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Ten lessons on the Iran nuclear deal's verification and monitoring regime

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Introduction

Conversations on the 2015 Joint Comprehensive Plan of Action (JCPOA), commonly known as the Iran nuclear deal, are typically part of broader political debates on the merits of international engagement with Iran. Critics of the agreement often ask why they should trust Iran to comply.

However, a closer look at the verification and monitoring mechanisms of the JCPOA indicates that it does not depend on trusting Iran. On the contrary, the JCPCOA was negotiated in a context of deep-rooted and mutual distrust between Iran and, in particular, the Western parties to the deal.

The international community is not being asked to trust Iran, but to trust the most intensive and robust nuclear monitoring and verification mechanisms that have been established anywhere in the world. Yet, as the debate widens over the wisdom of returning to the JCPOA without amendments and additions, what is being overlooked is the deal's core value of providing deep insight into Iran's nuclear programme. Its verification regime is based on real-time monitoring and a large-scale inspection effort that, when converged, is unprecedented.

So far, the role and importance of verification and monitoring have been secondary in the mainstream policy exchanges since US President Joe Biden took office in part because nuclear safeguards are perceived as highly techni-

cal. Unless the verification regime is better socially and politically articulated and clarified to decision-makers, the benefits of the JCPOA will be underestimated by many outside the nuclear arms control world, and bad-faith arguments by opponents to the JCPOA may appear to have more credence.

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The technical verification and monitoring provided for under the deal, agreed by all sides, would be the greatest loss if the JCPOA is allowed to wither. It is therefore important to be clear as to what the JCPOA is, and is not, and hence how the deal contributes to the

ability of the outside world to know - definitively - what is happening inside Iran's nuclear programme.

What is the JCPOA? What is it not?

The verification and monitoring regime established by the JCPOA is a key layer in the tri-level structure of the IAEA's effort in Iran. The IAEA's access into Iran does not depend on the JCPOA, but the deal provides critical insight.

The JCPOA works alongside two other key legal instruments. The first is the 1974 Comprehensive Safeguards Agreement (CSA) between Iran and the IAEA as part of its obligations under the Nuclear Non-proliferation Treaty (NPT), and the second is the Additional Protocol (AP) to Iran's CSA that it signed in 2003 and committed under the JCPOA to voluntarily apply until its entry into force. It bears noting that Iran voluntarily implemented the AP to its CSA between 2003 and 2006, when Iran's non-compliance with its CSA was reported to the Security Council.

The JCPOA was designed to supplement and strengthen, not replace, Iran's CSA, which is based on the core, broader safeguards system, which is implemented in 175 countries. Prior to the JCPOA, the CSA was the only nuclear verification agreement in place with Iran. The CSA is primarily designed to ensure no nuclear material in the country is diverted for use in a nuclear weapons programme, and the IAEA's

right under a CSA extends to locations that may not be declared by the State as well – the Model AP simply gave the IAEA more tools with which to do it. In turn, the CSA alone lays the basis for material accountancy, but focuses on a specific part of the fuel cycle. While it is true that the CSA applies to all material, it does not provide enough tools (special inspections excluded) to ensure that states have declared everything they should.

Regardless of the status of the JCPOA, Iran's safeguards agreement will continue to be implemented unless Iran withdraws from the NPT. However, what would be lost is the commitment Iran made in the JCPOA to implement its AP again. Like other APs to comprehensive safeguards agreements, it includes more robust mechanisms for following up on suspected nuclear facilities, including through short-notice access to such locations.¹ As of the end of 2020, Additional Protocols are in force in 136 States and Euratom. Another 14 States have signed an AP but have yet to bring it into force.²

The model AP, approved by the IAEA's Board of Governors in 1997, provides the basis for such APs. It allows the IAEA frequent to Iran's nuclear enrich-

1 On 16 January 2016, as notified in its letter to the Director General of 7 January 2016, Iran began to provisionally apply its AP in accordance with Article 17(b) thereof, pending its entry into force.

2 Status List: Conclusion of Additional Protocols Status as of 31 December 2020, International Atomic Energy Agency, <https://www.iaea.org/sites/default/files/20/01/sg-ap-status.pdf>

ment sites, such as Natanz. Of the 24 countries in the Middle East, only 10 have brought the AP into force, and only three have signed it, one of which is Iran.

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For example, under the JCPOA, Iran also agreed to resume implementation of a provision in the subsidiary arrangements to its CSA that requires Iran to notify the IAEA of its construction of new nuclear facilities as soon as the decision to construct or to authorise construction has been taken.³

³ The provision is Code 3.1. of the General Part of the Subsidiary Arrangements. In 1992, the Board of Governors approved a modified Code 3.1 to ensure the IAEA has sufficient

time to prepare for the implementation of safeguards at new nuclear facilities. The original formulation of Code 3.1 only required states to inform the IAEA of their facilities “not later than 180 days” before the introduction of nuclear material into a nuclear facility. Iran agreed to the modified Code 3.1 in 2003, but stopped its implementation in 2007.

According to a law passed at the end of 2020 by the Iranian Parliament (Majles), the Iranian government is now obliged to curtail voluntary transparency measures under the JCPOA, such as the AP, if the US does not lift sanctions. Iranian officials have said that this is a continuation of their remedial, reversible steps to “rebalance” the JCPOA in the face of continued US sanctions.⁴ Ahead of the first deadline set by the parliament, IAEA Director General Rafael Grossi secured a temporary bilateral understanding with Iran on 21 February 2021 that would maintain what he feels provides satisfactory verification and monitoring insight for at least three months, creating breathing room for the ongoing political and technical negotiations to get the fuller JCPOA commitments resumed by all parties.

The JCPOA was built on distrust, rather than trust. The verification and monitoring regime ensures joint oversight of the implementation of Iran's commitments, including through a Joint Commission and regular ministerial meetings. And it was designed to build trust through these engagements.

⁴ Interview by Young Journalists Club with Iranian Deputy Foreign Minister Abbas Araghchi, 21 February 2021, <https://www.yjc.ir/fa/news/7672463>

The JCPOA was designed to be sustainable. As the product of negotiations, it is structured to be a basis for continuity of knowledge through a dynamic and evolving process, and to be adapted as needs arise. Some aspects of the JCPOA, including the implementation of the AP, are not time-bound.

Ten lessons learned

Until recently, the verification and monitoring provisions included in the JCPOA have been implemented as designed. While Iran has taken operational steps that place it outside the bounds of what is considered full implementation of the JCPOA, these changes continue to be communicated to the IAEA in advance and the Agency has been able to observe the activity. Verification and monitoring in Iran has never been smooth, and indeed, difficulties have been encountered in the past. In this context, however, not every single question that arises should be considered a crisis. If the JCPOA is terminated altogether, the days of prevailing transparency, as well as cooperation and communication, may be numbered.

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The implementation of the JCPOA’s verification and monitoring provisions, even as two of its key parties reduced implementation of the deal overall, suggest a number of lessons. These are important both in the immediate future, and in the medium to long term. In the immediate timeframe, they highlight the strengths and weaknesses of the JCPOA that need to be understood in order to preserve it or to respond effectively to its collapse. In the longer term, these lessons should inform the architecture of future deals with Iran.

The following ten technical and political lessons relate to the sustainability of the JCPOA, currently at risk and starkly illustrated by the course of events over the past three years.

- 1. The JCPOA has proven fragile; it was clearly too easy for the US, a main party to the agreement, to walk away.** This should have been anticipated because of Congressional politics, the recurring need for presidential re-approval of sanctions waivers, and lack of Treaty status.⁵ Even if the current Biden administration re-enters and restores its commitments to the deal, the risk persists, as a subsequent administration may again scupper it, unless substantive work is undertaken to

⁵ While US abrogation could have been anticipated, the decision to proceed with the deal without Senate ratification by Congress was based on the understanding that it would not pass with the two-thirds majority required. However, even if it had been ratified, President Trump could have withdrawn from it, as he did with other treaties such as the Open Skies Treaty.

make the deal more socially and politically accepted by opponents and seen as legally binding on all parties by nature of its backing by UN Security Council Resolution 2231. As was seen under the Obama administration, the perceived risk of US sanctions returning was one of the factors that deterred many companies and banks from doing business with Iran even when sanctions were lifted, preventing Iran from realising the economic dividends it had hoped for.

- 2. Verification under the JCPOA is asymmetrical, as the JCPOA is framed in terms that focus on keeping Iran in compliance.** Forged in distrust about Iran's motivations, there are no mechanisms in the deal that ensure that the other parties are implementing their side of the deal, namely on the economic side. Iran signalled its displeasure at other parties' non-compliance in accordance with the deal's terms by attempting to trigger the dispute resolution mechanism (DRM) through the JCPOA's Joint Commission.⁶ For a year after the US's abrogation of the JCPOA, Iran chose to fully implement the deal and so far has chosen to remain in it, despite what it considers to be permissible

⁶ Given the fact that the DRM has been triggered by multiple parties since the US withdrawal – Iran against the Europeans, and the Europeans against Iran – and no sustained diplomatic process resulted from these attempts, the European argument has become diluted because the DRM is not seen as operationally effective.

remedial steps away from the original limitations.⁷

- 3. The success of the JCPOA is only as strong as the connection between nuclear limitations and verification and monitoring,** and verification and monitoring is becoming increasingly connected to Iran receiving the sanctions relief and economic engagement agreed to under the deal. Without all parts active and working together, the deal is not sustainable.
- 4. Verification and monitoring is about much more than inspections.** Verification and monitoring is the collection and assessment of information, including but not limited to the information acquired during in-field access to a country. Arguing that a lack of access to some activities means there is no verification is simply incorrect.
- 5. Verification and monitoring act as a balance against political claim-making.** As enshrined in the JCPOA, the mechanisms laid out in the JCPOA are not designed to prevent something specific from happening, but to enable the IAEA to do more extensive observation, and thereby keep all parties informed

⁷ Iran justifies taking steps away from full implementation of the JCPOA under paragraphs 26/36 of the JCPOA: "...Iran has stated that it will treat such a re-introduction or re-imposition of the sanctions 14 specified in Annex II, or such an imposition of new nuclear-related sanctions, as grounds to cease performing its commitments under this JCPOA in whole or in part."

about what is happening. Because there are inspectors on the ground on a daily basis in these facilities, they are able to see what is or is not consistent with Iran's declarations, offering technical observations to contextualise the political.

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6. Verification and monitoring benefits both sides. If Iran curtails verification and monitoring, it will open space for speculation. For this reason, Iran's close partners, such as Russia and China, have advised Iran that it should allow the IAEA inspectors the access provided for under the JCPOA without interruption, even if it chooses to expand its nuclear programme. Unlike their Western counterparts, these countries did not approach JCPOA negotiations or implementation with the assumption that Iran was or is planning to build a nuclear weapon.

Yet, without verification, it will make it difficult for these countries to give Iran political cover for its actions or protect it from the risk of other states taking aggressive corrective measures.

- 7. Verification and monitoring means Iran cannot acquire material for a bomb quickly without the world knowing about it.** There is a trade-off between speed and secrecy. Moving toward a nuclear-bomb capacity can either be achieved using its known facilities and in full view, with monitors aware of its progress. Or it could be done elsewhere, in hiding, which takes longer. Pulling off a nuclear weapon in secret would require Iran to build a covert parallel fuel cycle from front to back end, which would be costly and complex as it would require replication and testing. Without the JCPOA, the IAEA still has powerful tools to inspect and investigate Iran's activities, particularly through Iran's AP, which strengthens those tools in the space of undeclared activities, facilitating the inspectors' ability to detect possible secret activities.
- 8. Time matters, and continuity of knowledge through inspections is very important.** If seals are removed or cameras blocked, this can greatly reduce the IAEA's confidence in fully and actually understanding what may have happened in regards to these activities. If Iran does suspend cooperation with the supply chain monitoring, or the cen-

“Breakout is using all the material, equipment, facilities, and people that you have available to rush to that fastest point of having one nuclear bomb’s worth of nuclear material. We know that it doesn’t also include the time it would take to produce a nuclear weapon.

The idea would be that you take everything you have and you rush towards that bomb’s worth of material, in this case enriched uranium. If you’re going to do that then you have to use all the facilities, people and material that’s currently under IAEA verification and monitoring, so you can’t do it in secret. We would know quickly that Iran was doing this. If they were to try to replicate, reproduce, and duplicate these capabilities and this material in secret then they certainly could make that attempt.

I think a lot of the verification and monitoring would give us a good chance of detecting that. But even if they could do it in secret that would mean they would not be able to do it at the fastest possible timeline.”

– Corey Hinderstein, Nuclear Threat Initiative

trifuge manufacturing monitoring, for example, a month is worse than a day, and six months is considerably worse.

“The rules are like adding more pieces of a puzzle for inspectors to work with. If Iran chooses not to implement its Additional Protocol, the verification gap expands. Continuity of knowledge could decline.”

**– Laura Rockwood,
Open Nuclear Network**

If there is a disruption in verification and monitoring and the JCPOA gets back on track at some point, Iran will need to understand the expectation that other parties will have to re-establish a continuity of knowledge. Iran may view such demands as unnecessarily burdensome, but it should ensure this does not pose an insurmountable problem. Even with a short break, the greatest challenge may arise not as access is lost, but at the very moment inspectors try to

re-establish it.

9. It is not useful to believe in points of no return. Over the last three decades, there have been multiple times when different voices have said that Iran’s “nuclear program could well be getting close to the point of no return.” As long as the IAEA has adequate access for its analysis and a continuity of knowledge to contextualise any operational changes, Iran’s capabilities and stockpiles can be verified.

10. Flanking diplomacy is integral to the JCPOA, as agreed by the parties. The deal was forged on this premise as a result of increased cooperation. Both the JCPOA’s preamble and UN Security Council resolution 2231, which endorsed the JCPOA, includes language in which the deal is considered a floor for further discussions.⁸ These were not put into place as anticipated, especially due to the US abrogation of the deal. It is therefore essential for all parties to return to full implementation. Once resumed, operationalisation of all aspects of the deal should be implemented as originally conceived.

⁸ UNSCR 2231 states: “All provisions and measures contained in this JCPOA are only for the purpose of its implementation between E3/EU+3 and Iran and should not be considered as setting precedents for any other state or for fundamental principles of international law and the rights and obligations under the NPT and other relevant instruments, as well as for internationally recognised principles and practices.” [https://www.undocs.org/S/RES/2231\(2015\)](https://www.undocs.org/S/RES/2231(2015))



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