An Analysis of Iran's Nuclear Program

Iustin MUREŞANU-IGNAT

Abstract. *The current diplomatic overtures and negotiations between the Islamic Republic of Iran and the international community under the P5+1 format (the five UN Security Council Permanent Members plus Germany) for resolving the issue of the nuclear program of Iran have caught the world's attention in the autumn of 2013. Whether the result of these negotiations will lead to a genuine rapprochement between Iran and the rest of the world or a worsening of the relations with the Middle East state is an acute question these days. The answer is yet to come, but an inquiry into the causes of the present state of affairs may prove useful for shaping that answer. This paper attempts to look into the complex relationships and events that drive the policies of global and regional actors towards the nuclear program of Iran. While by no means a comprehensive study, we believe that this modest endeavor can only improve the understanding of this complex issue.*

Keywords: *Iran, Islamic Republic of Iran, United States, United Nations, Israel, Saudi Arabia, France, Russia, sanctions, nuclear program, conflict.*

Iustin MUREŞANU-IGNAT
Associate researcher,
Conflict Studies Center

Conflict Studies Quarterly
Issue 5, October 2013, pp. 19-46

The controversies over Iran's nuclear program and the current process of international negotiations to bring it under international control are based both on the existing structure of the international system and on the efforts of nuclear nonproliferation.

We believe that the conflict on Iran's nuclear activities is based on different interpretations of the Nuclear Non-Proliferation Treaty (NPT) (UN, 2005). The NPT is usually understood as a "Grand Bargain" between the five countries that possess nuclear weapons and the rest of the world who do not possess them, and is established on three fundamental "pillars": nuclear non-proliferation, the peaceful use of nuclear energy and nuclear disarmament. While "non-weapons" states

are pledging that they will not seek to obtain nuclear weapons, the "weapons states" commit to nuclear disarmament, and all parties agree to the "inalienable right" to use nuclear energy for peaceful purposes.

Generally, there have been two different approaches to these "bargains" of the NPT, one offer them equal standing, and one states that the goal of non-proliferation is above the other two (CSIS, 2012). There has been much debate and controversy over the letter and spirit of the NPT (ACA, 2011), and especially over the nuclear fuel-cycle technology, or the "dual use" capabilities (CFR, 2012), which in the case of Iran have led to decades-long tensions with the international community and the imposition of sanctions against it. The dispute is whether Iran, as a signatory of the NPT, has the right to enrich uranium under the international safeguards.

While Iran has followed the former approach to the NPT, upholding its "right to enrich", the international community under the leadership of the United States, have adopted the latter view, not only regarding Iran, but for other countries too (Iraq, North Korea, and also Brazil or South Africa).

The United States have pursued, under the G.W. Bush administration, a vigorous policy of nuclear non-proliferation. Under the new directions and necessities of the "War on Terror", America has tried hard in the last decade to limit the access to nuclear technologies (AIEA, 2004). But it used different ways in dealing with the various countries that were trying to access those technologies. There are remarkable differences between the way in which US have dealt with the nuclear programs of several countries in the '90s, like South Africa, Argentina or Brazil, compared to the programs of other countries, like Iraq, North Korea or Iran, or the so-called "Axis of Evil".

Comparisons between the cases of Brazil and Iran are interesting, because their relations with United States shared some similarities in the early years after the end of the Cold War. Brazil has researched nuclear technology between '60s and '90s, and even had a nuclear weapons program. Although that program stopped in 1991, Brazil was a late signatory of the NPT and still runs a nuclear program with military applications, for powering nuclear submarines (ACA, 2013). It had a not-so-smooth relationship with the US regarding its right to enrich uranium, which Brazil jealously defends (ENS, 2006). Despite these asperities and the clear military applications of Brazil's nuclear program, its relationship with the US has never sunk to the depths of that of Iran, and the question of international sanctions against Brazil has never been "on the table".

While Iran also has a nuclear program that is decades-long and has terrible relations with the United States, that also go back decades, the approach America has used in dealing with the Iranian nuclear program has been entirely different than with Brazil or South Africa, or even North Korea, for that matter. Although negotiations on the issue have taken place in the last decade, there has been an outright hostility to the concept of such a nuclear program.

It is interesting, then, to see some of the aspects that lie beneath the inflammatory declarations on both sides and try to find out what are the reasons for some of the regional and global actors involved in the Iranian nuclear controversy.

A History of Iran's Nuclear Program

Iran's nuclear program can be traced back to the times of the Shah, when, with the help of the United States, the Atomic Energy Organization of Iran (AEOI) established the Tehran Nuclear Research Center in 1967. The scientific facility was equipped with a 5MW research reactor for which US supplied the fuel, in form of highly enriched uranium (UN, 1967).

Under the rule of the Shah, Iran embarked on an extensive nuclear energy program. In 1974, mindful to the prospect of future oil-depletion, the Shah aimed at achieving around 23GW of electricity from nuclear power plants. These ambitious nuclear projects had to rely heavily on technical and fuel assistance from the United States and Europe. In the following years, Iran completed agreements with West-German (Kraftwerk Union – a subsidiary of Siemens) and French (Framatome) companies to build and supply two 1,200MW reactors at Bushehr and two other 900MW reactors.

Although fuel was initially to be provided by the companies building the reactors, plans were made to allow Iran to create its own infrastructure for enriching uranium. In 1975, President Ford approved the National Security Decision Memorandum 292, which allowed for "US materials to be fabricated into fuel in Iran for use in its own reactors and for pass-through to third countries with whom we have Agreement" (NSC, 1975).

A year later, US went even further, by requesting that Iran enrich uranium. In National Security Decision Memorandum 324, the American negotiators were meant to "seek a strong political commitment from Iran to pursue the multinational/binational reprocessing plant concept, according the US the opportunity to participate in the project" (NSC, 1976). The extraction of plutonium from the reactor fuel allowed for a complete nuclear fuel cycle. In those days, Iran was allowed to enrich uranium, extract plutonium, and US was seeking to make a profit out of it.

When the Iranian Revolution erupted in 1979, the country's nuclear activities were put on hold. Following the breakdown of the relations with the US, most of the countries terminated their cooperation with Iran under US pressure. The ensuing war with Iraq, which started in 1980, diverted the resources necessary for the nuclear development and damaged Iranian nuclear infrastructure. The two nuclear reactors under construction at Bushehr were bombed by Iraqi air force several times (Iran Watch, 2004).

After the war ended, the Iranian nuclear program was resuscitated. In the late '80s, during the presidency of Akbar Hashemi Rafsanjani, Tehran searched for new partners to support its nuclear development. Turned down by Western countries, it looked to the

former Cold War enemies of the US, Russia and China. Two protocols were signed with China, in 1985 and 1990, and one with Russia in 1995. The latter deal was intended to complete the construction of the Bushehr nuclear reactors, supply the fuel for them and create the infrastructure for Iran's own enrichment plants (IW, 1995). But pressures from the US blocked some of these agreements and transfers, particularly the enrichment technology. Also, during the '90s, it is believed that Iran acquired some uranium enrichment technology through the underground black market network run by the rogue Pakistani scientist, A.Q.Khan (CRS, 2005).

It is worth mentioning that in early '90s, when rumors of the Iranian undisclosed nuclear activities surfaced in the Western media, Tehran allowed IAEA inspectors full access to all the sites and facilities they required to see. There was nothing inconsistent with the provisions of the NPT Treaty allowing the peaceful use of nuclear energy.

Things started to precipitate in early 2000, when MEK (Mojahedin-e-Khalq – People's Mojahedin of Iran) disclosed to the media the scope of the Iranian enrichment efforts (IW, 2002). Consisting of two sites under construction, Natanz enrichment facility and Arak heavy-water reactor, these are still the point of disagreement between Iran and the international community. It is believed that MEK learned about these sites from the Israeli intelligence agency, Mossad (Hersh, 2012). In December 2002, construction at the two sites was confirmed by satellite photos showed on US television networks, and US Government promptly accused Iran of "across-the-board pursuit of weapons of mass destruction".

After IAEA inspections toured the country in 2003, it found no concrete evidence linking the Iranian nuclear program with the development of nuclear weapons, but stated that Iran has failed to comply with some of its safeguards agreements "with respect to the reporting of nuclear material and its processing and use" and "declaration of facilities where such material has been processed and stored" (IAEA, 2003). The report also stated that a "foreign supplier" was involved in providing the designs for Iran's uranium enrichment facilities. While it doesn't mention it by name, it is believed that China was supporting Tehran's enrichment development in the '90s.

As a technical intermission, Iran's struggle to obtain nuclear expertise has led it on the path to enriched uranium or plutonium, which can be used for both nuclear reactor fuel AND nuclear weapon fuel. Both elements are "fissile" and split when struck by neutrons, releasing energy which can be used to heat water in a nuclear reactor to produce electrical power, or, by chain-reaction, to destroy a city.

Uranium-235, the isotope required for nuclear fuel, can be found naturally in uranium deposits in a tiny quantity (0.7%). As such, obtaining a higher concentration of U235 requires the processing of uranium or the so-called "yellowcake", then gasified into

UF6 (uranium hexafluoride) which is pumped into centrifuges that serves to enrich the uranium until it's suitable for the intended purpose. The approximate levels of enriched uranium and their uses are:

- 3.5-5% for nuclear power plants reactors (Low-Enriched Uranium – LEU)
- 20-30% for research reactors (Highly-Enriched Uranium – HEU)
- 40% for the production of medical isotopes (HEU)
- 60-80% for naval nuclear reactors (HEU)
- 90% and above for weapons production (HEU).

The enrichment process can be achieved in a number of other ways, like laser isotopic separation, aerodynamic isotope separation, electromagnetic isotope separation, plasma separation etc. Iran has opted for the centrifuge separation because is the least expensive and can be achieved on an industrial scale, something that would be very difficult with the other techniques. It also acquired the designs of centrifuge technology from the Khan network (CRS, 2005).

Plutonium-239 can also be used for nuclear weapons or power and heat generation, nuclear research and medical applications. It is found in nature only in trace amounts, but can be obtained as a byproduct of commercial or research nuclear reactors. Plutonium producing reactors use heavy water as an essential ingredient in the nuclear reactions designed to produce plutonium.

Iran has started the building of a heavy water production plant at Arak in 2002 and in 2003 it announced its plan to construct a 40MW heavy water research reactor (also called Iran Nuclear Research Reactor (IR-40)). This reactor would use uranium as a fuel, but it would be also capable of producing plutonium. The reactor construction site was visited by IAEA inspectors in 2010, who confirmed its advanced construction stage. However, building activities were slow and the reactor is not yet complete. It is projected to become operational in 2014.

Iran has repeatedly claimed that the IR-40 facility is designed for research, development and for the production of isotopes with medical and industrial applications. It is a point that few in the international community believe, because these types of reactors have been used to produce weapon-grade plutonium. Some well-known examples of these kinds of reactors are Cirus in India (CCNR, 1996) and probably Dimona in Israel.

In the spring of 2003 the Iranian government attempted an agreement with the US, through Swiss intermediaries. The so called "Grand Bargain" saw the Iranians put everything on the table. They offered full transparency of their nuclear program, the withdrawal of their support for Hezbollah and Hamas organizations and asked for security guarantees from the US, an end of the sanctions and the normalization of their

relations. But the Bush administration, recently victorious in Iraq turned down the offer (PBS, 2007).

In a spirit of cooperation, Iranian representatives met with three European countries (France, Germany and United Kingdom – EU-3) in an attempt to settle the issues about its nuclear program. A joint statement was issued in October 2003 – the Tehran Declaration (IAEA, 2003) – stating that Iran will strengthen its cooperation with IAEA and suspend its uranium enrichment and reprocessing activities during the negotiations. The EU-3 group agreed to recognize Iran's nuclear rights under the NPT and offered access to modern nuclear technology and supplies.

The IAEA November 2003 report stated that Iran failed to comply with Safeguard measures in reporting the entirety of its nuclear activities, but "found no evidence" of a nuclear weapons program (IAEA, 2003). Later that year Iran signed an additional protocol with the IAEA, allowing unobstructed, on-the-spot inspections from the IAEA and in 2004 suspended its uranium enrichment process as a voluntary confidence-building measure. While the talks with the EU-3 dragged on for more than a year (Reuters, 2005), probably stalled by US pressures, in September 2004 the US Secretary of State called Iran "a growing danger" and called for "UN Security Council to impose sanctions" (BBC, 2005).

Events took a turn for the worse in 2005, with the advent of the hardline Ahmadinejad presidency. The new administration considered that the EU-3 broke their October 2003 commitments and took a tougher position in the negotiations (Oborne, 2013). While in August 2005 it resumed its uranium enrichment activities, in September the new Iranian President Mahmoud Ahmadinejad offered in a speech at the UN General Assembly that Iranian nuclear program might be managed by an international consortium, in which Iran would share ownership. The offer was refused by the European Union and the United States.

In February 2006, Iran resumed its uranium enrichment at Natanz nuclear facility and in April president Ahmadinejad announced that Iran had successfully managed to enrich uranium at 3.5%, most likely a small quantity produced by about 100 centrifuges. After US demands in April that Tehran stop its enrichment process and Iranian refusal in August, UN Security Council voted the implementation of sanctions against Iran in December 2006.

The following years were marked by increased efforts by Iran to "master the nuclear fuel cycle" (mining, preparation, usage, reprocessing and storage) and the international community imposing more sanctions against it. Although IAEA was allowed to carry out inspections to Iranian nuclear sites, cooperation with the international body was limited, and negotiations with Iran stagnated. Hardliners, radicals and neoconservatives on both sides made increasingly difficult any attempt to negotiate the unresolved issues.

On the Iranian side, great efforts were made to accomplish the enrichment of uranium on an industrial scale. To this end, at the nuclear facilities at Natanz and Fordow an increased number of centrifuges were installed: 7,231 in June (IAEA, 2009) and 8,308 in August 2009 (IAEA, 2009), 8,600 in January 2010 (IAEA, 2010), 10,400 in November 2012 (IAEA, 2012) and 15,400 in August 2013 (IAEA, 2013), with some thousands estimated being already manufactured and in reserve. Although not all centrifuges were operational, the increased capacity for enrichment is noteworthy. The levels of uranium enrichment were mostly at 3.5%, with some minor quantities at 20%, all within legal levels for civil usage in nuclear power plants and production of medical isotopes (IAEA, 2013).

While the IAEA did not find evidence of a "weaponized" nuclear program, its reports did not rule out the possibility of covert nuclear activities, due to the lack of Iranian cooperation beyond the letter of the international agreements and the dual-use nature of some nuclear related activities. The issue was further inflamed by Iran's ballistic missiles tests in July 2008 and again in September 2009.

Further talks to resolve the issue of the Iranian nuclear program were held intermittently in Geneva in P5+1 format (the five UN Security Council permanent members: United States, Russia, China, United Kingdom, France, plus Germany) between 2006 and 2013. Little progress was made until the autumn of 2013, when an agreement was struck on November 24.

Undermining Iran's Nuclear Program

Between 2007 and 2012, there were a number of attempts to sabotage the nuclear program of Iran. The most important two of these are the Stuxnet malware which infected the computers at Natanz nuclear enrichment facility and the assassination of key Iranian nuclear scientists.

Regarding the Stuxnet malware, or computer virus, it was discovered in July 2010, when a Belarus computer security company found the virus on computers belonging to an Iranian client. It has generated much debate around the world, because of its particular functions.

Initially believed to be designed to steal nuclear industrial secrets, it was later discovered that it was much more than that. It affected only computers which had Siemens software systems, which are used in Iran's nuclear enrichment activities (Jones, 2007). It acted in a particular way, different from other computer viruses, by way of increasing the pressure in the high-speed rotating centrifuges used for separating the U235 isotope. It also covered its attack by hiding the sensor readings of this abnormal activity from the monitoring systems. The result of this sabotage was an increased number of centrifuges failures and breakdowns.

But this sabotage was designed to be so stealthy, that the virus's actions avoided any centrifuge disruption that would lead to its immediate destruction, because its subsequent examination would have revealed the sabotage.

It is believed that this computer-based attack against Iran's nuclear program started in 2007, but reached critical damage between 2009 and 2010, and caused delays in the program of up to 2 years (Schwartz, 2012). It also affected it in a psychological way, because Iranian scientists began to doubt their abilities of conducting such an industrial enterprise. The total effectiveness of this attack is of some dispute, because ultimately galvanized Iran's nuclear efforts.

The Stuxnet computer virus was most likely created by a nation-state, because it required vast resources and considerable intelligence on industrial characteristics and technical parameters of the centrifuges it affected, resources far larger that would have been available to other developers (Flanagan, 2011). It is believed that behind its creation and deployment were US and Israeli agencies, as part of the wider US-Israeli cyber-warfare effort, under the name Operation Olympic Games, started under the presidency of G.W. Bush (Sanger, 2012).

Between 2007 and 2012, four Iranian scientists who were associated with the country's nuclear program died by bomb explosion, gunshot or poisoning, while a fifth scientist barely survived a car bombing. The authors of these assassinations are unknown, but suspected to be deployed by powers opposed to the nuclear development of Iran. Speculations were made about the authors being US or Israeli hitmen, but also belonging to MEK, an Iranian dissident organization, known for its terrorist attacks (Dareini, 2012).

International Sanctions against Iran

The sanctions imposed upon Iran were instituted initially by the United States after the Tehran embassy incident, later by the European countries under US pressure, and by the UN Security Council because Iran failed to comply with IAEA Safeguards mechanisms.

UN Sanctions

Since 2006, UN Security Council passed several resolutions imposing sanctions on Iran, based on IAEA reports stating Iran's non-compliance with its Safeguards Agreements. These sanctions followed an official Iranian rejection of suspension of all uranium enrichment and reprocessing activities. The most important resolutions imposing international and legal-binding sanctions against Iran are:

- UNSC resolution 1737 (December 23rd 2006) – imposed sanctions banning the supply of nuclear-related materials and technology, and froze the assets of key individuals and companies related to the nuclear program (UN, 2006).
- UNSC Resolution 1747 (March 24th 2007) – imposed an arms embargo and expanded the freeze on Iranian assets (UN, 2007).

- UNSC Resolution 1803 (March 3rd 2008) – extended the asset freezes and called upon states to monitor the activities of Iranian banks, inspect Iranian ships and aircraft, and to monitor the movement of individuals involved with the program through their territory (UN, 2007).
- UNSC Resolution 1929 (June 9th 2010) – banned Iran from participating in any activities related to ballistic missiles, tightened the arms embargo, travel bans on individuals involved with the program, froze the funds and assets of the Iranian Revolutionary Guard and Islamic Republic of Iran Shipping Lines, and recommended that states inspect Iranian cargo, prohibit the servicing of Iranian vessels involved in prohibited activities, prevent the provision of financial services used for sensitive nuclear activities, closely watch Iranian individuals and entities when dealing with them, prohibit the opening of Iranian banks on their territory and prevent Iranian banks from entering into relationship with their banks if it might contribute to the nuclear program, and prevent financial institutions operating in their territory from opening offices and accounts in Iran (UN, 2010).

US Sanctions (Jones, 2013)

In November 1979, Iranian students captured 52 American personnel at the US Embassy in Tehran and held them hostage for 444 days. President Carter tried unsuccessfully to obtain their freedom, including by authorizing a military rescue. The hostages were freed shortly after Ronald Reagan became president, in January 1981. The diplomatic relations between the two countries were broken and not restored since.

The Carter administration imposed the first round of escalating sanctions against Iran, starting with the ban on Iranian oil imports and following with blocking all $12 billion in Iranian government assets in the US in April 1980, an embargo on all US trade and travel with Iran was also imposed. These restrictions were lifted after the release of the hostages.

The Reagan administration imposed various restrictions on Iran, primarily based on the declaration that Iran was a state sponsor of international terrorism, following the 1983 bombing of the US Marine peacekeepers in Lebanon. The restrictions included U.S. opposition to World Bank loans to Iran. During the Iran-Iraq War, increasing restrictions were placed upon export to Iran on items that could have been adapted for military use. It was an extensive embargo, including for example scuba-diving equipment. In 1987, all US imports from Iran were also banned.

The Clinton administration expanded considerably the sanctions already in place. In March 1995, all US participation in Iranian petroleum development was forbidden, and in May a total trade and investment embargo on Iran was put in place. The Iran and Libya Sanctions Act (ILSA) of 1996 was passed overwhelmingly by the US Congress,

with provisions to force foreign companies to limit or terminate their investments in Iranian oil and gas industry.

The Bush administration ordered repeatedly the freezing of assets of companies and individuals believed to be involved in Iran's support of terrorism, in its role of destabilization of Iraq and its nuclear and missile programs. Foreign entities were also targeted by the sanctions, especially Chinese and Russian companies, for helping Iran's nuclear and missile programs.

The Obama administration saw Congress pass with overwhelming majority the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA). This piece of law targets the supply of refined petroleum products delivered to Iran by non-US companies. Due to a poor oil-refinement infrastructure, Iran imports about 30% of its gasoline. A growing approval by US European and Gulf allies to increase pressure on Iran saw major international oil companies announcing a halt of refined petroleum products to Iran. For example, BP terminated their supplying of jet fuel for Iran Air (Spencer, 2010) at European airports. In 2008, banks and other financial institutions in the US were prohibited to process transfers, transactions or payments between Iranian and non-Iranian banks.

Overall, US individuals and companies located anywhere (even offshore subsidiaries) are prohibited to engage in any kind of relations with Iran. These include purchases, sales, transportation, swaps, financing or brokering transactions related to goods or services of Iranian private or government origin. Other sanctions target financial, insurance and shipping companies in helping Iran sell oil.

New sanctions were imposed on July 1st and 31st 2013, after the new Iranian president Hassan Rouhani, considered to be a moderate, was elected into office in June. They prohibit foreign financial institutions to conduct transactions using the Iranian currency, the *rial*, with the purpose of making it "useless" outside of Iran. The new sanctions also forbid companies and individuals to do businesses in the US if they conduct or facilitate financial transactions through Iran's central bank. They also impose sanctions against Iranian officials suspected of human rights abuses and, significantly, limited the ability of the President of the United States to lift the sanctions, should a diplomatic agreement be achieved (USC, 2013).

The impositions of the 2013 sanctions, in the wake of the election of the moderate Hassan Rouhani and the possibility that a normalization of relations could follow, hints to the strong anti-Iranian sentiment in US Congress. Also, various provisions regarding punishment of foreign companies from doing businesses with Iran is doubtful, at best.

EU Sanctions

European Union imposed a number of sanctions on Iran, following the December 2006 UNSC Resolution 1737 and the breakdown of talks between EU-3 and Iran.

The first round of sanctions was imposed in April 2007 and went beyond the provisions stated in UNSC Resolution 1737 (EUbusiness, 2007).

In January 2012, the Council of the European Union imposed an embargo on Iranian oil exports, froze the assets of the Iranian Central Bank in the EU and halted the trading of various commodities, mainly gold, silver and petroleum-refined products. The Council also put restrictions on foreign trade, financial services, energy sector technologies, insurance and reinsurance activities by EU-based insurance companies with Iran (Torbat, 2012).

The EU sanctions also affect Iranian trade in graphite, aluminum, steel, coal and software designed for integrated industrial processes, with further impact on Iran's auto sector, including light and heavy vehicles, passenger cars, trucks, buses, minibuses, pick-up trucks and motorcycles.

On March 17th 2012, the SWIFT electronic banking network disconnected from its international network all Iranian banks that were identified as in breach of the EU sanctions (Reuters, 2012). As such, those banks and financial institutions are unable to conduct any international electronic financial transaction. This provision probably had the heaviest impact upon Iranian economy.

As a result of the Geneva 3 diplomatic agreement struck on November 24, Iran has achieved some easing of the sanctions imposed upon it. More precisely, until the end of May 2014, the United States and the European Union will "pause their efforts to reduce Iran's crude oil sales" (JPA, 2013) and unfreeze some of the Iranian assets in Western banks. Also, the easing will allow trading on precious metals, car and aviation industry spare-parts, food and agricultural products, medicine and medical devices. The United States and European Union will also refrain from imposing new sanctions (JPA, 2013).

Sanctions Controversy

It has been a matter of international agreement that the sanctions imposed on Iran were beginning to have a serious impact on Iranian economy by 2013. Various riots and unrest in Iran over the price of various goods and devaluation of the Iranian currency *rial* occurred in 2012 and 2013 (BBC, 2012). But despite crippling sanctions, Iran has not relented in its determination to continue its nuclear program.

On the other hand, disagreement occurred about whether the Iranian people blame the government or the West for the growing economic problems in the country. The evaluation of the sanctions' impact is further complicated by disagreement over the

purpose of these sanctions, on what they are meant to achieve. Numerous opinions have been forwarded, probably with an equal number of objectives. Some of these objectives include:

- Taking a moral stance against human rights abuses in Iran
- Deterring other countries from taking the same nuclear route as Tehran
- Signaling international disapproval
- Delaying and disrupting Tehran's nuclear and missile programs
- Helping the democratic opposition
- Crippling the country, or at least the government
- Using sanctions as leverage to open fruitful negotiations on the nuclear issue or perhaps on a broader set of issues
- Persuading Iran to halt its uranium enrichment efforts.

Each of these stated objectives are debatable. Probably the most controversial one is the last one. Iran has stated tirelessly that it will never, ever surrender its right to enrich uranium. While the Non-Proliferation Treaty of 1970 does mention "the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty" (UN, 2005), the word "enrichment" is not particularly mentioned. This legal technicality, combined with the IAEA 2003-2013 reports which stated that no evidence was found on a "weaponized" Iranian nuclear program has led to speculation over the real reasons of US opposition to the nuclear program of Iran.

There have also been discussions on the legality of some provisions of these sanctions. In early 2013, a European Union Court declared that the EU must eliminate the sanctions it has imposed on one of Iran's largest banks, due to insufficient evidence presented that the bank was involved in Iran's nuclear program (Reuters, 2013).

Another point of argument in the Iran's sanctions controversy is missed investment opportunities. When Tehran decided to privatize some sectors of its economy in the last years, Western companies watched helplessly how Chinese and Russian companies got the lion's share of those investments.

Last, but not least, one viewpoint stands to be noted. The US and European efforts to restrict investments and businesses of any kind with Iran, both at home and abroad, effectively cut the country from the international financial system. As an unforeseen consequence of this lack of international financial access, when the 2008 economic crisis started in US and later extended to Europe and the rest of the world, Iran was effectively insulated from the effects of the crisis.

Iran's Energy Crisis

One point that has received remarkably little attention in the decades-long dispute about Iran's nuclear program is the reason why such a program exists in the first place. The Shah of Iran first seized the opportunity in early '70s, when the fundamentals of the nuclear program were first discussed in Iran. The size of the population and its estimated growth, combined with a rather poor refinement capacity (true now as it was four decades ago) make for a high domestic energy demand and consumption.

Iran is one of the richest countries in the world in terms of hydrocarbon resources. It has the world's fourth largest proven oil reserves, after Venezuela, Saudi Arabia and Canada (EIA, 2013). At the current levels of production, it is estimated that these reserves will last more than a century. Because of the international sanctions, its production capacity declined sharply in the last five years, in fact increasing the life-span of its oil reserves. It also has the world's second largest natural gas reserves: 26.74 trillion cubic meters (EIA, 2013).

Despite all these hydrocarbon riches, the reason for Iran's energy crisis is that domestic demand for energy has spiked in the last years, while energy supply has been falling. Demand has risen due to economic growth based on high international oil prices and an increased population. Another reason for this increased demand for oil and gas has been the vast subsidies on the price of these commodities (Hassanzadeh, 2012). Heavy subsidized prices for petroleum-refined products are common in the Middle East countries, but in Iran these subsidies are larger than in any other country (Hassanzadeh, 2012). As a result of this policy the fuel prices in Iran are only a fraction of their world level. These subsidies cost around $7 billion, or 16% of government spending (IMF, 2011).

In addition, Iran has a growing automobile industry, with probably up to one million cars produced each year. This is one way of coping with one million young Iranian entering the labor market each year (IMF, 2011). Finally, oil and gas are used to produce electricity, also at heavily subsidized prices (EIA, 2013). And in the last years, electricity consumption has risen by 5.9% annually.

These are the reasons given for the country's nuclear program. There are high hopes in Iran that nuclear power will help meet its growing energy requirements. In September 2011, Bushehr nuclear power plant started supplying electricity to the grid, the first commercial nuclear power plant in the Middle East. Iran wants to further expand Bushehr facility with two new units and another nuclear power plant at Darkhovin (IAEA, 2009).

International Opposition to Iran's Nuclear Program

Israel

Because of the last decade's inflammatory statements on both Iranian and Israeli sides with threats going back and forth, it is difficult to see the early relations between the Islamic Republic of Iran and Israel. Today's stances of both countries are based upon actions and reactions which can be traced in the early years of the Islamic Republic.

After the mutual friendship between Iran under the Shah and Israel, things changed completely after the Islamic Revolution. In 1979, at the direct initiative of the Ayatollah Ruhollah Khomeini, diplomatic relations with Israel were unilaterally broken.

It is believed that this gesture was based upon the new revolutionary and religious ideology which laid at the foundation of the new republic. Iran fulfills the paradigm that a revolutionary regime aims at exporting its ideology. What was true for Revolutionary France in the late 18th century, for Soviet Union in the first half of the 20th century, was true now for the Islamic Republic of Iran. The main concept of the new regime was the necessity to export the Islamic Revolution throughout the Muslim world, especially the Middle East. With Israel residing at the heart of the region and controlling Muslim sacred sites, it is easy to see how it was an obstacle.

With Islamic Iran declared "leader of the Muslim World" (Puder, 2013), it is easy to understand why the Palestinian issue gained a completely new meaning and the continued support given by Iran to the Muslims considered oppressed or attacked by Israel, such as Hezbollah in Southern Lebanon or Hamas in the Gaza Strip.

This support to movements considered extremist or terrorist by the international community has raised international ire against Iran. It is important to remember that the initial US sanctions imposed upon Iran by President Carter following the seizing of the US Embassy in Tehran were lifted after the release of the hostages, and were imposed again only several years later, after President Reagan accused Iran of supporting international terrorism.

This fundamental, innate need to export the principles of the Islamic Revolution has led Iranian leaders to accuse Israel time and again of being an "illegal state", or a "parasite" (GS, 2011). Relations only took a turn for the worse after the election of the President Mahmoud Ahmadinejad in 2005, a hardliner of Iranian politics. Since that time, Iran has become known as the main enemy of Israel and the United States.

Ahmadinejad adopted a policy of confrontation with Israel through proxies, such as direct support for Hezbollah during the 2006 Lebanon War (Klein, 2006), or providing weapons for Hamas in the Gaza Strip (Haaretz, 2009). These proxy confrontations are still ongoing today, with Iran offering substantial support for Syria's Assad regime,

while Israel apparently carrying regular strikes against the same regime. Ahmadinejad presidency also saw the acceleration of the Iranian nuclear program, with hostile reactions to the international attempts of supervision, and the increased implementation of sanctions against Iran by the international community.

With Israel being under right-wing governments, it responded to the Iranian actions with more than words. This period saw the computer attack against Iranian nuclear enrichment facility in Natanz with the Stuxnet virus, and the assassination of Iranian nuclear scientists. While there are no direct evidences involving Israel in these actions, it is widely believed to be behind them.

While Iran appears to have a more moderate leader since June 2013, with Hassan Rouhani inclined to find a diplomatic solution to Iran's international problems, Israel is still under the government of the right-wing prime-minister Benjamin Netanyahu. He has adopted an increasingly hostile attitude against Iran, ranging from inflammatory statements, to direct threats against the nuclear program of Iran. While some of his actions may raise a smile, like his bomb-cartoon showed in the UN General Assembly, other actions raise concerns, like the recent Israeli air force long bombing drills over the Mediterranean, or his overtures regarding a military strike on Iran with Saudi support.

During autumn 2013, while the international diplomatic machinery was slowly moving towards a new round of talks with Iran, Israel consistently opposed to any such attempts. Each and every time, Israel's message was one of fierce resistance to the talks or their condemnation. It is believed that Geneva 2 round failed because of leaked information about the proposals being discussed and agreed on the evening of November 9th, to which Benjamin Netanyahu reacted predictably.

It is doubtful that the relations between the two countries will reach normalization in the foreseeable future. It is too early to tell. The mistrust between the two countries runs deep and will take a long time to heal. And with an ongoing proxy war in Syria, it will take even longer.

The United States

It is difficult to discern, among all the inflamed rhetoric directed against the Iranian nuclear program, the real reasons for the United States' opposition to the Iranian nuclear program.

Although the relations between the Islamic Republic of Iran and the United States got off on the wrong foot with the US Tehran Embassy incident, and got worse ever since, some points in their evolution deserve to be mentioned, along with the forces driving them. The existing anti-American sentiment in Iran, such as it is, is based primarily on a spiral of actions on both sides, and generated primarily by an apparent inability to understand each other.

It is important, however, to mention that the Iranian foreign policy towards the United States is fundamentally different than that towards the Middle East. While pursuing a policy of uniting the fellow Muslims, opposing Israel as an unnatural entity and helping other Muslims in their fight with it, the view towards United States is completely different. It is an Iranian paradox, if you will. A passionate view of the Middle East compared with a calmer, rational approach to the world's only superpower.

The first signs of mistrust started in the early years of the Cold War, when the first democratically elected prime-minister of Iran, Mohammed Mossadeq was overthrown in a CIA-sponsored coup, at the request of the British. The subsequent monarchical rule by the Shah of Iran was deeply unpopular in Iran, because of its arbitrary and oppressive rule, based to a high degree on the US support for the Shah.

After the Shah was deposed, he asked and received asylum in the US for medical treatment. The Iranian population feared that from the US the Shah will plot his return to power with the support of the CIA, as had happened 26 years earlier. This was the main reason for the storming of the US Embassy in Tehran and the following hostage crisis.

During the 80s, the relations between the two countries worsened with the Lebanon terrorist bombing attack, carried out by Hezbollah with the support of Iran, the support offered to Iraq during the Iran-Iraq war and the 1988 attack by the US Navy on tow Iranian oil platforms and the imposition of the sanctions by the Reagan administration.

After the end of the Cold War, US foreign policy in the Middle East became more assertive, inclined to create a new political and security architecture in the Middle East. This became possible with the advent of the United States as the sole superpower and the defeat of Iraq in the first Gulf War. This new political and security order became apparent with the starting of the Israel-Palestinian peace process, which had high hopes in the 90s.

The United States attempted to attract Iran in this new order, but Iran rejected, not out of anti-Americanism, but most probably because of its fierce independent foreign policy (Leverett&Leverett, 2013). It is interesting to note some seemingly disparate events, but which we believe lead to one conclusion. The imposition of the new round of sanctions by the Clinton administration against Iran coincides with the creation of the US Navy's 5th Fleet, based in Bahrain in the Persian Gulf (May-July 1995). Even though the US have deployed 500,000 troops on the ground in the Middle East in 1990 with hundreds of thousands more in support, there was no need for the creation of this 5th Fleet. We believe that this synchronicity is based on Iran's refusal to participate in the new political and security structure of the region, designed by the United States in the early 90s.

In this respect, Iran is considered a revisionist power in the region by the Unites States, because it desires to change the existing regional order. To achieve this, it follows a rational diplomacy, centered on soft power, which seeks to achieve Muslim unity

throughout the region. Its strategy is to change the balance of power in Afghanistan, Iraq, Lebanon, Egypt, and so on, in order to make the region more secure for itself (Leverett&Leverett, 2013).

On the other hand, the US policy in the Middle East allowed the use of its military supremacy to coerce and leverage political outcomes, to subordinate the major states in the region to a US-managed or dominated, political and security architecture in the Middle East. This emphasis on the military was especially true under the George W. Bush administration, with two major wars in the region lasting more than a decade.

A case may be made with regard to the Iranian nuclear program and US military power. While the nuclear program advanced in the first half of the previous decade, the main enrichment facility was at Natanz, in an open facility. But with the development of the Fordow nuclear site in 2005-2006, which is in an underground fortified bunker, relatively safe from attacks, the United States suddenly started to manifest a fierce opposition to the program and pursued the imposition of sanctions in 2006.

This may lead to the hypothesis that America could have accepted, grudgingly, a vulnerable Iranian nuclear program. But an invulnerable program appeared to be unacceptable. This is more striking, as the IAEA inspections observed both sites and found that there is no weaponized nuclear program and the same enrichment level were pursued in both locations.

The closing of the Fordow facility was also repeatedly demanded by the Israeli Prime-Minister Benjamin Netanyahu and was demanded by the P5+1 group during the 2013 Geneva negotiations and accepted by Iran in the November 24th agreement. The saying goes that "if we can't bomb it, they can't have it" (Leverett&Leverett, 2013).

Iran has demonstrated its willingness to cooperate with United States on more than one occasion. In Bosnia during the wars in former Yugoslavia (Beelman, 2011), in Afghanistan in fighting the Taliban and stabilizing the country, Iran demonstrated that it does not have an implacable anti-American foreign policy.

A different view than the one presented these days in the media about the conflict between Iran and the US may be a systemic one, in which the hegemon power tries to impose the rules of the international system on its members, and punishes those who do not accept those rules.

Saudi Arabia

Saudi opposition to the neighbor across the Gulf is widely known. This is based upon several factors, among which the religious differences and the balance of power in the region.

The religious card is played both on domestic and foreign fronts. Internally, Saudi Arabia considers its stance against Iran as a convenient tool for containing the domestic op-

position. If this tool was not so important before the advent of the Arab Spring, it has become of utmost importance since. This is working very well at containing the domestic opposition with a distraction from the various socio-economic pressures and manipulating sectarian tensions. With the rise of the Arab Spring, the Gulf monarchies in general (Diwan, 2011) and Saudi Arabia in particular have insisted on the Shia membership in the opposition movements, a move that allowed them to delegitimize their criticism as Iranian subversion attempts.

The sectarian division card works equally well on its foreign policy, in as far as many Western countries are giving constant support to the Arab Gulf monarchies in opposition to the possible alternative of Iranian-style theocracies, revolutionary and furiously anti-Western.

Even more on the outside front, there appears to be a strong and structured Saudi plan to counter Iran on all possible ways. From giving almost unconditioned support to the Syrian rebels, ranging from supplying money and weapons to plans for creating a rebel "Syrian Liberation Army" based in Jordan (Sayigh, 2013), Saudi Arabia struggles to oppose Iran on the Syrian side. The country has also called vehemently for an invasion of Southern Lebanon, in order to oust the Shiite Hezbollah movement from its stronghold.

Saudi Arabia also has strong ties with Pakistan, with a possible view of encircling Iran. It has been supporting this country for a long time, investing in Pakistani nuclear program. It has been recently reported that the nuclear ties between Pakistan and Saudi Arabia run so deep, that the Saudis have already purchased nuclear weapons from Pakistan, and the missile infrastructure has already been built in the country in order to accommodate these weapons, once they would be delivered (Urban, 2013). They are supposed to be delivered to Saudi Arabia if talks with Iran would fail and there would be no obstacles left for Iran to pursue the achievement of nuclear weapons. While these allegations are difficult to prove, they reflect a state of mind within the royal house of Saud, one extremely determined anti-Iranian.

The events in the Middle East this year also include a curious move from Saudi Arabia. It has changed its stance on Israel to a friendlier one, following the ancient principle of "the enemy of my enemy is my friend". Their mutual concerns over Iranian nuclear program have led to a "thaw" in their relations, and even sparked ideas of possible military cooperation against Iran. This particular rapprochement between former enemies may be dangerous, though mostly for Saudi Arabia, because of the long anti-Israeli and pro-Palestinian sentiment in the country.

What complicates the Saudi side even more is the succession crisis developing in the country. The current Saudi king is reportedly on his dying bed, and the princes of the royal family are absorbed in their jockeying for power. In these conditions, the country's foreign policy has largely been directed by the Saudi Intelligence Chief, Prince Bandar

bin Sultan, in the last months. His trip to Russia in August this year, where he tried to persuade the Russian president Vladimir Putin to abandon Syria, is well-known. With this larger-than-life character holding the reigns of Saudi foreign policy, the country is guaranteed to perpetuate its hostility towards Iran.

France

One of the most surprising opponents to a nuclear agreement with Iran was France. Or maybe it was not so surprisingly, considering some of the following: France was among the main proponents of the intervention in Libya in 2011 and participated heavily with military hardware. A few months later, France intervened again militarily, this time in Mali, where it maintains a significant military presence for the foreseeable future.

France has also taken a rather "hawkish" position on the issue of intervention in Syria in early autumn of 2013, where it was, if not the only European proponent for intervention, definitely was the strongest one. Also the recent NATO exercise in Poland needs to be mentioned, Steadfast Jazz 2013, where France was one of the main participants. Last, but not least, the recent agreement hammered in Geneva in late November could have been achieved earlier, if it had not been for France's opposition to the draft proposed at the second meeting, on November 7-9, 2013.

In an unusual position for France, a long-time critic of the US's role "as the world policeman", it has emerged in recent years as probably the most interventionist of the Western states. This aggressiveness on the international stage is undertaken at a time of an apparent diminishing influence, with the French military suffering budget cuts (The Economist, 2011) and French economy undergoing hardships. Even more remarkable is that this "hawkishness" in Middle East and North Africa was pursued under different governments, from both sides of the French political spectrum.

One possible explanation for France's new stance is the new power configuration in the Middle East and North Africa, where old regimes have been wiped out in the crucible of the Arab Spring, the new ones are still shaky, and the United States are in an apparent retreat from the region with a focus on the "Pivot to Asia" and the withdrawal of their troops from Iraq and Afghanistan. There appears to be a relative power vacuum in the region, which France hurried to fill in the recent years.

Although the last-minute US retreat from attacking Syria in early September 2013 has left France alone on the frontlines, and forced it back to the reality of its limits, it did not cool down enough the hot-heads in Paris. Only two months later, France was again posturing in an aggressive stance.

Another view of the recent French behavior in opposing the Geneva 2 talks is given by the formidable military contracts with the Arab monarchies (DefenseNews, 2013). It is most likely that France was persuaded into opposition by the promises of contracts for

aircrafts, warships, missile systems and a possible construction of nuclear power plants in Saudi Arabia (ConstructionWeek, 2013). Regarding the last point, it is ironic that Iran is not allowed to have a nuclear program, while France is bidding to build and operate nuclear power plants for its Wahhabi allies. Also worth mentioning are the economic ties with Qatar, another petro-monarchy which fears Iran, which has invested heavily in France, especially Paris.

Last, but not least, is necessary to mention the Jewish lobby in France, which shared a great responsibility in France's opposition to an initial agreement in Geneva. It has been reported that Meyer Habib, a French MP and a high official with the Representative Council of Jewish Institutions in France (CRIF), the Jewish organization with the most political power in France, has intervened directly to the French foreign minister Laurent Fabius to oppose the Geneva 2 draft agreement, threatening with an Israeli attack on Iran (Times of Israel, 2013).

The case of Russia

Russia is following the current developments in the issue of the nuclear program of Iran with interest, but also with mixed feelings. It has adamantly rejected any possibility of a military strike against Iran, and has kept its position unchanged over the years. The model that Russia proposed for solving the Iranian nuclear case was always through negotiations.

If Iran manages to find a workable, diplomatic solution for the world to accept its nuclear program, and engineers a way out of the current standoff with the United States and Israel, it will only enhance its current regional position. This means that any arrangements between Iran and the US will serve only to increase its influence over the Middle East. This can only serve Russia's interests, which has good relations with Iran, having cultivating them over the last decades.

These good relations between Russia and Iran serve a number of Russian interests. A "rehabilitated" Iran can help stabilize Afghanistan and reduce the terrorist threat that is fomenting there and could spread to the rest of Central Asia. Iran could also join the Shanghai Cooperation Organization (SCO) after getting rid of the international sanctions, which would boost the organization's strength and prestige.

More importantly, there has been an alignment of interests of both countries in the case of Syria. The Syrian conflict has significantly altered the political, diplomatic and military outlook of the Middle East in the last few years. Russia's position regarding the international response on Syria has led to the evolution of a situational alliance between Moscow, Damascus, Tehran and Hezbollah. This alliance, whether temporary or not, only time will tell, has made Russia a strong and influential player in the region. The recent thwarting of the West attack on Syria two months ago and

the negotiations with Egypt for a Russian naval base are testimony of Russia's new role in the Middle East.

But there is another side of the process of "thawing" the relations between Iran and the West for Russia. A case may be made that the current "special" relationship with Iran is based mainly on it being punished with terrible sanctions that are crippling its economy and having nowhere else to turn but to Russia. This is true for the fields of nuclear cooperation – the construction of nuclear power plants – and political and military cooperation. But Russia fears that as soon as Iran will have other opportunities, it will try to reorient itself to some more influential Western countries. There could be a risk that a country eager to be "friendly" in times of trouble will look elsewhere after its isolation alleviates. The examples of Serbia after the fall of Milosevic and Libya after Gadhafi have put Russia on guard in this respect.

Another point that could be made for Russia not wanting a too great rapprochement between Iran and the West is related to Iran's oil and gas deposits. With the sanctions in place, those hydrocarbon reserves are kept out of the international market, thus not driving down their price. Oil prices are quite high due to ban on Iranian oil sales. Maybe even more important is the fact that the Iranian ample reserves of natural gas are unable to find their way to the European market and thus be a competitor to Gazprom's iron grip on the European countries. If Iran gets rehabilitated, the Nabucco pipeline project, currently dead but still on some life-support, could see a sudden resurrection (Kashfi, 2013). After Russia fought almost a decade to kill it through South-Stream, it is probably the last thing it would like to see.

As such, the Iranian file is a complex one for Russia, with both threats and opportunities. Whether Russian fears of an Iranian divorce are to become reality, the developments in the next six months will tell.

In conclusion

A potential "thaw" in the relations between Iran and United States would have a great impact on the political and strategic landscape of the Middle East and the world. It remains to be seen if such an opening is possible, despite glittering diplomatic breakthroughs. The enemies of such a process are many and powerful.

The US Congress reconvenes on December 9th, 2013 and has a number of new bills imposing new and more terrible sanctions on Iran. At the moment those bills are pending discussion, but should they come into effect as laws, they would spell disaster in any diplomatic understanding. Any such move would be seen as breaking the good faith of the negotiation process and would effectively kill any possibility, however remote, of an understating between Iran and the West. The powerful Jewish lobby in Washington has demonstrated its grip on the US Congress votes regarding Iran on more than one

occasion, the recent example being the aborted US military strike on Syria. Should Israel desire to torpedo any deal reached in Geneva this autumn, it is surely within its means to do so.

That, in turn, would lead to an escalation of the current conflict with Iran, generating a "nuclear crisis". The moderates now in power in Tehran would be discredited in the eyes of the Iranian population, with a possible return to a hardline attitude towards the West. Iran would undoubtedly continue to enrich uranium and to further develop its nuclear program. That move would also give fuel to the hawks in Jerusalem and Washington alike, forcing president Obama to really consider the "military option" against Iran. And with the Middle Eat in flames, things could only get worse.

Saudi Arabia's opposition to Iran has been discussed above, but deserves to be mentioned once more. The country has criticized the US "softness" on Syria and Iran and has threatened with dissolution of the existing alliance. Should an Iranian opening to the West gain momentum, it could very well mean a breakup of Saudi Arabia from the US orbit. Although claims could also be made that another patron is difficult to find, the development of the US shale sector and the advent of China as the world's largest oil importing country may offer hints to the potential route the Saudis will take.

Another point that requires attention is that at the present moment, when Iranian economy is "in the ropes", oil sales are low, the population is starting to complain against the crippling sanctions, the country still manages to project its influence in the region (Iraq, Syria, Lebanon) and fight a proxy war with the West in Syria. Even in such dire conditions, Iran is still a formidable player. Should sanctions be removed completely, its economy being opened to international investments and oil sales booming, it will dominate the region even more. It is enough to say that if Saudi Arabia fears Iran when it is weak, they would be just horrified if it gets stronger. And the effects of horror upon the rational judgment are well-known.

On the other hand, a successful international management of the Iranian nuclear program will have its share of benefits. Ranging from a greater cooperation with United States in fighting terrorism, stabilizing Afghanistan and strengthen the US foothold into Central Asia, providing a peaceful resolution to the Syrian civil war, restraining Hezbollah in Lebanon, to helping Egypt get back on its feet from the convulsions of the Arab Spring and beyond, the list goes on and on. Given the US attempts to shift its focus to Asia/Pacific, Iran may help in the American efforts to leave behind a stable Middle East. Considering the rational Iranian approach to its relations with the United States, the future may have a distinct bright possibility.

Regarding the relations with Israel, these could take a longer time to mend. It is unlikely that the revolutionary attitudes towards the "oppressor" of the fellow Muslims and

the "parasite" will be easily extinguished. But better relations are not impossible, with positive effects on the Israeli-Palestinian negotiations being just one example.

Another interesting idea is to consider the effects of an Iranian opening to the rest of the world upon the Iranian society. The theories of globalization effects on the various societies are well established in this respect. Although the Iranian society is by no means patriarchal and could be considered a rather modern society when compared to some Arab petro monarchies in the Middle East, decades-long international sanctions have shielded it against the full spectrum of the globalization consequences, with all their upheavals and successes. Should that shield be removed, Iran will undoubtedly undergo profound changes and challenges with surprising repercussions. Only time will tell.

References

1. ACA (2013). *Brazil Moves Towards Nuclear Submarine*. Retrieved at the 28th of September 2013 from https://www.armscontrol.org/act/2013_04/Brazil-Moves-Toward-Nuclear-Submarine.
2. AIEA (2004). *The Nuclear Fuel Cycle and The Bush Nonproliferation Initiative*. Retrieved at the 28th of September 2013 from http://www.iaea.org/newscenter/focus/fuelcycle/neff.pdf.
3. Arms Control Association (2011). *Misinterpreting the NPT*. Retrieved at the 28th of September 2013 from http://www.armscontrol.org/2011_09/Misinterpreting_the_NPT.
4. BBC (2005). *Timeline: Iran nuclear Crisis*. Retrieved at the 28th of September 2013 from http://news.bbc.co.uk/2/hi/middle_east/4134614.stm.
5. BBC (2012). *Iran police clash with protesters over currency crisis*. Retrieved at the 29th of September 2013 from http://www.bbc.co.uk/news/world-middle-east-19812482.
6. Beelman, M. (2011). *Dining with the Devil: America's ,Tacit Cooperation' with Iran in Arming the Bosnians*, The Alicia Patterson Foundation. Retrieved at the 30th September 2013 from http://aliciapatterson.org/stories/dining-devil-americas-tacit-cooperation-iran-arming-bosnians.
7. Canadian Coalition for Nuclear Responsibility (1996). *Exporting Disaster*. Retrievet at the 28th September 2013 from http://www.ccnr.org/exports_3.html#3.2.2.
8. CFR (2012). *Iran: The Nuclear Challenge*. Retrieved at the 28th of September 2013 from http://www.cfr.org/iran/iran-nuclear-challenge/p28330?excerpt=1.
9. Congressional Research Service (2005). *Pakistan's Nuclear Proliferation Activities and theRecommendations of the 9/11 Commission: U.S. Policy Constraints and Options*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/sites/default/files/congress-crs-khannetwork-012505.pdf.
10. ConstructionWeek (2013), *Saudi Arabia to build 16 nuclear reactors*. Retrieved at the 30th of September 2013 from http://www.constructionweekonline.com/article-24384-saudi-arabia-to-build-16-nuclear-reactors/#.UrLhheK94ct.

11. CSIS (2012). *Understanding Iran's Right to Enrich*. Retrieved at the 28th of September 2013 from https://csis.org/blog/understanding-irans-right-enrichment.
12. Dareini, A.A. (2012). *Iran Scientist Assassination: Confessions In Murder Of Nuclear Scientists Aired On State TV*, Huffington Post. Retrieved at the 28th of September 2013 from http://www.huffingtonpost.com/2012/08/05/iran-scientist-assasinations-state-tv-confessions_n_1744862.html.
13. DefenseNews (2013). *Report: France Wins Billion-Euro Saudi Defense Deal*. Retrieved ath the 30th of September 2013 from http://www.defensenews.com/article/20130829/DEFREG01/308290020.
14. Diwan, K.S. (2011). Bahrain's Shia Question. What the United States Gets Wrong About Sectarianism, *Foreign Affairs*, 2nd March 2011. Retrieved at the 30th of September 2013 from http://www.foreignaffairs.com/articles/67555/kristin-smith-diwan/bahrains-shia-question.
15. Energy Information Administration (2013). *Iran Overview*. Retrieved at the 29th of September 2013 from http://www.eia.gov/countries/cab.cfm?fips=IR.
16. Environment News Service (2006). *Brazil Officially Starts First Uranium Enrichment Facility*. Retrieved at the 28th of September 2013 from http://www.ens-newswire.com/ens/may2006/2006-05-08-04.asp.
17. Eubusiness (2013). *EU ministers agree sanctions against Iran*. Retrieved at the 29th of September 2013 from http://www.eubusiness.com/topics/institutions/iran-sanctions.22/.
18. Flanagan, B. (2011). *Former CIS chief speaks out on Iran Stuxnet attack*, TheNational. Retrieved at the 28th of September 2013 from http://www.thenational.ae/business/industry-insights/technology/former-cia-chief-speaks-out-on-iran-stuxnet-attack.
19. Global Security (2011). *The Zionist Entity and Iran*. Retrieved at the 30th of september 2013 from http://www.globalsecurity.org/military/world/iran/zionist-entity.htm.
20. Haaretz (2009). *Report: Israel carried out 3 attacks on Sudan arms smugglers*. Retrieved at the 30th of September 2013 from http://www.haaretz.com/news/report-israel-carried-out-3-attacks-on-sudan-arms-smugglers-1.273055.
21. Hassanzadeh, E. (2012). *Recent Developments in Iran's Energy Subsidy Reforms*. Retrieved at the 29th of September 2013 from http://www.iisd.org/gsi/sites/default/files/pb14_iran.pdf.
22. Hersh, S. (2012). Our Man in Iran?. *The New Yorker*, 6 April 2012. Retrieved at the 28th of September 2013 from http://www.newyorker.com/online/blogs/newsdesk/2012/04/mek.html.
23. IAEA (2003). *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/sites/default/files/iaea-iranreport-111003.pdf.
24. IAEA (2003). *Statement by the Iranian Government and Visiting EU Foreign Ministers*. Retrieved at the 28th of Semptember 2013 from http://www.iaea.org/newscenter/focus/iaeairan/statement_iran21102003.shtml.

25. IAEA (2009). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, 5th June 2009. Retrieved at the 28th of September 2013, from http://www.iaea.org/Publications/Documents/Board/2009/gov2009-35.pdf.
26. IAEA (2009). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008), and 1835 (2008) in the Islamic Republic of Iran*, 28th August 2009. Retrieved at the 28 of September 2013 from http://www.iaea.org/Publications/Documents/Board/2009/gov2009-35.pdf.
27. IAEA (2009). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, 16 November 2009. Retrieved at the 29th of September 2013 from http://www.iaea.org/Publications/Documents/Board/2009/gov2009-74.pdf.
28. IAEA (2010). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008), and 1835 (2008) in the Islamic Republic of Iran*, 18th February 2010. Retrieved at the 28 of September 2013 from http://www.iaea.org/Publications/Documents/Board/2010/gov2010-10.pdf.
29. IAEA (2012). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran*, 16th November 2012. Retrieved at the 28th of September 2013 from http://www.iaea.org/Publications/Documents/Board/2012/gov2012-55.pdf.
30. IAEA (2013). *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran*, 28th August 2013. Retrieved at the 28th of September 2013 from http://www.iaea.org/Publications/Documents/Board/2013/gov2013-40.pdf.
31. International Monetary Fund, (2011). *Staff Report for the 2011 Article IV Consultation*. Retrieved at the 29th of September 2013 from http://www.imf.org/external/pubs/ft/scr/2011/cr11241.pdf.
32. Iran Watch (2004). *Bushehr Nuclear Power Plant Delayed Another Year*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/library/government/iran/iran-irna-bushehr-nuclear-power-plant-delayed-another-year-8-22-04.
33. IW (1995). *Protocol of Negotiations Between Iran and Russia*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/library/government/russia/russia-protocol-negotiation-between-iran-and-russia.
34. IW (2002). *Remarks by Alireza Jafarzadeh on New Information on Top Secret Projects of the Iranian Regime's Nuclear Program*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/library/ncri-new-information-top-secret-nuclear-projects-8-14-02.
35. Joint Plan of Action, (2013). Retrieved at the 29th of September 2013 from http://eeas.europa.eu/statements/docs/2013/131124_03_en.pdf.

36. Jones, G. (2007). *Germany's Pivotal Role in the Iranian Nuclear Standoff*, Carnegie Endowment for International Peace. Retrieved at the 28th of September 2013 from http://carnegieendowment.org/2007/11/20/germany-s-pivotal-role-in-iranian-nuclear-standoff/7f2.
37. Jones, S. (2013). *A History Of U.S. Sanctions Against Iran*, About. Retrieved at the 29th of September 2013 from http://usforeignpolicy.about.com/od/alliesenemies/a/A-History-Of-U-S-Sanctions-Against-Iran.htm.
38. Kashfi, M. (2013). *Iranian Gas and the Nabucco Pipeline Realities*, Oilprice. Retrieved at the 30th of September 2013 from http://oilprice.com/Energy/Natural-Gas/Iranian-Gas-and-the-Nabucco-Pipeline-Realities.html.
39. Klein, A. (2006). *Report: Iranian soldiers join Hizbullah in fighting*, Israel News, 24th July 2006. Retrieved at the 30th of September 2013 from http://www.ynetnews.com/Ext/Comp/ArticleLayout/CdaArticlePrintPreview/1,2506,L-3280446,00.html.
40. Leverett, F., Leverett, H.M. (2013). *Adjusting to the New Iranian Reality*, Consortiumnews. Retrieved at the 30 of September 2013 from http://consortiumnews.com/2013/08/05/adjusting-to-the-new-iranian-reality/.
41. National Security Council (1975). *National Security Decision Memorandum 292*. Retrived at the 28th of September 2013 from http://www.fordlibrarymuseum.gov/library/document/0310/nsdm292.pdf.
42. NSC (1976). *National Security Decision Memorandum 324*. Retrieved at the 28th of September 2013 from http://www.fordlibrarymuseum.gov/library/document/0310/nsdm324.pdf.
43. Oborne, P. (2013). Iran: how the West missed a chance to make peace with Tehran, *The Telegraph*. 21 April 2013. Retrieved at the 28th of September 2013 from http://www.telegraph.co.uk/news/worldnews/middleeast/iran/10007603/Iran-how-the-West-missed-a-chance-to-make-peace-with-Tehran.html.
44. PBS Frontline (2007). *The „Grand Bargain" Fax: A Missed Opportunity?*. Retrieved at the 28th September from http://www.pbs.org/wgbh/pages/frontline/showdown/themes/grandbargain.html.
45. Puder, J. (2013). America's Endless Search for a 'Moderate' Iranian President, *Frontpage Mag*. Retrieved at the 30th September 2013 from http://www.frontpagemag.com/2013/joseph-puder/americas-endless-search-for-a-moderate-iranian-president/.
46. *Recommendations of the 9/11 Commission: U.S. Policy Constraints and Options*. Retrieved at the 28th of September 2013 from http://www.iranwatch.org/sites/default/files/congress-crs-khannetwork-012505.pdf.
47. Reuters (2005). *EU rejects Iran call to speed up nuclear talks*. Retrieved at the 28th of September 2013 from http://web.archive.org/web/20050207205908/http:/www.alertnet.org/thenews/newsdesk/L01161464.htm.
48. Reuters (2012). *Payment system SWIFT to expel Iranian banks Saturday*. Retrieved at the 29th of September 2013 from http://www.reuters.com/article/2012/03/15/us-nuclear-iran-idUSBRE82E15M20120315.

49. Reuters (2013). *EU court rules for second time against Iran bank sanctions*. Retrieved at the 29th of September from http://www.reuters.com/article/2013/02/06/us-iran-sanctions-eu-idUSBRE91514220130206.
50. Sanger, D. (2012). *Obama Order Sped Up Wave of Cyberattacks Against Iran*, The New York Times. Retrieved at the 28th of September 2013 from http://www.nytimes.com/2012/06/01/world/middleeast/obama-ordered-wave-of-cyberattacks-against-iran.html?pagewanted=all&_r=0.
51. Sayigh, Y. (2013). *Unifying Syria's Rebels: Saudi Arabia Joins the Fray*, Carnegie Middle East Center. Retrieved at the 30th September 2013 from http://carnegie-mec.org/2013/10/28/unifying-syria-s-rebels-saudi-arabia-joins-fray/greh.
52. Schwartz, M. (2012). *Stuxnet Launched by the United States and Israel*, InformationWeek. Retrieved at the 28th of September 2013 from http://www.informationweek.com/traffic-management/stuxnet-launched-by-united-states-and-israel/d/d-id/1104637.
53. Spencer, R. (2010). *BP stops refuelling Iranian passenger planes*, The Telegraph. Retrieved at the 29th of September 2013 from http://www.telegraph.co.uk/finance/newsbysector/epic/bpdot/7873654/BP-stops-refuelling-Iranian-passenger-planes.html.
54. The Economist (2011). *The world's biggest defence budgets*. Retrieved at the 30th of September 2013 from http://www.economist.com/blogs/dailychart/2011/03/defence_budgets.
55. Times of Israel (2013). *'Israel will attack Iran if you sign the deal, French MP told Fabius'*. Retrieved at the 30th of September 2013 from http://www.timesofisrael.com/israel-will-attack-if-you-sign-the-deal-french-mp-told-fabius/.
56. Torbat, A.E. (2012). *EU Embargoes Iran over the Nuke Issue*, Information Clearing House. Retrieved at the 29th of September 2013 from http://www.informationclearinghouse.info/article31795.htm.
57. UN (1967). *Contract for the transfer of enriched uranium and plutonium for a research reactor in Iran*. Retrieved at the 28th of September 2013 from http://treaties.un.org/doc/Publication/UNTS/Volume%20614/volume-614-I-8866-English.pdf.
58. UN (2005), *The Treaty on the Non-Proliferation of Nuclear weapons*. Retrieved at the 28th of September 2013 from http://www.un.org/en/conf/npt/2005/npttreaty.html.
59. UN (2006). *Security Council Imposes Sanctions On Iran For Failure To Halt Uranium Enrichment, Unanimously Adopting Resolution 1737 (2006)*. Retrieved at the 29th of September 2013 from http://www.un.org/News/Press/docs/2006/sc8928.doc.htm.
60. UN (2007). *Security Council Tightens Restrictions On Iran's Proliferation-Sensitive Nuclear Activities, Increases Vigilance Over Iranian Banks, Has States Inspect Cargo*. Retrieved at the 29th of September 2013 from http://www.un.org/News/Press/docs/2008/sc9268.doc.htm.
61. UN (2007). *Security Council Toughens Sanctions Against Iran, Adds Arms Embargo, With Unanimous Adoption Of Resolution 1747 (2007)*. Retrieved at the 29th of September 2013 from http://www.un.org/News/Press/docs/2007/sc8980.doc.htm.
62. UN (2010). *Security Council Resolution 1929*. Retrieved at the 29th of September 2013 from http://www.refworld.org/cgi-bin/texis/vtx/rwmain?docid=4c1f2eb32.

63. United States Congress (2013). *H.R.850–Nuclear Iran Prevention Act of 2013*. Retrieved at the 29th of September 2013 from the http://beta.congress.gov/bill/113th/house-bill/850.
64. Urban, M. (2013). *Saudi nuclear weapons ‚on order' from Pakistan*, BBC. Retrieved at the 30th of September 2013 from http://www.bbc.co.uk/news/world-middle-east-24823846.