



House of Commons
Defence Committee

Rash or Rational? North Korea and the threat it poses

Fourth Report of Session 2017–19

*Report, together with formal minutes relating
to the report*

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The Defence Committee

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Summary

During 2016 and 2017 North Korea conducted an unprecedented series of missile launches and nuclear tests to advance its ambition to become one of the world's nuclear powers. This testing escalated tensions in the region and increased the risk of renewed conflict.

With its current rate of development, it is possible that North Korea can already strike the United Kingdom with an Inter-Continental Ballistic Missile (ICBM), potentially able to carry and deliver a nuclear warhead. Within the next six to 18 months, it is almost certain to be able to achieve this capability. However, North Korea has not yet publicly demonstrated that it has mastered either nuclear warhead miniaturisation or re-entry.

A North Korean nuclear strike against the UK seems highly unlikely. We do not believe that North Korea regards the UK as a primary target—its goal being to threaten the United States mainland (although also bringing the UK within range of its missiles) in the event of hostilities on the Peninsula.

It will be obvious to Kim Jong-un that initiating a nuclear exchange is bound to lead to North Korea's annihilation: the polar opposite of his objective of regime survival. We consider that Kim Jong-un, though undoubtedly ruthless, is nevertheless rational. As such, he could be dissuaded and deterred from launching a nuclear weapon.

It is far more likely that the UK will continue to suffer from reckless North Korean cyber-attacks, such as Wannacry. North Korea has shown an utter lack of concern about who gets hurt by such attacks. Similarly, there is a definite danger that North Korea would have few, if any, qualms about promoting nuclear proliferation to other states or even non-state actors.

Recent engagement between North and South Korea, and potentially between North Korea and the US, has begun to reduce regional tensions surrounding the North's nuclear weapons programme. However, Kim Jong-un seems to see such weapons as insurance against any threat to his regime's survival. He is therefore unlikely to give them up now.

If there were a conflict in the region, the UK would have no legal obligation to provide military assistance. Yet in the event of North Korean aggression against South Korea and/or against the United States, it is unlikely that we would stand aside.

1 Introduction

1. During 2016 and 2017, the self-styled Democratic People's Republic of Korea (North Korea) demonstrated its determination to become a nuclear-armed state by conducting an unprecedented series of missile launches and nuclear tests. These tests showed how quickly the North Korean programme was advancing, revealing increasingly powerful nuclear devices and missiles capable of reaching the United States and the United Kingdom.
2. The potential threat posed by North Korea's ability to mount nuclear attacks against the US, the Republic of Korea (South Korea) and other countries has led to a crisis in the region. In particular, the rhetoric of the exchanges between the US and North Korea on the missile launches and nuclear testing has escalated tensions in the region and increased the risk of renewed conflict. However, recent developments in 2018, including proposed talks between the leaders of North Korea and the US, may have begun to de-escalate the crisis.
3. At the same time, North Korea has continued to demonstrate its willingness and ability to conduct cyber-attacks around the world, with the UK among those countries seriously affected. For example, the global Wannacry ransomware attack in May 2017 infected many NHS organisations, causing widespread disruption across the healthcare sector. The UK Government later revealed that North Korea was most probably the source of Wannacry.

Terms of reference

4. On 13 September 2017, we held a one-off evidence session in which we examined the recent nuclear and missile testing by North Korea and the situation in the region. As a result of the evidence received, the continued missile testing by North Korea and the UK Government's announcement that North Korea was probably behind Wannacry, we decided to conduct a substantive inquiry into the threats to UK security posed by North Korea.
5. On 14 December 2017, we launched the inquiry with a call for evidence seeking submissions to address the following questions:
 - What is the security threat currently posed by North Korean capabilities in nuclear, cyber and other, conventional weapons to the UK and its allies?
 - Is the UK adequately prepared to defend itself against cyber and other emerging threats from North Korea?
 - How is the Ministry of Defence supporting other government departments and the private sector to defend themselves against cyber threats, such as those posed by North Korea?
 - What might be the potential capability of North Korea in nuclear, cyber and other, conventional weapons in the coming future?
 - How might the UK Government respond to any further escalation of the crisis, such as further development of North Korean military capabilities or conflict on or near the Korean peninsula?

The inquiry

6. We held three oral evidence sessions in total (including the initial one in September) with contributions from academic specialists; a former Assistant Chief of the Secret Intelligence Service, Nigel Inkster; a former Deputy Chief of Defence Staff (Capability), Vice Admiral (Rtd) Sir Jeremy Blackham KCB; the Minister of State for Defence, Rt. Hon. Earl Howe; the Minister of State for Asia and the Pacific, Rt. Hon. Mark Field MP; and the Asia-Pacific Director at the Foreign and Commonwealth Office (FCO), Kate White. We are grateful to all of our witnesses who gave oral and written evidence.

2 The North Korean nuclear threat

North Korea's nuclear weapons programme

7. North Korea has been conducting its nuclear weapons programme for over a quarter of a century. It started nuclear weapon development work during the 1980s, although it had begun nuclear research in 1962. By the early 1990s, North Korea was able to reprocess weapons-grade plutonium for use in nuclear devices. It had also begun developing ballistic missiles to deliver such devices, given that the free-fall 'ballistic' trajectory would enable longer missile ranges.¹

8. Its nuclear weapons programme slowed for a period between 1994 and 2002, on account of an agreement between North Korea and the US. After extensive talks, both countries accepted an 'Agreed Framework' in October 1994, which initially froze the programme, with the aim of full denuclearisation in return for economic assistance. However, in October 2002, President George Bush announced that the US had evidence that North Korea had violated the terms of the framework by developing the capability to produce highly enriched uranium. North Korea subsequently declared that it would restart its nuclear programme.² At the start of the following year, North Korea also withdrew from the 1968 Non-Proliferation Treaty, to which it had acceded in December 1985. It remains the only signatory to have withdrawn from the NPT.³

9. North Korea resumed testing in 2006, despite a further series of talks aimed again at denuclearisation. On 4 July 2006, North Korea test-fired six ballistic missiles, followed by a seventh the following day. These were the first launches since 1998 and incurred international condemnation. Despite this, North Korea then conducted its first nuclear test on 3 October 2006. The resumption of testing had followed five rounds of 'Six Party' talks involving North and South Korea, China, Russia, Japan and the US between 2003 and 2005.⁴ A further round of talks occurred during 2007, but these were suspended by 2009. Two more nuclear tests followed, together with further missile launches over the next few years.⁵

10. North Korea then significantly escalated both its missile and nuclear testing during 2016 and 2017, which demonstrated how far it had advanced. We set out these tests in the tables below. The last nuclear test, in September 2017, indicated a yield in the low hundreds of kilotons. This was comparable to the UK Trident missile warheads, which we have previously reported as having a yield of around 100 kilotons each.⁶ The most recent missiles tested, the Hwasong 14 and 15, may also have the range to reach the US mainland. Witnesses agreed that the pace of North Korea's advance was significant with Dr Nilsson-Wright, from the University of Cambridge, describing the testing between July and September 2017 as "a real step change in terms of the North's destructive capabilities".⁷

1 Ministry of Defence ([NKO0005](#)) and *North Korea: The Nuclear Issue and Prospects for Change*, Research Paper [07/03](#), House of Commons Library, January 2007

2 Research Paper [07/03](#), House of Commons Library, January 2007

3 *Nuclear Weapons - Country Comparisons*, Briefing Paper [Number 7566](#), House of Commons Library, October 2017 and Q142

4 Research Paper [07/03](#), House of Commons Library, January 2007

5 Briefing Paper [Number 7566](#), House of Commons Library, October 2017 and [Timeline: North Korea's missile and nuclear activity](#), BBC Monitoring, 29 November 2017

6 Defence Committee, Eighth Report of Session 2005–06, [The Future of the UK's Strategic Nuclear Deterrent: the Strategic Context](#), HC 986, para 22.

7 For example, Q2 [Dr Nilsson-Wright, Andrea Berger], Q73 and Q107

Table 1: North Korea nuclear testing during 2016 and 2017⁸

Date of nuclear test	Estimated Yield	Notes
6 January 2016	2–13 kt	
9 September 2016	5–19 kt	
3 September 2017	Approx. low hundreds (kt)	Approx.10 times larger than previous

Table 2: North Korea ballistic missile launches during 2016 and 2017⁹

Date of missile test	Missile(s) Tested	Estimated Range	Notes
7 Feb 2016	Unha-3	n/a	Satellite launch
16 & 18 Mar 2016	2 x Hwasong-7 (Nodong), 1 KN-11 (submarine launched)	< 1,300 km	One Hwasong-7 launch successful
15, 23 & 28 Apr 2016	2 x Hwasong-10 (Musudan), 1 x KN-11	4,000 km < 1,300km	All failed
31 May 2016	Hwasong-10	4,000 km	Failed
22 Jun 2016	2 x Hwasong-10	4,000 km	1 Failure
9 & 19 Jul 2016	1 KN-11 and 2 x Hwasong-7		One Hwasong-7 launch successful
3 & 24 Aug 2016	2 x Hwasong-7 and 1 KN-11	< 1,300km	1 Hwasong-7 failure
15 & 20 Oct 2016	2 x Hwasong-10	4,000 km	Both failed
12 Feb 2017	Pukguksong-2	2,000 km	
22 Mar 2017	Unconfirmed		Failed
5 Apr 2017	Unconfirmed		
16 & 29 Apr 2017	2 x Unconfirmed		Both failed
14 May 2017	Hwasong-12	4,500 km	
21 May 2017	Pukguksong-2	2,000 km	
4 Jul 2017	Hwasong-14 (ICBM)	6,700 km	Range to reach Alaska
28 Jul 2017	Hwasong-14 (ICBM)	10,400 km	Range to reach the UK and US mainland
29 Aug 2017	Hwasong-12	4,500 km	Overflew Japan
15 Sep 2017	Hwasong-12	4,500 km	Overflew Japan
28 Nov 2017	Hwasong-15 (ICBM)	13,000 km	Range to reach Washington DC

⁸ Ministry of Defence ([NKO0005](#))

⁹ Excludes short range missile tests. Ministry of Defence ([NKO0005](#)); Briefing Paper [Number 7566](#), House of Commons Library, October 2017; United Nations Security Council, [S/2017/150 Report of the Panel of Experts established pursuant to resolution 1874 \(2009\)](#) (February 2017), pp16–19; United Nations Security Council, [S/2017/742 Midterm report of the Panel of Experts established pursuant to resolution 1874 \(2009\)](#), (September 2017), pp9–12.

North Korea's ability to threaten the UK

11. The results of North Korea's testing suggest that it is already capable of launching missiles against neighbouring countries. For example, Defence Minister Earl Howe told us that "We have seen a gradual advancement in their ballistic missile technology demonstrated over the last few years ... We judge that they are now certainly capable of reaching targets in the short range, by which I mean Japan, South Korea—obviously—and adjoining territories."¹⁰ Other witnesses, such as Andrea Berger, Senior Research Associate at the James Martin Centre for Non-Proliferation Studies and Dr Cottee, Research Associate at the International Institute for Strategic Studies, agreed that this was likely to be the case. However, they also cited the wide range of views among experts about likely payloads and missile ranges given the limited information available.¹¹

12. It is less clear as to whether North Korea could currently launch an inter-continental ballistic missile [ICBM] that could reach the US or the UK. The latest North Korean missiles, the Hwasong 14 and 15, are believed to have the range to reach not just Alaska and Hawaii, but also mainland US, which also means that they have the range to reach the UK.¹² However, North Korea has yet to demonstrate fully that it can install a nuclear warhead small enough to fit into these missiles or that these warheads could survive re-entry—elements needed to achieve full ICBM capability. Professor Malcolm Chalmers, Deputy Director-General at the Royal United Services Institute, suggested that North Korea has not yet mastered re-entry technology.¹³ Defence Minister Earl Howe also judged North Korea's efforts to marry up the warhead to the missile as "work in progress".¹⁴

13. Yet Andrea Berger believed that North Korea might be more advanced than observation of the tests suggested. She cited a leaked US Defence Intelligence Agency assessment which considered that "North Korea can miniaturise a nuclear weapon to put it on the intermediate system and on the inter-continental missile system", and that "North Korea potentially had a more reliable re-entry capability than the one missile launch indicated".¹⁵ The Japanese Ministry of Defence also concluded that North Korea had possibly achieved miniaturisation.¹⁶

14. The likelihood is that North Korea will be capable of launching nuclear-armed missiles against the US and the UK within a few years at most, based on its current rate of development. Earl Howe told us that "Our judgment is that it will probably be six to 18 months before they have an ICBM capability that is capable of reaching the coast of the United States or indeed ourselves."¹⁷ Other witnesses, such as Professor Chalmers and Dr Cottee, believed that North Korea would achieve this within a few years, whilst Andrea Berger felt it would be prudent to assume that North Korea had already done so.¹⁸

15. North Korea might also develop nuclear capabilities to attack satellites and disrupt critical electrical infrastructures. Professor Clive Dyer, an expert on space weather, highlighted the potential damage that a nuclear detonation in the upper atmosphere, or

10 Q107

11 Q26

12 Qq28–30

13 Q74

14 Q113

15 Q26 [Andrea Berger]

16 *Nuclear Weapons - Country Comparisons*, Briefing Paper [Number 7566](#), House of Commons Library, October 2017

17 Q107

18 Qq26–27 and Q75

in space, could cause to satellites.¹⁹ There have also been reports in the US of the dangers posed by electromagnetic pulse (EMP) attacks on US electrical infrastructure. Many experts, however, doubt that North Korea has EMP capability.²⁰ Earl Howe would only confirm that assessments had been made of such risks. He did, however, tell us that the risk from fallout to the UK would be minimal should a nuclear detonation occur over the Pacific.²¹

16. There is also a risk that other state and non-state organisations hostile to the UK may use North Korean nuclear technology to threaten or even launch their own nuclear attacks against the UK. The MoD reports that North Korea already routinely sells “weapons-related technologies”, with “few qualms about who it sells to and the end-use of the goods and technology it supplies”.²² Indeed Andrea Berger told us that North Korea is already “the leading exporter of ballistic missile technology to the developing world” and has sold nuclear information in the past to others.²³ Dr Cottee believed that sanctions could help prevent such exports though they would also increase North Korea’s need for cash and hence likelihood of agreeing to such sales.²⁴

17. It is a reasonable assumption that North Korea can already reach the UK with ballistic missiles which could potentially carry nuclear warheads. In any case, it is almost certain to be able to do so within the next six to 18 months if it continues its programme at the current rate of development. North Korea has made significant advances in its nuclear weapons development programme over the last two years. It is widely believed that North Korea can now launch short-range ballistic missiles capable of hitting targets in the region. North Korea has, however, yet to demonstrate that it has successfully tested the remaining elements required for full Inter-Continental Ballistic Missile (ICBM) capability, such as re-entry vehicle technology or the miniaturisation and integration of nuclear warheads with its ICBMs.

18. **We also believe that North Korea’s nuclear programme may lead to nuclear proliferation—both to other states and to non-state organisations that are hostile to the UK. North Korea has shown no qualms about selling conventional arms to anyone, in its pursuit of hard currency, and sales of nuclear weapons technology could prove very profitable. We recommend that the UK Government should set out what actions it will take to prevent North Korea from selling its nuclear technology.**

North Korea’s motives for acquiring nuclear weapons

19. North Korea has repeatedly stated that its nuclear weapons programme is in response to the US threat to its security. For example, in May 2017, North Korea’s UK Ambassador told Sky News that “our nuclear power is a result of the US’s hostile policy against us,” and “it is the only way to protect the peace of the Korean Peninsula and the region.”²⁵ The MoD and the Campaign for Nuclear Disarmament also cited other North Korean proclamations setting out this argument.²⁶

19 Professor Clive Dyer ([NKO0008](#))

20 Business Insider UK, [A North Korean electromagnetic pulse attack could wipe out 90% of US population, expert warns Congress](#), 25 October 2017

21 Qq108–109

22 Ministry of Defence ([NKO0003](#))

23 Q40 [Andrea Berger]

24 Q40 [Dr Cottee]

25 Alistair Bunkall ([NKO0007](#))

26 Ministry of Defence ([NKO0003](#)) and Campaign for Nuclear Disarmament ([NKO0006](#))

20. Our witnesses agreed that the primary reason for North Korea acquiring nuclear weapons was to ensure the survival of its regime.²⁷ For example, FCO Minister Mark Field felt that recent conflicts had clearly illustrated the advantages of having nuclear weapons “... you are going to be exempt from being threatened. The message is loud and clear—this is the ultimate insurance policy for any country, going forward.”²⁸ Other reasons included the prestige of becoming a nuclear state, which Kim Jong-un might use to prove himself as leader.²⁹ Professor Chalmers also suggested that North Korea may subsequently use them more aggressively to seek re-unification of the Korean peninsula.³⁰

21. North Korea has also cited the fate of Colonel Gaddafi and Saddam Hussein—both of whom were overthrown by the US or its allies after abandoning their nuclear programmes.³¹ Mark Field acknowledged the mistakes of the UK and the international community:

I fear that mistakes were made, particularly in relation to Gaddafi and Libya, and that was a man who was seen as a pariah for 30 years. After 9/11, he was brought into the international community ... Within eight years he had been hunted down and killed. That is a pretty strong message for any leader. Do you trust the international community to hold true to their promises?³²

The likelihood of the UK being targeted by North Korea

22. The MoD does not consider that the UK will be a target of North Korean nuclear missiles, as its regime does not believe the UK to be a threat. In its written evidence, the Ministry of Defence stated that: “We do not judge that North Korea’s nuclear programme and other military capabilities are directed at the UK. North Korea has stated on several occasions that it does not consider the UK to be its enemy. It cites our official state relationship as evidence of this.”³³ Defence Minister Earl Howe emphasised this point to us, whilst other witnesses such as Andrea Berger and Nigel Inkster, a former Assistant Chief of the Secret Intelligence Service, also agreed about North Korea’s attitude towards the UK.³⁴

23. The UK has only a limited ballistic missile defence (BMD) capability, however, if North Korea decided to launch a missile at the UK. The Government is currently investigating the use of the anti-air missile systems on the Royal Navy’s six Type 45 destroyers in a BMD role, and is also developing a new land-based radar to detect ballistic missiles.³⁵

24. We agree with the UK Government’s view that North Korea has shown no sign hitherto of wishing to target the UK with nuclear weapons.

27 For example Q5, Q65, Alistair Bunkall ([NKO0007](#)) and Mr James Pragnell ([NKO0001](#))

28 Q140

29 Q71 and Q140

30 Q72

31 Q4 and Q71

32 Q140

33 Ministry of Defence ([NKO0003](#))

34 Q30, Q55 and Q107

35 PQ [2907](#) and PQ [2910](#)

3 Responding to a potential North Korean nuclear threat

Sanctions and incentives

Sanctions

25. Since the start of North Korea's nuclear weapons testing in 2006, the United Nations (UN) has imposed economic sanctions on North Korea, by means of nine increasingly severe resolutions. These have been unanimously approved by the Security Council, the latest in December 2017. The aims of these sanctions include making the continuation of its nuclear programme more costly than beneficial to North Korea, stopping it acquiring the technology it needs and cutting off its revenue sources.³⁶

26. Countries traditionally supportive of North Korea, such as China and Russia (both permanent members of the UN Security Council), have approved all nine resolutions. FCO Minister Mark Field suggested that it was not in their interests "to have such a potentially unpredictable state in their backyard".³⁷ Nevertheless, there are reports that suggest they have prevented stronger sanctions from being applied to North Korea.³⁸

27. Some countries have imposed additional measures. As well as sanctions against North Korea and its citizens, the US has targeted individuals and organisations in other countries considered to be providing support to North Korea. South Korea and Japan have also imposed their own sanctions, as has the European Union on behalf of member states, including the UK.³⁹

28. Sanctions have so far failed to halt North Korea's nuclear weapons programme, with clear evidence of inadequate enforcement limiting their effectiveness. Witnesses told us that poor implementation of sanctions globally, particularly by China, together with North Korean adaptability had reduced the impact of sanctions.⁴⁰ The UN's independent assessment panel has regularly reported that North Korea has circumvented sanctions—both by deception and with the help of organisations and individuals from other countries. In its latest report in September 2017, the panel concluded that:

Lax enforcement of the sanctions regime coupled with the country's evolving evasion techniques are undermining the goals of the resolutions that the Democratic People's Republic of Korea abandon all weapons of mass destruction and cease all related programmes and activities.⁴¹

36 Q5 and [Security Council Committee established pursuant to resolution 1718 \(2006\)](#), United Nations, accessed March 2018.

37 Q115

38 *North Korea: August 2017 update*, Briefing Paper [Number 8077](#), House of Commons Library, August 2017

39 Briefing Paper [Number 8077](#), House of Commons Library, August 2017 and Q115

40 Qq5–8 and Q41

41 United Nations Security Council, S/2017/742 [Midterm report of the Panel of Experts established pursuant to resolution 1874 \(2009\)](#), (September 2017), p4.

29. Mr Field, however, believed that sanctions have begun to bite. He cited evidence from the UK embassy in North Korea that they were beginning to affect everyday life.⁴² Kate White, Asia Pacific Director at the FCO, also told us that UK diplomats are holding talks with other nations about closing loopholes and eliminating grey areas around sanctions.⁴³

30. **The international community has strongly condemned North Korea's actions in developing nuclear weapons and has imposed increasingly severe economic sanctions. Even countries historically allied to North Korea, such as China, have supported international actions to put pressure on North Korea to abandon its nuclear programme.**

31. **Inadequate enforcement of sanctions has, however, significantly limited their impact on North Korea's economy. Successive United Nations reports show how North Korea has been able to bypass sanctions, often assisted by lax enforcement on the part of certain countries. *We recommend that the Foreign and Commonwealth Office should set out what steps it has taken to encourage other countries to enforce—in full—the agreed sanctions against North Korea.***

Measures taken by other countries

South Korea

32. South Korea's current government has sought dialogue with North Korea as the primary way to resolve the situation. President Moon Jae-in has been open in his desire for talks with North Korea, making a case to the US for seeking a freeze on the nuclear programme first, and then denuclearisation. He has also been clear that he would “prevent war at all costs” and avoid the damaging consequences to the region that would likely result from a conflict. Despite all this, South Korea has continued strongly to support sanctions against North Korea. It also continues to participate in joint military training exercises in the region with the US, something that North Korea considers provocative.⁴⁴

33. The start of 2018 saw increasing North Korean re-engagement with South Korea. North Korea's participation in the Winter Olympics hosted by South Korea is considered to have provided the impetus behind recommencing communications with South Korea—aided by the deferral of the spring US-South Korea training exercise. Even after the end of the Olympics, talks have continued with tangible progress and increasing symbolic importance. Following his meeting with Kim Jong-un in early March 2018, Chung Eui-yong, National Security Advisor to President Moon Jae-in, surprised the world by reporting that North Korea was now willing to denuclearise, in return for guaranteed security.

The North Korean side clearly stated its willingness to denuclearize ... It made it clear that it would have no reason to keep nuclear weapons if the military threat to the North was eliminated and its security guaranteed.⁴⁵

42 Q123

43 Q136

44 Q42 and *North Korea: August 2017 update*, Briefing Paper [Number 8077](#), House of Commons Library, August 2017

45 For example, [North Korea Signals Willingness to 'Denuclearize,' South Says](#), The New York Times, 6 March 2018 or [North Korea is willing to discuss disarmament, says South](#), BBC News, 6 March 2018

The United States

34. Under the Trump Administration the US has taken an assertive stance against North Korea and its nuclear weapons programme. The Obama Administration's policy of "Strategic Patience" was criticised by some for being ineffective, with no meaningful talks taking place, and representative of the Administration's lack of focus on North Korea. Under President Trump, the rhetoric has been much stronger and focused on applying "maximum pressure and engagement" on Kim Jong-un and his regime. For example, President Trump vowed to unleash "fire and fury like the world has never seen" on Pyongyang, if North Korea continued to menace the US.⁴⁶

35. Indeed, the US has threatened pre-emptive strikes on North Korea to stop its nuclear weapons programme by force, which risked the possibility of full-scale conflict in the region. For example, in August 2017, the US National Security Advisor was open about the US preparing plans for a 'preventive war' to prevent North Korea from threatening the US with a nuclear weapon.⁴⁷ A risk raised by Dr Cottee, however, was that any US strike might not be able to destroy all of North Korea's nuclear missiles.⁴⁸ Witnesses also agreed that if the US were to attack first, this would have a significant and detrimental impact on its international standing, not least given the likelihood of major loss of life from retaliation against South Korea.⁴⁹

36. The recent engagements between North and South Korea has, surprisingly, led to potentially historic talks between the US and North Korea. The possibility of such talks was considered remote, with the US clear that none would occur unless North Korea showed willingness to denuclearise. Yet, following Chung Eui-yong's announcement, President Trump declared that he would meet Kim Jong-un. If this happens, it will be the first time a sitting US President has met a North Korean leader. The Trump Administration considers that its tough stance has resulted in North Korea agreeing to talks without the US making any prior concessions, but we should be concerned if the talks were used only as a propaganda ploy by the North Korean regime.⁵⁰

37. It is unclear how much might realistically be achieved through these talks, particularly given the limited time available for preparation. President Trump has stated that he would meet his counterpart by May 2018, which is barely two months away.⁵¹ The US Government also lacks experienced, key personnel to lead preparations with, for example, no ambassador to South Korea, nor a North Korean envoy. Previous talks have also failed, with the last major ones—the Six Party talks—ending in 2008. As a result, the international reaction has been guarded, until more tangible results are seen.⁵²

38. Mr Field did tell us that, despite the US rhetoric, there has been US diplomatic work in the background. He said that "... it is worth looking rather less at President Trump's Twitter feed and a little bit more at what he is doing on the ground and what ambassadors are doing, both in New York and Washington".⁵³

46 *North Korea: August 2017 update*, Briefing Paper [Number 8077](#), House of Commons Library, August 2017

47 Briefing Paper [Number 8077](#), House of Commons Library, August 2017

48 Q34

49 Qq104–105

50 For example, [Trump-Kim talks show US strategy is working - VP Pence](#), BBC News, 9 March 2018

51 ['No response' yet from North Korea on talks with the US](#), BBC News, 12 March 2018

52 For example, [North Korea Signals Willingness to 'Denuclearize,' South Says](#), The New York Times, 6 March 2018 or [Trump and North Korea's Kim Jong-un to hold 'milestone' meeting](#), BBC News, 9 March 2018

53 Q120

China

39. As North Korea's main ally and trading partner, China has traditionally been seen as the key to bringing it to the negotiating table. China has long supported its fellow Communist neighbour internationally, for example, through the 1961 mutual defence pledge and, as noted in paragraph 28 above, has been considered lax in its enforcement of sanctions.⁵⁴ North Korea is also heavily dependent on China for trade, as it accounts for more than 90% of North Korea's total trade volume.⁵⁵

40. However, China has experienced a much more fraught relationship with the current North Korean regime and, as a result, its influence seems to be in decline. Mark Field told us that Kim Jong-un “is far less close to the Chinese than either his father or grandfather were”.⁵⁶ Other witnesses agreed, with Dr Nilsson-Wright telling us that “the senior Chinese leadership is irritated by the provocations from North Korea”.⁵⁷ Mark Field also disagreed that China was the key barrier to a resolution:

I think the notion that somehow this whole problem could be solved if only China pulled its finger out, which is something you hear from some people, is an entirely simplistic analysis of the situation.⁵⁸

41. China sees North Korea as a buffer between itself and the US in South Korea and would not want any outcome of this crisis to lead to greater US influence in the region.⁵⁹ Professor Heuser from the University of Reading also suggested that China would be risking its reputation were it to abandon North Korea.⁶⁰ Witnesses agreed, however, that at least formally China does not want North Korea to have nuclear weapons—although in practice, as Nigel Inkster pointed out, China is already surrounded by nuclear-armed states and “one more isn't going to make a whole lot of difference”.⁶¹ It is likely therefore that China will nonetheless continue to support North Korea, given wider political factors, even if it does not want a nuclear-armed North Korea.

42. Indeed, any solution to North Korea's nuclear programme is likely to be influenced by the US-Chinese relationship. In particular, China considers further US military activity in the region as a threat to its influence there. For example, China is strongly opposed to South Korea deploying more US anti-ballistic missile defence systems, such as THAAD, to counter North Korean missiles.⁶² Dr Nilsson-Wright considered that there needs to be an agreed strategy between the US and China to resolve the situation.⁶³

54 See also Q41, Q49 and *North Korea: August 2017 update*, Briefing Paper [Number 8077](#), House of Commons Library, August 2017

55 [The China–North Korea Relationship](#), Council on Foreign Relations, accessed March 2018

56 Q138

57 Q38 and Q79

58 Q138

59 Q82 and *North Korea: August 2017 update*, Briefing Paper [Number 8077](#), House of Commons Library, August 2017

60 Q41

61 Q38, Q79

62 Q2 [Dr Nilsson-Wright] and Q82

63 Qq10–11

UK efforts and support to other countries

43. The UK Government's position is that it is not acceptable for North Korea to develop and retain nuclear weapons. The FCO's Director of Asia Pacific was clear that the UK seeks irreversible and verifiable denuclearisation and its efforts are intended to put maximum pressure on North Korea to accept that.⁶⁴

44. These efforts have included both diplomatic and military activity. In addition to the UK's support for sanctions, Mark Field told us: "there is a lot of activity that is going on quietly behind the scenes in the diplomatic world that I think is beginning to bear fruit."⁶⁵ This includes working closely with China, Japan and South Korea, both bilaterally and multilaterally through UK embassies.⁶⁶ Since 2016, the UK has also been developing closer military ties with both South Korea and Japan through joint training exercises and joint working on cyber defence.⁶⁷

45. The UK also supports its diplomatic and military efforts with intelligence gathering and sharing with other countries. The UK is one of the few NATO nations with an embassy in North Korea—something the US does not have. Mark Field considered that this has significant benefit for international diplomacy and intelligence, especially as a member of the Five Eyes intelligence alliance.⁶⁸ However, he did concede that, given the closed nature of North Korean society, there are limitations to what useful and reliable information the UK can gather.⁶⁹

46. The United States and South Korea are leading the efforts to resolve the crisis with North Korea, but the UK clearly has a role to help reduce tensions in the region. It has, for example, strong diplomatic relationships with the US, South Korea and Japan, and its Embassy in North Korea provides avenues for communication with North Korea and for the gathering of information.

47. We welcome the resumption of talks between North and South Korea and potentially with the United States, although we remain unconvinced that these will really result in North Korea's denuclearisation. We nevertheless consider that continued North Korean engagement with the US and South Korea offers the best chance to de-escalate tensions and potentially lead to a resolution. We recommend that the Foreign and Commonwealth Office should continue with its diplomatic efforts to help resolve the crisis, including promoting dialogue.

Deterrence and containment

48. North Korea's continuation of its nuclear weapons programme, despite sanctions and other international pressure, suggests that it remains committed to its completion. As we set out in chapter 2, a nuclear capability is one of the central goals of the North Korean regime and it is already sufficiently advanced to be able to reach its neighbours with nuclear missiles. Many of our witnesses therefore consider that North Korea will

64 Q143

65 Q123

66 Q136

67 Q44 [Dr Nilsson-Wright], Q130 and Q164

68 Q110 and Q121

69 Qq151–152

not stop now, and will certainly not denuclearise, even though that remains the official position of the UK Government.⁷⁰ North Korea has invested too much effort and treasure in nuclear and missile technology to abandon it all at the moment of success.

49. Witnesses also believed that, on the same basis, deterrence and containment would be effective in preventing the North Korean regime from launching nuclear weapons. For example, Alistair Bunkall and Andrea Berger, amongst others, believed that self-preservation of the regime is a key motive and that “war, and the consequence of almost certain destruction, would contradict this”.⁷¹ Furthermore, Professor Chung-in Moon, one of the South Korean’s President’s Special Advisors, also told us in a private meeting that he judged Kim Jong-un to be “both rational and calculating—and therefore possible to negotiate with”.

50. Successful deterrence has to be visible and credible, though with due consideration of the risk of provoking North Korea. For example, Dr Nilsson-Wright said that the international community “needs to make clear that deterrence is reliable” and argued for stronger deterrence in conjunction with negotiations on denuclearisation.⁷² On the other hand, Professor Heuser argued that actions in support of deterrence could escalate tensions, for example any installation of nuclear weapons in Japan, “could be misinterpreted as preparations for an attack on North Korea”.⁷³

51. Earl Howe was sure that Kim Jong-un was already very clear about the consequences of military action: “Kim Jong-un knows that any attack on South Korea or anywhere else, or use of nuclear weapons in any context, would be met with an overwhelming response.”⁷⁴

52. On the basis of experience, it seems unlikely that North Korea will move towards denuclearisation at this late and highly advanced stage. If it proceeds on its present course, then the world will have to consider whether to recognise North Korea as a de facto nuclear power in the future and, from that point, establish whether or not a policy of military containment and nuclear deterrence will prove to be as successful with North Korea’s totalitarian rulers as it has been with other Communist regimes.

53. We consider that Kim Jong-un can be dissuaded from the use of nuclear weapons, by means of a policy of deterrence and containment, both now and after North Korea achieves its goal of acquiring nuclear-armed ICBMs. North Korea seeks such weapons both for prestige and regime preservation. We believe it is obvious to North Korea that launching such weapons would lead inescapably to devastating military consequences from the US, South Korea and other countries too. It would result in the downfall—indeed the annihilation—of the regime: the polar opposite of what Kim Jong-un is seeking to achieve. He is ruthless, like other Communist dictators before him, but he is rational. *We recommend that the Government should encourage the US and other allies to spell out very clearly to North Korea the West’s policy of deterrence and containment—and underline the consequences North Korea will face, if it ever launches a nuclear weapon.*

70 Q2, Q10, Q16, Qq101–102 and Q143

71 For example, Q5, Q65, Alistair Bunkall ([NKO0007](#))

72 Q10

73 Q16

74 Q145

4 The North Korean cyber threat

North Korean cyber capabilities

54. As with its nuclear programme, North Korea has also rapidly developed its cyber capability, enabling it to conduct numerous attacks across the world. It began its pursuit of cyber capabilities in the early 1990s, following the first Gulf War, and initial attacks were targeted against South Korea.⁷⁵ However, it was its assault on Sony Pictures in November 2014 that first drew the world’s attention to its potential.⁷⁶ This has since been further illustrated by increasingly sophisticated or widespread attacks, with examples as set out in the table below.

Table 3: Examples of cyber-attacks attributed to North Korea⁷⁷

Date	Details
Mar 2013	Attacks on South Korean banks and media agencies, disrupting websites, shutting down computers and erasing hard drives.
Nov 2014	Attack on Sony Pictures, stealing data and erasing hard drives. This was in response to the film, <i>The Interview</i> , as it was considered a slight on Kim Jong-un. The film was pulled from cinemas, although later re-released.
Feb 2016	Theft of \$101 million from the Bangladesh Central Bank via the SWIFT electronics payment system. There have also been reports of electronic thefts from other banks across the world since 2015.
Apr 2017	Theft of \$73 million worth of bitcoins in a hack of the Youbit exchange in South Korea. A further attack in December 2017, which closed the exchange, is also likely to have been the work of North Korea.
May 2017	Global ransomware attack, Wannacry, affecting more than 200,000 computers in at least 100 countries. The attack exploited a vulnerability in Windows operating systems and locked users out of infected computers and other devices, unless they paid out a ransom. The attack is considered to be the work of the Lazarus Group, under the direction of North Korea.

55. Robert Hannigan, a former director of GCHQ, has been reported as admitting that the North Korean cyber-threat “crept up on us”, and that “because they are such a mix of the weird and absurd and medieval and highly sophisticated, people didn’t take it seriously”.⁷⁸

56. Following the Sony Pictures attack, North Korea’s cyber capabilities were seen as an increasing threat to other countries. The Centre for Strategic and International Studies reported in 2015 that North Korea was already “emerging as a significant actor in cyberspace with both its clandestine and military organisations gaining the ability to

75 Q49 and Centre for Strategic & International Studies, [North Korea’s Cyber Operations Strategy and Responses](#), (December 2015), p23 and p79

76 Centre for Strategic & International Studies, [North Korea’s Cyber Operations Strategy and Responses](#), (December 2015), p4

77 Intelligence and Security Committee, [Annual report 2016–17](#), HC 655, p30; Centre for Strategic & International Studies, [North Korea’s Cyber Operations Strategy and Responses](#), (December 2015), p23 and p79; BBC [Bitcoin exchange Youbit shuts after second hack attack](#) 19 December 2017; Comptroller & Auditor General, [Investigation: WannaCry cyber attack and the NHS](#), Session 2017–19, HC 414, p4 and p19

78 [The World Once Laughed at North Korean Cyberpower. No More.](#) The New York Times, 15 October 2017

conduct cyber operations”.⁷⁹ Nigel Inkster told us that the early North Korean attacks were initially unsophisticated, but that he now ranks the country highly in its capabilities compared to other countries.

I would not put them in the same league as China and Russia in terms of either firepower, so to speak, or technical sophistication, but they are moving up the chain rapidly. I think it is a moot point whether they merit inclusion in the premier league, or whether they are still teetering on the brink of first division/premier league, but they are definitely up around that area.⁸⁰

57. The success of North Korean cyber operations reflects the attention that the country has put into this field. The Centre for Strategic and International Studies reported in 2015 that North Korea has sophisticated organisations conducting cyber operations, with an estimated 6,800 hackers, supported by a technology base capable of hardware and software development.⁸¹ Nigel Inkster and the NCC Group told us about the well-established pipeline to develop skilled cyber personnel, for example, putting “their brightest and best students” into elite North Korean or overseas universities. The NCC Group also noted the additional privileges for workers in cyber operations.⁸²

58. It is also likely that some regimes tacitly allow North Korea to base cyber operations in their countries. For example, Nigel Inkster told us that one of the North Korean cyber units has an operational base in a hotel in China, and that its activities must be known to the Chinese, given the bandwidth required and the close monitoring of web usage by the Chinese government.⁸³ FCO Minister Mark Field noted that it is not clear whether there has been concerted cooperation between North Korea and neighbouring countries. However, he was certain that the UK Government was raising its concerns with these countries:

Rest assured, we will have those discussions—at times publicly but, more often than not, privately—to make clear our displeasure.⁸⁴

59. Experts also consider that North Korean cyber capabilities will only improve. Robert Hannigan wrote in the Financial Times in October 2017 that the “Pyongyang regime’s capabilities will improve and they will continue to surprise us, as they have in other technology areas. There are an increasing number of sophisticated cyber tools available; they will learn from their mistakes and use them to better effect.”⁸⁵ Nigel Inkster also told us that cyber-attack “is one of those areas where you learn best by doing. They [the North Koreans] are very active and they are working very hard to keep pace with the most up-to-date, cutting-edge techniques.”⁸⁶

79 Centre for Strategic & International Studies, [North Korea’s Cyber Operations Strategy and Responses](#), (December 2015), p4

80 Q53

81 Centre for Strategic & International Studies, [North Korea’s Cyber Operations Strategy and Responses](#), (December 2015), p35

82 Q49 and NCC Group ([NKO0004](#))

83 Qq50–51

84 Q153

85 [The immediate threat from North Korea is in cyber space](#), Financial Times, 25 October 2017

86 Q53

The threat to the UK

60. It is likely that North Korea has already conducted a cyber-attack on the UK through the Wannacry ransomware, which particularly disrupted the UK's health system. The National Audit Office reported that at least 81 NHS trusts (34% of all trusts across England) were affected, along with nearly 600 GP practices. NHS England estimated that more than 19,000 appointments would have been cancelled as a result.⁸⁷ The FCO formally confirmed that North Korea was likely to be behind the attacks in December 2017.⁸⁸ Defence Minister Earl Howe accepted that Wannacry constituted an attack by North Korea on the UK.⁸⁹

61. Witnesses, nevertheless, agreed that the UK was unlikely to have been the main target. Nigel Inkster felt that North Korea was fortunate to have affected the UK to the degree it did with Wannacry, being “a function of the serendipitous discovery that our healthcare sector in particular was heavily dependent on operational systems that were no longer supported by the manufacturers”.⁹⁰ Asked whether the UK was the target, Earl Howe, told us that:

One has to assess whether that was the intended target. It is in the nature of viruses like that that you cannot predict where they will hit. Indeed, it was not just our NHS institutions; I understand many organisations around the world were affected. My understanding is that the target for that was South Korea but, in the nature of those activities, these viruses can spread almost anywhere.⁹¹

62. Our witnesses did not consider that the UK is a specific target for North Korean cyber-attacks. For example, as with North Korea's nuclear targeting, Nigel Inkster thought that the UK was not on North Korea's priority list.

We need to keep things in context. North Korea has a hierarchy of targets: they are most worried about South Korea, Japan and the United States, because they are the countries that most immediately impact on their national security.⁹²

63. Nevertheless there is a risk that the UK may be subject to future North Korean cyber-attacks either in the course of Pyongyang's pursuit of hard currency or in retaliation to perceived slights to the regime. The Intelligence and Security Committee reported in its 2016–17 Annual Report that “GCHQ has informed us that there is significant risk of a similar attack on the UK”, comparable with that on Sony Pictures.⁹³ In its written evidence, the MoD told us that:

We judge North Korea to have a relatively low threshold for use of offensive cyber capabilities. For the most part, North Korean cyber-attacks have targeted South Korea. But as international sanctions tighten, the country

87 Comptroller & Auditor General, [Investigation: WannaCry cyber attack and the NHS](#), Session 2017–19, HC 414, pp6–7.

88 [Foreign Office Minister condemns North Korean actor for WannaCry attacks](#), Foreign & Commonwealth Office press release, 19 December 2017

89 Q162

90 Q55

91 Q160

92 Qq55–56 and Q149

93 Intelligence and Security Committee, [Annual Report 2016–17](#), HC 655, para 160

may place more emphasis on the money-making opportunities that these capabilities afford, thereby subverting sanctions. Any actions of governments (including the UK) or corporate entities perceived by the regime to be insulting to the regime could lead to the use of offensive cyber.⁹⁴

64. The risks are heightened by North Korea's recklessness in its use of cyber-attacks, with little or no regard to retaliation or who might be affected. The Intelligence and Security Committee reported in its 2016–17 Annual Report that North Korea “is prepared to use its capabilities without any concern for attribution, and for ideological motives which are alien to other countries”.⁹⁵ Earl Howe, when talking about Wannacry, also remarked that “I think Kim probably did not care very much where, who or what was affected ...”⁹⁶

65. The North Korean cyber threat, however, remains below that of Russia and China, given their more sophisticated cyber capabilities. As Nigel Inkster told us, “If we have reasonable defences to deal with the Chinas and the Russias, we should be able to handle North Korea.”⁹⁷

66. North Korea has shown that it has both the ability and intent to conduct cyber-attacks around the world, whether for financial gain or in response to perceived slights against its leader. It has also demonstrated a level of sophistication which makes it one of the world's most advanced cyber powers.

67. It is likely that North Korea has already successfully attacked the UK with the Wannacry ransomware, although we agree with the Government that the UK was probably not intended to be the principal target. Nevertheless, the Wannacry attack highlighted basic vulnerabilities in UK information technology systems. With North Korea unconcerned by who gets hurt when it lashes out, the UK will continue to be at risk from North Korean cyber-attacks.

UK cyber defence

68. The Government acknowledges the need for ever-improving cyber defences as cyberspace becomes ever more critical to the UK and the range of cyber-threats intensify. In its most recent National Cyber Security Strategy, 2016 to 2021, the Government set out the increasing cyber-threat from not only state and state-sponsored groups, but also from cyber-criminals, terrorists and hacktivists.⁹⁸

69. To improve UK cyber-capabilities, including cyber-defences, the Government has been increasing investment in this area since the start of the decade. The 2010 National Security Strategy and 2013 Spending Review allocated a total of £860 million to the National Cyber Security Programme. The 2015 National Security Strategy and Strategic Defence and Security Review then announced £1.9 billion, over the following five years, for cyber-defence and ‘sovereign capabilities in cyber space’. In its written evidence, the MoD detailed a number of cyber-programmes that it is running as part of this investment.⁹⁹

94 Ministry of Defence ([NKO0003](#))

95 Intelligence and Security Committee, [Annual Report 2016–17](#), HC 655, para 161

96 Q161

97 Q56 [Nigel Inkster]

98 HM Government, [National Cyber Security Strategy 2016–2021](#), November 2016, pp17–20

99 HM Government, [National Cyber Security Strategy 2016–2021](#), November 2016, para 1.3, Ministry of Defence ([NKO0003](#)) and Q149

70. The National Cyber Security Centre (NCSC) was one of the programmes announced in 2015 as part of this investment and is considered a positive step by Government. It acts as the “lead across Government and the private sector in supporting organisations to defend themselves against cyber threats” and was established in October 2016 by GCHQ.¹⁰⁰ Nigel Inkster considered that the NCSC helped strengthen the UK’s ability to “deal with the kind of threats that we might be subject to”.¹⁰¹ Professor Chalmers and the NCC Group also agreed that it helped public-private cooperation, although the NCC Group felt that more collaboration is still needed.¹⁰²

71. We have not examined the effectiveness of the Government’s investment as part of this inquiry. Some of the Government’s work on cyber-security will, however, be examined by the Joint Committee on the National Security Strategy. It is currently conducting an inquiry on the cyber-security surrounding the UK’s critical infrastructure.¹⁰³

72. The lack of sufficient numbers of skilled cyber-staff is, however, a concern for the UK’s cyber-capability development. Mark Field told us that GCHQ had difficulties retaining its cyber-staff.¹⁰⁴ The Intelligence and Security Committee, in its 2016–17 Annual Report, also concluded that for GCHQ “recruiting and retaining technical specialists in the face of ever-growing levels of private sector competition remains a significant challenge”.¹⁰⁵ In March 2018, the MoD opened a new Defence Cyber School to help develop specialist cyber-skills within both defence and the wider government.¹⁰⁶

73. The Government signalled further increases in investment in cyber last year, potentially at the expense of conventional forces. The National Security Adviser, Sir Mark Sedwill, told the Joint Committee on the National Security Strategy that increasing cyber-threats, particularly from Russia, needed to be addressed as part of the National Security Capability Review (NSCR). However, he also confirmed that the review was to be fiscally neutral, so any funding increase for cyber-security would have to be taken from other areas across defence and security.¹⁰⁷

74. We strongly believe that this trade-off between capabilities is the wrong approach. As we concluded recently on the Royal Marines and UK amphibious capability, “The answer to new and intensified threats must be augmented capabilities—not massively reduced ones such as the deletion of amphibious forces and specialised ships”.¹⁰⁸

75. With the announcement of the Modernising Defence Programme (MDP) in January 2018, it is no longer clear how funding for cyber-security will be allocated across the MoD and the other government security organisations. The MDP separated defence from rest

100 Ministry of Defence ([NKO0003](#))

101 Q55

102 Q56 [Professor Chalmers] and NCC Group ([NKO0004](#))

103 [Cyber security: Critical National Infrastructure inquiry launched](#), National Security Strategy Joint Committee press release, 21 December 2017

104 Q167

105 Intelligence and Security Committee, [Annual Report 2016–17](#), HC 655, p41

106 [New Defence Cyber School opens to help protect UK](#), Ministry of Defence news, accessed March 2018

107 Oral evidence taken before the Joint Committee on the National Security Strategy on [18 December 2017](#), HC (2017–19) 625, Q4, Q9 and Q11

108 Defence Committee, Third Report of Session 2017–19, [Sunset for the Royal Marines? The Royal Marines and UK amphibious capability](#), HC 622, para 101.

of the NSCR and its conclusions are likely to be published in July, a few months after the NSCR. The Secretary of State for Defence has been clear that the MDP has not been designed to be fiscally neutral.¹⁰⁹

76. We welcome the Government's continued investment in countering the growing cyber-threat to the UK, not only from North Korea, but also from other states and from non-state organisations. £1.9 billion has already been allocated to improve the cyber-defences of both public and private bodies and the Joint Committee on the National Security Strategy is examining how some of this funding may be improving the cyber-security of the UK's critical national infrastructure. It is also expected that the Government will announce further investment following the National Security Capability Review and the (now separate) defence review, the Modernising Defence Programme, both of which are expected to be published later this year.

77. However, this additional funding must not be at the expense of conventional forces. As we have already highlighted in our report on the Royal Marines, the Government has an inescapable duty to ensure that there are sufficient funds to meet the new and intensified threats in addition to pre-existing threats which have not gone away. New threats require new investment, rather than simply seeking to 'balance the books' by sacrificing conventional capabilities. *We would strongly recommend—indeed, we must insist—that the UK Government finds this additional cyber funding from outside the existing defence budget.*

109 PQ [127876](#) and Oral evidence taken on 21 February 2018, HC (2017–19) 814, Q11 and Qq16–17

5 Other North Korean threats

North Korea's biological and chemical capability

78. It is likely that North Korea possesses both biological and chemical warfare capabilities, in addition to its nuclear arsenal. Defence Minister Earl Howe confirmed North Korea's chemical warfare capability to us, stating that: "We know that a chemical agent was used to kill Mr Kim's half-brother. That indicates that they do have a capability in that area. We know that they train for chemical warfare."¹¹⁰ Professor Chalmers also told us that North Korea holds a substantial stockpile of chemical weapons and possibly also biological weapons which can inflict large-scale damage.¹¹¹

79. Yet Earl Howe also pointed out that it was not clear what would cause North Korea to use biological or chemical weapons. He acknowledged the limitations of the intelligence the UK Government can acquire in this field.¹¹²

80. The MoD confirmed in February 2018 that it was considering expanding its anthrax vaccination programme to UK armed forces personnel in high-readiness units. It was widely reported in the media that the possibility of the UK being involved in a conflict with North Korea was a factor for this review.¹¹³

North Korea's conventional forces

81. North Korea maintains large conventional armed forces, which could cause significant destruction on the peninsula. The MoD told us that the North Korean armed forces' key strength is their mass, including some 1.2 million regular personnel and 3,500 tanks. The army also has a high number of artillery pieces in place along the Demilitarised Zone—many of which can reach of South Korea's capital, Seoul—and a large establishment of Special Forces.¹¹⁴

82. However, the MoD strongly believes that North Korea would lose if it fought a conventional war. In its written evidence, the MoD's assessment was that, "whilst its conventional forces could inflict significant damage, they would ultimately be no match for those of the United States and South Korea". It judged that the North Korean armed forces are limited by ageing equipment, that its air power is "far inferior to those of other regional powers and the navy is primarily a coastal defence force".¹¹⁵ Professor Chalmers also told us that it would be only a matter of time before overwhelming US and South Korean forces would overrun North Korean forces in a conflict.¹¹⁶

83. In addition to its growing nuclear and cyber capabilities, North Korea continues to possess a very substantial army, as well as biological and chemical agents which could inflict severe casualties in the South. Although these capabilities do not directly threaten the UK, they remain significant threats to the region in the event of a conflict.

110 Q168

111 Q63

112 Q168

113 For example, [Troops 'need anthrax jabs' as North Korea and terrorism threat grows](#), The Times, 24 February 2018 or [British troops 'could get anthrax jabs' amid UK terror threat and mounting tensions between US and North Korea](#), The Daily Mail, 24 February 2018

114 Ministry of Defence ([NKO0003](#)) and Q35

115 Ministry of Defence ([NKO0003](#))

116 Q63

6 UK actions in the event of conflict

The likelihood of conflict

84. The advancement of North Korea's nuclear weapons programme since 2016 has further increased the prospect of war between it and other countries—the US, in particular. We set out the tensions between North Korea, the US and other neighbouring countries in Chapter 3. Should conflict break out, Dr Cottee could not see it being contained within North Korea. As well as US and South Korean forces, he highlighted that both Chinese and Russian forces are deployed on the North Korean border and could be involved, were the region to be destabilised.¹¹⁷

85. Overall, the MoD and other witnesses do not consider that conflict is likely. Defence Minister Earl Howe told us that we should not be “... alarming ourselves that there is a risk of war around the corner. We don't think, on balance, that there is a likelihood of armed conflict in the near future.”¹¹⁸ Professor Chalmers also believed that conflict was not inevitable, though it remains a horrifying possibility, telling us that: “... there is a one in four chance of a major war over the next couple of years in the Korean peninsula ...”¹¹⁹

86. If conflict does arise, it may be triggered by accident or even initiated by the US. In its written evidence, the MoD considered that miscalculation could lead to conflict, noting that North Korea has previously “described the imposition of sanctions, US statements and the threat of maritime interdiction operations, as ‘acts of war’.”¹²⁰ Other witnesses, such as Professor Heuser, also suggested that even firm deterrence could be misinterpreted, whilst Alistair Bunkall raised the prospect of a US pre-emptive strike as a trigger for conflict.¹²¹

Legal obligations for the UK to provide military assistance

87. The UK Government considers that there is no legal obligation for the UK to support countries such as South Korea or Japan in the event of an attack by North Korea. In its written evidence, the FCO states that “under the 1953 Armistice that ended the Korean War, the UK is not under any legal obligation to defend the Republic of Korea (ROK) or to join the US in defending the ROK” and that the UN Charter “does not oblige the UK to come to the aid of another state if attacked”. It also considers that attacks on US territory in the East Asia region fall outside of the Washington (NATO) Treaty, unless part of a wider conflict:

Article 6 of the Washington Treaty defines the geographical scope of Article 5 primarily as ‘the territory of any of the Parties in Europe or North America’ or ‘islands under the jurisdiction of any of the Parties in the North Atlantic Area north of the Tropic of Cancer’. However, any attack against the United States, whether directed against Hawaii, Guam, or another US state or territory, is likely to be part of a major conflict. In such a case, either

117 Q35

118 Q169

119 Q98

120 Ministry of Defence ([NKO0003](#))

121 Q16 and Alistair Bunkall ([NKO0007](#)) and Mr James Pragnell ([NKO0001](#))

the consultation provisions of Article 4 or the collective defence provisions of Article 5 would plainly apply, and the decision of the North Atlantic Council would determine the response of the Alliance.¹²²

88. Despite the lack of legal obligation, the UK would be likely to respond positively to a call for assistance from a country attacked by North Korea, whether the call came directly from the country under attack or through the United Nations. South Korea took the UN approach in 1950 when North Korea invaded, and that led to the UK's involvement in the war. Professor Chalmers and Vice Admiral (Rtd) Sir Jeremy Blackham, a former Deputy Chief of Defence Staff (Capability), agreed that the UN would be key to any UK intervention.¹²³ The FCO, however, set out that the Government would need to be satisfied first of the existence of a legal basis, stating that: "The UK would not participate in any military operations involving the use of force before being satisfied that there was a lawful basis on which to do so."¹²⁴

89. FCO Minister Mark Field also ruled out UK participation in any pre-emptive attack on North Korea under present circumstances:

Chair: I will have one more go. I still have not heard the words: "We are not talking about joining in the initiation of an attack, [but] only possibly participating in the response to an attack initiated by North Korea."

Mark Field: This is highly speculative, but I can foresee no circumstances at the present time where we would be joining in the initiation of any attack.¹²⁵

90. There is potential for conflict in the region, most likely as a result of miscalculation by either side. However, the UK has no legal obligation to provide military assistance if countries in the region are attacked by North Korea. The UK Government might still decide to undertake military action, but it would clearly need to be satisfied first of the legality of such action, such as under the terms of an agreed UN resolution. But, if hostilities were initiated by North Korea, it is difficult to see the UK standing aside.

Deploying UK military forces to the region

91. The UK currently has very few forces in the region, with no permanent military bases in place. Earl Howe told us that a single frigate, HMS Sutherland, was currently on course to visit the region, with another to follow later in the year.¹²⁶ The nearest British Army presence is a battalion of Gurkhas stationed in Brunei and there are no Royal Air Force units stationed in the area.¹²⁷

92. It would also take time to deploy significant UK forces, particularly if they were already committed elsewhere. Earl Howe told us that: "At present, as of today, it is clearly difficult for me to give you facts and figures as to what we could send, because we are

122 Ministry of Defence ([NKO0009](#))

123 Q85

124 Ministry of Defence ([NKO0009](#))

125 Q135

126 Q129

127 *UK defence obligations to South Korea*, Briefing Paper [Number CBP08100](#), House of Commons Library, October 2017

committed in a number of parts of the world, but given adequate notice, yes, I am sure we could deploy forces.”¹²⁸ Sir Jeremy Blackham went into more detail on how long force deployment would take:

We need to be clear that were we to try to move significant forces to that part of the world, we are talking in terms of weeks, not days ... We are also talking about reducing our commitment to a number of other current commitments and asking ourselves whether we actually have the resources to deploy a significant number of forces—I am now talking about not just the hardware but the manpower, arsenals, maintenance and support for a significant period of time.¹²⁹

93. Sir Jeremy also raised the difficulty of sustaining UK forces, unless at the expense of other commitments. His view was that:

It depends, obviously, on how much you are prepared to strip away any other commitments that you have ... If you are talking about more conventional units, my own guess—and it is a guess—is that you are talking about a year or something like that. Not much longer ... I think that we would simply run out of units at that point. We cannot actually man a complete destroyer and frigate force now.¹³⁰

94. The MoD confirmed to us that the UK has plans in place to deploy forces to the region if necessary. Earl Howe told us that the plans cover different scenarios but he provided no further detail for operational security reasons. The Minister did confirm that these plans include consideration of how long forces could be sustained and what forces could be deployed given the UK’s existing commitments across the world.¹³¹

95. However, regardless of what UK forces were deployed, they would not prove decisive in any conflict in the region. As we reported in Chapter 5, North Korean conventional forces number over a million, while the US-South Korea Combined Forces Command controls over 600,000 active-duty military personnel across both nations.¹³² Witnesses, such as Sir Jeremy Blackham and Dr Cottee, agreed that any UK involvement is likely to be “symbolic”.¹³³

96. Instead, witnesses raised the possibility that the US might ask the UK to take on some of its responsibilities elsewhere in the world. These include ‘backfilling’ for US forces in the Middle East and the Indian Ocean, so that they could be redeployed to the Korean peninsula, and also covering for intelligence gaps. This would be easier for the UK to do than committing forces to direct conflict with North Korea.¹³⁴

128 Q130

129 Q84 [Vice Admiral Sir Jeremy Blackham]

130 Q91

131 Qq177–179

132 *UK defence obligations to South Korea*, Briefing Paper [Number CBP08100](#), House of Commons Library, October 2017

133 Q44 [Dr Cottee] and Q84 [Vice Admiral Sir Jeremy Blackham]

134 Q44 and Q87

Conducting offensive cyber operations

97. The UK also has the option of conducting cyber-attacks against North Korea. The Government has publicly stated that it has been developing offensive cyber-capabilities through the National Offensive Cyber Programme (NOCP), which is run jointly between GCHQ and the MoD.¹³⁵ Indeed the UK has already conducted cyber-attacks against Daesh in the Middle East, although Nigel Inkster indicated that these attacks may have had only a limited effect.¹³⁶ GCHQ told the Intelligence and Security Committee that the programme represented a step-change in the UK's efforts on offensive cyber:

... this is on a different scale and it is the full spectrum of capabilities from tactical stuff ... right through to what we would say is the high end of counter-state offensive cyber capabilities which might never be used but are the sort [of] high-end deterrents, if you like, and everything in-between.¹³⁷

98. Mr Inkster suggested that it would be difficult to carry out cyber-attacks on North Korea, although these might include “kicking it off the net” and “going after some of their operations in third countries”.¹³⁸ However, he also noted that “there are very few things in North Korea that are absolutely dependent on the internet and networking capabilities, in contrast to major western nations ... which are increasingly network-dependent and hence very vulnerable”.¹³⁹ The UK could also attack North Korea's nuclear programme, but he presumed that those systems would be heavily protected and would require human infiltration to gain access.¹⁴⁰

99. Any UK military involvement in this theatre is not going to be decisive. However, the UK might be able to provide significant offensive cyber-capability or relieve US forces from commitments outside the region, should the need arise.

Providing non-military assistance

100. In the event of conflict, the FCO Minister confirmed that the Government has evacuation plans in place for UK citizens. The FCO estimate that around 100,000 UK citizens visit South Korea each year and at least 8,000 live and work there, with more in Japan. The Minister and the FCO also confirmed that the evacuation plans are constantly updated and are discussed with allies in the region.¹⁴¹

101. Mr Field did, however, raise the difficulties of evacuation. He noted that the FCO would not know who was in South Korea at any one time and that events might not go to plan: “Inevitably, if this is brought into action, it would be at a time of such great crisis that one has to realise that the best-laid plans would not necessarily go awry, but would not go as smoothly as they might do on a 50-page memorandum.”¹⁴² Professor Chalmers

135 Q165 and Ministry of Defence ([NKO0003](#))

136 Q61 and Q165

137 Intelligence and Security Committee, [Annual Report 2016–17](#), HC 655, para 107

138 Q99

139 Q49

140 Q59

141 Qq171–172 and Ministry of Defence ([NKO0009](#))

142 Q174

also mentioned port capacity issues, as other countries would want to evacuate their own citizens, whilst at the same time the US would be bringing in people and material. He concluded that “... it would be a very crowded space”.¹⁴³

102. Such evacuations would benefit from the use of specialist ships designed for amphibious operations, but the UK Government continues to reduce this capability. We have recently reported on the versatility of such ships as part of our inquiry into the importance of the Royal Marines and the Royal Navy’s specialist amphibious fleet. For example, in 2000, UK amphibious ships were used for non-combatant evacuations in Sierra Leone.¹⁴⁴ The MoD has now, however, confirmed the sale of HMS Ocean, the UK’s only helicopter carrier, to Brazil.¹⁴⁵ The future of the two Landing Ship Docks, HMS Albion and HMS Bulwark, are also dependent upon the latest defence capability review, the Modernising Defence Programme.¹⁴⁶

103. It is most likely that UK military assistance would be needed for evacuating UK citizens in the region, in the event of a conflict. We welcome the fact that the UK Government has evacuation plans in place to meet such a contingency. We recognise, however, that there would be almost insuperable challenges for any evacuation to succeed if the UK further reduced its amphibious capability, by deleting HMS Albion, HMS Bulwark, or both. *We recommend that the MoD should continue to update its evacuation plans as the situation further develops. The MoD should also provide us with a categorical assurance that, as part of its Modernising Defence Programme, it has now fully understood the essential role of amphibious capability in conducting civilian evacuations, as well as inserting troops from the sea.*

143 Q93

144 Q176 and Defence Committee, Third Report of Session 2017–19, [Sunset for the Royal Marines? The Royal Marines and UK amphibious capability](#), HC 622, para 21.

145 [UK agrees sale of HMS Ocean to Brazil](#), Ministry of Defence news story, 19 February 2018

146 Defence Committee, Third Report of Session 2017–19, [Sunset for the Royal Marines? The Royal Marines and UK amphibious capability](#), HC 622, Summary.

Conclusions and recommendations

The North Korean nuclear threat

1. It is a reasonable assumption that North Korea can already reach the UK with ballistic missiles which could potentially carry nuclear warheads. In any case, it is almost certain to be able to do so within the next six to 18 months if it continues its programme at the current rate of development. North Korea has made significant advances in its nuclear weapons development programme over the last two years. It is widely believed that North Korea can now launch short-range ballistic missiles capable of hitting targets in the region. North Korea has, however, yet to demonstrate that it has successfully tested the remaining elements required for full Inter-Continental Ballistic Missile (ICBM) capability, such as re-entry vehicle technology or the miniaturisation and integration of nuclear warheads with its ICBMs. (Paragraph 17)
2. We also believe that North Korea's nuclear programme may lead to nuclear proliferation—both to other states and to non-state organisations that are hostile to the UK. North Korea has shown no qualms about selling conventional arms to anyone, in its pursuit of hard currency, and sales of nuclear weapons technology could prove very profitable. *We recommend that the UK Government should set out what actions it will take to prevent North Korea from selling its nuclear technology.* (Paragraph 18)
3. We agree with the UK Government's view that North Korea has shown no sign hitherto of wishing to target the UK with nuclear weapons. (Paragraph 24)

Responding to a potential North Korean nuclear threat

4. The international community has strongly condemned North Korea's actions in developing nuclear weapons and has imposed increasingly severe economic sanctions. Even countries historically allied to North Korea, such as China, have supported international actions to put pressure on North Korea to abandon its nuclear programme. (Paragraph 30)
5. Inadequate enforcement of sanctions has, however, significantly limited their impact on North Korea's economy. Successive United Nations reports show how North Korea has been able to bypass sanctions, often assisted by lax enforcement on the part of certain countries. *We recommend that the Foreign and Commonwealth Office should set out what steps it has taken to encourage other countries to enforce—in full—the agreed sanctions against North Korea.* (Paragraph 31)
6. The United States and South Korea are leading the efforts to resolve the crisis with North Korea, but the UK clearly has a role to help reduce tensions in the region. It has, for example, strong diplomatic relationships with the US, South Korea and Japan, and its Embassy in North Korea provides avenues for communication with North Korea and for the gathering of information. (Paragraph 46)

7. We welcome the resumption of talks between North and South Korea and potentially with the United States, although we remain unconvinced that these will really result in North Korea's denuclearisation. We nevertheless consider that continued North Korean engagement with the US and South Korea offers the best chance to de-escalate tensions and potentially lead to a resolution. *We recommend that the Foreign and Commonwealth Office should continue with its diplomatic efforts to help resolve the crisis, including promoting dialogue.* (Paragraph 47)
8. On the basis of experience, it seems unlikely that North Korea will move towards denuclearisation at this late and highly advanced stage. If it proceeds on its present course, then the world will have to consider whether to recognise North Korea as a de facto nuclear power in the future and, from that point, establish whether or not a policy of military containment and nuclear deterrence will prove to be as successful with North Korea's totalitarian rulers as it has been with other Communist regimes. (Paragraph 52)
9. We consider that Kim Jong-un can be dissuaded from the use of nuclear weapons, by means of a policy of deterrence and containment, both now and after North Korea achieves its goal of acquiring nuclear-armed ICBMs. North Korea seeks such weapons both for prestige and regime preservation. We believe it is obvious to North Korea that launching such weapons would lead inescapably to devastating military consequences from the US, South Korea and other countries too. It would result in the downfall—indeed the annihilation—of the regime: the polar opposite of what Kim Jong-un is seeking to achieve. He is ruthless, like other Communist dictators before him, but he is rational. We recommend that the Government should encourage the US and other allies to spell out very clearly to North Korea the West's policy of deterrence and containment—and underline the consequences North Korea will face, if it ever launches a nuclear weapon. *We recommend that the Government should encourage the US and other allies to spell out very clearly to North Korea the West's policy of deterrence and containment—and underline the consequences North Korea will face, if it ever launches a nuclear weapon* (Paragraph 53)

The North Korean cyber threat

10. North Korea has shown that it has both the ability and intent to conduct cyber-attacks around the world, whether for financial gain or in response to perceived slights against its leader. It has also demonstrated a level of sophistication which makes it one of the world's most advanced cyber powers. (Paragraph 66)
11. It is likely that North Korea has already successfully attacked the UK with the Wannacry ransomware, although we agree with the Government that the UK was probably not intended to be the principal target. Nevertheless, the Wannacry attack highlighted basic vulnerabilities in UK information technology systems. With North Korea unconcerned by who gets hurt when it lashes out, the UK will continue to be at risk from North Korean cyber-attacks. (Paragraph 67)
12. We welcome the Government's continued investment in countering the growing cyber-threat to the UK, not only from North Korea, but also from other states and from non-state organisations. £1.9 billion has already been allocated to improve the cyber-defences of both public and private bodies and the Joint Committee on the

National Security Strategy is examining how some of this funding may be improving the cyber-security of the UK's critical national infrastructure. It is also expected that the Government will announce further investment following the National Security Capability Review and the (now separate) defence review, the Modernising Defence Programme, both of which are expected to be published later this year. (Paragraph 76)

13. However, this additional funding must not be at the expense of conventional forces. As we have already highlighted in our report on the Royal Marines, the Government has an inescapable duty to ensure that there are sufficient funds to meet the new and intensified threats in addition to pre-existing threats which have not gone away. New threats require new investment, rather than simply seeking to 'balance the books' by sacrificing conventional capabilities. *We would strongly recommend—indeed, we must insist—that the UK Government finds this additional cyber funding from outside the existing defence budget.* (Paragraph 77)

Other North Korean threats

14. In addition to its growing nuclear and cyber capabilities, North Korea continues to possess a very substantial army, as well as biological and chemical agents which could inflict severe casualties in the South. Although these capabilities do not directly threaten the UK, they remain significant threats to the region in the event of a conflict. (Paragraph 83)

UK actions in the event of conflict

15. There is potential for conflict in the region, most likely as a result of miscalculation by either side. However, the UK has no legal obligation to provide military assistance if countries in the region are attacked by North Korea. The UK Government might still decide to undertake military action, but it would clearly need to be satisfied first of the legality of such action, such as under the terms of an agreed UN resolution. But, if hostilities were initiated by North Korea, it is difficult to see the UK standing aside. (Paragraph 90)
16. Any UK military involvement in this theatre is not going to be decisive. However, the UK might be able to provide significant offensive cyber-capability or relieve US forces from commitments outside the region, should the need arise. (Paragraph 99)
17. It is most likely that UK military assistance would be needed for evacuating UK citizens in the region, in the event of a conflict. We welcome the fact that the UK Government has evacuation plans in place to meet such a contingency. We recognise, however, that there would be almost insuperable challenges for any evacuation to succeed if the UK further reduced its amphibious capability, by deleting HMS Albion, HMS Bulwark, or both. *We recommend that the MoD should continue to update its evacuation plans as the situation further develops. The MoD should also provide us with a categorical assurance that, as part of its Modernising Defence Programme, it has now fully understood the essential role of amphibious capability in conducting civilian evacuations, as well as inserting troops from the sea.* (Paragraph 103)

Formal minutes

Tuesday 27 March 2018

Members present:

Rt Hon Dr Julian Lewis, in the Chair

Leo Docherty	Gavin Robinson
Martin Docherty-Hughes	Ruth Smeeth
Rt Hon Mr Mark Francois	Rt Hon John Spellar
Mrs Madeleine Moon	Phil Wilson

The Draft Report (*Rash or Rational? North Korea and the threat it poses*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 103 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Fourth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Tuesday 17 April at 10.45am

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the [inquiry publications page](#) of the Committee's website.

Wednesday 13 September 2017

Question number

Andrea Berger, Senior Research Associate, James Martin Centre for Non-Proliferation Studies, **Dr Matthew Cottee**, Research Associate, International Institute for Strategic Studies, **Dr John Nilsson-Wright**, University of Cambridge and Senior Research Fellow, Chatham House, and **Professor Beatrice Heuser**, Professor of International Relations, University of Reading

[Q1–47](#)

Tuesday 19 December 2017

Vice Admiral (Rtd) Sir Jeremy Blackham KCB, former Deputy Chief of Defence Staff (Capability), **Professor Malcolm Chalmers**, Deputy Director-General, Royal United Services Institute, and **Nigel Inkster CMG**, Special Adviser, International Institute for Strategic Studies

[Q48–105](#)

Tuesday 23 January 2018

Rt Hon. Mark Field MP, Minister of State for Asia and the Pacific, **Rt Hon. Earl Howe**, Minister of State for Defence, and **Kate White**, Director of Asia Pacific, Foreign and Commonwealth Office

[Q106–183](#)

Published written evidence

The following written evidence was received and can be viewed on the [inquiry publications page](#) of the Committee's website.

NKO numbers are generated by the evidence processing system and so may not be complete.

- 1 Alistair Bunkall ([NKO0007](#))
- 2 Campaign for Nuclear Disarmament ([NKO0006](#))
- 3 Ministry of Defence ([NKO0003](#))
- 4 Ministry of Defence ([NKO0005](#))
- 5 Ministry of Defence ([NKO0009](#))
- 6 Mr James Pragnell ([NKO0001](#))
- 7 NCC Group ([NKO0004](#))
- 8 Professor Clive Dyer ([NKO0008](#))
- 9 Vice Admiral (Rtd) Sir Jeremy Blackham KCB ([NKO0002](#))

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the [publications page](#) of the Committee's website.

Session 2017–19

First Report	Gambling on 'Efficiency': Defence Acquisition and Procurement	HC 431
Second Report	Unclear for take-off? F-35 Procurement	HC 326
Third Report	Sunset for the Royal Marines? The Royal Marines and UK amphibious capability	HC 622
First Special Report	SDSR 2015 and the Army	HC 311
Second Special Report	Armed Forces Covenant Annual Report 2016	HC 310
Third Special Report	Investigations into fatalities in Northern Ireland involving British military personnel: Government Response to the Committee's Seventh Report of Session 2016–17	HC 549
Fourth Special Report	Gambling on 'Efficiency': Defence Acquisition and Procurement: Government Response to the Committee's First Report	HC 846
Fifth Special Report	Unclear for take-off? F-35 Procurement: Responses to the Committee's Second Report	HC 845