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**The Iran Nuclear Archives
and their Implications**

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The Iran Nuclear Archives and their implications

More than a year has already elapsed since Israel managed to bring the Iranian nuclear archive from a warehouse in Tehran to Tel Aviv and showed the world that Iran lied regarding the military dimensions of its nuclear program and misled the International Atomic Energy Agency (IAEA). Yet the international community prefers to live in a state of denial and ignores the implications of the archives, using two lines of argumentation that are either false or insufficient. The first says that there was nothing really new in the archives and that the broad picture was already known so that the new details are not that important. The second argument is that the IAEA has not made yet any judgement about the meaning of the archives contents and until it does, any judgement is not professional and mature enough to conclude anything that contradicts the first argument.

We (The Friends of Israel Initiative) looked deeper into the archives contents and are convinced that in fact the material in the archives and the mere decision of Iran to keep them in the way they were held proves that there is a need to adopt a different international attitude to Iran's nuclear program.

The main findings from the archives

1. The Iranian leadership ordered the Iranian scientists to produce by 2003 5 nuclear bombs to be mounted on missiles. The leadership allocated the necessary resources including unlimited budget, for the implementation of this program.
2. Following this order Iran developed a comprehensive military nuclear program that encompassed all the relevant components. Within a relatively short period of time, under project AMAD, the Iranian scientists made considerable progress in researching and developing the weaponization of enriched Uranium and built the infrastructure for all the necessary stages of the R&D, including an underground testing facility and a chamber for testing an internal neutron initiator, a device that is used only to initiate an atomic bomb. Moreover they also built facilities needed to produce the weapons once the development of the three necessary components is finished – fissile material produced through either enriching uranium or processing plutonium, ballistic missiles capable of carrying a fitted nuclear warhead (the chosen missile was the Shahab 3 that was already tested at the time (2001) and the weaponization capabilities (design, detonator etc.). For more technical details of the findings of the archives see the Harvard Belfer Center report (<https://www.belfercenter.org/publication/iran-nuclear-archive-impressions-and-implications>) and the series of reports issued by David

Albright and Olli Heinonen at the Institute for Science and International Studies (ISIS) and at the Foundation for the Defense of Democracies (FDD)¹.

3. Iran developed a design for a nuclear weapon that was supposed to be used for the production of its initial 5 bombs. For developing this design Iran reviewed several designs of a nuclear device it obtained.
4. Iran consulted quite a few foreign scientists to better cope with the challenges that such a program entails. These scientists came from countries that had produced nuclear weapons and were not cooperating with Iran on an official basis. The Iranians made of course their utmost to conceal this cooperation.
5. Iran was working with Uranium that was not declared to the IAEA in sites that were not declared to the IAEA. The facility in Tuqzabad that was used to store uranium is one example out of quite many (Abadeh is another).
6. In 2003 the AMAD program was suspended but the work did not entirely stop. AMAD was replaced by another organization that retained the same personnel and was later replaced several times by other organizations that still kept the same scientists that used to work in the AMAD project. The director of the current formation, known as SPND, is the same person who led the AMAD program, Mohsen Fakhrizadeh. When AMAD was suspended the new organization was expected to go on with researching the gaps that were still of concern to the nuclear program.

¹ Shock Wave Generator for Iran's Nuclear Weapons Program: More than a Feasibility Study, David Albright and Olli Heinonen, May 7, 2019 ; Project Midan: Developing and Building an Underground Nuclear Test Site in Iran, David Albright, Sarah Burkhard, Olli Heinonen, Frank Pabian, and Andrea Stricker, April 2, 2019. ; Fordow Enrichment Plant, aka Al Ghadir: Iran's Nuclear Archives Reveals Site Originally Purposed to Produce Weapons-Grade Uranium for 1-2 Nuclear Weapons per Year, David Albright, Frank Pabian, and Andrea Stricker, March 13, 2019. ; The Iranian Nuclear Archive: Implications and Recommendations, David Albright, Olli Heinonen, and Andrea Stricker, February 25, 2019. ; A Key Missing Piece of the Amad Puzzle: The Shahid Boroujerdi Project for Production of Uranium Metal & Nuclear Weapons Components, David Albright, Olli Heinonen, Frank Pabian, and Andrea Stricker, January 11, 2019. ; Anatomy of Iran's Deception and How Iran Benefited: Iran's Nuclear Archive Confirms Gchine Uranium and Yellowcake Production Plant were Originally Part of a Clandestine Nuclear Weapons Fuel Cycle. Yet, Gchine never stopped operating, David Albright, Olli Heinonen, Frank Pabian, and Andrea Stricker, December 19, 2018. ; Revealed: Emptying of the Iranian "Atomic Warehouse" at Turqz Abad, David Albright, Olli Heinonen, Frank Pabian, and Andrea Stricker, November 28, 2018. ; The Plan: Iran's Nuclear Archive Shows it Planned to Build Five Nuclear Weapons by mid-2003, David Albright, Olli Heinonen, and Andrea Stricker, November 20, 2018. ; Breaking Up and Reorienting Iran's Nuclear Weapons Program: Iran's Nuclear Archive Shows the 2003 Restructuring of its Nuclear Weapons Program, then called the AMAD Program, into Covert and Overt Parts, David Albright, Olli Heinonen, and Andrea Stricker, October 29, 2018. ; New Information about the Parchin Site: What the Atomic Archive Reveals About Iran's Past Nuclear Weapons Related High Explosive Work at the Parchin High Explosive Test Site, David Albright, Sarah Burkhard, Olli Heinonen, and Frank Pabian, October 23, 2018.

7. The nuclear archive was arranged in the way it was found in view of the Joint Comprehensive Plan of Action (JCPOA) of 2015, known as the Iran nuclear deal. Before the agreement the material was scattered in various places. The forming of the archives and the huge investment in it indicate that there was an intention to both hide it from the inspectors and to use it in the future. The facility in which the archive was kept was made of many movable containers each holding many safes that were very orderly kept in a way that would enable moving the entire archive from one location to another within a short notice.
8. The material in the archives was arranged in an orderly fashion. An interesting part of it, the red files, was dedicated to the exchanges with the IAEA and specially to cheating of the IAEA and held all the relevant documents that were "cooked" for the agency. It was necessary to avoid discrepancies and it shows how professional the Iranians were and how they assumed that the IAEA inspectors were not going to insist on finding the truth.

The lessons learnt from these findings

1. The archive tells the truth about the Iranian nuclear project. Contrary to what the IAEA report of December 2015 (that enabled the coming of the JCPOA into force a month later) claims, Iran had a robust military nuclear project and contrary to its commitments in the JCPOA Iran took the necessary steps to resume work on its nuclear weapons at a time of its choosing.
2. Iran lied all along the way and was successful in cheating the IAEA and the international community. It claimed that it did not have the intention to produce nuclear weapons and that it never breached its international commitments but that was a big lie.
3. The international community and the IAEA never believed the big lie, but were ready to believe that the Iranian military nuclear project was only in a feasibility study stage. Here is the language of the IAEA 2015 report summary "The Agency 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. The Agency has found no credible indications of the diversion of nuclear material in connection with the possible military dimensions to Iran's nuclear programme". The archives make a mockery of this statement.

4. The reasons behind the approach of the IAEA and the international community were partly their naivety and partly their eagerness to make a deal with Iran regardless of the truth about its nuclear project. The result was a very dangerous deal and a very soft component in the deal that deals with weaponization (the infamous section T of the deal). If we look at section T we may easily see that Iran breached each and every one of its components but the IAEA was given no tools to learn about it. Here is the language of section T "Iran has committed that it will not engage in the following activities, which could contribute to the design and development of a nuclear explosive device:

- 82.1. Designing, developing, acquiring, or using computer models to simulate nuclear explosive devices.

- 82.2. Designing, developing, fabricating, acquiring, or using multi-point explosive detonation systems suitable for a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

- 82.3. Designing, developing, fabricating, acquiring, or using explosive diagnostic systems (streak cameras, framing cameras and flash x-ray cameras) suitable for the development of a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

- 82.4. Designing, developing, fabricating, acquiring, or using explosively driven neutron sources or specialized materials for explosively driven neutron sources. Obviously, Iran, according to the archives possessed or used to possess all of those elements. Much of the information about these elements was kept in the archive itself, waiting to be used. Again, the archive makes a complete mockery of section T, that was problematic even before the exposure of the archive.

To sum up this issue we may say that the archives prove that Iran was in breach of every international commitment it had:

1. It breached the NPT (Non-Proliferation Treaty) by having a comprehensive and active program to produce 5 nuclear weapons and by keeping the information and the weapon designs in its possession.
2. It breached the NPT Comprehensive Safeguards Arrangements and its additional protocol (approved but not ratified by Iran) by having and keeping undeclared amounts of (enriched) uranium and by not declaring to the IAEA the sites it used for uranium and nuclear activities, such as Turqzabad and Abadeh. In Turqzabad it seems that its efforts to hide its activities were insufficient and according to press report the IAEA found traces of enriched uranium there.
3. It breached the spirit of CTBT (The Comprehensive Nuclear Test Ban Treaty) by building a facility for testing nuclear bombs and having a plan to conduct such a test without declaring about it.

4. It breached the JCPOA by keeping in its possession nuclear bomb designs and other relevant material, by keeping the archive in a way that is in harsh contradiction to its commitment in the preamble to the deal to never acquire nuclear weapons, by keeping the structure that was involved in AMAD project almost untouched and inaccessible to the IAEA inspecting teams and by cheating the IAEA experts regarding the military dimensions of its nuclear program.

All of that was true even before Iran began breaching the JCPOA openly in the last few months. These last breaches shorten gradually the time Iran needs to have enough fissile material for a first nuclear device. Considering the fact that Israel took only 20% of the documents that were stored in the archive and that much of the knowledge is stored in other places too, it seems that the way from having a sufficient quantity for a device to having a first bomb can be relatively short.

What should be done about this state of affairs? First of all, the IAEA and the international community have to pronounce the truth and adopt it as the basis of their actions. Iran lied systematically and breached every international commitment it was a signatory to. Iran had a robust military nuclear program and it was way beyond the feasibility studies and scientific stage. The IAEA should clarify that this is the case and make clear that its December 2015 paper on the potential military dimensions of Iran's nuclear program was false.

Thereafter, Iran should be held accountable to its behavior and should accept a much more effective deal that will really guarantee that it will never be able to develop and acquire nuclear weapons. It has to tell the full story of its past activities and come clean on all of them, it has to allow the IAEA inspectors uncompromised access to all facilities and scientists anywhere and anytime, it has to dismantle the key facilities that were built for the military nuclear program, including Fordow and Parchin, it has to fulfil its commitment in the JCPOA regarding the heavy water reactor and the quarrying of uranium (the archive explains the military purpose of Fordow, Parchin and the uranium quarrying facility in Gauchin), it has to forsake the enrichment of uranium, it has to stop the development of ballistic missiles that can carry nuclear weapons and it has to accept that the new agreement will not have a sunset clause. Without these changes in the deal it is going to remain a dangerous deal that serves only the Iranians.

The other concerns about Iran

Simultaneously to cheating in the nuclear realm, Iran took advantage of the situation created by the JCPOA to expand its influence in the region. The cases are well known and so are the results. Iran controls to a large extent Syria, Lebanon, Iraq and Yemen and it is not shy on making it known. This behavior is belligerent and a major reason for regional instability as was proven with the attacks carried out by Iran and its proxies against US interests and allies, including the United Kingdom, Saudi Arabia and Israel. Iran and its proxies keep threatening and planning to attack Israel as was shown by the digging of at least 6 underground tunnels by Hezbollah, crossing from Lebanese territory into Israel with the intention of surprisingly penetrating Israeli territory and capturing civilian villages (Metulah and Zariit), as a part of a larger ground offensive along the border. Even after the tunnels were discovered and exposed, Hezbollah keeps threatening to carry out this offensive operation, for which it dedicated a special forces unit named "Radwan Force". The Iranian behavior comes as no surprise to many but stands in sharp contradiction to the expectations of the architects of the JCPOA who

illusioned themselves that following the agreement Iran will change its course and become a peace seeking member of the international community. The generally silent response of the international community to Iran's loud threats to destroy and annihilate Israel and to Hezbollah's threats and actions, as well as the cautious response to the attacks on the Saudi oil facilities and the safe maritime activity in the Persian Gulf, are a clear extrapolation of the submissive attitude of the international community to the Iranian breaches of the NPT, the safeguards, CTBT and JCPOA. It is high time the international community and especially the IAEA take the necessary measures to avoid a nuclear Iran and Iranian hegemony in the Middle East.

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