

BICOM ANALYSIS: ISRAEL'S NEW ACTIVE DEFENCE AGAINST FLYING TERROR

Contributed by BICOM
Saturday, 01 March 2008

In light of reinvigorated threats of "open war" from Hezbollah and fresh calls by Iran for Israel's imminent destruction, Israel has taken the precautionary measure of reactivating its Patriot air defence system near Haifa in northern Israel for the first time since the Second Lebanon War.[1] Doing so coincided with the disclosure that Israel's homemade 'Iron Dome' anti-missile shield, fast approaching operational readiness, will not, contrary to Israeli public assumptions, adequately protect Sderot residents against the daily hail of Qassam rocket fire by Palestinians in the south.[2] The political appetite for "Active Defence" (hi-tech weapons which destroy threats in-flight) against short range missiles was generated by the fallout from events in two consecutive summers: 2005, when Israel voluntarily withdrew from the Gaza Strip, and 2006, when it clashed with Hezbollah in south Lebanon.[3] Without troops on the ground, Israel has struggled to find a way of protecting vulnerable communities which lie in close proximity to enemy lines. Developments pertaining to the use, advantages and limitations of this anti-missile project offer a timely opportunity to reflect on how it slots into Israel's strategic defensive programme and thinking. Meanwhile, conventional military action to tackle the hostility being exercised by Israel's neighbours, most vigorously at present by Gaza-based Palestinian militias, is rapidly becoming unavoidable.

The Qassam: local menace or national threat?

The name "Qassam" has become synonymous with the various rockets, described by some commentators as "flying pipe bombs", [4] being constructed in Gaza. With a range of 3-10km, Qassams are basic, unguided, ballistic missiles, which terrorists produce with simple ingredients such as powdered sugar and fertilizer.[5] Yet Israel is spending between \$300-375 million on its anti-Qassam missile defence project.[6] Dubbed 'Iron Dome', it was the preferred choice of the defence establishment last February after examining a range of options, precisely because it was thought to be the only effective solution for defeating ultra-short range rockets flying at low trajectories.[7]

Understanding the domestic political imperative which has led to this investment lies in the grim reality of everyday life for citizens living near Israel's borders. Radical Palestinian and Hezbollah fighters have exploited the new freedom of mobility presented by Israel's unilateral withdrawals from south Lebanon in May 2000 and the Gaza Strip in August 2005. The Israeli national psyche remains scarred by the barrage of 3,970 Katyusha rockets which Hezbollah guerrillas used to great effect in turning Israel's home front into a battlefield in the Second Lebanon War in August 2006.[8] The fear by residents in the north that a new round of war could literally erupt on their doorstep at any moment is outweighed only by the very real, ceaseless, bombardment of Sderot and Western Negev towns. All the major Palestinian factions - Hamas, Fatah, Palestinian Islamic Jihad, the Popular Democratic Front for the Liberation of Palestine, the Popular Resistance Committees - are complicit in this form of terror attack, almost all of which are aimed at heavily populated civilian areas, which offsets their notorious inaccuracy. 331 Israelis have been killed or injured since 2005, and the sheer quantity of incoming missiles has struck unendurable fear into the heart of these communities. Over 400 such blasts in just less than two months show no hope of any pending reprieve. Three in every four Sderot children aged 7-12 today suffer from post-traumatic anxiety.[9]

Just as Hamas models its tactics in Gaza on Hezbollah's activities in southern Lebanon, intelligence sources are concerned that militant Palestinians will soon succeed in imitating these attacks in the West Bank, from where they can easily target Israel's central population belt.[10] Perceiving impotence on the part of an Israeli government which is failing to protect civilians, regional adversaries are spurred on and Israel's strategic deterrence is undermined. Yet even without factoring in the cache of more sophisticated and non-conventional ballistic missiles in Syrian and Iranian arsenals, short range rockets in the possession of guerrilla groups in Israel's backyard clearly represent a national terror threat.

'Active Defence': a political imperative

Subject to Katyusha attacks by Palestinians operating in south Lebanon since the mid-1970s, the debate about how best to defend against short range rockets is not new in Israel.[11] Although the huge cost of defence systems tended to inhibit development, and despite operational concerns, it was in light of this new constellation of threats, and growing public demand, that Olmert's administration was compelled to act.[12]

Sceptics doubted whether anti-missile technology would counter rockets that reach their destinations almost as fast as they are fired. The Iron Dome system will not be able to intercept Qassams that are airborne for less than 20 seconds, meaning rockets fired from Beit Hanun in Gaza will still be able to hit Sderot, not much more than a mile away. Experts add that the system could also be stretched beyond its capacity by a battery of multiple-barrel launchers, deployed to

simultaneously spray a torrent of rockets.[13] This revelation led Olmert last week to approve previously rejected recommendations for 'passive' defensive measures: the fortification of 3,600 homes in Sderot and communities of the "Gaza envelope".[14] That leaves around 4,400 homes outside the perimeter of protection.

The Israeli government is reluctant to invest heavily in such fortifications. The Qassam virus will continue to spread, and Israel's primary obligation, as in the social contract of any modern democracy, is to provide security to its citizens.[15] Meanwhile, with respect to the Iron Dome, an overriding public sense that the technology existed to shield people carried greater political weight than scepticism by defence specialists about whether a hermetically sealed missile defense against short range rockets was ever really feasible.[16]

Deployment in the Negev is still expected by early 2010, and because the system remains at the cutting edge of military R&D, Prime Minister Olmert has even requested that development be accelerated such that multiple Iron Dome systems are introduced, in the north as well as the south, as quickly as possible.[17] It provides a glimpse of the priority being given to options which might deter or neutralize rocket threats in order to avoid ground warfare at all costs. Indeed, this ambitious project is just one feature in Israel's evolving strategic plans.

Israel's 'multi-layered' defence programme

Whilst many details are classified, official statements tend to refer to the 'multi-layered' nature of Israel's anti-missile arrangements. Given the unique complexity of threats, it is not surprising that Israel's defence doctrine runs deeper than that of any other country in the world.[18] This was so with 'passive' defence programmes to counter missile threats implemented since the 1950s, when shelters were built across the country, and in the 1990s, when gas masks were issued to every citizen in the face of concern that chemical warheads would be used by Iraq under Saddam Hussein. Today, equally unprecedented developments are occurring in respect of "Active Defence".

The current two-tiered system is being evolved into a five-tier missile shield for protecting Israel's skies from a comprehensive weapons arsenal of varying range and sophistication located across the Middle East. The most advanced Arrow 3 system will become the new upper, anti-ballistic missile layer, followed by the current Arrow and MIM-104 Patriot Advanced Capability-2 (PAC-2) theatre defence systems.[19] Two new layers for combating rockets are currently being developed by Israeli manufacturer Rafael Industries.[20] One of these is referred to interchangeably as both 'Magic Wand' and 'David's Sling': very little information is known, though it is thought to be able to defend against short to medium range missiles of 40-250km.[21] The 'Iron Dome', or 'Iron Cap' as it is sometimes translated, is the final piece of the jigsaw, and has garnered greater attention because it is intended to defend against the high profile Qassams, Katyushas and Grads that form the bulk of Hezbollah and Hamas stockpiles.[22]

Conclusion

Israel wants to avoid being drawn into conflicts on its enemies' terms. Conducting pre-emptive, targeted air strikes on rocket assembly facilities is made very difficult by Palestinian and Hezbollah militants who are adept at manipulating densely populated areas for cover.[23] In asymmetric warfare between democratic nation states and urban guerrillas operating with fundamentally different values, human shields might yet prove more effective than sophisticated anti-ballistic missile ones.

Defence analysts agree that there is probably no such thing as a leak proof anti-rocket shield.[24] Nonetheless, the Iron Dome system will be warmly welcomed by thousands of vulnerable residents who at present feel abandoned in Israel. Part of the thinking behind an effective anti-missile theatre is that it would facilitate strategic rather than reactionary military engagement, enabling Israel to act on its own timetable rather than that of its enemies. This is an especially acute factor given that Hezbollah chief Hassan Nasrallah may choose to make good on his missile threats just as Israel reluctantly re-enters Gaza, thereby subjecting Israel to a potentially protracted, bloody conflict on two fronts. Not until it is serviceable in the Western Negev will the extent to which the Iron Dome neutralizes the Qassam threat become apparent, but a functioning system in the south might have unshackled Israel from the imminent collision with Hamas which is widely predicted.[25] Defence decision-makers would be able to operate more flexibly, which ultimately explains why, despite falling short of the Israeli public's hopes, the Iron Dome anti-missile project will still be completed.

[1] 'Hezbollah chief: We're preparing for war with Israel in coming months', Yoav Stern, Haaretz, 23 February 2008. <http://www.haaretz.com/hasen/pages/ShArt.jhtml?itemNo=957096&contrassID=1&subContrassID=1> ;
'Iranian official: Countdown to Israel's destruction has begun', Yossi Melman, Haaretz, 24 February 2008.

<http://www.haaretz.com/hasen/pages/ShArt.jhtml?itemNo=956744&contrassID=1&subContrassID=1> ; 'Israel deploys Patriot in the North', Associated Press, The Jerusalem Post, 18 February 2008.

<http://www.jpost.com/servlet/Satellite?pagename=JPost/JPArticle/ShowFull&cid=1203343698207>

- [2] 'Iron Dome system found to be helpless against Qassams', Reuven Pedatzur, Haaretz, 22 February 2008. <http://www.haaretz.com/hasen/spages/956859.html>
- [3] 'Israel Embarks on a Third Ballistic Defense System', Defense Update, 2007. http://www.defense-update.com/newscast/0207/news/010207_iron_cap.htm
- [4] Dr. Dore Gold, Jerusalem Center for Public Affairs, cited in 'Israel's Missile Defense Strategy', Victor Vejl, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>
- [5] Israel Missile Defense Association. http://www.imda.org.il/English/Threats/threats_missile.asp?missileid=9
- [6] 'Israel Stuck Between a Rocket and a Hard Place: Invasion of Gaza Seen as Unwanted But Inevitable', Chemi Shalev, Forward, 20 February 2008. <http://www.forward.com/articles/12749/> ; 'Iron Dome', Missile Monitor, 19 October 2007. <http://missilemonitor.blogspot.com/2007/10/iron-dome.html>
- [7] 'Israel Embarks on a Third Ballistic Defense System', Defense Update, 2007. http://www.defense-update.com/newscast/0207/news/010207_iron_cap.htm ; 'Olmert: Hamas responsible for situation in Gaza', Attila Somfalvi, YNew News, 18 February 2008. <http://www.ynetnews.com/articles/0,7340,L-3508263,00.html> ; see also Israel Missile Defense Association. www.imda.org.il
- [8] 'Israel's Missile Defense Strategy', Victor Vejl, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>
- [9] 'International Law and Gaza: The Assault on Israel's Right to Self-Defense', Avraham Bell, Jerusalem Center for Public Affairs, Vol. 7, No, 29, 28 January 2008. http://www.jcpa.org/JCPA/Templates/ShowPage.asp?DRIT=1&DBID=1&LNGID=1&TMID=111&FID=443&PID=0&IID=2021&TTL=International_Law_and_Gaza:_The_Assault_on_Israel%E2%80%99s_Right_to_Self-Defense ; 'Israel Stuck Between a Rocket and a Hard Place: Invasion of Gaza Seen as Unwanted But Inevitable', Chemi Shalev, Forward, 20 February 2008. <http://www.forward.com/articles/12749/>
- [10] 'Israel's Missile Defense Strategy', Victor Vejl, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>
- [11] 'Anti-Rocket Defense: A Waste of Taxpayers' Money?', Yiftah Shapir, INSS Insight No. 18, 30 May 2007. <http://www.inss.org.il/research.php?cat=45&incat=&read=146>
- [12] 'Gaza: Risks and Opportunities', Efraim Inbar, BESA Perspectives No. 38, 13 February 2008. <http://www.biu.ac.il/SOC/besa/perspectives38.html> ; 'Israel's Missile Defense Strategy', Victor Vejl, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>
- [13] 'Anti-Rocket Defense: A Waste of Taxpayers' Money?', Yiftah Shapir, INSS Insight No. 18, 30 May 2007. <http://www.inss.org.il/research.php?cat=45&incat=&read=146>
- [14] 'Iron Dome system found to be helpless against Qassams', Reuven Pedatzur, Haaretz, 22 February 2008. <http://www.haaretz.com/hasen/spages/956859.html> ; 'Sderot burning', Editorial, The Jerusalem Post, 18 February 2008. <http://www.jpost.com/servlet/Satellite?cid=1203343699073&pagename=JPost%2FJPArticle%2FShowFull>
- [15] 'Gaza: Risks and Opportunities', Efraim Inbar, BESA Perspectives No. 38, 13 February 2008. <http://www.biu.ac.il/SOC/besa/perspectives38.html> ; 'Anti-Rocket Defense: A Waste of Taxpayers' Money?', Yiftah Shapir, INSS Insight No. 18, 30 May 2007. <http://www.inss.org.il/research.php?cat=45&incat=&read=146>
- [16] 'Israel's Missile Defense Strategy', Victor Vejl, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>
- [17] Israel Missile Defense Association. http://www.imda.org.il/English/Defenses/defense_System.asp?missileid=31 ; 'Israel Embarks on A New Rocket Defense System', Defense Update, 1 February 2007. http://www.defense-update.com/newscast/0207/news_010207.htm#cap ; 'Israel Embarks on a Third Ballistic Defense System', Defense Update, 2007. http://www.defense-update.com/newscast/0207/news/010207_iron_cap.htm ; 'PM: Iron Dome at advanced stage', The Jerusalem Post, 18 February 2008. <http://www.jpost.com/servlet/Satellite?cid=1203283470359&pagename=JPost%2FJPArticle%2FShowFull> ; 'BMD Watch: Olmert backs Iron Dome', Martin Sieff, United Press International, 25 January 2008. http://www.upi.com/International_Security/Industry/Analysis/2008/01/25/bmd_watch_olmert_backs_iron_dome/2980/

[18] Uzi Rubin, former director of Israel's Missile Defence Organisation (IMDO), cited in 'Israel develops comprehensive defences against varied missile, rocket threats', Alon Ben-David, Jane's Defence Weekly, 13 December 2007. http://www.janes.com/news/defence/systems/idr/idr071213_1_n.shtml ; Uzi Arad, Founding Head of the Institute for Policy and Strategy, cited in 'The Critical Need for Missile Defense for Israel's National Security: A US-Israel Forum', Israel Missile Defense Association. <http://imda-video-archive.media-line.co.il/Videos-archive-eng.aspx>

[19] 'Israel develops comprehensive defences against varied missile, rocket threats', Alon Ben-David, Jane's Defence Weekly, 13 December 2007. http://www.janes.com/news/defence/systems/idr/idr071213_1_n.shtml ; 'BMD Watch: Olmert backs Iron Dome', Martin Sieff, United Press International, 25 January 2008.

http://www.upi.com/International_Security/Industry/Analysis/2008/01/25/bmd_watch_olmert_backs_iron_dome/2980/

[20] Rafael Industries is also reported as Rafael (Armaments Development Authority) and Rafael Advanced Defense Systems Ltd.

[21] 'Weekly Missile Defense Update for Jan. 19-Jan. 25', The Heritage Foundation: Leadership for America, 25 January 2008. <http://blog.nationalsecurity.org/2008/01/>

[22] 'Iron Dome', Missile Monitor, 19 October 2007. <http://missilemonitor.blogspot.com/2007/10/iron-dome.html> ; 'Israel Embarks on a Third Ballistic Defense System', Defense Update, 2007. http://www.defense-update.com/newscast/0207/news/010207_iron_cap.htm ; 'BMD Watch: Olmert backs Iron Dome', Martin Sieff, United Press International, 25 January 2008.

http://www.upi.com/International_Security/Industry/Analysis/2008/01/25/bmd_watch_olmert_backs_iron_dome/2980/

[23] 'Israel's Missile Defense Strategy', Victor Vejjil, theTrumpet.com, 31 October 2007. <http://thetrumpet.com/index.php?q=4388.2621.0.0>

[24] 'Deterrence, Missile Defense, and Collateral Damage in the Iranian-Israeli Strategic Relationship', W. Andrew Terrill, Strategic Studies Institute, February 2008. www.strategicstudiesinstitute.army.mil/pdf/PUB854.pdf

[25] 'Gaza: Risks and Opportunities', Efraim Inbar, BESA Perspectives No. 38, 13 February 2008. <http://www.biu.ac.il/SOC/besa/perspectives38.html>