1. Introduction: international security, armaments and disarmament

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I. The year 2016 in review

This is the 48th edition of the SIPRI Yearbook. Like its predecessors, it offers an overview of events and trends in conflicts, peace and international security during the previous year. The 2016 edition remarked that it was not difficult to characterize 2015 as one of the darkest years for international stability and human security since the end of the cold war. Nonetheless, there were also positive developments during that year and the international system for upholding security and international law continued in many respects to function well. Not least, international agreements were reached on restricting the tempo of climate change, and adapting to respond to its impact, and on a global development agenda until 2030. Although effective implementation will be demanding, both agreements were possible because the world's states were able to set aside their differences to arrive at an overarching understanding on two of the major challenges of our era. While there were no comparable landmark international agreements in 2016, the overall perspective on the year is still a balance between negative developments and the continued functioning of the international system.¹ However, the year ended with clear grounds for concern about the direction of travel and the long-term health of that system.

In 2016, none of the underlying problems that fed the negative side of the balance sheet of human security and international stability was resolved. Conflicts in the Middle East continued to generate humanitarian tragedies and large-scale movement of refugees (see chapter 7), albeit less so than in 2015. Violent conflict continued in several other parts of the world, most notably in Africa, Asia and to a lesser extent Eastern Europe. Many of these conflicts involved military intervention by external states on the side of one or more of the conflict parties (see chapter 2). Terrorism by non-state actors continued to have a major impact in many countries and regions, especially the Middle East, Africa, South Asia and Europe. Developments in North East Asia contributed to international political instability and could have potentially serious knock-on effects. The Democratic People's Republic of Korea (DPRK, North Korea) carried out two nuclear test explosions and multi-

¹ For an overview of several positive developments, see Rice-Oxley, M., Ford, L., Harvey, F. and Hodal, K., 'Eight charts that show 2016 wasn't as bad as you think', *The Guardian*, 30 Dec. 2016.

ple missile tests. With these, it effectively completed its emergence as the world's ninth nuclear weapon state (see chapter 11). All these developments offered cause for concern not only about the immediate results but also about the possibility of even more serious longer-term consequences.

On the positive side, the Paris Climate Agreement, reached in December 2015, gained enough formal ratifications to enter into force in November 2016.² The Iran nuclear deal—the Joint Comprehensive Plan of Action (JCPOA)—signed in mid-2015, began implementation on time in early 2016 (see chapter 12). Progress was made with work to monitor the unfolding implementation of the United Nations 2030 Agenda for international social and economic development, a long-term and diffuse enterprise from which short-term impact should not be expected (see chapter 6). These continuations of decisions taken in the previous year indicate that commentary about the distance between formal agreement and implementation may sometimes be overblown. A major contribution in 2016 to the positive part of the balance sheet was the peace agreement in Colombia (see chapter 2, section II). This complex agreement was narrowly rejected in an initial referendum in October 2016 but then revised and ratified by the Colombian Parliament in the following month.³

Despite these encouraging signs, this Yearbook shows that virtually all the major global indicators for peace and security have moved in a negative direction: more military spending, increased arms trading, more violent conflicts and the continuing forward march of military technology.

Discomfiting questions

Against this background, 2016 was a year when some discomfiting questions came to the fore. Recognition that the number of armed conflicts was at a level not experienced since the mid-1990s raised the question of whether the great gains in peaceful relations since the end of the cold war had been reversed (see chapter 2). Despite the continuing functionality of the international political system, there was growing unease about the durability of key parts of the international security architecture. In particular, the return of strategic competition between the major powers, some fear, could have negative implications for managing increased conflict risk.⁴ The logic of this worry is that with competition for influence comes disunity over important

²United Nations Framework Convention on Climate Change, The Paris Agreement, http://unfccc.int/paris_agreement/items/9485.php.

³ 'Colombia referendum: voters reject FARC peace deal', BBC News, 3 Oct. 2016; 'Colombia signs new peace deal with Farc', BBC News, 24 Nov. 2016; and Partlow, J. and Miroff, N., 'Colombia's Congress approves historic peace deal with FARC rebels', *Washington Post*, 30 Nov. 2016.

⁴ See Mead, W. R., 'The return of geopolitics', *Foreign Affairs*, May/June 2014; and World Economic Forum, *The Global Risk Report*, 2016 (World Economic Forum: Geneva, 2016), pp. 24–28.

issues in international institutions such as the UN. However, from some perspectives, the problem was seen as an aspect of the perceived decline of the West, on the assumption that it is the West's predominance that is important for managing conflict. By contrast, others welcomed the West's decline, pointing to actions by the West that have been negative for peace. Whatever stance is taken about the desirability of the phenomenon, the conclusion that the West's influence is weakening finds acceptance among commentators and politicians of otherwise divergent views.5

Political developments in Europe and the United States seemed to reveal a much decreased commitment to international institutions (see section III). This has led to concern about the destabilizing effects of the renewed emphasis in many states on a narrowly defined national interest. Being questions about geopolitics and strategy, they are posited at a high level of generality, are open to dispute and are dubious in their definition. They are, nonetheless, real issues.

The Anthropocene epoch

Beyond the geopolitical and strategic questions, moreover, there loomed an even higher-level issue about the shape that the current era is taking. In August 2016, the International Geological Congress meeting in Cape Town, South Africa, took the decision to name the current geological epoch the Anthropocene. The term means that the decisive shaping forces for geology and ecology are human activities. It succeeds the Holocene, which is the label for the epoch of the past 12 millennia. The idea that the Anthropocene label is right for this epoch was first proposed in a brief article in a professional academic newsletter in 2000.7 The proposition was subjected to consideration by a working group of the International Union of Geological Sciences set up in 2009, which reported with its recommendation to the 2016 Congress.8 Geologists continue to discuss the precise date and trigger event for the onset of the Anthropocene. One line of thought favours the start of the industrial revolution, around 1800 CE, while others opt for the beginning of the nuclear age in 1945, the start of dense carbon emissions from

⁵ Grove, T., 'Russia's Putin says the West is on the decline', Reuters, 9 July 2012; Abdullahi Boru Halakhe, 'China's rise meets America's decline in Africa', Al Jazeera, 27 May 2014; and Solana, J. and Talbott, S., 'The decline of the West, and how to stop it', New York Times, 19 Oct. 2016.

⁶ Carrington, D., 'The Anthropocene epoch: scientists declare dawn of human-influenced age', The Guardian, 29 Aug. 2016.

⁷ Crutzen, P. J. and Stoermer, E. F., 'The "Anthropocene", Global Change Newsletter, no. 41 (May

⁸ Subcommission on Quaternary Stratigraphy, Working group on the Anthropocene, 'What is the "Anthropocene"?: current definition and status', accessed 30 Apr. 2017.

coal-burning power stations, or the beginning of large scale environmental pollution such as by plastics.9

Although the concept of the Anthropocene contains scientific uncertainties and is a way of thinking about the world rather than an established fact, it deserves a place in contemporary discussion of international stability and human security. Climate change and other kinds of environmental change linked to human activities are realities and, as has always been true of the natural environment, shape the conditions of life. Politics, however, tends to pay attention to other things. The contemporary political period does seem to be defined in part by increasing competition between the great powers. It is therefore salutary to reflect on the need for an unprecedented scale of international cooperation to address the challenges for humanity summed up in the idea of the Anthropocene, at a time when that cooperation may risk becoming more elusive than it has seemed for most of the time since the end of the cold war.

II. Trends in armaments and disarmament

The basic data in this Yearbook about the scale of military activity continues to be discomfiting. Military spending and arms production continue at high levels, and international arms transfers of major conventional weapons have reached their highest level since 1990. World military expenditure is estimated at \$1686 billion in 2016, an increase of 0.4 per cent in real terms compared to the previous year (see chapter 9).

The volume of international transfers of major weapons in 2012–16 was 8.4 per cent higher than during the previous five-year period and the highest volume for any five-year period since 1990 (see chapter 10). With this increased demand for arms imports, it is worth remarking that the sales of the world's top 100 arms and military services companies fell by 0.6 per cent in 2015, the most recent year for which data is available (see chapter 10, section V). In other words, companies outside the Top 100 are increasing their output. Emerging producers such as South Korea have substantially increased their sales.

As for weapons of mass destruction (WMD), all the world's nuclear weapon states have active nuclear modernization programmes, as, of course, does North Korea, which is the newest of them (see chapter 11). India and Pakistan are expanding their nuclear weapon stockpiles and their missile delivery capabilities. Chemical weapons have again been used in armed conflict in Syria (see chapter 13).

⁹ Subcommission on Quaternary Stratigraphy (note 8); and Carrington (note 6).

Weakening disarmament and arms control

A key approach to preserving international peace and security in the modern age has been to seek to control or limit the number of weapons and the ways in which they can be used. Two different methods to achieve this end have been arms control and disarmament. Disarmament involves reducing or even eliminating arms or armed forces, while arms control is a matter of restricting the development, production, stockpiling, proliferation, transfer, testing, deployment or use of arms in ways that do not necessarily mean reduced numbers.

For a period after the end of the cold war, a mixture of arms control and disarmament measures reduced worldwide military spending and nuclear weapon stockpiles began to diminish. During that period, post-apartheid South Africa renounced the nuclear ambitions of the old apartheid state, while Belarus, Kazakhstan and Ukraine, new states after the break-up of the Soviet Union-all three of which could have held on to Soviet nuclear weapons to become nuclear weapon states themselves—similarly renounced any nuclear weapon ambitions. Overall, the number of nuclear weapons worldwide fell from about 65 000 at peak to some 14 945 in 2016.

There has always been a quite complex balance within the broad area of armaments, arms control and disarmament, between programmes to increase military strength and action to limit or reduce the size of armed forces. Today the trends in this area show armament programmes in the ascendancy. Recent years have seen developments that, while technical and complex, nonetheless have profound implications for human security and international stability.

Existing multilateral and bilateral arms control agreements and processes are under challenge. Among the most important developments, in 2015, the final step was taken in Russia's protracted withdrawal from the 1990 Treaty on Conventional Armed Forces in Europe (CFE Treaty), a process that started in 2007 (see chapter 14, section III). In 2016, Russia suspended its implementation of a bilateral agreement with the USA to eliminate plutonium from dismantled nuclear warheads. Justifying this action, the Russian Government said the USA was unable to prove its own compliance with the agreement (see chapter 12, section I). Although the US-Russian 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START) is still being implemented to both parties' apparent satisfaction, the US-Russian 1987 Intermediate Nuclear Forces (INF) Treaty is under pressure. In 2016, each party accused the other of breaching it. For the first time since 2003, a mechanism established by the INF Treaty for resolving disputes was called into action (chapter 12, section I).

The trend for weakening arms control presents challenges in reinforcing, implementing and verifying the existing international legal framework. These are exemplified by the failure of the November 2016 Review Conference of the Biological and Toxin Weapons Convention to agree substantial progress (see chapter 13). The failure even to agree on the substance of the disagreement at the 2015 Review Conference of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons could indicate structural problems in negotiating on WMD issues. ¹⁰ A different illustration of the problematic overall trend comes from the non-entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Meanwhile, nearly two decades after the 1993 Chemical Weapons Convention entered into force, significant stockpiles have yet to be destroyed (see chapter 13, section IV); and in 2016 there were multiple confirmed reports of chemical weapons being used in the conflicts in Iraq and Syria (see chapter 13, sections I and II).

Increased efforts at control, increasing challenges

In 2016 the UN General Assembly adopted a resolution to start negotiations in 2017 on eliminating nuclear weapons (see chapter 12, section III). Support for what is now generally known as a 'ban treaty' has grown steadily, but not among the main nuclear weapon states and their allies. In the UN vote, North Korea supported the ban, while China, India and Pakistan abstained, and the other five voted against. The negotiations will have to overcome the growing polarization between some of the nuclear weapon states (NWS) and many of the non-nuclear weapon states, since a ban treaty would have little practical effect without the participation of the former. It is arguable, however, that agreeing and, before that, even just entering into negotiations on such a treaty could increase the political and diplomatic pressure on NWS to pursue nuclear disarmament.

The 2015 JCPOA is another example of international diplomacy to address disagreements over WMD proliferation through cooperation and negotiation. It remains on track, implementation having started on time in 2016. Efforts also continued to strengthen the security of nuclear materials in civilian use, through the fourth and final Nuclear Security Summit in Washington, DC, in April 2016, with a primary focus on combating the problem of nuclear terrorism (see chapter 12, section II). It is worth noting, however, that an effective agreement on the security of all weapons-related nuclear materials and facilities is a long way off. International regulations on the handling of weapon-usable nuclear material apply solely to material in civilian facilities, but over 80 per cent of weapons grade plutonium and

¹⁰ See Rauf, T., 'The 2015 Non-Proliferation Review Conference', SIPRI Yearbook 2016, pp. 689-99.

¹¹ See Rauf, T., 'Resolving concerns about Iran's nuclear programme', SIPRI Yearbook 2016, pp. 673-88.

uranium worldwide are in military use. The nuclear weapon states oppose proposals to apply the current civilian-only mechanisms to military nuclear materials. The 2016 Washington Summit communiqué reaffirmed states' responsibility 'to maintain at all times effective security of all nuclear and other radioactive material, including nuclear materials used in nuclear weapons'. 12 In a related development, the UN General Assembly called for a high-level expert group to prepare ideas for a treaty to end the production of fissile material such as highly enriched uranium for nuclear weapons (see chapter 12, section III). Known as the Fissile Material Cut-Off Treaty (FMCT), this is a proposal that has been discussed back and forth for over two decades since it was first proposed in a 1993 UN address by US President Bill Clinton. While it is important that it remains on the agenda, a positive outcome for an FMCT is far from assured.

Recent years have seen other important efforts to regulate arms. The landmark Arms Trade Treaty entered into force in December 2014, but it is still too early to pass judgement on the effectiveness of its implementation. Trade controls have been introduced to cover a wide range of activities such as transit, trans-shipment, brokering, financing and knowledge transfer. Controls have also been extended to new sectors such as transport and banking, Internet trading platforms and academia. These controls are often controversial because of the restrictions they place on trade, travel and scientific research.13

Since 2013, possible regulation of Lethal Autonomous Weapons Systems (LAWS) has been taken up in the context of the 1981 UN Convention on Certain Conventional Weapons (CCW Convention). LAWS present an immense arms control challenge.14 The forward march of military technology continues from automation, through machine learning to artificial intelligence and robotics. They are expected to provide realistic options for offensive weapons that could be deployed in dynamic and complex environments with little or no human input or supervision. An arms control discussion framework has been found for LAWS, but progress is slow. Few governments have defined positions, a minority have decided to address the issue, and discussions so far have been purely informal and largely for information and definitional purposes. It is not clear if or when negotiations will start or what their objective would be. Options range from a complete ban to regulation of

¹² Nuclear Security Summit, 'Nuclear Security Summit 2016 communiqué', Washington, DC, 2016, 1 Apr. 2016, p. 2.

¹³ Bauer, S., 'Improvement of EU dual-use export controls in the context of the European Commission's reform proposal', DG for External Policies, Policy Department, Workshop: Dual Use Export Controls (European Parliament: Brussels, Oct. 2015), pp. 48-86. See also chapter 15 in this volume.

 $^{^{14}}$ See Boulanin, V., EU Non-Proliferation Consortium, 'Mapping the debate on LAWS at the CCW: taking stock and moving forward', Non-Proliferation Paper no. 49, Mar. 2016.

deployment and use. The question must be whether the pace of arms control will match the pace of arms development.

An even sharper challenge for arms control as a principle comes from another recent technological entrant to the international security scene cyberwarfare and cybersecurity. Discussions on the regulation of the cyber field are more advanced than on LAWS.¹⁵ However, the frequency and complexity of high-profile cyberattacks, whether state inspired, criminal or terrorist in origin, suggest that defensive and control measures are both lagging. A 2016 study on Russian security refers to 'Russian defense experts, who assert that cyberwarfare is no longer a war of the future' but, rather 'is taking place now'. 16 The report notes that from Russia's perspective: 'Cyberwarfare takes precedence over kinetic warfare and is being undertaken by states continuously. The boundary between war and peace is being gradually erased'. It should be emphasized that the Russian experts cited in the report are exercised by the cyber threat to Russia. Nonetheless, such assessments only gained in weight and relevance as 2016 progressed, given concerns about computer hacking during the US presidential elections.¹⁷ Beyond that, each of the qualities of cyberwarfare that the experts reportedly emphasize—its primacy over traditional, kinetic warfare, its status as a current and continuous feature of political relations and its blurring of the war-peace boundary-offers a profound challenge to any idea of bringing cyberwarfare capabilities under some agreed form of international control. Economic cybersecurity may be in every state's interest—and since some of the main sources of economic cyber insecurity and disruption may be nonstate actors, there may be considerable room for international cooperation to achieve some degree of cyber protection for corporate entities. However, in the political and strategic realm, the prospects for such cooperation seem intrinsically weaker.

III. International politics and global security

Russia and the United States

Some of the disputes over arms control issues, especially in the nuclear field, reflect the deteriorating relationship between Russia and the USA. Growing

¹⁵ Several states have sought to improve cybersecurity through regulation and collaborative efforts between government and the private sector. In the EU e.g. these include the 2016 Directive on Security of Network and Information Systems and the 2016 EU General Data Protection Regulation. See Skilton, M., 'Implications of the EU announcements for cyber security and access to the digital single market', Huffington Post, 8 July 2016.

¹⁶ Rumer, E., Russia and the security of Europe, Carnegie Endowment for International Peace, 30 June 2016, p. 15.

¹⁷ New York Times, 'Russian hacking in the US election', n. d., https://www.nytimes.com/news-event/russian-election-hacking>.

political and strategic differences between the two get in the way of cooperation on specific initiatives. In 2016, the choice of language by leaders of both the West and Russia reflected hardening positions on the issues that divided them. There was considerable discussion of a new cold war and it seems likely that any breakthrough in cooperation on issues such as nuclear security and the management of plutonium stocks will need to be preceded by improvements in the general relationship. 18 This is particularly troubling given the scale and urgency of some of the issues. For example, the New START agreement will expire in February 2021, ten years after its entry into force. Negotiations on a successor agreement will need to begin well before that date if there is to be any hope for success.

The election of Donald J. Trump as US President was widely taken as reason to expect imminent improvement in US-Russian relations, because of the evidence of the many links between the incoming President's associates and Russia, and because of Trump's pre-election words of praise for Russian President Vladimir Putin. 19 A longer look suggested this should by no means be taken for granted. The issues that divide the two states are not only the specifics of arms control and contention over Ukraine's territory. Syria and the future of the Middle East but, more widely and deeply, the calculus of power and influence in world politics. Since Putin became Russia's President, first as Acting President at the very end of 1999 and then in his first successful election in May 2000, Russian policy has taken a path that is increasingly independent of Western influence and, in his third presidential term from May 2012, actively against Western policy.²⁰ By the end of 2016, as Russia took a leading position in international policy on Syria (see below), and in the absence of an effective challenge to its 2014 annexation of Crimea, there was little reason to expect President Putin to change course. While it remained to be seen how Trump, once inaugurated, would direct US policy towards Russia, it was a priori unlikely that there would be concessions on issues that the Trump Administration would deem of fundamental interest. The possibility of continued contention remained strong, although it might yet be balanced by a degree of future rapprochement.

The general sharpening of confrontation between two of the world's most powerful states up to the end of 2016 is a part of the context for understanding many of the current conflicts and regional political dynamics. Some of these have considerable reverberations in international politics and,

^{18 &#}x27;Russia-NATO relations have fallen to a new cold war level: Russian PM', RT, 13 Feb. 2016; and Oliphant, R., 'Russia and the West "have entered a new cold war", Daily Telegraph, 23 Oct. 2016.

⁹ Crowley, M., 'All of Trump's Russia ties, in 7 charts', *Politico Magazine*, Mar./Apr. 2017; 'Trump says Putin "a leader far more than our president", BBC News, 8 Sep. 2016; and Diamond, J., 'Timeline: Donald Trump's praise for Vladimir Putin', CNN, 29 July 2016.

²⁰ Vladimir Putin was Acting President from 31 Dec. 1999 and President for two terms from May 2000 to May 2008; he was Prime Minister from May 2008 to May 2012 when he was elected President again, which he remains, http://eng.putin.kremlin.ru/bio>.

consequently, a considerable impact on global security. The effect of this can be to make intrinsically complex issues of conflict and security even more complex as external actors take a local stake. However, the effect can also work in the opposite direction, as conflicts are brought to the point of accommodation and settlement in part because of the interests and actions of external powers.

This is a general phenomenon of world politics. It is particularly important today because there are signs that international institutions, treaties and bodies such as the United Nations and the Organization for Security and Cooperation in Europe are facing serious difficulties in the international political environment. As these organizations are important for upholding peace and security, developments that hamper their functionality could have a negative effect on both. Concern about this is a product of various factors. The deteriorating relationship between Russia and the USA contributes to it. Statements by leading political figures who seem to take multilateral institutions less seriously and be less ready to invest in them also feed it. Given the USA's importance in the international architecture, the election of Donald Trump has translated concern into consternation.²¹ While still a candidate—and even earlier—he made a series of sceptical statements about some of the major institutions of the international order, including some that the USA has long been committed to. For example, he said the UN was 'not a friend of democracy, it's not a friend to freedom'; he was highly critical of the Trans-Pacific Partnership and the North American Free Trade Agreement. on which he was not alone in the presidential election; and by implication, given his views on climate change, he was unimpressed by the Paris Climate Agreement.²² Overall, the scepticism Trump brings to international institutions tends to increase uncertainty about their health and durability.

The Middle East and North Africa

Events in the Middle East and North Africa continued to be of prime significance for global security concerns in 2016. The region's strategic location and its natural resource wealth in oil and gas ensure that it remains an arena of intense competition for power and influence. The emotional resonance of some of the conflicts also ensures that many—although not all—regional

 $^{^{21}}$ Deen, T., 'Trump's threat on multilateral treaties keeps UN guessing', InterPress Service, 15 Nov. 2016.

²² Begley, S., 'Read Donald Trump's Speech to AIPAC', *Time*, 21 Mar. 2016; Alexander, H., 'Donald Trump and the United Nations: a fight waiting to happen?', *Daily Telegraph*, 19 Jan. 2017; Ballotpedia, '2016 presidential candidates on international trade', *Presidential Elections: The Road to the White House*; Twitter, 6 Nov. 2012, @realDonaldTrump, 'The concept of global warming was created by and for the Chinese in order to make US manufacturing non-competitive', https://twitter.com/realdonaldtrump/status/265895292191248385?lang=sv; and 'Climate changeable', Snopes, retrieved 30 Apr. 2017, https://www.snopes.com/donald-trump-global-warming-hoax/.

developments receive priority political attention around the world and in international forums.

Governance failures in most Arab countries have been among the key drivers of conflicts and insecurity since 2011 and the days of 'the Arab Spring' (see chapter 3, section I). International governance has not been able to compensate for those shortcomings. In addition, the unfolding consequences of international intervention are part of the explanation for continuing violence in Iraq since the 2003 invasion by the US-led coalition. These problems are exacerbated by the complex relations and rivalries that exist between regional powers, most notably between Iran and Saudi Arabia. There is also an increasing tendency for the regional powers to intervene in the affairs of other countries in the region. In 2016, 11 of the states in the region used military force in combat on the territory of other countries. Meanwhile, the Israel-Palestine conflict came no closer to resolution despite a French attempt to convene an international peace conference set for January 2017; Israel announced its boycott well in advance.²³ The conflict remains potent and dangerous.

The Middle East was the first region where the UN became involved in attempting to manage violent conflicts and mitigate their harm. UN efforts to bring peace, or at least a lower level of violence, have persisted. For all that effort and determination, the region remains highly conflicted and, if judged by the number of conflicts and their lethality, is more insecure than at any time in the past seven decades. The fact that war continued in Syria throughout 2016 despite repeated attempts by the UN to assemble negotiations is merely the tragic norm in the region. Repeated ceasefires brokered by other international actors also had little effect.

The USA, Russia and other external actors used both force and diplomacy in Syria and often supported different sides in the war. Russia's air campaign and Iran's ground forces supported the Syrian Government of Bashir al-Assad. Western special forces were active on the ground, a coalition of Western and Arab states undertook airstrikes in support of opposition groups, and Turkey launched an offensive in northern Syria (see chapter 3).

The diplomatic, political and military activity by the external supporters of the contending parties in Syria restricted the room for the UN to act as a genuinely independent mediator. This is not because the UN is itself partisan, but the main external actors sit on the UN Security Council and contest matters there as well. Although the space is limited, there has been UN activity and there has been some diplomatic cooperation between Russia and the USA. For example, they worked together to achieve two ceasefire agreements in 2016. There has also been diplomatic competition, however,

²³ Beaumont, P., 'Israel tells France it will not join talks aimed at reviving peace process', The Guardian, 7 Nov. 2016.

and the USA was not involved in the diplomacy that achieved a third ceasefire agreement at the very end of 2016. Whatever the fate of the December ceasefire, the international system failed to prevent the tragedy that has unfolded over six years in Syria.

The Euro-Atlantic region

In 2016, doubts grew about the durability of what many Western commentators see as key parts of the architecture of international security. The result of the United Kingdom's referendum on membership of the European Union (EU) in June 2016 will eventually take a major European government out of an international arrangement that is, for many though not for all, one of the foundation stones of peace in Europe. ²⁴ In November, Donald J. Trump won the US Presidential election. Alongside his scepticism about the UN and other components of the international order (see above), he called the North Atlantic Treaty Organization (NATO) obsolete and expensive. ²⁵

Taken together with the 'Brexit' vote in the UK and a perceived rising tide of scepticism and disillusionment about the EU in Europe, the election of Trump raised concern and anxiety within the Euro-Atlantic security policy community. Elsewhere, there was limited sympathy with these regional concerns. Reaction to the result of the US presidential election from both Russia and China was mixed and nuanced. Although candidate Trump was widely interpreted to be a supporter of Putin and a vociferous opponent of Chinese trade and economic policy, official Russian reaction was not unreservedly enthusiastic, and official Chinese reaction not wholly antagonistic. For many of those who are professionally and politically engaged in security policy analysis and planning, however, the feeling of unpredictability that Trump's election brought was both tangible and unsettling. The Munich Security Report summed up the uncertainty in that community's general sentiment with its subtitle: Post-Truth, Post-West, Post-Order?

These sentiments were buttressed by recognition that conflict continued in Ukraine and that during 2016 Western policy could find no leverage with

²⁴ See e.g. Knott, P., 'Europe's peace and democracy can be broken: Brexit is one of the cracks', New European, 7 Dec. 2016; and Shanklin, N., 'Brexit and movements for peace and justice', Peace News, no. 2592–93 (Apr.–May 2016).

²⁵ Hains, T., 'Trump: NATO is obsolete and expensive, "Doesn't have the right countries in it for terrorism", Real Clear Politics, 27 Mar. 2016.

²⁶ Euroscepticism on rise in Europe, poll suggests', BBC News, 8 June 2016.

²⁷ Osborn, A. and Lowe, C., 'Russia revels in Trump victory, looks to sanctions relief', Reuters, 9 Nov. 2016; Reuters, 'Donald Trump's victory raises questions in China', *Fortune*, 9 Nov. 2016; and Beech, H., 'Donald Trump's victory is some of the best foreign news China could have hoped for', *Time*, 20 Nov. 2016.

²⁸ Munich Security Conference, *Munich Security Report*, 2017: Post-truth, Post-West, Post-order?', [n. d.], https://www.securityconference.de/en/discussion/munich-security-report/munich-security-report-2017/>.

which to bring about a shift from seeming deadlock to a durable settlement in the small part of eastern Ukraine controlled by Russia.²⁹ That is not to say that the West is necessarily dissatisfied with the deadlock; some Western analysis has seen the dissatisfaction and disadvantage as lying firmly on Russia's side, 30 Nonetheless, the inability of the West to impose its will on Russia is seen by many to be chastening—problematically so from a Western perspective, rightly so when viewed from the Russian side.

In a different way, the attempted military coup in Turkey in July also has disturbing resonance for supporters of the Western alliance (see chapter 4, section III). Turkey has long held a paradoxical position in that alliance as a strategic bulwark of NATO's south-eastern quarter and an essential ally in enterprises in and against Iraq, but also an uncomfortable partner because of human rights issues, not least during the country's periods of military rule. In fact, Turkey was for a long time ambivalent about operations against Irag; in 2003, the Grand National Assembly narrowly failed to approve US access to Turkey's airfields and harbours for the pending invasion of Iraq.³¹ The issue of Turkey's potential membership of the EU is also paradoxical. Turkey applied to join in 1987 but was not included in successive EU expansions in the next two decades. Accession negotiations only began in 2005.32 There was official EU approval for the negotiations but little enthusiasm.

Around 265 people were killed in the attempted coup.³³ In the aftermath, it was reported that well over 100 000 judges, teachers, police officers and government officials had been suspended or dismissed, while over 36 000 were arrested in a crackdown that also saw 81 journalists arrested and awaiting trial by December.³⁴ If the coup demonstrated an apparent fragility at the heart of Turkey's state institutions, the crackdown, while revealing the government's determination to retain power, also reintroduced discomfiting elements into Turkey's NATO membership and relationship with the EU. In the European Parliament, a non-binding resolution was passed with crossparty support condemning 'disproportionate repressive measures' after the attempted coup and urging the EU to freeze the talks on Turkish mem-

²⁹ Miller, C., 'Ukraine: is the stalemate stable?', Transatlantic Academy, 29 Aug. 2016. See also chapter 4, section II, in this volume.

³⁰ Pond, E., 'A useful stalemate in Ukraine', Politics and Strategy: The Survival Editors' Blog, 4 Aug. 2016.

³¹A majority of Turkish Deputies (264 against 250) voted to permit access, but not by a large enough majority to allow the decision to be implemented. 'Turkey upsets US military plans', BBC News, 1 March 2003.

³² European Commission, European Neighbourhood Policy and Enlargement Negotiations, https://ec.europa.eu/neighbourhood-enlargement/countries/detailed-country-infor- mation/turkev_en>.

³³ Al Jazeera and agencies, 'Turkey PM: Attempted coup leaves 265 people dead', Al Jazeera, 16 July 2016.

 $^{^{34}}$ Toksabay, E. and Hardcastle, E., 'Turkey suspends 291 navy personnel over links to failed coup', Reuters, 13 Nov. 2016; and 'Turkey's crackdown propels number of journalists in jail worldwide to record high', Committee to Protect Journalists, 13 Dec. 2016.

bership. 35 An opinion poll in six EU member states found large majorities against Turkish membership. 36

Further distance from its Western allies was introduced by Turkey's evolving policy and actions on the Syria conflict. Where it had previously sought the overthrow of Assad, it began in 2016 to focus on narrower goals. It aimed to improve border security, counter the rise of the Kurdistan Workers' Party (PKK) and maintain its ability to influence events in Syria. This reflected in part the government's response to an increasingly serious situation in south-eastern Turkey, where conflict with the PKK has renewed, and the death toll between mid-2015 and 2016 was over 2400.³⁷ In August 2016 Turkey launched an offensive in northern Syria against the Islamic State group and Kurdish groups, including those intermittently or partially supported by the USA.³⁸

North East Asia

Several tracks of uncertainty interweave in North East Asia. This area includes two of the world's economic powerhouses: China and Japan. The Korean Peninsula is the site of permanent military confrontation and unresolved conflict between the two Koreas. North Korea's nuclear weapons programme is the target of a concerted UN attempt to exert political pressure through economic sanctions. Regional uncertainties deepened as political scandal steadily engulfed the South Korean President, Park Geun-hye.³⁹ In December 2016, parliament impeached the president and the general expectation was that there would be early elections.⁴⁰ (The Presidential term had been due to last a further year.) Whether this would mean in 2017 that South Korean policy would contribute to increasing tensions on the peninsula or to a possible effort to reduce confrontation was an open question.

Doubts about future US policy grew when President-elect Trump seemed unaware of some of the sensitivities in the US relationship with China. The latter's support and, perhaps, active engagement would presumably be needed to restrain North Korea's nuclear programme. Even so, Trump chose to risk offending Chinese sensibilities by taking a telephone call from

³⁵ Rankin, J. and Shaheen, K., 'Turkey reacts angrily to symbolic EU parliament vote on its membership', *The Guardian*, 24 Nov. 2016.

³⁶ Smith, M., 'Turkey less popular choice to join the EU than even Russia', YuoGov, 3 Aug. 2016.

³⁷ Munich Security Conference (note 28), p. 22, citing the interactive data source, International Crisis Group, 'Turkey's PKK conflict: The rising toll', http://www.crisisgroup.be/interactives/turkey/.

³⁸ McKirdy, E., 'Turkey sends tanks into Syria to battle ISIS', CNN, 24 Aug. 2016; and 'Turkey shells IS, Kurdish positions in Northern Syria', New Arab, 23 Aug. 2016.

³⁹ 'S Korea president Park geun-hye "had role" in scandal', BBC News, 20 Nov. 2016.

 $^{^{40}}$ McKirdy, E., Hancocks, P. and Kwon, K. J., 'South Korea's parliament votes to impeach President Park Geun-hye', CNN, 9 Dec. 2016.

Taiwan's leader, Tsai Ing-wen.41 The Chinese leadership responded by making it clear that this is a red-line issue: it opposes all official interaction between Taiwan and the USA. The USA has accepted this constraint since 1972. The President-elect made a fair point by commenting on the irony that China accepts that the USA sells weapons to Taiwan but objects to a phone call.42 That irony, however, is one of the realities of political and strategic compromise, balance and, on some issues, cooperation in North East Asia.

Beyond the Taiwan issue and of more immediate concern was North Korea's nuclear weapons programme. There were two test explosions and multiple missile launches in 2016 (see chapter 11, section IX). The UN has been united and consistent about imposing sanctions on North Korea. There has been no lack of clarity about goal and means but the goal has not been achieved. Sanctions were twice tightened in 2016, by the USA in March and by the UN in November. 43 Time will tell whether, perhaps with tighter sanctions also imposed by China, the approach will be effective. Meanwhile, more uncertainty arose from the forthright certainty with which President-elect Trump tweeted, just after New Year 2017, that North Korea's deployment of intercontinental missiles 'won't happen!'. 44 No clarification or explanation of the basis for that confidence, or of the possible planning or strategic assessment that might underlie it, was forthcoming in background briefings either before or after the President-elect's statement.

The long-lasting dispute in East Asia over maritime sovereignties reached a new phase in 2016 with implications for both regional stability and political relations over such issues as North Korea's nuclear programme. 45 China's claim to large swathes of the South China Sea and the islets of the Paracel Islands and the Spratly Islands were subjected to examination by international arbitration in a case brought by the Philippines. The judgement, delivered in July 2016, rejected China's historical claim. 46 However,

⁴¹ Gearan, A., Rucker, P. and Denyer, S., 'Trump's Taiwan phone call was long planned, say people who were involved', Washington Post, 4 Dec. 2016.

⁴² Gearan, A., 'Trump speaks with Taiwanese president, a major break with decades of US policy on China', Washington Post, 3 Dec. 2016.

⁴³ 'New North Korea sanctions issued by President Obama', BBC News, 17 Mar. 2016; and Somini, S. and Perlez, J., 'UN stiffens sanctions on North Korea, trying to slow its nuclear march', New York Times, 30 Nov. 2016.

⁴⁴ Gaouette, N. and Starr, B., 'Facing growing North Korea nuke threat, Trump vows: "It won't happen!"', CNN, 3 January 2017.

See e.g., 'Why is the South China Sea contentious?', BBC News, 12 July 2016; and Institute for Security and Development Policy (ISDP), 'Understanding China's position on the South China Sea disputes', ISDP Backgrounder, June 2016.

⁴⁶PCA Case no. 2013-19 In the Matter of the South China Sea Arbitration, Before an Arbitral Tribunal Constituted Under Annex VII to the 1982 United Nations Convention on the Law of the Sea, Between the Republic of the Philippines and the People's Republic of China: Award, 12 July 2016, https://pca-cpa.org/wp-content/uploads/sites/175/2016/07/PH-CN-20160712-Award.pdf. For a helpful guide to the dispute and the 500-page long judgement, see Holmes, O. and Phillips, T., 'South China Sea dispute: What you need to know about The Hague court ruling', The Guardian, 12 July 2016.

China immediately indicated that it does not accept the international court's ruling, and the Philippines under President Rodrigo Duterte sought closer relations with China, casting doubt on the current government's allegiance to a case its predecessor had brought. 47

There are also territorial issues in the East China Sea. While less high profile than the dispute in the South China Sea, China has pressed a claim against Japan's right, which Japan asserts dates back to the 19th century, to eight uninhabited islets known as the Senkaku Islands by Japan and the Diaoyu Islands by China.⁴⁸ Both governments frequently send vessels to the disputed area and in December 2016 Japan announced that it would strengthen naval deployments there.⁴⁹

All the governments in the region face what they regard as major security challenges and a threatening environment. North Korea justifies its nuclear weapons programme with reference to US and South Korean joint military exercises, which it claims betoken aggressive intentions. South Korea views North Korea's nuclear and missile development programmes and the proximity of North Korean military forces to its capital, Seoul, with foreboding. Japan is similarly concerned about North Korea's actions and regards the continued steady growth of Chinese military spending, the modernization of its armed forces and China's territorial claims and naval deployments in the East China Sea as threatening. China in turn continues to regard the US alliances with Japan and South Korea as a threat to its own interests, ambitions and security. In 2016 there were worrying signs that the tensions surrounding these contentious regional issues were starting to build to crisis point.

Africa

At the beginning of the 21st century, it was common to reflect that Africa was tortured by widespread, intractable and brutal conflicts. In 2012, Ethiopia's Prime Minister, Meles Zenawi, speaking at a meeting of the African Union at its newly inaugurated headquarters building in Addis Ababa, recollected and derided *The Economist* magazine's description of Africa in 2000 as 'hopeless'. ⁵⁰ By 2012, it had become much more common to find reports on improved economic performance, progress on development indicators such

 $^{^{47}}$ Phillips, T., Holmes, O. and Bowcott, O., 'Beijing rejects tribunal's ruling in South China Sea case', *The Guardian*, 12 July 2016.

⁴⁸ 'How uninhabited islands soured China-Japan ties', BBC News, 10 Nov. 2014.

⁴⁹ Associated Press, 'Japan boosts coast guard fleet to defend disputed East China Sea islands', *The Guardian*, 22 Dec. 2016.

⁵⁰ 'Remark's by H.E. Ato Meles Zenawi, Prime Minister of the Federal Democratic Republic of Ethiopia, at the Inauguration of the African Union Commission Conference Centre and Office Complex', Addis Ababa, 28 Jan. 2012; and 'Hopeless Africa', *The Economist*, 11 May 2000.

as child mortality, and reduced armed conflict, adding up to a vision of African success.51

There are, however, uncomfortable questions for Africa too. There are more armed conflicts in Africa than any other region (see chapter 2, section I), although it has not experienced the sharp escalation of conflict since 2010 that the Middle East has. Overall, the number of armed conflicts in Africa was approximately the same in 2016 as in 2015.52 Nonetheless, there are some intractable conflicts, such as in South Sudan and northern Nigeria, as well as deep political instability and insecurity, such as in the Democratic Republic of the Congo and Somalia. This should caution against sweeping judgements on the success or failure of Africa. The situation is different from place to place. Africa as a whole is not locked into a cycle of underdevelopment and intractable violence as some observers perceived it to be two decades ago, but nor have African governments and international partners built sustainable peace throughout the continent. Against this background, the number of people who have fled their homes is rising. There were 4.4 million refugees and 11 million internally displaced persons in 2016, a combined total of 15.4 million that is 2.5 million higher than in 2015. The United Nations High Commissioner for Refugees (UNHCR) expects further increases in 2017. Worse, the UNHCR reported in 2016 that 76 per cent of refugees did not receive a full daily ration of basic food, and that refugees faced further ration cuts.53

The nuanced balances in this mixed story are repeated on the economic front. Following four decades from 1960 in which overall African economic performance was little better than stagnant, more recent continent-wide growth rates have averaged 3 per cent per annum. The African Development Bank, however, cautions that two specific challenges related to economic growth must be faced. 54 The first is uncertainty about whether the 21st century growth spurt is sustainable; the second is that, as yet, economic growth has not done much to reduce poverty. This would in turn suggest that economic growth is currently feeding inequality, which could be storing up problems of social and political instability and potential conflict for the future.

⁵¹ 'The sun shines bright', *The Economist*, 3 Dec. 2011; 'Trade in east Africa: Worth celebrating', The Economist, 9 June 2016; 'The best story in development', The Economist, 19 May 2012; and Burbach, D. T., 'The coming peace: Africa's declining conflicts', Sustainable Security, Oxford Research Group, 22 Sep. 2016. See also the website 'African success: People changing the face of Africa', http://www.africansuccess.org/>.

In addition to chapter 2, section I, in this volume, see also Raleigh, C. and Moody, J. (eds), Armed Conflict Location and Event Data Project (ACLED), 'Real-time analysis of African political violence, Feb. 2017', Conflict Trends, no. 55.

⁵³ UNHCR, Global Appeal 2017, 'Update: Africa', Dec. 2016.

⁵⁴ African Development Bank, African Development Report, 2015: Growth, Poverty and Inequality Nexus, Overcoming Barriers to Sustainable Development (African Development Bank Group: Abijan, Côte d'Ivoire, June 2016).

IV. Conclusions

The challenge facing Africa is how to sustain progress and arrange for the benefits to be felt throughout societies, and do so at a time when the international institutions that have contributed to African development may be distracted by the effects of great power rivalries and wider strategic uncertainties. This is, perhaps, a challenge in all parts of the world. It is not inevitably insurmountable. Experience of peace processes, arms control, international development and climate change negotiations has shown that, as in Africa, international cooperation can work. Time will tell whether the international cooperative urge is as persistent as the problems it needs to address.

The uncomfortable questions that defined 2016 and the transition into 2017 have been building for many years. They are driven by a variety of causes, such as changes in policy and approach among the big powers, developments such as the Arab Spring in 2011, the aftermath of the international financial crash and economic crisis of 2008–10, the pressure of growing socio-economic inequalities and the consequences of climate change. States all too often respond to both the long-term trends and shorter-term events with actions that, while understandable on their own terms and in the light of individual states' interests and the options available, nonetheless combine to increase ambient insecurity and risk. It is high time for political leaders to re-emphasize the centrality of cooperation to address major global problems and carry that approach through into action. If the major problems of our time are to be addressed successfully, cooperating within the framework of well functioning international institutions is an imperative.