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### The failure of protecting the home front

We are running a few years campaign (the two of us together and separately) on the defense of steep trajectory weapons (missiles, rockets and mortars). Any one of us has NO business interest in this issue and our activity is from pure national motives.

The danger of the threat of short and medium range rockets was already recognized at the early 90's. At the initiative of the Government of Israel (Shimon Peres, then Prime Minister, 4.1996) a joint enterprise with the United States to develop a laser system (Nautilus) was initiated. The development was completed with great success (7.2000).

The system performed a series of 46 successful tests at the US Army's test facility (White Sands in New Mexico) intercepting rockets, artillery shells and mortar, in single shots and salvos, shooting surprisingly and in bad weather, 100% success.

This unprecedented achievement results from the advantage of using the speed of light weapon. The system was designated to protect Kiryat Shmona from the firing of the Katyusha rockets. An area near Margalot was located and a group of people (from the antiaircraft branch of the IAF) was chosen to receive training in the United States to operate the system.

However, the defense establishment froze this project in 2001-2, for a variety of reasons: the withdrawal from Lebanon (5.2000) led to the false idea that the threat of rockets was removed. The IAF (Dan Halutz, then IAF Commander) believed that if the Katyusha shooting renews, they are able to destroy them. The results of this arrogant concept were experienced during the second Lebanon war. The defense establishment (Amos Yaron, then IMoD's GM) were worried from loading the defense budget, which was then in distress.

The IDF was never enthusiastic from the defense approach, although one of the cardinal tasks of IAF was to keep the skies clean, a role it fills in great success. Somehow, defending the country from steep trajectory weapon fell between the chairs and no service is responsible for this, when the IAF is responsible only for ballistic missile defense, at the operating ranges of the arrow.

Defense systems against missiles, rockets and mortars are not intending to replace offensive actions, on the contrary, efficient defense systems will enable the IDF a vast freedom and flexibility that will not be a result of removing the threat on the home front.

It's reflective to consider that even 10 - 12 Skyguard systems (production model based on the Nautilus) placed in the northern border during the Second Lebanon War, could entirely change the war results. Regrettably, although the Winograd Committee focused on real and important issues, they ignored the failure of protecting the home front, while a solution was attainable.

Following the Second Lebanon War, the defense ministry established a committee (The Nagel Committee, 2.2007), which was manned by its policy supporters only,

when none of its opponents was not even invited to express his opinion. The committee ignored the laser solution (Nautilus / Skyguard), the available, proven, efficient and cost-effective, and also an official commitment of the development company (NGC, see below), choosing a local development project - "Iron Dome" which is not available, its effectiveness has not yet been proven and is extremely expensive.

Isaac Ben Israel explained the absurd of this decision, even before it was adopted in an interview with Yuval Yoaz, (Makor Rishon, 29.12.2006):

... "The recent requests of the Defense Ministry, since the Qassams returned to the news headlines, to test interception systems with technologies other than lasers, encountered at Ben Israel very much skeptically: 'We must recognize the fundamental difficulties in intercepting short-range rockets', he declares. 'There is no real chance that these solutions will be able to provide a real answer, unless this is a long-range missile'. According to Ben Israel, there are two major problems in all those solutions presented nowadays by the Ministry of Defense: The first concerns the short time flight – the short range between the launching place and the hit leaves very little time to perform standard interception actions, which requires localization of launching place of the missile, localization of the missile's trajectory, targeting, shooting and hitting. This is without taking into account the firing of two Qassam rockets at the same time in different areas.

The second problem is the price the shooting. The standard systems for intercepting rockets by missiles spend huge amounts of money in every interception. The price of the intercepting missile can reach hundred thousand dollars, while the cost to produce a Qassam rocket is nearly 500 dollars. The comparison is absurd'...

'Both these issues are necessarily conclude that there is no escape from using the laser weapon' explains Ben Israel. 'The bullet speed in the Nautilus is speed of light. The beam focuses on target, intercepting it within two to three seconds, and is immediately ready to another target. Short-range problem disappears and the system allows consecutive operations, one after the other. Even on the cost issue the laser has clear advantage – the price of Intercepting a Qassam rocket is the price of the energy that is been invested in creating laser beam, something around a thousand dollars'.

So, why is the Ministry of Defense decided to stop the project? The answer lies in the way Israel is managing. The short-range rockets have apparently also influenced the scope of vision and thinking of the Ministry of Defense.

The project, explains Prof. Ben Israel, has been financed at the early stages through the US taxes payers, without using the financial aid to Israel...

The system was eligible to move forward to the second Step, which according to preliminary planning the State of Israel was asked to participate in one third of the production cost. The payment could come from US financial aid to Israel, but the State of Israel at the years of the defense budget reduction, with the illusion of peace in the north, long before the disengagement which has shorten the range of Qassams in the south, began to worry whether it should really spend so much on an unknown system ... '

Major General (Ret.) David Ivry said at the conference held on - 9.5.2007 at the Fisher Institute for the Study of Aviation and Space:

'The Nautilus system is an ideal weapon against short-range rockets. One of its main advantages is intercepting at the speed of light. The results of the second Lebanon War could have been entirely different if we would have had number of systems to the protection of Nahariya and Kiryat Shemona, as an example. There is no need to deploy dozens of systems along the border. Even a few systems to protect vital and sensitive places could have been sufficient. About 6 years have been wasted while utilizing these years properly could have allowed us to be already equipped with the proper defense systems at the last war'.

Ben Caspit interviewed Major General (Ret.) Yitzhak Mordechai, who was the Minister of Defense (1996-1999) during the development of the Nautilus (Maariv, 18.5.2007):

... 'I do not understand it, when I was Minister of Defense I approved the Nautilus project based on laser defense against Katyusha rockets and Qassams. I allocated for this money, I talked to the Americans, I went to the factory in California. Tests were already conducted, and then someone here decided that there is no need and they stopped the project. If they would have been invested the appropriate energy, it could already be operational. The first experiments succeeded. Listen, I went to the plant itself, I met the member of the House of Representatives Jane Harman from California who helps the company, I brought from her materials, we sent them Katyusha rockets to Nevada, where they conducted the experiments'. So what happened?

'Then someone decided that it was a low priority, that there are not any Katyusha rockets and there will not be any Qassams, and we do not need it. Just this alone requires an investigation committee. I submitted all the documents on this issue to the Winograd Committee. I gave there a testimony of an expert. Listen, there is a proven laser system, it is clear that the future belongs to this technology, and most of its budgeting was at all an American. I can not understand how these decisions were taken here'...

Following our pressure, along with other factors, the Defense Minister, Ehud Barak, ordered the general manager of his office, Pinhas Buchris, to examine the possibility of bringing the Nautilus, from the United States to Sderot, to protect the city and the surrounding communities from the Qassams and mortars shooting. His visit to the United States, along with Yaakov Nagel, the scientific assistant to head of the Mafat, was held in mid-March 2008.

Upon returning from the visit, a number of media (Roni Daniel - Channel 2, Amir Buhbut - Maariv, Yaakov Katz - The Jerusalem Post, and Yuval Azoulay - Haaretz, 20-23.3.2008) published a dramatic announcement that during the visit to the United States Buchris witnessed an experiment of the system (Nautilus), in which 36 rockets were launched and only 8 were intercepted, so the whole experiment was a failure - hence, the findings of the visit strengthen the position of the defense ministry in disqualifying the Nautilus / Skyguard. As a result of our pressure and after the damage has already been caused, both Buchris (while interviewing to Ben Caspit, See below) and Shlomo Dror, spokesman of the IMoD (in a response to Omedia, a web site, where I occasionally write), admitted that the experiment was not taken place at all, it was not even designed, and one no-one expected it to be held. They absolutely 'do not understand' how such leaking can happen ... It is not difficult to guess who fed the media with these false details, about 'the test that never was'.

Pinchas Buchris and Jacob Nagel were lengthily interviewed by Ben Caspit ('Enough with this madness', Maariv, 4.4.2008. Ben Caspit directs the attention of Buchris to an official commitment letter of Northrop-Grumman (NGC) to the performance, schedule, costs and penalties payments they are ready to take on deviations. Buchris response is amazing: 'You are talking about a letter sent years ago, and on the Nautilus, and this is not relevant now. I address issues that occurred prior to my period'... It's incredible that such a claim came from the general manager of the office who 'should turn every stone', as he said, to bring a solution and relief to the people of Sderot and surroundings.

The letter, a copy of which we have, was sent on 16.1.2007 (about 3 months before Buchris entered to his position) to Shmuel Keren, head of Mafat in the IMoD, by Mike McVey vice president at NGC, referring to the Skyguard system, not to the Nautilus, in which the company obligated to begin within the supply within 18 months, at a fix price with readiness to carry financial penalties in case of delays. This is a letter of huge importance. It outlines a program which could have started immediately upon its receiving and could result that the first Skyguard systems could be implemented in the Gaza periphery area already starting July 2008!! This official proposal of NGC, one of the three largest companies in the world in the military systems, was just concealed.

The defense establishment is aware that the threat of missiles and rockets has become a strategic threat to Israel. They also admit that lasers have a significant advantage in intercepting steep trajectory weapon. But they ignore the current available and proven lasers, preferring the development of the local "future" lasers (Solid State), which they admit that will not be available in the next decade.

Do they believe that a strategic threat to Israel will also wait a decade? What is the reason that the selected solution ("Iron Dome") and the future solution (Solis State Laser) are both based on local development ("Blue - White")? Is the security of Israel depends on where the selected solution has been developed? Is it possible that Israel is also a victim of what the late President of the US, Eisenhower, named "the military-industrial complex"? Why was this laser chosen as a proper solution to protect Kiryat Shmona and is not suitable for the protection of Sderot? Mafat took part in writing this laser ("Nautilus") specifications. If it is so bad, how come that such spec has been written? How come that public money (mostly American) has been "wasted" on the allegedly erroneous specifications? Is it possible to expect that these officials who rejected the laser solution on 2001 will admit on 2007 ("the Nagel Committee") that they were wrong? Is it possible to trust the consideration of those people who were mistaken (according to their words) in such a severe failure of exposing the home front to a massive firing of rockets?

We do not discuss a history issue: the threat of steep trajectory weapons has not been removed but strengthened. The firing from the Gaza Strip will not stop by itself. The tens of thousands of rockets of the Hizbulah will not stay in the stores. The IDF doesn't have an effective solution against rockets and mortars except renewing rapidly the available and proven laser project (Nautilus / Skyguard). This laser has also the scale-up capability to intercept ballistic missiles (independently of their speed and the range from which they were launched). The expectation to the "future laser" (Solid State) is an insubstantial illusion. The window of opportunity is narrow, both in terms of the realization of the threat and in terms of availability of the solution (due to the changes in the US government). It's essential to find a way to break the barrier of wickedness and senselessness on protection of the home front.

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