IRAN'S AIR POWER: IS IT POWERFUL ENOUGH FOR THE US?

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Iran must have given a surprise to the US and the West with its firing on a US drone last year. It shows that Iran, like other countries, has been developing all the sectors of its military defence. In a talk, Uzi Rubin, former Director of the Israel Mission Defence Organisation in the Israel Ministry of Defence (MoD) had said that although in 2010 Iran had the largest air force parade in Sastan where it showcased 220 aircraft, it is neither interested in modern aircraft technologies nor aircraft. The Iranians have shown interest in long-range missiles. In fact, aircraft purchase has been giving way to missile programmes.[1] But the November 1, 2012 attack by two Russian-made SU-25 jets known as Frogfoots on a US MQ-1 Predator[2] and Iran's development of the indigenous Thunderbolt fighter jets might lead the Western militaries to change their opinion. This article talks about Iran's military strategy and its

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1. "Israel's Air and Missile Defense Program", a talk by Uzi Rubin at the Centre for Air Power Studies, on June 4, 2012.
2. Thom Shanker and Rick Gladstone, "Iran Fired on Military Drone in First Such Attack, U.S. Says", *The New York Times*, November 8, 2012, http://www.nytimes.com/2012/11/09/world/middleeast/pentagon-says-iran-fired-at-surveillance-drone-last-week.html?pagewanted=all&_r=0, accessed on November 19, 2012.On December 4, 2011, Iran announced that its defence forces had downed the aircraft through a sophisticated cyber attack. The Iranian experts had hacked the US RQ-170 Sentinel stealth aircraft and had brought it down by hacking its control system and uploading a new programme to it. It was also further reported that Iran was able to copy the US RQ-170 drone after decoding its hard disc. US officials had described the loss of the aircraft in Iran as a setback and a fatal blow to the stealth drone programme. "Official: US Informed of Iran's Air Power after RQ-170 Capture", *FARS News Agency*, December 4, 2012, http://english.farsnews.com/newstext.php?nn=9107124234, accessed on February 21, 2013.

Protecting its centres of gravity is crucial for any nation, and towards this, air power is the best option in both offensive and defensive roles.

development in air power. With the upgradation in this sector, will Iran be a tough opponent for the US, Israel and the West? Will Iran be able to counter-attack its opponent through its military capabilities, especially by relying on air power?

IRAN'S DEFENCE STRATEGY

Iran, today, is one of the most sought-out countries because of its nuclear enrichment programme which has not gone down well with the West and the US. This theocratic country has always been able to counterpose the US, Israel and the West since the 1979 Revolution. In fact, Iran's first priority since the 1979 Revolution has been the survival of its theocratic regime. Along with this, it has sought to become the strongest and the most influential country in West Asia, able to influence the world affairs. Its leadership's ideological goal is to be able to export the theocratic form of government, its version of Shia Islam. In this process, in order to protect the regime's survivability, Iran has based it security strategy on deterring an attack. For years, it has spoken about its "20-Million Man Army" and its asymmetric doctrine as deterrents to any would-be invader. Its military strategy is designed to defend against external or "hard" threats from the US and Israel. It includes deterrence, asymmetrical retaliation and attrition warfare. It also prefers a point defence[3] strategy, with its strongest defences located around key strategic centres.[4] Protecting its centres of gravity is crucial for any nation, and towards this, air power is the best option in both offensive and defensive roles, with the latest development of precision-guided munitions, airborne early warning systems, radars, ballistic missiles, cruise missiles and different varieties of technologically advanced fighter aircraft. Iran has been giving

3. Point defence is the defence of a single object or a limited area, e.g. a ship, a building or an airfield, now usually against air attacks and guided missiles. Point-defence weapons have a smaller range in contrast to area-defence systems and are placed near or on the object to be protected.
4. "Unclassified Report on Military Power of Iran" April 2010, http://www.foxnews.com/projects/pdf/IranReportUnclassified.pdf, accessed on November 16, 2012.

importance to air power, with air defence developments like Surface-to-Air Missiles (SAMs) and Anti-Aircraft Artillery (AAA).[5]

Iran's air power and its logistic ability and capability, in comparison to the US or Israel or Turkey, is weak. But with the latest developments in Iran regarding the nuclear weapons, which are giving sleepless nights to the West, especially to the US and Israel, the atmosphere in the international arena has become tense. Despite the sanctions that have been imposed upon Iran by the international community, militarily, Iran has been able to check the latest attacks inflicted upon it. This unexpected defence against the US might have astonished it, but the advanced technologies which the West, especially the US and Israel possess, would be difficult for Iran to resist.

In fact, inside the Pentagon, a plan for an air war against Iran has not been ruled out. With the highly capable US Air Force, the West and the US have the ability to mount intense strikes against Iranian targets. The US has been preparing for a formidable air campaign[6] with missiles, bombers and strike fighters that would be sent against Iran's air defences. It has been reported that along with these, there would be other aircraft which would be targeted on Iran's nuclear sites, accompanied by command-and-control aircraft, airborne electronic counter-measures and electronic warfare systems, all choreographed with aerial tankers.[7] The above gives a clear picture of an air power battle which would be supported by naval assets. Therefore, the "air-sea battle" concept which has been the doing the rounds in US national security circles might be applied in Iran. But a similar doctrine may be observed in Iran as well.

5. In September 2012, Iran displayed a new all-Iranian-made air defence system, which is said to be designed to confront American warplanes in case of a US attack on the country. The system is known as the Raad, or Thunder, is more advanced than its Russian predecessor and is designed to confront fighter jets, cruise missiles, smart bombs, helicopters and drones. The Raad carries missiles with a range of 50 km (30 miles), capable of hitting targets at 22,000 m (75,000 ft). Naseer Karimi, "Iran Air Defense System Makes Debut", *Huffington Post*, September 21, 201, http://www.huffingtonpost.com/2012/09/21/iran-air-defense-system-_n_1903183.html accessed on February 21, 2013.
6. Air campaigns, which are strategic in nature, due to their capability to turn any air operation into air dominance through combat power, and combat support to both ground and naval troops, leading to the control of air, help any nation to turn the fate of a war.
7. David Wood, "Iran Air War: US Plans for Possibility, But Goal Remains Unclear", *Huffington Post*, February 29, 2012, http://www.huffingtonpost.com/2012/02/29/iran-air-war-plans-us-military_n_1310777.html, accessed on November.

In response to this and also for its survivability, Iran has been trying to build a self-sufficient military programme since 1992, manufacturing its own tanks, armoured personnel carriers, missiles, radars, boats, submarines, and fighter jets. More recently, Iran's military leaders have said that they believe future wars would be air- and sea-based and Tehran has sought to upgrade its air defence systems and naval power in anticipation of such a possibility.[8] Though Iran has been giving much attention to building missiles,[9] in view of the trend of attacks by the West and the US[10], it has also been developing and upgrading its air power. It must have understood the importance of air power to defend itself from any air strikes which the US or Israel or in a worst case scenario, the North Atlantic Treaty Organisation (NATO) might opt for.

IRAN'S AIR POWER

The Islamic Republic of Iran Air Force (IRIAF) is the aviation branch of the Iranian armed forces. The present air force came into being in the early 1980s when the former Imperial Iranian Air Force was renamed. It remained largely dependent on 1970s-vintage US aircraft like the F-4 Phantom II, F-14A Tomcat and F-5E Tiger II. The air force has attempted, with some success, to maintain in service these American-built aircraft which Iran acquired during the Shah's regime. Also, the air force had purchased Soviet and Chinese aircraft, and pressed ex-Iraqi aircraft into service, along with indigenously built aircraft,

8. "Iranian Military to Test New Air Defense System Modeled after US Hawk During Drill, TV says" , *The Washington Post*, http://www.washingtonpost.com/world/middle_east/iran-tv-military-to-test-new-air-defense-missile-system-modeled-after-us-hawk-during-drill/2012/11/12/903eb798-2cb7-11e2-b631-2aad9d9c73ac_story.html, accessed on November 15, 2012.
9. Iran, understanding its position to be on the defensive (because the possibility of Iran flying across the continent to attack the US conventionally is thin in comparison to the US), has been relying on its missile systems. Recently, it has been reported that Iran was getting ready to test its new air defence system modelled after the US Hawk system. It is named "Mersad" or Ambush. Iran has also displayed its S-200, a Russian-made air defence system. It is a medium to high altitude surface-to-air missile system designed primarily to track, target, and destroy aircraft and cruise missiles. "Iran's Army Drill to Test new air Defense System", *Bloomberg Business Week*, November 12, 2012, http://www.businessweek.com/ap/2012-11-12/irans-army-drill-to-test-new-air-defense-system, accessed on November 19, 2012.
10. In all the conflicts where the US or Israel or West has been involved, it is air power which has been used. The recent Libyan crisis is proof of this.

in order to maintain a capable force. Following the 1979 Revolution, due to its strained relations with the West, Iran had to procure new equipment from Venezuela[11]and Brazil, apart from Russia and China. The continuous spare parts shortages faced by the air force led to a decision in the late 1980s to develop the local aerospace industry to support the air force. In 2002, Iran with the cooperation of Ukraine, successfully started the manufacture of the Iran-140, a licensed-built version of the Antonov AN-140 transport aircraft. Simultaneously, Iran began construction of two domestically produced fighters, upgraded using technology from the F-14 Tomcat and F-5 Tiger II. The fighters have been named the Azarakhsh and Shafaq. Since then, the country has also become self-sufficient in the manufacture of helicopters. Iran claims that it has the capability of producing the old US AH-1 Cobra gunship. Additionally, Iran also produces the Bell Helicopters Bell-212 and Bell-206 in serial production. These are known respectively as the Shabaviz 2-75 and Shabaviz-206.[12]

Iran has recently made good progress in the aircraft industry and has succeeded in gaining the technical knowhow for producing stealth aircraft and drones. The IRIAF possesses new generations of aircraft, and continues updating the electronic warfare operations, radars and smart ammunition. The Iranian Air Force tested its defence capabilities in massive air drills, dubbed as "Fidaeeyan-e Harim-e Velayat III", in Iran's northwestern regions. During the exercises which started on September 6, 2012, the Iranian Air Force fighter jets practised electronic war operations and Iran's two well-known home-made fighter jets, namely the Saeqeh (Thunderbolt) and Azarakhsh (Lightning) staged successful missions and bombed the specified targets under full radio silence. The Saeqeh and Azarakhsh were among the several squadrons of the Iranian Air Force fighter jets which conducted night raids on fixed

11. Military cooperation between Chavez and Ahmadinejad was recently proved by the use of some Iranian Mohajer 2 drones, operating in Venezuela under the name of Sant Arpia. Richard Clements, "Did Iran Really Get One or More F-16 Fighter Jets From Venezuela?" *The Aviationist*, August 20, 2012, http://theaviationist.com/2012/08/20/iran-f16/, accessed on November 19, 2012.
12. Source: Wikipedia, accessed on November 16, 2012.

and mobile targets under complete radio silence. An array of fighter jets, fighter bombers, cargo and transportation planes, including the F-4, F-5, Sukhoi-24 (SU-24) fighter-bombers, MiG-29 and the logistic C-130 planes, were used in the exercises.[13] In a gap of months, the next air drill has taken place. The "Velayat-4" manoeuvres would involve the biggest air drill the country has ever held.[14]

Giving a recent update (February 2, 2013) on Iran's air power, Iranian Defence Minister Ahmad Vahidi said that Iran has successfully tested a new stealth fighter with short take-off and landing capability. This new aircraft is known as the F313 "Qaher". Qaher in Farsi means to conquer. The vital characteristics of this advanced aircraft include a very small radar cross-section and the capability of operating and flying at low altitude. The new jet has advanced electronic systems and could be armed with missiles and other weapons developed by the Iranian industry. Qaher was the first Iranian jet to use a front control wing. Advanced computer design software (CATIA) was used for designing this jet, and the aerodynamic analysis methods such as Computational Fluid Dynamics (CFD) also were used. The software and the analysis method was done with the help of numerical grid generation software (GAMBIT), flow analysis software (FLUENT) and other design computation software. The configurations of the above give a lethal projection to the aircraft. The jet has ten important characteristics. These are:

- Two inlets and inlet ducts make up the air induction system to deliver air to the engine. Due to the indirect angle of the engine to the air inlets, the radar reflectivity is reduced, and it allows the angled design of the inlet ducts to the surface to get radar energy waves, just like in the F-3.
- The hot exhaust gas mixes with cold air through the inlet ducts, and gets cooler before it gets out of the exhaust system, to reduce the heat effect on the surface of the aircraft.

13. "Commander: Pentagon Assessing Iran's Air Power in Secret Sessions", *FARS News Agency*, November 15, 2012, http://english.farsnews.com/newstext.php?nn=9101290105, accessed on November 15, 2012.
14. "Eye on US? Iran Launches Biggest-ever Air Drill", *The Times of India*, November 13, 2012.

- Use of radar-absorbent materials in the body allows absorption of wave energy and reduces radar reflection, for greater stealth effect.
- Considering that the estimated length and height of the aircraft is less than 16 and 4 m, respectivly, the two compartments have a payload capacity of two 2,000 pound bombs, or a greater number of smaller smart guided missiles, or at least 6 air-to-air missiles in the category of the R-17 or PL-12.
- The relatively large vertical tail surface creates favourable directional stability and the canted vertical tails create aerodynamic benefits as well specific appropriate lateral manoeuvring capabilities.
- The very large canopy gives a 360 degree visibility, which is essential for low altitude fly-by flights, especially helps ground mission attacks, and is also very useful in close dogfights.
- The angled wing is a perfect example of indigenous design for aircraft, which gives a side profile like an M, and similar to a W profile, which is the best form to use in modern aircraft.
- Single-cycle landing gear is proof that the F-313 is a lightweight aircraft, with minimum flying weight of 12 to 14 tonnes, and maximum flying weight of 20 tonnes.
- There are 8 analogue displays in the cockpit, which shows that the Multi-Function Display (MFD) technology has room for improvement in the Qaher jet.
- The F-313 has a central control stick, with the control systems, wing movable surfaces, rudder, and vertical stabiliser all hydraulically controlled and not the Fly-By-Wire (FBW) system.[15] This aircraft is similar

15. "Under the Skin of the New Iranian Stealth Fighter", *Arabian Aerospace Online News Service*, February 7, 2013, http://www.arabianaerospace.aero/under-the-skin-of-the-new-iranian-stealth-fighter.html, accessed on February 9, 2013. The Minister has further said that given the apparent small size of the aircraft and its single engine design, the Qaher 313 could be powered by reverse engineered variants of the General Electric J-85 turbojet that Iran has known to have in its possession. Ibid.

to the US-built F/A-18.[16]

Apart from this new addition to the Iranian basket of aircraft, Iran's most advanced fighter aircraft—the tactical MiG-29 Fulcrum—has been upgraded with a modern electronic system. This fourth-generation advanced jet fighter aircraft, designed for an air combat superiority role, is being powered by two Klimov RD-33 afterburning turbofan engines that can achieve a maximum speed of Mach 2.25 or 1,490 mph. Its armament includes the 1X30 mm GSh-30-1 cannon with 150 rounds and it can carry 7, 720 pounds of weapons, including 6 air-to-air missiles – a mix of Semi-Active Radar Homing (SARH) and AA-8 "Aphid", AA-10 "Alamo", AA-11 "Archer", AA-12 "Adder", FAB 500-M62, FAB-1000, TN 100, EMC pods, S-24, AS-12, AS-14. Its avionics include the Phazotron N019, N010 radar systems. Also, there is an "in-flight refuelling nozzle making them compatible with the drogue refuellers operated by the IRIAF".[17] The latest additions which have joined the Fulcrum are the indigenous Saeqeh (Thunderbolt) fighter jets and recently the Qaher (F-313). It is reported that the Iranian single-seat bomber has the ability to track down enemy aircraft, engage in combat, target locations on the ground, and carry a load of assorted weapons and ammunition.[18]

16. "Ahmadinejad Unveils new Iranian Air Force Fighter", *The Voice of Russia*, February 2, 2013, http://english.ruvr.ru/2013_02_02/Ahmadinejad-unveils-new-Iranian-air-force-fighter/ accessed on February 9, 2013. The F/A-18 Hornet is a twin-engine supersonic, all-weather carrier-capable multirole fighter jet, designed to dogfight and attack ground targets. Attaining speeds of up to 1,200 miles per hour, the supersonic jet can fly for 2,084 miles before refuelling, which can be done in-flight. Multifaceted in use, the jet can escort fighters or carry out reconnaissance and strike missions – both air-to-air and air-to-ground – at any time of day and in all types of weather. Upgrades to the F/A-18 since 1989 have included night strike capability, enhanced-performance engines that enable the craft to reach speeds in excess of Mach 1.8, improved radar, and a laser-guided bomb delivery device. This jet has undergone structural changes like in the fuel tank's capacity. "F/A-18 Hornet", http://usmilitary.about.com/od/fighter/a/f18hornet.htm, accessed on February 21, 2013. This aircraft can be refuelled in flight. The F/A-18 multi-mission aircraft can operate from either aircraft carriers or land bases. "Top 10 World Modern Fighter Aircraft", http://weapons.technology.youngester.com/2010/04/top-10-world-modern-fighter-aircraft.html
17. "Iran Upgrades its MiG 29 Fighter Jets with Modern Electronics", August 4, 2012, http://www.examiner.com/article/iran-upgrades-its-mig-29-fighter-jets-with-modern-electronics, accessed on November 19, 2012.
18. "Iran to Produce New Generation of Fighter Jets, Destroyers: Official", http://www.presstv.ir/detail/2012/08/26/258186/iran-to-build-fighter-jets-destroyers/, accessed on November 19, 2012.

A new Saeqeh-V has also been developed. The front section of the new fighter (an advanced version of the Saeqeh, a modified F-5 with Hornet-like tails) is attached to the tail of a Tu-154 testbed that would be used for high speed tests.[19] Apart from these, Iran has built an indigenous Unmanned Aerial Vehicle (UAV) called Shahed-129, which would be able to carry out combat and reconnaissance missions with its 24-hour non-stop flight capability.[20] Iran's air planners understand the value of airborne early warning and C41 systems, airborne intelligence, electronic warfare platforms, UAVs and airborne refuelling. It has an active programme of reconnaissance, target and lethal UAVs.[21] From the above, Iran's air power capabilities and also its interest in developing and upgrading the systems, become clear.

During the Iran-Iraq War or the First Persian Gulf War in 1980, the strategy that Iran used was that of strategic bombing and aircraft scrambling to defend the Iranian air space.[22] It conducted successful hit-and-run operations using groups of small boats against vessels passing through the Strait of Hormuz. Combined with extensive mine-laying in the strait, the guerrilla tactics allowed Iran to sink over 500 vessels during the war. However, in a direct confrontation with a US fleet after an Iranian mine caused damage to a US frigate, Iran's Navy was crushed.[23] But with the latest technology and the change in strategies, Iran would try to enhance its capabilities in both defensive and offensive roles, and give a tough fight to the US. Therefore, it would continue to build up its air power abilities alongside its missile defence systems till it is able to come out openly with its nuclear weapons.

Meanwhile, the US, the superpower with the super military ability, till date has the ability to overpower its enemies. This was witnessed during

19. David Cenciotti, "Iran's Next Generation Fighter Jet Testbed Unveiled (and it Looks Like an F-5 Attached to a Tupolev 154)", *The Aviationist*, August 21, 2012, http://theaviationist.com/2012/08/21/iran-new-fighter/, accessed on November 19, 2012.
20. "New Indigenous Saeqeh Fighter Jets to Join Iran Air Force", http://www.presstv.ir/detail/2012/09/25/263480/irans-new-fighter-jets-to-join-iriaf/, accessed on November 19, 2012.
21. "Unclassified Report on Military Power of Iran" April 2010, http://www.foxnews.com/projects/pdf/IranReportUnclassified.pdf, accessed on November 16, 2012.
22. Although Iraq initially had bombed Iran's airfields which are the centre of the gravity of any nation, Iran retaliated through the strategies of bombing and offensive air power.
23. For more details, refer http://www.globalresearch.ca/iran-s-military-capabilities-iran-could-attack-us-military-facilities-asymmetric-warfare-russian-defense-analyst/28668, accessed on November 19, 2012.

As for Israel, its military has been the best equipped and best trained in the whole region but some sections of Iran's military have also been battle-tested.

the ejection of the Iraqis from Kuwait in 1991, the bombing of Serbia in 1999, the kicking out of the Taliban regime in Afghanistan in 2001, and the defeat of Saddam and his cronies in 2003. The US has the ability to launch big strikes on Iran with bombers, stealth aircraft and cruise missiles, followed up by drones that could carry out damage assessments to help direct further strikes. Unlike Israel, the United States has plenty of refuelling capability. Bombers could fly from Al Udeid air base in Qatar, from Diego Garcia in the Indian Ocean or from bases in Britain and the United States.[24]

But a little twist has been seen as potential target countries (read Iran and China) and even some lukewarm allies (Turkey) have been figuring out ingenious ways to blunt American power without trying to meet it head-on, using a combination of high-tech and low-tech jujitsu. At the same time, US naval and air forces have been shrinking under the weight of ever more expensive hardware. It's no longer the case that the United States can overwhelm clever defences with sheer numbers. Defence Secretary Robert Gates had summed up the problem recently, saying that countries in places where the United States has strategic interests – including the Persian Gulf and the Pacific – have been building "sophisticated, new technologies to deny our forces access to the global commons of sea, air, space and cyberspace.''[25] As mentioned earlier, the attack on the US Predator might have surprised and propelled the US to be on high alert regarding the potential of its opponent. Iran, although reeling under the sanctions, would try every method for its survival.

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24. Elisabeth Bumiller "Iran Raid Seen as a Huge Task for Israeli Jets", February 19, 2012, http://www.nytimes.com/2012/02/20/world/middleeast/iran-raid-seen-as-complex-task-for-israeli-military.html?pagewanted=all&_r=0, accessed on February 21, 2013.
25. David Wood, "China, Iran Creating 'No-Go' Zones to Thwart U.S. Military Power", 2010, http://www.politicsdaily.com/2010/03/01/china-iran-creating-no-go-zones-to-thwart-u-s-military-power/, accessed on November 16, 2012.

tested. The asymmetrical methods and tactics Iran uses in small decentralised units[26] could be a concern for Israel, the US and the West. In fact, one vital observation regarding Israel's attack on Iran could be the distance factor between the countries. Apart from Oman, Israel doesn't have a cordial relationship with any of the Gulf states from where it would be able to access air bases if there was a conflict between Israel and Iran. Moreover, Oman only allows the US and UK to use to air bases. Though it has a good bilateral relationship with Israel, Oman also has a strong relationship with Iran. Hence, Israel's capability to strike Iran using the Gulf bases would be doubtful in the conventional manner as long as it doesn't build bridges with the Arab countries.

In a scenario of a clash between Iran and Israel, at the time of the attack, Israel would need to use its electronic warfare planes to penetrate Iran's air defences and jam its radar systems to create a corridor for an attack. But, at the same time, Iranian missiles could force Israeli warplanes to manoeuvre and dump their munitions before they could even reach their targets. Iran could also strike back with missiles that could hit Israel.[27] There are three routes which could be accessible for Israel at the time of such a situation. They are to the north over Turkey, to the south over Saudi Arabia or taking a central route across Jordan and Iraq.[28] Unfortunately, Israel no longer has a cordial relationship with Turkey after the *Mavi Marmara* incident or the Gaza Flotilla Raid in 2010. Though trade and commerce between the two countries is still going on, the defence relationship which was very strong, has deteriorated to the point of complete non-cooperation.

However, one opening for Israel could be the route from Azerbaijan. This air base would prove to be vital for Israel if a conflict starts with Iran, as Azerbaijan shares its border with Iran. For Israeli intelligence, there would also be a possible added benefit from Azerbaijan: the Israelis would be

26. For further details, refer Ben Piven, "Iran and Israel: Comparing Military Machines ", *Al Jazeera*, April 24, 2012, http://www.aljazeera.com/indepth/features/2012/03/201232613134385363 6.html, accessed on February 21, 2013.
27. Bumiller, n. 24.
28. Ibid.

able to collect information because of the significant cross-border contacts and trade with Iran's large ethnic Azeri community. The Azeri military, after its independence from the Soviet Union, has four abandoned Soviet-era airfields that could be made available to the Israelis, as well as four air bases for its own planes. In February 2012, Israeli defence officials confirmed the completion of a $1.6 billion deal to sell drones and anti-aircraft and missile defence systems to Azerbaijan, bringing sophisticated Israeli technology to Iran's doorstep.[29] At the same time, there is a word of caution for Israel, which an observer (Anshel Pfeffer) has pointed out could be of importance: although a range of American military experts had claimed that Azeri airfields would be invaluable for Israel as it would solve some of the fuel/range issues of a 2,000+km strike, they failed to address the problem of where the Israeli warplanes would fly to once they were refuelled in Azerbaijan. There is no friendly route to fly back to Israel. Only the Iranian space would be available which would not be accessible in the event of a war. Moreover, hardly any appealing alternatives would be available for Israel once an attack was carried out. All the countries would be on the highest alert.[30]

CONCLUSION

The unfolding of the future regarding Iran would be interesting to follow. Both Iran and the US are becoming well equipped to counter each other. On the one hand, Iran is protecting its centres of gravity, namely, the nuclear enrichment sites where an important factor to be remembered for any future strike would be that these are "not a pinpoint target''. However, towards this end as well, the US has armed itself with the option of attacking the sites with a Massive Ordnance Penetrator (MOP). What needs to be seen is the impact of this penetrator—whether it would be inconsequential or

29. "Azerbaijan Allows Israel to use its Air Bases Near Iran Border", *Israel Hayom,* March 29, 2012, http://www.israelhayom.com/site/newsletter_article.php?id=3718, accessed on February 22, 2013.
30. Anshel Pfeffer, "Azerbaijan will be a Platform for Israel - if Not for F-15s, then Punk Rock", *Haaretz*, March 29, 2012, http://www.haaretz.com/news/israel-s-eye-on-iran/azerbaijan-will-be-a-platform-for-israel-if-not-for-f-15s-then-punk-rock-1.421555, accessed on February 22, 2013.

consequential.[31] Iran's one time weak point was its not-so-well developed air power which could have been an Achilles heel but this has been turned around. Iran, with its foresight, has taken care of this factor. Its aircraft have been fitted with indigenous precision-guided munitions like the Zoobin, Qadr, Qassed and also the Sattar-1C. Although, deployment of the former two has not been revealed (though the munitions were displayed), the latter ones were seen being deployed from the F-4E and F-5[32] respectively during exercises. There are many precision-guided munitions which are being developed. How many will be successful in deterring its adversary would be witnessed only in the future.

Whether it would be able to defeat the West is a huge question but given the psyche of Iran, it would give it a tough time. It has the capability to unbalance US power [33]through its asymmetric strikes on the defence bases within the West Asian region which the US has been allowed to use (like Masirah Island base, Khasab in Musandam Peninsula, Al Udeid air base in Qatar, etc). Through the help of Hamas and Hezbollah, Iran has the capability to create instability within the region, especially in Iraq, whose spillover effect on the US would be grave.

Iran won't accept defeat easily, though the scenario is bleak with the

31. David Wood, "Iran Air War: US Plans For Possibility, But Goal Remains Unclear", *Huffington Post*, February 29, 2012, http://www.huffingtonpost.com/2012/02/29/iran-air-war-plans-us-military_n_1310777.html, accessed on November 19, 2012.
32. "Iran's Indigenous Precision Guided Munitions", *The Arkenstone*, June 16, 2011 http://thearkenstone.blogspot.in/2011/06/irans-indigenous-precision-guided.html, accessed on November 19, 2012.
33. The downing of the RQ-170 drone in 2011 by Iran should be taken seriously by the US, Israel and the West, because this spy drone, manufactured by Lockheed Martin, has special coatings and a batwing shape designed to help it penetrate other nations' air defences undetected. The specialty of the drone is that it carries either an inertially stabilised electro-optical or an infrared camera. The gimballed camera allows the operator to easily track both stationary and moving targets, providing real-time intelligence. In addition to this, it has the capability of flying above 16,000 ft and also the ability to provide persistent low-altitude reconnaissance. Hence, the very fact that the Iranians could down it should be enough for the US and its allies to be careful in future. "Official: US Informed of Iran's Air Power", *FARS News Agency*. Also last year Brig. Gen. Amir Ali Hajizadeh, the Commander of the Islamic Revolutionary Guards Corps (IRGC) Aerospace Force had said that the 35 military bases which the US has around Iran were all within the reach of Iranian missiles. Also, the missiles have the capability to hit in the early minutes after an attack. Lee Ferran, "Iran: We Can Hit 35 US Bases in 'Minutes'", *ABC News*, July 5, 2012, http://abcnews.go.com/Blotter/iran-hit-35-us-bases-minutes/story?id=16716804, accessed on February 22, 2013.

Through the help of Hamas and Hezbollah, Iran has the capability to create instability within the region, especially in Iraq, whose spillover effect on the US would be grave.

heavy economic sanctions being levied on it. The biggest minus point for Iran in this encounter is that it is alone. Even though China and Russia support it, they would take a back seat if the allied powers attack Iran through the green signal given by the United Nations. But if the building of the nuclear weapons proves true, then it would be a completely different story. Another important observation is that manned aircraft would have an upper-hand over the UAVs in the future, though the UAVs' significance is no less important. UAVs or Unmanned Combat Aerial Vehicles (UCAVs) are undoubtedly important as they can identify a target and also attack it. They have the capacity for reconnaissance, surveillance and intelligence gathering but a manned piloted aircraft would always be important. A pilot being present in the scenario would be able to not only strike the specific target but would also be able to assess the surrounding environment and take the next tactical step accordingly. For the UAVs, this might take some time as the pilots who would be controlling them would be in their main stations, far away from the target area. Also, another important factor to keep in mind about the UAVs and UCAVs is that with the upcoming technology of electromagnetic pulses, these unmanned aircraft might be easy targets in the air space of an adversary. The systems of these unmanned aircraft can be easily jammed. Hence, the debate which has been going for some time regarding the phasing out of manned aircraft and the taking over of their role by the UAVs and the UCAVs could be put to rest with the Predator being fired upon — at least, till the time machines have the capability to completely take over humans, which is not possible. It is because of the human mind that the latest technology is arrived at.

A balanced defence system is vital for every country's national security but having a strong strategy for air power is necessary and proves the indispensability of the role of air power.