected to require extreme procedures by the government and the population, in order to mitigate the negative effects of such an incident. At the same time, the Finnish government also points out that such a catastrophe may have effects lasting for decades. However, the threat assessment also points out the high amount of safety regulations and mechanisms employed by modern plants. While the threat is highly mitigated by this procedures, the report does not ignore the fact that most of the nuclear accidents are caused by an initial event followed by unforeseen consequences, as well as acknowledging the possibilities of a Fukushima 2011 style accident. Finally, with regards to this nuclear threat, the report presents a direct considerable negative effect to the Internal Security, Economic stability, the population and the psychological resilience of it. It does present indirect consequences for the other vital functions of the seem less affected. Interestingly, the likelihood of the trend was expected to remain unchanged.

India

1	Terrorism[67]
Threat area(s)	Physical security, territorial security.
Threat causality	Recent attacks, such as the Pulwama terrorist attack in February 2019, which killed forty Indian soldiers, highlights the persistent threat of (state-sponsored) terrorism. Terrorism and religious extremism are perceived as a symptom of broader state-based tensions, particularly in relation to Pakistan and the contested territory of Jammu and Kashmir.

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66   Ministry of Interior, 63–68.

67   Ministry of Defence, 'Annual Report 2018-19' (Government of India, 2019), 7–8, https://mod.gov.in/sites/
default/files/MoDAR2018.pdf.

1	Terrorism[67]
Actors / description	India identifies (i) terrorism in the hinterland and (ii) cross border terrorism in Jammu and Kashmir as the two main theatres of terrorism relevant for **internal security**. • **Pakistan.** Terrorist activities sponsored by Pakistan in Jammu and Kashmir is the top security challenge India faces.[68] Since the battle of Kargil in 1999, India has faced consistent and deadly cross-border terrorist attacks from Pakistan. Following the Pulwama attack, which was claimed by the Pakistan-based **Jaishe-Muhammad** (JeM), India retaliated by launching a pre-emptive airstrike on a JeM training camp inside Pakistani territory, a first in the Kashmir conflict.[69] India views Pakistan's active support of JeM and other Jehadi organizations to be one manifestation of the conflict between the two countries, with the constant battle between the Indian forces and terror cells constituting a proxy war. In terms of **regional security**, **Pakistan** and **Afghanistan** are singled out as terrorism hotspots with **non-state actors** such as the **Taliban**[70] and **ISIS**[71] specifically mentioned as threats to regional peace and order, with flow-on effects to the Indian state.

2	Internal Insurgencies and Separatism
Threat area(s)	Territorial security, physical security, economic security
Threat causality	Internal insurgencies arising from **tribal, ethnic, religious** and **linguistic divergence** within the Indian population are perceived as vulnerabilities to territorial, physical, and economic security as the grievances of minority groups are being exploited by **separatist movements** and **Pakistan**. Insurgency-related violence is a common threat in the Indian hinterland and in the north-east of the country.
Actors / description	• **Local factions** in the Indian hinterland and in the north-east of the country have historically been prone to insurgency-related violence and separatist political parties. While there has recently been a decline in violent incidents such as civilian and military casualties and kidnapping due to successful negotiation agreements in the **north-eastern region**, the state remains on high alert for such movements and controlling the conflict is draining of military resources. **The Kashmir region**, a disputed area, partially controlled by India, Pakistan and China, has been particularly prone to insurgencies. In August 2019, the Indian government revoked the semi-autonomous status of the state of **Jammu and Kashmir**. This has had implications for **internal security** as the enforcement of a communication blackout and curfews has led to clashes between locals and the military. This illustrates that **internal cohesion and security** is an aim that India prioritizes and finds worth militarizing for.

68   Ministry of Defence, 8.

69   Ministry of Defence, 3.

70   Ministry of Defence, 3.

71   Ministry of Defence, 'Annual Report 2017-18' (Government of India, 2018), 3, https://mod.gov.in/sites/default/files/AR1718.pdf.

3	The proliferation of Nuclear Weapons and other Weapons of Mass Destruction (WMD)
Threat area(s)	Physical security
Threat causality	India faces a significant threat of WMDs from both **state** and **non-state actors**. In particular, tensions between India and its neighbours spurs the necessity of **nuclear deterrence** and has led to further proliferation of WMDs.
Actors / description	• **Pakistan.** Despite a lack of economic development, Pakistan continues to expand its nuclear capabilities and test ballistic missiles relentlessly.[72] The nuclear threat from Pakistan is exacerbated by the severity of India and Pakistan's adversarial relationship, as well as Pakistan's proclivity to take risks and reliance on nuclear weapons in the absence of conventional military strength relative to India.[73] • **China.** Though not explicitly mentioned in the Annual Report, as China expands its nuclear capabilities to compete with the US and Russia, India may be vulnerable to a nuclear power that it is unable to compete with.[74] • **Russia.** The capabilities of **Russia** and **the US** are of no concern from India's perspective due to warm relations with both countries, particularly with Russia who is one of India's largest suppliers of defense equipment and a key partner in the development and production of advanced military technology.[75] • **North Korea.** Pyongyang's nuclear and ballistic missile tests are perceived as a challenge to both regional and global security, and India has been active in condemning the continued proliferation of WMD.[76] • **Non-state actors.** WMD terrorism is viewed as a potential threat to international security.[77]

4	Ethno-regional conflict and tensions
Threat area(s)	Physical security, territorial security
Threat causality	Driven by **ethnic** and **religious divides** and **territorial disputes**, tensions between India and its neighbours has only intensified in recent years. Furthermore, military collusion between **China** and **Pakistan** has intensified in terms of mission, doctrine, planning and equipment compatibility.

72   Ministry of Defence, 'Annual Report 2018-19', 2019, 4.

73   Verghese Koithara, 'Nuclear Strategy', in *Managing India's Nuclear Forces* (UK: Brookings Institution Press, 2012), 201–6, http://www.jstor.org/stable/10.7864/j.ctt12617b.14.

74   Harsh V. Pant and Kartik Bommakanti, 'India's National Security: Challenges and Dilemmas', *International Affairs* 95, no. 4 (2019): 838.

75   Ministry of Defence, 'Annual Report 2018-19', 2019, 6.

76   Ministry of Defence, 'Annual Report 2017-18', 4.

77   Ministry of Defence, 'Annual Report 2018-19', 2019, 2.

4	Ethno-regional conflict and tensions
Actors / description	• **Pakistan.** Pakistan continues to be confrontational toward India, both in terms of conventional military measures and sub-conventional measures, such as proxy wars (i.e. the active support of Islamic terrorism and insurgency within India). Pakistan continues to nurture anti-India terror groups as strategic assets and encourage them into the political mainstream in Pakistan.[78] • **China.** Although the situation on the Indian-Chinese border remains stable, China has positioned itself as the primary supplier of military hardware, techno-economic funding and diplomatic support to Pakistan, leaving the Indian hinterland sandwiched between a threatening alliance.[79]

5	Maritime Security
Threat area(s)	Physical security, territorial security, economic security
Threat causality	Maritime security is perceived by India as the key enabler and guarantor of **military** and **economic** strength, and ultimately dominance in this domain will secure India's global resurgence as a powerful economic actor.[80] However, an unprecedented situation is currently afoot whereby China is now stronger than India in the Indian Ocean, as the establishment of fixed **Chinese** military bases in the Indian Ocean and recent deployments signify. [81] This emergence is threatening India's relative strategic maritime advantages in the region.
Actors / description	• **China** has strong naval partnerships with neighbours of India such as Myanmar, Sri Lanka and the Maldives, which serves to provide enhanced access to the Indian Ocean. This is known as the String of Pearls doctrine, a Chinese strategy that has encircled India with naval bases. • **China**'s strides in the maritime domain are simultaneously advancing the strategic maritime position of **Pakistan**, as the two countries enjoy unparalleled naval cooperation.[82]

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78   Ministry of Defence, 'Annual Report 2017-18', 4.

79   Ministry of Defence, 4.

80   Ministry of Defence, 'Annual Report 2018-19', 2019, 32.

81   Pant and Bommakanti, 'India's National Security: Challenges and Dilemmas', 836.

82   Pant and Bommakanti, 836.

6	Radicalization
Threat area(s)	Sociopolitical security, physical security (indirect), economic security (indirect), and energy security (indirect).
Threat causality	Radicalization, which is strongly linked to the aforementioned threats of terrorism, internal Insurgencies, and separatism, is perceived as a threat to **national security** and **regional stability**. Specifically, in **Jammu and Kashmir**, the rise of **Islamic fundamentalism** is linked to ongoing civil strife, sectarian conflicts, separatism and terrorism. Supported by social media, separatists and insurgents seek to radicalize locals, with damaging effects on **democratic institutions**.[83] The proliferation of radical ideology in neighbouring states, such as the **Maldives** and **Bangladesh**, is seen as a potential threat due to the potential spillover effects of regional instability.[84] Similarly, radicalization (and instability in general) in **West Asia** is perceived as an indirect threat to **economic security** and **energy security**, as approximately nine million Indians remit USD 39 billion annually from this region, and the region also meets more than half of India's energy needs.
Actors / description	• **Terror groups** and **separatists** supported by **Pakistan** are seen as the main drivers of radicalization in India. • **Unspecified radical organizations** in Bangladesh and the Maldives are seen to be threatening democratic structures and regional stability.

Israel

1	Intrusion of Sub-state Actors
Threat area(s)	Physical security, economic security, sociopolitical security, cooperation security.
Threat causality	Sub-state actors, for the most part, supported by other states, aspire to impose their political agenda on Israel.[85] Instead of manoeuvring into its territory conventionally, however, the enemy penetrates it for terrorist or propaganda purposes,[86] using decentralized command-chain, camouflage and civilian environment to reduce IDF's freedom of action while inflicting damage on Israel.[87] The estimated impact varies, the worst-case scenarios predict escalation with states and authorities affiliated with the groups, provoking state-to-state confrontations on a single or even multiple fronts, including Lebanon, Syria and the Gaza Strip.[88]

83   Ministry of Defence, 'Annual Report 2017-18', 16.

84   Ministry of Defence, 3.

85   Belfer Center for Science and International Affairs, 'Dettering Terror: How Israel Confronts the Next Generation of Threats', 17.

86   Belfer Center for Science and International Affairs, 18.

87   Belfer Center for Science and International Affairs, 9.

88   'Strategic Survey for Israel 2018-2019', *INSS* (blog), 118, accessed 25 September 2019, https://www.inss.org.il/publication/strategic-survey-israel-2018-2019/.

1	Intrusion of Sub-state Actors
Actors / description	Actors identified are predominantly **Hamas**, **Hezbollah**, together with other groups of lower importance, such as Palestinian Islamic Jihad and ISIS.[89] The most recent trends in the means these actors employ to challenge Israel are cross-border tunnels, high trajectory weapons, incendiary kites and *ad hoc* terrorist attacks performed by vehicles or cutting weapons.[90] Newly, however, the danger posed to Israeli society is increasing due to allegations of a possible **proliferation of advanced weaponry**, most notably Hezbollah's attempts to acquire high precision missiles. This „precision project" could significantly improve military capabilities of Hezbollah while also creating a potential for escalation, especially in cases where Israel counters these efforts by attacks short of war.[91]

2	Conventional Confrontation
Threat area(s)	Physical security, economic security, cooperation security.
Threat causality	Some of Israel's immediate neighbours, and other hostile states in the region, aim to undermine it either by challenging it directly or by conducting „conventional proxy warfare".[92] On the background of Israel's volatile international legitimacy[93] and somewhat undermined deterrence capacity as of recently,[94] states grow bolder in confronting Israel's forces, particularly on the Syrian and Lebanese fronts.[95]

89   Belfer Center for Science and International Affairs, 'Dettering Terror: How Israel Confronts the Next Generation of Threats', 14.

90   'Strategic Survey for Israel 2018-2019', 121–23.

91   'Strategic Survey for Israel 2018-2019', 112.

92   'Strategic Survey for Israel 2018-2019', 110.

93   Belfer Center for Science and International Affairs, 'Dettering Terror: How Israel Confronts the Next Generation of Threats', 7.

94   'Strategic Survey for Israel 2018-2019', 123.

95   Here it should be noted that the line between state actors and non-state (or, indicatively „sub-state") actors is blurred in Israel's view, just as are the notions of unconventional and „conventional proxy" warfare. The rationale behind this is most likely Israel's tendency to consider non-state actors as state-supported. Hence, there are elements where the difference between threats 1 and 2 is more formal than substantial but appears very much as two distinct aspects within the documents and shall be so treated also in this analysis.

2	Conventional Confrontation
Actors / description	• **Iran**: Iran is presented as in the process of building military infrastructure throughout Lebanon, Syria and Iraq,[96] spreading its influence aggressively. Direct **confrontations between Israel and Iran have spurred up in 2018**, most often on the Syrian territory, hinting at a new trend according to the Survey.[97] At the same time, Iran continues to finance Shia and other groups throughout the region, including Hezbollah, Hamas, and Shia militias in Iraq and Yemen.[98] There is a strong perception that although the U.S. applies a diplomatic and economic pressure against Iran, it will not engage militarily, drawing lessons from its previous interventions in the region.[99] Israel would then be the sole state to counter all Iran's attempts at regional hegemony.[100] • **Syria**: Although not consolidated enough at the moment to challenge Israel,[101] its alignment of interests with Iran suggest a similar possibility of a conventional confrontation in the future. • **Lebanon**: The connection between the State of Lebanon and Hezbollah is considered a robust one by Israel, and it is not unimaginable that an escalation of tensions between Hezbollah and Israel would lead to a conventional-like confrontation in the future, akin to former Israel-Lebanon wars.[102]

3	Nuclear Weapons Proliferation
Threat area(s)	Physical security.
Threat causality	Attempting to gain regional hegemony and a better position for negotiation, Iran might be striving to acquire a nuclear arsenal, especially after the failure of the JCPOA. Catastrophic consequences could stem from this for Israel, who stands directly in opposition to Iran's interest in the region.
Actors / description	The recent termination of the JCPOA creates new conditions on the ground, and the reaction of **Iran** is to be closely observed. Three scenarios are predicted, in decreasing order of likelihood: "strategic patience" of both sides, new U.S.-Iran negotiations or Iran's resumption of illicit activity.[103] The North Korea-like scenario of Iran acquiring a nuclear missile is highly unlikely, but due to its potential significance cannot be discarded.[104]

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96 'Strategic Survey for Israel 2018-2019', 113.

97 'Strategic Survey for Israel 2018-2019', 113.

98 'Strategic Survey for Israel 2018-2019', 114.

99 'Strategic Survey for Israel 2018-2019', 126.

100 'Strategic Survey for Israel 2018-2019', 117.

101 'Strategic Survey for Israel 2018-2019', 116.

102 'Strategic Survey for Israel 2018-2019', 133.

103 'Strategic Survey for Israel 2018-2019', 114–15.

104 'Strategic Survey for Israel 2018-2019', 128.

4	Instability in the Vicinity
Threat area(s)	Physical security, sociopolitical security, cooperation security, economic security.
Threat causality	Having defined its character as Jewish, Israel is cautious about any instability in its vicinity that could potentially bring about Islamic regimes and thus present an ideological opposition to it (akin to Iran and other previously hostile regimes), introducing new economic and military tensions. The existing conditions which greatly increase the likelihood of such events occurring are socio-economic deterioration and poor governance.[105]
Actors / description	• **Palestinian territory**: The schism in the governance of Palestinian territory, and the terrorist nature of Hamas, continue to feed the destabilizing potential in the area, despite mediating attempts of "moderate Arab states". [106] In the foreseeable future, a potential breaking point will be the succession of the leader of Palestinian Authority (PA) in the West Bank, thus far on good terms with Israel. There is a growing concern that the end of Mahmud Abbas' era will create a political vacuum, [107] opening space for Hamas to seize the opportunity.[108] Such a scenario is unlikely but would lead to severe consequences pertaining to the renewal of hostility, to the undermining of Israel's international and domestic legitimacy, and to a significant improvement of Hamas' position to the detriment of Israel, disrupting the delicate balance of deterrence currently maintained. Other broad and less likely triggers for undermining the PA include the surge of terrorist attacks and the ensuing pressure on the authorities,[109] or a possible failure of President Trump's „Deal of the Century" and the backlash resulting from it.[110] • **Egypt**: The rationale for placing Egypt so high on the agenda, apart from recent historical events, is the assumption that an Islamic government in Cairo might lead to a Turk-Egyptian alliance and dramatically worsen Israel's strategic environment. This scenario is, however, considered a „black swan" one, with rather slim chances of materializing.[111] • **Jordan**: Similarly, to Egypt, any revolution of Islamic character in Jordan would lead to its direct ideological opposition to Israel, joining Lebanon and Syria as another direct neighbour-enemy. The potential for this to occur is increased by the ongoing economic and refugee crisis. [112]

105 'Strategic Survey for Israel 2018–2019', 118.

106 'Strategic Survey for Israel 2018–2019', 118.

107 'Strategic Survey for Israel 2018–2019', 118.

108 'Strategic Survey for Israel 2018–2019', 130.

109 'Strategic Survey for Israel 2018–2019', 118.

110 'Strategic Survey for Israel 2018–2019', 119.

111 'Strategic Survey for Israel 2018–2019', 130.

112 'Strategic Survey for Israel 2018–2019', 130.

5	Cyber Warfare
Threat area(s)	Economic security, physical security, sociopolitical security, cooperation security.
Threat causality	Without the documents being specific on the threats cyber arena induces for Israel, the text hints at the traditional issues related to it – security of financial assets, critical military and civilian infrastructure, intelligence gathering and spreading of enemy's propaganda, which would be employed with the aim of undermining Israel, possibly in tandem with military operations. [113]
Actors / description	Israel considers its cyber capacity still significantly superior to the sub-state actors', but a "black swan event" of **Iran** or **Russia** conducting a large scale cyber-attack is to be born in mind, according to the Survey.[114]

6	Declining International Support
Threat area(s)	Cooperation security, economic security, physical security.
Threat causality	The strength of Israel's position is dependent on the quality of its cooperation with the United States. Should the latter turn to strict isolationist policy,[115] Israel would be obliged to adapt to a new, more solitary and significantly less favourable strategic environment than hitherto.
Actors / description	**U.S.** - Israel openly cherishes its strong alliance with the U.S., the solidity of which was demonstrated in particular in President Trump's transfer of the American Embassy to Jerusalem, the termination of U.S. subsidies to UNRWA, and its support of Israel by the UNSC. However, the contingency of U.S. reducing its support to Israel significantly must be considered, particularly seeing President's record of unexpected decisions, U.S.' progressive pivot to the Pacific region and its newly found fuel sources reducing its interest in the Middle East.[116] Importantly, it cannot be excluded that President Trump will not retain his function after the next elections, and as the Democratic party exhibits significantly less sympathy towards Israel, its potential success might mean a rapid and significant deterioration of the U.S.-Israel relations.[117]

113 Belfer Center for Science and International Affairs, 'Dettering Terror: How Israel Confronts the Next Generation of Threats', 54.

114 'Strategic Survey for Israel 2018-2019', 131.

115 'Strategic Survey for Israel 2018-2019', 128.

116 'Strategic Survey for Israel 2018-2019', 126.

117 'Strategic Survey for Israel 2018-2019', 126–28.

Japan

1	Conventional Confrontation
Threat area(s)	Physical security.
Threat causality	An ongoing reconfiguration of the regional and global balance of power, coupled with unresolved territorial disputes, increases the chance of Japan again facing a threat of a conventional confrontation, the scale of which is yet unclear. This claim is supported by the fact that the number of irregular situations between Japanese Self-Defense Forces and armed forces of other states has multiplied, and in the unstable political context of the region might lead to unintended consequences.[118]
Actors / description	China is the main driver of the regional change of balance of power and rising tensions.[119] Its assertive action in contested territories, most notably the South China Sea, has several times led to borderline situations, an example of which can be found in Chinese vessels not once directing their fire radar at Japanese destroyer, broadly considered an outright hostile step.[120] Low scale confrontations, short of war, are predicted to increasingly occur, with an unclear potential of escalation. In the meantime, China has significantly strengthened its A2/AD as well as practical operability capabilities,[121] and its new desire of regional and potentially global hegemony raises further concerns.

2	Regional Instability
Threat area(s)	Physical security, economic security, sociopolitical security, cooperation security.
Threat causality	The mutual interdependence of states, all the more on the regional level, signifies that in case one state is affected by conflict, the entire region will be affected and more vulnerable.[122] The ample sources of instability elsewhere, therefore, might have implications for Japan's interests in terms of trade, quality of cooperation and even physical security. Ethnic and separatist contestations are to be closely observed, as well as increasing modernization of regional military forces.

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118 Ministry of Defense, *Defense of Japan 2018*, 104.

119 'A New Security Strategy for Addressing the Challenges in the Turbulent International Order', Policy Recommendations (Tokyo, Japan: Japan Institute of International Affairs, 29 November 2018), 3–4, https://www2.jiia.or.jp/en/pdf/recommendations/A_New_Security_Strategy_for_Addressing_the_Challenges_in_the_Turbulent_International_Order.pdf.

120 Ministry of Defense, *Defense of Japan 2018*, 47.

121 'A New Security Strategy for Addressing the Challenges in the Turbulent International Order', 4.

122 Ministry of Defense, *Defense of Japan 2018*, 171.

2	Regional Instability
Actors / description	There is a number of external reasons for Japan to note a sharp spike in the militarization of the region; mutual influence in an arms race-like manner, attempt to offset China's rise and inadequacy of multilateral mechanisms that fail to provide effective dispute settlement platforms.[123] The latter is the most pronounced in what concerns the South China Sea, where ASEAN does not provide sufficient means to resolve heated issues between China, Vietnam and the Philippines.[124] At the same time, virtually all countries have domestic strains that wield the potential to spill over. Philippines and Indonesia tackle Islamic extremism, the scale of which is rather high[125], and crime, while Myanmar (Rakhine region)[126] and Malaysia (Luconia Shoal)[127] face separatist tendencies and ethnic clashes. China, again by its sheer power, presents the most potentially destabilizing factor, on the one hand for its hegemony claims and the ensuing aggressive expansion, but also, on the other, for its domestic burdens, including ageing population, economic slowdown, corruption, rural-urban disparity, pollution and, importantly, separatist and ethnic instabilities in Tibet and Xinjiang.[128] The interplay of these with regional security developments, in combination with "national pride"[129] and post-colonial grievance that drives Chinese strive for hegemony, will have to be watched for.

3	Economic Coercion
Threat area(s)	Economic security, cooperation security.
Threat causality	Economic power has been increasingly used to spread influence, and large-scale financial aid may lead as far as to undermine the current world order.
Actors / description	Here, a reference is specifically made to the Chinese Belt and Road Initiative, which is particularly dangerous for the following assumption; developing countries in dire need of foreign investment cannot refuse large amounts of money flowing from China. Their incapacity to repay the debt, however, creates an unintended submission of the developing state to China, who may demand political concessions in return. Japan terms of this strategy the "debt trap".[130] Such was the case of Sri Lanka, who, unable to repay the debt, was obliged to lease to China it's port of Hambantota. Although not constituting an imminent threat to Japan, any expansion of Chinese influence is considered a challenge to the rules-based world order, potentially exacerbating more pressing issues between China and Japan.

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123 Ministry of Defense, 171.

124 Ministry of Defense, 156.

125 A Filipino group Maute, pledging allegiance to ISIL occupied a city (Marawi) and clashed violently with armed forces before yielding it.

126 Ministry of Defense, *Defense of Japan 2018*, 150.

127 Ministry of Defense, 148.

128 Ministry of Defense, 89.

129 Ministry of Defense, 89.

130 'A New Security Strategy for Addressing the Challenges in the Turbulent International Order', 4.

4	Hybrid Warfare and Grey Zone Situations
Threat area(s)	Physical security, economic security
Threat causality	Grey zones refer to hostile activities that cannot be labelled as warfare, nor peacetime actions. Exploiting grey zones is the main method utilized in hybrid warfare and in the so-called "sharp power",[131] and gains prominence in the international arena insofar as it allows to reach its strategic goal, with low costs and can effectively offset conventional superiority of an opponent. It is characterized by the use of tools from multiple domains, counting cyber domain, informational and psychological warfare, coercive economic diplomacy and the like.[132] Its multidimensionality also, however, increases the difficulty to craft an appropriate response, and Japan is facing several hybrid threats that aim to create new facts of the ground and render Japanese society more vulnerable.
Actors / description	China is the most disruptive and relevant actor for Japan in this respect. The 2003 doctrine of Three Warfares (media warfare, psychological warfare, legal warfare)[133] already hinted at China's will to incorporate hybrid elements into its broader strategy, and its current activity East and the South China Sea confirms this endeavour. The Chinese method is to impose its presence in contested territories and establish *faits accomplis*,[134] exploiting the legal gap surrounding the ownership issues and expulsing adversaries with no or strictly limited violence. Such logic is clearly applied over the Spratley Islands[135] and, most crucially for Japan, Senkaku Islands,[136] considered an inherent part of Japanese polity. Clashes in the sea and the establishment of East China Sea Air Defense Identification Zone inducing controls of overflight are a clear manifestation of this. [137] Particularly worrisome is China's openly stated disregard for the decision of the Permanent Court of Arbitration, which ruled in favour of the Philippines in a territorial claim in the South China Sea.[138] Such disdain for international norms markedly raises concerns of China's expansion. Russia is also mentioned among the states who extensively rely on hybrid methods to spread influence,[139] but the threat this poses to Japan is incomparably lower than the one of China, despite the fact that the Russian eastern force is growing.[140]

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131 'A New Security Strategy for Addressing the Challenges in the Turbulent International Order', 3.

132 'A New Security Strategy for Addressing the Challenges in the Turbulent International Order', 3.

133 Ministry of Defense, *Defense of Japan 2018*, 91.

134 Ministry of Defence, 'Annual Report 2017-18', 152.

135 Ministry of Defense, *Defense of Japan 2018*, 151.

136 Ministry of Defense, 104.

137 Ministry of Defense, 90.

138 Ministry of Defense, 156.

139 Ministry of Defense, 48.

140 Ministry of Defense, 131.

5	WMD Proliferation
Threat area(s)	Physical security.
Threat causality	The proliferation of four forms of WMDs has gained in prominence in recent years; nuclear, chemical, biological weapons and ballistic missiles. While nuclear missiles proliferation concerns States exclusively, the lowering cost of biological and chemical weapons, combined with the dual-use character of many technologies necessary for their manufacturing, make them increasingly available not only to states, but also non-state actors, including terrorist organizations.[141] Problematically, this proliferation concerns Japan greatly, as many of the instances occurred in its vicinity.
Actors / description	Particularly threatening is North Korean nuclear and ballistic missile program, to the extent where the People's Republic is considered the greatest and most imminent menace to Japan.[142] The growing number of missile tests together with provocative rhetoric prompts Japan to mark this situation as "not tolerable".[143] North Korea is also said to possess a large amount of prohibited chemical weapons such as VX.[144] Its less radical stance notwithstanding, China has been as of recently also increasing its nuclear arsenal.[145]

6	Cyber Domain and Technological Innovation
Threat area(s)	Physical security, information security, economic security, sociopolitical security.
Threat causality	Growing utilization and dependency on technology brings about new vectors of potential inbound and outbound attack. The rapid expansion of reliance on the cyber domain is the most relevant threat posed by technological innovation for the time being. Every infrastructure, counting business, civilian public but also military systems might be subject to an attack and subsequently rendered non-functional. [146] Emerging activity in outer space is of particular relevance for network-centred militaries, including the Japanese forces. Recent tests of anti-satellite missiles threaten to paralyze C4ISR and communication of the latter in case of a confrontation.[147] Lastly, certain technical innovations, which increasingly originate within the private sector, might prove in the near future to present a great advantage for militaries that integrate them in the capabilities. In particular, AI, Big Data, quantum technology, autonomous systems, 3D printing and high energy lasers stand out as crucial.[148] Progress in these among Japan's adversaries; therefore, unsurprisingly causes discomfort among the authorities.

141 Ministry of Defense, 186.

142 Ministry of Defense, 67.

143 Ministry of Defense, 46.

144 Ministry of Defense, 187.

145 Ministry of Defense, 186.

146 Ministry of Defense, 202–3.

147 Ministry of Defense, 205.

148 Ministry of Defense, 207.

6	Cyber Domain and Technological Innovation
Actors / description	Many of the above form the basis of what Japan considers to be Chinese development of "asymmetrical capabilities",[149] which seem to be non-conventional measures capable of significantly hampering conventional efforts of other states. China is said, first of all, to be responsible for several cyber-attacks around the globe, including in the US, but it also tested anti-satellite missiles and quantum communication.[150] Electronic warfare is probably the most important part of China's A2/AD effort. North Korea is equally active in the cyber domain, attacking the Republic of Korea as well as using malware for fundraising.[151]

7	Redefinition of Maritime Norms
Threat area(s)	Economic security, physical security.
Threat causality	As an island country, rules-based maritime navigation is essential for Japan's prosperity. Witnessing therefore unilateral, and occasionally entirely illegal moves of other states in the waters surrounding the country renders Japan anxious about the implications such steps might have for the thus far uncontested shared use of this global common and Japan's security.[152]
Actors / description	This uneasiness stems predominantly from Chinese activity in the East China Sea. China is as of lately usurping maritime spaces of supposed free navigation, obstructing private fishing vessels as well as overflight rights. Despite the enactment of the Code for Unplanned Encounters at Sea (CUES) between Japan and China, the former continues to feel threatened by what it considers to be an erosion of UNCLOS.[153]

8	Terrorism
Threat area(s)	Physical security.
Threat causality	Terrorism becomes internationalized, more capable, mobile and decentralized, while its emergence is prompted by phenomena that increase in impact and scope and will continue so, such as poverty, weak governance, and newly also climate change.[154] Importantly, radical thoughts and activity motivated by middle eastern groups also spread in south-east Asia, bringing the threat of terrorist attack materializing on Japanese soil once again even closer.[155]

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149 It should be noted that the term „asymmetrical capabilities" or „asymmetrical weapons" is used rather unusually, and should be read rather as „unconventional". Nonetheless, it is interesting to emphasize that Japan still sees a certain weakness behind the reliance on non-conventional measures, given that the adjective „asymmetrical" is traditionally attributed to situations where an overwhelming power of one is offset by tactics and methods adapted to the asymmetry. It seems blatant, and not only from this, that Japan still considers the US conventionally the strongest nation.

150 Ministry of Defense, *Defense of Japan 2018*, 205–7.

151 Ministry of Defense, 203.

152 Ministry of Defense, 190–92.

153 Ministry of Defense, 190.

154 Ministry of Defense, 171.

155 Ministry of Defense, 176.

8	Terrorism
Actors / description	The imminence of the threat was greatly elevated by ISIL listing Japan as one of the hostile countries at which war should be waged, which was followed by Japanese citizens being targeted in Dhaka in 2016.[156] Philippines and Indonesia, in particular, have been struggling with the spread of Islamic radicalism.[157] Bearing domestic and regional security in mind, Japan proclaims terrorism to be one of its "own problems".[158]

Munich Security Conference

1	Great Power Competition
Threat area(s)	Political security, Economic Security, Physical security
Threat causality	As the world becomes less unipolar, and power is dispersed, the stability of the world order becomes less **stable**. To this extent, the trend of great power competition also becomes a threat as the competition becomes more ruthless, and it is involved in more domains, the more impact/disruption is expected. The final result of this threat is the **Interregnum** period, an order characterized by instability and uncertainty.
Actors / description	The report **does not provide a definition for great power.** • **China.** Understood as the direct competitor to the **US**, their competition is expected to result in a similar conflict as the **Cold War**. Chinese determination towards becoming a Great power, comes **under the assumption of the fall of the US**. Given that **China** is considered the long-term challenge of the US**, the report would assume that China becomes the long-term challenge of the International World Order**. • **Russia**. It's considered as the most immediate security concern for the world order and the west; however, the long-term geopolitical prospects are less tangible. **War or conflict by Russia is seen as a tool of communication, in its grand strategy to restore its International Power status.** Its position in the **UNSC** and aggressive foreign policy are considered of particular concern. • **Japan**. Concerned over the rise of China, Japan is becoming more active as a regional player**. This means that its hostile position towards China is expected to increase, competing in different domains such as Economic Aid/investment, or Military Projection**. • **The US.** It is seen as the "defender" of the contest, as the rising great powers see the US as the most significant power. However, as presented in threat n4, the US can hardly be seen as a "defender" of the international order. • **EU**. Covered in threat 5, **it is seen as unprepared for a world with great power competition**. **Arms Race** is also included as an area of **Great Power competition.** The report raises the problem of the Trump administration and Russia quarrels over the Arms Control treaties. The fall of the INF treaties and the multipolar world presents a further challenge for achieving a useful framework on this matter. In this matter, **the EU , Russia and the US** are seen as the main actors in this domain. **US and Russia** as the racers, and the **EU** as the actor in the middle who is not sure how to react.

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156 Ministry of Defense, 171.

157 Ministry of Defense, 147,151.

158 Ministry of Defense, 171.

2	Intra-state conflict & Inter-state conflict
Threat area(s)	Physical, Human, Societal, Political security
Threat causality	Under the assumption that the Liberal World order is one providing stability, regional wars which generate negative impacts in other countries in the region, are widely considered as a threat. At the same time, intrastate non-military conflict is also seen as problematic.
Actors / description	• **North Korea v. Regional players**. North Korea is seen as an extremely volatile country. While the negotiation attempts by the US are seen with a positive glance, the lack of real progress on the area is still a source of concern. • **Japan v. China.** While given their position as similar powers, and the backing of Japan by the US, increasing tensions between China and Japan over the Senkaku/Diaoyutai islands is worrisome. War may be unlikely, but a constant state of instability and uncertainty can be considered as the threat. • **The Middle East**. The middle east is not only a region with two ongoing Intra-State conflicts, Yemen and Syria. It is also a region prone to interstate conflict; the report explains this through the regional amities, as well as, by the under covered arms race given that 7 out of the 10 top military spending countries are in the region. • **Western Balkans**. Conflicts in the Balkans are considered to be increasing, even when the EU has acknowledged the need to integrate these territories even further. The report uses the example of Kosovo and Serbia as a demonstration of how relations are tense and political missteps may result in violence.

3	US unpredictability as an Ally
Threat area(s)	Political, Economic security
Threat causality	The US is considered by the report as an actual pillar for the International Order. Hence, its unpredictability and sudden volatility against allies and institutions are considered as a threat to the entire system. The cause is placed on the lack of power, the rise of competitors and internal politics, which motivate the current administration to take these steps
Actors / description	Similar to the ECFR reports, the **US current grand strategy (or lack thereof) is not considered as a long term constant or a historical trend**. • The **EU** is one of the actors closely related to this threat. The reason is; first, their lack of capability to react in such an uncertain world; secondly, the need and importance they place in the transatlantic relationship as a guarantee of security; and thirdly, the lack of action towards breaking the US-EU dependency and be able to develop a strategic autonomy. • **China.** The reactions of the US are closely related to the perception in academia and elites in the US of an unstoppable China, which is close behind the US. On the contrary, the report presents this understanding as exaggerated by the tunnel vision generated by the use of traditional measurements of power. The current steps by the Trump administration are seen as highly disruptive, and **they also generate the perception of the US being against the Liberal International Order**. The problem or threat associated with this becomes that the **US is often des-estimated as a potential source of reform for the international system**. Hence, the unpredictability and antagonism of the US generate a threat for the International Order, as other actors such as China try to claim a better stance as reformers of the International Order which may include non-liberal reforms.

4	EU Incapacity for Action.
Threat area(s)	Political Security
Threat causality	The EU incapacity to take the lead as a defender of the liberal international order is considered as a threat. With the fall of the US as a defender of the international order, the MSC believes that the EU must step up and take that mantle. However, the MSC finds several conflicts inside, which do not allow the EU to produce effective strategies in this regard.
Actors / description	To this regard, the MSC reports find the internal **rise of antagonism towards the French-German Axis**, as problematic. The French-German Axis considered the center of gravity for the EU's security strategic decision making, is no longer enough. This generates more challenges to pass any relevant policy to this regard. At the same time, the fate of **Brexit** also rises as a problem. The most significant aspect of this is the inward-looking crisis, which is obstructing the formulation of a "global Britain" grand strategy. At the same time, Brexit could generate further complications towards the formulation of a security structure at the European level, as the UK military and non-military capabilities are way too significant .

5	Terrorism & International Criminal Networks[159]
Threat area(s)	Physical Security, Economic Security, Political Security, Human Security.
Threat causality	While **globalization** provided better opportunities for the international economy, **it has also created opportunities for international criminal networks and terrorist groups to operate more effectively**. Hence, the threat increases by the proliferation of these groups, and the human threat they present.
Actors / description	Terrorism is a lesser threat for the MSC report when we compare it on how it was covered in previous reports[160]. While the threat has not disappeared on the report, it is shadow towards the concern for Illegal international networks, either on smuggling, human traffic, arms dealing or even terrorism. • **The Sahel**. The report raises the Sahel as a significant problem zone with regards to terrorism and criminal networks. The MSC believes that the presence of different criminal systems in the region, and the internal fights between these networks and between governments and population make the threat even more pressing. At the same time, a large amount of territory brings difficulties for effective anti-terrorist/anti-crime operations. On this regard, the MSC mentions **France & Germany** as key outside actors in this regard, particularly given their operations in **Mali & Niger**. The report presents the problem of International Criminal networks in more countries, such as **Mexico** with a particular mention to the number of assassinations related to crime-related activities, **Afghanistan** as an example of the connection between terrorism and drug networks, and the **US** as an example of one of the countries having to deal with the large number of drug imports which pushed for a Opium crisis.

159 Münchner Sicherheitskonferenz, 'Munich Security Report 2016. Boundless Crises, Reckless Spoilers, Helpless Guardians', Annual Report, Munich Security Conference (Munich, Germany: Münchner Sicherheitskonferenz, February 2016), 40–43;58–61, https://www.securityconference.de/fileadmin/ MunichSecurityReport/MunichSecurityReport_2016.pdf.

160 Münchner Sicherheitskonferenz, 'Munich Security Report 2016'.

6	Trade Protectionism
Threat area(s)	Economic , Political Security
Threat causality	The number of trade disputes between countries is a cause for concern. Generally, the **cause of protectionism comes from interests of defending internal markets**. However, the US-China war is considered to be more comprehensive as it includes security concerns. At the same time, the **US attacks on WTO**, and the disregard of multilateral conflict resolution tools are a threat to the international trade system.
Actors / description	The report articulates, the **increase in protectionist policies**, **the attack on the WTO** and the **US–China trade war** as further "issues" or matters for concern. • **Increase in protectionist policies.** The report finds that "covert protectionism" has been a constant for years, through the exploitation of loopholes at the **WTO**. The element of concern is not tariffs, but **subsidies**. • **WTO under attack.** US policy, through an aggressive stance against the **WTO**, creates a problem to find paths forward for its reform. The report raises **the concern for the disregard towards multilateral solutions**, which is ending up by undermining the tools for trade dispute resolutions. • **US-China trade war.** The report understands that the US–China trade war goes far beyond that of a trade war. It recognizes that it is also motivated by security and geopolitical concerns.

7	International organizations (non) assertiveness
Threat area(s)	Political Security
Threat causality	Given that the International order is deeply connected with liberal institutions, the lack of assertiveness of them, are considered as problematic. Either through the unresponsiveness to deal with crises in different regions, such as the Sahel, or through the confusion and mixed signals they provide to willing countries, the lack of assertiveness is considered a problem.
Actors / description	• **WTO.** The WTO is understood to be the main actor for disputes settlement of trade conflicts. However, the report expresses concern over the lack of reform at the WTO and the presence of loopholes allowing for countries to wage protectionist measures against each other. Generating further instability. • **EU**. The EU is seen as an organization requiring a more active role in global affairs, mainly to support the liberal order after the withdrawal of the US. Their lack of action, as shown in threat 4, is allowing other countries to play a more prominent role in regions in crisis, such as **Western Balkans**, where **China and Russia** are exerting pressure destabilizing the region and creating antagonism towards the EU. • **Eastern Europe.** Here as well, the lack of assertiveness from institutions creates confusion and miscalculation in countries in the Caucasus and eastern Europe. The report presents the examples of the former Soviet republics in the Caucasus, which they are not comfortable under the spheres of Russian influence, but can not find a clear exit through **NATO or the EU**, given the mix messages this send. The report calls the region to be in a **"state of uncertainty."** because of it.

8	Lack of AI regulation
Threat area(s)	Physical security
Threat causality	The unprecedented AI development has brought a whole set of opportunities and threats. The report presents AI, however, as an area which needs to be drafted a regulatory framework. Without this framework, there are concerns for the use of AI technologies for warfare which can become too autonomous.
Actors / description	**This trend was prepared not by the MSC but by McKinsey & Company.** AI is mentioned mainly through the military perspective. There is no mention of AI trends for civilian use; thus, the report makes no mention of threats such as automatization. On the other hand, the report mentions the advantages this technology will bring to the military and the changes it will bring for logistics. However, the report raises concerns over the need to regulate these advantages. The report presents the **US and China** , as the leading innovators on the developments in these technologies. **Japan, Germany, Canada and the UK**, follow but with a considerable gap to the first two. At the same time, the report presents that the developments of AI and the adaptation of these technologies will have significant effects on the geopolitical balance.

Peru

1	Extreme Climate Events[161]
Threat area(s)	Environmental, Economical, Human security
Threat causality	Peru environmental cycles present cyclical environmental threats, which are to be expected between at least 5-year threats. The threat *per se* is that of extreme climate events which can affect infrastructure or the environment where populations depend on. The cause for these events is mainly that of natural cycles; however, they can be magnified by climate change
Actors / description	The main threat that is perceived in this case is that of the **phenomenon of El Nino**. It is used as the prime example of cyclical climate event, which can have disastrous consequences if unprepared. The likelihood for this event is then highly likely during a certain period, and this changes depending on meteorological estimation. Today the **likelihood of El Nino is reduced to 50% probability**, as estimated by the World Meteorological Organization (WMO) from which Peru's report is based on[162]. However, the impact of such an event is estimated to be disastrous, such **as floods, damages to critical infrastructure, loss of human lives, and indirect effects to the confidence and functioning of the state.** At the same time, **El Nino** and the steady increase in temperatures, have already accelerated the loss and degradation of glaciers in Peru, up to 71%. This means that it reduces the hydric capabilities in cities, where 60% of Peru's population lives and 80% of GDP is generated.

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161 CEPLAN, 'Analisis de los principales riesgos y oportunidades globales para el Peru al 2030' (Lima, Peru: Centro Nacional de Planamiento Estrategico, January 2019), 22–25, https://www.ceplan.gob.pe/wp-content/uploads/2019/01/Riesgos-y-oportunidades-CEPLAN.pdf.

162 World Meteorological Organization, 'El Niño/La Niña Update', Event Update, World Meteorological Organization, May 2019, https://public.wmo.int/en/our-mandate/climate/el-ni%C3%B1ola-ni%C3%B1a-update.

2	Natural Disasters – Earthquake / Volcanic action[163]
Threat area(s)	Environmental Security, Physical Security, Economical Security
Threat causality	Threats coming from unforeseen, or steadily cyclical events are considered to be of maximum concern for Peru. To this regard, scenarios for an Earthquake or volcanic event are presented. The threat comes from the lack of preparation and the destructive capabilities of both events. Impacts are estimated to be catastrophic in both scenarios, i.e. evacuation or destruction of entire cities.
Actors / description	**Closely related to historical experience**, the report presents the threat of Natural Disasters as one of the major concerns. This is particularly present on the earthquake scenario, where the report brings the 1746's earthquake, which destroyed several infrastructures along with the costs, wiped out almost the entire infrastructure of Lima and Callao, and killed more than 20.000 inhabitants. The report presents that a similar scenario is very likely to occur. The report presents the belief that an **8,8 Mw earthquake is likely to occur by the coast near Lima**. If this earthquake is to materialize, **it will cause a Tsunami which is expected to flood areas of at least 2km** and waves of 8 meters in the best-case scenario[164]. **To this scenario, the report estimates around 110 thousand casualties, 2 million injured, 350 thousand houses destroyed, and 623 thousand left unhabitable**. To this, the report adds damages to critical infrastructure, as well as schools, hospitals, and contamination of rivers. Secondly, the report raises the threats from volcanic activity; however, the estimation of its effects are less described that those in the earthquake scenario. The report brings the main concern over two particular volcanos, Misti and Ubinas. The report presents as **main vulnerabilities** which would magnify the nature event into a wide-spread disaster. Those include ***bad urban planning leading to uncontrolled urbanization and sub-optimal constructions; poverty levels; lack of socio-economic conditions***. To this regard, the report brings the example of the adjacent hills near Lima were poorly constructed settlements can be found, which are most like to be the main victims of this event.

3	Failure of National and Regional governance[165]
Threat area(s)	Economic, Political and Public Security.
Threat causality	Corruption is seen as one of the main threats to Peru. This threat is shared along with several other countries of the region. The threat comes from the effects that corruption can have in regional governance, such as loss of productivity, loss of public confidence in the government, and rising costs for public spending. At the same time, particular concerns are given to corruption developments in other regional governments, which can have a domino effect into the region, with the case of the *Lava Jato* seen as the prime example.

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163 CEPLAN, 'Analisis de los principales riesgos y oportunidades globales para el Peru al 2030', 25–33.

164 CEPLAN, 27.

165 CEPLAN, 33–38.

3	Failure of National and Regional governance[165]
Actors / description	The CEPLAN understands of corruption to be a global phenomenon. It believes that corruption reaches critical instances when it manages to install itself as one of the rules of the system, such as creating the perception that bribes are mandatory. The report presents examples of corruption across Latin America, with particular focus on scandals which managed to cross borders and create domestic effects. An example of this is the *Lava Jato* investigations in **Brazil** which led to widespread corruption scandals in Latin America, up to the point of leading to the arrest of one previous Peruvian president, and the extradition request of another. However, the report also presents the threat of Corruption levels inside the country at the moment. The report presents this as a threat, given the burden they create on the economic and political system. An interesting point brought about is the burden corruption generates in the population physique. The report presents that 51% of the population would support a *coup d' etat,* given the levels of corruption, an observation which can not go unnoticed in Latin America given its violent history during the 70s-80s.

4	Failure to Mitigate & Adapt to Climate Change[166]
Threat area(s)	Environmental Security
Threat causality	The recent international developments in the fight against climate change, combined with the weak position of Peru against Climate Change, brings the failure to address climate change as a major threat. While the report also points out the internal actions which can generate more vulnerabilities, the report also focuses on the need to coordinate an international framework in the topic. Peru, acknowledged by the report, is one of the most vulnerable countries towards Climate Change developments.
Actors / description	The report shares the views of the IPCC report of 2018, and it incorporates it as the main explanation of this threat. To this regard, it presents that **climate change deterioration may reach to irreversible levels**. It presents that if temperatures rise over **1.5 degrees by 2030**, it can have irreversible and dire consequences for Peru, and the world. Moreover, **Peru highlights the role of the United States to invigorate the lack of preparedness towards this topic, by pulling out of the Paris Agreement**. The report presents its concern over this element as the US represents one of the main emissions of Greenhouse gases, and it not committing to the fight against global climate change would be difficult to overturn.

5	Environmental Damages caused by human error[167]
Threat area(s)	Public Health, Economic Security
Threat causality	Brought about by the presence of oil spills created by human error or by technical failures, the report presents the threat from environmental damages which can affect local populations and the domestic economies. At the same time, deforestation is also presented as a man-made action which could have negative consequences.

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166 CEPLAN, 38–41.

167 CEPLAN, 41–47.

5	Environmental Damages caused by human error[167]
Actors / description	To this extent, the report presents the main element of concern towards the **companies of the energetic sector**. The report goes into depth to explain some of the errors produced by these entities, which result in impacts to the entire society. Such as contamination of water and food supply, negative physiological effects on the population, and negative economic effects.

6	Structural Unemployment[168]
Threat area(s)	Economic Security, Human Security
Threat causality	Unsurprisingly one of the main threats concerning the CEPLAN is that of structural unemployment and the consequences in the economy, as well as the well-being of the population. The threat of structural unemployment is closely associated with **mega-trends** connected to the development of new technologies and automatization and loss of jobs.
Actors / description	The threat of structural unemployment is based on the fear of not being to provide jobs for a large sector of the population if the country is not prepared for the technological changes, or if companies are not able to adapt effectively. At the same time, the report finds that the **demographic mega-trends** also play a role in this aspect, as the population is starting to become older. Such a trend, combined with the current state of welfare systems in Latin America, can become a magnifier for this threat. As older populations are not able to have a reasonable pension, they may become forces to join the working force, creating more demand for jobs.

7	Illegal commercial flows[169]
Threat area(s)	Economic Security, Public Security
Threat causality	Shadow economy and the burden this may have on the Peruvian economy is seen as a top-ranking threat for Peru. The threats originate from the interaction of different mega-trends, which creates disbalances in the cost-benefit equation of individuals, where they prefer to operate outside the legal framework to either avoid taxes or involve in illegal commerce.
Actors / description	The main concern over this threat is the percentage of the illegal economy compared to the legal economy. The report presents the cases of the **United States, Germany or Canada**, where this case of Illegal commerce is seen as less present, up to the point of being 10% at most. However, in the case of Peru, the report acknowledges the illegal economy to be that of 35% of the real economy. This creates burdens at the taxation systems, as tax collection becomes unreliable. At the same time, the report adds on how this **threat magnifies the presence of other threats, such as regional Narcotrafficking organizations** or contraband of other products.

168 CEPLAN, 47–50.

169 CEPLAN, 50–53.

Russian Federation

1	National Defense[170]
Threat area(s)	Physical security (deterrence, prevention of armed conflict), economic security
Threat causality	Perception of a threat of military intervention from other states and the resulting need to bolster the armed forces, the economy to support military efforts and socio-economic needs to deter and counter aggression.
Actors / description	**Military** - Russia identifies the need to bolster its nuclear deterrence capabilities, as well as maintaining the readiness of the armed forces, increasing defense capabilities, modernising the equipment and expanding the innovation potential of the military-industrial complex. It further notes the need to improve forms and methods of troop, formation and agency deployment in line with the needs of modern warfare. **Economy** - alongside the modernization of the armed forces, the state sees the need to prepare the national government, local governments and the armed forces to sustain the economic needs of the population in case of conflict. **Alternative means** - Russia notes the need to address conflict prevention through non-military means as well, highlighting factors such as diplomatic mechanisms, arms control and international legal instruments.

2	State and Public Security171
Threat area(s)	Physical, human, socio-political, environmental, cultural and cooperation security
Threat causality	Emphasis is placed on intelligence and other activities by foreign entities, activities of terrorist/extremist entities, activities by radical public groups, criminal organisations, promotion of extremist ideologies via digital means, criminal offences, corruption and natural and man-made disasters.
Actors / description	The government publication does not explicitly note the names of actors behind its threat perception, but with respect to extreme ideologies, Russia is predominantly concerned with fascism, religious extremism, terrorism and separatism. It notes the importance of safeguarding chemical, biological and radioactive resources from malicious actors. Moreover, it seeks to counter the participation of Russian citizens in criminal and terrorist networks abroad. It makes particular reference to the incitement of 'colour revolutions' that undermine traditional Russian religious and moral values. Alongside tackling the aforementioned challenges, the government seeks to increase the trust of the citizens in the law enforcement and judicial systems, as well as protect Russian citizens abroad and increase international state security cooperation. It further seeks to bolster border security using new technologies and to improve the effectiveness of border protection forces. Finally, there are lapses evident in the technological advancement of disaster prevention and management, from disaster monitoring to safety standards of critical infrastructure and alerting the public to the onset of crises.

170 Putin, 'Russian National Security Strategy', paras 33–41.

171 Putin, paras 42–49.

3	Quality of Life[172]
Threat area(s)	Socio-political, human and economic security
Threat causality	Threats are identified as poor economic and technological development, economic sanctions against Russia, budget misappropriation, a rise in inequality and a drop in the quality of goods and services.
Actors / description	Aside from addressing the aforementioned socio-economic challenges, the government notes the need to ensure food security. This is to take form in achieving food independence, effectiveness in production, improving soil quality and the regulatory environment for genetically modified crops and health and safety.

4	Economic Growth[173]
Threat area(s)	Economic security
Threat causality	The strategy outlines a breadth of economic risks faced by the country. These are poor economic and technological competitiveness, dependence on raw materials export, vulnerable financial system and information infrastructure, imbalance in the national budget, ownership of companies in foreign jurisdictions (offshoring), depletion of natural resources and their stockpiles, labour shortage, persistence of a shadow economy, corruption, illegal immigration and regional inequality. In terms of external factors, the government notes (global) economic crises, foreign sanctions, unfair competition, illegitimate use of legal resources and disruption to critical (heating, power, mineral, water etc.) infrastructure as threats to its (economic) security.
Actors / description	Tackling economic challenges is the second lengthiest section of the strategy after strategic stability (Threat 9), suggesting that greater emphasis is placed on economic security. One of the main focuses of the government is addressing energy security, both in terms of domestic consumption, as well as the export and competitiveness of Russian energy supplies. It particularly notes the political reasoning for the discrimination against Russian energy supplies, a dynamic it seeks to counter. Alongside macroeconomic, labour and financial sector reforms, the country seeks to address its major regional divide, in part by improving coordination of infrastructure development and population settlement, as well as promoting independent economic development at the regional level and strengthening budgetary provisions.

172 Putin, paras 50–54.
173 Putin, paras 55–66.

5	Science, Technology and Education[174]
Threat area(s)	Economic and human security
Threat causality	Low development of advanced technologies, dependence on the import of foreign equipment, components, software and materials, quality of secondary and higher education, social standing of science, technology, engineering and mathematics (STEM) professionals, illicit use of Russian technology, foreign sanctions against Russian scientific/educational entities and an underdeveloped legal base.
Actors / description	The government primarily seeks to address its technological security, in part by improving its innovation and industrial policies, as well as state system for training highly-skilled specialists, with applied science and education receiving the greatest focus. The government further seeks to improve the standing of public-private part- nerships and facilitate the transfer of education, science and industry research to the state for the purpose of the military, state and public security.

6	Public Health[175]
Threat area(s)	Human security
Threat causality	low life expectancy, high levels of disability, high mortality rates, population decline, poor quality of medication and citizens rights in the protection of health.
Actors / description	The strategy pays particular attention to issues of epidemics, which includes drug abuse, HIV, tuberculosis and alcoholism. Aside from reforms of the healthcare sector to improve service provision, the state seeks to particularly address motherhood/ childhood protection, palliative care, innovation and application of research in medi- cal practices (including the development of personalised medicine), bolstering of the domestic pharmaceutical sector and reducing the dependence on foreign suppliers and the development of a system to monitor the biological situation across Russia.

7	Culture[176]
Threat area(s)	Human, cultural and socio-political security
Threat causality	Weakening of unity through external cultural and informational expansion, propa- ganda of permissiveness and violence, racial/ethnic/religious intolerance, the decline of the importance of the Russian language at home and abroad, attempts to falsify Russian and world history and unlawful encroachments on [Russian] cultural objects.
Actors / description	The identification of culture as a security domain is relatively unique to Russia. The government is particularly concerned with the upkeep of traditional ideological, spiritual, moral and historical values, which in its view are being eroded, in part, by foreign actors. One of the primary focus areas of the government is the rejuvenation of the Russian language, both at home and abroad, with a focus on the CIS states. The suggested need for this is the language and cultural requirements of Russians abroad and the stimulus for Eurasian integration.

174 Putin, paras 67–70.

175 Putin, 71–75.

176 Putin, paras 76–82.

8	Ecology of Living Systems and Rational Use of Natural Resources[177]
Threat area(s)	Human, economic and environmental security
Threat causality	depletion of raw materials, water and biological resources, inefficient and improper extraction and use of resources, dominance of the extractive sector in the economy, an extensive shadow economy, high levels of pollution and ecosystem damage, a lack of capacity in consumer and industrial waste management, trans-border transfers of dangerous substances, poor enforcement of environmental standards and low level of education in environmental culture.
Actors / description	The issue interlinks human security, economic and environmental sustainability. Overdependence on the extractive sectors of the Russian economy, along with outdated manufacturing processes and poor waste management present major health risks to the Russian population. This is, in part, a result of frequent man-made disasters in industrial and energy sectors, namely chemical factories, mining sites and power plants.

9	Strategic Stability and Equal Strategic Partnership[178]
Threat area(s)	physical, economic and cooperation security
Threat causality	foreign interference, NATO expansion eastward, (transnational) crises, limited economic cooperation, both with neighbouring states, as well as more contentious states such as the U.S., nuclear non-proliferation, and the challenge of preserving stability and predictability of strategic offensive arms [authors note: this likely refers to the development of autonomous weapons systems].
Actors / description	The government highlights the need to increase its engagement with international partners in economic cooperation, arms control, crisis management and political relations. The strategy notes the desire to engage both with individual states, as well as regional and international organisations such as the Shanghai Cooperation Organisation and the United Nations. The diversity also applies geographically, with the strategy explicitly emphasizing the development of cooperation with the EU, U.S., Russia's neighbours, East Asian states and NATO. Some areas of cooperation are (nuclear) arms control, strengthening international mechanisms on the control of new (military) information technology and exploration of the Arctic, where the document argues Russia - U.S. interests align. Contrary to the soft-spoken comments on international cooperation, Russia still views NATO expansion eastward as a key threat, but highlights the willingness to cooperate with NATO partners, should the alliance adjust its policy towards Russia. One particular example is the deployment of missile-defence systems close to the Russian border.

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177 Putin, paras 83–86.
178 Putin, 87–107.

Singapore

1	Disease & Terrorism[179]
Threat area(s)	Physical Security, Human Security
Threat causality	Given the geographical nature of Singapore, a city-state, epidemic diseases such as Severe Acute Respiratory Syndrome (SARS). In such a densely populated city like Singapore, the rate at which a virus can spread an infect a lot of the population can be dangerously quick. Contagious pathogens of this nature are a threat that falls under the umbrella of a *black swan*; 'hard-to-predict' events with a large impact. On the other hand, there are threats visible to everyone which people are withdrawn from dealing with, so act as if there are not important. One problem which characterizes a *black elephant* is terrorism. Singapore has neither been immune to terrorism, with the 1974 hijack of Laju ferry by the Japanese Red Army and the threat of the Jemaah Islamiyah (JI) who's prerogative is to expand a pan-Islamic caliphate across South-East Asia.
Actors / Description	**Singapore's Defense & Technology Agency** (DSTA) and **National Laboratories** have developed a contact tracing system and infrared fever screening system that will act as an early warning system to alert the authorities of an epidemic threat entering the borders. [180] Singapore has enhanced its protection of **Jurong Island**, an integral petrochemical complex in generating energy for the city, to a high-level security standard. Furthermore, the government has ensured the social integration of Islamic communities within the city to avoid marginalization and alienation. Their strategy has involved the **Inter-Racial and Religious Confidence Circles** (IRCCs) comprised of networks of community leaders and influencers to understand the relationship between different races and religions.[181] In addition, the **Religious Rehabilitation Group** (RRG) is represented by counsellors who help detainees to understand how their fundamentalist beliefs have been distorted.

2	Diffusion of power and its influence on people and philosophy
Threat area(s)	Political Security, Economic Security, Human Security
Threat causality	The CFS evokes Joseph Nye's determination that power in geopolitics is shifting from West to East, in parallel with business and society shifting from a centre to the margins, in both East and West.[182] This is not only gauged by the size of its economies but also the volume of investment within science & technology, the empowerment of social minorities and new platform business. As technology is becoming ever-more integral in how individuals and society function, it is also important to consider the relationship of our day-to-day, private lives with technology, i.e. the 'quantified self'.[183] With the deep integration of technology comes shifts in the organizing principles and philosophies of our society, with the powerful and wealthy utilizing technology to advance further than those from less-wealthy/poverty backgrounds. [184] Indeed, the inequality may no longer be solely down to wealth disparity, but on biology and intelligence.

179 Center for Strategic Futures, 'Foresight 2017', 16–17.

180 Center for Strategic Futures, 10.

181 Center for Strategic Futures, 16.

182 Center for Strategic Futures, 23.

183 Center for Strategic Futures, 23.

184 Center for Strategic Futures, 26.

2	Diffusion of power and its influence on people and philosophy
Actors / description	China has become the second-largest economy in the world, re-investing its revenue into research and development (R&D) to the tune of US $377 billion in 2015. **China** has also been expanding its geopolitical influence, founding the **Asian Infrastructure Investment Bank** (AIIB) which is comprised of 74 members with another 26 prospective members worldwide. Meanwhile, **India** is developing its science & technology capabilities by spending 0.8% of its GDP in R&D, presented by the 1,000 R&D centres registered and another 4,000 tech start-ups.[185] In light of business and society, power will shift from the established centres to the margins, but importantly not being evenly distributed. For example, **Bitcoin** has thrown open the door to the cryptocurrency space, whilst **Kickstarter** has provided a new platform more entrepreneurs to attract capital in launching their ideas.[186] These ideas pride themselves on a peer-to-peer model, negating the need for a centralized middleman to facilitate the transaction/investment. Even though technology has its advantages, namely P-2-P, it has catalyzed the embeddedness of the gig economy. Successful **tech entrepreneurs** may widen the gap of inequality, leaving others to 'scurry about in the gig economy' whilst business can be performed through the cheap labour costs of automation, augmented reality (AR) and artificial intelligence (AI). The inequality of wealth may be further exacerbated by inequality of personal traits with gene-line technology become increasingly cheaper.[187]

3	Unhealthy Economic Growth
Threat area(s)	Economic Security
Threat causality	Since the Great Recession, global economic growth has been sluggish. For small countries, economic growth tends to depend on the exterior global winds of economic growth. Singapore is moving from extremely quick growth to moderate growth, joining the ranks of rich countries which usually grow at a slower rate. Small countries must focus on the quality of growth, which is driven by productivity and innovation, rather than the pace of growth. Making the domestic economy more dynamic and inclusive for everybody, will also make it more resilient against the health of the globalized economy.[188]
Actors / description	Policies to ensure the inclusiveness of growth include educating students to master skills that businesses need, training and workers in new jobs, income redistribution and social insurance. **Scandinavian countries** such as **Sweden** and **Denmark,** are used as prime examples, with many home-grown global companies embedded in groups of local companies, combined with the presence of **multi-national companies (MNCs)** and foreign talent.[189] Both **global** and **local companies** work together in the production and R&D to manufacture products that are eventually sold worldwide – raising wages for workers and tax revenue for the government. Going for quick, short-term growth can potentially lead to an income trap where **MNCs** push up wages across the economy, making it harder for local companies to remain competitive and appealing to workers, reducing their profit.[190]

185 Center for Strategic Futures, 26.

186 Center for Strategic Futures, 23.

187 Center for Strategic Futures, 23.

188 Center for Strategic Futures, 47.

189 Center for Strategic Futures, 48.

190 Center for Strategic Futures, 48.

4	Artificial Intelligence
Threat area(s)	Cybersecurity, Human security
Threat causality	Ai's rapid development and integration within everyday technologies have meant that people have become accustomed to it and stopped questioning the implications. The CFS raise three issues concerning AI; inequality, inscrutability and ethics.
Actors / description	Developments in AI have the potential to reverse the trend in growing equality stimulated by industrialization. As the technology becomes increasingly more advanced, it will outperform human capability instigating mass under-employment and a new under-class, shifting power to the new **technological aristocracy**. **Apple**, **Alphabet Inc.(Google**), **Microsoft**, **Amazon** and **Facebook** all occupy the five largest companies by stock-market value. Furthermore, due to AI developing its unique logic pattern for learning and conducting certain tasks, such as **Deep Learning** achieved through 'artificial neural networks', we as humans may have an inability to explain ow AI programs reach their conclusions. **Technology scientists** are struggling to explain the reasons for why Ai has come to some conclusions yet know that the data sets provided cause Ai to make them, leaving a trade-off between explainability and effectiveness.[191] Lastly, the issue of ethical programming rules into the operations of AI systems so that there are responsible in how they govern their behaviour is a challenge, expressed by **Isaac Asimov**'s **"Three Laws of Robotics"** as being 'context-dependent'.[192] However, trying to make AI understand human intuition about what is acceptable or not across a spectrum of moral contexts is a very difficult task, therefore, when something does go wrong, who is to blame? [193]

United Arab Emirates

1	Cyberwarfare and Technology-Related Issues[194]
Threat area(s)	Economic security, sociopolitical security, physical security.
Threat causality	The increasing reliance of all sectors on the cyber domain increases vulnerabilities in many chokepoints. Both criminality and warfare are expected to be progressively transferred in the cyber arena, where financial and state infrastructures are likely targets, as well as national unity and cohesion, in the UAE particularly visible among the youth.[195] An arms race between IT criminals and security developers is likely to occur.

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191 Center for Strategic Futures, 60.

192 Center for Strategic Futures, 61.

193 Center for Strategic Futures, 62.

194 Ministry of Cabinet Affairs & Future, 'Future Outlook 100: Global Trends for 2050', 110–11.

195 Al-Suwaidi, *United Arab Emirates Society in the Twenty-First Century*, 167.

1	Cyberwarfare and Technology-Related Issues[194]
Actors / description	Cyber criminality is expected to involve lone-wolf actors-entrepreneurs, who will sell information to the highest bidder, presumably via Dark Web, which constitutes a major and increasing threat given the ease of untraceable coordination it allows for.[196] Importantly, businesses and private property were statistically the main targets of cyber criminality, and no developments suggest a change in this trend. The distinction between cyber criminality and warfare is, however, a blurred one, following a broader trend of the rise of non-state actors in challenging the states, to which traditional definitions of warfare might often not be adapted to. Generally, the cyber domain lowers the barriers for mere individuals to incur crises of a national or international character. The increasing interconnectedness of humans and technology cannot be disputed and will further intensify the dangers posed by cyberattacks. The notable evolutions will include autonomous vehicles, smart cities, a proliferation of 3D printing and quantum computing with its capacity to revolutionize encryption methods.

2	Climate Change[197]
Threat area(s)	Physical security, food security, sociopolitical security, economic security.
Threat causality	Climate change is considered one of the main threats and is likely to affect the UAE in several ways. Firstly, extreme weather could expose lives, critical infrastructure and livelihoods to danger. Secondly, climate change is estimated to have a significant impact on food security and world food price volatility.[198] Lastly, large scale migration from global south to wealthier countries is predicted, including the UAE. [199]
Actors / description	Though world food consumption will inevitably rise, considering the ongoing demographic changes, climate change will reduce the size and capacity of crops. Apart from disruptions in the global food trade, the significance of this commodity presupposes also a rise in conflict over it. Similarly, shrinking living space, extreme weather and food/water scarcity will force a considerable portion of the global population to seek better living conditions in wealthier countries, and although the UAE is not thought to be the primary target country, the patters on the flows are difficult to predict and the Emirates might not avoid some inflow and subsequent societal instability. This phenomenon's significance is estimated to raise. As prevention measures are close to being ineffective due to the magnitude of the ongoing degradation and lack of cooperation, adaptation will be increasingly needed, including possible anthropogenic ecosystem manipulation.

196 Ministry of Cabinet Affairs & Future, 'Future Outlook 100: Global Trends for 2050', 126–27.

197 Ministry of Cabinet Affairs & Future, 96.

198 Ministry of Cabinet Affairs & Future, 102–3.

199 Ministry of Cabinet Affairs & Future, 104–5.

3	Radicalization and Terrorism[200]
Threat area(s)	Physical security, sociopolitical security.
Threat causality	Although the future development of radicalization and terrorism is difficult to foresee due to their dependence on the global geopolitical situation, generally it is expected to rise, especially in the Middle East region. The rationale behind this prognosis is that the increasingly complex geopolitical setting is likely to generate motivation for radical extremism, while technological and societal developments will simplify recruitment, communication, coordination and, importantly, storytelling. The UAE, for its ideological opposition to extremism, is to be targeted, and the damage was foreseen ranges from physical one on lives and infrastructure, to social one aiming to undermine national unity. [201]
Actors / description	Despite the neutral language employed in the Report, JSS is much clearer on what groups, in particular, pose a menace to the State: **Muslim Brotherhood**, **Hezbollah**, **Houthi rebels** in Yemen and diverse militias in Iraq and Syria.[202] Apart from the Muslim Brotherhood, the rest self-identifies usually as Shia-dominated groups, where Iran would be a common state denominator. This, however, is not stated in the documents.

4	Natural Resource-Related Threats[203]
Threat area(s)	Physical security, economic security, sociopolitical security.
Threat causality	Contestations over natural resources are likely to induce global instability due to resource wars and water/food insecurity. There are two levels for the analysis of resource scarcity: global one, i.e. the continuous use of finite resources by humans, and a regional one, implying that certain localities are abundant in different commodities and hold relative advantages. While the global outlook will eventually pose a danger to the humankind, regional one is more destabilizing for the near future as all means are expected to be employed to satisfy national needs for resources, including diplomatic, economic and coercive measures.
Actors / description	The Middle East, including the UAE, is particularly vulnerable to water scarcity and possible upstream-downstream conflicts as well as price volatility. On top of that, the region and mostly its urban areas are also not spared of significant environmental degradation, which further increases pressure on food and water provisions.

200 Ministry of Cabinet Affairs & Future, 116.

201 Al-Suwaidi, *United Arab Emirates Society in the Twenty-First Century*, 62.

202 Al-Suwaidi, 71.

203 Ministry of Cabinet Affairs & Future, 'Future Outlook 100: Global Trends for 2050', 92–95.

5	Biotechnology[204]
Threat area(s)	Physical security, economic security, socio-political security.
Threat causality	The threats introduced by genetic modification intensify as the barriers in terms of cost, infrastructure and technologies decrease. The first and foremost way this manifests itself are "engineered pandemics", or genetically modified diseases with high mortality and virulence. This, in combination with growing resistance to antibiotics, holds a disastrous potential. They strive for a "perfect human" is another,[205] though less pressing way genetic modification might pose a global risk. Its potential for improving human lives; notwithstanding, the unknown-unknowns of the process might lead to near-extinction of humankind as the reaction of the enhanced individuals to various diseases cannot be fully foreseen. It is also noted that a small chance exists of genetic modification widening the gap between rich and poor by being exclusive due to its price, thereby underscoring the already destabilizing topic of social inequality.
Actors / description	There are two ways in which newly created pandemics could be disseminated: involuntary and voluntary. While the former is of lower risk, attributed mostly to failures in academic institutions, the latter is potentially more significant, increasing capabilities of criminals, terrorists and states in waging new forms of biological warfare.

6	The proliferation of Weapons of Mass Destruction[206]
Threat area(s)	Physical security.
Threat causality	The proliferation of WMD that is nuclear, radiological, biological and chemical weapons, is likely to expand due to, on the one hand, reduced technological obstacles, while on the other they will be further motivated by geopolitical tensions, which, though difficult to predict exactly, are foreseen to increase. This proliferation and improvement of WMD is becoming more commonplace not due to a direct transfer of the weapons but most notably by growing availability of dual-use technologies.
Actors / description	Proliferation is likely to concern both rogue state and non-state actors, WMD will be more precisely targeted and more difficult to attribute. Without containing specific remarks, the documents allude to Iran as the main threat for local security in this respect.

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204 Ministry of Cabinet Affairs & Future, 112–13.

205 Ministry of Cabinet Affairs & Future, 156.

206 Ministry of Cabinet Affairs & Future, 118–19.

7	Militarization of Space[207]
Threat area(s)	Space security, physical security, economic security.
Threat causality	Space will increasingly be subject to militarization. Although a regulation on placing WMD in the space exists, it is outdated, contested and does not limit deployment of conventional weaponry in the orbit. At the same time, dependency on space infrastructure increases for both civilian and military purposes, spurring motivation of states to secure it, resulting in a slow revival of the space race. This occurs on the background of the growing polarization of international politics, where reaching an agreement on the update of space regulation is becoming wishful thinking. Combination of these factors prompts the authors to attribute rather high importance to this phenomenon, especially as the UAE recently joined the group of states who deployed technology in the earth's orbit.[208]
Actors / description	The Report provides an example of the U.S.' reliance on space for its terrestrial activity, showing that its space infrastructure is key for communication, intelligence, reconnaissance, surveillance and generally for its network-centric military capabilities. High stakes elevate the intensity of potential escalation, be it caused by deliberate action or by accident, the possibility of which surges given the high amount of space debris orbiting around the planet. There is, importantly, also a growing trend of commercialization of space with private actors playing a considerable role in terms of space mining, tourism and settlement. The economic competition will thus add to the complexity of future space contestations.

8	Changing Landscape of Energy Production[209]
Threat area(s)	Economic security, energy security.
Threat causality	As energy sources diversify and turn away from conventionally used oil and gas, new geopolitical realities are being introduced both globally and for the UAE. The first evolution of global weight is the rise oh shale, i.e. unconventional sources of oil and gas. Improving technology and new sources allow for lower barrel prices which stay so for a longer period of time than previously observed. While improving the energy security of the source countries, the relative importance of oil-rich states might be subject to changes. The rise of shale, however, subscribes to a larger trend termed as "the end of oil era". Albeit slow at the moment, diversification of energy sources and the focus on renewables poses a great economic threat to the UAE population's living standards, welfare, employment and social cohesion.[210]
Actors / description	The most relevant specific change is the newly found shale oil reserves in the **U.S.**, which are predicted to be comparable to Saudi Arabia reserves of oil by 2040. The rise in shale gas will have a significant increase in both the U.S. and **China**.

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207 Ministry of Cabinet Affairs & Future, 128–31.

208 Al-Suwaidi, *United Arab Emirates Society in the Twenty-First Century*, 89.

209 Ministry of Cabinet Affairs & Future, 'Future Outlook 100: Global Trends for 2050', 84–85.

210 Al-Suwaidi, *United Arab Emirates Society in the Twenty-First Century*, 116.

9	Urbanization[211]
Threat area(s)	Sociopolitical security, economic security, physical security.
Threat causality	The unprecedented growth of urban areas in size, and by extension in importance, suggests a potential for devolution of power from states to cities, accompanied by unpredictable social implications and reconfiguration of global centres of power, with cities possibly seeking autonomy. In the long run, this is the major source of instability presented by urban growth. In the short run, urban growth introduces more acute challenges of social character that are likely to continue, namely rendering social inequality and ensuing frustration more visible and actively destabilizing. Finally, larger cities, especially coastal ones, are to be increasingly vulnerable to disasters, both due to climate changes and environmental degradation caused by massive and under-controlled growth.
Actors / description	The **C40** initiative is a one demonstrating clearly the way in which cities already coordinate in an autonomous manner, exchanging best practices and transferring technologies on environmental protection without any involvement of the states. Emerging countries are expected to face the greater intensity of threats stemming from urban growth, where an exodus from rural areas towards the cities, combined with the low regulatory capacity and insufficient urban planning, will enhance the above-mentioned social issues. It is specifically noted that urban areas in East Asia, with China and India in the forefront, will grow substantially faster than its counterparts elsewhere.

10	State Failure[212]
Threat area(s)	Physical security, economic security, socio-political security.
Threat causality	The consequences of state failure are not geographically limited and impact the whole region and the international community. Failing states generate destabilizing refugee flows, spillover effects and economic losses, but also create legitimacy for transboundary movements in challenging individual states, which translates among other things into radicalization. Importantly, the trend of state failure is predicted to intensify, mostly because its root causes, such as poor economic governance, inequality, ethnic tensions, and competition over natural resources will be more pressing vis-à-vis population growth and climate change. Indicatively, 62% of the global poor will live in developing countries by 2030.
Actors / description	State fragility is expected to perpetuate itself in a vicious circle-like manner, whereby less performant governments will face challenges of greater scope due to underestimation of preventive measures. This, in turn, will further undermine their legitimacy and capacity to cope with the problems, exacerbating the instability. This is foreseen to be the case for developing and already fragile countries, most notably those that have or will have experienced conflict in recent past.

211 Ministry of Cabinet Affairs & Future, 'Future Outlook 100: Global Trends for 2050', 138–39.

212 Ministry of Cabinet Affairs & Future, 124.

11	Threats to National Identity[213]
Threat area(s)	Sociopolitical security, physical security.
Threat causality	National cohesion and values are considered as one of the cornerstones of national security, and the challenges stemming from globalization can, therefore, have security implications for the country. States with insufficient societal cohesion are thought to be vulnerable to diverse versions of identity contestations resulting in tribalism, ethnic tensions, radicalization and other "doctrinal sub-identities." This is and will be exploited in military practice, known as the 4th Generation Warfare, whereby internal societal instability is instilled purposely in order to weaken opponents.
Actors / description	Specific examples of the ways social cohesion might be corroding in the UAE include reduced use of Arabic language, youth's detachment from national principles due to its increasing connection with the external world, dissemination of political Islam, and the high expatriates/citizens ratio. Youth is marked as particularly vulnerable to the creeping erosion of national unity.

United States of America

1	Cyber[214]
Threat area(s)	Economic security, physical security (disruption of critical infrastructure, intelligence gathering), sociopolitical security.
Threat causality	As billions of new devices are integrated into the lives of US individuals and into US business practices, adversaries' experimentation with cyber tools has resulted in a growing capability to impact US national security. **The threat assessment is based on a 10-year analysis of adversaries' cyber programs**, as well as on an analysis of the United States' increasing use of IoT-related technologies.
Actors / description	• **China**. Beijing is identified as a threat within the cyber domain largely as a result of its potential to impact economic security (espionage), as well as due to its potential to pose a threat to physical security (disruption of military & critical infrastructure). China is also identified as a sociopolitical (cyber influence) threat. • **Russia**. Russia's activities within the cyber domain are identified as a threat to economic security, physical security, and sociopolitical security. • **Iran**. Iran's activities are viewed as a threat to the United States' economic security, as well as (to a lesser degree) to its physical security. • **North Korea**. North Korea is identified as a threat to financial institutions. Its espionage activities are further identified as a threat to economic security. • **Nonstate and Unattributed Actors**. Nonstate actors are identified as potentially damaging to US economic security (financially-motivated and/or criminal activities). Terrorist actors specifically are identified as potentially being able to leverage the domain to extract information vis-à-vis US assets overseas (read: impact the integrity of US intelligence operations).

213 Al-Suwaidi, *United Arab Emirates Society in the Twenty-First Century*, 13,130-131,127.

214 Coats, 'Statement for the Record', 4–7.

2	Online Influence Operations and Election Interference[215]
Threat area(s)	Sociopolitical security, cooperation security.
Threat causality	Increasing occurrence rates vis-à-vis foreign influence campaigns mean potential adversaries have access to a ream of data through which to refine their tactics and capabilities. The threat level is increased by the proximity of the 2020 elections and by the presence of social and racial tensions. The threat posed by these activities may be further propagated by actors' ability to tamper with (digital) US election systems by means of the **cyber** domain. **Deepfakes** are specifically identified as a potentially dangerous technology, suggesting the US Intelligence Community is acutely aware of social media platforms' potentially detrimental impact within the sociopolitical domain.
Actors / description	• **Russia**. Russia has exhibited a willingness to exploit social and racial tensions. Moscow is expected to more aggressively couple its cyber and influence toolkits in the future in order to subvert US foreign policy interests. • **China**. China is viewed as willing to employ information warfare towards the censorship of views which it perceives as core to party legitimacy; namely: Taiwan, Tibet, and human rights. • **Iran**. Iran has exhibited a willingness to target audiences in both the US and allied nations with pro-Iran messaging.

3	Weapons of Mass Destruction and Proliferation[216]
Threat area(s)	Physical security.
Threat causality	The threat from biological weapons has grown more diverse because their development and deployment has been made easier by the presence of several dual-use technologies. State engagement in the development of delivery systems has generally increased relative to previous years, not least owing to the collapse of the INF and JCPOA treaties.
Actors / description	• **North Korea**. North Korea dismantled components of its WMD infrastructure but showcased its ability to utilize chemical and biological weapons. The country's activities are inconsistent with its previously expressed desire to denuclearize fully. • **Russia**. Moscow is viewed as the US' most capable WMD adversary, owing (in no small part) to its active engagement in the development of new strategic and nonstrategic delivery systems. • **China**. Beijing continued to modernize its WMD capabilities. Most notable are its testing of hypersonic glide vehicles and its deployment of sea-based weapons. • **Iran**. Iran is not currently undertaking activities which are considered key to producing a nuclear device, but the strain that is being placed on the JCPOA – combined with rhetoric from Washington and Tehran – raises the general threat level. Tehran is also actively engaged in the development of delivery systems. • **South Asia**. The situation in India and Pakistan is viewed as dangerous, with high tensions – and Pakistan's active development of new types of delivery systems – being a driving cause for concern.

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215 Coats, 7.

216 Coats, 8–10.

4	Terrorism[217]
Threat area(s)	Physical security.
Threat causality	Despite significant setbacks, Jihadi groups remain active. Organizations have become more sophisticated, and the conflicts in Iraq and Syria have produced a large pool of battle-hardened fighters. Perceives 'Islamization' of Europe and the West tied to the proliferation of violent ethnic-supremacist and ultranationalist groups.
Actors / description	**Iran** is identified as the only *state* which engages in the development and maintenance of terrorist capabilities, with the Iranian Ministry of Intelligence and Security (MOIS) being identified as a driving actor within the country. Outside of Iran, the US Intelligence Community identifies **ISIS**, **Al-Qa'ida**, **Homegrown Violent Extremists**, **Hizballah**, and **Violent Ethno-supremacist and Ultranationalist Groups** as threatening actors. The analysis generally acknowledges the reduced (though still present) threat level which is *directly* posed by organized groups such as **ISIS** and **Al-Qa'ida** and places a heavier emphasis on the threat posed by **Homegrown Violent Extremists**. The information campaigns propagated by established groups is identified as a driving factor behind the increased threat level with which the aforementioned group is associated. **Hizballah** is viewed as employing terrorism as a tool through which to maintain plausible deniability. **Violent Ethno-supremacist and Ultranational Groups** as identified as a potential threat largely as a result of the previously recorded willingness of individuals tied to these groups to carry out attacks on minorities and politicians.

5	Counterintelligence[218]
Threat area(s)	Economic security, physical security (intelligence gathering), sociopolitical security, cooperation security.
Threat causality	Other states' intelligence services are perceived as posing a persistent threat the US national security, due (in no small part) to these organizations' role in increasing the likelihood of the other threats identified within this document. The intensity of the counterintelligence threat is established on an actor-by-actor basis and reflects these services' **capabilities** and **intent**, as well as **broad operational scopes**. The openness of US society is viewed as a potentially exploitable attack vector.
Actors / description	• **Russia**. Russian intelligence services are expected to play a role in eroding US democracy (sociopolitical) and collecting US intelligence to undermine its foreign policy goals internationally (economic, physical, and cooperation security). • **China**. Chinese intelligence services are viewed as likely to exploit the openness of US society to extract valuable information from the academic and scientific communities. • **Iran and Cuba**. Iran and Cuba are perceived as viewing the United States as a primary target for intelligence operations. • **Nonstate actors**. Hacktivist groups, transnational criminals, and terrorist groups are likely to attempt to gain access to classified information to support their objectives. These organizations are likely to employ their capabilities towards the recruitment of sources, as well as towards the performance of illicit activities.

217 Coats, 10–13.

218 Coats, 13–14.

6	Emerging and Disruptive Technologies and Threats to Economic Competitiveness[219]
Threat area(s)	Economic security, physical security (indirect).
Threat causality	The US lead in science and technology is perceived as a boon that boosts both the country's military and economic competitiveness & prosperity. The current (strategically competitive) environment has fueled aggressive efforts on the parts of US adversaries to acquire top *talent, companies, data*, and *intellectual property* in an attempt to increase their competitiveness. **The US' gradually reduced lead in this area is proxied for through the *share* of papers cited by researchers which are of US origin**.
Actors / description	**Russia** and **China** are the only actors to be identified as potential competitors. Technologies to be identified as key are: 1. **Artificial Intelligence and Autonomy**; 2. **Information and Communications**; 3. **Biotechnology**, and; 4. **Materials and Manufacturing**. These technologies are universally expected to provide states which succeed at developing and harnessing them with enhanced economic, military, and (to a lesser degree) sociopolitical capabilities.

7	Space and Counterspace[220]
Threat area(s)	Economic security, physical security.
Threat causality	Space-based assets will become increasingly critical to activities within the civilian and military domains. The expansion of the global space industry is driving this transition by reducing the costs of asset deployment, rendering the frontier accessible to government, nonstate, and commercial actors. This creates new vulnerabilities and makes adversaries' heavy investments into the domain particularly worrisome from the US perspective.
Actors / description	**Russia** and **China** are the only actors to be identified as potential competitors. Of particular concern are these countries' aggressive investments into anti-satellite (ASAT) weapons. The perceived threat level is increased by thee countries' omission of ASAT weapons in proposed international agreements on the non-weaponization of space.

8	Transnational Organized Crime[221]
Threat area(s)	Economic security, physical security (critical infrastructure), sociopolitical security.
Threat causality	The activities of drug traffickers are associated with violence and are identified as a major driver of the US' ongoing opioid crisis, which claimed 70,000 American lives in 2017. The activities of transnational criminal organizations are further credited with instances of partial state capture, as well as with threats to critical infrastructure.

219 Coats, 15–16.
220 Coats, 16–17.
221 Coats, 18–19.

8	Transnational Organized Crime[221]
Actors / description	• **Mexico**. Mexican transnational organizations such as the Sinaloa Cartel and New Generation Jalisco Cartel are associated with drug & human trafficking activities, as well as with state capture. MS-13 (Central America general) is also identified as a threat. • **China**. Chinese synthetic drug suppliers are credited with contributing to the US opioid epidemic through the large-scale production of fentanyl.

9	Economics and Energy[222]
Threat area(s)	Economic security.
Threat causality	Global growth is likely to slow as a result of trade tensions, high levels of debt, and geopolitical tensions. Uncertainty about global economic growth will challenge emerging markets – especially those who depend on external financing and/or are heavily reliant on trade with advanced economies, likely resulting in internal tensions. The problem is exacerbated by the current administration's inability (or unwillingness) to complete trade deals with key trading partners, as well as by China's slowing growth. Combined, these dynamics will result in **reduced demand for energy and other commodities**, thus further slowing global growth.
Actors / description	• **Argentina, Brazil, Mexico, South Africa, Indonesia, Turkey**. These countries are identified as 'emerging economies,' whose markets are subject to disruption within the current economic climate. • **Mexico, Canada, the EU, the UK, Japan, and South Korea**. These countries are identified as key trading partners. The threat assessment notes the challenges posed by Brexit. • **China**. China is identified separately from other countries as a driver of global economic growth. It is also identified as an emerging market and as a potential energy consumer. • **Libya, Nigeria, Venezuela, Iran, Saudi Arabia, Russia, China, India, the United States, Australia**. These countries are all identified as being potentially relevant to the global energy industry.

10	Human Security[223]
Threat area(s)	Economic security, physical security (critical infrastructure), sociopolitical security.
Threat causality	Threats to public health, high human displacement rates, assaults on religious freedoms, and environmental & climate change constitute the major threats. Crises in conflict areas are attributed as constituting the most significant detriment to global health and human displacement. Religious freedom is under assault by autocratic regimes, with the likely impact being violent extremism, social tension, and political turmoil. Climate change will damage ecosystems and undermine the economic benefits they provide, as well as degrade military operations by damaging infrastructure. It is also associated with increased political and interstate tensions.

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222 Coats, 19–21.
223 Coats, 21–23.

10	Human Security[223]
Actors / description	• **Venezuela**'s crisis is viewed as likely to impact **Brazil**, **Colombia**, **Trinidad**, and **Tobago** (global health). • The **Democratic Republic of Congo**'s Ebola outbreak is associated with instability across the African continent. • **China**, **North Korea**, and the **Middle East** are identified as major offenders when it comes to the suppression of individuals' religious freedoms. • **Egypt**, **Ethiopia**, **Iraq**, **Jordan** are identified as the major losers of climate change and are gauged as likely to experience instability in the short term. • **Russia** and **China** are identified as potential beneficiaries of climate change, as reduced levels of sea ice are perceived as beneficial to their military and economic interests.

World Economic Forum

1	Systemic Risks
Threat area(s)	Cybersecurity, sociopolitical security, economic security, physical security, food security.
Threat causality	Five sectors are identified as posing a major threat to global stability based on the Global Risk Perception Survey: - **Environmental fragilities**: environmental risks are the most imminent threat in terms of probability and likelihood, according to the survey. Extreme weather, rising global temperature and biodiversity loss increase pressures on water and food security, and in the past years' induced acute states of nutrition insufficiency in 23 countries. Coupled with global failure to mitigate climate change and its impacts globally, risks stemming from it will increase.[224] - **Societal and political strains**: the trend of societal polarization is likely to continue increasing and leads to a revival of identity politics, anger against elites, and intensified pressure on state institutions who lose the capacity to cope with the corroding societal tissue. Continuation of this phenomenon might push leaders to adopt more confrontational, and potentially destabilizing, methods of defence of national interest.[225] - **Economic vulnerabilities**: economic risks assumed a more prominent role in the survey in 2019, due to the slowdown of major economies, increased market volatility, high global indebtedness, and inequality. Generally, lower economic performance is linked to eroding trust in global institutions and damage to social contract within countries.[226] - **Geopolitical tensions**: disputes between major powers are expected to rise due to dissensus on fundamental norms, risking reconfiguration of alliances and barring progress on the protection of global commons.[227] - **Technological instabilities**: massive data theft and cyberattacks too score high in the survey, relating to the theft of financial assets, intelligence data and information on citizenry. AI is also of concern, most notably on the background of fake news and the development of emotionally reactive systems.[228]

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224 World Economic Forum, 'The Global Risk Report 2019', 15.

225 World Economic Forum, 13–14.

226 World Economic Forum, 13.

227 World Economic Forum, 12–13.

228 World Economic Forum, 16.

2	Increasing Divergence in Values
Threat area(s)	Cybersecurity, sociopolitical security, economic security, physical security.
Threat causality	In an increasingly multipolar world, values have become more a source of divisions rather than unity. The resulting pivot towards strong nation-states, anti-globalization tendencies and intra-societal polarization is likely to render multilateralism less effective and impede cooperation on a long list of cross-border challenges such as migration, R2P and human rights, climate change, Fourth Industrial Revolution and so on. Ultimately, the intensification of these tensions is said to have the potential to foment open conflict.[229]
Actors / description	A clear manifestation of this change can be observed in the change in perception concerning economic policy. The latter, formerly perceived as a way of preventing conflict by increasing stakes and interdependency between states, nowadays is taken for a tool of strategic competition.[230] Case in point is the disputes between **China** and the **U.S.**, where the rising rift over tariffs causes a growth slow-down in both states, with global implications on interest rates. Similar disputes, albeit smaller in scale, also involved other actors, counting the **EU**, **Mexico**, **Canada** etc. Similarly, foreign direct investment has become a matter of geopolitical stance. Particularly western countries are developing means of blocking FDI in sectors related to national history and importance („coined by France as „economic patriotism") or technology, most notably in cases where cutting-edge technological advancements could be of dual-use for the development of military capabilities. [231]

3	Psychological Stresses, Mental Health and Social Cohesion
Threat area(s)	Economic security, sociopolitical security, physical security.
Threat causality	The global population is under increasing psychological distress, stemming from several systemic vectors of pressure. Violence (large scale conflicts, GBV, crime), poverty, income disparities, Fourth Industrial Revolution, overwork or even the prospect of automation have all been identified as contributing factors to this trend. Observed results are globally increasing anxiety, depression, loneliness, sense of loss of control, lack of empathy and mental disorders. This, in turn, is presented as feeding into political divisions, volatile electoral results and social unrest, and in some cases, especially when states embark on accusatory rhetoric blaming other states of exploiting these weak points, intrastate tensions.[232]

229 World Economic Forum, 23.
230 World Economic Forum, 26.
231 World Economic Forum, 28.
232 World Economic Forum, 41.

3	Psychological Stresses, Mental Health and Social Cohesion
Actors / description	While recognizing potential methodological flaws of the cited studies, a general trend of mental health deteriorating is convincingly confirmed. The analysis is not limited to any social group, and essentially all segments of the global population are affected, albeit via different patters. Automation, poverty,[233] and income disparity is shown, not surprisingly, to cause more psychological distress among populations of developing countries and low-income classes in developed countries, while the loss of community affiliation,[234] loneliness and unsustainable work-life balance affect more urban populations, mostly irrespective of class and country. Two trends specifically related to the latest global developments were highlighted; rise of **social media** and the changing **household structure**. While addictiveness of social media is difficult to be attributed to any negative impacts for the global security, what becomes problematic is the "functional impairment" and ensuing lack of empathy to which social media might lead.[235] This, in turn, is prone to create a societal division as cross-society bonds are weakened, leading to the abovementioned political threats. The household structure is changing most saliently in urban areas, where the number of single-households is drastically increased to the detriment of family settings.[236] Resulting loneliness, anxiety and the loss of the sense of belonging is said to have a pronounced impact on the health of the urban populace. Altogether, the authors' conclusion is that all negative emotions, in the realm of politics, translate into an inevitable instability, caused by one overarching feeling anger.[237]

233 World Economic Forum, 36.

234 World Economic Forum, 41.

235 World Economic Forum, 38.

236 World Economic Forum, 37.

237 World Economic Forum, 34.

4	Transformation of Biological Risks
Threat area(s)	Physical security, economic security, sociopolitical security.
Threat causality	The frequency of disease outbreaks has been steadily increasing, and the world deeply underestimates preparedness. Ebola, SARS, MERS, Zika and Yellow Fever are just a few to mention and the fact that the pandemic scale of these was prevented should be seen rather as near-miss catastrophes than the result of an adequate response.[238] Owing, in great part, to the global geopolitical tensions,[239] sufficient investment and collaboration in research is missing. A major pandemic outbreak is estimated to be a comparable economic burden as the mitigation of climate change, setting aside the losses on human lives.[240] The additional factor amplifying risks of disease outbreaks is the advancement in biotechnology and its proliferation. Laboratories of increasingly smaller size and cost are said to be capable of developing viruses previously unseen or thought to be eradicated.[241] The implications, aside from unintentional release, are most pronounced in the arena of international terrorism, where reintroduction biological weaponry could dramatically increase their capabilities, by reducing costs while increasing impact of attacks.[242]
Actors / description	Five global trends make the world more prone to disease outbreak: high volumes of international travel, Increasing density of living spaces, deforestation, climate change and human displacement. A trend observed with respect to states' reaction towards potentially pandemic crises is termed a "pattern of panic and neglect": during and after the outbreak, states, after having underestimated prevention measures, call for preparedness and research, inducing progress on mitigation of the disease. Once the effects of the virus begin to weaken, they resume their previous course of action, marked by underinvestment and low preparedness. [243] Problematically, however, conside-ring that former success in averting pandemics might have been a "near-miss scenario", the impact of neglect and underestimation can prove disastrous in the next event. The authors compare the significance of biotechnology advancements to the internet and assert that as much as in hindsight all agree that internet should have been a subject of global regulation from the outset, so should biotechnology.[244]

238 World Economic Forum, 34.

239 World Economic Forum, 52.

240 World Economic Forum, 47.

241 World Economic Forum, 48.

242 World Economic Forum, 49.

243 World Economic Forum, 48.

244 World Economic Forum, 51.

5	Sea-Level Rise and Preparedness of Coastal Cities
Threat area(s)	Physical security, economic security, sociopolitical security.
Threat causality	Two-thirds of the global population is expected to live in cities by 2050 and 570 coastal cities will be, by the same year, threatened by the steady rise of sea level.[245] Urbanization not only elevates the sheer number of human lives and property at stake but also exacerbates the problem due to the degradation of natural barriers. Infrastructure is to be affected the first, and the section elaborates on how transport, internet, sanitation, drinking water facilities, energy, agriculture and tourism industries will deteriorate globally, economically burdening the affected countries to a great extent.[246] Crucially, however, the rise of sea levels is also predicted to lead to massive human displacement, increasing water and food insecurity as well as social pressures in target countries, while the multilateral debate over global preventive measures is slow at best, marred by lack of alertness as well as burden-sharing questions.
Actors / description	There is a mild uncertainty over the exact effect of sea-level rise, and all cities will not be affected uniformly, depending on the progress of climate change as well as interactions of changing ecosystems. However, what is certain is that prevention is in order and effects range from adaptable to catastrophic. Three prevention measures are proposed: hard engineering, nature-based defences and preventive relocation. The global trend is shifting from the first option to the last one, but as the authors note, measures should be initiated as soon as possible, as all of these take considerable periods of time in terms of dialogue and planning.[247]

245 World Economic Forum, 55.

246 World Economic Forum, 58.

247 World Economic Forum, 59.

6	Future Shocks: Low Probability-High Impact Events
Threat area(s)	Physical security, information security, water/food security, space security.
Threat causality	This section is broken down into ten scenarios of high impact and low but increasing probability. - **Weather insecurity**: climate change-induced weather instability might force states to manipulate it technologically, which could lead as far as to diplomatic and military contestation in cases where this action would be considered hostile.[248] - **Encrypting technology risks**: the rise of and a potential breakthrough in quantum computing risks to render all known encryption technology obsolete, disclosing virtually any classified information.[249] - **Urban–rural rift**: continuing urbanization and increasingly diverging social features between rural and urban areas risks erosion of state unity and emergence of separatist movements.[250] - **Politicization of food supply**: there is a growing risk that global food supply chokepoints use their relative advantage in food abundance to pursue their political agenda globally.[251] - **Advanced biometric surveillance**: new forms of AI-driven data gathering allow for more comprehensive mapping of societies, simplifying, on the one hand, the control of autocratic regimes over their populations, while on the other, also provide an abundance of data for targeted persuasion, with implications for fake news dissemination.[252] - **Water security:** "day-zero" of water supply for major cities is approaching and the societal shock might lead to multiple directions, from the radicalization of domestic politics to inter-state conflict.[253] - **Space security**: increasing dependency on low orbit satellites both for civil and military spheres, combined with lack of regulation, heightens the likelihood of space race and confrontation, even in cases when damage is accidental due to a great number of debris particles.[254] - **Emotionally responsive AI**: "affective computing", or AI programmed to read and respond to human emotions, could find application in a range of fields, including advertising, but also radicalization and fake news dissemination. - **The decline of human rights:** a new age of "strong politics" leads progressively to prioritization of collective security over the individual one. Human rights are divergently interpreted across regions and a risk exists of them disappearing entirely as a concept.[255] - **Challenging global monetary system**: the recent surge of protectionism could go as far as to nations wanting to "take back control" from globally established monetary institutions that currently ensure its stability.[256]

248 World Economic Forum, 66.

249 World Economic Forum, 66.

250 World Economic Forum, 68.

251 World Economic Forum, 69.

252 World Economic Forum, 69.

253 World Economic Forum, 71.

254 World Economic Forum, 72.

255 World Economic Forum, 74.

256 World Economic Forum, 75.

ETH Zurich

1	Trade Wars [257]
Threat area(s)	Economic security, physical security.
Threat causality	Redefinition of benefits from LWO and reprioritization of interests in major powers cause important frictions globally. Countries formerly known as protagonists of the LWO embarked upon a renegotiation of virtually all significant trading terms and became more de-globalized, bilateral, protectionist and confrontational, seeking more "fairness" in the redistribution of profits. Emerging countries, by contrast, utilized all means offered by LWO to narrow the gap of their economic performance with the West. Trade has become more politicized and confrontational and as such, lowers the barriers for an accidental break out of a military conflict.
Actors / description	There are no structural culprits of this threat. The **US** is currently the most visible actor in waging trade wars, but its dissatisfaction is somewhat justified on the background of its differential treatment in international institutions, lowering life quality and illicit activity of emerging powers exploiting its disadvantage. What is problematic though - and threatening – is the approach President Trump adopted. By an intense effort to redefine relations so as to grasp more economic profit for the country, namely by introducing tariffs and practices bordering with blackmail, he politicized economy and thus increased the risk of economic rift spilling over to the political arena. A case in point is the arrest of the financial director of Huawei in Canada at U.S.' request and subsequent exchanges with China. This is significant in that the most evident and intense dispute concerns the two most important global economies. At the same time, **Chinese** activity in industrial intelligence and economic protectionism are equally important factors in explaining how this situation came to be.

2	Return of Multipolarity: Undermining of LWO Institutions by its Former Protagonists[258]
Threat area(s)	Economic security, sociopolitical security, physical security.
Threat causality	LWO is considered to be in a great part the cornerstone for the world's stability which lead to the sharp decline of interstate wars witnessed in the last several decades. This has been particularly evident in the economic sphere, where institutions such as WTO, IMF and WB provided large loans to states in crisis and created a platform for an effective dispute settlement. Problematically, major powers that were to be its guarantors and protagonists experienced a surge of anti-globalist sentiment and the representatives of the consequent political environment engaged in the dismantlement of the very system they conceived as and thought to be globally stabilizing. The primary threat lies in the necessary return to a strictly anarchical and multipolar world, with all insecurities it brings about. The return of power-politics in the used-to-be protagonist countries is akin to effectively admitting the downfall of the LWO.

257 Michael Haas et al., 'Strategic Trends 2019: Key Developments in Global Affairs', Strategic Trends (Zurich: ETH Zurich, 2019), 12-13,20-21, https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/ST2019.pdf.

258 Haas et al., 13–15.

2	Return of Multipolarity: Undermining of LWO Institutions by its Former Protagonists[258]
Actors / description	The virtual end of LWO is here much more clearly attributed to one actor – the **US** – at least from the short-term perspective. It is inevitable that emerging states oppose a world order they cannot dominate, but it was Trump's rhetoric that was the "beginning of the end" of the system, as it came from the former "unipolar" and world leader. Trump's attacks on the WTO, and specifically on its capacity to impartially deal with disputes, threatens to "render it irrelevant", given that one of the largest world economies undermines it. Generally, therefore, not only emerging countries question multilateralism set up by the Western countries, but also its former supporters. According to the authors, two historical phenomena should be recalled when analyzing current economic world order: pre-1945 rather anarchic approach to international politics, and the period of mercantilism i.e. attempts to maximize exports in order to cumulate national power, which is greatly reminiscent of the contemporary setting.

3	The weakening of Cornerstone Alliances[259]
Threat area(s)	Physical security, sociopolitical security.
Threat causality	Related to the above, this threat stems from the trend of anti-globalist sentiment within the West. The abovementioned disdain for multilateralism and increasing protectionism in the West lead some countries to question the political and military alliances that underpin their supremacy and the prevalence of LWO. By introducing ever-deeper rifts, these tendencies decrease unity of the West on the background of emerging states catching up economically and militarily.
Actors / description	Once again, the **US** stands out as a major actor largely responsible for fueling this situation. Thinking of gaining greater leverage when acting bilaterally, and also motivated by the realpolitik considerations currently so prominent in the US politics, the State engages in activity potentially detrimental to its allies, causing great confusion and insecurity. On the Atlantic side of the US, it is the **European Union** and some individual states that are affected the most. Trump's vocal criticism of **NATO** and insufficient states' contribution were the primary reasons to call for the creation of independent European defence (PESCO) separate from the increasingly isolationist and illegible US. Abovementioned trade reconfiguration bordering with trade war also did not exempt allies, accompanied with just as strong rhetoric. Incidentally, Trump's politics is also said to sow illiberalism within Europe, especially for his support of Brexit and his sympathy for "illiberal" leaders. Again, whatever the structural causes and culprits, the US is thought to be the most prominent trendsetter and wielding the most power to resist or spur such tendencies. On the Pacific side, the US has been similarly unaccommodating towards Japan. The overall impression is that no states, regardless of any ties, are untouchable and all relationships can be revised on the basis of interest they bring to the US. Such an approach is particularly dangerous especially insofar as it generates confusion in what still continues to be the most powerful military alliance in history - NATO.

259 Haas et al., 12–14, 22–23.

4	Political Advantages of Authoritarian States in Technological "Arms Race"[260]
Threat area(s)	Physical security, sociopolitical security.
Threat causality	Global militaries continue to be reliant on technological progress, but cutting-edge technology no longer originates exclusively from state-financed R&D. Private sector innovations begin to play a larger role, which introduces several disadvantaging consequences for the West. While Western states have no means to effectively coerce private firms to share technological innovations for national security purposes, emerging countries, often authoritarian in character, do. Problematically, this "civil-military fusion" is not limited merely to national companies but extends on all actors operating on a state's territory. With an increasingly international supply chain of the critical private actors, the proliferation of technology, illicit or legitimate, is more extensive and the rule of law and economic freedom in the West might prevent it from keeping pace with its more authoritarian counterparts.
Actors / description	Notably, R&D still constitutes an approximately similar percentage of US' GDP, but the share of public funding on overall national R&D has fallen from 1.2% to 0.7%. The shift towards the private sector is therefore greatly pronounced. One of the main actors said to have profited the most from such a setting is **China**. By its economic boom and also by hosting a score of offshored Western production sites and companies, China narrowed significantly the technological gap that became evident after the first Gulf War. Its strategies towards such an objective range from student exchanges and talent hunt, holding a majority of shares in offshored companies, to theft and industrial intelligence. A great demonstration of West's awareness and caution over the supposed civil-military fusion is their suspicion towards **Huawei** and 5G network installation by China.

5	"Filling the Void": Global Disengagement of the West Compensated by Emerging Countries[261]
Threat area(s)	Cooperation security, physical security, economic security.
Threat causality	Isolationist and dissonant West is preoccupied with its internal tensions and considerably less interested in supposedly distant affairs, geographically and politically. Emerging countries exploit this inactivity by forging economic, political and military ties with countries of potential strategic importance in the near future.[262] Such **dynamics** further tips the world balance in favour of countries hostile towards the West and complexifies the world order, rendering it more insecure.

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260 Haas et al., 32–38.

261 Haas et al., 50–57, 68–69, 73–74.

262 Haas et al., 65.

5	"Filling the Void": Global Disengagement of the West Compensated by Emerging Countries[261]
Actors / description	Several examples are noted throughout the text, mostly related to **Russian** activity. Nonetheless, the underlying rationale is identical for **China** as well: certain developing countries and actors are in dire need of international help, and viable alternatives to the Wester aid present themselves whenever the West is either disinterested to act or conditions its help with democratization. The non-ideological character of Chinese and Russian assistance has been of particular importance in their success in spreading influence, and the West appears, once again, disadvantaged by its pronounced principles, which have been though somewhat overshadowed by security considerations as of lately, in an attempt to not lose global relevance to rival superpowers. Following examples stand out: • **Egypt**. The breaking point in reviving Russo-Egyptian ties was the ousting of President Morsi and subsequent cuts in military aid provided by the Obama administration. Military cooperation between Russia and Al-Sisi's Egypt expanded dramatically, including a 3.5 billion USD arms deal, joint exercises, Russia's access to Egyptian airspace and deployment of Russian special forces for counterterrorism operations. • **Syria**. Russian involvement in the Syrian conflict represents its most ambitious military venture since the fall of the Soviet Union. Considering it strategically crucial, Russia inserted itself in the country expending all efforts to bolster President Assad's position, whereas American troops started withdrawing. Its help secured Russia an irreplaceable role in the deconfliction of the territory as well as a loyal ally in the middle east, with a promising claim on the financing of the reconstruction of the country. Similarly, Beijing unconditionally offered investment for reconstruction purposes, unlike the West who tied its financial aid promises to democratic elections. • **Central Asia.** Though Western, and in particular European states show meagre interest in the central Asian region, allegedly grudging extensive dialogue with authoritarian states subject to Russian influence, both Russia and China are racing to establish alliances and facts on the ground in countries like Kazakhstan and Kyrgyzstan.

6	Conventional A2AD of Emerging Countries Transforming into Defeat Capability[263]
Threat area(s)	Physical security.
Threat causality	Several decades of opulent military supremacy of the West formerly prompted emerging countries to offset it by developing capabilities know as Access to Area Denial (A2/AD), designed to inflict the largest possible cost on the intervening entity. With growing economic and political relevance, however, the same actors are beginning to reorient their militaries' capabilities from A2/AD to a confrontation on a much more equal footing.

263 Haas et al., 39–42.

6	Conventional A2AD of Emerging Countries Transforming into Defeat Capability[263]
Actors / description	Impressive advances were made in terms of offsetting Western supremacy in the air and on the sea. The advantage of number and quality of supersonic missiles are not an exclusive capability of the **US** army anymore, witnessing **China**, **India** and **Russia** investing heavily in the sector and exchanging technology among themselves. Stealth and anti-stealth technologies present another domain in which China, in particular, has been rapidly progressing. Though its stealth aircraft may not be operational at the moment, reports exist of the possibility of PLA possessing a quantum radar, which would render US' stealth technology obsolete. Some argue this should provoke a "sputnik effect", nudging the US to step up their efforts in the field. Meanwhile, the technology of the F-22 and F-35 aircraft, which form the mainstay of US' air supremacy, might have been compromised by Chinese cyber espionage – a trend further decreasing Western military superiority. Generally, authors assert that superpowers' military might is more balanced than at any point since World War II.