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**NUCLEAR NON-PROLIFERATION IN THE  
MIDDLE EAST CONTEXT**

**Edited by  
Alexei Arbatov, Vladimir Dvorkin  
and Sergey Oznobishchev**

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## **Summary**

This paper is based on the materials of the conference held at IMEMO RAN. It presents an analysis of the situation in the Near and Middle East in terms of nuclear nonproliferation. The experts have examined Israel's nuclear program, the state of its nuclear arms and its nuclear strategy.

In addition, the brochure analyses the state of Iran's nuclear program, presents a review of its nature and possibilities to peacefully resolve this acute international problem, crucial for the prospects of global nuclear nonproliferation. Special sections are dedicated to the analysis of the relations between Israel and Iran and their respective military policies, as well as scenarios of a potential military conflict between Israel and (or) the United States and Iran, including the regional and global implications of these scenarios.

The analysis of the prospects of establishing a weapons of mass destruction free zone in the Middle East will be of considerable interest to both experts and general interested public. The conclusions and recommendations provide an outlook on the possibilities to settle the problem of Iranian nuclear program basing on the interim agreement reached in Geneva in November of 2013.



## **Introduction**

The Near and Middle East (NMD) is the world's most conflict-prone and explosive region where conflicts of various levels and nature are either raging or smoldering. The Arab Spring has swept through the countries of the region disrupting their authoritarian though relatively stable regimes. It marked the onset of a prolonged period of turbulence, with some states facing the prospect of being taken over by extreme Islamist forces. These developments have aroused concern, since in this part of the world some states possess weapons of mass destruction and others are seeking them. In addition, the region has been the main breeding ground for regional and global terrorism.

Non-recognition of Israel and openly calling for its elimination has been an integral element of certain regimes and political movements of the region, which imprint a constant tension and incite further conflicts in the NMD. Some countries have used Tel Aviv's possession of undeclared limited nuclear arsenal to justify their own efforts at following the path of nuclear weapons development. In this context, the situation around Iran's nuclear program has been particularly hazardous: the international community has advanced justified concerns regarding its possible military component.

Without finding a solution to Iranian nuclear issue, the strengthening of the global nuclear weapons nonproliferation regime and the stabilization of the situation in the region will be impossible. The progress that dawned in November 2013 on reaching an interim compromise on the basis of partially limiting Iranian nuclear program and expanding international control over it in return for suspension and mitigating various economic sanctions, were only a first step towards this goal.

This paper is based on the materials of the conference held at IMEMO RAN on 17 October 2013 under the project entitled "The prospects for multilateral nuclear disarmament" that has been implemented in association with the Nuclear Threat Initiative (NTI). The brochure presents an analysis of the nonproliferation problems in the context of the dynamic politics and conflicts in the Near and Middle East,

the nuclear programs and forces of Israel and Iran, military and political engagement of the great powers. It also offers projections of various scenarios of the future development of the situation in the NMD.

## **1. ISRAEL'S NUCLEAR POLICY**

### **Victor I. Yesin**

Israel's undeclared nuclear weapons are perhaps the only issue related to Israel that is wrapped up in the thickest shroud of mystery and obscurity. The country has remained outside the Nuclear Weapons Non-Proliferation Treaty (NPT) that was opened for signature in 1968. While formal statements by Israeli officials have neither acknowledged nor denied the fact that Israel possesses nuclear weapons, the information on the country's nuclear arms and the plans of their potential use has been closed, unacknowledged and isolated from any other events in the life of the nation.

Meanwhile, the majority of the international community's experts are certain that Israel does possess nuclear weapons. The last doubts to that effect were dispelled on 5 October 1986 when the London Sunday Times published an interview with Mordechai Vanunu, a former employee at the Nuclear Research Centre in Dimona, Israel. The interview covered Israel's nuclear weapons development program and included photographs made by Vanunu on the premises of the Nuclear Research Centre in Dimona<sup>1</sup>.

This chapter covers the aspects related to Israel's nuclear program, its nuclear arms and nuclear strategy.

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<sup>1</sup> The credibility of the information on Israel's nuclear programme disclosed by Mordechai Vanunu was confirmed by the events that followed. In particular, soon after the interview was published, Vanunu was lured from the UK to Rome by a female Israeli intelligence agent to be abducted by the Israeli intelligence and transported to Israel. Vanunu was secretly tried for treason and sentenced to 18 years of imprisonment. When he was finally released, Vanunu remained under secret police supervision, he was held incommunicado, since the prosecution believed that he still held state secrets (<http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013).

### **Israel's nuclear program**

Israel's nuclear program was launched in 1952, when the Israeli Atomic Energy Commission (IAEC)<sup>2</sup> was established. The IAEC was chaired by Ernst David Bergmann, an organic chemist (considered the father of the Israeli nuclear program). The scientific and technological cooperation between Israel and its friendly states has largely contributed to the making and development of the program. Israel's most massive cooperation has been with France and the United States.

It was with France that Israel worked most closely with in the development of nuclear weapons. In 1950s-1960s the Israeli experts participated in the program for the development of the French nuclear bomb, and the data obtained by France during the nuclear tests in the Sahara was passed to the Israeli side<sup>3</sup>. In addition, France assisted Israel in building the facilities for the production of weapon-grade plutonium. Under the secret agreement signed by France and Israel in 1956, the French built the IRR-2 heavy-water, natural uranium-fuelled reactor with the initial power level of 26 MW<sup>4</sup>. The reactor was commissioned in 1963 and modernized in the 1970s: it is estimated that its electric power increased to 75-150 MW. As the result, the production of weapon-grade plutonium could have been increased from 7-8 kg to 20-40 kg per year<sup>5</sup>.

When the IRR-2 reactor was started up, Israel made an important step towards implementing its military nuclear program. Around the reactor was created the Negev Nuclear Research Center (NNRC) that is

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<sup>2</sup> The Israeli Atomic Energy Commission (IAEC) has been one of the most sensitive institutions. Its budget is kept secret, and its employees will face strictest sanctions if they speak about matters related to their work. (<http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013).

<sup>3</sup> This data enabled Israel to develop indigenous nuclear weapons without having to carry out live tests / Nuclear Weapons after the Cold War. Edited by Arbatov Alexei and Dvorkin Vladimir, Carnegie Moscow Center. Carnegie Endowment for International Peace, 2008. P. 447 (Russian text is available at [http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/governance/future/PDFs/11066NuclearWeapon\\_fin%5B1%5D.pdf](http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/governance/future/PDFs/11066NuclearWeapon_fin%5B1%5D.pdf)).

<sup>4</sup> <http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013.

<sup>5</sup> New Challenge after the Cold War: Proliferation of Weapons of Mass Destruction (Novyi vyzov posle kholodnoi voyny: rasprostranenie oruzhiya massovogo porazheniya). The Open Report of SVR. Moscow, 1993. (In Russian) (<http://www.svr.gov.ru/material/2-13-6.htm>, last visited on 4 September 2013).

now the major site for the production of fissile materials and the products containing them for subsequent use in nuclear weapons. Most of the facilities of the Centre are located underground. Apart from the IRR-2 reactor, the NNRC includes an industrial radiochemical plant for the separation of plutonium from the fuel irradiated in the reactor<sup>6</sup>; an uranium ore refinery; an experimental cascade of gas centrifuges for the separation of uranium isotopes; industrial facilities for the production of uranium and plutonium metal and fuel (fuel elements) to be used in nuclear reactors; a plant for the production of heavy water (tritium), lithium-6 and lithium deuteride<sup>7</sup>; a number of scientific and research laboratories, including laboratories for laser uranium enrichment<sup>8</sup> and uranium isotope magnetic separation.

There are various experts' estimates as to the quantity of the weapons-grade plutonium that has been produced in Israel. The assessments of the Stockholm International Peace Research Institute (SIPRI) appear to be the most reliable. According to the SIPRI estimates, as of 2011, Israel can have accumulated 690-950 kg of weapon-grade plutonium<sup>9</sup>. Meanwhile, the production still continues – a fact that indirectly proves Tel Aviv's intention to build up Israel's nuclear capability.

As to the uranium stockpiles in Israel, they are estimated as sufficient to meet domestic needs<sup>10</sup>. Starting from 1972 Israel has had no need in imported uranium raw material, since the phosphate fertilizers

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<sup>6</sup> The industrial radiochemical plant (also referred to as Machon 2) was built with the assistance of the French Saint-Gobain Nucleaire. Its annual output is estimated at 15-40 kilograms of weapon-grade plutonium (<http://www.svr.gov.ru/material/2-13-6.htm>, last visited on 4 September 2013).

<sup>7</sup> With these materials at their disposal, the Israeli experts are quite capable of developing nuclear weapons with a "stuffing" that uses the nuclear fusion reaction to increase the explosion efficiency. Thus, it will be possible to minimize the weight of the nuclear weapon while preserving its yield, which is especially important in terms of developing nuclear warheads for missiles (making it possible to increase the range by reducing the weight of the reentry vehicle).

<sup>8</sup> Israel holds a 1974 patent on laser isotopic enrichment. (<http://www.svr.gov.ru/material/2-13-6.htm>, last visited on 4 September 2013).

<sup>9</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

<sup>10</sup> Late in the 1970s, Israel's proven uranium reserves were estimated at 25,000 tons. The known deposits are located in the Negev Desert around Efe and Zepha / Nuclear Weapons after ... Op.cit.P.449

production industry could annually yield 40 to 50 tons of uranium oxide which is twice as much the amount that the IRR-2 requires<sup>11</sup>. By early 1990s, the production of uranium oxide was increased to 100 tons per year<sup>12</sup>.

Meanwhile, according to the SIPRI estimates, the industrial production of highly enriched uranium (HEU) is currently not in place in Israel<sup>13</sup>. Therefore, there is no production of nuclear weapons on the basis of HEU, either. The amount of LEU required for the production of fuel for the IRR-1 light water reactor (referred to below) is produced at the NNRC that, as it has been noted above, has the relevant experimental and laboratory facilities. It should also be taken into account that the US supplied Israel with 50 kilograms of HEU to operate its IRR-1 reactor<sup>14</sup>.

The nuclear cooperation between the United States and Israel began in 1955. The US agreed to build a 5Mw(e) IRR-1 light water pool-type research reactor<sup>15</sup> in Nachal-Sorek (20 km South of Tel Aviv) that was started up in June 1960, and to train Israeli scientists and technicians at the Oak Ridge and Argonne national laboratories<sup>16</sup>. In 1955-1960 the laboratories trained 56 Israeli scientists and technicians<sup>17</sup>.

Due to low power, the IRR-1 reactor could hardly have been used for the production of weapon-grade plutonium. At the same time, this reactor helped the Israeli scientists and technicians gain the experience with HEU<sup>18</sup>. Another important thing is that a group of buildings was subsequently built around the IRR-1 reactor to house a number of laboratories. In addition, a scientific and research centre was erected in the vicinity to carry out various research in the field of nuclear science

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<sup>11</sup> Nuclear Weapons after the Cold War. Edited by Arbatov Alexei and Dvorkin, Vladimir, Carnegie Moscow Center. Carnegie Endowment for International Peace, 2008.

<sup>12</sup> <http://www.svr.gov.ru/material/2-13-6.htm>, last visited on 4 September 2013.

<sup>13</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

<sup>14</sup> Nuclear Weapons after ...Op.cit.P.446.

<sup>15</sup> Unlike IRR-2, the IRR-1 reactor is under IAEA safeguards. Israel signed the relevant safeguards agreement in 1975 / Nuclear Nonproliferation: A Brief Encyclopedia (Yadernoe nerasprostranenie: kratkaya entsiklopediya), Moscow, ROSSPEN; PIR Center, 2009. P. 45.

<sup>16</sup> Nuclear Weapons after...Op.cit.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

and technology, including military oriented research<sup>19</sup>. In particular, this centre has allegedly carried out research and development of nuclear weapon designs<sup>20</sup>. The plant for the assembly of nuclear weapons is situated in Jodefat (130 kilometers northeast of Tel Aviv)<sup>21</sup>.

As regards the cooperation between Israel and other countries in the field of military use of nuclear power, it is important to mention the recorded fact of such cooperation with the Republic of South Africa and Taiwan in the 1970s<sup>22</sup>. Notably, Israel's cooperation with the Republic of South Africa appears more than indicative. As early as in 1977 the Newsweek, referring to the opinion of a number of experts from the US intelligence community, expressly stated that "the alleged South African nuclear bomb is an Israeli nuclear device"<sup>23</sup>. On 22 September 1979 at 1AM GMT sharp the sensors of the US VELA 6911 satellite registered a double flash in the Indian Ocean in the vicinity of South Africa's Prince Edward Islands<sup>24</sup>. The most obvious explanation was that a nuclear test had just been carried out. The list of suspects who may have been behind the test was quickly reduced to the Republic of South Africa and Israel.<sup>25</sup>

The Israeli leadership made the political decision to develop nuclear weapons in 1955, while the corresponding program was given a boost after the Suez Crisis in autumn 1956<sup>26</sup>. Tel Aviv was compelled to action, since there was a threat that nuclear weapons would be used against Israel. This threat was voiced in the address of Nikolai A. Bulganin, Chairman of the Council of Ministers of the Soviet Union<sup>27</sup>.

According to an estimate by the Institute of Strategic Stability (ISS) of the Russian Rosatom State Atomic Energy Corporation, Israel's

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<sup>19</sup> Ibid.

<sup>20</sup> Nuclear Nonproliferation: A Brief Encyclopedia (Yadernoe nerasprostranenie: kratkaya entsiklopedia), Moscow, ROSSPEN; PIR Center, 2009. P. 45.

<sup>21</sup> Ibid. P. 45.

<sup>22</sup> The fact is mentioned in a special study of 1979 by the US Defense Intelligence Agency. // Nuclear Weapons after the Cold War. Edited by Arbatov Alexei and Dvorkin Vladimir, Carnegie Moscow Center. Carnegie Endowment for International Peace, 2008.

<sup>23</sup> Newsweek, 12 September 1977.

<sup>24</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>25</sup> Ibid.

<sup>26</sup> Nuclear Nonproliferation: A Brief Encyclopedia (Yadernoe nerasprostranenie: kratkaya entsiklopedia), Moscow, ROSSPEN; PIR Center, 2009. P. 44.

<sup>27</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

first nuclear weapons may date back to 1967-1968<sup>28</sup>, while the US Center for Global Security Research insists that Israel possessed two nuclear bombs as early as at the time of the so-called Six-Day War of 1967<sup>29</sup>.

Since then, Israel has steadily stepped up the production of nuclear weapons while increasing their variety: in addition to the 20 kiloton nuclear bombs, the country launched the production of nuclear warheads with the same yield<sup>30</sup>.

There is a wide range of available expert estimates on Israel's nuclear arsenal. For example, according to the SIPRI, Israel now has around 80 assembled nuclear weapons, including 50 warheads for missiles and 30 air bombs<sup>31</sup>. Meanwhile, the ISS of the Rosatom estimates Israel's overall nuclear arsenal at 130-200 weapons<sup>32</sup>. According to some even more generous estimates, late in the 1990s Israel's nuclear arsenal was made up of 400 weapons, including air bombs, warheads for ballistic missiles, projectiles for heavy artillery systems and mines<sup>33</sup>.

It appears that given the current uncertainty about Israel's nuclear arsenal, the most substantiated estimate may be the one that is based on the calculations of the amount of the accumulated stockpiles of weapon-grade plutonium used by Israel to produce nuclear weapons.

It is generally admitted that 5 kilograms of weapon-grade plutonium is an amount sufficient to make a nuclear weapon<sup>34</sup>. Proceeding from this assumption, it may be easily calculated that if Israel

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<sup>28</sup> Nuclear Weapons and National Security (Yadernoe oruzhie I natsionalnaya bezopasnost) / Rosatom Institute of Strategic Stability [Varava Voldemar P. et al., edited by Mikhailov Victor N.]. Saransk: Krasny oktyabr printing house, 2008. P.111.

<sup>29</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>30</sup> This is an estimated yield of the Israeli nuclear weapons. It corresponds to the yield of the French first nuclear reactors, since the technology of developing and manufacturing such reactors was made available to the Israeli nuclear experts. As Israel was unable to carry out live nuclear tests, the country's nuclear experts have hardly been able to significantly increase the yield of the nuclear weapons.

<sup>31</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

<sup>32</sup> Nuclear Weapons and National ...Op.cit.

<sup>33</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>34</sup> Yadernoe Nerasprostranenie (Nuclear Nonproliferation): A textbook for college students in two volumes. Volume I / Akhtamzyan Ildar A. et al. Edited by Orlov Vladimir A.. Second edition, revised and expanded (in Russian). Moscow, PIR Center, 2002. P. 45.

used all the stockpiles it has accumulated by 2011, it could produce 138-190 nuclear weapons.

As it is, Israel could hardly have used up all the available stockpiles of weapon-grade plutonium. It may be assumed that, as it was the case with the other de-facto nuclear-weapon states, Israel has reserved for contingency up to a quarter of its accumulated stockpiles of weapon-grade plutonium.

In the light of the considerations outlined above, by early 2012 Israel's nuclear arsenal could be estimated at 100 to 140 weapons. Reasonably enough, the variety of their types corresponds to the structure of the country's nuclear forces (referred to in the second section of this chapter). Meanwhile, it will be safe to say that Israel has neither artillery-fired projectiles nor nuclear mines. No evidence of Israel possessing these types of nuclear weapons has ever been found<sup>35</sup>.

The estimate of Israel's nuclear arsenal quoted above is based on a number of assumptions that include an aspect of uncertainty. Therefore, it should not be regarded as exhaustive, let alone fully reliable.

At the same time, one may state that Israel has a robust research and production base for the nuclear power industry that makes it possible not only to maintain, but also to enhance the country's nuclear capability. In addition, Tel Aviv's interest in thermonuclear weapons should not be dismissed, either. However, the need to carry out live nuclear tests appears to be an impassable obstacle in this respect. In September 1996 Israel signed the Comprehensive Nuclear Test-Ban Treaty (CTBT), though it has not ratified it yet<sup>36</sup>. Therefore, Tel Aviv is rather unlikely to venture upon live nuclear tests unless it is absolutely necessary.

### **Israel's nuclear arms**

The expert analysis of the structure of the Israeli armed forces carried out by Rosatom ISS revealed that Israel has the nuclear triad resting upon dual-use delivery vehicles, namely tactical aircraft, mobile missile systems and diesel-electric submarines<sup>37</sup>.

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<sup>35</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

<sup>36</sup> Nuclear Nonproliferation: A Brief ... Op.cit.P. 45, 46.

<sup>37</sup> Nuclear Weapons and National ... Op.cit.

Of the Israeli Air Force aircraft, the US-made F-4, F-15 and F-16 tactical fighters and A-4 attack aircraft supplied by the US (currently in stow position) are capable of delivering nuclear bombs<sup>38</sup>.

The F-4 tactical fighter has a flight range of 1,250 kilometers (without in-flight refueling). Its maximum flying speed is 2,350 km/h (at a height of 12,000 meters) with a service ceiling of 21,000 meters. It is capable of carrying one nuclear bomb<sup>39</sup>.

The F-15 tactical fighter (F-15I, the Israeli modified version) has a combat radius of 1,650 kilometers (without in-flight refueling). It has a maximum flying speed of 2,650 km/h (at a height of 11,000 meters) with a service ceiling of 18,000 meters. It is capable of carrying one nuclear bomb<sup>40</sup>.

The F-16 tactical fighter (F-16I, the Israeli modified version) has a combat radius 1,500 kilometers (without in-flight refueling). It has a maximum flying speed of 2,100 km/h (at a height of 11,000 meters), with a service ceiling of 18,000 meters. It is capable of carrying one nuclear bomb<sup>41</sup>.

The A-4 attack aircraft has a flight range of 1,200 kilometers (without in-flight refueling). It has a maximum flying speed of 1,000 km/h (at a height of 5,700 meters) with a service ceiling of 10500 meters. It is capable of carrying one nuclear bomb<sup>42</sup>.

Of all the Israeli Air Force's F-4, F-15 and F-16 tactical fighter aircraft park, 40 to 50 aircraft are certified as nuclear-capable<sup>43</sup>. No more than 8-10 of the A-4 attack aircraft are certified as nuclear capable<sup>44</sup>.

In early 2012 it was reported that the Israeli F-15I and F-16I tactical fighters may be armed with Popeye air-to-surface nuclear cruise missiles<sup>45</sup>. If this information is accurate, it means that the operational capabilities of the air component of Israel's nuclear triad have increased, since the launch range of Popeye missiles may exceed 1,000 kilometers.

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<sup>38</sup> Ibid, P. 112.

<sup>39</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> <http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013.

<sup>44</sup> Ibid.

<sup>45</sup> Mozgvoi Alexander. Gulf War III / National Defense No 2 (71), February 2012. P. 18.

Alongside with the aircraft, the Israeli Air Force has Jericho I and Jericho II solid fuel ballistic missiles that may carry both conventional and nuclear reentry vehicles, as part of the mobile missile systems<sup>46</sup>.

The Jericho I single-stage short-range ballistic missile (SRBM) was included in the inventory in 1972<sup>47</sup>. It was developed with active participation of Dassault, a French aerospace company. The missile has a launch weight of 6.7 tons and a range of up to 500 kilometers when carrying a reentry vehicle of around 1,000 kilograms<sup>48</sup>. It has target accuracy (circular error probable) of around 500 meters<sup>49</sup>.

The Jericho II two-stage intermediate-range ballistic missile (IRBM) was included in the inventory in 2002<sup>50</sup>. It has a launch weight of around 14 tons and has a range of 1500-1800 kilometers when carrying a reentry vehicle of 750-1000 kilograms<sup>51</sup>. It has target accuracy (circular error probable) of around 800 meters<sup>52</sup>.

It is estimated that in total the Israeli Air Force has up to 150 Jericho I SRBMs and 50 to 90 Jericho II IRBM<sup>53</sup>. There may 30 to 40 mobile launchers for these missiles (18-24 for Jericho I and 12-16 for Jericho II)<sup>54</sup>. In time of peace, these launchers are not deployed, they are stowed in specialized underground facilities at the Kfar Zekharya missile base (38 kilometers south of Tel Aviv)<sup>55</sup>.

According to the available information, Israel's shorter-range missiles (with a range of less than 500 kilometers) are not equipped with nuclear reentry vehicles and are therefore not covered by this chapter.

As to the advanced development of ballistic missiles with extended range, Israel has been engaged in the development of a three-stage solid fuel Jericho III missile. Its first flight test was in 2008, and the

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<sup>46</sup> Nuclear Weapons and National ...Op.cit.

<sup>47</sup> Ibid. P. 112.

<sup>48</sup> Ibid. P. 112.

<sup>49</sup> <http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013.

<sup>50</sup> Nuclear Weapons and National ...P. 112.

<sup>51</sup> Ibid.

<sup>52</sup> <http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013.

<sup>53</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

second was in November 2011<sup>56</sup>. It is estimated that this new missile may have a range of more than 4,000 kilometers when carrying a reentry vehicle of 1,000-1,300 kilograms<sup>57</sup>. The missile is expected to be made operational in 2015-2016.

The Shavit space launch vehicle may be regarded as a prospective long-range delivery vehicle. This three-stage solid-propellant launcher was developed using the US technology<sup>58</sup>. The Israeli used it to launch five spacecraft with a weight of around 150 kilograms each into low earth orbit (September 1988, April 1995, May 2002 and June 2007)<sup>59</sup>. Another three launches ended in failure (September 1994, January 1998 and September 2004)<sup>60</sup>.

The US Lawrence Livermore National Laboratory experts believe that the Shavit launcher may be quite easily modified into an operational missile capable of delivering a payload of 500 kilograms to a distance of 7,800 kilometers<sup>61</sup>. However, this launcher can hardly be viewed as an effective delivery vehicle for a nuclear weapon (it is mounted on a massive ground-based launch pad and has a rather long launch preparation time)<sup>62</sup>. At the same time, the design and technological solutions used for the development of the Shavit launcher may well be applied to the development of operational missiles with a range of 5,000 kilometers and more.

Israel has used the Palmachim rocket launch site 22 kilometers southwest of Tel Aviv for the test and combat training launches of ballistic missiles and the placing of spacecraft into low-earth orbits<sup>63</sup>. In addition, a trailer-based launcher in the Mediterranean Sea is used for the test and combat training launches of operational ballistic missiles<sup>64</sup>.

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<sup>56</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

<sup>57</sup> Ibid.

<sup>58</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Nuclear Weapons after ... Op.cit

<sup>62</sup> Ibid.

<sup>63</sup> <http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013.

<sup>64</sup> Ibid.

The sea leg of the Israeli nuclear triad is represented by German-made Dolphin-class diesel-electric submarines carrying cruise missiles that may be equipped with conventional or nuclear reentry vehicles<sup>65</sup>.

The operational inventory of the Israeli Air Force includes three Dolphin-class submarines delivered from Germany in 1998-1999 and retrofitted to carry missiles<sup>66</sup>. No reliable data is available as to the type of cruise missiles carried by these submarines. Some sources insist that these cruise missiles are the US Sub Harpoon missiles modernized by the Israeli, with a range of up to 600 kilometers<sup>67</sup>, others claim that they are Israeli's indigenous Popeye Turbo air-to-surface missiles developed on the basis of the Popeye missile<sup>68</sup>. The Popeye has a range of up to 1,500 kilometers<sup>69</sup>.

In 2011-2012 Germany delivered two more Dolphin-class submarines to Israel<sup>70</sup> that were further retrofitted and are currently awaiting the completion of the series of tests before they come operational in the Israeli Navy (approximately, it may take place late in 2013).

Currently, a sixth Dolphin-class submarine is being built for Israel at the shipyard of the Howaldtswerke-Deutsche Werft AG near the city of Kiel. Notably, the German government approved a subsidy of 135 million euro – one third of the total price – for Israel to purchase the submarine<sup>71</sup>. It may be delivered to Israel in 2014.

To summarize, it may be noted that at this stage Israel has a wide range of non-strategic delivery systems for nuclear weapons and a substantial – by regional standards – nuclear capability. In enhancing its

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<sup>65</sup> Nuclear Weapons and National...Op.cit.

<sup>66</sup> The Dolphin-class submarines supplied by Germany were not equipped to carry missiles. The Israeli developed specialized containers to be able to launch cruise missiles from underwater and equipped the submarines with them (10 containers on each submarine) / Nuclear Weapons and National...Op.cit. P. 112.

<sup>67</sup> Nuclear Reset: Arms Reduction and Nonproliferation / Ed. by Arbatov Alexei and Dvorkin Vladimir; Carnegie Moscow Center. Carnegie Moscow Center, 2012.

<sup>68</sup> Mozgvoi Alexander. Gulf War III / National Defense No 2 (71), February 2012. P. 18.

<sup>69</sup> <http://www.sem40.ru/warandpeace/military/ourweapon/8037/>, last visited on 4 September 2013.

<sup>70</sup> SIPRI Yearbook 2011: Armaments, Disarmament and International Security. Oxford University Press, 2011.

<sup>71</sup> SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012.

nuclear capability, Israel has focused on the development of the sea-based component of its nuclear forces that has the greatest survivability. This quality is seen as extremely important for Israel, as the country is rather vulnerable to an attack with WMD (due to the small size of its territory).

### **Israel's nuclear strategy**

If Israel has nuclear forces, it must have a nuclear strategy. It should be noted that this strategy has never been declared. At the same time, the analysis of the statements made by the Israeli officials suggests that this strategy is based on the following basic principles<sup>72</sup>:

- The primary role of Israel's nuclear arsenal is to serve as a deterrent against potential adversaries. Clearly, Tel Aviv regards the huge geopolitical, demographic (and, potentially, military) advantage of the surrounding Arab – and for the most part Muslim – states as a compelling argument for its reliance on nuclear weapons as a guarantee of its security<sup>73</sup>.

- Tel Aviv regards nuclear weapons as the weapon of last resort. Israel may decide on the first use of nuclear weapons if there is an assault on Israel threatening its mere existence as a state.

- In case of a nuclear strike against Israel (or a strike using other kinds of weapons of mass destruction) the country's surviving nuclear arsenal will be used against the aggressor without reservation.

- Unless there are profound changes in the military and strategic situation in the region, the official Israel will continue to hold the world guessing whether it possesses nuclear weapons. It appears that

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<sup>72</sup> See Nuclear Weapons after ...Op.cit; Nuclear Weapons and ... P. 184; Modern International security: the Nuclear Factor (Sovremennaya mezhdunarodnaya bezopasnost: yaderny factor) / Fenenko Alexey V.; edited by Veselov Vasiliy A. – Moscow: ZAO Aspekt Press Publishing House, 2013. P. 445, 446.

<sup>73</sup> Shimon Peres, the then Prime Minister of Israel, was the first to raise the issue. He said that there were “links between the maintenance of a nuclear capability and the continued threats to national survival [of Israel], linked to the military, geographic and demographic asymmetries in the region” (<http://www.nti.org>, last visited on 3 October 2013).

this policy is a military and political resource that Israel has no intention to lose<sup>74</sup>.

- Israel has spared no effort to exclude any real possibility of its potential adversary developing nuclear weapons<sup>75</sup>. For this purpose, Israel will not stop short of using force, even it means violating the rule of international law<sup>76</sup>.

Most likely in the foreseeable future Israel's unidentified nuclear arsenal will remain a most important component of military strategic equilibrium in the region, a crucial bone of contention in the relations between Tel Aviv and the other states in the region, as well as a major factor in terms of the prospects of nuclear weapons proliferation in the Near and Middle East and other regions<sup>77</sup>.

Meanwhile, as was correctly noted by Academician Alexey Arbatov of the Russian Academy of Sciences, it should not be overlooked that the "recent trends could call into question Israel's national security strategy. In the event of continued proliferation of nuclear arms (in particular, through their acquisition by Iran and other Islamic states) Israel's nuclear deterrence would be neutralized by the nuclear capabilities of the other regional states. This could result in Israel's catastrophic defeat in a future conventional war, or lead to an even greater disaster as a consequence of regional nuclear warfare"<sup>78</sup>.

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<sup>74</sup> It should be taken into account that Israel's policy of "nuclear opacity" was the result of the 1969 accord between the Israeli Prime Minister Golda Meir and the US President Richard Nixon in 1969 / Nuclear Weapons after...Op.cit.P.456.

<sup>75</sup> This effort is put forth under the Begin Doctrine adopted in 1981 (named after Menachem Begin, who was Prime Minister of Israel at that time), that states that Israel will spare no effort to prevent the Arab countries from carrying out research aimed at the development of nuclear weapons / Yadernoe Nerasprostranenie (Nuclear Nonproliferation): A textbook for college students in two volumes. Volume I / Akhtamzyan Ildar A. et al. Edited by Orlov Vladimir A.. Second edition, revised and expanded (in Russian). Moscow, PIR Center, 2002. P. 176.

<sup>76</sup> In June 1981 the Israeli F-16 aircraft destroyed the Iraqi Osirak reactor that was under construction near Bagdad, and in September 2007 Israel carried out an air attack against a nuclear facility in Deir-es-Zor in eastern Syria. (<http://www.jewniverse.ru/biher/AShulman/37.htm>, last visited on 4 September 2013; SIPRI Yearbook 2012: Armaments, Disarmament and International Security. Oxford University Press, 2012).

<sup>77</sup> Nuclear Weapons after...Op.cit

<sup>78</sup> Nuclear Reset...Op.cit.P.63,64.

Establishing a Weapons of Mass Destruction Free Zone in the Middle East appears to be the way out of the deadlock.

This idea dates back almost 40 years, since the United Nations General Assembly adopted resolution 3263, "Establishment of a nuclear-weapon-free zone in the region of the Middle East" on 9 December 1974<sup>79</sup>. When this resolution was voted for, Israel abstained. It acceded to the resolution only in 1980 with the proviso that direct peace talks between the states of the region will be the condition for the establishment of a nuclear-weapon-free zone in the Middle East<sup>80</sup>.

Until early 1990s there were virtually no major regional fora for the Middle East states to discuss the issues related to the establishment of a nuclear-weapon-free zone<sup>81</sup>. To a large extent, the reason was the reluctance of the parties to come to the negotiating table.

The first breakthrough in this sphere was the Madrid Peace Process lead off by the Madrid Conference in October 1991 that included Middle East states. The Conference was aimed at offering the parties an opportunity to align their positions and find a solution to the existing problem in terms of achieving peace and ensuring nuclear non-proliferation in the region. In this context it should be noted that shortly before the concept of a nuclear-weapon-free zone in the Middle East was logically expanded into a WMDFZ<sup>82</sup>.

One of the results of the Madrid Conference was the establishment of a working group on arms control and regional security. From January 1992 to October 1995 the group held several rounds of negotiations to discuss various issues, including nuclear nonproliferation. Egypt sought to place the issues related to nuclear non-proliferation in the agenda as soon as possible, while Israel insisted that such negotiations would be possible only after lasting peace had been

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<sup>79</sup> In the future, the United Nations General Assembly adopted similar resolutions each year.

<sup>80</sup> Trushkin Ivan. WMD-Free Zone in the Middle East: from Ideas to Reality (Blizhnevostochnaya zona svobodnaya ot oruzhiya massovogo unichtozheniya: ot idealov k realnosti / Indeks Bezopasnosti #3 (98), Vol. 17, Autumn 2011. Moscow: PIR Center, 2011. P.58 (the English text is available at <http://pircenter.org/en/experts/237-trushkin-ivan-v>)

<sup>81</sup> The only such forum was the UN General Assembly.

<sup>82</sup> The idea of establishing a Weapons of Mass destruction Free Zone in the Middle East was proposed by Egypt. / Trushkin Ivan. Op. cit. P.59.

achieved throughout the region<sup>83</sup>. In addition, the Arab countries demanded that Israel sign the NPT. However, Tel Aviv stood its ground – first the peace and then the accession to the NPT regime<sup>84</sup>.

At the end of the negotiations the final document was not signed. The negotiations failed to gain the critical mass to drive the establishment of a WMDFZ from the deadlock which was largely due to profound, years long controversies and the too strong mistrust between the Arab countries and Israel<sup>85</sup>.

Simultaneously with the Madrid Peace Process, the NPT Review Conferences also contributed to the effort of preparing for the establishment of a WMDFZ. The NPT Review and Extension Conference in 1995 adopted the so-called resolution on the Middle East calling all the states in the Middle East to use the available forae to adopt practical steps to achieve progress in the establishment of an effectively verifiable zone free from weapons of mass destruction and their delivery systems, as well as to abstain from taking any steps that would hinder the achievement of this objective<sup>86</sup>.

However, no actual effort was made to implement the resolution on the Middle East even after the Final Document of the NPT Review Conference in 2000 highlighted the commitment to achieve the implementation of the resolution.

The pendulum swung only in 2010, when the NPT Review Conference formulated specific measures for a coordinated effort of the international community aimed at establishing a WMDFZ in the Middle East. The Conference decided that the following steps should be implemented<sup>87</sup>:

- The Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution<sup>88</sup>, in consultation with the States of the region, will convene a conference in 2012, to be attended by all States of the Middle East, on the establishment of a Middle East zone free of weapons of mass destruction (2012 Conference);

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<sup>83</sup> Trushkin Ivan. Op. Cit. P.60.

<sup>84</sup> Ibid.

<sup>85</sup> Ibid. P.61.

<sup>86</sup> <http://www.pircenter.org>, last visited on 10 October 2013.

<sup>87</sup> See Trushkin Ivan. Op. cit. P.65, 66.

<sup>88</sup> The Resolution on the Middle East of 1995 was co-sponsored by the US, Russia and the UK.

- The Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, will appoint a facilitator with a mandate to support implementation of the 1995 Resolution by conducting consultations with the States of the region in that regard and undertaking preparations for the convening of the 2012 Conference. The facilitator will report to the 2015 Review Conference;

- The Secretary-General of the United Nations and the co-sponsors of the 1995 Resolution, in consultation with the States of the region, will designate a host Government for the 2012 Conference;

- IAEA, the Organization for the Prohibition of Chemical Weapons and other relevant international organizations will prepare background documentation for the 2012 Conference regarding modalities for a zone free of weapons of mass destruction and their delivery systems, taking into account work previously undertaken and experience gained.

Tel Aviv reacted rather sharply to the RevCon decision, calling it “deeply flawed and hypocritical” and declaring that Israel, as a non-signatory state of the NPT, “is not obligated by the decisions of this Conference” and “will not be able to take part in” the Implementation of the resolution on the Middle East<sup>89</sup>.

So how the land lies with the implementation of the said decision of the NPT Review Conference?

Jaakko Laajava (Finland) was appointed facilitator of the 2012 Conference with Finland designated as the host country of the Conference. In 2011-2012 Laajava and his team held around 100 meetings with potential participants of the Conference<sup>90</sup> to no avail. It was decided that the Conference would be deferred to 2013. By all appearances, the Conference will not take place this year, either, since the contradictions between the intentions of the potential participant countries have remained. Besides, the situation in the region has aggravated due to the civil war in Syria involving external extremist

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<sup>89</sup>[http://www.mfa.gov.il/MFA/Goverment/Communigues/2010/Statement\\_Government\\_Israel\\_NPT\\_Review\\_Conference\\_29-May-2010.htm](http://www.mfa.gov.il/MFA/Goverment/Communigues/2010/Statement_Government_Israel_NPT_Review_Conference_29-May-2010.htm), last visited on 10 October 2013.

<sup>90</sup> Ulyanov Mikhail. To Hold a Conference on the Establishment of a WMDFFZ in the Middle East is the Responsibility of the Countries of the Region (Otvetstvennost za provedenie konferentsii po sozdaniyu ZSOMU na Blizhnem Vostoke lezhit na starnakh regiona / Indeks Besopasnosti No 2 (101), Vol 18, Summer 2012. – Moscow: PIR Center, 2012. C.24.

armed groups, and the forced change of power in Egypt. Thus, the Conference has been relegated to the background.

As to Israel's position on the convening of the Conference and the establishment of a WMDFZ in the Middle East, it has remained fundamentally unchanged despite the attempts of the co-sponsors of the resolution on the Middle East to influence Tel Aviv.

Lack of peace in the Middle East is the well-known reason of Israel's obstinacy that has been repeatedly voiced by the Israeli officials. Only two Middle East states have signed peace treaties with Israel, namely Egypt and Jordan<sup>91</sup>. The rest of the states in the region have not recognized Israel's sovereignty, while some of them, such as Iran, deny Israel the right to exist as a state. Under these circumstances Tel Aviv is not willing to be engaged in any international dialogue that may affect Israel's status as an undeclared nuclear power.

Another unspoken (though intrinsic) reason of Israel's "obstinacy" that Tel Aviv has been reluctant to mention is that Israel finds no sense in renouncing nuclear weapons that is a guarantee of its security. Even if all of the Middle East states sign peace treaties with Israel, it will not be enough to relieve its security concerns. The nature of the political regimes in most of the Arab countries implies that a change of leadership, either unforced or otherwise, may result in a dramatic shift in the policy in terms of recognizing Israel and the agreements with it<sup>92</sup>. Thus, as already stated, Israel will spare no effort to prevent its potential regional adversaries from acquiring nuclear weapons while retaining its status as an undeclared nuclear power.

It appears that Israel is not likely to change this strategy unless it has received convincing security assurances. Only the P5 is capable of providing such legally binding guarantees. Will the P5 be willing to do so? This appears highly questionable. Even the United States has been in no haste to bring Israel under its "nuclear umbrella", primarily for fear of being forced into the Israeli-Arab armed conflict.

From the above reasoning, it is clear that the establishment of a WMDFZ in the Middle East goes hand in hand with the Middle East peace process. The two processes have to be concurrent, at the very least. The establishment of a WMDFZ in the Middle East will not be possible

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<sup>91</sup> The peace treaty between Egypt and Israel was signed in 1979, and the peace treaty between Jordan and Israel was signed in 1994 / Trushkin Ivan. Op. cit. P.59.

<sup>92</sup> Nuclear Weapons after...P.455.

unless Israel is recognized by all the states in the region. Neither will it be possible without an agreement of equal and indivisible security that would eliminate any possibility that military force will be used to resolve potential conflicts between the countries of the region. This is a formidable challenge that nevertheless has to be met, if the international community intends is resolved to prevent a catastrophe in the Middle East region.

## **2. IRAN'S NUCLEAR PROSPECTS**

### **Alexei G. Arbatov**

By all appearances, Iran's nuclear program has reached its final stage both technologically and politically.

Technologically, Iran has almost acquired the capability to produce nuclear weapons. Politically this may be regarded as a turning point due to the fact that after Hassan Rouhani, a middle-of-the road leader and an expert in the nuclear sphere, won the 2013 presidential election, great hopes arose that the issue would be resolved peacefully. If it proves impossible to reach a mutually acceptable arrangement with him either, the war will become inevitable.

#### **The current state of the program**

The nuclear program of the Islamic Republic of Iran has progressed in several areas<sup>93</sup>. A variety of books and articles has been written on the subject, and we shall therefore confine ourselves to a brief summary. The Natanz natural uranium enrichment facility and the new Fordow facility located near the city of Qom<sup>94</sup> house a total of 19,000 centrifuges, including 10,200 centrifuges currently in operation (according to the plan, the two facilities are to house a total of 56,000 centrifuges). Both facilities have been placed under the IAEA safeguards. By spring 2013, Iran had produced a total of 8,300 kg of uranium enriched to 5 percent, and a quarter of this amount was used to produce 280 kg of uranium enriched to 20 percent<sup>95</sup>. The two facilities yield 15 kg of uranium

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<sup>93</sup> Nuclear Power in Iran (updated on 29 May 2013) (<http://www.world-nuclear.org/info/Country-Profiles/Countries-G-N/Iran/#.Ub7CJee-2So>).

<sup>94</sup> Fitzpatrick Mark, Iran's Growing Nuclear Weapons Capability. Conference of the International Luxembourg Forum on Preventing Nuclear Catastrophe, 21 May 2013. Montreux, Switzerland.

<sup>95</sup> Since Israel indicated that a stockpile of more than 140 kg of uranium enriched to 20% was a 'red line', a quarter of the material is converted to uranium dioxide used to produce fuel rods for nuclear power plants (though Iran does not possess technology for the production of nuclear fuel assemblies).

enriched to 20 percent<sup>96</sup> every month. Though 20 percent-enriched uranium cannot be used as nuclear explosive, enrichment of uranium-235 to 20 percent accounts for 90 percent of operations and energy consumption related to uranium enrichment to weapon-grade, i.e. enrichment to more than 90 percent. If the entire amount of the stockpiled uranium of various levels of enrichment is used to produce weapon-grade material, it will be sufficient for 5 to 6 nuclear warheads (as many as the DPRK currently has)<sup>97</sup>. On the whole it may take up to one year to complete the technology cycle to obtain a nuclear weapon, a considerable part of which may be conducted covertly.

In parallel, Iran has been developing the plutonium cycle: a heavy water production facility has been built in Arak, and a natural uranium-fueled (i.e. enrichment-independent) heavy water-moderated research reactor is nearing completion. The latter can produce an increased amount of plutonium which is another, a more efficient material used in nuclear weapons. The projected annual plutonium output is 9 kg – an amount sufficient for 1 to 2 nuclear warheads. The reactor is to start operating in 2014, and from then on an air strike at the facility will imply a risk of an extensive radioactive contamination of the local environment due to the dispersal of plutonium. The commissioning date is another "red line" indicated by the opponents to the Iranian program<sup>98</sup>.

Further, up to late 2003 Iran had been developing associated technologies. To that end, the Physics Research Center in Tehran was implementing the so-called AMAD Plan, a research program to explore the technology of converting uranium into metal and producing uranium hemispheres used only for nuclear weapons, to exploring designs of nuclear warheads and ways to adjust missile reentry vehicles to them, to test at the Parchin facility explosive devices required to create a nuclear critical mass, as well as electronic firing systems for the nuclear warhead. These military projects were suspended late in 2003, however, according

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<sup>96</sup> The uranium with such enrichment level is produced under the pretext of fueling the Tehran Research Reactor (TRR). However Iran's officials have officially admitted that the reactor needs only 1.5 kg of uranium a month.

<sup>97</sup> The available 280 kg of 20 percent-enriched uranium are enough to obtain 56 kg of weapon-grade uranium, which would be sufficient for 2 unsophisticated nuclear explosive devices. This final stage of enrichment may be accomplished at a small and potentially undercover facility within 2-2.5 months.

<sup>98</sup> Fitzpatrick Mark. Op. cit.

to the IAEA report of 2011, the activities conducted under the AMAD Plan were subsequently resumed<sup>99</sup>.

In addition, Iran has actively pursued ballistic missiles with increasingly long ranges: Ghadr-1 has a range of 1,600 kilometers, while Sejil-1 has a range of 2,000 kilometers, which is to say, the two missiles are capable of reaching Central Europe and the Moscow Region.

#### **Assessing the nature of the program**

It has often been stated that under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), Iran has the right to develop the nuclear fuel cycle (NFC), same as many other developed countries. However, in spite of this point, Iran's nuclear program has established several unique precedents.

*Firstly*, as the global experience suggests, nuclear fuel cycle facilities (uranium enrichment and plutonium separation) are present only in states that either possess nuclear weapons (which is what the nuclear fuel cycle was initially created for) or have an advanced nuclear power industry. Major uranium enrichment facilities exist (or used to exist) in twelve countries. Those include Russia, the United States, France, the United Kingdom, China, South Africa, India and Pakistan, all of which used this technology for developing nuclear weapons. Enrichment is also conducted by Brasil, a country that initially intended it for military purposes which it subsequently relinquished. In addition, there are enrichment facilities in the countries that have never had ambitions to acquire nuclear weapons, yet possess advanced nuclear power industry: Japan (54 reactors), Germany (18 reactors) and the Netherlands (4 reactors)<sup>100</sup>.

Another component of the nuclear fuel cycle is the separation of plutonium from irradiated nuclear fuel from reactors. The construction of a The heavy water reactor constructed in Arak will enable Iran to separate plutonium for both peaceful and military purposes. Currently, such technology is available to eleven states, including Russia, the US, France, the UK, China, Israel, India and the DPRK (each of these states have developed plutonium-based nuclear weapons). Besides, the Federal

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<sup>99</sup> IAEA. Report of the Director General, 9 November 2011. P. 6. GOV/2011/65

<sup>100</sup> Germany's and the Netherlands' nuclear fuel cycle facilities are part of the transnational URENCO Group (as are those of the UK and the US).

Republic of Germany, Japan and South Korea (a total of 20 reactors) also have this technology, and have used plutonium to produce mixed oxide fuel (MOX fuel) for reactors. Iran possesses neither the facilities to produce such fuel, nor the reactors to consume it.

Without an advanced civilian nuclear energy industry uranium enrichment or plutonium separation does not make economic sense, especially given the vast supply of low-enriched uranium on the global market. Iran's situation is unique – it denies that it has any military nuclear plans while at the same time it has no large-scale peaceful nuclear power industry. So far, Iran only has an old research reactor in Tehran, an operative nuclear power station in Bushehr, a research reactor under construction in Arak and two power reactors at Darkhovin. Despite the fact that Iran has announced an intention to build 16 reactors within 15 years, the project appears by no means realistic; in any case it is a matter of a very distant future.

Apparently, being aware of the said inconsistency, Tehran came out with official statements late in October 2013 on its plans to proceed to the production of indigenous nuclear fuel for the Bushehr nuclear power plant. This is a violation of the agreement with Moscow stipulating that Iran should obtain nuclear fuel elements from Russia for at least 10 years (i.e. till 2021). To ensure fuel supply for the Bushehr nuclear power plant from indigenous sources, Iran will need 60,000 to 100,000 centrifuges (depending on their type<sup>101</sup>), therefore the point of Tehran's declaration was to justify the enhancement of uranium enrichment capacities in spite of the country's commercial obligations to Russia, to economic feasibility, and to the six resolutions of the United Nations Security Council demanding that enrichment-related activities be suspended until all the questions and suspicions of the IAEA have been cleared up.

At the same time, the experts estimate that after the IAEA's questions have been cleared up, Iran will be allowed to have no more than 10,000 IR-1 centrifuges. If this is the actual enrichment capacity, it will require no less than six months to enrich the available low-enriched (5 percent) uranium further to weapon-grade uranium and obtain an amount sufficient to create an explosive device<sup>102</sup>. Thus, the UNSC will

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<sup>101</sup> Barnes Diane. Iran Nuclear Fuel Plan Spurs Uncertainty in the West. NTI Global Security Newswire. 25.10.2013. [www.nti.org/article/iran-nuclear](http://www.nti.org/article/iran-nuclear)

<sup>102</sup> Ibid.

have enough time to approve relevant countermeasures, or, alternatively, the United States or Israel will have an ample time to make and implement certain decisions unilaterally.

The *second* aspect that makes Iran's program unique is how the nuclear fuel cycle facilities were built. While a pilot enrichment complex in Natanz was being erected above ground, a huge production plant was being built underground and disguised. Only following a leak by Iranian renegades in 2002, the official Iran notified IAEA of these projects. The Fordow plant was built in the hard rock at a depth of 80 meters and was disclosed by intelligence services in 2009, causing Iran to notify IAEA.

There was no point in building such underground facilities and, consequently, in going to such enormous additional expense, if the facilities in question were intended for peaceful nuclear power industry, as Tehran has insisted. Neither can any references to a threat of an air strike from Israel be regarded as a reasonable excuse: indeed, all other components of the country's nuclear power industry are not protected from such a strike and would be destroyed if the adversary sought to hinder the development of Iran's peaceful, not military power industry.

There have been only two other instances in the world history when such underground nuclear power industry facilities were built: the USSR's underground nuclear power station ("Atomgrad") near the city of Krasnoyarsk for the production of weapon-grade plutonium, and the uranium enrichment facility that is apparently being built in the massif in North Korea. The two facilities were no doubt intended for military use – to produce weapon-grade nuclear materials even when there is a war, resisting air strikes.

*Thirdly* – there is no credible explanation as to why Iran had to launch indigenous production of 20 percent-enriched uranium, considering that in 2009 Russia had offered to supply such fuel for the Tehran research reactor in exchange for the same amount of 5 percent-enriched uranium (with the fuel assemblies to be produced in France). Iran used far-fetched pretexts to reject this project, and this is despite the fact that Russia has shielded Iran from UNSC's sanctions that otherwise could have been by far tougher and struggled to reach a compromise at the talks between Iran and P5+1 in the many recent years<sup>103</sup>. In 2012

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<sup>103</sup> The following year, in 2010, a new Turkey/Brazil arrangement was proposed: 1,200 kg of Iranian uranium enriched to 3.5% were to be transported to Turkey in return for 120 kg of 20 percent-enriched uranium for the Tehran Research Reactor to be provided

Iran's next step was to declare its plans for the production of uranium enriched to weapon-grade – allegedly, to be used in the naval nuclear reactors<sup>104</sup>.

In view of the above, we cannot be uncertain as to whether Iran's nuclear program is military-oriented, unless we choose to ignore simple facts due to political considerations.

Two more points appear worthy of analysis. One is that Iran has not taken a political decision to create nuclear weapons and has so far been involved in the development of the technical capability to do so. In this respect it must be emphasized that there is no knowing whether Tehran has taken the political decision or not. None of the states that now possess nuclear weapons (including South Africa) publically declared its determination to create nuclear weapons before it actually had them. Tehran would be the last to do so, lest Israel or the United States respond with preventive military action.

Israel and South Africa crossed the “nuclear threshold” (late in the 1960s and early in the 1980s, respectively) without anyone noticing. Meanwhile, it has taken India and Pakistan several decades to reach the threshold only to cross it overnight in 1998 without any valid reasons or explanations.

Another point is that Iran needs nuclear capability solely as a deterrent against aggression, and not to attack Israel, let alone the United States – an act like that would equal national suicide. Meanwhile it should be remembered that 8 states possessing nuclear weapons (i.e. all but the US and the tight-lipped Israel) have subsequently justified the development of nuclear weapons with the interests of acquiring the capability of nuclear deterrence against external aggression.

It is equally important to note that after 1945, in all major military conflicts, from the Korean War of 1950 to the conflict in Georgia in 2008, each side considered itself to be the victim of aggression and would have used nuclear weapons if it had found itself in a hopelessly losing situation. Luckily, none of those conflicts involved a direct clash

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by the Vienna Group (IAEA, the United States, Russia and France). The mere fact that Turkey – Iran's regional rival and an ally to the US in the NATO hosting the US nuclear weapons in its territory – was chosen as the storage country for Iran's uranium suggests the futility of the plan. Naturally, the plan was soon rejected by Tehran against the backdrop of its indignation at the latest UNSC resolution on sanctions.

<sup>104</sup> Atul Aneja. Iran starts designing nuclear submarine engine. News International, 14 June 2012, IST.

of nuclear powers (excluding the Kargil armed conflict back in 1999, when neither India nor Pakistan had large-scale nuclear forces). The one and only time when there was a head-on confrontation between the US and the USSR – during the Cuban missile crisis in 1962 – only a miraculous bit of luck saved the world from a nuclear catastrophe (this estimation has been confirmed by many recently published research papers and memoirs of the participants).

Unlike all the rest of the nuclear powers, Iran has progressed towards its goal gradually and cautiously while pretending to be negotiating and seeking a compromise with other countries. It took Pakistan 11 years – since Abdul Qadeer Khan, father of the Pakistani nuclear program, stole nuclear papers from URENCO Group – to develop nuclear weapons and conduct a nuclear test. The Iranian nuclear program has been underway for 27 years, since the pilot plant in Natanz was built in 1985.

What necessitates such caution is primarily Tehran's fear of an air strike by Israel (previously – by the United States).

Another compelling motive for the diplomatic flexibility of the Islamic Republic of Iran is the need to avoid tougher UNSC sanctions. Feigning willingness to compromise and gradually enhancing its material capacity, Iran aims to lead Russia and China to believe its declarations on peaceful intentions once and again (or to make them look as if they did). Moscow and Beijing have tended to embrace this assumption, incessantly calling for a peaceful resolution of the problem and the softening of sanctions, while Iran has slowly but surely progressed towards the nuclear threshold. The six resolutions on the Iranian nuclear program adopted by the United Nations Security Council in 2006-2009 (four of which envisaged sanctions) failed to put an end to the said activities.

Finally, secretly constructing the Fordow enrichment facility and juggling with false explanations and obligations was where the Western patience was exhausted<sup>105</sup>. Again, it is evident that Tehran

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<sup>105</sup> When the foreign intelligence services discovered the fact that this underground uranium enrichment plant was under construction in 2009, Iran admitted this fact explaining that the facility was intended as a “reserve facility” in case of a military strike at the complex in Natanz. However, later that year Tehran readjusted the data it had submitted to the IAEA claiming that the facility was intended for the production of uranium enriched to no more than 5% to be used as nuclear fuel. Then, in June 2011, Iran informed the IAEA that instead the plant would produce 20 percent-enriched uranium for the Tehran Research Reactor, noting that the amount produced would be

underestimated the sharpness of the reaction of France, Germany and the UK<sup>106</sup> while overestimating the political advantages of the EU's reliance on oil imports amidst a major crisis. In January 2012 the EU Council imposed an embargo on Iran banning the "purchase, import or transport from Iran of crude oil and petroleum products" by the EU member states<sup>107</sup>. In addition, the Security Council froze the assets of the Iranian Central Bank within the EU<sup>108</sup>.

Contrary to all arguments that the sanctions do not work, this resolute step caused a dramatic change in the sentiments inside Iran, eventually affecting the outcome of the election in June 2013. It begs the conclusion that the sanctions do work after all, provided that they have strong economic implications and not just a merely symbolic value, and that sanctions would have had their effect much earlier, if all the UNSC members had taken a unified and strong position.

However, such sanctions should be accompanied by an active diplomatic search for a compromise instead of threats and ultimatums – the clumsy tactic used by the Bush administration after 2003 largely responsible for the failure of the diplomatic compromise that had been arranged back then.

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small and that old IR-1centrifuges would be used. However, subsequently Iran claimed that the production of 20 percent-enriched uranium would be moved from the Natanz plant to Fordow and that the total output would be tripled owing to improved IR-2 centrifuges. In January 2012 Iran announced the start of uranium enrichment in Fordow once again declaring that it will not waive its legitimate right under the NPT to enrich uranium for peaceful purposes.

<sup>106</sup> 'Iran enriching uranium at Fordow plant near Qom'. (<http://www.bbc.co.uk/news/world-middle-east-16470100>).

<sup>107</sup> Council Decision 2012/35/CFSP of 23 Jan. 2012 amending Decision 2010/413/CFSP concerning restrictive measures against Iran, Official Journal of the European Union, L19, 24 Jan. 2012.

<sup>108</sup> National Defense Authorization Act for Fiscal Year 2012 stipulates sanctions against financial institutions cooperating with the Iranian Central Bank. National Defense Authorization Act for Fiscal Year 2012, US Public Law no. 11281, signed into law 31 Dec. 2011, (<http://thomas.loc.gov/cgi-bin/bdquery/z?d112:h.r.01540>), section 1245. Also see: 'Obama signs US sanctions bill into law', BBC News, 31 Dec. 2011, (<http://www.bbc.co.uk/news/world-us-canada-1637607>).

### **The possibility of a peaceful solution**

The Iranian nuclear program has gathered great material and political momentum; it represents huge financial and technological investment and has been regarded as a prestigious national project.

Iran's new president, a supposedly moderate politician, could not immediately take steps towards a final compromise, even if he wanted to. First of all, he has to consolidate his power inside the country, and, being a seasoned diplomat, try to win maximum concessions from the US and the rest of P5+1 in return for Iran's counter-moves.

In this context the Joint Plan of Action elaborated by P5+1 at Geneva negotiations on November 24, 2013 should be considered only as a first step towards peaceful solution of the highly controversial problems associated with Iranian nuclear program. But reaching the final agreement certainly would not be easy.

Of particular importance are the following Iranian commitments: to provide specified information to the IAEA, including information on Iran's plans for nuclear facilities and nuclear activities; to suspend enriching uranium over 5% for the duration of the 6 months; not make any further advances of its activities at the Natanz Fuel Enrichment Plant, Fordow, or the Arak reactor; to refrain from building new locations for the enrichment or from constructing reprocessing facilities; partly to convert to oxide and partly to dilute to no more than 5% the existing uranium which was previously enriched to 20%.

The reciprocal measures on the part of Europe to such obligations should serve as a stimulus for such actions. In this regard of key importance is the obligation that "in return, the E3/EU+3 would undertake" voluntary measures suspending a number of US and EU sanctions.

Nonetheless, the signed agreement has a number of limitations: the Fordow enrichment complex has not been closed although it being built deep underground suggests its military role; Iran has not taken firm commitment to ratify the 1997 Additional Protocol to IAEA safeguards; the IAEA inspectors have not been given unequivocal right of access to Parchin site where nuclear weapons related experiments were conducted in the past; no mention is made of removing outstanding issues of Iranian past nuclear related activities with the IAEA; there is no mention of the limitation of Iranian missile programs, which were one of the subjects of the past UN Security Council resolutions; no limitation is placed on

increasing the stock of 5% uranium, which has no justification by peaceful energy or scientific needs.

It is also a matter of concern that shortly after the agreement the Iranian officials started giving unhelpful interpretation of its provisions including those relating to the construction of the Arak reactor and notification of IAEA about nuclear related sites.

The final agreement, that should be concluded no later than the agreed deadline, should have regard to the relevant resolutions of the UN Security Council adopted during the 2006-2010 period, and address the above limitations and other concerns as follows: Iran should accept obligations to suspend all reprocessing, heavy water-related and enrichment-related activities, which are not justified by its peaceful energy and scientific needs, and to refrain from constructing new facilities for such activities. Iran should take the steps required by the IAEA Board of Governors to resolve outstanding questions related to its past nuclear-related activities, but Iran should not be punished by any new sanctions for possible past violations of the IAEA safeguards. Iran should ratify the 1997 Additional Protocol or take legally binding obligations to abide by its terms as an integral part of the final agreement. Iran should not undertake any activity related to ballistic missiles capable of delivering nuclear weapons.

The key compromise should imply that as a member-state of the NPT Iran is entitled to uranium enrichment and reprocessing – but only in strict accordance to its existing peaceful nuclear energy, scientific and medical needs, and this correlation should be a subject of agreement with the IAEA (actually this principle point should be generalized to apply to all NPT member-states.). In response to Iran accepting and implementing the above provisions all existing sanctions related to Iranian nuclear activities should be lifted and Iran rendered full assistance in the development of peaceful nuclear energy in line of the NPT provisions.

The Geneva conference on the Middle East weapons of mass destruction free zone should be convened subsequent to successful resolution of the Syrian and Iranian crises, starting with a chemical and biological weapons free zone arrangement with appropriate attention to ensuring the security of all involved nations.

When IAEA has cleared all the issues, it would suffice Iran, in terms of a compromise, to proceed with experimental uranium enrichment to 5 percent at the pilot plant in Natanz (above ground) while preserving the accumulated stockpile of uranium enriched to 5 percent

for future civilian purposes (a total of around 7 tons) that should be placed under IAEA safeguards, and possessing a small amount of uranium enriched to 20 percent in the form of the material for fuel assemblies (uranium dioxide).

In the longer term, the construction of new nuclear power plants will justify an increase in enrichment, if Iran does not find it more cost-efficient to buy the fuel material on the global market. In its turn, Russia and the West will be ready to invest in the building of light-water reactors, to provide guarantees for uranium fuel supplies for such reactors and to transfer to Iran the technology of assembling the fuel rods (fuel elements).

The key factor for the peaceful resolution of the issue will be the position of President Rouhani. If the new president is willing to give up on the military elements of the program and to obtain the guarantees for the development of solely peaceful nuclear power industry, reaching a compromise will be quite possible. The main question is whether the president will be able to justify such a shift with Iran's ruling establishment (the public at large cannot distinguish between the peaceful and the military aspects of the program).

If he succeeds, reaching an agreement at the second stage of the negotiations will present no special problems and will be a matter of nuclear and diplomatic techniques in which Rouhani has a unique position for a chief state official. He is better versed in the subject than any P5+1 head of state or for that matter than any leader in the world.

### **3. THE THREAT OF A THIRD GULF WAR**

#### **Vladimir Z. Dvorkin**

##### **New developments**

In the recent years, up to the latest presidential election in Iran, the major part of the global political and expert community believed that an armed conflict between Iran and Israel (with possibility of the US subsequently coming to the support of Israel) or directly between Iran and the United States (with the support of the US by a number of Arab and European states) was highly probable. There were different opinions only on the timing and the scope of the armed conflict.

However, when Hassan Rouhani - a moderate politician who promised to ensure the transparency of Iran's nuclear program and even acknowledged the Holocaust - was elected president of Iran, the forecasted probability of war tangibly decreased.

The US Administration and its European partners seek to resolve the Iranian nuclear crisis by political and diplomatic means believing that tough economic sanctions imposed by the US and the EU in 2012 (especially the EU oil embargo and financial sanctions) have obviously been a success. Russia and China have always advocated a peaceful settlement of the Iranian nuclear problem while opposing tougher sanctions.

The US policy reflects the Administration's intention to avoid straining the relations with the Muslim world. This attitude is shared by the majority of the European countries.

At the same time, such commitment to finding a peaceful solution to the Iranian nuclear problem does not suit Israel, where hardly anyone believes that Iran will actually give up on the development of nuclear weapons. The US policy aimed at expanding the dialogue with Iran has been criticized by the Israeli authorities and mass media, who insist that the United States is leaving Israel alone to face the regime of the ayatollahs that cannot be trusted. In particular, Israel has criticized the prospect of formalizing the compromise that had previously been discussed at the talks with Iran – the permission to enrich uranium to 5%. This step would contradict six UNSC resolutions stipulating that Iran

shall have no right to enrich uranium and shall suspend any related activities until all IAEA suspicions have been cleared.

A part of the global expert community shares these concerns. This kind of a compromise was discussed at the conferences of the Luxembourg Forum in 2013. The conferences' final declarations specified that backtracking on the requirement for a complete cessation of uranium enrichment till outstanding issues with IAEA were removed - would deal a blow to the authority of the UNSC.

Israel does not believe that once Iran has acquired nuclear weapons, it would venture to use it. However, the main consequence will be the final disruption of the nuclear non-proliferation regime (triggered by North Korea's withdrawal from NPT and its obtaining nuclear weapons). Neighboring states (Saudi Arabia, Turkey, and Egypt) may follow this example. Another serious implication would be that Iran would decide that it can aggressively act with impunity (as does North Korea) and would boost its support for Hezbollah and Hamas in terrorist attacks, or may even directly use its Army and the Islamic Revolutionary Guards Corps (IRGC, currently fighting in Syria) in armed raids against Israel.

Israel is resolved to prevent Iran from reaching the nuclear 'threshold', including by use of military force. Basically, the United States also intends to prevent this course of events, though its 'red lines' allow for a greater degree of flexibility. Such being the case, while putting high hopes on the success of the final negotiated solution, the possibility of various military conflict scenarios for the region should not be ruled out and their consequences must be taken into account well in advance.

### **Scenarios for Israeli strikes**

If Israel gets convinced that even under the new president Tehran still continues to drag out the negotiations with P5+1 to cover up the progress of its nuclear program, the Israeli leadership is quite likely to make decision to deliver a its own strike against Iran. At least three scenarios of Israeli air-missile strikes against Iran appear theoretically possible.

*Scenario one.* Judging by the strikes against nuclear facilities in Iraq and Syria (in 1981 and 2007 respectively), Israel may carry out oe selective air attack, for example against enrichment facilities in Natanz and Fordow. It should be noted that the assumption on the high

survivability of the underground facility in Fordow against strikes without the use of bunker-buster bombs is only partially true. An underground facility of this type cannot operate in isolation without above-ground structures, such as entry/exit points, transportation routes, power supply and communications systems, etc. Restoring the above-ground infrastructure will take a quite a long time. Besides, the operations of the facility may be seriously obstructed by cyber-attacks.

*Scenario two.* Israel may carry out several air-missile strikes limited both in time (a few days) and scope against a wider range of nuclear infrastructure facilities, missile launchers, air defense facilities, airfields, command centers and key communications facilities.

*Scenario three.* Some experts believe that there is also a possibility of repeated air-missile strikes against a wider (compared to scenario two) range of targets during several weeks. The main obstacle will be not the limited capabilities of the Israeli Air Forces, but rather the reaction of the world community, the West and the UNSC.

Israel has the military capabilities required to implement any of the three scenarios.

For example, according to the International Institute for Strategic Studies (London), the Israeli Air Force (IAF) has 800 combat aircraft, including 628 in service and 172 in operative reserve<sup>109</sup>. In addition, the IAF has 10 RF-4E reconnaissance aircraft, 6 airborne early warning aircraft, 37 surveillance and electronic warfare aircraft, 20 liaison aircraft, 3 tanker aircraft, as well as 133 combat helicopters, 8 antisubmarine helicopters and 150 assault support helicopters. The main air bases are Ramat David, Tel Nof, Sde Dov, Hatzor, Hatzerim, Bikat Uvda, Mitzpe Ramon, Palmachim, Tell Milch and Lod.

The main combat aircraft of the IAF are F-16 Fighting Falcon fourth generation multi-role fighter (360 units in service in several modes) and F-15 Eagle fighter aircraft (90 units), both US-made. The F-16 models C and D were further improved (new flight control systems and avionics were installed). There are plans to purchase fifth generation F-35 Lightning II fighter-bombers from the United States. The first batch of 20 aircraft of this type is to be received in 2015-2017, with 55 more aircraft to be purchased later on. The latest air fleet replacement that started in 2003 was supposed to be completed in 2008 by a delivery of

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<sup>109</sup> [http://militera.lib.ru/h/0/pdf/tsyganok\\_ad02.pdf](http://militera.lib.ru/h/0/pdf/tsyganok_ad02.pdf)

102 F-16 I fighter-bombers. There were also plans to buy 25-40 F-22 fighter-bombers in the future.

In terms of combat readiness and strike power, the Israeli military Air Forces are comparable to those of France, Germany and the UK. The Israeli fleet of combat aircraft and helicopters is the fourth largest in the world after the United States, Russia and China. The Israeli pilots are by all appearances ahead of any pilots of the world's leading nations in terms of their combat experience.

In case of a military operation, the Israeli aircraft will most probably use one of the three air transit routes. The first, and potentially the main route lie through Jordan and Iraq. The second route - across Syria and southeast Turkey - may be used to deliver a strike against nuclear fuel cycle facilities in the vicinity of Tehran and on the Caspian Sea shore. The third potential route runs across the Mediterranean Sea and the Black Sea to reach the targets in northwest Iran.

According to expert estimates, to get past the Iranian air defense Israel will need up to 20 aircraft of various purposes – from jammers to fighter-bombers with anti-radar missiles and other air-to-ground armament – that will ensure that the attack aircraft safely reach the weapons release zones. These weapons would be primarily air-to-surface missiles – the US-made AGM-84E naval anti-ship Harpoon missiles modified for use as air-to-surface missiles that have already been used against military industrial facilities in Iraq during the first Gulf War in 1991. Further, there are new Popeye AGM-142A guided missiles developed by Israel. These missiles have television and thermal guidance systems. Since the Harpoon missiles' range is 40-150 kilometers (excluding Popeye, which has an extended range), the Israeli pilots will have to enter the Iranian air defense zone.

Reportedly, Israel also has its own GBU-28 bunker busters, while more powerful GBU-57 bunker busters apparently were supplied by the United States in 2012 in return for Israel's consent to postpone a strike and give more time for negotiations<sup>110</sup>. Following that, the US tested an even more effective MOP-bomb of this class to convince Israel that the United States will not tolerate Iran's further developing survivable underground nuclear facilities.

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<sup>110</sup> News of the Military Industrial Complex (Novosti VPK) ([www://vpk.name](http://www://vpk.name). 23 October 2013).

If a military operation unrolls under either of the first two scenarios, Israeli Air Force might well take certain losses. Notably, death or capture of pilots has been the sorest issue for Israel (in contrast to its adversaries) as a highly developed democratic society. However, there has been a public consensus in Israel on this issue that the stakes in preventing Iran from acquiring nuclear weapons are so high that even heavy losses in combat air crews and the damage by Iran's potential response would be justified.

However, many experts believe that the main obstacle for Israeli Air Force is not so much the Iranian air defense systems as Israel's own geographic location. In contrast to its previous strikes against Iraq and Syria, this time it would be much more difficult for the Israeli tactical fighter aircraft to cover the 1,500 kilometer distance with maximum combat load, strike the targets and return to their bases.

Hence, Jericho intermediate-range ballistic missiles (IRBMs) may also be used, though it would depend on whether they have sufficient guidance accuracy. One of the Israeli options in terms of improving guidance accuracy might be to use a guidance system similar to that of the US Pershing-II missile or a GPS navigation system.

Further developments will depend on whether Iran's leadership decides on retaliatory strikes against Israel, with a glance to an intervention by the US that might follow. It is very unlikely that Israel would use nuclear weapons, however such a scenario should not be ruled out. Israel may use nuclear weapons if the survival of the nation is endangered (or, using the wording of the Russian Military Doctrine – for the lack of a similar publically available Israeli document – “in case of aggression... with the use of conventional weapons when the very existence of the state is threatened”<sup>111</sup>).

To deliver its retaliatory strikes, Iran may use Shahab-3 and Sejil ballistic missiles, since Iran's Air Force would hardly be the best option in this case (12 domestically manufactured Azarakhsh and Saeqeh jet fighters and 120 obsolete US-made F-5 fighters). It is also possible that Iran would use the units of Hezbollah, Hamas, Islamic Revolutionary Guards Corps (IRGC) and its Army in Syria, Lebanon and the Gaza Strip to conduct offensive operations across the Israeli borders.

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<sup>111</sup> The Military Doctrine of the Russian Federation  
(Russian text is available at [http://www.kremlin.ru/ref\\_notes/461](http://www.kremlin.ru/ref_notes/461))

Whether the US will get involved in the war will depend not so much on the number of missiles launched by Iran as on the severity of the damage they do to Israel. Due to a low level of accuracy, Iran's missiles would hardly affect Israel's military capacity. However, massive strikes against cities may cause heavy casualties among the civilian population. Besides, severe damage may be caused if the oil refineries and the nuclear power plant in Dimona are destroyed. At this point it is not possible to assess the effectiveness of the Israeli ballistic missile defense system with its Arrow-type anti-ballistic missiles against ballistic missiles with a range of 1,500 to 2,000 kilometers.

### **Options of the US military operations**

If Israel suffers substantial damage, the US leadership, reluctant as it may be, will have to protect its de-facto ally under the pressure of the American media, public opinion, the Congress and the Israel lobby.

It cannot be absolutely ruled out that under some circumstances Washington might decide on a strike before and without. This is unlikely under the Obama administration, but still it may happen if the current stage of negotiations ends in failure and Iran presses forward with the most dangerous areas of its nuclear program<sup>112</sup>. This scenario would be more likely under a new US leadership after 2016, especially if it is gained by the Republican hardliners.

The US military capacity in the region is ample for destroying most of Iran's key nuclear and general military facilities within the first days without reinforcement by additional forces, i.e. with a great deal of surprise.

Iran's territory is constantly monitored by US spy satellites capable of not only identifying the targets and their exact coordinates, but also of controlling the Iranian communications channels, monitoring the movement of troops and materiel (and, presumably, nuclear material and equipment) on a real-time basis. In addition, much information is provided by an extensive human intelligence networks of the US and Israel in the region.

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<sup>112</sup> This may apply to accelerated accumulation of 20 percent-enriched uranium, switchover to the production of weapon-grade uranium (e.g. under the pretext of producing fuel for naval reactors), construction of several other underground facilities similar to the one at Fordow and the building of a plutonium separation facility near the Arak reactor, etc.

In the first place, in a military operation against Iran at least two aircraft carriers may be involved. Subsequently, a total of six aircraft carriers may be used. Most of escort ships are equipped with Aegis missile defense system. In addition, they may carry Tomahawk cruise missiles with a range of around 1,000 kilometers and an accuracy of up to 6 meters of circular error. Overall, a task force may be created comprising 10 wings of more than 1,000 US Air Force and US Navy aircraft, over 40 ships and nuclear-power submarines with around 1,000 submarine-launched cruise missiles. Unmanned reconnaissance and strike aerial vehicles (drones) will also be extensively used.

Besides, to deliver strikes against Iran, USAF B-2A strategic bombers forward-deployed at the Diego Garcia base (the Chagos Archipelago in the Indian Ocean), as well as B-52 strategic bombers forward-based at Fairford (UK) may be employed. They will follow the well-tried route of 2003: through the area of the Baltic Straits, crossing the airspace of Denmark, Poland, Hungary, Romania, over the Black Sea and further through the airspace of Turkey and Iraq.

The initial stage of the operation may open with the launches of air- and sea-launched cruise missiles. The primary targets of the cruise missiles would be reconnoitered air defense facilities, communications and combat control facilities, missile sites, military airfields, naval bases. Since almost all of the specified targets (with the exception of mobile launchers and air defense systems) are stationary, many of them would be easily destroyed or disabled. Simultaneously, the group would execute an electronic warfare operation to disrupt Iranian combat control and clear the way for the first and the most severe air strike.

The air strike may comprise at least three echelons. The first echelon would include EA-6B electronic warfare aircraft and attack aircraft operating from the aircraft carriers. This echelon should come into operation as soon as the first airstrike is completed. Its role is to detect and destroy air defenses and aircraft (including airborne aircraft) that have survived the attack by cruise missiles, as well as to detect and destroy air defenses covering the nuclear infrastructure facilities.

Iran's air defenses and fighter aircraft is the weakest link of its armed forces, therefore (just as it was done during the first and second campaigns in Iraq) the task of destruction of Iran's air defenses and Air Force may be assigned as soon as the first attack by cruise missiles is over and the first echelon has completed its mission. Even if a small part of the Iranian road-mobile air defense systems survive, it would not be

capable of covering nuclear infrastructure facilities or troops during the adversary's air operation.

The second echelon may consist of a part of fighter-bombers and attack aircraft operating from aircraft carriers and bases in Saudi Arabia, Iraq, Qatar, Bahrain, Kuwait, Oman and possibly Turkey. Their primary tasks will be to carry on with the disarming strike that began with the cruise missile launches. The primary objectives of their follow-up attack would be reconnaissance and engagement of missile launches, artillery sites, military infrastructure facilities, missile sites and combat ships (primarily, the light fast missile boats and submarines), capable of blocking the Strait of Hormuz. Aboveground nuclear infrastructure facilities may also be destroyed in the course of the second attack.

In addition to US air forces deployed in the region, the second echelon of the air strike might already include B-2A strategic bombers forward-deployed at the Diego Garcia base and B-52 strategic bombers forward-based at Fairford. Part of these aircraft would be carrying bunker-busters to against underground concrete nuclear facilities.

The third echelon would join the operation as soon as the second echelon has completed its mission - so that Iran has no time to prepare the remaining part of its air defenses to respond to the attack of strategic bombers. Thus, the strategic bombers should take off well in advance to be able to arrive on time at the point where the third echelon will be formed. The nuclear infrastructure facilities would be the main targets assigned to strategic bombers.

Judging by the experience of the past Gulf wars, on the first day the carrier-based aircraft and the aircraft from the airfields around Iran can make three-four flights thus sustaining the density of fire set by the first most powerful attack. In the following days the flying intensity will decrease. The aircraft will act as separate tactical formations assigned with the mission of destroying newly reconnoitered targets and preventing Iran's Army from mounting a military response. Integrated use of all means of reconnaissance will ensure total real-time control over the areas from which Iran may offer a military response – primarily the Iranian coastline, missile launchers sites and military deployments.

In the following days of the operation the US Command will seek to complete the destruction of Iran's nuclear complex infrastructure. Complete dismantlement of Iran's nuclear program implies the destruction of not only the uranium enrichment facilities in Natanz and Fordow, but also of other critical facilities, such as nuclear facilities at

Isfahan (the production of uranium hexafluoride), Ardakan (the production of yellowcake) and the Saghand uranium mine. Presumably, no strikes will be delivered against the Tehran Research Reactor and the Bushehr Nuclear Power Plant, for fear of excessive collateral damage and international political implications. Whether there will be strikes against the heavy-water reactor in Arak will depend on whether by that time the reactor is put in operation, since the destruction of the functioning reactor would cause broad-scale plutonium contamination.

Whereas the air defenses protecting the nuclear complex and Iran's Air Forces will be destroyed within the first days of the operation, the effective destruction of the nuclear facilities themselves will require much more effort and time.

Most certainly (as was the case during all of the most recent conflicts involving the US military), extensive information warfare operations will be conducted to disrupt country's military and civilian information infrastructure. Given the overwhelming information superiority of the US, it would be possible not only to disrupt all kinds of Iran's electronic communications and the command systems, but also to put enormous psychological pressure on the population and military personnel. All civilian radio and television channels will be jammed and filled with the radio and television programs prepared by the US psy-ops experts aimed at disrupting public and military administration and using mass media to spread panic among the population. The US experience in the two Gulf Wars and the war in the Balkans suggests that information operations make a major impact, and in some cases a decisive contribution to achieving the objectives of a military campaign. After the first three-echelon strike the US may well deliver an ultimatum requiring that Iran stop any military operations against Israel and return to the talks on total dismantling of its nuclear program. The subsequent course of the conflict will depend on the political decision taken by Iran's military, political and spiritual leaders. Two critical political decisions are possible. First – to acknowledge the defeat, submit to the terms of the US ultimatum and proceed to negotiations on the terms of further settlement of the conflict. Second – to call the nation to 'holy war' against Israel and the US aggressor.

In terms of preserving Iran's current political regime and its economic capacity, to acknowledge the defeat seems more attractive at first glance, since the missile and air strikes would render all elements of the national economy defenseless and totally vulnerable. Further

bombardments and missile strikes would inevitably lead the country to an economic collapse and cause heavy civilian casualties.

However, despite the negative consequences of further war, this decision may be unacceptable for the Iranian leadership for reasons related to domestic policy. The majority of the country's population will perceive the surrender as a profound national humiliation – a reaction that spells the loss of authority for Iran's spiritual leaders and threatens the existence of the regime itself. The decision to surrender would receive a chilly welcome among the clergy and in the military circles. With the weakening of the centralized power, separatist movements may become more active in the Kurdish- and Azeri-inhabited regions of the country, threatening Iran's territorial integrity.

In the light of such a prospect, Iran's spiritual leaders may call the nation to a total war against the aggressor. This is all the more so because the nuclear program has come to be perceived by the population as a symbol of the country's independence and a source of national pride.

There is a possibility that Iran will deliver some retaliation as early as during the strike operation by the US and will continue after the initial phase of the operation by its adversaries has been completed. Iran may use the remaining cruise and ballistic missiles to deliver strikes against the ships and bases of the United States in the Gulf area and on the Israeli territory. However, these strikes would hardly cause extensive damage, since the said missiles lack in accuracy and are likely to be intercepted by the US and the Israeli air and missile defenses. Total control over the Iranian coast by all types of reconnaissance and the capability to quickly engage the emerging targets by unmanned combat aerial vehicles and aircraft carriers would make it practically impossible for the remaining Iranian attack and missile boats and submarines to operate.

The US, let alone Israel, is not considering a ground campaign against Iran and its subsequent occupation. At the same time, there may be short targeted overland operations by special units to destroy specific targets.

An important issue is whether Iran will be able to keep up resistance and restore its nuclear program. In case of an Israeli strikes, Iran would make intensive efforts to rebuild its nuclear program. Notably, such rebuilding will be explicitly military-oriented and will be preceded by Iran's withdrawal from the NPT. This restoration may take from several years to a decade, depending on the severity of the damage.

The position of the international community and the UNSC is likely to prevent Israel from further strikes.

If the operation is carried out by the United States, the Iranian nuclear program will hardly be rebuilt in the foreseeable future.

### **How the rest of the world may react**

It is obvious that the Muslim world at large will react very harshly to an attack against Iran, so Israel or the US will have to brace themselves against the indignation of the entire global Islamic community.

However, if Iran is attacked by the United States alone (which does not seem very likely under the current Obama administration but is still possible under certain circumstances), the reaction of the Muslim world will be less unanimous in word, let alone in deed. This especially applies to Saudi Arabia, Qatar, Bahrain, the United Arab Emirates and Turkey who might tacitly (or maybe even openly) welcome Iran's defeat and the destruction of its nuclear program.

At any rate, there will be a wave of protests involving attacks on the embassies of the United States and its allies throughout the Muslim world. The Organization of the Islamic Conference (OIC) will hold an extraordinary meeting strongly condemning the aggression. The League of Arab States (LAS) and the Organization of African Unity (OAU) will do the same. In addition, the 22 members of the LAS as well as several OAU members may demonstratively withdraw from the NPT. While the Islamic ruling regimes will do their best to bring down the wave of protests threatening to destabilize the domestic situation, they will have to associate themselves with the 'street protest' at the official level. All this will boost the authority and the popularity of Islamic radical groups in North Africa, the Middle East, in Central and South Asia.

Islamic radicals, including the Muslim Brotherhood and the various branches of Al Qaeda will respond with terrorist attacks targeting the initiators of the strikes against Iran as well as their allies, including the Muslim states whose governments are listed among the US partners.

As to Europe, massive protests accompanied by acts of violence by the Islamic community can be expected, as well as terrorist attacks in the countries most closely allied with the US. These include the UK, France, Germany, the Netherlands and Denmark. In this context, the discord within the NATO and the European Union will intensify.

The official position of Russia and China will be predictably negative, and so will be the reaction of the majority of the public and political elites. The military and political divide between Russia/China and the West will dramatically deepen. The cooperation on international security, including nuclear disarmament and non-proliferation measures, will be put on ice for a long time.

At the same time, deeply destabilized Iraq, Afghanistan, Pakistan (with its nuclear weapons) and Central Asia, as well as an upsurge in international terrorism may subsequently force the US and its allies in Europe and the Far East to cooperate with Russia, China and India, unlikely as it might seem after the military attack against Iran.

To summarize, a military operation by Israel and (or) the United States without a sanction of the United Nations Security Council is likely to stop the Iranian nuclear program for a prolonged period of time or to destroy it completely. However, these activities will have most dire consequences such as an upsurge in terrorist attacks, a flow of thousands of refugees, an unpredictable rise in the prices of energy products, as well as other scarcely predictable implications of the turmoil in the region and beyond. It is possible that the war may destroy the NPT regime and cause a number of states to intensify their nuclear programs in order to obtain their own nuclear deterrence capability against the United States and Israel.

The international community should be ready to make enormous efforts to counter global terrorism, prevent a humanitarian disaster in Iran and far beyond as well as to provide huge resources for the social and economic recovery of the war-torn countries and regions.

The outlooks for the development of military and political situation around Iran outlined above are based on the assumption that the next stage of the P5+1 negotiation fails to find a diplomatic solution to the Iranian nuclear problem. These dramatic prospects should be fully taken into account in Tel Aviv and Washington before they decide on military actions against Iran. Taking them into consideration implies putting all the necessary effort in reaching final agreements on Iran's nuclear program and thus preventing a new Gulf war.

## **4. ISRAEL-IRAN: POLITICAL DILEMMAS**

### **Irina D. Zvyagelskaya**

*I want there to be no confusion on this point. Israel will not allow Iran to get nuclear weapons. If Israel is forced to stand alone, Israel will stand alone.*

*Benjamin Netanyahu's speech at the UN General Assembly,  
1 October 2013*

*In critical situations in which you do not know what the outcome will be, he argued, do not try to achieve the maximum gain, but ensure that in case of failure the price you pay will be minimal.*

*John von Neumann, the developer of the game theory*

The address by Iran's President Hassan Rouhani to the UN General Assembly in September 2013 – which came as a surprise for many a one – highlighting the willingness to negotiate and displaying an obvious change in tone as well as in the usual Tehran's vocabulary raised a question not so much to the sincerity of the new president as to the readiness of the Iranian top authorities to agree on a shift with a prospect to break the isolation and achieve the lifting of sanctions.

While the majority of the leaders of the greatest world powers welcomed the words of the Iranian president hoping for a more negotiable Tehran, with the oil companies (Chevron, Exxon Mobil, Conoco, Anadarko, as well as their European counterparts) indicating their willingness to come back to the Iranian market as soon as the sanctions are lifted, the Israeli leaders responded with sharp criticism of Rouhani himself and Iran's supreme leader.

The speech of Israel's Prime Minister Benjamin Netanyahu at the United Nations General Assembly was clearly out of tune with the general hopes for easing the tensions with Iran. The speech primarily focused on Iran's nuclear program which Israel believes is a military one designed to acquire nuclear weapons in the near term. According to the Israeli intelligence, Iran is only several months away from obtaining a

nuclear device. Iran has the capabilities to enrich uranium to 90% within one or two months. Even if it does not manage to make a standard nuclear bomb, within less than six months it will have at least one primitive nuclear explosive device.

The US has been more moderate in its estimates, as it apparently believes that Israel has deliberately dramatized the situation. According to the US estimates, Iran will need at least one year to come up with a nuclear weapon.

The mistrust that Israel has for Iran, as well as its commitment to take every effort to prevent Iran from acquiring nuclear weapons, is also based on a number of factors related to psychology, such as historical memory, the constant pressure that the need to ensure security has on the leadership and the society, the prevailing mistrust towards the external world. In this light, even the hypothetical probability of Israel losing its monopoly on nuclear weapons in the Middle East is viewed as absolutely unacceptable.

Notably, in the past Israel used to assist the Shah Iran in military matters, considering it to be a natural ally (a pro-Western country with the same level of isolation in the region, etc.). However, the ideological imperative enunciated by the new regime after the Islamic Revolution of 1979 created a wide gap between Iran and Israel.

### **Historic background**

It may be reminded that the relations with Iran and Turkey were particularly valuable for Israel. Both Iran and Turkey shared a border with the Soviet Union, depended on the West and had mistrust towards the Arabs. In terms of the Israeli foreign policy, the relations with Turkey and Iran opened the door into the Muslim world, which, given the ongoing conflict with the Arabs, had become particularly important for Israel.

In March 1950 Iran recognized Israel de facto. An unofficial Israeli mission opened in Tehran. There were oil supplies from Iran to Israel. The Suez campaign added a new chapter to the relations between the two states. In September 1957 communication was established between SAVAK (Iran's domestic security and intelligence service) and the Mossad to be later joined by the military departments. In spring 1959 an agreement on military and intelligence cooperation was signed and remained in force until the Shah was deposed in 1979.

A number of western experts believe that the Shah Iran did not confine its nuclear program to peaceful purposes. Anthony H. Cordesman, an expert on the issues related to nuclear balance in the Middle East from the Washington Centre for Strategic and International Studies, notes that in the 1970s Iran was carrying out a secret military nuclear program centered around the TNRC (Tehran Nuclear Research Centre) where the technology of laser uranium enrichment and the separation of plutonium from spent nuclear fuel was being mastered since 1975<sup>113</sup>. In addition, Iran engaged in a research on new methods of plutonium production, with a small research group to develop nuclear weapons established in the 1970s.<sup>114</sup>

As soon as Israel has developed indigenous nuclear weapons, it turned to a policy of ambiguity and non-transparency which means that the country discloses no information either on the nuclear program itself, or on its nuclear capability. Later on, the Israeli nuclear policy was reinforced by the “Begin doctrine” which stipulated that Israel’s neighbors in the Middle East should be prevented from developing nuclear weapons by all means.

After the fall of the Shah in 1979 Israel has increasingly viewed Iran’s nuclear policy and program as an acute challenge and threat. It has been assumed that Iran would hardly consider a strike against Israel (though this option could not be totally discarded either), though there are several more likely and dangerous scenarios, such as nuclear weapons falling into the hands of terrorists, the spread of nuclear weapons throughout the Middle East, in which case the implications may be quite unpredictable.

Under these circumstances, Israel is loath to lose its nuclear monopoly and has repeatedly demonstrated its commitment to clamp down on any attempt to change the situation in this sphere. One may recall a strike at a nuclear reactor in Iraq in 1981 and the bombing of the Syrian suspicious site in 2007 which resulted in the destruction of a military facility.

Doubtless, the situation with Iran is different. Indeed, the elements of its nuclear program are dispersed throughout the country and are located in hard-to-reach places. Besides, Iran is capable of a retaliation

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<sup>113</sup> Cordesman A, Burke A. *The Proliferation of Weapons of Mass Destruction in the Middle East*. Washington DC.: CSIS, 2004. P. 74

<sup>114</sup> Op. cit.

that can be extremely dangerous for the entire region or even for the system of international relations at large. However, despite the fact that undesirable consequences should not be ruled out, some well-informed Israeli officials insist that in actual fact all the concerns are grossly exaggerated. According to a number of Israeli experts, a strike against few major complexes would suffice to set Iranian nuclear program back for a long time. According to them, the possibility of Iran activating terrorist groups or blocking the Strait of Hormuz is very low.

Iran's increasingly active interference in the Middle East conflict has turned into a factor directly influencing Israel's security. The US military operation in Iraq destroyed the previous balance of forces in which Iran was neutralized by Iraq. Iraqi resistance removed, Iranian leadership felt free to act more assertively in the Gulf area and pursue its own course, associated mostly with president Ahmadinejad, in the Middle East. This young radical politician with relatively modest international experience rose to power in August 2005 primarily owing to political problems within the country.

The ruling Iranian religious corporation proved far from unanimous. The reformism of presidents Hashemi Rafsanjani and Mohammad Khatami caused great concern on the part of conservatives striving to preserve "ideological purity" and the existing political system. Having ascertained that there is a demand for liberal course in Iran, where young people account for the majority of population and where a share of students is relatively high, the conservatives promoted their candidate to the presidency. Radical conservatism relies mainly on the support of rural migrants who have but recently settled in towns and failed to integrate into the urban cultural environment, while having lost the ties with their traditional environment in which they existed previously. These marginalized groups that exist almost in any society occupy the lowest steps of the social hierarchy and are most aggressive. They often support the most primitive forms of nationalism, which at the same time reflects certainty of their civilizational exceptionality typical of Iranians.

Iran claims the leadership in Islamic world and in the region, has actively strengthened its positions in Iraq, provided support to Hezbollah, Hamas and developed ties with the Syrian regime, which has virtually turned it into a party in the internal Syrian confrontation.

Iran's assistance to anti-Israel actors has drastically changed the dynamic of the Iranian-Israeli relations. As the US researcher Trita Parsi

writes: “Iran was no longer a distant and potential foe. Through Hezbollah, Iran was a border state. And through the Palestinian groups, Iran was now inside of Israel, or at least inside Israeli-occupied territory. The idea of making peace with the Arab vicinity to confront the Persian periphery had failed, because the periphery had penetrated the vicinity”<sup>115</sup>.

Israeli experts hope that eventual rocket attacks can be mitigated to a great extent through the Iron Dome system which proved highly effective during the Operation Pillar of Defense in November 2012. At that time tensions heightened in the relations between Israel and radical Palestinian groups in the Gaza Strip, with many rockets fired against Israeli territory. Almost all of them were intercepted and caused no harm. So it was no coincidence the Middle Eastern experts asked themselves a question whether the impenetrability of the Iron Dome was also a lesson to be learned by Iran. However, according to some Russian military officials, a real danger may come from Iranian missiles supplied to Hezbollah. Those have shorter flight time and lower altitude and, hence, in a conflict situation additional measures to intercept these missiles automatically would be required.

Israel’s anti-Iranian approach also determines its stance as to the civil war in Syria. At first sight, it appears inconsistent. Although Israel has always viewed Syrian regime as an enemy, it has examined options of settlement involving the return of the Golan Heights under the Syrian sovereignty. Furthermore, the situation along the Syrian border has remained calm, and the more predictable Bashar Al-Assad who spent many years in the West has appeared by all means a better option than the Islamic extremists with their craving for power and overwhelming irrational hatred towards Israel.

Nevertheless, Israeli experts have no doubts that Iran’s ties with Syria and Hezbollah pose most serious and immediate danger for Israel. In terms of the security of Israel, breaking these ties by deposing Bashar Al-Assad outweighs the risks of strengthening his extremist opponents. It is easier for Israel to protect its border than to counter a well armed anti-Israel front where even a non-state actor like Hezbollah has achieved mutual deterrence with Israel thanks to the assistance from Iran.

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<sup>115</sup> Parsi T. *Treacherous Alliance. The secret dealings of Israel, Iran and the United States*. New Haven and London: Yale University Press, 2007, kindle e-books, location 2455-2463

Israel's perception of Iran is also influenced by high intensity of emotions. It should be acknowledged that Iranian leadership has made a lot to aggravate Israel pressing on the sore spot of its mentality, denying the Holocaust or at least its true scale. Iranian presidential statements on the subject, as well as numerous conferences held in Iran were perceived by both Israel and the Western states as an intentional insult to the memory of the victims of Holocaust and an indirect justification of Nazism. It was the killing of millions of Jewish people during the WWII that made the international community resolve the issue of establishing the Jewish State that became a successor and kept the memory of the Jewish people.

This enormous tragedy still plays a special role in shaping Israelis' national identity. Acknowledgement of the unique nature of the Holocaust has become an instrument of formulating national tasks and priorities. According to Israeli researcher Alek D. Epstein, the main idea of the Yad VaShem museum (the Holocaust memorial) is that in the dreadful years when millions of Jewish people were shot, gassed or burnt in crematoria and incinerators, they had no state to come to their rescue. Therefore, for their security and survival Jewish people can only count on their own state and its armed force<sup>116</sup>.

Due to this perception of the Holocaust, the policy of Iran was perceived in Israel as an existential threat. There are politicians in Israel which cannot forego these parallels, although Israel as a powerful regional center has little in common with the defenseless Jewish communities in Europe which could not stand up to the Nazi destruction machine.

Former Israeli foreign minister Shlomo Ben-Ami has noted that there is a temptation to view current threats in the light of the tragedy experienced by the Jewish people: "Today's anxieties, too, are fed by perceptions and fears, by real and imagined concerns. The Iranian challenge to Israel's strategic hegemony is presented as a Holocaust-style existential threat..."<sup>117</sup>.

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<sup>116</sup> Epstein Alek D. *Mezhdu Stenami: Popytka Kollektivnogo Portreta Israillskoi Natsii* [Between the Walls. An Attempt at Collective Picture of Israeli Nation]// *Nepriosnovenny Zapas*. No.4 (66), 2009. (Available in Russian at: <http://magazines.russ.ru/nz/2009/4/ep9.html>.)

<sup>117</sup> Ben-Ami S. *The Middle East Hair's Trigger*//Daily News, 5 March 2010

Even Rouhani's acknowledgement of the atrocities of the Holocaust failed to change the way Iran is perceived by Israel's society which does not trust Iranian leaders. According to the poll held in late September 2013, 66% of the 500 Israeli Jews favor the use of force against Iran with the view to stopping its nuclear program, while 84% of the respondents believe that Iran is not going to scale its nuclear program down<sup>118</sup>.

In almost every statement the Israeli leadership makes accusations against Iran and call to stop its nuclear program. Israel has urged its foreign partners to put pressure on Iran. This is the matter on which Obama administration and the Israeli leadership disagree. Although both parties share the view that Iran should not possess nuclear weapons, Netanyahu's attempt to move the Iranian issue to the top of the agenda has apparently run counter to the US administration's vision of priorities.

After their meeting (in September 2013) the US President discussed the Palestinian issue, the situation in Syria and only at the end touched Iranian issue. Netanyahu, in contrast to that, focused exclusively on the Iranian issue. He expressed no straight opposition to the talks between Iran and the US but, as Barack Obama made it clear, Netanyahu's words sounded harder than mere generalities. The Prime Minister said that in all talks with Iran its word would be checked against deed, and the result would be the only thing that mattered. Despite the fact, that both Netanyahu and Obama talked diplomatically, the difference between them obviously persisted<sup>119</sup>.

While Tel Aviv fears to lose control over Iran's transforming into the nuclear power, Washington remains certain that it will be able to stop this process at the appropriate moment. Therefore their assessments of the threat differ quite a lot. Certainly, Israel would not think of using force without regard to its major ally. According to certain Israeli experts, Israel will increasingly resort to cyber-warfare in its attempt to stop or hold Iranian nuclear program by hacking relevant computer software.

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<sup>118</sup> Gold Yan. Public opinion in Israel on a strike against Iran and Binyamin Netanyahu's statement in the UN.

The majority of Israeli people believe that Israel should attack Iran, although single-handedly, for the development of its nuclear program (<http://www.israel7.ru/News/News.aspx/163542> 04.10.2013).

<sup>119</sup> <http://cursorinfo.co.il/news/novosti/2013/09/30/netaniyagu-i-obama-ne-dogovorilis-po-iranu/> (in Russian)

Israel considers international sanctions as an effective means of countering Iran. Israel believes those should have been extremely rigorous and not be confined to limiting Iran's activities under its nuclear program. The sanctions made Iran search for accommodation and compromise. Yet having gathered and analyzed information on Iran's nuclear program, Israel has every reason for mistrust towards Iran. Prime Minister Netanyahu stressed the following: "Why would a country that claims to only want peaceful nuclear energy, why would such a country build hidden underground enrichment facilities? Why would a country with vast natural energy reserves invest billions in developing nuclear energy? Why would a country intent on merely civilian nuclear programs continue to defy multiple Security Council resolutions and incur the tremendous cost of crippling sanctions on its economy? And why would a country with a peaceful nuclear program develop ballistic missiles, whose sole purpose is to deliver nuclear warheads?"<sup>120</sup>.

No doubt, there is sense and logic behind those questions asked by the Israeli Prime Minister and they are based on realities. According to Igor Ivanov, President of the Russian International Affairs Council, "today Iran's nuclear program is a national idea that unites all the country's political forces. To my knowledge, there is no single serious Iranian politician, whether representing opposition or not, who would advocate the dismantlement of the nuclear program. Neither the party in power, nor the moderate political figures mention nuclear weapons for political reasons"<sup>121</sup>.

Although the leading powers do not claim that Iran's nuclear program has exclusively peaceful nature, they try to resolve the problem through political means. Unlike them, Israel maintains that it is ready to accept negotiations in parallel to harsh sanctions against Iran, yet it reserves the right to make its own decision (on the use of force) depending on the situation. In a situation when Iran's intensive activity in the region has further exacerbated its relations with Arab states and turned Iran, due to its ties with Syria and Hezbollah, into a target of the "Sunni offensive" – hypothetical Israeli strike could agree with Sunni

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<sup>120</sup> Netanyahu UN Speech 2013 Transcript: Full Text Of General Assembly Address (<http://www.policymic.com/articles/65983/netanyahu-un-speech-2013-transcript-full-text-of-general-assembly-address>).

<sup>121</sup> Ivanov Igor. Iran's Nuclear Program. Russia's Position. ([http://RussianCouncil.ru/inner/?id\\_4=847#top](http://RussianCouncil.ru/inner/?id_4=847#top)) (in Russian)

desire to weaken the Shia power whose ambitions have converted it into their political opponent.

Israel would inevitably feel more skeptical about any Iranian initiative than the rest of the world. This can first and foremost be accounted for by the fact that, according to Israel's assessments, Iran has already achieved an advanced stage of its nuclear program. As Israeli researcher Ephraim Kam notes, "in contrast to the past, Iran is currently not interested in gaining time to advance its nuclear program because uppermost in its mind is attaining an agreement that will result in revocation of the sanctions, not to mention that the nuclear program has already reached an advanced stage. This is why Rouhani has talked about negotiations leading to an arrangement within three to six months. Therefore it is also clear that Iran will, at the very outset of the talks, seek US willingness to lift or at least significantly reduce the sanctions..."<sup>122</sup>.

Currently total lifting of the sanctions remains a complicated issue for the future. However, even if the partial suspension of sanctions weakens Israel's favorite formula implying imposition of sanctions accompanied by the threat of a military operation. Furthermore, the talks between the US and Iran may widen the differences that exist between the US and Israel. Israeli defense minister Moshe Yaalon said: "There is agreement between the United States and us on the goal, and agreement on intelligence and close cooperation. But we are in disagreement about the red line. For the Americans, the red line is an order by [Ayatollah] Khamenei to build a nuclear bomb. For us, the red line is Iranian ability to build a nuclear bomb"<sup>123</sup>.

Having to choose "between the bomb and the bombing", most Israeli politicians would opt for the latter. Notably, their political views (whether right or left) do not affect their attitudes towards Iran. This is especially true of the Israeli military establishment. Indeed, there is no big difference in the attitudes of Ehud Barak, former Prime Minister and the head of the left-wing Independence faction and Defense Minister Yaalon.

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<sup>122</sup> Kam Ephraim. Hassan Rouhani and the Spiritual Leader: A New Style of Negotiations// INSS Insight No. 471, October 4, 2013. (<http://www.inss.org.il/index.aspx?id=4538&articleid=5734>).

<sup>123</sup> Shavit Ari. Does This Mean War? Top Israeli strategists debate the Iranian bomb. Haaretz Newspaper, 2012 // Kindle ed. (loc. 216)

Nevertheless, the position of the minority should also be mentioned, especially that of the former Mossad Director Efraim Halevy. He stressed that even a nuclear Iran would pose no threat to the existence of Israel, and choosing between letting Iran have a bomb and bombing Iran had little to do with rational perception of reality. “Because an attack on Iran is liable to foment a generations-long war with Iran, it is our duty to do all we can to prevent a bomb and prevent bombing and resolve the crisis creatively”<sup>124</sup>.

However, according to Israeli Prime Minister Binyamin Netanyahu, achieving a compromise on Iranian nuclear program, the possibility of which opened in November 2013, would be a “historic mistake”.

As Tehran has taken a new course that it should be encouraged to pursue, it becomes increasingly urgent — rather than merely necessary — to find a creative solution to this issue.

Israel’s foreign policy priorities include, in addition to Iran, an outstanding Palestinian issue that for all its routine nature (both parties has lived with it for decades), comes to the fore from time to time. Those who believe the strike against Iran is necessary, often say that this should be done in parallel to the settlement of the Palestinian issue in order to reduce the risks.

Still, the attempts to use armed force in order to delay Iran’s acquisition of nuclear weapons may prove counterproductive, as they would cause a negative reaction of the international community and bring about isolation of Israel. More importantly this would make Iran accelerate its work on nuclear weapons that will eventually render it immune to the use of force.

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<sup>124</sup> Shavit Ari. Op. cit.// Kindle ed. (loc. 1487)

## **5. MIDDLE EAST ZONE FREE OF WEAPONS OF MASS DESTRUCTION**

**Alexei G. Arbatov**

The establishment of a weapons-of-mass-destruction-free zone (WMDFZ) in the Middle East is one of the major issues in terms of security in the region. The idea dates back 40 years: it was originated as a concept of a nuclear-weapons-free zone with the endorsement of the United States, France and Canada in 1974 by the Shah's Iran. Notably, at that time Iran had just started to implement a massive nuclear power industry development program (23 reactors, the full nuclear fuel cycle). Later that year the concept was supported by the United Nations General Assembly Resolution 3263, with further similar resolutions to be adopted by the UN nearly every subsequent year.

In the wake of the events of 1981, the concept was expanded to include a proposal that the countries of the region sign an agreement not to attack each other's nuclear facilities (the idea was suggested by the Israeli air strike against Iraq's Osirak nuclear reactor in 1981). In the first half of the 1990s this matter was extensively discussed in the Madrid Framework and was taken up by the Non-Proliferation Treaty Review Conferences of 1995, 2000 and 2005. Notably, at the NPT Review Conference in 2005 the issue was transformed into a broader concept of a WMD-free zone (i.e. from then on, the concept included nuclear, chemical and biological weapons). A call for a conference on WMDFZ to be convened in 2012 was included in the outcome of the 2010 NPT Review Conference that otherwise would not be adopted at all. However, in 2012 the event was called off under the influence of the US position.

The main obstacle for the establishment of such a zone and the related nuclear disarmament of Israel is the explosive military and political situation in the region. Admittedly, the other existing nuclear-weapons-free zones (NWFZ) – in Latin America, South Pacific, South-East Asia, Africa and Central Asia – also suffer from some or other degree of social and political instability that sometime gets quite intense. However, as of the moment these NWFZs were established, in neither of

the said regions there were any bases where nuclear weapons were operationally deployed or stockpiled (Latin America, South Pacific, South-East Asia). In some cases nuclear weapons were eliminated for internal political reasons (Africa – the Republic of South Africa), or had been removed by the proprietor state (from Central Asia to Russia). Certainly, that made things easier, though even so there were disputable issues related to the transit of nuclear weapons, the storage and movement of nuclear material, security assurances, etc.

However, the main problem is that neither of the said regions, unlike the Middle East, has had such a high level of political tensions, military confrontation or a recent history of five wars and major armed conflicts (similar to wars and conflicts in the Near and Middle East in 1947-1949, 1956, 1967, 1973 and 1982) all of which involved an invariable set of contenders – Israel vs. the surrounding Arab states.

In the recent years, the picture was aggravated by the destabilizing consequences of the Arab Spring, the confrontation between Iran and the Arabian peninsula monarchies, as well as the conflicts between Sunni and Shias, Islam's two major sects, that took the shape of a civil war in Syria.

Another feature that makes the region so unique is that Israel is the only country in the world the elimination of which has been officially called for by the neighboring states. There are only two countries with which Israel has signed peace treaties, namely Egypt (1979) and Jordan (1994), however, even in these countries the domestic situation is far from predictable, among other things as regards the recognition of peace treaties with Israel. It would not be an exaggeration to say that of all the formally recognized states (as opposed to unrecognized states) Israel for many decades has existed under the greatest and constant external threat. This is confirmed not only by the declarations of the neighboring governments, but also by the ongoing terrorist and missile attacks against its territory by the largest terrorist organizations – which are actually guerilla armies – deployed in adjacent Lebanon, Syria and the Gaza Strip (notwithstanding the fact that the latter is fully dependent on water, food, petrol and power supplies from Israel).

From the geostrategic perspective, Israel's position is highly vulnerable: its territory lines the sea coast stretching 60 to 80 kilometers inland (that is to say, it lies well within range of modern rocket artillery or within a two-day march of mechanized troops). Though in the recent six decades the Arab countries have suffered five defeats in their wars

against Israel, this fact hardly made any difference in terms of their wellbeing, aside from piqued national pride and relatively small combat losses. By contrast, as soon as Israel loses just one war, it will cease to exist as a nation and a state. Thus, Israel's security fully depends on the high combat readiness of its armed forces, on the rapid reserve mobilization system, the advance defense, the preemptive offensive operations and – as a last resort measure – on the effectiveness of nuclear deterrence.

The Arab countries have a population that is 40 times larger than Israel's, and a total area that is 400 times greater than that of Israel. In addition, the Islamic states procure large amounts of weapons and military equipment from abroad, so their military superiority over Israel in terms of conventional armed forces is only a matter of time.

It emerged that despite their NPT membership, Iraq, Iran, Libya and Syria in the recent decades have pursued military nuclear programs in circumvention of the IAEA safeguards. Israel has signed the Chemical Weapons Convention (CWC, 1993) and the Comprehensive Nuclear-Test-Ban Treaty (CTBT, 1996), but has not ratified either of them. As to its neighbors, Egypt and Lebanon have not ratified the CWC (to which Syria should be added, as it signed the Convention only in 2013), while Egypt, Iran, Syria and Lebanon are not parties to the CTBT.

While unanimously supporting the WMDFZ concept, the Islamic countries insist that Israel's non-declared nuclear capability and its failure to join the NPT is the main issue in terms of the region's security and an obstacle to the strengthening of the nuclear weapons non-proliferation regime. In its turn, Israel claims that the creation of the WMDFZ will only be possible on the basis of its peace treaties with all the countries in the region and comprehensive security settlement. The Islamic states condition such a settlement on Israel's withdrawal from all territories occupied in 1967, resolution of the Palestinian problems and establishment of the State of Palestine with a capital in East Jerusalem.

Without getting into details of the Arab-Israeli relations that lie far beyond the scope of this research, it should be noted that the Palestinian issue is not only a matter of territories west of Jordan, in the Gaza Strip and East Jerusalem. This issue is rooted in the deepest layers of life of the Muslim world. For the majority of the countries in the region that are characterized by some or other degree of authoritarianism and the association of Islam with state power, the struggle for the rights of the Palestinians and the aim to eliminate Israel is the most important

instrument of ideological legitimization of their regimes at the national level, and an excuse for the social and political backwardness. It is also the main banner to rally the Arab nations around, and for some of them - the case for their claiming leadership in the Islamic world.

If the Arab regimes were only concerned with the fate of "homeless" Palestinians, they may well have established a Palestinian state in the Palestinian territories they had been occupying for almost twenty years in 1949-1967. The same applies to the Palestinian refugees and the poor condition of their camps in the neighboring Arab countries. These camps (with their extremely high birth rates) have been artificially maintained in a desolate state to epitomize the effects of 'the Israeli aggression' and serve as an infinite pool for new recruits to swell the ranks of Islamic guerilla-fighters. Otherwise, the huge financial aid from the Arabian oil monarchies and Iran could have been used long before to turn these camps into thriving cities or to house all the refugees in the neighboring Arab countries, just as was the case with millions of immigrants displaced within Europe after the WWII.

Finding a permanent solution to the Palestinian issue and recognizing Israel would result in profound and unpredictable changes in the Arab and Islamic world. By contrast, Israel, as a highly-developed democracy, would benefit in all respects as a result of peaceful resolution of this historic problem. Israel does not need hostility or regional tensions for its domestic legitimacy, ideological identity, external ambitions, or attraction of capital investment and new immigrants.

Another facet of the WMDFZ is that wide spread domestic instability and unpredictability of the Islamic states has become still more exacerbated in the context of the Arab Spring of 2011-2013 (and is not related in any way to the Palestinian issue or the Israeli nuclear weapons and the NPT), render any potential political and military agreements with these states quite unreliable and reversible.

No doubt, the concept of the WMDFZ has until now been explicitly anti-Israeli in terms of politics and publicity which by no means has facilitated its implementation. However, leaving it aside, Tel Aviv will not relinquish its undeclared nuclear capability even if the Iranian nuclear issue is resolved peacefully. Israel is not alone in this position. Indeed, this posture with certain variations is shared by all other eight nuclear-weapon states, most of which enjoy an incomparably more secure geopolitical position and whose territories, populations and armed forces are incommensurably larger.

Officially, Russia welcomes the idea of the WMDFZ in the Middle East in every way, which is quite explainable, given the country's political interests in the Near and Middle East. However, those who take this concept strategically seriously might well weigh it against Russia's own position on nuclear issues, especially considering that the current rapport between Russia and Israel has been better than ever before since the time that Moscow voted for the establishment of the Jewish state in 1948.

For example, the keynote address of Russia's President Vladimir Putin in the run-up to the 2012 presidential election highlighted the role of nuclear weapons in ensuring the country's security: "As long as the 'powder' of our strategic nuclear forces created by the tremendous efforts of our fathers and grandfathers remains dry, nobody will dare launch a large-scale aggression against us."<sup>125</sup> Then, it goes on as follows: "...nuclear deterrence will retain its leading role and importance in the structure of the Russian armed forces, at least until we develop new types of weapons, new-generation strike systems".<sup>126</sup> Speaking of the country's arms program till 2020, Vladimir Putin noted: "In the coming decade, Russian armed forces will be provided with over 400 modern land- and sea-based intercontinental ballistic missiles, 8 strategic ballistic missile submarines"<sup>127</sup>.

And this posturing should be fitted into the reality of Russia's territory being 600 times the size of Israel's territory and its population being 20 times larger than that of Israel. Russia has a one-million-strong army and over 5,000 operationally deployed nuclear weapons. It borders on allied and friendly states (or very small states that are part of other alliances, such as Estonia, Latvia and Lithuania). No other state in the world will ever dare declare that Russia should be 'wiped out from the pages of history', or that it should be 'removed from the political map of the world'. Nevertheless, Moscow would obviously never agree to the creation of a nuclear-free zone either in Europe or in its presently favored Eurasia.

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<sup>125</sup> Putin Vladimir V. "Being Strong: National Security Guarantees for Russia" // Rossiiskaya Gazeta, 2012 — 20 February (<http://www.rg.ru/2012/02/20/putin-armiya.html>, the English text is available at <http://archive.premier.gov.ru/eng/events/news/18185/>).

<sup>126</sup> Ibid.

<sup>127</sup> Ibid.

As to Israel, it appears that the change in its position on the WMDFZ is possible, if but theoretically, only in the event that it receives totally credible guarantees of external security. Such commitments must imply nothing less than the obligation to fight for Israel if attacked from abroad. The P5 (or the UN Security Council, vulnerable to veto of any P5 nation) are incapable of providing such legally binding guarantees. China will be the last one to fight the Arabs over Israel, while Russian commitment of this kind would also be a matter of serious doubt. Meanwhile, any ambiguity in matters related to the nation's survival is unacceptable for Tel Aviv. At any rate, the five great powers are not allies among themselves (except the US, the UK and France) and therefore will hardly be able to assume a collective obligation to protect Israel should its existence be threatened, since this would imply allied relations and joint military operations.

Only Israel's official accession to NATO (and the extension of the guarantees under the Article V of the North Atlantic Treaty to Israel) or a bilateral alliance with the United States (similar to the US alliances with Japan and South Korea) might theoretically motivate Israel to seriously consider some nuclear disarmament measures (for instance: disclosing information on its nuclear forces, limiting or reducing the number of nuclear weapons, lowering their operational readiness or their partial dismantling under IAEA control). However, in the foreseeable future the provision of such guarantees will hardly be acceptable to the United States or Western Europe for many political and economic reasons.

At the same time, the creation of the WMDFZ may start with the elimination of chemical weapons and the accession of all the countries within the Zone to the relevant Convention. The arrangements on the elimination of chemical weapons in Syria have given an unexpected boost to the process. The future steps may include parallel movement on the key security issues and a phased creation of the WMDFZ starting for example with a ban on the activities and technology in the region that are related to nuclear fuel cycle (i.e. those with dual use).

To recap, the creation of the European security system in 1970-1990 also progressed from political and economic arrangements to confidence building measures, transparency, reduction of nuclear arms and conventional forces and arms, prohibition of biological weapons and elimination of chemical weapons – though this process stopped far before creating a nuclear-weapon-free zone.

While discussing the issues related to the WMDFZ and its prospects, one should factor in the European experience as well. Greater Europe is no doubt the world's most secure, stable and prosperous region, at least insofar as it is not troubled by the traditional threat of a military aggression between the states. For all that, the region includes three nuclear powers (Russia, the UK and France) and deployed forward-based nuclear weapons of yet another country (the United States).

Meanwhile, after the major success of the two recent decades, the negotiations on nuclear disarmament appear to have reached the stage of prolonged stagnation. To resume this dialogue and the process would, among other things, set a good example for the Middle East as well, since it would not be a matter of political and PR posturing (as promotion of the WMDFZ), but a model of actual negotiations on the reduction and elimination of nuclear weapons.

## Conclusions

The Near and Middle East during many decades has been the region with the highest level of political and military tensions in the world. Alongside the traditional conflicts that in the recent decades have plunged the region into devastating wars (between Israel and its Arab neighbors, Iraq and Kuwait, Iraq and Iran), the region has been the scene of most vigorous activities of terrorist organizations and has witnessed the use of weapons of mass destruction. In the recent years, the overall volatile environment was aggravated by social destabilization and violence stemming from the Arab Spring (Tunisia, Egypt, Yemen, Bahrain, Lybia), the confrontation between Iran and the Arabian monarchies, the bitter feud between Sunni and Shiite Muslims (Syria) – many of which involved extensive outside interference. The region is the most dangerous area in terms of further proliferation of nuclear weapons and a possibility of a new war between Israel and Iran or the United States and Iran.

At the same time, late in 2013 the region saw a prospect for peacefully resolving some most acute problems with the active assistance of the great powers. This relate foremost to the eliminating of Syria's chemical weapons, achieving the first agreement at Geneva negotiations on Iran's nuclear program, promoting the ideas of Geneva conferences on peaceful settlement in Syria and establishing a weapons of mass destruction free zone in the region.

It is still unclear whether these initiatives will be merely sporadic diplomatic successes or will produce a critical mass for a profound and long-term constructive turnaround in the situation to facilitate peaceful resolution of conflicts and the broad cooperation among the great powers.

This above survey examines the region's key problems in their current state and offers a forecast for the nearest future factoring in such issues as nuclear weapons nonproliferation and preventing a new Gulf war, the prospects of strengthening the NPT regime and regional security.

1. The first peculiarity of the region is that it houses a nuclear weapon state, though at the official level Israel has neither admitted to having nuclear weapons, nor denied it. The international expert community is convinced that Israel does possess such weapons, estimating the country's nuclear arsenal at up to 100-140 weapons, plus a reserve stock of weapon-grade plutonium. Besides, Israel has a specific nuclear triad composed of tactical air strike force, land-mobile solid fuel ballistic missiles and diesel-electric submarines carrying cruise missiles.

2. Although Israeli nuclear doctrine is not publically available, there are good grounds to believe that Tel Aviv regards nuclear weapons as a "last resort" to use in case there is a threat of a catastrophic defeat in a conventional warfare or to retaliate to a nuclear strike against Israel (as well as an attack with other kinds of weapons of mass destruction). Israel's undeclared, but obvious nuclear potential is the main tool for deterring both kinds of threat to its national security and survival.

3. Tel Aviv responded with sharp criticism to the Geneva agreement on the Iranian nuclear program in November 2013, qualifying it as evasive and failing to provide reliable safeguards against the development of nuclear weapons by Iran (primarily due to the fact that there is no ban on the enrichment of uranium and the further stockpiling of the uranium enriched to 5%). Israel's mistrust towards Iran is based on the actual assessments of Iran's nuclear program, as well as on factors related to politics and psychology. Tel Aviv has viewed Tehran's policy as a serious challenge to Israel's security, given the influence that Iran has on Syria and the support it has given to Hezbollah – the world's largest paramilitary force. Besides, many provocative statements of official Iran calling for elimination of Israel or denying the Holocaust have fuelled Israelis' fears and historic grievances.

Israel is determined to prevent its potential adversaries in the region from obtaining nuclear weapons (demonstrated by its past strikes against suspected nuclear facilities in Iraq and Syria) Tel Aviv is mostly concerned by the fact that under the 2013 Geneva agreement Iran will maintain the production facilities to quickly convert the 5% uranium stockpile into weapon-grade material. Washington believes that it can stop the process any time, as soon as the manufacturing of Iranian nuclear weapon is discovered, while

Israel insists that the mere technical capability for such action should be prevented. Hence there is a tangible difference in the positions of the leaderships in Washington and Tel Aviv.

4. Impartial assessment of the state of Iran's nuclear program suggests that the program has entered its final stage both technically and politically. Technically, Iran has virtually acquired capability to produce nuclear weapons. Politically, if the hopes for peaceful resolution of the problem under the new Iranian president Rouhani fail, a new Gulf war will become inevitable.

For a decade Iran followed its nuclear path gradually and cautiously, creating an appearance of negotiating and seeking a compromise with other nations. Limited sanctions imposed by the UNSC could not stop Iran's nuclear progress. Only the resolute actions by the EU in 2012 on imposing an oil embargo against Iran caused a significant change in the political moods inside Iran and most probably affected the outcome of the presidential election in June 2013.

It begs the conclusion that the sanctions may indeed be instrumental if they have profound economic implications, instead of being merely nominal. However, such sanctions should be supported by a vigorous diplomatic effort aimed at finding a compromise, instead of an unsophisticated policy of threats and ultimatums (as implemented by the US government in 2003-2004).

5. Iranian nuclear program created some precedents. *First*, unless a country is developing a nuclear weapon or has an advanced civilian nuclear energy program, neither uranium enrichment, nor plutonium separation is cost-effective, especially given the fact that low-enriched uranium is offered in abundance at the world market. The case of Iran is unique, as it builds up its uranium enrichment capability and plutonium generation capacity while denying ambitions to produce nuclear weapons or having large-scale civilian nuclear program for the foreseeable future.

*Second*, Iran's nuclear program is also unique in that the large enrichment plants were built in secret: either masked (Natanz) or hidden deep underground in hard rock formations (Fordow). There is no reason to build such underground facilities and go to the huge additional expenses, if these facilities were part of exclusively peaceful nuclear energy program, which Tehran has claimed them to be.

*Third*, there is no credible answer to the question why Iran has opted to produce its own 20% uranium, given the fact that in 2009 Russia and France proposed to supply it with the fuel for the Tehran Research Reactor in exchange for a corresponding amount of 5% uranium.

6. The common opinion that Iran has not yet taken a political decision to develop nuclear weapons and has only been developing technological capabilities to do it has never been substantiated. None of the 10 states that have developed nuclear weapons (including South Africa) had publically declared its intention to do it before it actually acquired them. Iran's agreeing to certain concessions in 2013 Geneva agreement may be an indication that the country is really willing to renounce nuclear weapons' acquisition - or a decision only to slow down its nuclear progress to gain time for economic revival. Quite possible this is a subject of severe in-fighting in Iranian ruling elite. In this respect, the closing argument will be the success or failure of the negotiations on the final agreement in Geneva and the substance of its provisions.

7. The credible threat of a military strike by Israel or the United States played a big role in slowing down Iranian nuclear program, alongside with the sanctions of the UNSC, US and EU. Despite the agreements reached in Geneva, the threat of war is still not completely excluded, though it was tangibly reduced.

Though Israel has sufficient military capability to launch an air and missile strike against Iran's nuclear infrastructure, it would not be capable of destroying it completely, especially given the fact that the United Nations Security Council and the global public opinion will strongly oppose further strikes. This would at most set the Iranian nuclear program back several years.

If Iran and the entire Muslim world mount retaliation against Israel, the United States — reluctant as it may be — may be forced to defend its ally. Otherwise, if the negotiations are disrupted and Iran proceeds with its nuclear program, the US may venture on a military operation without Israel's participation and rely on tacit support by its partners on the Arabian Peninsula.

in this case the United States would use up to six aircraft carriers against Iran and large Air Force and Navy deployments in the vast zone from the Mediterranean Sea to the Arabian Gulf. The US air-

missile strikes may set Iran's nuclear program several decades back or even destroy it completely.

However, this scenario may result in an upsurge of Islamic extremism and terrorism across the world, the destabilization in the neighboring countries across the great expanse from Palestine to the Hindu Kush, and provoke a sharp rise of tensions between the West and Russia.

Therefore, the international community should make every effort to solve the problem through peaceful means and to pass between Scylla and Charybdis: preventing a new war, on the one hand, and ensuring Iran's verifiable abandonment of its previous intention to reach nuclear threshold, on the other hand.

8. The Geneva agreements were an interim compromise: in return for decreased sanctions (primarily of financial, technical and oil nature), the IAEA inspectors will be given broader access to Iran's nuclear facilities; uranium enrichment to a level of more than 20% is prohibited with the available stockpiles of such material to be transformed or downblended; there will be no further expansion of uranium-enrichment capacities or the number of the centrifuges in Natanz; the construction of the heavy-water reactor in Arak will be frozen.

Nonetheless, the signed agreement has a number of limitations: the Fordow enrichment complex has not been closed although it being built deep underground suggests its military role; Iran has not taken firm commitment to ratify the 1997 Additional Protocol to IAEA safeguards; there is no limitation of Iranian missile programs; no limitation is placed on increasing the stock of 5% uranium, which has no justification by peaceful energy or scientific needs.

The final agreement, that should be concluded no later than the agreed deadline (1 year from November 2013), should have regard to the relevant resolutions of the UN Security Council adopted during the 2006-2010 period, and address the above limitations and other concerns. Iran should respond to the requests by the IAEA Board of Governors to resolve outstanding questions related to its past nuclear-related activities (but Iran should not be punished by any new sanctions for possible past violations of the IAEA safeguards). Iran should ratify the 1997 Additional Protocol or take legally binding obligations to abide by its terms as an integral part of the final

agreement. Iran should suspend all activity related to ballistic missiles capable of delivering nuclear weapons.

The key compromise should imply that as a member-state of the NPT Iran is entitled to uranium enrichment and reprocessing – but only in strict accordance to its existing peaceful nuclear energy, scientific and medical needs, and this correlation should be a subject of agreement with the IAEA. Actually this principle point should be generalized to apply to all NPT member-states.

In response to Iran accepting and implementing the above provisions all existing sanctions related to Iranian nuclear activities should be lifted and Iran rendered full assistance in the development of peaceful nuclear energy in line of the NPT provisions.

The possibility of reaching such a final solution by peaceful means depends mostly on the position of the Iranian leadership. If its aim is to seek the nuclear threshold – even in the long view – then the compromise will be neither a full nor a lasting one. The failure to reach an agreement or its disruption later on will make the war inevitable. Meanwhile, if the new president is willing to give up on the military elements of the program and to obtain the guarantees for the development of solely peaceful nuclear power industry, reaching the ultimate compromise will be quite possible.

9. The establishment of the Weapons of Mass Destruction Free Zone in the Middle East (WMDFZ) has been one of the core issues in terms of the security in the region. The main obstacle for the establishment of this zone and Israel's corresponding nuclear disarmament is the tense political and military situation in the region.

In contrast to the Near and Middle East, neither of the regions where WMDFZs have already been established has had such a high level of political tensions, military confrontation or a recent history of five wars and major armed conflicts. Another feature that makes the region so unique is that Israel is the only country in the world the elimination of which has been officially called for by the neighboring states and non-state actors. Meanwhile, in Europe – the world's most stable and safe region – the possibility of establishing such a zone is not even a matter of discussion.

Israel's position on the establishment of the WMDFZ has been negative. A change in Israel's position (taking into account its tragic history and origins and precarious geopolitical situation) might be possible only in the event that it receives absolutely credible

guarantees of external security (such as Israel's official accession to NATO or a bilateral security agreement with the United States). However, this appears unlikely in the nearest future.

At the same time, the creation of the WMDFZ may start with separate significant measures, such as the elimination of chemical weapons and the accession of all the countries within the Zone to the relevant Convention, negotiations on other security issues of the region, which is predicated on all the states of NMD recognizing Israel's right to exist, sovereignty and territorial integrity.

In the recent years, the negotiations between Russia and the US on nuclear disarmament have come to a deadlock. Among other gains, expanding US-Russian cooperation on the security issues of the region might serve to revive this process, and the other way around: resuming this nuclear arms control would have a positive effect on moving forward on the nuclear problems of the Near and Middle East.

## **ANNEX 1**

### **ABBREVIATIONS**

BMD	ballistic missile defense
CTBT	Comprehensive Nuclear Test-Ban Treaty
CWC	Chemical Weapons Convention
EU	European Union
GPS	Global Positioning System
Hamas	Islamic Resistance Movement (Gaza Strip)
HEU	highly-enriched uranium
IAEA	International Atomic Energy Agency
IMEMO RAN	Institute of World Economy and International Relations of the Russian Academy of Sciences
INF Treaty	Treaty between the USSR and the US on the Elimination of Intermediate-range and Shorter-range Missiles
IRBM	intermediate-range ballistic missile
IRG	Islamic Revolutionary Guards Corps
LAS	League of Arab States
NATO	North Atlantic Treaty Organization
NFC	nuclear fuel cycle
NNRC	Negev Nuclear Research Center
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NSP	Nuclear Security Project
NTI	Nuclear Threat Initiative
OAU	Organization of African Unity
SIPRI	Stockholm International Peace Research Institute
SNF	spent (irradiated) nuclear fuel
SRBM	short-range ballistic missile
TNRC	Tehran Nuclear Research Center
UN	United Nations
UNSC	United Nations Security Council
WMD	weapons of mass destruction
WMDFZ	weapon of mass destruction-free zone

## **ANNEX 2**

### **List of Participants in the Conference Moscow, IMEMO RAN, October 17, 2013**

1. Alexei G. Arbatov, Head of the Center for International Security of the IMEMO RAN, Academician of the Russian Academy of Sciences.
2. Vladimir G. Baranovsky, Deputy Director of the IMEMO RAN, Academician of the Russian Academy of Sciences.
3. Vasily K. Belozerov, Associated Professor, Department of Political and Social Science, Russian Plekhanov Economic University.
4. Nikolay N. Bobkin, Senior Researcher of the Institute for the U.S. and Canadian Studies of the Russian Academy of Sciences (ISKRAN), Colonel (rtd.).
5. Evgeny P. Buzhinsky, Senior Vice-President of the PIR Center, Lieutenant-General (rtd.).
6. Alexander Y. Cheban, Visiting Research Associate, PIR Center.
7. Dmitry A. Chizhov, Researcher, Center for International Security, IMEMO RAN.
8. Dmitry A. Danilov, Head of Section of European Security, Institute of European Studies, Russian Academy of Sciences.
9. Vladimir Z. Dvorkin, Principle Researcher, Center for International Security, IMEMO RAN, Major General (rtd.).
10. Natalia S. Evtikhevich, Program Manager of the Russian International Affairs Council.
11. Marianna G. Evtodyeva, Senior Researcher, Center for International Security, IMEMO RAN.
12. Sui Futsi, Principle Researcher, Head of the Department of Strategic Studies, Chinese Academy of Public Sciences
13. Timur T. Kadyshhev, Leading Researcher of the Center for Environment, Security and Disarmament.
14. Sergey Yu. Kazennov, Principal Research Associate, Center for International Security, IMEMO RAN.

15. Natalia I. Kalinina, Chief Researcher, Center for International Security, IMEMO RAN.
16. Elina V. Kirichenko, Director, Center for North American Studies, IMEMO RAN.
17. Anton V. Khlopkov, Director, Center for Energy Security Studies.
18. Alexander A. Khranchikhin, Deputy Director, Institute for Political and Military Analysis.
19. Irina Y. Kobrinskaya, Leading Researcher of the IMEMO RAN.
20. Vadim O. Koroshchupov, Research Fellow, Center for International Security, IMEMO RAN.
21. Mikhail A. Lebedev, Executive Scientific Secretary of the Russian Pugwash Committee.
22. Vadim V. Makarenko, independent expert, Lieutenant Colonel (rtd.).
23. Viktor I. Mizin, Deputy Director of the Institute of International Studies, MGIMO(U) of the Ministry of Foreign Affairs.
24. Sergey K. Oznobishchev, Head of Sector, Center for International Security, IMEMO RAN.
25. Andrei V. Rachkov, Director, Moscow Office of the Russian Federal Nuclear Energy Center
26. Natalia P. Romashkina, Researcher, Center for International Security, IMEMO RAN.
27. Lev D. Ryabev, Advisor to General Director, State Company "Rosatom".
28. Leonid F. Ryabikhin, Deputy Chair, Committee of Scientists for Global Security.
29. Vladimir I. Sazhin, Senior Researcher, Institute of Oriental Studies of the Russian Academy of Sciences (IVRAN).
30. Evgeny K. Silin, Director of the Association of Euro-Atlantic Cooperation.
31. Eduard G. Solovyev, Head of the Theory of Politics Section of the IMEMO RAN.
32. Vladimir I. Sotnikov, Senior Researcher, Center for International Security, IMEMO RAN.
33. Petr V. Topychkanov, Senior Researcher, Center for International Security, IMEMO RAN.

34. Tatyana A. Tutnova, Ph.D. Student, Institute of Oriental Studies of the Russian Academy of Sciences (IVRAN).
35. Sergey V. Tselitsky, Researcher, Strategic Studies Section, Center for International Security, IMEMO RAN.
36. Anatoly D. Tsyganok, Head of the Center of Military Prognosis of the Institute of Political and Defense Analysis, Colonel (rtd.).
37. Alexander I. Shumilin, Head of the Center for Middle East Conflicts Studies, Institute for the U.S. and Canadian Studies of the Russian Academy of Sciences.
38. Vadim I. Vladimirov, Senior Researcher, Center for International Security, IMEMO RAN.
39. Victor I. Yesin, Chief Researcher, ISKRAN, Colonel General (rtd.).
40. Vladimir I. Yurtaev, Director of the Center of African Studies, Peoples' Friendship University of Russia.
41. Efim L. Zhigun, Director, Institute of Middle East Studies.
42. Irina D. Zvyagelskaya, Chief Researcher, Institute of Oriental Studies of the Russian Academy of Sciences (IVRAN).
43. Pavel S. Zolotarev, Deputy Director of the Institute for US and Canada Studies of the Russian Academy of Sciences, Major-General (retd).