



Policy Memo

DATE: November 11, 2016

SUBJECT: The Iran Nuclear Agreement: Could It Inform Future Nonproliferation and Disarmament?

The Iran nuclear agreement, known as the Joint Comprehensive Plan of Action (JCPOA), contains innovative provisions that, if adapted, could be applied in other countries to facilitate cooperation in nuclear technology, build confidence that nuclear programs remain exclusively peaceful, and strengthen the cause of nonproliferation and disarmament.

This memo provides key conclusions from experts that sought to identify innovative aspects of the JCPOA that could be adapted for other uses, assess their potential utility for advancing nonproliferation and disarmament, and consider the organizational and political challenges to their broader application.

Categories and Added Confidence

The JCPOA is designed to provide confidence that Iran's nuclear program remains peaceful in nature. At a basic level, JCPOA provisions provide examples of commitments that a state could observe to reinforce or restore international confidence that it is meeting its obligations under Article III of the Nuclear Non-Proliferation Treaty (NPT). While the text of the JCPOA explicitly states that the agreement is not precedent setting, it is worth considering whether and how some of its innovative provisions could be adapted and used in the future.

The roundtable considered how adaptations of various provisions of the JCPOA could be relevant—and indeed constructive—in three circumstances:

On October 26–28, 2016, experts and policymakers from academia, government, international organizations, and civil society gathered at the Airlie Center outside Washington, DC, to participate in the Stanley Foundation's [57th annual Strategy for Peace Conference](#). This year's conference featured autonomous roundtables where experts focused on policy ideas, challenges, and recommendations in four key global issue areas: climate change, genocide prevention, nuclear security, and global governance.

This policy memo captures the major discussion points and policy recommendations from the roundtable on "The Iran Nuclear Agreement: Could It Inform Future Nonproliferation and Disarmament?," chaired by George Perkovich, vice president for studies and director, Nuclear Policy Program, at the Carnegie Endowment for International Peace. Chelsea Green served as the rapporteur. A more detailed policy dialogue brief is forthcoming.

- As routine measures in states complying with their safeguards commitments.
- As measures to allay concerns or build confidence in states where the International Atomic Energy Agency (IAEA) has questions about safeguards compliance.
- As measures to resolve cases where the IAEA or the UN Security Council have determined that nonproliferation commitments have been broken.

Above all, participants emphasized that governments and international bodies should place highest priority on avoiding situations like those that arose in Iran, where an uneconomical and proliferation-alarming fuel cycle program was begun in violation of safeguards requirements.

Innovative Elements and Potential Adaptations

Starting Point of Accountancy

The JCPOA moves forward the starting point of materials accountancy for Iran to include IAEA monitoring or safeguards on uranium mining, conversion, and concentration. It also includes provisions to monitor Iran's centrifuge supply chain and research and development.

Additionally, the JCPOA relies on online live enrichment monitoring systems to provide continuous measures of Iran's uranium enrichment activities. Such provisions and technologies improve the IAEA's ability to demonstrate confidence in member states' commitments. While the legal basis for these activities is not new—they are generally provided for under states' safeguards agreements and additional protocols—the regular application of such procedures is new. Roundtable participants asserted that it would be important for member states to treat these JCPOA provisions as normal requirements for nonnuclear weapon states that choose to conduct any or all of these related fuel cycle activities. At a minimum they should be deemed necessary to restore confidence in states facing questions regarding, or acting in breach of, their safeguards agreements.

Commensurability

The JCPOA reflects a principle of commensurability, where the agreement's constraints are designed to cap Iran's fuel cycle activities to levels that do not significantly exceed its demonstrated nuclear energy and isotopic needs. This includes provisions that limit Iran's level of uranium enrichment, the size of its stockpile of uranium hexafluoride, and the production capacity of its centrifuge cascades. The IAEA already looks for consistency between a member state's nuclear plans and activities in its overall safeguards assessment. However, for states that seek to develop fuel cycle programs, commitments to ensure their commensurability with demonstrable needs for fuel—particularly by limiting the level of enrichment to less than 5 percent and limiting the size of uranium stockpiles—would help build confidence in the purely peaceful purposes of their nuclear programs. And for states that are found noncompliant with their safeguards obligations and that retain fuel cycle capabilities, commensurability would seem to be a necessary element of any effort to restore international confidence.

Weaponization

The JCPOA establishes that “Iran will not engage in activities that could contribute to the development of a nuclear device.” Filling an ambiguity in the NPT, the JCPOA then lists a number of weapons-relevant activities that are prohibited, including computer modeling of explosive devices, multipoint explosive detonations systems, and explosively driven neutron sources. Non-weapons states already agree, under Article II of the NPT, to not acquire nuclear weapons. Thus, fleshing out this general prohibition with specific examples of unpermitted activities, and/or those that could be permitted only after compelling scientific and/or commercial justification for them were provided to the IAEA, would not amount to a new burden. But it would clarify boundaries between peaceful and weapons-related programs, which would be useful for purposes of nonproliferation and nuclear disarmament. In circumstances where a state’s compliance with its safeguards obligations is questioned and/or determined by the IAEA, prohibition of specific weaponization-related activities should be considered imperative, as in the JCPOA. At the same time, when listing sensitive weaponization-related activities, care must be taken not to provide a blueprint for weapons acquisition.

Procurement

A procurement channel, established by the JCPOA under the Joint Commission that monitors implementation of the agreement, has the authority to review and authorize Iran’s purchase of items on established IAEA dual-use lists and verify end-users. This new mechanism provides added confidence that sensitive items are not siphoned off into a covert weapons program. The roundtable noted that such an approach could be useful in the future if or when states are found in noncompliance with their nonproliferation commitments.

Challenges and Vectors for Broader Application

Efforts to apply innovative elements of the JCPOA more broadly could face substantial political and bureaucratic obstacles. Non-weapons states are keenly sensitive to restrictions that are perceived as infringing on their access to peaceful nuclear technology. Meanwhile, other states, particularly Russia, remain wary of expanding the IAEA’s mandate and of providing opportunities for individual states to try to exploit the IAEA. Furthermore, some of the procedures considered here would carry new costs for the IAEA, member states, and nuclear operators. Avoiding and overcoming such resistance to change will take time and creativity.

The roundtable began by noting that for the vast majority of states, the provisions that could be adapted from the JCPOA would impose no cost or additional inspections burden. A prohibition of weaponization-related activities would simply reaffirm existing commitments and entail no increase in normal safeguards activity. States with nuclear programs that do not involve indigenous fuel cycle activities would not need to move forward the safeguarding of materials accountancy and would not be burdened by requirements of commensurability.

States that do seek to undertake indigenous fuel cycle activities would need to expect the monitoring of all related activities, from mining forward, and would be expected to adopt the commensurability principle. However, if implementation of these provisions eased international resistance to their planned programs and helped build international confidence in them, the benefit could outweigh the costs. Conversely, demonstration of added costs and lost

opportunities from noncompliance could have a deterrent effect on countries considering efforts to develop weapons capabilities.

In any case, participants recognized the need to clarify and highlight what states stand to gain by observing such provisions. Ideally, in the case of states considering indigenous fuel cycle programs, other states, including the United States, would offer the alternative of leasing and taking back fuel. Other, more easily delivered benefits could include expanding and investing in participation of countries' scientists in cooperative research on nuclear energy, medical isotopes, or design of proliferation-resistant technologies. In general, benefits that demonstrate the monetary value or scientific prestige of participating in such regimes could expand the acceptance of enhanced nonproliferation measures.

Several agencies and institutions stand out as possible vectors for expanding application of these innovative measures.

IAEA

Most of the identified innovative elements of the JCPOA—on accountancy, commensurability, and non-weaponization—fall clearly within the IAEA's mandate. The roundtable recommended that the agency conduct and publish studies of the effectiveness of JCPOA provisions, similar to how the IAEA's Program 93+2 examined how to make safeguards more effective after the discovery of Iraq's covert nuclear weapons program after 1991. Participants also noted the significant budgeting, staffing, and management challenges that the agency currently faces and expressed concern about the practical feasibility of increasing agency activities going forward if its budgetary and staffing needs are not met.

Nuclear Suppliers Group

The Nuclear Suppliers Group (NSG) has a central role in preventing the diversion of sensitive technologies. Adapting and applying elements of the JCPOA that monitor and control transfer of dual-use technology could enhance nuclear suppliers' confidence in cooperation with other states. Indeed, states' willingness to embrace relevant provisions, as discussed here, could help NSG members assess and expedite nuclear trade with them. Some roundtable participants suggested that the NSG could help the IAEA assess safeguards compliance by providing the agency with notifications of denial and approval of supply. Participants noted with caution that the NSG has considered similar proposals over recent years without establishing a new rule. As another obstacle, expanding notification to the IAEA of denial and approval risks commercial sensitivities that member states might strongly resist.

Other Vectors

The roundtable identified the viability of several forums for helping expand adaptation and application of innovative JCPOA provisions. For example, negotiations on a nuclear weapon prohibition treaty are slated to begin in March 2017. Several elements of the JCPOA could be useful in treaty negotiations for defining and verifying purely peaceful nuclear programs—those that are not seeking to acquire nuclear weapons and those that have disarmed. Principles and

practices within the JCPOA could also help inform measures to enhance the nonproliferation, nuclear cooperation, and disarmament objectives of the NPT, as will be discussed by the preparatory committees for the 2020 NPT Review Conference and the P-5 process. If and when a conference is held regarding a zone free of weapons of mass destruction in the Middle East, the elements of the JCPOA discussed here could help define the parameters of allowable nuclear activities and verification procedures for such a zone. Each represents a possible venue in which countries could voluntarily commit to observe the enhanced nonproliferation measures discussed above and help strengthen the global nonproliferation regime.

For these proposals to gain traction, however, they will need leadership from stakeholder countries and institutions. They will also require greater analysis of the effectiveness over time of the innovative provisions of the JCPOA, exploration of political pathways that would allow them to be noncontroversial, and a clearer emphasis on the benefits of adopting such practices.

The analysis and recommendations in this policy memo do not necessarily reflect the view of the Stanley Foundation or any of the conference participants but rather draw on the major strands of discussion put forward at the event. Participants neither reviewed nor approved this document. Therefore, it should not be assumed that every participant subscribes to all of its recommendations, observations, and conclusions.

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