

THE MISSED OPPORTUNITY OF THE MULTI-STATE NUCLEAR DEAL WITH IRAN



DR. ALEJANDRO ZURITA

Former Head of International Nuclear Research Cooperation at the European Atomic Energy Community (Euratom), 2008-2016. He participated in the first exploratory missions at technical level to Iran on civil nuclear research.

The Iran's nuclear deal, formally called **Joint Comprehensive Plan of Action (JCPOA)**, was signed in Vienna on 14 July 2015 between Iran, on one side, and the five permanent members of the UN Security Council (China, France, Russia, UK and US) plus the EU and Germany, on the other. It includes reciprocal commitments regarding the lifting of all UN, multilateral and national sanctions together with limitations in Iran's military nuclear programme, which is conceived by Iran to assure its territorial sovereignty (recalling the previous war with Iraq) and the regime's survival (through elimination of sanctions).

At that time, JCPOA was hailed internationally as a win-win agreement and a great diplomatic success. The objective of the international community to limit the capabilities of Iran's military nuclear programme reinforcing security in the region was combined with the Iranian government's need to get rid of international sanctions that suffocated its economy and to open its young and educated society to the world. About two thirds of the Iranian population had been born after the 1979 revolution and the country's potential and its human capital were indeed key elements in favour of that agreement. The signing of the JCPOA thus ushered into a period of optimism and economic opportunities. During the first months after the agreement was signed, the Iranian GDP experienced a rapid rise and a wave of prospects and joint ventures flooded the country. There were also expectations that the long-term character of the deal would facilitate further future agreements in different areas.

TECHNICAL ACTIONS AGREED UNDER THE JCPOA AGREEMENT

The main Iranian military nuclear programme is focused on the two proliferation routes of Uranium enrichment and Plutonium production. In this regard, Iran has two underground

enrichment plants, the underground Fordow and the partially underground Natanz. The enrichment of natural Uranium is performed through isotope separation aimed at increasing the percentage of the isotope Uranium-235 that is fissile, i.e. U-235 can produce nuclear reactions for various purposes depending on the level of enrichment. Certainly, enriched U-235 of about 3-4% is used as fuel in nuclear power plants for the generation of electricity and heat, while enriched U-235 of about 20% is used as fuel in research reactors typically for producing medical and industrial radioisotopes and for developing advanced materials. Finally, an enriched U-235 over 90% is weapons-grade Uranium used for production of nuclear weaponries. On the Plutonium issue, Iran has the Arak IR-40 (presently denominated Khondab) heavy water research reactor, which can be also used to produce fissile isotope Plutonium-239 through neutron capture by Uranium-238 isotopes and subsequent reprocessing. Plutonium is considered weapons-grade when it contains over 93% of the Plutonium-239 isotope.

Diverse concrete actions were agreed under the JCPOA. The main ones concerned **Uranium enrichment** are summarised as: a) reduction of enrichment capacity to one-third in the number of gas centrifuges at the Natanz enrichment plant; b) limitation of the enrichment level up to 3.67% at the same Natanz plant; c) conversion of the Fordow enrichment plant into a nuclear physics and technology centre; d) limitation of the Iranian stockpile of up to 3.67% enriched Uranium hexafluoride to 300 kg; and e) use of the Iranian stockpile of medium-enriched (5-20%) Uranium-235 for fabrication of nuclear fuel for the Tehran Research Reactor. Other concrete actions related to **Plutonium** are summarised as: a) the redesign and rebuilding of the Iranian Arak IR-40 reactor to enable the use as reactor fuel of Uranium-235 enriched up to 3.67% to produce radioisotopes for medical and



industrial uses, instead of U-238 to produce Plutonium; b) the availability of the excess of heavy water for export to international markets; and c) the no engagement of Iran in fuel reprocessing, except for specific activities exclusively aimed at the production of medical and industrial radioisotopes. Many of those actions included specific technical involvements of JCPOA signatories.

Furthermore, Iran has a nuclear programme with two main nuclear technology centres and one nuclear power plant in operation. Since its opening in 1984 with Chinese assistance, the Isfahan Nuclear Technology Center (INTC) is the largest nuclear research complex operating three research reactors, all supplied by China, as well as a Uranium conversion facility, and plants for fuel production and zirconium cladding. Moreover, the Tehran research reactor (TRR), in operation since 1967 with US assistance, was converted in 1988 with Argentinian assistance following the Carter non-proliferation policy to operate with low-enriched Uranium of 19,75% from the previous highly enriched Uranium of 93%. In 2011 the Bushehr nuclear power plant was put into operation for electricity production and desalinization, based on the Russian rebuilding of one of the two reactors constructed by the German Kraftwerk Union and damaged by Iraqi air strikes during the 1980-1988 Iraq-Iran war. Two new Russian-designed VVER-1000 reactors are presently under construction in the same Bushehr site.

THE JCPOA UNRAVELLING

The International Atomic Energy Agency (IAEA), in charge of verifying the fulfilment of all nuclear actions, stated in March 2018 that Iran was implementing its JCPOA commitments. However, two months later, the Trump Administration unilaterally withdrew the United States from the JCPOA and imposed new sanctions with a global scope applying to all countries and companies doing trade and business with Iran, cutting the country off the international financial system and rendering null the economic provisions of the JCPOA.

That move was welcomed by Israel and Saudi Arabia, justifying their opposition on the non-inclusion of ballistic missiles in the deal. However, the US withdrawal from the JCPOA was widely rejected by the international community and by two thirds of the US public opinion according to CNN polls. It was also considered a strategic mistake freeing Iran of the limitations to build up its ability to fabricate nuclear bomb material. In a joint statement, France, Germany and the UK tried to rescue the deal stating that the UN Security Council resolution endorsing the nuclear deal remained the "binding international legal framework for the resolution of the dispute". China and Russia also criticized the withdrawal, while the European Commission declared the US sanctions against Iran illegal in the EU and banned European companies and citizens from complying with them. Nonetheless, the JCPOA was mortally wounded despite being formally supported by the other signatories, agreed JCPOA actions could not be implemented, the military nuclear programme was not reversed and Iran continued to enrich Uranium-235.

The impact on Iran's economy, with giant commercial contracts as those with Boeing and Airbus cancelled, was huge. And the political impact was also decisive. During the 2021 electoral campaign, the then presidential candidate, Ebrahim Raisi, attacked those Iranian actors who had negotiated the deal stating that the outgoing reformist President Hassan Rouhani (2013-2021) had sold the country and that his Foreign Minister, Mohammad Javad Zarif, should be indicted on treason. Nevertheless, interactions between Iran and the IAEA on a possible revival of the deal started in 2021 with the Biden administration, and several negotiation talks took place during 2022. Even though Iran referred to the possibility of withdrawing from the Nuclear Non-Proliferation Treaty and abandoning the Iran-IAEA Safeguards Agreement (complete exclusion of inspectors), during the visit of the IAEA Director-General Rafael Grossi to Teheran in March 2023, Iran confirmed its readiness to continue its cooperation providing further information, addressing outstanding safeguards issues and allowing the implementation of further verification

and monitoring activities. According to US Secretary of State Antony Blinken, the JCPOA's future depended mainly on the economic benefit the deal will give to Iran.

IMPOSSIBLE PRESERVATION OF JCPOA UNDER THE PRESENT ESCALATION

Before the present crisis in the region, it was considered that the implementation of the above-mentioned JCPOA actions would contribute to the security and stability of the region, even though various attempts to revive that deal failed. A recent one occurred at the IAEA Governing Board of June 2024, in which China, Russia and Iran proposed unsuccessfully to recover a draft agreement circulated by the EU High Representative Josep Borrell already in August 2022 aimed at reviving the JCPOA. But geopolitical tensions played against it, as the Iranian support to Russia in the war in Ukraine resulted as an obstacle contaminating a potential consensus.

The Iranian public opinion on nuclear weapons has changed. Polls completed already in May 2024 and based on more than two thousand citizens' interviews, suggested a growing support from 67% to 71%, to the statement "Iran should possess nuclear weapons", from which the specific answer 'strongly agreeing' increased from 40% to 48% (1). That raise was partly caused by the JCPOA failure and the intensification of sanctions. In fact, Iran has nearly all the necessary technological capacity to build a nuclear weapon, also having at least ten thousand active centrifuges enriching Uranium-235. It is considered that enrichment levels of 90% achieving weapons-grade Uranium could be reached fast.

After the death of President Raisi in a helicopter crash, the expected reformist Masoud Pezeshkian, supported by the main actors of the nuclear deal Rouhani and Zarif, was elected on 5 July 2024 as new Iranian president. He was congratulated notably by Saudi Arabia under the

framework of their new diplomatic relations reestablished in 2023. In line with Pezeshkian's electoral campaign, it was expected that Iran would pursue a policy mainly aimed to eliminate international sanctions instead of accelerating the Uranium enrichment process towards achieving weapons-grade levels, as the so-called North Korean approach did withdrawing from the Non-Proliferation Treaty.

For years, Israel and Iran continued a kind of silent war sustained until now by indirect attacks on the interests and allies of both parties. But the reciprocal missile attacks between Iran and Israel in April and October 2024, directly aimed at their own territories, opened a new chapter in their hostilities with an escalation of the crisis to regional dimensions. Even though the missile exchanges did not affect Iranian nuclear capabilities, those facilities remain a tempting target for Israel, especially considering that the Iraqi nuclear reactor Osirak was already destroyed by Israel in 1981. Following the first Iran's strikes last April on Israel, also the former US National Security advisor, John Bolton, considered that the moment arrived to target and dismantle those Iran's capabilities (2).

The theoretical preservation of the JCPOA is totally impossible in the present crisis initiated by the Israel-Hamas confrontation, with the resulting ordeal of the population of Gaza, and strongly expanded especially in Lebanon, but also in Yemen and Syria. This makes the regional context extremely critical and unpredictable.

REFERENCIAS

[1] <https://thebulletin.org/2024/06/a-majority-of-iranians-now-favor-possessing-nuclear-weapons-their-leaders-take-note/>

[2] <https://m.youtube.com/watch?v=9OYKd1reSPc>. ■