

Dealing Preventively with NPT Withdrawal

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"Those who cannot remember the past are condemned to repeat it."

George Santayana

"An ounce of prevention is worth a pound of cure."

Benjamin Franklin

1. Introduction: What is at Stake?

Since it came into force in 1970, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) has worked remarkably well to prevent the horizontal proliferation of nuclear weapons. The one major exception is North Korea, which withdrew from the NPT in 2003. Despite this track record of success, the stability of the current non-proliferation regime could be significantly undermined by further withdrawals by countries such as Iran.

The right of states to withdraw from the NPT is clearly stated in the Treaty. Article X.1 provides that:

“Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.”

Since it is impossible to deny the right of states parties to withdraw from the NPT, it is all the more important to put in place appropriate *preventive measures* to dissuade withdrawal from the Treaty. The urgency of dealing preventively with NPT withdrawal increases as more non-nuclear-weapon states are poised to become “nuclear threshold states.”¹ As the IAEA reported in 2008:

¹ A “nuclear threshold state” is defined here as a state capable of manufacturing more than one nuclear device in a few months’ time and possessing the necessary delivery means.

“Much of the sensitive information coming from the [Abdul Qadeer Khan] network existed in electronic form, enabling easier use and dissemination. This includes information that relates to uranium centrifuge enrichment and, more disturbing, information that relates to nuclear weapon design.”²

and:

“a substantial amount of sensitive information related to the fabrication of a nuclear weapon was available to members of the network.”³

The widespread dissemination of this type of scientific and technical information raises the prospect that more states will acquire the capability to manufacture nuclear weapons and their means of delivery, thus increasing the need for new measures to bolster the system that has worked to limit nuclear proliferation over the last 50 years.

2. Threats to Withdraw from the NPT

A number of states have suggested over the years that they might, under certain conditions, withdraw from the NPT. Given the difficulties and dangers of attempting to deal with any such withdrawals only after the fact, it is necessary to act preventively to deter states from taking these steps.

2.1 Iran

Iran has threatened to withdraw from the NPT on a number of occasions. The gravity of this possibility is underscored by the IAEA’s past findings that, “Iran has carried out activities relevant to the development of a nuclear explosive device.”⁴

In July 2003, a month after Iran's breaches to its Safeguards agreement were first reported to the IAEA Board of Governors, Ali Larijani, a member of Iran's Supreme National Security Council, said:

“Because we have obtained the essential (nuclear) technology, if they attack our facilities, we will withdraw from the NPT.”⁵

In May 2006, in a letter to United Nations Secretary General Kofi Annan, the Iranian parliament again threatened to force the government to withdraw from the NPT if the United States and its allies continued pressuring Tehran to suspend uranium enrichment.⁶

² IAEA Board of Governors, “Implementation of the NPT Safeguards Agreement in the Socialist People’s Libyan Arab Jamahiriya,” [GOV/2008/39](#), September 12, 2008, para. 38.

³ Ibid, Annex 1, para. 26.

⁴ IAEA Board of Governors, “Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran”, [GOV/2011/65](#), November 8, 2011, para. 53. The report contains a 12-page Annex describing the weaponization activities undertaken by Iran, including the development of fast-acting detonators; initiation of high explosives and associated experiments; hydrodynamic experiments; studies involving the modelling of spherical geometries, consisting of components of the core of an HEU nuclear device subjected to shock compression; etc.

⁵ <https://gulfnews.com/uae/iran-threatens-npt-pullout-if-attacked-1.361965>

Iran has since issued several similar threats, in particular after the United States' unilateral withdrawal from the Joint Comprehensive Plan of Action (JCPOA) in May 2018. Most recently, on 20 January 2020, after Britain, France and Germany declared Iran in violation of the JCPOA and launched a dispute mechanism that could eventually see the matter referred back to the Security Council and the re-imposition of U.N. sanctions, Iranian Foreign Minister Javad Zarif, [said](#): "If the Europeans continue their improper behavior or send Iran's file to the Security Council, we will withdraw from the NPT."⁷

Because an Iranian decision to withdraw from the NPT could trigger a devastating war in the Middle East or, at the least, lead to further international economic sanctions against Iran, it may be that the Islamic Republic has little to gain from such a move. Such threats can, however, have a destabilizing and detrimental effect.

Even if Iran remains a party to the NPT, its repeated threats to withdraw may raise concerns that it is seeking to become a nuclear threshold state. These concerns could prompt Iran's neighbors to launch their own secret nuclear weapons programs which, when eventually detected by the IAEA, could lead them to withdraw from the NPT.

2.2 Turkey

Turkey has ratified the Additional Protocol (AP)⁸ to its Comprehensive Safeguards Agreement (CSA). It has also ratified the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and has not, thus far, indicated an intention to build a domestic enrichment or reprocessing facility.

Nevertheless, in the fall of 2019, Turkish President Recep Tayyip Erdoğan suggested that Turkey might be questioning its stance with regard to nuclear weapons:

"Several countries have missiles with nuclear warheads, not one or two. But [they tell us that] we can't have them. This I cannot accept."⁹

This was clearly a reference to Israel and its undeclared nuclear arsenal.

Given that Turkey is a member of NATO¹⁰ hosting nuclear weapons on its territory, it seems unlikely that the Erdoğan regime could make a convincing case that it faces "extraordinary events" jeopardizing its supreme interests that might trigger an actual withdrawal from the NPT. While President Erdoğan's statement may have been political posturing, it is an indication that

⁶ <https://english.aawsat.com/theaawsat/news-middle-east/iran-threatens-to-quit-nuclear-treaty>

⁷ https://www.reuters.com/article/us-iran-nuclear/iran-has-not-ruled-out-talks-to-end-nuclear-dispute-says-official-idUSKBN1ZJ0ML?mkt_tok=eyJpIjoiTURZMU1XTTRabUUwTjJWbCIsInQiOiJBak9tbkExWlB6aDk0Mlpyb2c0YmRDQtdEeE50N2FUTFZR2xGXC9kRkd2U2ZBcTlyK1RkcDU0K1hlaU1UKzE1NHBDWxo2NUFzMjlKTUpCbG93dmtrb0ExYVRhdEpvRXgydmIQUWhicDFiRFBVSUZRD0p6ajMrUm4wMGFCTjhqbFwvIn0%3D

⁸ The AP is a protocol to a safeguards agreement that significantly increases the IAEA's ability to verify the peaceful use of all nuclear material in states with comprehensive safeguards agreements.

⁹ "Turkey Shows Nuclear Weapons Interest", ACA, October 2019

<https://www.armscontrol.org/act/2019-10/news/turkey-shows-nuclear-weapons-interest>

¹⁰ even if Turkey's decision to buy Russia's S-400 missiles has strained ties with NATO allies.

the situation in Turkey may be more volatile than in the past and could change quickly if, for instance, Iran were to withdraw from the NPT.

2.3 Saudi Arabia

Unlike Turkey, Saudi Arabia has not signed and ratified the Additional Protocol nor the Comprehensive Nuclear-Test-Ban Treaty. Moreover, Saudi Arabia has so far only signed a Small Quantities Protocol (SQP) with the IAEA rather than a full Comprehensive Safeguards Agreement.¹¹ An SQP safeguards agreement waives a number of articles included in a full CSA. While this more limited safeguards system might have been justifiable when it was agreed to by the IAEA Board of Governors in 1974, it is entirely inadequate in today's environment.

For instance, an "SQP State" would be entitled to procure equipment for a centrifuge enrichment facility and to build such a facility without having to declare these activities until 6 months before introducing nuclear material in that facility, whereas any other state with a CSA would have to provide preliminary design information "as soon as the preliminary design phase is completed and in advance of the decision to construct or authorize construction."

Saudi Arabia has so far also rejected the United States' demand that it adopts the "Gold Standard"¹² in the nuclear cooperation agreement between the two countries, thereby leaving the door open to future nuclear ambitions. Not requiring the Gold Standard from Saudi Arabia would further decrease any hope to ever obtaining a similar commitment from Tehran.

In 2018, Saudi Arabia's Crown Prince Mohammed bin Salman told CBS News that the Kingdom "does not want to acquire any nuclear bomb, but without a doubt if Iran developed a nuclear bomb, we will follow suit as soon as possible."¹³ Given the availability of technical support (e.g., from countries such as Pakistan) to begin developing nuclear enrichment capabilities, such statements should not be regarded lightly.

Today, the U.S. maintains strong sanctions on Iran over its nuclear program that largely prohibit the country from exporting oil. It is hard to imagine, however, that the U.S. would be willing to take such measures against Saudi Arabia should the Kingdom be found to be in non-compliance with its Safeguards Agreements and pursuing a nuclear weapon program. While a decision by Saudi Arabia to withdraw from the NPT would likely not be without consequences, there are currently few meaningful restrictions to deter the country from taking this step should it feel that its national interests were at stake.

¹¹ Saudi Arabia is presently finishing the construction of a Venezuelan experimental reactor. It cannot start receiving nuclear fuel assemblies with only an old SQP in force. <https://www.bloomberg.com/news/articles/2019-04-03/first-images-of-saudi-nuclear-reactor-show-plant-nearing-finish>

<https://edition.cnn.com/2019/04/06/middleeast/saudi-arabia-nuclear-reactor-iran-tensions-intl/index.html>

¹² The "gold standard" is a legally binding obligation to forswear enrichment and reprocessing technology.

See "The Nonproliferation Gold Standard: The New Normal?", Arms Control Association, October 2019, Victor Gilinsky and Henry Sokolski.

<https://www.armscontrol.org/act/2019-10/features/nonproliferation-gold-standard-new-normal>

¹³ <https://www.reuters.com/article/us-saudi-iran-nuclear/saudi-crown-prince-says-will-develop-nuclear-bomb-if-iran-does-cbs-tv-idUSKCN1GR1MN>

Because the withdrawal – or even just the threat of withdrawal – from the Treaty by one state could set in motion a chain of events leading to the unraveling of the non-proliferation regime, there is a need to deal preventively with this risk. It is thus imperative to put in place comprehensive measures to deter withdrawal from the NPT by states parties as described below.

3. Deterring NPT Withdrawal

As discussed above, states have a right to withdraw from the NPT in cases where they believe their national interests are jeopardized by continued participation. Furthermore, as we have seen, a number of states have signaled credible intentions to withdraw from the Treaty under certain circumstances. Upon withdrawing from the Treaty, a state would be legally permitted, under current rules, to use *previously safeguarded* nuclear materials and facilities for nuclear weapons production. The only recourse currently available to the international community in such cases would be to negotiate a coordinated response, including potential sanctions against the withdrawing state. Organizing such a response in the midst of a crisis and the vicissitudes of international politics is not the optimal arrangement for promoting international peace and security.

For deterrence to be effective, it is necessary to put in place additional measures to ensure that non-compliance with the NPT or withdrawal from the Treaty would have immediate and significant consequences. The measures should also diminish the risk that certain states will attempt to “game the system” by enlisting support of one of the veto-wielding members of the UN Security Council (UNSC) to obstruct or mitigate sanctions. A comprehensive system to deal preventively with NPT withdrawal, in a country-neutral way, would thus comprise four elements:

1. Since the risk that a state will exercise its right to withdraw from the NPT is heightened when it is discovered to have engaged in undeclared nuclear activities, there needs to be a mechanism for promptly and efficiently dealing with non-compliance. The UNSC should therefore adopt a legally binding *generic* resolution¹⁴ providing the IAEA expanded verification rights when a state is found to be in non-compliance with its safeguards agreements.
2. While states will always be able to exercise their right to withdraw from the Treaty, they should understand that there will be immediate consequences to doing so. The UNSC should thus adopt a legally binding *generic* resolution for promptly responding to NPT withdrawal.
3. To address a substantial loophole in the current safeguards regime, it should become a norm that *all sensitive nuclear fuel cycle facilities* be covered by irreversible safeguards

¹⁴ A generic resolution is one of a general nature which does not address issues in a specific State as most UNSC resolutions do. This is not a new concept and there are important precedents including the legally binding [Resolution 1373](#) (28 September 2001) dealing with acts of terrorism, and [Resolution 1540](#) (28 April 2004) addressing the risk of proliferation of weapons of mass destruction.

agreements and that previously safeguarded materials and facilities cannot be used for weapons production upon a state's withdrawal from the Treaty.

4. The Nuclear Suppliers Group (NSG) should adopt the requirement of irreversible safeguards as an export condition before making any nuclear-related transfer to a state.

These four components of a comprehensive system to deter NPT withdrawal are discussed in more detail below.

3.1 The UNSC should adopt a *generic* resolution preventively dealing with cases of non-compliance by temporarily providing the IAEA expanded verification authority

It is likely that a state will not withdraw from and NPT if it has no intention of manufacturing nuclear weapons. And it is likely that, before withdrawing from the NPT, such a state will try to develop an undeclared nuclear program. It is also likely that the IAEA will detect the existence of the undeclared program and that the state in question will be found to be in non-compliance with its safeguards agreements.

We know from experience that time is of the essence in such cases. Any non-compliant state should face the certainty that it will be referred within a short period of time first to the IAEA Board of Governors (BOG) and then to the UNSC. If it proactively cooperates with the Agency to correct the situation, it should be referred to the Security Council for "information purposes only," as was the case with Libya. If, by contrast, the non-compliant state adopts a "*policy of concealment, with cooperation being limited and reactive, and information being slow in coming, changing and contradictory,*"¹⁵ as was the case in Iran, the issue should be reported without delay to the UNSC for action.

In its very first resolution adopted by consensus on 12 September 2003,¹⁶ the Board of Governors called on Iran to, "*suspend all further uranium enrichment-related activities, including the further introduction of nuclear material into [the] Natanz [enrichment plant]... pending provision by the Director General of the assurances required by Member States, and pending satisfactory application of the provisions of the additional protocol.*" The resolution also called on Iran to grant "*unrestricted access, including environmental sampling, for the Agency to whatever locations the Agency deems necessary for the purposes of verification of the correctness and completeness of Iran's declarations.*"

There are two problems with such a resolution: the first is that it is not legally binding. The only way to make it legally binding is to have it adopted by the UNSC acting under Article 41 of the UN Charter. The second problem is that expanded access rights have never been defined in any precise way.

Contrary to widespread belief, the Additional Protocol to Comprehensive Safeguards Agreements does not provide the Agency "*access at all times to all places and data and to any person...*" a

¹⁵ Implementation of the NPT Safeguards Agreement in Iran, GOV/2003/75, §50, 10 November 2003.

¹⁶ GOV/2003/69 <https://www.iaea.org/sites/default/files/gov2003-69.pdf>

right articulated in Article XII.A.6 of the IAEA Statute. Some of the AP access limitations are summarized in Appendix 1.

Experience has taught us, in particular in the cases of North Korea and Iran, that when a state is found to be in non-compliance with its safeguards agreements (or in breach of its obligation to comply with its safeguards agreements) and does not show full transparency and cooperation in resolving questions and/or inconsistencies with regard to its nuclear program (both past and present), the Agency will temporarily need expanded verification rights going beyond those granted under a Comprehensive Safeguards Agreement and the Additional Protocol.

This was already clearly reflected in the IAEA's report of September 2005 on Iran, where it is stated:

“In view of the fact that the Agency is not yet in a position to clarify some important outstanding issues after two and a half years of intensive inspections and investigation, Iran's full transparency is indispensable and overdue. Given Iran's past concealment efforts over many years, such transparency measures should extend *beyond the formal requirements of the Safeguards Agreement and Additional Protocol* and include access to individuals, documentation related to procurement, dual use equipment, certain military owned workshops and research and development locations. Without such transparency measures, the Agency's ability [...] to verify the correctness and completeness of the statements made by Iran will be restricted.”¹⁷

Greater authority will be necessary in these circumstances to provide *in a timely manner* an adequate level of assurance that there are no undeclared nuclear material and activities in that state and that no *previously* undeclared nuclear activities have been undertaken in furtherance of a military purpose.

As already mentioned, the problem is that these additional “transparency measures” have not been defined officially in any precise way.¹⁸ And when they are requested under an IAEA Board resolution,¹⁹ they are not legally binding on the non-compliant state.

To give the IAEA the verification tools it needs in cases of non-compliance, the UNSC should adopt a *generic* resolution (under Chapter VII of the Charter), deciding independently of any specific case, that if a state is found by the IAEA Board of Governors to be in non-compliance with its safeguards agreements (in accordance with Article XII.C of the IAEA Statute), *upon request by the Agency*, the UNSC would automatically adopt a *state-specific* resolution under Chapter VII requiring that state to grant to the Agency well defined extended access rights. A draft of such a UNSC generic resolution on non-compliance is provided in Appendix 2.

These broader access rights must not exclude military sites, since it would be likely for the military (or related actors) to be involved in nuclear activities associated with a weapons program

¹⁷ IAEA GOV/2005/67 para. 50 <https://www.iaea.org/sites/default/files/gov2005-67.pdf>

¹⁸ As an example under its Resolution 1737 (2006) the Security Council decided “that Iran shall provide such access and cooperation as the IAEA requests to be able...to resolve all outstanding issues, as identified in IAEA reports.”

¹⁹ as was for instance the case for Iran on [September 12, 2003](#) and [February 4, 2006](#)

should one exist. At the same time, military sites may contain sensitive information that would not be relevant to the Agency's investigation. Therefore the Agency's activities on such sites may need to be conducted under "managed access" conditions, which protect such information while allowing the Agency to reach its objective.²⁰

The access rights that would correct most of the undue limitations of the Additional Protocol are contained in the "Model Temporary Complementary Protocol" (MTCP) published in April 2009.²¹ This MTCP should enable the Agency to verify *in a timely manner* the absence of undeclared nuclear material, equipment and activities in a State found by the IAEA Board of Governors to be in non-compliance with its Safeguards Agreement(s), to verify the correctness and completeness of the declarations made by the State to the Agency, and to determine whether or not previously undeclared nuclear material and activities have been undertaken in furtherance of a nuclear weapons program. The provisions of the MCTP are consistent with Article XII.A.6 of the IAEA Statute.

These extended access rights would be *terminated* as soon as the Agency's Secretariat and the Board of Governors have drawn the conclusion that there are no undeclared nuclear material and activities in the state and that its declarations to the IAEA are correct and complete.

3.2. The UNSC should adopt a legally binding *generic* resolution for promptly responding to NPT withdrawal

For a period of 13 years after North Korea was first reported by the IAEA for non-compliance to the UN Security Council (in 1993) the latter failed to adopt a single resolution condemning North Korea, even during the three and half years that followed its withdrawal from the NPT in 2003.

It is only after North Korea tested a nuclear weapon on 9 October 2006 that the Security Council finally adopted, on 14 October 2006, the legally binding Chapter VII Resolution 1718 imposing an embargo on arms and "luxury goods," as well as a freeze on assets and travel ban for persons designated as involved in North Korea's nuclear program. It further imposed a ban on a range of imports and exports and prohibited Pyongyang from conducting nuclear tests or launching ballistic missiles.

These sanctions were much too mild and came much too late to dissuade North Korea from further expanding its nuclear weapons program. Since then, North Korea has conducted nuclear weapons tests in 2009, 2013, twice in 2016, and in September 2017, and has launched numerous and increasingly more capable ballistic missiles.

²⁰ This issue has been addressed in the Joint Comprehensive Plan Of Action (JCPOA) concluded in July 2015 between Iran and the P5 plus Germany. Nevertheless the language used in its Annex1, § Q, remains ambiguous and subject to interpretation. It provides that: "§74. Requests for access ... will be made in good faith, with due observance of the sovereign rights of Iran, and kept to the minimum necessary ... In line with normal international safeguards practice, such requests will not be aimed at interfering with Iranian military or other national security activities but will be exclusively for resolving concerns regarding fulfilment of the JCPOA commitments and Iran's other non-proliferation and safeguards obligations."

²¹ See "Concrete Steps to Improve the Non-proliferation Regime", Carnegie Paper No. 100, April 2009, page 27 and following. https://carnegieendowment.org/files/improve_nonpro_regime.pdf

The main factor leading to this dramatic situation has been China's steadfast opposition to Security Council sanctions against Pyongyang. China's stated justification was concern that harsh sanctions could precipitate the collapse of the regime, potentially driving hundreds of thousands of North Korean refugees into China. Destabilization of the regime caused by sanctions also raised the specter for China of a reunified Korea on its border under the leadership of the democratic South – host to more than 25,000 U.S. troops. Although China's concerns may be legitimate, the consequence of its obstruction to effective action by the UNSC is that North Korea now possesses an arsenal of nuclear weapons which it is unlikely to abandon in the foreseeable future (notwithstanding U.S. pressure).

It is critical for the Security Council to adopt new measures to minimize the risk that other states could one day follow North Korea's example. As exemplified by the cases of Iran and North Korea, one of the greatest difficulties in deterring states from violating their non-proliferation undertakings and from ignoring legally binding Security Council resolutions is their hope that, for geopolitical or economic reasons, at least one of the five veto-wielding members of the Security Council will oppose the adoption of effective sanctions.

As a step toward strengthening the non-proliferation regime, the Security Council should adopt a generic and legally binding resolution *deciding* that if a state notifies its withdrawal from the NPT (an undisputed right under Article X.1), such notification would constitute a threat to international peace and security as defined under Article 39 of the UN Charter.²² This generic resolution should ensure that, under these circumstances, the Security Council would meet immediately with a view to deciding, under Article 41 of the UN Charter, which measures to apply as soon as the withdrawal becomes effective.

This generic resolution should include a provision requiring all states to suspend military cooperation with the withdrawing State. Continued military support would, logically, be inconsistent with the stance that the withdrawing state represents a threat to international peace and security. The resolution should also include a statement by the Security Council's five permanent members that they consider the withdrawal to be such a major threat to international peace and security that, in such a case, they do not *intend* to exercise their veto right against state-specific sanctions if they are the only permanent member to do so. Because this declaration of intention would not be legally binding, the generic resolution would not deprive those members of their veto right on any state-specific resolution. It would, however, ensure that the Council will consider the matter without delay and increase the prospect of immediate sanctions for the withdrawing state.

A draft UNSC generic resolution on NPT withdrawal is provided in Appendix 3.

Such a proposal would likely encounter concerns and objections. One potential legal objection to the proposed resolution is that it provides to the UNSC powers it was never intended to wield. The Security Council, so the objection goes, was not designed to act as an international legislator but rather as an international executive institution, responding ad hoc to situations as they arise

²² In Resolution 1540 of April 2004, the Security Council is "*Affirming* that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security." It has reaffirmed that statement many times thereafter, but has never "*decided*" that this is the case under an operative paragraph of a legally binding Chapter VII resolution.

and essentially applying existing international law contained in other treaty and customary sources.

In response, it should be pointed out that nothing in the UN Charter *prohibits* the Security Council from adopting forward-looking resolutions aimed at improving international peace and security. Indeed, there are important precedents for when the Council has done just that. One is the legally binding Resolution 1373 (adopted unanimously on 28 September 2001) dealing with threats to international peace and security caused by terrorist acts. Another is Resolution 1540 (28 April 2004) which addresses the threat to international peace and security caused by the proliferation of nuclear, chemical and biological weapons, as well as their means of delivery. The proposed resolution does not conflict with or alter rights and obligations of States Parties to the existing international disarmament and nonproliferation instruments and is far less prescriptive than Resolutions 1373 and 1540.

Another potential concern is purely political in nature. A number of non-nuclear-weapon states (NNWS) have expressed frustration with the nuclear-weapon states' failure to fulfill their NPT Article VI undertaking "*to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.*" Some NNWSs may therefore resist adoption of a measure that could be perceived as limiting their right to withdraw from the Treaty but does not impose further obligations or restrictions on nuclear-weapon states.

While the right of States Parties to withdraw from the NPT in accordance with Article X.1 is explicitly recognized in the preamble of the draft resolution, it does not follow that there should be no consequences to the exercise of such rights. While NNWSs may be legitimately frustrated by the actions or inactions of nuclear-weapon states, this should not alter the recognition by the community of nations that a withdrawal from the NPT by any state would constitute a grave threat to international peace and security, in particular if the withdrawing state has previously been found to be in non-compliance with its safeguards agreements.²³

3.3 It should become a norm that *all sensitive nuclear fuel cycle facilities* be covered by irreversible safeguards agreements

One of the main outstanding safeguards loopholes that deserves prompt attention is the absence of a requirement for IAEA safeguards to remain irreversibly in force should a state leave the NPT. Currently, if Iran or any other NPT non-nuclear-weapon state were to withdraw from the treaty, its Comprehensive Safeguards Agreement with the IAEA would automatically lapse under the terms of that agreement. As a result, the withdrawing state may use previously safeguarded nuclear material and facilities to produce nuclear weapons, as North Korea did after its withdrawal in 2003, without violating any international treaty.

²³ In case some of the ten non-permanent members of the Security Council would forcefully object to operative paragraph 1, it could be formulated as follows: "*Decides that if a State gives notice of withdrawal from the NPT under its Article X.1, or otherwise withdraws from the NPT, after having been found by the IAEA to be in non-compliance with its NPT Safeguards Agreements and reported as such to the Security Council, this notification of withdrawal or withdrawal will constitute a threat to international peace and security under Article 39 of the Charter of the United Nations.*"

Over the past 15 years, states and organizations have submitted proposals designed to close this significant loophole. For example, Luxembourg submitted a working paper on behalf of the European Union to the 2005 NPT Review Conference recommending that states “[a]ffirm as a matter of principle that all nuclear materials, equipment, technologies and facilities, developed for peaceful purposes, of a State Party to the Treaty on the Non-Proliferation of Nuclear Weapons remain, in case of a withdrawal from the Treaty, restricted to peaceful uses only and as a consequence have to remain subject to safeguards.”²⁴ Germany and France made similar proposals in 2004.

The UN Security Council attempted to address this issue in 2009, passing Resolution 1887²⁵, which urges states to “[r]equire as a condition of nuclear exports that the recipient State agree that, in the event that it should terminate its IAEA safeguards agreement, safeguards shall continue with respect to any nuclear material and equipment provided prior to such termination, as well as any special nuclear material produced through the use of such material or equipment.”²⁶ However, this resolution does not extend to domestically produced nuclear material, equipment, and facilities. Moreover, because it was not adopted under Chapter VII of the UN Charter, it is not legally binding.

None of these proposals have created an effective legal barrier to a state’s utilization of previously safeguarded facilities and materials for military purposes after a withdrawal from the NPT. Recall that Iraq, North Korea, Iran and Libya all had undeclared enrichment and/or reprocessing-related activities and nuclear-weapon objectives by the time they were reported to the UNSC for non-compliance. It is our collective responsibility to ensure that nuclear-weapon and non-nuclear-weapon states work together to close this major NPT loophole by creating a legal requirement to maintain safeguards even if a state exercises its right to withdraw from the Treaty.

Fortunately there is a simple solution to achieve this objective. In contrast to Comprehensive Safeguards Agreements, facility-specific safeguards agreements – known as INFCIRC/66-type agreements – do not lapse if the state withdraws from the NPT.²⁷ The IAEA Board of Governors should therefore adopt a (non-legally binding) resolution stating that it should become a norm that *all sensitive nuclear fuel cycle facilities* be covered by INFCIRC/66-type safeguards agreements. Under normal circumstances and as is the case already today, for non-nuclear-weapon states, INFCIRC/66 safeguards agreements concluded with the IAEA are and will continue to be subsumed under their existing Comprehensive Safeguards Agreements. They would become operational only if the latter were terminated.

²⁴ 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, “Withdrawal From the Treaty on the Non-Proliferation of Nuclear Weapons; European Union Common Approach: Working Paper Submitted by Luxembourg on Behalf of the European Union,” NPT/CONF.2005/WP.32, May 10, 2005.

²⁵ <http://unscr.com/en/resolutions/doc/1887>

²⁶ UN Security Council, S/RES/1887, September 24, 2009.

²⁷ Facility-specific agreements can be terminated only if the recipient state returns or transfers to a third state all supplied nuclear material, equipment, and facilities previously subject to safeguards or if those items and materials are “no longer usable for any nuclear activity relevant from the point of view of safeguards or had become practicably irrecoverable.” IAEA, “The Agency’s Safeguards System,” INFCIRC/66/Rev.2, September 16, 1968.

This approach does not create a new safeguards standard, as the Model Additional Protocol did in 1997. Instead, it involves the simple adoption of an older type of safeguards. Therefore, it should face fewer political obstacles, would impose a negligible legal and financial burden on the state or the IAEA, and would require only a little extra paperwork at the outset.

Without waiting for IAEA member-states operating fuel-cycle facilities to voluntarily conclude the relevant facility-specific safeguards agreements, the UNSC should include in the generic resolution dealing with cases of non-compliance the requirement that a State reported to the UNSC for non-compliance would have to conclude, within a short period of time, INFCIRC/66-type safeguards agreements for all enrichment- and reprocessing-related facilities under construction or operating on its territory. Such a provision is included in subparagraph 1.b of the "Draft UNSC Generic Resolution on Non-compliance" of Appendix 2.

3.4 The Nuclear Suppliers Group (NSG) should adopt as an export condition that *all sensitive nuclear fuel cycle facilities* be covered by irreversible safeguards agreements

It seems unrealistic to expect, as the NSG does, that a country deciding to leave the NPT and expel IAEA inspectors would *thereafter* agree to enter into a facility-specific safeguards agreement with the IAEA, return previously delivered material and equipment to the supplier state, or accept inspectors from the exporting state to conduct verification work that IAEA inspectors are no longer allowed to do. It would be much more effective to require states to conclude a facility-specific safeguards agreement with the IAEA *before* any materials or technology are transferred, rather than as a bilateral and limited fallback obligation after a state has withdrawn from the NPT.

Members of the NSG should, therefore, formally agree to interpret the “effective safeguards in perpetuity” criterion²⁸ as requiring that the recipient state *either* have an INFCIRC/66-type safeguards agreement in force with the IAEA on all enrichment- and reprocessing-related equipment, technology and material before any nuclear-related transfer to that state, *or* that they officially adopt the “Gold Standard,” forswearing enrichment and reprocessing technology.

NSG non-nuclear-weapon states should lead by example and place all their enrichment and reprocessing facilities under facility-specific safeguards agreement with the IAEA.

By virtue of the current roster of NSG members, taking this step would bring all non-nuclear-weapon states – with the exception of Iran – that are parties to the NPT and currently operate enrichment and reprocessing facilities within this new mechanism. Nuclear-weapon states should also lead by example when it comes to their own civilian facilities. Currently, nuclear-weapon states have concluded “Voluntary Offer Agreements” with the IAEA, under which they determine which facilities they will make available for safeguards. The nuclear-weapon states provide the IAEA with a list of these “eligible” facilities. In order to demonstrate commitment to the principle of irreversible safeguards, each nuclear-weapon state should agree to place any civilian enrichment or reprocessing facility figuring on its list under INFCIRC/66-type safeguards

²⁸ Nuclear Suppliers Group, “Guidelines for Nuclear Transfers,” June 2013, para. 6(a)(iv) http://www.nuclearsuppliersgroup.org/images/Files/Updated_control_lists/Prague_2013/NSG_Part_1_Rev.12_clean.pdf.

agreements. With negotiations on a fissile material cutoff treaty stalled, this would provide an alternate means of achieving a first step towards a similar goal and may enable the nuclear-weapon states to demonstrate some concrete progress in this area.

Leading by example remains an elusive objective, but it would be wrong to underestimate its usefulness. A lack of leadership in this area not only prevents advancement beyond the non-proliferation status quo, but also threatens to undermine the status quo. A continuing failure to lead by example will mean that the legitimacy and effectiveness of the NPT regime will erode slowly but surely.

4. Conclusion

Under a Comprehensive Safeguards Agreement (with or without an Additional Protocol), a state has the right to construct a uranium enrichment facility and to produce not only low-enriched uranium (LEU), but also highly-enriched uranium (HEU), or to extract plutonium from spent nuclear fuel, as long as these activities and material are declared and placed under IAEA safeguards. This right holds even if there is no clear economic justification for undertaking these activities. However, in such a case, it is legitimate for the international community to ensure that such activities are not undertaken “in furtherance of any military purpose.” To this end, the international community should, at a minimum, adopt the measures recommended in this paper in order to deter such states from ever using fuel-cycle facilities for manufacturing nuclear weapons. The need is all the more urgent given the extent of sensitive information related to uranium enrichment and nuclear weapon design that has already been disseminated and is readily accessible in electronic form.

Deterrence can be effective only if states believe that both NPT withdrawal and non-compliance with safeguards agreements will have immediate consequences.²⁹ To this end, members of the UNSC should adopt legally binding generic resolutions along the lines suggested in this paper.

Because members of the Security Council would not know which states might be subject to such resolutions in the future, the discussion and adoption of these country-neutral measures should be easier and less acrimonious than they would be during the heat of a crisis. An agreement on a set of standard responses to be applied evenhandedly to any state found in non-compliance, regardless of its political alliances, would significantly enhance the credibility of the non-proliferation regime.

At a time when there is so much tension among some of the permanent members of the UNSC, there is one thing on which they all agree: none of them wants to see another country with the bomb. If adopted, the concrete measures recommended in this paper would make a real difference in protecting against nuclear proliferation. To achieve this, all countries – led by the five permanent members of the Security Council – will need to acknowledge the urgency of

²⁹ President Barack Obama noted both elements in his 2009 Prague speech: “We need more resources and authority to strengthen international inspections. We need real and immediate consequences for countries caught breaking the rules or trying to leave the treaty without cause.” Office of the Press Secretary, The White House, “[Remarks by President Barack Obama](https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered),” April 5, 2009
<https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered>

adopting these measures to mitigate the consequences of the next potential proliferation crisis. Getting there will not be easy, but it is the responsibility of our decision makers to remember that, as Cardinal de Richelieu once said³⁰, "politics is the art of making possible what is necessary."

Appendix 1

Access rights needed beyond those provided under Comprehensive Safeguards Agreements (CSA) and the Additional Protocol (AP)

Contrary to widespread belief, the AP does not provide the Agency "*access at all times to all places and data and to any person...*" a right foreseen in Article XII.A.6 of the IAEA Statute.

Based on IAEA safeguards implementation experience it is apparent that there are a number of areas where the Agency needs expanded authority to reach in a timely manner the conclusion that there is no undeclared nuclear material and activities in a state.

Access to information

- States should provide to the Agency information on their *past nuclear activities* (including on nuclear fuel cycle-related R&D activities, activities listed in Annex I of the AP, and the import of equipment listed in Annex II of the AP) for the period *starting when the state became a party to the NPT* and not only after the State concluded a CSA.
- Experience has demonstrated that it is important for the Agency to have prompt access to the information necessary for the Agency to carry out its verification and evaluation activities effectively and efficiently. However, *the AP does not specify deadlines for States to respond to Agency's requests*. The state should have to provide the Agency with the required information within 24 hours.

Access to persons

- Neither the CSA nor the AP contains provisions about the Agency's access rights to persons in the state concerned. More generally the Agency is not allowed to freely interview people working at nuclear facilities or other relevant locations. This situation must be corrected by providing *access to individuals at their usual occupational location* or such other location deemed relevant by the Agency.

Access to locations.

³⁰ <http://www.linternaute.fr/citation/11743/la-politique--c-est-l-art-de-rendre-possible-ce-qui-est--cardinal-de-richelieu/>

- The AP stipulates that the state shall provide the Agency with access to any location specified by the Agency in order to verify the absence of undeclared nuclear material, equipment and activities. However the only verification activity allowed at such a location is to carry out environmental sampling but no other measurements, not even visual observation.
- Most importantly *there is no time limit for the state to provide the access requested by the Agency*, as experienced on many occasions in Iran. This must be corrected.

Access to data and documents

There is no explicit reference in the CSA or the AP to the obligation of a state to submit, upon request by the Agency, the *original documents* supporting the state's declarations (possibly for forensic analysis) and copies of any relevant document nor the right for the Agency to access these documents at the location where they are normally used or stored. Also there is *no time limit in the AP for providing access to documents*.

These deficiencies have been corrected in the "Model Temporary Complementary Protocol" (MTCP) which can be found in the document "Concrete Steps to Improve the Non-proliferation Regime".³¹

This MTCP should enable the Agency to verify in a timely manner the absence of undeclared nuclear material, equipment and activities in a State found by the IAEA Board of Governors to be in non-compliance with its Safeguards Agreement(s), to verify the correctness and completeness of the declarations made by the State to the Agency, and to determine whether or not previously undeclared nuclear material and activities have been undertaken in furtherance of a nuclear weapons program.

The provisions of this MCTP are consistent with Article XII.A.6 of the IAEA Statute.

Appendix 2

Draft UN Security Council Generic Resolution on Non-compliance

The Security Council,

Affirming that proliferation of nuclear, [chemical and biological] weapons, as well as their means of delivery, constitutes a threat to international peace and security;

Reaffirming, in this context, the Statement of its President adopted at the Council's meeting at the level of Heads of State and Government on January 31, 1992 (S/23500), including the need for all Member States to fulfill their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction;

³¹ "Concrete Steps to Improve the Non-proliferation Regime", Carnegie Paper No. 100, April 2009, page 27 and following. https://carnegieendowment.org/files/improve_nonpro_regime.pdf

Recalling also that the Statement underlined the need for all Member States to resolve peacefully in accordance with the Charter any problems in that context threatening or disrupting the maintenance of regional and global stability;

Affirming its resolve to take appropriate and effective actions against any threat to international peace and security caused by the proliferation of nuclear, [chemical and biological] weapons and their means of delivery, in conformity with its primary responsibilities, as provided for in the United Nations Charter;

Affirming its support for the multilateral treaties whose aim is to eliminate or prevent the proliferation of nuclear, [chemical or biological] weapons and the importance for all States parties to these treaties to implement them fully in order to promote international stability;

Affirming that prevention of proliferation of nuclear, [chemical and biological] weapons should not hamper international cooperation in materials, equipment and technology for peaceful purposes while goals of peaceful utilization should not be used as a cover for proliferation;

Recognizing further the urgent need for all States to take additional effective measures to prevent the proliferation of nuclear, [chemical or biological] weapons and their means of delivery;

Affirming its commitment to the Treaty on the Non-Proliferation of Nuclear Weapons, and recalling the right of States Party, in conformity with Article I and II of that Treaty, to develop research, production and use of nuclear energy for peaceful purpose without discrimination;

Recalling that the IAEA General Conference in its resolution GC(49)/ RES/13 of 30 September 2005 noted that “the Agency’s capability to detect undeclared nuclear material and activities should be increased,” and stressed “the continuing need for the Agency’s safeguards system to be equipped to respond to new challenges within its mandate”;

Determined to facilitate an effective response to global threats in the area of nuclear proliferation.

Acting under Chapter VII of the Charter of the United Nations:

1. *Decides* that if a State is reported by the IAEA to be in non-compliance with its NPT Safeguards Agreement(s), the Security Council shall forthwith adopt a state-specific resolution, under Article 41 of the Charter of the United Nations:

a. deciding that, upon request by the IAEA, the State in non-compliance shall provide the IAEA immediate access to locations, facilities, individuals, documents, and equipment as defined in the Model Temporary Complementary Protocol (MTCP) attached in the Annex to this resolution³² and any other access right specifically requested by the IAEA. The MTCP shall remain in force until such time as the IAEA has drawn the conclusion that the State declarations under its Safeguards Agreements are correct and complete and that there is no undeclared nuclear material and activities in the State;

b. deciding that the State in non-compliance shall conclude within 60 days of the adoption of the state-specific resolution an INFCIRC/66-type safeguards agreement for

³² See pages 27 to 43 of https://carnegieendowment.org/files/improve_nonpro_regime.pdf

all enrichment-related and reprocessing-related facilities (as defined in Appendix B³³) under construction or operating on its territory;

c. requesting the Director General of the IAEA to report within 60 days of the adoption of the state-specific resolution, and thereafter on a quarterly basis, on whether the State:

(i) is fully implementing the provisions of its Safeguards Agreement(s) and the MTCP, and is fully and proactively cooperating with the IAEA;

(ii) has concluded with the IAEA the facility-specific safeguards agreement required under sub-paragraph 1.b;

2. *Decides* that if the Director General of the IAEA is unable to report within the timeframe defined in sub-paragraph 1.b, or at any time thereafter, that the State in non-compliance is fully implementing the provision of sub-paragraphs 1.a. and 1.b above, the Security Council shall forthwith adopt a specific resolution under Article 41 of the Charter:

a. requiring the State to immediately suspend all uranium and plutonium conversion and enrichment-related activities and all reprocessing-related activities, including theoretical and applied research and development and suspend any other activity specifically requested by the IAEA or the Security Council until such time as the IAEA has drawn the conclusion that the State declarations under its Safeguards Agreements (including the MTCP) are correct and complete and that there is no undeclared nuclear material and activities in the State;

b. requesting the Director General of the IAEA to report within 60 days of the adoption of this specific resolution on whether the State has fully complied with the provision of sub-paragraph 2.a.

3. *Decides* that if the reports referred to in sub-paragraphs 1.c and 2.b show that the State in non-compliance with its NPT Safeguards Agreement does not fully comply with the provision of sub-paragraphs 1.a, 1.b and 2.a, the Security Council will meet without delay to adopt a state-specific resolution under Article 41 of the UN Charter deciding that all States shall forthwith suspend the supply of any military equipment and cooperation with the non-compliant State as long as it remains in non-compliance with Security Council resolutions.

Appendix 3

Draft UN Security Council Generic Resolution dealing with NPT Withdrawal

The Security Council,

Reaffirming that proliferation of weapons of mass destruction, and their means of delivery, constitutes a threat to international peace and security,

³³ which remains to be drafted at the time of the adoption of the resolution.

Reaffirming the Statement of its President adopted at the Council's meeting at the level of Heads of State and Government on 31 January 1992 (S/23500), including the need for all Member States to fulfil their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction,

Recalling that the Statement underlined the need for all Member States to resolve peacefully in accordance with the Charter any problems in that context threatening or disrupting the maintenance of regional and global stability,

Recalling also Resolution 1887 adopted by the Security Council on 24 September 2009,

Affirming its resolve to take appropriate and effective actions against any threat to international peace and security caused by the proliferation of weapons of mass destruction and their means of delivery, in conformity with its primary responsibilities, as provided for in the United Nations Charter,

Affirming that the NPT remains the cornerstone of the nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament and for the peaceful uses of nuclear energy,

Affirming its support for the multilateral treaties whose aim is to eliminate or prevent the proliferation of weapons of mass destruction and the importance for all States parties to these treaties to implement them fully in order to promote international stability,

Affirming that prevention of proliferation of nuclear weapons [weapons of mass destruction] should not hamper international cooperation in materials, equipment and technology for peaceful purposes while goals of peaceful utilization should not be used as a cover for proliferation,

Recognizing the urgent need for all States to take additional effective measures to prevent the proliferation of weapons of mass destruction and their means of delivery,

Encouraging all Member States to implement fully the disarmament treaties and agreements to which they are party,

Underlining the need to pursue further efforts in the sphere of nuclear disarmament, in accordance with Article VI of the NPT,

Reaffirming the need to combat by all means, in accordance with the Charter of the United Nations, threats to international peace and security,

Affirming its commitment to the Treaty on the Non-Proliferation of Nuclear Weapons, and recalling the right of States Party, in conformity with Article I and II of that Treaty, to develop research, production and use of nuclear energy for peaceful purpose without discrimination;

Recognizing further the right of States Party to withdraw from the Treaty on the Non-Proliferation of Nuclear Weapons in accordance with its Article X.1;

Underlining that if a State Party withdraws from the Treaty on the Non-Proliferation of Nuclear Weapons all nuclear material and facilities previously under IAEA Comprehensive Safeguards Agreement (Infcirc/153, corrected) could be used in the framework of a nuclear weapons programme;

Affirming that withdrawal from a Treaty does not absolve a State of any violation of that Treaty committed while the State was still a party to the Treaty;

Recognizing the threat posed to international peace and security by a state withdrawing from the NPT;

Noting the statement, from China, France, the Russian Federation, the United Kingdom, and the United States, aimed at dissuading any state from withdrawing from the NPT, attached as Annex A to this resolution,

Determined to facilitate an effective response to global threats in the area of nuclear non-proliferation,

Acting under Chapter VII of the Charter of the United Nations,

1. *Decides that* if a State gives notice of withdrawal from the NPT under its Article X.1, or otherwise withdraws from the NPT, this notification of withdrawal or withdrawal will constitute a threat to international peace and security under Article 39 of the Charter of the United Nations;

2. *Decides that* under the circumstances defined under point 1 above, the Security Council shall meet without delay to adopt the measures required to address the threat posed by the withdrawing State;

3. *Decides that* under the circumstances defined under point 1 above, all States shall, with immediate effect, refrain from providing any form of military support to [suspend all military cooperation with] the withdrawing State;

4. *Decides* under the circumstances defined under point 1 above, to adopt a state-specific resolution establishing, in accordance with rule 28 of its provisional rules of procedure, for a period of no longer than two years, a Committee of the Security Council, consisting of all members of the Council, which will, calling as appropriate on other expertise, report to the Security Council for its examination, on the implementation of the state-specific resolution, and to this end calls upon States to present a first report no later than six months from the adoption of that resolution to the Committee on steps they have taken or intend to take to implement that resolution;

5. *Decides* to remain seized of the matter.

Annex A: draft Statement

China, France, Germany, the Russian Federation, the United Kingdom, the United States, acknowledging that if a State withdraws from the NPT, this withdrawal constitutes a major threat to international peace and security under Article 39 of the Charter of the United Nations, and affirming their resolve to take appropriate and effective actions against any threat to international peace and security caused by the proliferation of nuclear weapons, declare that in case the Security Council would consider the adoption of a Chapter VII state-specific resolution sanctioning a State withdrawing from the NPT, they do not intend to exercise their veto right against such a resolution if they are the only permanent member to do so.