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SCIENCE AND TECHNOLOGY  
COMMITTEE

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THE IRANIAN NUCLEAR PROGRAMME:  
HOW TO BUILD UPON THE DEAL

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SPECIAL REPORT

**Osman Askin BAK (Turkey)**  
*Special Rapporteur*

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## I. INTRODUCTION<sup>1</sup>

1. After years of intense international negotiations, the E3/EU+3 (China, France, Germany, Russia, the United Kingdom, and the United States, with the High Representative of the European Union (EU) for Foreign Affairs and Security Policy)<sup>2</sup> and Iran reached agreement on a Joint Comprehensive Plan of Action (JCPOA) on 14 July 2015. In a 2012 resolution on the Iranian nuclear programme<sup>3</sup>, brought forward by the Science and Technology Committee (STC), the NATO Parliamentary Assembly (NATO PA) called for a comprehensive, negotiated, and long-term solution to the Iranian nuclear dispute. With the JCPOA, this goal has been achieved. If Iran adheres to its commitments, the country will be on a path – albeit a long one – to restore international confidence in the exclusively peaceful nature of its nuclear programme consistent with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). In short, the JCPOA marks a turning point in the international community’s approach to the Iranian nuclear programme.

2. The nuclear dispute with Iran began when clandestine Iranian nuclear facilities came to light in 2002. The diplomatic resolution of this issue is in Iran’s long-term security interest as well as in the interest of the people of Iran. For the next 10 to 15 years, the JCPOA drastically reduces the risk that Iran could develop a nuclear weapon in a very short time if it chose to do so. Furthermore, the international community will remain in a strong position to monitor Iran’s nuclear programme beyond 2025 to 2030, as many provisions last until 2035 and 2040.

3. If Iran were capable of rapidly producing nuclear weapons, it would present a threat to regional stability, global security, the nuclear non-proliferation regime, and the vital interests of certain states. That risk has now been minimised. Instead, the agreement opens the doors for a more stable and constructive relationship between Iran and the international community. Still, whether Iran chooses to seize this opportunity remains an open question. Many challenges loom, quite apart from the nuclear issue. Most importantly, Iran continues to play a destabilising role in the region through its proxies.

4. Back in 2010, in an effort to resolve the Iran nuclear issue, Turkey and Brazil signed the “Tehran Declaration” with Iran, which, although not as comprehensive as the JCPOA, proposed a deal that contained some similar elements to those in the JCPOA. However, the deal was not supported by some of the partners in the negotiation process and thus could not be implemented.

5. Undoubtedly, the nuclear agreement is a negotiated outcome where both sides had to make compromises. This is the nature of a transactional deal between often diametrically opposed sides. The JCPOA is not perfect, but on balance, it is grounded in reality, and the gains for international security outweigh its drawbacks. The JCPOA has put in place stronger measures than those contained in normal International Atomic Energy Agency (IAEA) Comprehensive Safeguards Agreements and Additional Protocols as well as those contained in the 2013 interim Joint Plan of Action between the E3/EU+3 and Iran. In 2013, Iran was on the verge of becoming a virtual nuclear weapons state; today, Iran has the opportunity to maintain an exclusively peaceful nuclear programme, and the international community has the ability to verify this.

6. More generally, the agreement allows the international community to better manage the risks emanating from Iran’s nuclear programme. Critics argue that in the later years of the JCPOA, when many restrictions will come to an end, Iran will become a virtual nuclear weapons state, one that

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<sup>1</sup> This report was drafted before the Presidential election in the United States on 8 November 2016. At the time of the adoption of this report, it was not yet clear how the election would affect the nuclear agreement with Iran.

<sup>2</sup> The E3/EU+3 is also referred to as P5+1, denoting that five of the six countries are Permanent Members of the United Nations (UN) Security Council. This report uses the term E3/EU+3 to account for the key role played by the EU High Representative for Foreign Affairs and Security Policy.

<sup>3</sup> [See NATO PA resolution 400 \(2012\) on the Iranian Nuclear Programme](#)

could quickly break out to become a possessor of nuclear weapons. In the JCPOA, Iran has reaffirmed “that under no circumstances will Iran ever seek, develop, or acquire any nuclear weapons”. However, even if suspicions arise at any point that Iran is reneging on this pledge, the international community will still have all the instruments available which brought Iran to the negotiating table in the first place.

7. This report does not aspire to be exhaustive, given the detail and complexity of the nuclear agreement and the intensity of the political debate surrounding the negotiations, but it:

- lays out the parameters of the Iranian nuclear deal, including its strengths and weaknesses;
- discusses the Iranian ballistic missile and space programmes, which are central to any discussion on possible military dimensions of a nuclear programme;
- provides an update on the Iran nuclear deal since it was adopted in the summer of 2015;
- and looks at possible ways to build on the deal.

8. This report does not deal with the larger security implications of the Iranian nuclear deal, which is one of the topics of a 2016 report prepared by the NATO PA’s Political Committee<sup>4</sup>. A first draft report was discussed at the STC meeting at the NATO PA Spring Session held on 29 May 2016. This report has been updated, revised, and expanded for discussion. It was adopted at the STC meeting at the NATO PA Annual Session on 20 November 2016.

## **II. ELEMENTS OF THE IRANIAN NUCLEAR DEAL: STRENGTHS AND WEAKNESSES**

9. The JCPOA is designed to verifiably block all Iranian pathways towards a nuclear weapon at declared facilities along the full nuclear cycle, through strict physical constraints and monitoring and verification provisions, and to make it very difficult for Iran to undertake clandestine nuclear efforts. Even after many of the provisions fade away in the later years of the JCPOA, the international community will be in a better position to judge whether Iran’s nuclear programme is exclusively for peaceful uses compared to the situation before the JCPOA went into effect. In exchange for complying with the strict measures under the JCPOA and United Nations Security Council Resolution (UNSCR) 2231, Iran’s economic and political isolation will gradually be lifted.

10. The deal is structured in a way that increases the likelihood of compliance by providing positive and negative incentives to Iran to follow through on its commitments. Most importantly, the E3/EU+3 and the UN Security Council granted the first round of sanction relief only on 16 January 2016 – the so-called Implementation Day – when the IAEA had announced its satisfaction with several key steps Iran had taken to limit its nuclear programme and implement additional transparency measures. Furthermore, sanctions will “snap back” into place if any country deems Iran to have reneged on its commitments at any given point in time. On the positive side, Iran achieved its primary objectives: a clear path towards the comprehensive lifting of all sanctions related to its nuclear programme as well as continuing a peaceful nuclear programme with a uranium enrichment component.

### **A. LIMITS ON PRODUCTION AND REMOVAL OF EXISTING FISSILE MATERIAL**

11. The centrepiece of the deal is composed of restrictions on Iran’s production of uranium and plutonium and of provisions on removing existing stocks of fissile material from the country.

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<sup>4</sup> See Report of the Sub-committee on Transatlantic Relations of the Political Committee *Security in the Gulf* [172 PCTR 16 E]

## 1. Uranium

12. A key criterion for the E3/EU+3 became the length of Iran's "break-out time", i.e. the time it would take to produce enough highly-enriched uranium for one nuclear warhead. Before the interim Joint Plan of Action went into effect in 2013, Iran's break-out time was thought to be two to three months. With the JCPOA's limits to Iran's uranium enrichment capacity and low-enriched uranium stockpile, the E3/EU+3 reckon that this time has been increased to over a year for at least 13 years.

13. Specifically, key restrictions include:

- reducing Iran's enrichment capacity by half;
- reducing for 10 years the number of installed centrifuges from over 20,000 to 6,100 first generation IR-1 machines (of which 5,060 will be operational);
- prohibiting enrichment of uranium above 3.67% (i.e. above normal reactor fuel grade);
- eliminating 97% of Iran's uranium enriched to levels below 3.67% and capping it at 300kg for 15 years;
- limiting the testing of advanced centrifuges for 10 years;
- limiting the deployment of advanced centrifuges in 2026 to 2028, in order to maintain the same limited enrichment capacity;
- prohibiting research and development on alternative forms of uranium separation for 10 years.

14. Uranium enrichment and related research and development at Fordow Fuel Enrichment Plant will cease completely for 15 years. The facility is buried deep into the mountainside and therefore more difficult to monitor. It will be converted into a nuclear, physics, and technology research centre. One third of the 1,044 centrifuges at the site will produce stable radioisotopes for use in medicine, agriculture, industry, and science; the other two-thirds will be used as replacements if centrifuges break. For 15 years, no other uranium enrichment facilities or facilities to convert fuel plates or nuclear scrap material back to low-enriched uranium (enriched to 3.67% or below) can be built.

15. Several criticisms have been raised regarding restrictions on uranium. Indeed, the JCPOA restrictions do not go as far as those called for in the 2012 NATO PA resolution. The resolution argued that enrichment should only be allowed once the IAEA has clarified all outstanding issues and come to a broad conclusion that Iran's nuclear programme is entirely civilian in nature. However, given the importance the Iranian government attaches to uranium enrichment, a complete end to enrichment may never have been realistic. Some critics have also argued that the break-out time could currently be as low as seven months if Iran decided to re-install about 1,200 IR-2m centrifuges that have been placed in monitored storage. Furthermore, they argue that break-out timelines will drop rapidly between the years 2028 and 2035, as key restrictions on technology, enrichment levels, and facilities expire and Iran once again begins to be treated like any other non-nuclear weapon state under the NPT: from four to six months in 2028 to a few days in the year 2035. Of course, any steps by Iran to increase its enrichment capacity beyond its practical peaceful needs in the later years of the JCPOA would heighten concerns that it was aiming to produce fissile material for nuclear weapons.

## 2. Plutonium

16. In essence, the JCPOA blocks Iran from any potential plutonium route to a nuclear warhead for the foreseeable future. This is an important and consequential concession on Iran's part. Of the 15,000 or so nuclear warheads on the planet, more than 95% rely on plutonium, because plutonium warheads are far more efficient as well as easier and cheaper to produce in large numbers.

17. Since 2006, Iran has not complied with several UNSCRs ordering the suspension of construction of the IR-40 reactor at Arak, a heavy water reactor capable of producing weapons-grade plutonium. Facilitated by a working group composed of E3/EU+3 representatives, the Arak reactor will be re-designed so that it can produce only very small amounts of plutonium. The re-designed reactor would need at least four years to produce enough plutonium for a single warhead. Before Implementation Day, Iran has already made the core of the unfinished Arak reactor unusable by drilling holes into it and filling them with concrete. A modified core will be installed that will produce only minimal amounts of plutonium. Iran will also ship spent fuel abroad for the lifetime of the reactor and sell, on the international market, all heavy water produced in the heavy water production plant at Arak that is not required for the functioning of the reactor. Although the Arak reactor will not be dismantled, it would require at least a few years to convert the reactor back to its original specifications and the effort would be easily detected.

18. Iran has agreed not to construct any additional heavy water reactors for 15 years. Also, for the same number of years, it will not engage in spent fuel reprocessing (including research and development), except irradiated enriched uranium targets for medical or industrial use. It will also not build any fuel separation facilities for 15 years, except for a small one at Arak. While these JCPOA restrictions expire after year 15, Iran has expressed that it has no plans or intentions to undertake any of these efforts in the future. It has stated that it plans to rely on light water reactors for its power and research reactors, and intends to ship out spent fuel from all reactors. Critics have pointed out that such plans and intentions are not legally binding commitments.

## **B. MONITORING, VERIFICATION, AND TRANSPARENCY**

### **1. Verification regime**

19. IAEA monitoring and verification is crucial to enforce the provisions of the JCPOA and Iran's other safeguard obligations as well as to increase the likelihood that clandestine activities can be quickly detected. A key aim is to determine whether the IAEA can draw the so-called Broader Conclusion that all nuclear material in Iran remains in peaceful activities. The IAEA aims to finish this process within eight years.

20. The overall monitoring and verification regime is three-pronged and consists of Iran's Comprehensive Safeguard Agreement with the IAEA, the Additional Protocol, and further verification measures unique to the JCPOA.

21. The Comprehensive Safeguards Agreement is the bedrock of IAEA efforts to verify that nuclear programmes are exclusively peaceful. It has always been implemented in Iran, but the country will now also implement the modified Code 3.1. The modified code requires Iran to notify the IAEA when it decides to build a new nuclear facility. Without it, countries only need to notify the IAEA six months before they introduce nuclear material into a new facility, leaving a loophole for potential proliferators.

22. Iran will now begin implementing the Additional Protocol, which it signed in 2003, but only voluntarily implemented between 2003 and 2006. On the so-called Transition Day, which will occur either eight years from Adoption Day or when the Broader Conclusion is reached (whichever comes earlier), Iran will seek ratification of the Additional Protocol in parliament. The Additional Protocol gives the IAEA the ability to conduct wider-ranging inspections, in particular at undeclared locations.

23. While Iranian compliance with the Comprehensive Safeguards Agreement and the Additional Protocol will be required as long as Iran is a party to the NPT, the duration of specific provisions under the JCPOA varies from 10 years to indefinite. Overall, Iran's current monitoring and verification regime amounts to the most intrusive verification regime in the history of the IAEA. More specifically, JCPOA-specific measures include:

- **Challenge inspections:** If the IAEA has concerns regarding undeclared nuclear materials or activities, or activities inconsistent with the JCPOA at undeclared locations, including military facilities, the agency can request clarification. If the IAEA's concerns are not resolved, the maximum time that Iran can legally keep inspectors out of the facility in question is 24 days. This provision remains in force for 15 years. However, it should be noted that the IAEA's permanent right to make a challenge inspection for facilities involving undeclared nuclear materials is a corner stone in the Comprehensive Safeguards Agreement and was augmented with complementary access in the Additional Protocol. This does not expire. Since the JCPOA also prohibits activities that could contribute to the design and development of a nuclear explosive device, any facilities suspected of such activities also fall under the challenge inspection provision.
- **Uranium mines and mills:** The IAEA will be able to monitor uranium ore concentrate production facilities for 25 years.
- **Centrifuge production:** IAEA will contain centrifuge rotors and bellows and conduct surveillance of them for 20 years.
- **Long term IAEA presence in Iran:** The agency will significantly increase the number of inspectors, with a goal of 130 to 150 inspectors within nine months after Implementation Day.
- **Use of advanced technologies:** The IAEA will be able to use modern technologies to monitor and verify compliance in Iran. This includes online enrichment measurement and electronic seals that provide continuous measurements directly to the IAEA.

24. This new regime puts the IAEA in a position where it can monitor and verify Iran's declared nuclear and nuclear-related facilities over the full nuclear cycle – from uranium mining and milling to nuclear waste treatment. In order to “break out” of the NPT and develop nuclear weapons, Iran would need far more than one or even several clandestine facilities: it would need to develop an entire clandestine nuclear programme from start to finish. This is very unlikely without early detection either by the IAEA or national intelligence assets.

25. Concerns have been raised with regard to the fact that Iran can delay inspections of sites for a maximum of 24 days, giving Iran time to hide the activities of concern from inspectors. There are no “anywhere, anytime” access provisions, as some had called for. It must be noted, however, that it is almost impossible to sanitise facilities that worked with nuclear materials or large-scale nuclear-related facilities within 24 days. However, evidence of small-scale prohibited activities not involving nuclear material could potentially be removed in time. Furthermore, it is important to note that a maximum inspection delay of 24 days is an improvement compared to the normal Additional Protocol provisions which have no such limit.

## 2. Resolution of the “Possible Military Dimension” Issue

26. An important part of reaching the nuclear deal with Iran was determining whether there had been a military dimension to the Iranian nuclear programme. At the end of 2011, the IAEA first laid out its detailed concerns surrounding Iranian activities relevant to the development of a nuclear explosive device. When signing the JCPOA, the IAEA and Iran also agreed upon a “Roadmap for Clarification of Past and Present Outstanding Issues”, based on the 2013 Framework for Cooperation that was never fully implemented.

27. The Roadmap aimed at the resolution of all past and present outstanding issues by the end of 2015. Completion of the activities in the Roadmap, as verified by the IAEA, was a precondition for Implementation Day and the accompanying sanctions relief. The twelve areas of concern, as described by the IAEA in 2011, are contained in Table 1. The Roadmap provided for technical expert meetings, technical measures and discussions. The IAEA and Iran signed a separate arrangement regarding the issue of Parchin. At the Parchin military complex, Iran is suspected of having constructed a large explosives containment vessel to conduct hydrodynamic experiments, which would be a strong indicator that the country sought to develop nuclear weapons. Since the

allegations were presented, Iran has undertaken extensive reconstruction of the site, which amounted to a sanitisation of the site according to most experts.

28. In its final assessment of 2 December 2015, the IAEA “assesses that a range of activities relevant to the development of a nuclear explosive device were conducted in Iran prior to the end of 2003 as a coordinated effort, and some activities took place after 2003. The Agency also assesses that these activities did not advance beyond feasibility and scientific studies, and the acquisition of certain relevant technical competences and capabilities. The Agency has no credible indications of activities in Iran relevant to the development of a nuclear explosive device after 2009.” Subsequently, the IAEA’s Board of Governors noted “that all the activities in the Road-map for the clarification of past and present outstanding issues regarding Iran’s nuclear programme were implemented in accordance with the agreed schedule and further notes that this closes the Board’s consideration of this item”.

29. In 2012, the NATO PA recognised the potential value of a grace period, whereby Iran would not be punished for admitting to past illicit nuclear-related activities. This unfortunately did not materialise. Critics have thus stated that the closure of the possible military dimensions issue was a mistake, as Iran did not explain all activities undertaken in the areas of concern and was often unwilling to cooperate on these items. While that is true, it is more important, on balance, that the international community gain confidence that all current and future nuclear activities in Iran are of an exclusively peaceful nature. The issue may, however, re-emerge when the IAEA deliberates on whether to reach the Broader Conclusion. A Broader Conclusion does not necessarily mean that the state in question has never had a nuclear weapons programme. However, if suspicions arise again that some of these past activities continue or have resumed, this will obviously negatively affect the Broader Conclusion process.

**Table 1: AREAS OF CONCERN - POSSIBLE MILITARY DIMENSION**

|   |
|---|
| 1. Programme management structure                           |
| 2. Procurement activities                                   |
| 3. Nuclear material acquisition                             |
| 4. Nuclear components for an explosive device               |
| 5. Detonator development                                    |
| 6. Initiation of high explosives and associated experiments |
| 7. Hydrodynamic experiments                                 |
| 8. Modelling and calculation                                |
| 9. Neutron initiator  |
| 10. Conducting a test                                       |
| 11. Integrating into a missile delivery vehicle             |
| 12. Fusing, arming, and firing system                       |

**3. Procurement Channel**

30. The JCPOA also regulates, for a period of ten years, the flow of goods to Iran’s nuclear activities permitted under the JCPOA as well as dual-use goods that could be used for non-permitted nuclear-related activities. A Joint Commission was set up under the JCPOA, comprising the E3/EU+3 and Iran, to oversee implementation of the agreement. The Joint Commission has set up a permanent working group for the procurement channel. The procurement working group can communicate approval of a proposed sale to the UN Security Council. In the case of a dispute in the working group, the Joint Commission will take up the case. Importantly, the working group can conduct checks on end users to establish whether the goods end up where they were intended to. If properly implemented, the arrangement should help detect any clandestine Iranian nuclear development and deter illicit procurement activities through the threat of snapback sanctions.



31. Critics have pointed out that the procurement channel mechanism is very complicated and could pose several problems. They suggest that the time for reviewing proposals – a maximum of 30 days – is too short to ensure effective reviews, potentially leading to gridlock, rushed decisions or inadequate investigations of end use. The procurement channel could easily be overwhelmed, given the increased global commerce in goods that could be relevant to illicit nuclear activities. Overwhelming the channel could also be used as a deliberate tactic by Iran. Outside the procurement channel, Iran could try to use middle men to acquire illicit goods, which would of course violate the JCPOA but Iran could protest innocence if such activities came to light. Also, Iran has become very adept at acquiring goods that are not on international control lists, but could be conducive to illicit nuclear activities. Lastly, the UN has very limited resources to conduct outreach to its member states on how the channel works. This could mean that member states might not be fully aware of their obligations.

### C. SANCTIONS RELIEF

32. Key sticking points during the JCPOA negotiations were the questions of when and which sanctions should be lifted. Ultimately, the JCPOA came to stipulate that sanctions relief related to Iran's nuclear programme will take place in three stages: on Implementation Day (16 January 2016); on Transition Day, which will take place either in 2023 or when the IAEA reaches the Broader Conclusion, whichever comes first; and on Termination Day in 2025. Restrictions imposed by the UN Security Council on imports and exports of conventional arms and ballistic missile-related material will stay in place until 2020 and 2023 respectively or until that time when the IAEA reaches the Broader Conclusion – whichever comes first.

33. **Implementation Day:** All UN sanctions related to Iran's nuclear programme will be lifted. However, a set of specific, time-limited restrictions have been included in UNSCR 2231. Mostly, they stipulate UN Security Council approval before states can engage in certain activities with Iran, for example nuclear-related trade. However, asset freezes on a number of individuals and entities will remain in place and new ones can still be imposed. The United States will lift or suspend many nuclear-related US sanctions. Most importantly, it will lift most extraterritorial (or secondary) sanctions, i.e. those that are applicable to non-US persons. Some primary sanctions, i.e. those applicable to US persons, will also be lifted or suspended, but the overwhelming majority will remain in place. The EU will lift many EU nuclear-related sanctions, asset freezes, and other measures and restrictions.

34. **Transition Day:** The United States will seek legislative action to end nuclear-related sanctions so that Iran is treated in a fashion consistent with the US approach to other non-nuclear weapon states under the NPT. The EU will terminate all other nuclear-related sanctions on Iran.

35. **Termination Day:** Remaining restrictions and provisions contained in UNSCR 2231 will end. Remaining EU sanctions will also end.

36. The Joint Commission is in charge of monitoring the status of sanctions relief. If other efforts fail to resolve a dispute, any member of the Commission may refer the issue to the UN Security Council, alleging that Iran is in breach of the JCPOA. The Security Council would then be required to vote on a resolution to continue sanctions relief. If no resolution to continue sanctions relief passes within 30 days, all previous UN Security Council sanctions will "snap back" into place. This procedure gives the member who alleges that Iran is in non-compliance a veto right, forcing the "snap back" of sanctions. This provision for the automatic re-imposition of sanctions expires in 2025. However, some observers believe that the permanent members of the UN Security Council have informally agreed to prolong the mechanism for another five years when it is set to run out.

37. The sanctions relief process has been criticised. Some argue that it is needlessly hasty in providing Iran access to frozen assets and new economic opportunities. Only those assets will be

released that were frozen due to the dispute over the Iranian nuclear programme. However, experts disagree on the total value of frozen assets to be released under the JCPOA. The US Treasury Department has estimated that Iran will be able to access around USD 56 billion in foreign reserves. Iran itself thinks that it can access about USD 35 billion. Iran has not gained immediate access to the frozen assets, as many are tied up in contracts or non-performing loans. If some of the freed-up funds are channelled into lucrative commercial agreements, it may create incentives in other countries – including parties to the JCPOA – not to re-impose sanctions in the case that Iran does not implement the JCPOA. Additionally, it is not clear what the threshold for UN Security Council referral will be: how egregious do alleged breaches on Iran’s part have to be for one of the EU3+3 states to risk undoing the JCPOA? Furthermore, the strengthening of Iran’s economy due to the lifting of sanctions may result in diminished punitive impact if sanctions are re-imposed. Critics have also argued that sanctions relief frees up money that Iran could use to support its proxy groups abroad. The international community must therefore be extremely vigilant regarding how Iran uses the money. It is in the interest of its people that these funds go towards economic development efforts instead of foreign adventures.

### **III. IRANIAN BALLISTIC MISSILE AND SPACE PROGRAMMES**

#### **A. THE STATUS OF IRAN’S BALLISTIC MISSILE PROGRAMME**

38. Iran’s ballistic missile programme has its roots in a rudimentary programme under the Shah, and was well-established by the mid-1980s to counter Iraq’s missiles and compensate for the degradation of its air force after the Islamic Revolution. Today, Iran possesses the largest ballistic missile inventory in the Middle East, and the country is working hard to increase the sophistication, scale, and reach of its missiles. Any ballistic missile with a large enough payload can carry a nuclear warhead if designed to do so, which has made the programme particularly worrying to large parts of the international community.<sup>5</sup> Iran is the only country that has developed missiles with a range of over 2,000 km without having manufactured nuclear warheads first. The Iranian government has repeatedly stated that it does not need ballistic missiles with a longer range.

39. Currently, Iran’s ballistic missiles are still of low quality, especially regarding accuracy. For years to come, Iranian ballistic missiles will thus be of little military use, but will mostly be useful as a political tool. However, the programme is set to make strides over the coming years. Notably, enhancing the precision of its larger missiles is a priority for the Iranian military. The domestic Iranian capacity to independently develop and produce ballistic missiles has grown. Indeed, it appears that Iran is slowly overtaking North Korea in certain aspects. Still, the country remains dependent on foreign suppliers for key technology and components. For example, it appears that the country cannot produce the liquid propellant engines needed for its missiles. Iran is actively working on new intermediate- and long-range ballistic missiles. It will face challenges in developing these new systems and has a history of setting overly ambitious goals and overstating achievements. This should give the international community enough time to react to worrying developments. In due time, however, Iran remains on track to be able to manufacture long-range ballistic missiles and, most crucially, an Intercontinental Ballistic Missile (ICBM), if it so chooses. Iran’s ballistic missiles can already reach NATO territory in Southeast Europe, but most experts do not believe that missiles with the range to threaten Western Europe or the United States will be developed before 2017 and 2020 respectively.

40. Due to the sensitive nature of missile programmes, all open-source assessments of Iran’s missile capabilities are necessarily based on expert judgment. A lack of consensus exists as to the technical specifications, system performances, and even the number of different systems. Table 2 provides an overview of Iranian ballistic missiles, according to one preeminent expert.

<sup>5</sup> Iran also has active cruise missile and unmanned aerial vehicle programmes that could potentially carry nuclear weapons.

**TABLE 2: SELECT IRANIAN BALLISTIC MISSILES**

|  | <b>Est. Range</b> | <b>Est. Payload</b> |
|--|-------------------|---------------------|
| <b>Shahab-1</b>  | 300 km            | 900 kg              |
| <b>Shahab-2</b>  | 500 km            | 720 kg              |
| <b>Qiam</b>  | 600 km            | 720 kg              |
| <b>Shahab-3</b>  | 900 km            | 1,000 kg            |
| <b>Ghadr-1</b>   | 1,600 km          | 750 kg              |
| <b>Emad</b>  | unknown           | unknown             |
| <b>Sajjil-2</b>  | 2,000 km          | 750 kg              |
| Based on testimony by Michael Elleman before the US Senate Committee on Banking, Housing, and Urban Affairs on 24 May 2016 |                   |                     |

41. During the JCPOA negotiations, the United States in particular tried to put limits on Iran's ballistic missile programme, but Iran refused to give ground. In fact, Iran has never accepted that the UN Security Council placed restrictions on its ballistic missile programme in the first place. Thus, one of the key criticisms of UNSCR 2231 has been that the language on ballistic missiles is weak and constitutes a major loophole. It must be noted, however, that the previous ban on ballistic missiles was in the first place aimed at increasing pressure on Iran to enter negotiations on its nuclear programme.

42. In the resolution, "Iran is called upon not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons, including launches using such ballistic missile technology, until the date eight years after the JCPOA Adoption Day or until the date on which the IAEA submits a report confirming the Broader Conclusion, whichever is earlier." Two main problems arise regarding this provision. First, the resolution uses the weaker term "call upon" rather than "shall not", which would be legally binding. Second, Iran has argued that its ballistic missiles are not "designed to be capable" to carry nuclear warheads. The language of UNSCR 2231 changed ever so slightly, but importantly, compared with previous resolutions, which mentioned ballistic missiles "capable of delivering nuclear weapons". Within the E3/EU+3, France, Germany, the United Kingdom, and the United States argue that all systems that can carry at least a 500kg payload to a range of at least 300km are inherently capable of delivering a nuclear warhead. Iran currently possesses an estimated 300 ballistic missiles that fall into this category (Missile Technology Control Regime Category 1).

43. Restrictions on sales of missile technology to Iran have been extended by eight years under UNSCR 2231. However, under UNSCR 2231, potential missile-related sales will be less strictly monitored than nuclear sales, and the means to punish Iran for illicit imports are fewer and less potent than those related to nuclear or nuclear-related technology. Also, it has been pointed out that sanctions on a number of banks that have facilitated illicit procurement have been lifted early on. It should be noted, however, that even when restrictions are lifted, for most countries able to export such technology, sales would not be in keeping with the voluntary constraints imposed upon them by the Missile Technology Control Regime. Having said that, several important producers of missile technology are not partners in the Missile Technology Control Regime.

## **B. THE STATUS OF IRAN'S SPACE PROGRAMME**

44. Technology developed and tested in the Iranian space programme, first embarked upon in the 1990s, could provide useful expertise for an ICBM programme, including valuable insights into booster rocket technology and other useful areas pertaining to ballistic missile programmes. Iran first launched a commercial satellite on a Russian rocket in a 2005 joint project. Progress in Iran's space programme was impressive in the following years. In 2008, Iran launched its own two-stage Safir space launch vehicle, most likely a derivative of the Shahab-3, for the first time. In February 2009, Iran succeeded in placing the Omid satellite into orbit with the Safir carrier rocket.

This was followed by two more launches in 2011 and 2012, putting the Rasad-1 and Navid satellites into space. All satellites were ostensibly for civilian purposes. Both the Omid and the Rasad-1 have fallen back to Earth again, as planned. In early 2015, Iran placed the Fajr satellite into orbit with another Safir rocket. Iran also presented a new rocket model called the Simorgh in 2010, which could see its first test in 2016. Iran has also launched several smaller rockets with animals on board. Iran previously had high ambitions for its space programme, including manned flight. It is reported that following the shutdown of the Iranian Space Agency in early 2015, Iran's space programme was eventually moved under the authority of the Ministry of Communications and Information Technology.

#### **IV. THE IRANIAN NUCLEAR DEAL: WHERE DO WE STAND AFTER ONE YEAR?**

45. This section provides an update on the Iran nuclear deal since it was adopted in the summer of 2015, with a focus on the period since Implementation Day.

##### **A. IRAN'S COMPLIANCE WITH THE JCPOA AND UNSCR 2231**

46. In his first report to the UN Security Council on the implementation of the JCPOA and UNSCR 2231 in July 2016, UN Secretary-General Ban Ki-moon was encouraged by Iran's JCPOA implementation record over the first six months. Indeed, Iran's implementation has been better than most expected, although by no means perfect. To Iran's credit, for example, the IAEA could announce Implementation Day a mere three months after Adoption Day. Most observers thought that Iran would need a longer time to fulfil the necessary requirements.

47. Since Implementation Day, the IAEA has reported twice to its Board of Governors on the implementation of the JCPOA. The IAEA could attest that Iran was living up to its obligations with one exception that was quickly remedied. In February 2016, the IAEA found that Iran held stocks of 130.9 tons of heavy water, which was 0.9 tons more than allowed under the JCPOA, i.e. 0.69% over the limit. Within a week, however, Iran had shipped 20 tons of heavy water to Oman. Subsequently, the United States purchased 32 tons of heavy water from Iran. This brought Iran in line once again with the JCPOA. Most experts argue that the overproduction should be seen as a modest and technical breach. However, critical voices argue that the sale set a bad precedent. While the JCPOA does not forbid heavy water production as long as Iran remains under the 130 tons limit, it should be made clear to Iran that it cannot deliberately overproduce heavy water in order to force acquisitions on the international market.

48. The two IAEA reports came under criticism because of a lack of crucial details that previously had been made available to the Board of Governors. After Iran restarted uranium enrichment in 2007, the IAEA reports contained a large amount of detailed information. This enabled independent expert assessments of high quality. For example, the reports contain very little information on verification efforts on weaponisation activities. Last year, inspectors found man-made particles of natural uranium, albeit in inconclusive trace amounts at the Parchin military complex. Some experts argue that this discovery should trigger a re-sampling, especially in light of continuing reconfiguration of the complex. However, the IAEA reports do not mention whether it returned to the complex for additional verification. Furthermore, Iran's long-term centrifuge enrichment plan has not been made available to the public. Leaked in the summer of 2016, an independent expert review concluded that it did not contain details that were more sensitive than any other details divulged in the JCPOA and thus could have been released. An important result of a review of this plan was that the experts who saw the plan now judge that Iranian breakout times at the end of year 13 of the JCPOA would be four months – instead of their previous estimate of six months. It must be stressed that a lack of detail does not mean that the IAEA did not live up to its task or that Iran has not complied with its obligations. However, it means that assessments based on open sources, including this report, have become more difficult. France, Germany, the United Kingdom, and the United States have already called for more detailed reporting. Increased

transparency should be in Iran's interest as well, as it would increase public confidence in Iranian behaviour.

49. In July, Secretary-General Ban Ki-moon could also report to the UN Security Council that "there have been no reports of the supply, sale, transfer or export to the Islamic Republic of Iran of nuclear-related items undertaken contrary to the provisions of the [JCPOA] and resolution 2231 (2015)". While that may be true, it must be noted that German intelligence services have stated that Iran tried to acquire nuclear-related material in a covert way after the signing of the JCPOA, but before Implementation Day. The episode clearly demonstrates that Iranian procurement activities need to be very closely monitored by all means available.

50. It is still impossible to say whether the JCPOA procurement channel will work as envisaged. Critics and proponents of the procurement channel can continue to stand by their positions. The main reason is that, by September 2016, Iran had made no requests. One proposal was handed in by Iran, but was later withdrawn. Challenges in bureaucratic competencies inside Iran on end use approval procedures appear to be responsible, in part, for the lack of requests. However, reports indicate that Iran made an inquiry with a supplier to acquire controlled carbon fibre material. The request was denied both by the supplier and its government. Thus, the inquiry never reached the procurement working group, where it would have likely been denied.

51. Even before Implementation Day, Iran tested the weakness of UNSCR 2231 regarding ballistic missiles. On 10 October 2015, Iran launched a test of the Emad ballistic missile. Another test of the Ghadr-110 followed on 21 November. After Implementation Day, Iran launched five tests in two rounds (March and May 2016). For comparison, during the period of greatest tension between Iran and the international community over the nuclear programme (2006 to 2012), Iran averaged five tests per year. During his first report to the UN Security Council, Secretary-General Ban Ki-moon therefore told the UN Security Council that he was concerned with such launches. He argued that "those launches are not consistent with the constructive spirit demonstrated by the signing of the Joint Comprehensive Plan of Action." France, Germany, the UK and the United States are on record stating that these tests were conducted in defiance of UNSCR 2231. However, China and Russia do not share this view.

52. Secretary-General Ban Ki-moon was also concerned by a seizure of an arms shipment on route to Yemen in March 2016. Iran denies that it was sending arms to Yemen. He also noted several open questions regarding the participation of Iranian entities and a company in the Fifth Iraq Defence Exhibition in March 2016 and travel to Iraq by an Iranian general on the travel ban list to Iraq.

## **B. SANCTIONS RELIEF AND THE IRANIAN ECONOMY**

53. The hope for a revival of the Iranian economy due to sanctions relief certainly played a key role in its leaders' willingness to negotiate the JCPOA. Since Implementation Day, the E3/EU+3 have followed all steps on sanctions relief. Indeed, they have been more accommodating than some critics of the deal would have liked.

54. Importantly, the Iranian economy has stopped its freefall, as it continues to stabilise and is slowly improving. However, the economy is still in a much weaker state than before sanctions were imposed. In the year after signing the JCPOA, the Iranian economy grew by 0.7%. For the year 2016, the World Bank estimates a growth rate of 4.2%. The Iranian government itself has a target rate of 8% annual growth. Inflation peaked in 2014 with rates approaching 40%, according to the International Monetary Fund. In the summer of 2016, the rate fell to below 10% for the first time in a quarter century. Iran's currency has also stabilised. The official unemployment rate is currently at 11%, which is just below the average rate for 2001 to 2016. There are signs, albeit weak, that Iran's banking sector is slowly recovering, too. Small and medium-sized European banks are once again starting to do business in Iran, although still in a very cautious way. However, no European

major banks have thus far engaged with Iran. The Financial Action Task Force also still recommends a high level of scrutiny for transactions with Iran, as it still needs to seriously address the risk of terrorist financing and money laundering. In a surprise decision, due to some concrete action and renewed political will, the Financial Action Task Force has suspended, for one year, its call for member states to employ special countermeasures.

55. Iran's economy has been in dire straits for a number of years. It has therefore always been unrealistic to expect a full-blown economic boom after only a few months. Nevertheless, Iran has argued to the UN that it has yet to fully benefit from the lifting of sanctions. Four key reasons explain why the Iranian economy is not living up to the high hopes of its leadership, according to experts. First, since the 1979 revolution, Iran has always been a difficult country to do business in. Sanctions relief under the nuclear deal has no automatic impact on this. Currently, Iran ranks 118<sup>th</sup> on the World Bank's ease-of-doing-business index, for example. Second, Iran is still the target of sanctions – both residual nuclear-related sanctions and other sanctions, including for its support for terrorist organisations, its human rights record and its ballistic missile and conventional weapons proliferation. Third and relatedly, the threat of a "snap back" of sanctions also weighs heavily on outside investors. Fourth, the low oil prices mean that Iran cannot generate as much revenue from oil exports as it could have hoped for a few years ago.

56. Still, despite these fundamental inhibitors, Iran has attracted USD 3.4 billion in foreign direct investment since the signing of the JCPOA, with a number of high value deals on the horizon. The US Treasury Department has recently granted licenses to aviation giants Airbus and Boeing for the sale of civilian passenger aircraft to Iran. Accordingly, Boeing aims for a sale of 80 aircraft for USD 17.6 billion in total; Airbus has agreed to sell 118 aircraft for a combined total of USD 27 billion; ATR, a French-Italian company, also intends to sell 40 turboprop aircraft to Iran for EUR 1 billion. The green light for aircraft sales will allow Iran to start renewing its aging fleet of planes. Additionally, Peugeot-Citroen is coming back to the country with a EUR 400 million joint venture with an Iranian car maker. The decision is a blessing not only for these companies but also for Iranian politicians who are looking forward to expanding Iran's engagement with the world now that sanctions linked to Iran's nuclear programme have been lifted.

57. Iran's oil exports have reached 2.3 million barrels of oil per day, which is more than twice the amount exported before the signing of the JCPOA. Indeed, by August 2016, Iran was producing 3.85 million barrels per day again, which is just below pre-sanctions levels. Nevertheless, it is difficult to see how Iran will keep up its exports let alone increase its exports over time. Currently, it is almost certainly tapping into its oil reserves to live up to its stated goal of exporting 2 million barrels per day on average. In the long run, Iran aims to produce 4.6 million barrels per day. However, to reach this target, Iran needs to attract massive investments into its oil sector. The Iranian government itself has said the country needs about USD 50 billion of external investment per year to attain its goals. By Iran's own reckoning, investments into 28 oil developments and 21 natural gas developments are needed. While the government is trying to reform the very restrictive laws on foreign investment in the oil and gas sector, these currently still inhibit investments.

58. The United States still has severe restrictions on financial transactions in place for Iran. Iran cannot touch the US financial system or use dollars for any business deals, for example. Also, banks who have US citizens in their senior management cannot work with Iran. A reasonable step for the United States would be to issue clearer guidance on its remaining sanctions and their operation in order to signal to the international financial system what US enforcement positions are and what standards the United States expects from businesses and banks.

59. Ultimately, however, it is up to the Iranian government to undertake the necessary reforms of its economic sector to enable investment, in particular regarding banking operations and bureaucratic processes. It is unlikely that businesses, especially from Europe and North America, will make investments that are still very risky in the absence of such reforms. While unlikely,

improved behaviour at home and on the international scene would of course be a tremendous boon for Iran's economic health.

## **V. CONCLUDING REMARKS: HOW TO BUILD UPON THE DEAL**

60. Few recent issues in international politics have been as polarising as the Iran nuclear agreement. Deep national and international divisions were reflected in the vigorous lobbying for and against the deal – both in parallel to negotiations and after the signing of the JCPOA. The JCPOA is by no means perfect, but the outcome is better than any realistic alternative and certainly preferable to the use of military force.

61. More than one year after its signing, the deal has neither lived up to the highest hopes of optimists nor realised the biggest fears of its critics. However, it is clear that the JCPOA has produced substantial benefits for international security. Before the 2013 Joint Plan of Action put interim limits on Iran, the country possessed over 19,000 centrifuges (including over 1,000 second-generation centrifuges); a stockpile of more than 9,700kg of low-enriched uranium and more than 370kg of highly enriched uranium, enriched to 20%; a heavy-water reactor on track to be completed; and an advanced centrifuge research and development programme. This stands in clear contrast to what Iran is allowed to have under the JCPOA. Your Rapporteur hopes that critics of the nuclear deal in two key states – Iran and the United States – will not derail it in the future and undermine this important success in international diplomacy.

62. The premise of the deal is that Iran must continuously demonstrate that its nuclear programme is exclusively peaceful – from the outset and through the later years of the JCPOA. The JCPOA and IAEA safeguards are the main tools to monitor and verify this. In addition, national intelligence efforts will remain of utmost importance, just as they were when Iran's clandestine nuclear efforts were first discovered. If Iran reneges on its commitments, the same options available to the international community prior to the JCPOA will still be available. Furthermore, the possibilities opened up by sanctions relief provide positive incentives for Iran to become fully invested in pursuing an exclusively peaceful nuclear programme. It is up to the Iranian government to make best use of these new possibilities. Over time, the international community should gain confidence that Iran will not seek to develop nuclear weapons, thus staving off potentially catastrophic alternatives such as resumption of worrying nuclear activities and even a new war in the Middle East. Conversely, the E3/EU+3 should strictly comply with their obligations in order to not offer Iran any excuses to violate any of its obligations.

63. It is clear that the Iranian nuclear deal will not solve all security problems in the Gulf region and beyond. Indeed, it may create new challenges. Inter alia, states worried that Iran is now freer to engage in detrimental regional policies need to be reassured. Indeed, Iran's behaviour in the region has not noticeably changed since the nuclear deal was signed. Nevertheless, the nuclear deal should take the spectre of a nuclear-armed Iran off the table for at least 10 years and presents the countries in the region and beyond a range of options that could lead to more stable and peaceful regional dynamics.

64. Given opposition to the nuclear deal from various quarters on both sides, keeping the deal on track may require renewed political determination and the highlighting of economic benefits for all sides concerned. The slowdown in the world economy is a compelling factor for the search for new markets. Therefore, unless there are noteworthy and intentional adverse developments in the implementation of the nuclear deal, commercial and economic gains alone should stand to provide a strong enough incentive for all sides to keep implementation on track.

65. The volume of trade and investments in infrastructure projects and civil aviation – amounting to billions of dollars – should enable Iran, a country that has been subject to several years of sanctions, to swiftly re-integrate into the global system.

66. In this context, Iran's re-inclusion in trade and financial markets and the extensive infrastructure investment needs of Iran in a range of sectors including oil and gas may create new opportunities for neighbours such as NATO-member Turkey and other countries in the region and beyond, as witnessed through the flow of delegations to Iran in the past few months.

67. Additionally, the Preferential Trade Agreement between Turkey and Iran could serve to facilitate and bridge trade and investments in Iran by third countries. Turkey's financially safe and investment-friendly environment, as well as its location as a major trading and transit hub for Iran particularly from the Western hemisphere, could serve to minimise potential risks direct investment into Iran might pose due to the unsteady economic and political climate in the country. Such Iran-bound but Turkey-based investments would also allow additional access to Turkish and other regional markets.

68. Ever since the IAEA set out its concerns about possible military dimensions to Iran's nuclear programme, this Committee has emerged as the central transatlantic parliamentary forum to discuss and monitor the issue. Between 2012 and 2016, the Committee held a total of eight meetings and adopted a report and resolution on the topic. The Committee's work has contributed to consolidating and strengthening the transatlantic community's resolve to prevent a nuclear weapons-capable or even nuclear-armed Iran. As the international community moves into the implementation phase of the JCPOA and UNSCR 2231, the Committee and the NATO PA will continue to foster transatlantic unity on the Iranian nuclear issue.

69. The future of the JCPOA will depend to a large degree on the outcome of Congressional and Presidential elections in the United States in November 2016 and Presidential elections in Iran in May 2017. Continued international consensus on the JCPOA is in no way guaranteed, as its opponents in both countries could win. Republican Presidential candidate Donald Trump opposes the Iran deal as it now stands, but it is still unclear whether he would cancel it or try to renegotiate it, if elected. In Iran, the Supreme Leader Ayatollah Ali Khamenei has recently accused the United States of not fulfilling its pledges, underlining the futility of negotiations with the country in his mind. If a conservative opponent of President Hassan Rouhani wins, the JCPOA could be further threatened.

70. If the JCPOA withstands US and Iranian elections, it seems less likely that the deal will rapidly unravel. Even then, however, the international community cannot sink into complacency. The stakes are too high. Political and bureaucratic will and attention must stay on the JCPOA. Attempts to fundamentally renegotiate the deal must be guarded against. The international community must also ensure that Iran does not attempt to ease restrictions or seek exemptions that would hollow out the JCPOA over time. Lastly, the international community needs to monitor Iran's behaviour closely. The JCPOA cannot be allowed to be an element in a long-term nuclear hedging strategy for Iran.

71. As the international community has successfully passed Implementation Day, it is time to capitalise on the JCPOA process. Your Rapporteur thus would like to present a set of recommendations to build on the nuclear deal.

#### **A. STRENGTHENING MONITORING AND VERIFICATION IN IRAN**

72. The JCPOA and UNSCR 2231 mark the beginning of a thorough monitoring and verification regime. However, additional measures to make it more durable should be put into place.



- **Increased funding and provision of technology for the IAEA:** IAEA monitoring and verification in Iran will need to be met with funding and technology commensurate with the new responsibilities. The international community, in particular the E3/EU+3, should thus increase funding for the agency, provide the necessary high-end technology, and convince Iran to allow the use of such high-end technology.
- **Rigorous national intelligence efforts:** To complement IAEA monitoring and verification, states should ensure adequate funding of national intelligence efforts to monitor potential clandestine nuclear or nuclear-related facilities.
- **Ensure international unity:** As the international community moves into full implementation of the JCPOA provisions, unity will become extremely important. The international community must hold Iran accountable so that it respects both the letter and the spirit of the JCPOA and UNSCR 2231. Differences of opinion on the provisions in the JCPOA and UNSCR 2231 have already and will continue to emerge. Dispute resolution mechanisms in place, the smooth functioning of the Joint Commission and Procurement Channel will undoubtedly come under strain at some point, but the international community needs to keep in mind the larger objective of ensuring that Iran's nuclear programme remains peaceful. This includes discerning between technical and material breaches of the nuclear deal. Transatlantic unity on sanctions will become increasingly important as well, as Europe and North America traditionally have different approaches to international sanctions. Iran should not be allowed to exploit these differences.
- **Engage in early discussions on follow-on measures for the later years of the JCPOA:** The E3/EU+3 should engage in discussions among themselves, but also with Iran, to ensure that additional provisions are in place to assure the international community that Iran's nuclear programme will remain exclusively peaceful as the JCPOA moves into its later years.

## **B. STRENGTHENING THE GLOBAL NUCLEAR NON-PROLIFERATION REGIME**

73. After the massive failure of the 2015 NPT Review Conference due to unbridgeable disagreements on a path towards a zone free of weapons of mass destruction in the Middle East, the global nuclear non-proliferation regime is in dire need of being strengthened wherever it can be. Building on the JCPOA, several measures could be taken to bolster it. In part, these measures would also assuage fears that more countries in the Middle East might try to build their own illicit nuclear programmes.

- **Increase the number of states who implement the IAEA's Additional Protocol:** Currently, 126 states and Euratom implement Additional Protocols. Twenty states have signed an Additional Protocol but have yet to bring it into force. If Iran had had an Additional Protocol in place before 2002, the IAEA would have had a much higher chance of detecting activities not in line with Iran's NPT obligations. This fact should boost the international community's efforts to convince more states to sign one. In particular, nuclear newcomers should be convinced to sign and implement an Additional Protocol to address concerns that they could be tempted to develop nuclear weapons.
- **Encourage nuclear newcomers to eschew the production of highly-enriched uranium (enriched to above 3.67%) and plutonium:** The Iran agreement demonstrates that countries are able to develop advanced nuclear programmes without resorting to the production of highly-enriched uranium and plutonium. Nuclear newcomers, especially in the Middle East, should be encouraged to forego such production. Indeed, Iran has said it would be willing to do so after the JCPOA restrictions end if other countries in the region made the same pledge.
- **Encourage nuclear newcomers to sign fuel supply and fuel take-back guarantees:** Iran's main argument for building up uranium enrichment facilities has been that it needs to produce fuel domestically for its reactors. States which provide nuclear reactors to nuclear newcomers should provide fuel-supply guarantees for the lifetime of the reactors and take back the spent nuclear fuel.

- **Encourage nuclear newcomers to eschew nuclear weapons-related experiments:** Iran has claimed that many of the experiments that raised suspicions as to the peaceful nature of its nuclear programme were conducted for civilian purposes. To avoid any ambiguity in nuclear newcomers' programmes, the international community should encourage states to declare such experiments to the IAEA on a voluntary basis before they are conducted or, even better, to sign memoranda with the agency that such experiments would violate the country's safeguards agreement.
- **Make it clear that leaving the NPT will lead to severe penalties:** Critics have argued that the costs of leaving the NPT regime are currently too low. The international community should make it clear to all states parties that abandoning their NPT commitments will lead to swift and severe punishment, thus increasing the chances that states are deterred from doing so.
- **Achieve the entering into force of the Comprehensive Test Ban Treaty (CTBT):** The CTBT, adopted in 1996, would ban nuclear test explosions by everyone, everywhere. It has yet to enter into force, as eight states have not yet ratified the treaty (although some have signed it). The nuclear non-proliferation regime would receive a significant boost if the CTBT entered into force.

### **C. NATO BALLISTIC MISSILE DEFENCE**

74. The JCPOA substantially reduces the risk of Iran becoming a nuclear weapons state that could threaten NATO territory. However, the Iranian ballistic missile programme continues relatively unfettered. NATO has an obligation to deter and defend against external threats. Hence, NATO has decided to develop a ballistic missile defence capability to protect all NATO European populations, territory and forces. The prompt completion of NATO's ballistic missile defence capability should remain a high priority for the Alliance.

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