CHAPTER 3: Armed Forces of The Islamic Republic Of Iran Artesh-IRIA, & The Islamic Revolutionary Guard Corps - IRGC





StephenEHughes

CHAPTER 3: Introduction

The Islamic Republic of Iran has developed two distinct Armed Forces; both have parallel structures, as Air Forces, Naval, and etc., the Artesh (Regular Military) IRIA and the Islamic Revolutionary Guard Corps, IRGC.

The Artesh and the IRGC have their own subservices (the ground forces, air force, and the navy). In addition, the IRGC maintains several special-operations forces the Al Qods force being the largest. IRGC has an internal Iranian police –light infantry component, the Basij. Each service and subordinate branch contains its own commander in chief and has an independent staff; both the Artesh and the IRGC have their own top joint staff.

The Islamic Republic of Iran's Chemical, Biological, Radiological and Nuclear (CBRN) warfare, research & development domains is in the hands of the Islamic Revolutionary Guard Corps. Chapter 3 breaks downs these Armed Forces structures, provides a comparison variation from separate intelligence reports as to personnel composition, activities, training and military inventory. There are practical, quick reference charts for military equipment to personnel. There are overviews to detailed outlines with pictures diagrams of the rocket artillery to tactical ballistic and long range missiles. Including also cruise missiles.

Prior to 1979 Iranian Revolution Washington and Tehran under monarchy government of Mohammad Reza Shah Pahlavi were allies. The America was the main exporter of U.S. military equipment to Iran. During this period Iran was subsequently able to purchase some of the most sophisticated conventional weaponry available at the time. Since 1979, however, and the breakdown of Iran's relations with the West, international sanctions has seriously effects on its Armed Forces equipment. Consequently the ability to procure spare parts, in-service support, upgrades and training for that equipment has been minimal in the last few decades. Much of Iran's equipment inventory has degraded rapidly and is becoming increasingly obsolete. Iran has had to rely on the import of military equipment from other suppliers, primarily the Soviet Union (now Russia) and China. To compensate for these military short comings the Armed Forces military doctrine of warfare relies heavily on its growing and effective missile and cruise missile forces.

Tehran's ballistic missile assets should be seen not only as a deterrent but also, in terms of their capability to project power, as extended strike force multiplying systems primarily armed with conventional warheads, but with options for the delivery of biological, chemical and perhaps eventually even nuclear payloads with longer range systems, from drone to cruise & ballistic missiles.

Military doctrine is a combination of irregular and asymmetrical warfare. Therefore, Iran's military equipment mirrors this doctrine, inventories & production of large numbers of fast attack craft, naval mines (5th largest inventory in the world) and the largest submarine fleet in the Middle East. IRI subs vary from 3 Russian kilo Class submarines to variety of indigenously produced smaller subs.

Tehran's Radical Religious Dogma of Khomeini Fuels the Direction, the Strategic Orientation and Planning of the Armed Forces of Iran. This war machine is driven by four governing factors:

- Transform the Islamic Republic of Iran into a regional Islamic military power capable of projecting influence throughout the Middle East and beyond.
- To avoid a repeat of the tragic deterrence failure that led Iraq to invade Iran in 1980, and defeat International (America) –Zionists (Israel) velvet revolution. (Velvet Revolution, the peaceful overthrow of a government, especially a communist government as seen in Czechoslovakia in late 1989)
- A Nuclear Arsenal Umbrella
- Destruction of the, "Great Satan "(America) and its right-hand the," lesser Satan", (Israel)

Chapter 3 will explore Tehran's Mosaic Military Doctrine

The Armed Forces of Iran are immersed into a military strategy termed, "Mosaic Military Doctrine ", a methodology best described as, "Irregular Warfare & Hybrid Threat". The Iranian concept of asymmetric response is a unique amalgamation of elements of conventional warfare, special operations, insurgency tactics and terrorism. Emphasis on use of indirect, non-conventional methods and means to coerce, subvert, attrition, and exhaust an adversary.

Aspects of IRI's Mosaic Military Doctrines Contains, Naval Irregular warfare , CBRN Warfare, Martyrdom Ops, (These Operations Are Primarily Confined To The Islamic Revolutionary Guard) Employment of Improvised Explosive Devices (IEDS) and intelligence gathering.

Stratagems forms Mosaic of warfare emphasizes undermining, with eroding an adversary's power, influence, and will to exercise control or influence over relevant population(s). Illustrations of would be, America's military quagmire in Iraq and Afghanistan, Israel's wars in Lebanon with Tehran's Militant Proxy Hezbollah and Hamas in Gaza.

Irregular Warfare does not require the defeat of an adversary through primarily direct military confrontation Emphasis on use of indirect, non-conventional methods and means to coerce, subvert, attrition, and exhaust an adversary

***Hybrid Threat: "Any adversary that simultaneously and adaptively employs a tailored mix of conventional weapons, irregular tactics, terrorism, cyberwarfare and criminal behavior to obtain their political objectives*. "**

Lt. Col Frank G. Hoffman, USMCR (Ret.), Senior Research Fellow, Marine Corps Combat Development Command Institute for National Strategic Studies, National Defense University



"I hereby warn the American and European Forces to leave the Persian Gulf before it is too late and you are drowned in Quagmires of Death."
July 20, 1988, Khomeini speech on Radio Tehran

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CHAPTER 3: ARMED FORCES OF THE ISLAMIC REPUBLIC OF IRAN ARTESH-IRIA, &THE ISLAMIC REVOLUTIONARY GUARD CORPS – IRGC

The Islamic Republic of Iran has developed two distinct Armed Forces, Both have parallel structures, as Air Forces, Naval, and etc., the Artesh (Regular Military) and the Islamic Revolutionary Guard Corps.

NOTE: This is an overview and summary many of the issues to familiarize the reader, provide update information. These complex issues in this chapter will be broken down, and investigated further in other chapters.

Acronyms
IRIA – Islamic Republic of Iran Army , ARTESH
IRIGF – Islamic Republic of Iran Ground Forces
IRIAA – Islamic Republic of Iran Army Aviation
IRIP – Islamic Republic of Iran Police
IRGC – Islamic Revolutionary Guards Corps
IRGCGF – Islamic Revolutionary Guards Corps Ground Forces

The Artesh and the IRGC have their own subservices (the ground forces, air force, and the navy). In addition, the IRGC maintains several special-operations forces the Qods force being the largest. IRGC has an internal Iranian police –light infantry component, the Basij. Each service and subordinate branch is headed by its own commander in chief and has an independent staff; both the Artesh and the IRGC have their own top joint staff.

Supreme Leader Khamenei is commander-in-chief of the armed forces of Iran, which is structured around three main elements:

- **Artesh, Regular Military (IRIA)**
- **Islamic Revolutionary Guard Corps (IRGC)** ***Pasdaran***
- **Law Enforcement Force (LEF)**

The Artesh and IRGC come under the control of the Ministry of Defense and Armed Forces Logistics (MODAFL). These forces are responsible for defending Iran's borders and providing for internal security. The LEF is formally subordinate to the Ministry of Interior, and plays a key role in internal security and frontier security. [1]

Joint Staff of the Armed Forces (JS) Brigadier General Abdolrahim Mousavi is Deputy Chief of the Joint Staff of the Iranian armed forces

The JS is an umbrella structure that formally facilitates the joint operational control of both military arms; however JS and most other staffs are manned by delegated IRGC officers.

"Strategic appointments and associated promotions are made by the supreme leader, who in his capacity as supreme commander in chief has authority to appoint the commanders of both the Artesh and the Pasdaran, the head of the joint staff of the armed forces, and the commanders of the branches in their structures. Furthermore, he personally appoints commanders of some key military formations subordinate either to the army or corps, such as of the capital garrison. As was envisaged since the revolution, this appointment authority provides an ultimate lever of influence on the hard-power component of the defense and security forces pool by placing the commanders, handpicked on the basis of loyalty, in charge of the "boots on the ground." Appointment power gives the supreme leader **an opportunity to maintain balance between key uniformed players**."

Pasdaran Incorporated: Evolving From Revolutionary To Praetorian Guard By Jahangir Arasli March 2010 Naval Postgraduate School Monterey, Unclassified Approved for public release; Distribution is unlimited page 57

1). Iran's Security Sector: An Overview *Wilfried Buchta* Pages 6-8 Geneva Centre For The Democratic Control Of Armed Forces (Dcaf) Conference Paper 2004*

MODAFL



Ministry of Defense Armed Forces Logistics; Ministry of Defense and Support for Armed Forces Logistics; Ministry of Defense

Also Known As:

- **Ministry of Defense and Armed Forces Logistics**
  Ministry of Defense and Support for Armed Forces Logistics (MODSAF)
  Vezarat-e Defa va Poshtyabani-e Niru-haye Mosallah
  Ministry of Defence & Armed Forces Logistics
  Government of Iran, Department of Defence
  Vezerate Defa (Ministry of Defense)[2]

MODAFL was formed in 1989 to create a unified command-and-control structure for Iran's armed forces. Although MODAFL technically controls the Revolutionary Guards Corps, the IRGC maintains substantial autonomy and pursues separate defense projects.

Subordinate to MODAFL

- **The Defense Industries Organization (DIO),**
- **The Aerospace Industries Organization (AIO)**
- **The Defense Technology and Science Research Centre (DTSRC)**



MODAFL has operational control over the Islamic Republic ballistic missile development programs. MODAFL entities' illicit procurement activities have resulted in a series of ongoing U.S. sanctions. Designated National (SDN) list maintained by the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) on October 25, 2007, freezing its assets under U.S. jurisdiction and prohibiting transactions with U.S. parties, pursuant to Executive Order 13382, which targets proliferators of weapons of mass destruction (WMD) and their delivery systems. Listed by the European Union on June 24, 2008 as an entity linked to Iran's proliferation-sensitive nuclear activities , IRI's development of nuclear weapon delivery systems; Listed by the British government in 2008 as an entity of potential concern for WMD-related procurement; listed by the Japanese government in 2008 as an entity of concern for proliferation relating to missiles and nuclear weapons; added to the Specially; listed by the German government in 2005 as a risky end-user in warnings supplied to industry. Identified by the British government in February 1998 as having procured goods and/or technology for weapons of mass destruction programs, specifically missile and nuclear, biological and chemical (NBC), in "addition to doing non-proliferation related business"; sanctioned by the U.S. Department of State in May 1996, together with Iran's State Purchasing Office, and North Korea's Changgwang Sinyong Corporation, for engaging in "missile technology proliferation activities;" according to the European Union, responsible for Iran's defense research, development and manufacturing programs, including support to missile and nuclear programs; according to the German government, carries out military procurement mainly through the State Purchasing Organization (SPO), as well as through the following entities subordinate to the Ministry: the DIO, the AIO, the Aircraft Industries Group (AIG), and the Iran Electronics Industries (IEI) [3]

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2).Iranian Entity: Ministry Of Defense Armed Forces Logistics (MODAFL)
http://www.iranwatch.org/suspect/records/ministry-of-defense-armed-forces-logistics-(modafl).html
3). Ministry of Defense and Armed Forces Logistics (MODAFL) http://www.nti.org/facilities/274/

Building an Industrial Military War-Machine

The IRI has one of the largest military forces in the Gulf Region. In addition the Islamic Republic of Iran has the largest missile force in the Middle East. However for the size of IRI's armed forces, the requisite defense budget is reportedly small. In some aspects IRI's defense spending appears to be the smallest expenditure in the Middle East.

> ***"Iran has shown that it has obtained advanced weapons and technology from China, North Korea, and Russia. It has already shown that it can use such purchases to help increase its capabilities for asymmetric warfare by buying systems like submarines, various air and anti-ship missiles, more advanced air defense missiles, and a wide range of other systems. It has also bought some modern aircraft and more modern tanks from Russia. Iran must do a great deal to overcome the limits of its largely worn and obsolescent conventional forces, but may be able to accomplish a great deal over time,"***
>
> **Conventional Armed Forces In The Gulf Anthony H. Cordesman June 2008**

Iranian Defence Expenditure

According to Stockholm International Peace Research Institute (SIPRI) 2011 Year Book, Armaments, Disarmament and International Security, the IRI does not include spending on the Islamic Revolutionary Guards Corps in its official defense budget. This is despite the fact that, with ground, air and naval forces as well as missile units, accounts for the leading portion of IRI's military capabilities. [4] It is true the IRI is subject to International sanctions. But in reality these sanctions has had limited detrimental effects to the IRI's military Industrial base. This is because of world's financial crisis and critical economic conditions. Even though there is tough talk coming from Washington concerning IRI sanctions, in 2012 ten additional countries was allowed to bypass sanctions and purchase oil from the IRI. This is in addition to Japan, China, India and South Korea who import more than 60 percent of IRI's oil. [5] (More on this will be discussed later)

Middle East is one of the most heavily militarized areas in the world; the region spends more on military equipment as a percentage of GDP than anywhere else in the International Community. The defense budget of the Gulf Countries was estimated about $68 billion in 2011. "This is expected to grow to about $80 billion by 2015. It is expected that the overall Defence spending in the Middle East will cross $100 billion by 2015, as Gulf Arab nations embark on military modernization programs. [6]

International Arms Black Market

Hundreds of various entities have evolved to supply the IRI military industrial needs. Some are left over's from the Saddam Hussein sanctions era, others are simply opportunists. [7] The dual-use nature of many technologies and commodities in the manufacturing and development of CBRN and their delivery systems, coupled with lack of International Export Control Measures and non-proliferation policies has profoundly befitted IRI's military Industrial production capabilities. [8]

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4). SIPRI Military Expenditure Database http://www.sipri.org/databases/milex
5). Obama Exempts Japan and 10 European Nations From Iran Sanctions Law By Steven Lee Myers Published: March 20, 2012 http://www.nytimes.com/2012/03/21/world/
6). Military spending by Gulf states likely to reach Dh367b by 2020, February 21, 2011 http://gulfnews.com/business/investment/military-spending-by-gulf-states-likely-to-reach-dh367b-by-2020-1.765167
6a). On the high military spending in the Middle East Adam Hedengren Last updated: November 15, 2011 http://www.yourmiddleeast.com/special-reports/article/on-the-high-military-spending-in-the-middle-east_1999
7). Military Modernization Efforts Spur Further Middle East Defense Growth By Forecast International on Wednesday, January 19th, 2011 http://www.defencetalk.com/military-modernization-middle-east-defense-growth-31401/#ixzz1rVqCgmkr
8). Black Market Shows Iran Can Adapt to Sanctions, By Charlie Savage And Mark Landler Published: October 4, 2009 http://www.nytimes.com/2009/10/05/world/middleeast/05sanctions.html

Ayatollah Khomeini: "*We shall export our revolution, to the whole world. Until the cry 'Allah Akbar' resounds over the whole world"*

"Islam makes it incumbent on all adult males, provided they are not disabled and incapacitated, to prepare themselves for the conquest of other countries so that the writ of Islam is obeyed in every country in the world. But those who study Islamic Holy War will understand why Islam wants to conquer the whole world...Those who know nothing of Islam pretend that Islam counsels against war. Those who say this are witless. Islam says: Kill all the unbelievers just as they would kill you all!"

Holy Terror, Amir Taheri London 1987, p.226-7

There is a bewildering paradox, the International Community along with their vast Intelligence agencies acknowledged, confronted, the rise of Communism, and its goal of global domination. They comprehended communism darkness which endeavored to reshape the world in its image. Yet when it comes to the threat of the Islamic Republic of Iran, its vision of world subjugation, its irregular international wars for global domination, there is but a faint whisper of protest. As if Jungian archetypes from past religious wars had possessed their intellectual perceptions and reasoning. Drowning in their ocean of economic oil addiction, the International Community is quickly sinking into a cesspool of white washing politics and blissful ignorance. With delusional rapture by the manta of, "containment," as the Islamic Republic of Iran's irregular international wars spread to epidemic levels.

"Iran's 20-year outlook plan from the year 2005 seeks to make Iran a "top regional power". Among other objectives, its current five-year plan seeks to expand bilateral, regional, and international relations, strengthen Iran's ties with friendly states, and enhance its defense and deterrent capabilities. Commensurate with that plan, Iran is seeking to increase its stature by countering U.S. influence and expanding ties with regional actors while advocating Islamic solidarity. It also seeks to demonstrate to the world its "resistance" to the West. Iran is attempting to secure influence in Iraq and Afghanistan while undermining U.S. efforts by furnishing lethal aid to Iraqi Shia militants and Afghan insurgents."

Iran's Military Power Statement before the Committee on Armed Services United States Senate 14 April 2010 Lt. General Ronald L. Burgess, Jr., United States Army Director, Defense Intelligence Agency Page 3 http://armed-services.senate.gov/statemnt/2010/04%20April/Burgess%2004-14-10.pdf

IRI's Religious Ideology & Strategic Defense Planning,
Defense planning in the Islamic Republic is driven by four principal factors:

- Transform the IRI into a regional Islamic military power capable of projecting influence throughout the Middle East and beyond;
- To avoid a repeat of the tragic deterrence failure that led Iraq to invade Iran in 1980, and; defeat International (America) –Zionists (Israel) velvet revolution. (Velvet Revolution, the peaceful overthrow of a government, especially a communist government as seen in Czechoslovakia in late 1989)
- A Nuclear Arsenal Umbrella
- Destruction of the, "Great Satan "(America) and its right-hand the," lesser Satan", (Israel)

"Status and Influence: The IRI's leadership believes that the Islamic Republic plays a key role in world affairs as the standard bearer of revolutionary Islam and the guardian of oppressed Muslims (and even non- Muslims) everywhere. Accordingly, they believe that the fate of the ummah (the Islamic community) depends on Iran's ability to transform itself into a world power that can defend and advance the interests of that community. This perception also leads Tehran to support radical Islamic movements throughout the Middle East to undermine U.S. influence in the region, reshape the international environment in a way that is conducive to Iranian interests, and to burnish the regime's revolutionary Islamic credentials at home and abroad."[9]

9). The Strategic Culture of the Islamic Republic of Iran Operational and Policy Implications Michael Eisenstadt Middle East Studies Monograph Series Aug 2011 US Marine Corps page 3

Overview Islamic Republic of Iran Armed Forces 2011

There are various conflicting intelligent estimates size, equipment and capabilities of the IRI's Armed Forces. I will be reporting from different entities and share their competitive conclusions.

"A constant feature in any assessment of Iran's conventional capabilities is the sheer quantity of military force that it possesses and in particular its manpower strength which is currently estimated at 523,000 active personnel, nearly a quarter of which is Islamic Revolutionary Guard Corps personnel. The reserve strength of the armed forces is an additional 350,000; while the Basij paramilitary resistance force has been estimated in excess of 1 million personnel when mobilized. As such, Iran has the largest potential military manpower capability in the Middle East region. " Iran: Conventional Military Capabilities SN/IA/4264 24 September 2009 Claire Taylor International Affairs and Defence Section page 2

Conscription: As of 2008, 19 was the age for compulsory military service, 16 years for volunteers, 17 years for Law Enforcement Forces and 15 years for Basij Forces. All males were required to serve 18 months of active military service, while women were exempt from military service. Conscription is a selective process. Some conscripts are deployed with the army and others to civilian functions such as the construction industry, health care, teaching and village reconstruction.

Middle East Military Forces Database Online, The Institute for National Securities Studies Tel Aviv Israel http://www.inss.org.il Islamic Republic of Iran 2011

It is important to note as we have seen the Basij as well as having LEF forces, there is also elements attached to the IRGC and trained as light infantry.

Personnel Estimation of the Islamic Republic of Iran Armed Forces 2011			
Personnel	**Regular**	**Reserves**	**Total**
Ground Forces	**350,000**	**350,000**	**700,000**
Air Defense	**12,000**		**12,000**
Navy	**18,000**		**18,000**
IRGC Ground Forces	**100,000**		**100,000**
IRGC – Navy	**20,000**		**20,000**
Total	**520,000**	**350,000**	**870,000**
Paramilitary/ Law Enforcement Forces			
LEF	**120,000**		**120,000**
Basij	**2,000,000**		**2,000,000**
Total	**2,120,000**		**2, 120,000**

Middle East Military Forces Database Online, The Institute for National Securities Studies Tel Aviv Israel http://www.inss.org.il Islamic Republic of Iran 2011

Commander of All Armed Forces **Supreme Leader: Ayatollah Khamenei**
Head of State (formally subordinate to National Leader): President Mahmud Ahmadinejad
Minister of Defense: Ahmed Vahidi
General Commander of the Armed Forces: Major General Salehi
Head of the Armed Forces General Command Headquarters: Major General Hasan Firozabad
Chief of the Joint Staff of the Armed Forces: Brigadier General Abdolrahim Mousavi
Commander of the Ground Forces: Brigadier General Ahmad-Reza Pourdastan
Commander of the Air Force: Brigadier General Hassan Shahsafi
Commander of the Air-Defense Forces: Brigadier General Farzad Esmayeeli
Commander of the Navy: Rear Admiral Habibollah Sayyari
Commander-in-Chief of the IRGC: Major General Mohammed Ali Jaafari
Chief of the Joint Staff of the IRGC: Brigadier General Mohammed Hejazi
Commander of the IRGC Ground Forces: Brigadier General Mohammad Pakpour
Commander of the IRGC Air Wing: Brigadier General Amir Ali Hajizadeh
Commander of the IRGC Naval Wing: Rear Admiral Ali Fadavi
Commander of the IRGC Resistance Force (Basij): Brigadier General Mohammed Reza Naqbi **Middle East Military Forces Database Online, The Institute for National Securities Studies Tel Aviv Israel http://www.inss.org.il Islamic Republic of Iran 2011**

"Iran's conventional weakness does need to be kept in careful perspective. It has spent nearly two decades building up capabilities for asymmetric and revolutionary warfare. Iran's asymmetric capabilities interact with its nuclear weapons development efforts to compensate for the limitations to its conventional forces. Going nuclear provides a level of intimidation that Iran can use as both a form of terrorism and to deter conventional responses to its use of asymmetric warfare"

Iran and The Gulf Military Balance By Alexander Wilner Anthony H. Cordesman October 27, 2011
http://csis.org/files/publication/111027_Iran_Gulf_Military_Balance.pdf

Artesh, Regular Military Forces of the Islamic Republic of Iran

> ***President Carter had the U.S. Pentagon tell the Shah's top military commanders about 150 of them to acquiesce to the Ayatollah Khomeini and not fight him. "They did, all of them were executed in one of the Khomeini first acts.***
>
> **A Series of Unfortunate Re-Runs Gadi Adelman February 21, 2011 familysecuritymatters.org/publications/**

Artesh, is the 350,000-strong regular armed forces, since it does not play any major roles in the IRI's politics, internal and external issues, not much is heard about it. It is not subject to direct sanctions or other close international scrutiny because for all intense and purposes IRI's CBRN domain is in the hands of the IRGC. Nor does it appear the Artesh is involved in International Irregular Warfare activities, in Iraq, Afghanistan, nor involved with Hamas, Hezbollah or other IRI militant proxies like the IRGC and Qods Forces. Artesh fields more men under arms than does the IRGC (350,000 Artesh soldiers versus about 125,000 IRGC). The Artesh military force contains its own navy, ground forces, and air force. Personnel are a combination of conscripts and volunteers. Artesh contains the bulk of the IRI's armored capabilities and armored fighting vehicles. Artesh's field's only one Division which can be considered a true armored division, the 92nd Armored Division. [11] However officially IRI's national budget lists the IRGC receiving more direct funding than the military forces of the Artesh. According to the 2010–2011 National Budget, $4.8 billion was allocated to the Army, while $5.8 billion was allocated to the IRGC. [12]

"***Apart from the national budget, the IRGC and its many subsidiaries have direct access to Iran's foreign exchange reserve, from which the Army is barred. Over the course of 2009–2011, the IRGC's Khatam al-Anbiya (similar to the US Army Corps of Engineers) was awarded some $25 billion in contracts developing Iran's oil and gas sector, while the Army did not enjoy such largess. The IRGC is also engaged in many other economic activities, both legal and illegal, which have made it one of the most important actors on Tehran Stock Exchange. The economic activities of the Artesh, in contrast, seem limited to several chain stores."*** The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 www.mei.edu

During the cold war era Iran's Armed Forces under Shah Pahlavi became one America's greatest military assets in the Middle East. President Nixon and the Shah, Mohammad Reza Pahlavi had known each other as far back as 1953, when Nixon was vice president. Two decades later President Nixon under the military burden of the Vietnam War sought to reduce American military commitments in other parts of the world. The Shah's of Iran fulfilled a crucial strategic role: protecting American and Western interests in the Persian Gulf. Nixon and the Shah agreed in a set of 1972 agreements that Iran would receive top U.S. military advisers, technicians and weaponry, including the most sophisticated conventional weapons then in the American arsenal. The Shah had the ambition, the financial means and was willing to tap into Iran's vast oil wealth to buy modern conventional arms. Hundreds of Iranian Army & Naval Officers, along with air force pilots were trained in the US. By 1979 Iran was ranked as having the world's fifth strongest army and the Persian Gulf's most formidable military power. [13] In February of 1979 the Imperial Army gave an official declaration of neutrality in the course of the Iranian Revolution, this was due to the political pressure from Washington's Carter Administration. But Ayatollah Khomeini brutally purged the Army in the immediate aftermath of the victory of the revolution. Several thousand were executed along with highest trained military staff. The executions halted after the invasion of Saddam Hussein. Remnants of the Artesh were given a chance to prove its loyalty to Ayatollah Khomeini in the wake of the Iran –Iraq war. [14]

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11). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 www.mei.edu
12). IBID 11
13). Fall of the Shah of Iran Biot Report #137: November 11, 2004 http://www.semp.us/publications/biot_reader.php?BiotID=137
14). The Artesh: Iran's Marginalized Regular Military page 32, Middle East Institute Viewpoints November 2011 www.mei.edu

Artesh, Regular Military Forces
Islamic Republic of Iran Army (IRIA)

The Commander-in-Chief of the Artesh: General Ataollah Salehi, born March 9, 1950. As Commander in Chief of Artesh, he directs operational command authority over the commanders of Artesh's Army's Ground Forces, Air Force, Navy and Air Defense Force. General Salehi has held this position since 2005. He graduated before the Islamic Revolution from the Iranian Army's military academy in 1971 with the rank of Artillery Second Lieutenant of the Army's Ground Forces. General Salehi is one of the few surviving American trained military officers. He was undergoing military training in America when the Iranian Revolution broke out. He chose to return to Iran in late 1980 when the Iran-Iraq war broke out. He became a close associate of Tehran's current Supreme Leader Khamenei in 1980. Salehi was placed under command of Khamenei who had just been appointed commander in chief of the army by Ayatollah Khomeini. Khamenei with limited military experience and Iran's crumbling Abadan front from Saddam Iraqi offensives sought help from Salehi. Salehi was sent to Abadan in 1983 and began planning several major counter offenses against Iraqi troops, including the conquest of the Faw (aka Fao) peninsula in 1986 that resulted in the death of 12,000 Iraqi troops. [15]


Major General Ataollah Salehi

Wa –al Fajr –Eight Operation: Was the code word for the Iranian military operation on February 10-11 in 1986. The Wa–al Fajr –Eight Operation was a three prong operation. Two axis of advance was focused on areas about 25 miles north and south of Iraq's Basra, the other prong was through marshlands to a peninsula lying between the Shattal Arab and Kuwait offshore Bubiyan Island. The first two axis of attack was not successful nor was the third. Lacking armored forces the third axis of attack was pushed back, however Iranians regrouped and conducted a successful night attack. This was major Night Attack, in poor weather incorporating a diversion attack north of Basra night of February 11. ; Salehi was able to build a professional fighting force out of the remnants of the Iranian Military. Here Iranians crossed a thousand mile front. Salehi was able to organize and practice over the past year amphibious lands, laying pontoon bridgeheads and boat ops. In addition commando units of roughly 1,000 men were formed, including special teams of frogmen. These units were specially trained for amphibious assaults and fighting in wetlands, and which had an effective command structure similar to that of airborne or special forces units. Saddam's forces, even committing his elite Republican Guard, chemical weapons were unable to dislodge the Iranian Forces , from 9 Feb -25 March Iraqi air forces flew 18,648 sorties, considering in 1985 the total sorties flew was 20,011. Iranian forces main good use of anti-aircraft weapons shooting down over 30 Iraqi aircraft the first week. In addition was effective in deploying anti-tank teams that stopped Iraqi armored thrusts. [16]

- Iranian Forces learned to dig in, disperse quickly and more supplies in small quantities at night, thereby nullifying Iraqi air strikes.
- IRI began to use women for rear area military tasks for the first time in October, 1985, in order to free men for assignments at the front.
- Developed effective anti-armor teams
- IRI forces employed Chinese-made SAMs (surface to air missiles, used against aircraft) extensively during the Iran-Iraq War, in particular during the Fao Offensive in February 1986

In the intervening years, Salehi noted military capabilities helped him steadily climbed through the ranks and became deputy to the chief-of-staff, of the IRIA.

15).Biography for Ataollah Salehi http://www.silobreaker.com/biography-for-ataollah-salehi
16).The Longest War: The Iran-Iraq Military Conflict Chapter 8 , Iran's FAO Offensive Dilip Hiro

General Ataollah Salehi, Fierce Vigilance, Military Doctrine

Iran has historically always had an extremely motivated military cadre. While their equipment still limits IRI's potential, military units participate in large, combined arms exercises with numerous smaller ones between them. The strong sense of nationalism as well as Militant Islamic religious fervor of the IRGC combines into a very unique complex war-enemy ideology which shapes the individual soldier into a lethal tactical- strategic tool. This can be compared to the Japanese soldier mind set of WWII.

General Salehi has repeatedly warned against IRI military complacency. His military doctrine can best be termed as "Fierce Vigilance ", avoiding the enemy's capability to launch a preemptive strike, coupled with understanding an enemy's strategy and tactics on the battlefield. This entails levels of military tactical strategic stratagems, understood best in Western military term as a spoiling attack , but much more complex .(A spoiling attack is a tactical maneuver employed to seriously impair a hostile attack while the enemy is in the process of forming or assembling for an attack). He has been noted as stating, "*This has always been emphasized by the Leader of the revolution, Ayatollah Khamenei, since the enemy is the killer of the inattentive and that's why our armed forces consider every night a night of attack.*" Befitting from his American Military Education; General Salehi trains Artesh forces in CBRN operations, combined arms operations, naval landings using hover craft and stresses the need to confront an enemy by attacking on multiple fronts.

Some noted quotes by General Salehi

- ***"The characteristics of the Zionist regime of Israel are terrorism, espionage and blood-sucking, usurper regime which has occupied Palestinian lands by force. Israel cannot continue its military, political and social life. Hence, it is trying to postpone its disintegration through activities such as espionage."*** [17]

- ***Iran will not repeat its warning ... the enemy's carrier has been moved to the Sea of Oman because of our drill. I recommend and emphasize to the American carrier not to return to the Persian Gulf,*** " Dec. 30, 2011 Gen. Ataollah Salehi, warning the U.S. Navy not to send an aircraft carrier back to the Persian Gulf. The carrier left the area after the IRI launched a series of military exercises.[18]

- ***It is important to note unlike the IRGC and the Islamist Basij militia forces, the Artesh personnel did not seek martyrdom in the Iran-Iraq War. This is partly evident by the numbers, and the number of IRGC and Basij casualties in the war.*** [19]

Mosaic Doctrine, is primarily designed to defeat the Armed Forces of America and its allies including Israel. America's warfare strategy relies heavily on technology, decapitating, and disrupting an enemy's chain of command, and by doing so, preventing the adversary from being able to take any military action. Fierce Vigilance Military Doctrine major principals are attrition and passive defense in depth , coupled with Mosaic Doctrine .Unlike the IRGC, whose Qods Force is tasked with exporting Iran's revolutionary ideals, and arming and training foreign proxy forces like Hizbullah, the Artesh is responsible solely for confronting outside threats defending and protecting IRI's land, sea and air borders.

"Islamic Republic of Iran's IRGC Generals Salami, Jafari, Safavi, and Abbasi are the greatest promoters of Mosaic Doctrine strategy, asymmetrical deterrence and war-fighting." Iranian Military Capability Ground Forces Open Source Intelligence Project V 1.0 March 2011 page 3

17) Israel chooses spying to survive Nov 30, 2008 http://edition.presstv.ir/detail/76985.html
18). Quotable: Iran's army chief warns U.S. January 11, 2012 http://articles.chicagotribune.com/2012-01-11/news/ct-perspec-0111-quotable-20120111_1_iranian-army-aircraft-carrier-series-of-military-exercises
19). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

'Mosaic Doctrine' Autonomous Decentralized Combined Regular, Irregular and Asymmetrical Warfare

Unlike centralized command and control of all armed forces branches, elements and entities, Mosaic Doctrine grants significant autonomy and freedom of self determined actions. The overall decision making is granted to all armed forces branches, elements and entities. As a result all decisions and actions are asynchronous, concurrent and autonomous, leading to efficient and fast decision making in the battlefield environment.

Mosaic Doctrine Three Basic Predominant Military Variations

1). Centralized Command with Centralized Control

2). Centralized Command Coupled with Decentralized Control

3). Decentralized Command with Decentralized Control

Mosaic Doctrine based warfare, conception and development is often attributed to Islamic Revolutionary Guard Corps Officers and staff, however in reality its bedrock is General Salehi. American and Western Intelligence agencies tend form rather simplest interpretations of this military doctrine. In General Salehi's military theoretical application of Mosaic Doctrine, not only applies to small groups of infantry units, but the full spectrum of the Islamic Republic of Iran's warfare capabilities. That would include using any international assets such as Hezbollah, Hamas or other militant proxies. Since Mosaic Doctrine requires an all inclusive use of International military assets, and these IRI proxies are trained, supported by the IRGC –Qods Forces and not Artesh, hence you find more issues and connections involving the IRGC and Mosaic Doctrine.



Mosaic Doctrine warfare theory conceives of using inferior military technology to defeat far superior advanced military technology, even employing chemical warfare assets. Developing these tactics and strategy was a critical necessity in the Iran –Iraq war. The Mosaic chemical warfare Doctrine evolved out of the tens of thousands casualties Saddam Hussein's deadly chemical warfare agents inflicted.

A simple ground war example would be the Iran –Iraq Wa –al Fajr –Eight Operation, where lacking armored forces, air support Iranian forces were able to defeat Saddam's combined superior military forces containing armored, air, artillery and chemical warfare agents. Small dispersed infantry teams successfully defeated Saddam's elite Republican Guard, even when they used chemical warfare agents against the Iranians. A good example comes from winter war-field of the Second World War, in particular at the battle of Suomussalmi where Finnish ski-based troops used superior maneuverability to encircle Soviet infantry and tanks based troops who were forced to use only roads in the thick snow. The Finnish army defeated Soviet opponents more than twice their size and far outgunned, using rapid maneuver and to their advantage. A core principal of Mosaic Doctrine is that inferior military forces can defeat a superior military force using a combination of regular and irregular warfare tactics, and using advanced ballistic missile and cruise missile capabilities as a force multipliers.

Force Multiplier: "*A capability that, when added to and employed by a combat force, significantly increases the combat potential of that force and thus enhances the probability of successful mission accomplishment*." (JP 3-05.1) Source: U.S. Department of Defense, Joint Doctrine Division

Mosaic Doctrine: Theory and Developmental Concepts

Shaping IRI's Mosaic Doctrine Theory and Developmental Concepts are highly influenced by Chinese, North Korean (China & North Korea longtime ally and collaborators) and Vietnamese Warfare Doctrines, .In addition Tehran's research from Israel's combat methods in Lebanon, to US Combat Operations & methods against Saddam Hussein, and America's Afghanistan Strategy.

China has an extensive history of employment unconventional warfare tactics, some based on sheer courage and desperation. During WWII the 8th Route Army fought against formidable Japanese military machine employing biological warfare agents killing as many as 100,000 people (the real death toll can never be known). [20]

Mosaic War Doctrine was greatly influenced by: PLA military Officials (People's Liberation Army) and North Korea's strategy and tactics in the Korean War fighting America's superior air land power. Underlining this is North Vietnamese General Vo Nguyen Giap Indo-China wars with France and America. PLA has not forgotten that the Soviet Union went bankrupt trying to keep up with Reagan's military build-up in the 1980s. Today China's focus is on a strategy relying on a whole range of regular and asymmetric stratagems, satellite warfare to naval / naval mine warfare, a full spectrum cruise missile & ballistic missiles capabilities to cyberwarfare. [21]

PLA publication, " Unrestricted Warfare, Assumptions on War and Tactics in the Age of Globalization " written by two PLA Air Force senior colonels, Qiao Liang of the PLA Air Force Political Department and Wang Xiangsui of the Guangzhou Military District PLA Air Force Political Department, published in February 1999. Unrestricted Warfare discussed what it termed," new types of warfare", which may be conducted by civilians as well as by soldiers including computer hacker attacks (today known as cyberwarfare), trade wars and finance wars. Finding the right combination of weapons can not only make up for the weaknesses of different generations of weapons, it can be a "force multiplier" of weapons effectiveness as "High Tech Units are Vulnerable to Low Tech Adversaries". The blending of technologies for war in the global era has ended the dominance of powerful American weapons and tactics of war. From this new baseline the relations of weapons to war have changed and made the concept of war itself vague. "Unrestricted Warfare" means that any methods can be prepared for use, information is everywhere, the battlefield is everywhere, and that any technology might be combined with any other technology, and that the boundaries between war and non-war and between military and non-military affairs has systematically broken down. [22]

1999 Unrestricted Warfare:

"It is becoming obsolete to automatically consider military action the dominant means and the other means the supporting means in war As the arena of war has expanded, encompassing the political, economic, diplomatic, cultural, and psychological spheres, in addition to the land, sea, air, space, and electronics spheres, the interaction among all factors have made it difficult for the military sphere to serve as the automatic dominant sphere in every way. War will be conducted in nonwar [i.e. non-military] spheres. "If we want to have victory in future wars, we must be fully prepared intellectually for this scenario, that is, to be ready to carry out a war which, affecting all areas of life of the countries involved, may be conducted in a sphere not dominated by military actions." *[23]*

Military action is but one of the many forms of warfare. Other forms of conflict political, psychological, sociological, technological and economic are just as important or, under certain circumstances, even more important in order to survive or win; strategies must be planned to the scale of decades, not years. The Battlefield is everywhere. [24]

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20). Tuo Mao: The Operational History Of The People's Liberation Army By Martin Kenneth Andrew B.A. Hons (Deakin), M.A. (Northern Territory University) 26 May 2008 http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1072&context=theses
21). Peaceful Rise through Unrestricted Warfare: Grand Strategy with Chinese Characteristics page 6 Tony Corn http://smallwarsjournal.com/blog/journal/docs-temp/449-corn.pdf
22).PLA Colonels on "Unrestricted Warfare": Part I, http://www.fas.org/nuke/guide/china/doctrine/unresw1.htm
23).Qiao Liang and Wang Xiangsui, Unrestricted Warfare, Beijing: PLA Literature and Arts Publishing House, 1999, pp.141-142.
24). IBID 2 page 27

Defining Mosaic Doctrine : *Hybrid Threat: "Any adversary that simultaneously and adaptively employs a tailored mix of conventional weapons, irregular tactics, terrorism, cyberwarfare and criminal behavior to obtain their political objectives*. " Lt. Col Frank G. Hoffman, USMCR (Ret.), Senior Research Fellow, Marine Corps Combat Development Command Institute for National Strategic Studies, National Defense University

Aspects Of IRI's Mosaic Military Doctrines Contains CBRN Warfare, Martyrdom Ops , (These Operations Are Primarily Confined To The Islamic Revolutionary Guard) Employment Improvised Explosive Devices (IEDS) And Information.



"The Iranian concept of asymmetric response is a unique amalgamation of elements of conventional warfare, special operations, insurgency tactics and terrorism. It is not defined officially and is hardly to be found in any document (at least publicly known). ,

"Rather it represents a systemic set of religious thoughts, strategic visions, political considerations, which are practically translated into the military forces structure, operational doctrines and tactical procedures. It is based on their own painful, unique, and invaluable experience of the protracted, eight year long Iran – Iraq war (1980 – 1988), which decisively formed the mindset of at least two generations of both the Iranian elite and [Iranian] society. Furthermore, it encapsulates lessons learned from all recent military conflicts, ranging from performance of the modern Western nation-states armed forces (Americans in the Gulf I, Gulf II and Afghanistan, Israelis in Lebanon) down to modus operandi of non-state actors vis-à-vis greater powers in the same conflicts (e.g. insurgency and terrorist operations).,"Obsolete Weapons, Unconventional Tactics, and Martyrdom Zeal: How Iran Would Apply its Asymmetric Naval Warfare Doctrine in a Future Conflict By Jahangir Arasli No. 10 April 2007 ISSN 1863-6039 pages 11-12

Definition of Irregular Warfare Operations and Activities Associated with IW

DoD IW (Irregular Warfare) Directive 3000.07 identified five primary activities associated with IW The operations/activities below comprise IW and typically represent indirect aspects of campaigns:

- **Insurgency/Counterinsurgency (COIN);**
- **Unconventional Warfare (UW);**
- **Terrorism/Counterterrorism (CT);**
- **Foreign Internal Defense (FID);**
- **Stabilization, Security, Transition, and Reconstruction (SSTR) Operations; (Stability Operations)**
- **Strategic Communications (StratComm);**
- **Psychological Operations (PSYOP);**
- **Civil-Military Operations (CMO);**
- **Information Operations (IO);**
- **Intelligence/Counterintelligence (CI);**
- **Transnational criminal activities/Law enforcement activities**

Mosaic Irregular Forms of Warfare, emphasizes undermining, with eroding an adversary's power, influence, and will to exercise control or influence over relevant population(s). For an illustration, America's military quagmire in Iraq and Afghanistan and Israel's wars in Lebanon with Tehran's Militant Proxy Hezbollah and Hamas in Gaza.

- IW does not require the defeat of an adversary through primarily direct military confrontation
- Emphasis on use of indirect, non-conventional methods and means to coerce, subvert, attrition, and exhaust an adversary

Different Focus of Operations:

- **Conventional Warfare: Defeat of adversary's military forces**
- **Irregular Warfare: Erosion of an adversary's power, influence and will; gaining the support of the population**
- **Conventional Warfare: emphasizes interplay between government and military**
- **Irregular Warfare: emphasizes interplay between government and population**

The logic of Unrestricted Warfare is based on, *Protracted War*, most Western strategists, have traditionally equated war with the clash of arms, Communist leaders are trained to think of conflict in much larger dimensions. Military action for them is but one of the many forms of warfare, political, psychological, sociological, technological and economic are just as important or, under certain circumstances, even more important.

"Fourth Generation Warfare and Mao's People's War, lends itself to operational and strategic understanding of hybrid threats A hybrid threat actor is a practitioner of unrestricted operational art and the concept essentially assigns vocabulary to practicality and common sense. Hybrid threats comprehend the reality of their environment and the inherent complexity and interrelation within it. As a rational actor translating strategic intent into tactical action, hybrid threats aim to set conditions for strategic opportunity and prevent the tendency of the U.S. system to dominate the battlefield. Therefore, like water that exists in liquid, gas or solid form, the hybrid threat has no consistent state, but transforms and adapts to the conditions it finds itself in to operate, survive and achieve favorable advantage."

The Hybrid Threat Concept: Contemporary War, Military Planning and the Advent of Unrestricted Operational Art, A Monograph Major Fleming United States Army School of Advanced Military Studies United States Army Command and General Staff College 17-05-2011 page 35

"Hybrid threat: Any adversary that simultaneously and adaptively employs a tailored mix of conventional weapons, irregular tactics, terrorism, and criminal behavior to obtain their political objectives". Lieutenant Colonel (Retired) Frank G. Hoffman,

Hybrid warfare will be the dominant form of warfare in the twenty-first century due to the prevalence of hybrid threats that currently exist throughout the world. A combination of conventional and irregular warfighting capabilities, hybrid warfare is the twenty-first century kind of warfare with its own limiting conditions and its own peculiar preconceptions. It is critical for the Department of Defense to determine the strategic implications of hybrid warfare on the National Military Strategy and the way that the United States military will fight hybrid warfare. [25]

25). Twenty-First Century Warfare Will Be Hybrid, Colonel Leslie F. Brown United States Army 2011 U.S. Army War College, Carlisle Barracks http://www.dtic.mil

Artesh: Islamic Republic of Iran Army Order of Battle (IRIA)

The Artesh exists as a conventional army designed to fight 3rd generation wars against state powers, though retaining some asymmetric capability.

Artesh is built upon a three tier army-level headquarters system. The IRIA is made up of 350,000 active-duty troops; another 350,000 are available as reserve troops. (Reports vary on IRIA strengths and capabilities)

- **Each IRIA Division has a somewhat different organization.**
- **There are two brigades within the airborne forces and four Special Forces brigades within the division. The airborne and special forces are trained at a facility in Shiraz.**
- **Field artillery is divided into five regiment-sized groups, with surface-to-surface rockets and missiles under the command of the Islamic Revolutionary Guards Corps (IRGC).**
- **The regular armored divisions are sub-divided into three brigades. The acquisition of new Chinese, Polish and Ukrainian main battle tanks has allowed for this expansion of the armored forces**
- **There are 4-6 army aviation units, and a growing number a growing number of air defense groups,**

The IRIA Is Organized into Four Corps reported to be composed of, four armored divisions, six infantry divisions, six artillery groups, two commando divisions, an airborne division, aviation groups, and other smaller independent formations. These latter units include independent armored, infantry, and commando brigades. To note each Artesh division has a somewhat different organization. Some reporting indicates only one to two of IRIA's armored divisions are well enough equipped to be considered true armored divisions, Artesh does have at least one elite Special Forces Division, which was formed in 1993–1994, and the 55th paratroop division. Some intelligence reports state the 23rd Special Forces Division has 5,000 full-time regulars and is one of the most professional units in the IRIA. Artesh also has a number of independent brigades and groups. These include some small armored units, one infantry brigade, one airborne and two to three Special Forces brigades, and coastal defense units, a growing number of air-defense groups, five artillery brigades/regiments, four to six army aviation units, and a growing number of logistic and supply formations. The land forces have six major garrisons and 13 major casernes. [26]

IRIA armored divisions are estimated having around 12,000 soldiers. Each division has 3 brigades. Armored brigades probably have 1+ tank battalions, while mechanized have 1 each. Tank battalions have 34 tanks in 3 companies, assuming 100% strength. Each brigade is then allotted at least two artillery battalions, one self-propelled unit usually consisting of M109s, and another of towed guns usually the M-46 or the D-30. Infantry mechanization is provided by BMPs organized into battalions of 27 with 9 AFVs per company and M113s or BTR-60s organized into battalions of 33 with 11 AFVs per company. Mechanization is not always homogenous in that battalions may be made up of both M113s and BTR-60 companies. [27]



26). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu
27). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 page 45

The 92nd Armored Division: is the only Iranian division that has enough tanks to be considered a true armored division, even by regional standards. Jane's Sentinel Country Risk Assessments says the 92 AD is equipped with T-72 tanks, and is seen as Islamic Republic of Iran's premier armored division. The 92nd Armored "Khuzestan" Division, has three armored brigades mainly equipped with Chieftain MBTs,(Main Battle Tanks) T-72 Tanks, and M-113 APCs (armored personnel carriers) the 283rd Armored Cavalry Battalion , including the 1st Brigade west of Khorramshahr and south of Ahwaz, 2nd Brigade west of Dezful, and 3rd west of Ahvaz.

Artesh Armored Divisions

92nd Armored Division
88th Armored Division
81st Armored Division
16th Armor Division

Armored Brigades:

- **37th Armored Brigade** Based out of Isfahan. Armor is possibly the T-72.
- **71st Armored Brigade** Based out of Ilam on the border with Iraq. Armor is the Safir-74. Rumored to be equipped with the Zulfiqar MBT, however this is unlikely and may be in a reference to which unit the prototypes were assigned to for testing.
- **38th Armored Brigade**: Based out of Torbat Jam near the border of Afghanistan and Turkmenistan. [28]

IRI's main battle tanks (approximately 1,600) are mainly made up of aging Chieftain MK3/5, M47M, M60A1 (British); Soviet-made T-72; North Korean-made T-59 and T-62, and the domestically-made Zulfiqar. [29]

Only 480-580 of its main battle tanks can be described as "modern" by common military standards. The T-72Ss are export versions of the Soviet T-72B. Some have been built under license in Tehran, and are armed with a 125 mm 2A46M smoothbore gun. They have a relatively modern IA40-1 fire control system and computer, a laser range finder, and a night and day image intensifying sighting system. As well as firing the normal types of 125mm separate-loading ammunition (projectile and charge), the T-72S can also fire a Svir 9M119 (NATO designation AT-11 'Sniper') laser beam-riding guided anti-tank missile to a range of 4,000m. The T-72S is powered by an 840-horsepower V-84MS diesel engine, has upgraded suspension and mine protection capabilities, and a combat weight of 44.5 tons. [30] IRI has been able to extend the service life of some of its aging tanks, the T-54s, T-55s, and T-59s by improving their armor and fire control systems. These tanks have been refitted with an Iranian-made M-68 rifled 105 mm gun similar to the one used in the M-60A1. Armor add -ons, IRI has developed and has developed an explosive reactive armor, although the effectiveness of such armor remains unclear. The Revolutionary Guard is reported to have a special variant of the T-54 called the Safir-74. [31]

Zulfiqar 3 MBT: is an IRI designed and built tank. The Zulfiqar-3 is the successor to the Zulfiqar-1 and Zulfiqar-2 tanks developed by IRGC lead industries. The Zulfiqar 3 is a radical redesign compared to the earlier Zulfiqar-1 prototypes; most strikingly, it superficially resembles the US's M1 Abrams tank. The Zulfiqar is armed with a fully-stabilized 125-mm smoothbore gun, fitted with an autoloader However one of the major problems with the Zulfiqar-3 was in its fire control mechanism. In April of 2012 Army Ground Force Brigadier General Ahmad Reza Pourdastan stated this problem had been overcome, and a modern fire-control system is now mounted on the home-made Zulfiqar Tanks. "*The new fire control system of Zulfiqar tank has been manufactured and unveiled and the laser telemetry devices have also been mounted onto the tanks.,"* There are 100 of these in service more likely found in IRGC . [32]

28). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu
30). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 page 45-48 30). – 31). IBID 2
32). Zulfiqar 3 Main Battle Tank http://www.military-today.com/tanks/zulfiqar_3.htm

Upgraded British Chieftain MBT Mobarez Program, theoretically it is one of Iran's more powerful tanks, open reports state that this tank has is upgraded through the Mobarez upgrade program. While specifics are not known, its features include a newer, more robust fuel tank, new gearbox, upgraded suspension, a new engine and increased armor. Upgrades to the 120 mm gun include night-vision and a laser range finder, complete with an electrical generator power supply. The engine compartment is noticeably larger, though the armor appears to be largely unchanged, with a slightly redesigned hull due to the larger engine compartment. There is also a new laser range-finger located on the right hand side of the turret above the smoke discharger's. Purportedly, Iran still has enough Chieftains to outfit one full division (the 16th AD) as well as an unspecified brigade.

2012 Tanks Islamic Republic of Iran	
MBT high quality	522
T-72	422
Zulfiqar	100
MBT medium & low quality	1000
Chieftain	100
M48	150
M60 A1	150
T-54/55	550
T-62	50
Light tanks	79
Scorpion	80
Towsan	-1
Tanks Total	1601
inss.org.il/weapons	

It is uncertain how many of Iran's Chieftains and M-47/M-48s are operational, since the total number of Chieftains includes the remainder of 187 improved FV4030/1 versions of the Mark 5 Chieftain that were delivered to the country before the fall of the Shah.

Some experts estimate that IRI's sustainable operational tank strength may be fewer than 1,000 tanks. Furthermore, the Chieftains and M-60s are at least 16-20 years old, and the T-72 and Zulfiqar are the only tanks with advanced fire control systems, sights, and armor-piercing ammunition. It is also estimated that the Islamic Republic of Iran armored forces can only sustain about half the number of its main battle tanks for any period of extended maneuver warfare. At present, however, IRI's tanks are dispersed in relatively small lots among all of its regular Army and some of its Islamic Revolutionary Guard Corps (IRGC) combat units - all the IRGC units generally only have small tank force cadres and it is unclear to what extent these forces will be armored in the future.

IRI has some 865 other armored fighting vehicles, 550-670 armored personnel carriers. Tehran also manufactures bolt-on armor for light AFVs that provide protection up to 30 mm AP ammunition. These come in the form of rectangular plates that range in size from only a few cm long that protect from 7.62 mm bullets, up to larger plates that are significantly larger. These can be applied to any AFV in military service, though are most commonly seen on M113 and BMP-style AFVs. There may be around 20-30 Pt-76s.

Armored Personnel Carriers			
2011 - 2012			
	APCs	639	639
	Boragh	140	140
	BTR	300	300
	M113	200	200
	MT-LB	-1	-1
	IFVs	713	713
	BMP-1	300	300
	BMP-2	413	413
	Reconnaissance	35	35
	Engesa EE-9	35	35
Armored Personnel Carriers Total		1387	1387
inss.org.il/weapons			

33). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: May 16, 2012 pages 22-34

Armored Personnel Carriers, Tehran's military industry is producing an armored fighting vehicle called the Boragh (Boraq) and a lighter APC called the Cobra or BMT-2, of which some 140 are in service. The Boragh seems to be a copy of a Chinese version of the BMP-1. It is a fully tracked and amphibious and has a combat weight of 13 tons. It can carry 8-12 people, plus a crew of two. Reports differ as to its armament - perhaps reflecting different variants **30 mm:** IRI uses the 2A42 auto-cannon on its BMP-2s and Boraghs in IFV configuration, also is manufacturing turrets for the Boragh, they may also be manufacturing the cannon.



76 mm: The 2A28 low-pressure, smoothbore cannon is used on IRI's BMP-1s. It fires the same PG-9 ammunition as the SPG-9 recoilless rifle. The round is manufactured under the name "Zafar"

¼ Ton tactical vehicles are among the most common vehicles found in the Armed Forces, serving as transports, weapon platforms and multipurpose vehicles. Military stock centers around the ubiquitous "Jeep" design and includes the M-38 and it's civilian counterpart, the CJ-5 named 'Shahbaz' which has an M- 151 style front-grill, leading to some confusion over a vehicles actual ID. Also used is the later M-151.



Inventory Soft Vehicles Analysis

IRI's inventory of light, soft-skin vehicles, such as the Safir, Toofan and Toyota Land Cruiser, are the most common vehicles within the Iranian military in addition to the larger 5-ton class trucks which they are used for mechanization, scouting, support, and for direct offensive operations. They even have, to some extent, been used as a substitute for armor support and true mechanization.

Motorcycles are omnipresent within the military, employed as fast, non-traditional tactics and transportation. 4-wheeled ATV's are found also though the motorcycles are far more common. Motor-trail bikes are deployed throughout the ground forces, in the marines, IRGC-GF (Ground Forces), and the IRIA. They are commonly deployed at the squad level in hunter-killer teams, such as with a team of 5+ bikes of two men each carrying RPG's and assault rifles. Other organizations include mechanizing an entire squad or platoon, complete with rifleman, support gunners, and anti-air/tank soldiers. It's also not uncommon to see a "swarm" of motor-bikes with 10-20 RPG's and supporting rifleman. Sniper teams are also a common sight on motorbikes. Vehicles like Jeep's and motorcycles enable ground forces to maintain a mobile force with an all-terrain capability, all while remaining relatively independent of the long supply chains that heavier vehicles. The Taliban of Afghanistan employs motorcycles to a good effect.

Tehran has some 5,000 mortars in its military inventory. These include 107 mm and 120 mm heavy mortars and 800-900 81mm and 82 mm mortars. The IRI's armed forces have at least several hundred of its heavy mortars mounted on armored vehicles.

34). Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011
35). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

Artesh Infantry Corps



- 77th Mechanized Infantry Division
- 84th Mechanized Infantry Division
- 30th Infantry Division
- 28th Infantry Division
- 64th Infantry Division
- 21st Infantry Division
- 41st Independent Brigade
- 40th Independent Infantry Brigade

Artesh Infantry Corps, Of IRIA's six infantry divisions, at least three of them are mechanized with a number of independent brigades throughout the country. Intelligence reports vary but is believed, mechanized infantry divisions are made up of one armored brigade, three mechanized infantry brigades, one reconnaissance battalion, one SPA (self propelled artillery) battalion, one towed artillery battalion, an engineer battalion, a supply battalion, a transport battalion as well as containing an army aviation and air defense contingent. Also included is a commando battalion, though this might be labeled as a secondary light-infantry unit. Mechanized units are the primary users of APCs like BTR-60s and M113s, while regular infantry units still rely primarily on light vehicles like Toyota trucks, Safir jeeps and 5-ton transport trucks. Artillery battalions are composed of towed guns, mainly weapons like the M-46 and D-30.

Transport: Most common are large soft-skinned troop transport trucks that also serve as towing platforms for artillery as well as SAM's and AAA. Jeep's are also widespread, though they have almost entirely been replaced by the newer, indigenous, Safir, though for all intents and purposes, it can be considered identical to a regular jeep. These also serve as platforms for machineguns, mortars, recoilless rifles, ATGMs. Along the same line as the Safir are light trucks that sere the same purpose.

Artillery: Artillery within the Artesh varies widely and is by no means uniformly standardized, the most common being the D-30 and M-46 towed artillery as well as the self-propelled M109 howitzer and the 122 mm Grad (locally called Arash rocket, fired from the HM-20). Numerous other types exist as well, the vast majority being either towed or MLRS type. Mortars are often widespread and integrated directly into each unit.

Air Defense: Zu-23-2's are integrated directly into infantry units, both towed as well as being mounted onto vehicles, the same holds true for MANPAD's such as the Misagh. Dedicated air defense battalions traditionally use SAM's such as the Rapier or HAWK.

- **64th Infantry Division:** Headquartered near Urmia in the West Azerbaijan province in north-western Iran. Currently, the first brigade is located in Urmia, the second in Salmas, and the third in Piranshahr. Unconfirmed composition (800 men, 4 M-46/type-59-1, 3 D-30)
- **21st Infantry Division:** Based out of Tabriz in the East Azerbaijan province in north-western Iran. The first brigade is in Tabriz, the second in Maragheh and the third in Marand. A fourth brigade may exist but its existence remains unlikely given the usual composition of divisions with three rather than four brigades. They may use the both the D-30 and the M-46 towed guns, but the fact that the 2nd brigade shares a compound with the 11th independent artillery group prevents knowing which unit the latter belongs to.
- **30th Infantry Division:** Based in the city of Gorgan, in the Golestan province in northern Iran. It also serves as a training center for troops from all across Iran, graduating 1500-2000 troops monthly. It is unclear exactly what training this is for. Artillery support is provided at least in part by the M-46 towed gun. They use the newer Safir's rather than the older Jeeps. Artillery support is given by M-46 towed gun. Unconfirmed composition (1,500 men, 7 FH155, 6 FH122).

36). Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011
37). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

Artesh Infantry Corps

- **28th Mechanized Infantry Division:** Based out of Sanandaj in the Kurdistan province in western Iran. 1st brigade is in Sanandaj, the 2nd might be in Baneh, but recent satellite imagery shows no build-up, compared to others who put them at Saqqez and Marivan, where there are visible military facilities. The division is most likely equipped with M-60A1 MBTs and M113//BTR-60/BMP-1 AFVs. Artillery support is provided at least in part by the D-30 towed gun.

- **84th Mechanized Infantry Division:** Based out of Khorramabad in the Lorestan province in western Iran. The 1st brigade is located in Khorramabad; the 2nd is in a rural setting around 20 km west of Khorramabad. It is plausible that the 84th uses the remaining Chieftains as part of their armored brigade. Mechanization appears to be mainly BTR-60's rather than being split between them and M113's. Artillery support is provided at least in part by the D-30 towed gun around 2 battalions of an unknown gun, possibly the GHN-45. The 2nd brigade uses 2 battalions of D-30 towed guns. One unconfirmed composition (1,400 men, 6 T-72, 13 BMP-1, 6 M109, 3 FH155)

- **77th Mechanized Infantry Division:** Based out of Mashhad in the North Khoresan province in north-eastern Iran, on the border with Afghanistan. As a mechanized division, it has one armored brigade in Mashhad equipped with M-47M and more recently, T-72 tanks as well as M113 and BTR-60 APCs. BMP-type AFVs are likely as well. Unconfirmed composition, (1,100 men, 4 FH155, 7 FH122).

- **40th Independent Infantry Brigade**: is based out of the city of Ardabil in the Ardabil province in north-western Iran.

- **41st Independent Brigade**: Not necessarily, but presumed to be, an infantry brigade. Based somewhere in the West-Azerbaijan province.



Artesh Commando Corps

Commando units are a subset of infantry rather than being an entirely separate branch. They operate both as independent divisions and brigades.

The most likely difference, judging from what is available is that commandos are specialty troops designed for light insertion in rough terrain with emphasis on a variety of deployment such as motor-bikes, trucks and aviation assets. They often function as rangers and it is not uncommon to see soldiers with patches from ranger school as well as mountain-warfare, desert-warfare and airborne badges. They are usually identifiable by their duck-hunter camouflage and tan berets. Most units use AK-47 variant rifles instead of the usual G3 found within the IRIA. As well as functioning as infantry battalions within larger IRIA units. Brigades are split up into three infantry battalions, one artillery battalion, one air defense battalion, and one instruction battalion; divisions are likely just scaled up with 3 brigades.

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38). Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011
39). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

Artesh Commando Corps



- **58th Commando Division: or "Zulfiqar" Division. It is based out of Dezful.**
  2nd Brigade Of 58th Division Has The Following Composition:
  - 3 Infantry commando battalions
  - 1 Air defense battalion
  - 1 Artillery battalion
  - 1 Instruction battalion
  Another fact we know is that Iranian divisions tend to be 'light' in the sense that they're usually smaller than their western equivalents. Given this, we can extrapolate this data to the rest of the division, and it is likely that the rest of division looks something like this:
  - 9 Infantry commando battalions
  - 3 Air defense battalion
  - 3 Artillery battalion
  - 3 Instruction battalion

- **23rd Commando Division**: is one the most elite units in IRI and Artesh. Originally started as a brigade, but was expanded to a full division with 4+ brigades during the war with Iraq. Most sources put its number at 5,000, but this number still dates from its days as a brigade. The unit is reported to be made up entirely of volunteers and consistently has top-notch equipment and what is likely the best training available. They are identifiable by their desert dominant safariflage camouflage and their widespread use of body armor. They are identifiable by their top-notch equipment by Artesh standards, notably, desert dominant safariflage, body armor, Kevlar helmets, and newly manufactured collapsible stock G3 rifles. Some believe they could be an airborne-rapid-deployment force. They are never without full body armor. As far as support weaponry goes it is most commonly RPG's and PKM at the squad level. Use of motor bikes is the only proven vehicle use as of yet.

- **45th Independent Commando Brigade**: Based out of Dezful, uses D-74 towed artillery pieces Based out of Dezful, the 45th can easily be confused with the 58th due to their close proximity. One interesting feature is that they use both the G3 rifle as well as the Ak-47. They may also be deployed with BMP-2 IFV's, or they might have merely been acting in close support with the 92nd armored division, it is unclear.

- **55th Airborne Brigade** (sometimes called a Division) Based out of Shiraz, the 55th is notable for being a primarily paratroop brigade in addition to being a more general airborne unit. They make heavy use of the 10 IRIAF C-130's and IRIAA fleet of transport helicopters, though are not heavily mechanized otherwise. They are identifiable by their duck-hunter camouflage, black beret and unit insignia on the upper right sleeve. More recently they have been seen wearing uniforms in the desert safariflage pattern.

- **65th Airborne Special Forces Brigade/ Rapid-Deployment Force:** Along with the 23rd commando division, the 65th is one of the most adept units within the IRIA. The 65th is headquartered in Tehran. They operate as a rapid-deployment airborne light-infantry unit with counter-terror abilities. They are a HALO-capable force. They are identifiable by their green-dominant safariflage camouflage, as well as a distinctive unit patches of a green parachute canopy and a single bird-wing swooped back.

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40). Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011
41). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

Artesh Commando Corps



- **Zahedan Commando Brigade** Actual unit designation is unknown, but a commando presence has been confirmed, being seen on parade in Zahedan and during the 2006 Blow of Zolfaqar games, wearing the tan beret, and commando patch associated with the independent commando units. They also had used the AK-47 and duck-hunter camp in the same manner as the 58th commando division. It can also probably be assumed that their organization is similar to each of the individual brigades within the 58th division.

- **Gorgan Commando Brigade** Same as the Zahedan brigade, nothing is known beyond that they are equipped in the same manner as the rest of the commando units.

- **Tabriz Commando Brigade** Same as the Zahedan brigade, nothing is known beyond that they are equipped in the same manner as the rest of the commando units.

- **25th Independent Commando Brigade**: Based out of Pasveh in West Azerbaijan south of Lake Urmia, on the western border with Iraq.

- **35th Independent Commando Brigade**: Based out of Kermanshah on the western border with Iran. They wear a black beret, compared to the usual tan beret favored by commando units.

- **4th Commando Unit** Located in Tehran, literally, nothing else is known, beyond its rumored existence.

Other Unconfirmed Artesh Forces/Equipment

- **- 5th Artillery Group (900 men, 27 MRL-107, 28 FH122)**
- **- 4th Artillery Group (800 men, 22 MRL-107, 25 FH122)**
- **- 1st Artillery Group (1,000 men, 10 BM-21, 9 MRL-107, 35 FH-122)**
- **- 351st SSM Brigade (280 men, 2 BM-30)**
- **- 75th Logistics Brigade (600 men)**
- **- Iranian Army Helicopter Brigade (350 men, 5 AH-1J, 4 CH-47C, 6 UH-1)**
- **- 7th Artillery Group (600 men, 22 FH122)**
- **- 43rd Independent Mountain Battalion (600 men)**
- **- 79th Cavalry Battalion (450 cavalry)**

42). Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011
43). The Artesh: Iran's Marginalized Regular Military Middle East Institute Viewpoints November 2011 page 18 www.mei.edu

Today Islamic Republic of Iran Has Two Military Forces with different roles

Every Iranian Military Branch have different role,

IRIA Ground forces, protects IRI borders, coastal areas,

IRGC Navy focuses on Persian Gulf, Strait Hormuz & coastal defense.

IRIN (Iran Regular Navy) Focuses on Oman Sea, Hindia Ocean & overseas mission like fighting piracy in Somalia Sea.

IRIAF Air Force focuses on protect IRI's border & Iran's sky like other air force include overseas missions, Straits of Hormuz and Caspian Sea

IRGC Aerospace focuses on protecting Tehran, Nuclear Facilities, military Industrial Facilities, and Missile Bases & Iran Space Zone.

ARTESH IRI's Regular Army with 6 Branches
1. Iran Air Force (IRIAF)
2. Iran Navy Force (IRIN)
3. Iran Army Force (Artesh)
4. Iran Air Defense Force (IADF)
5. Special Forces Division
6. Independent Rapid Deployment Elements
IRGC
IRGC (Islamic Revolution Guard Corps) With 10 Branches
1. IRGC Navy
2. IRGC-GF Army
3. IRGC Aerospace Force & Space Defend Force
4. IRGC Missile Force
5. IRGC Quds Force
6. Basij Forces
7. Lovers of Martyrdom Garrison
8. CBRN Force
9. Ansar- Ul – Mehdi Corps
10. Khatam al-Anbiya Air Defense Base

In the past the IRIA and the IRGC did not practice combined military exercises. However this is changing. In 2012 it was announced a series of combined IRIA & IRGC war games would take place. [44]

The Islamic Republic's Constitution underlines the division between the IRIA and the IRGC two forces, stating that the Artesh is responsible for defending Iran's borders and maintaining internal order, while the IRGC is responsible for protecting the regime.

IRGC's Connection to IRI's Nuclear Program has made it the key entity of International concern. In October 2007, the U.S. designated the IRGC under Executive Order 13382, which gives the US president the right to block American entities from maintaining financial connections with Iranians involved in the production or proliferation of weapons of mass destruction, (CBRN). The UN and the European Union have also sanctioned the IRGC for its involvement in IRI's WMD activities. The EU designated the IRGC in June 2010, noting that the group had "operational control for IRI's ballistic missile programs, facilities and has undertaken procurement attempts to support Iran's ballistic missiles and nuclear program."US designated the IRGC in October 2007, it also named nine other entities owned or controlled by the group, including the Qods Force, for its terrorist activities. The EU followed suit, sanctioning the Qods Force in July 2010. The Artesh has been spared most of the international attention that the IRGC receives. [45]



Russia, China, and North Korea loom large as IRI's best foreign military backers. These states have done hefty loads of business with Tehran in the recent past and are poised to do more in the future.

44). Iran Army, IRGC to hold joint military drill: Cmdr. http://www.presstv.ir/detail/238678.html
45). Middle East Institute Viewpoints: The Artesh • www.mei.edu pages 14-15

IRGC, IRIA and Naval Aviation Order of Battle Summary Chart

Air Force Order-of-Battle

Note: All Figures Include All Aircraft for IRGC , IRIA and Naval Aviation

Category	Quantity	In Service	Notes
Combat	320	224	
Transport	129	105	
Helicopters	570	340	



Combat Aircraft

Model	Quantity	In service	Since	Notes
Interceptors				
F-14A Tomcat	57	35	1972	Being upgraded
MiG-29	34	24	1990	
Subtotal	91	59		
Multi-role				
F-4 D/E • Phantom	55	36	1968	6 of which are RF-4E
Mirage F1-E 21 10 1991				
Subtotal 76 46				
Ground Attack				
Su-24	22	22	1991	
Su-25	13	13	1991	Upgraded
Saegheh 12	12	12	2006	Indigenously developed Low production rate
Azarakhsh	6	6	2000	
Subtotal	53	53		
Obsolete				
F-7	50	24	1987	
F-5 A/B/E	50	42	1974	
Subtotal	100	66		
Total 320 224				
Future procurement				
J-10	24			
Saegheh	25			
SU-27	?			

INSS.ORG.IL/IRAN 06/10/2011

The Islamic Republic of Iran's combined armed forces are no longer contains the military might and capability as it did during the Shah of Iran reign. From the mass executions of highly trained military personnel in the 1979 revolution to almost a decade of conflict the Iran – Iraq war, 1980 -1988 destroyed the once great military. In one of the largest ground assaults since World War II, Saddam sent 200,000 troops across the Iranian border, initiating what would become a bloody eight-year conflict. The U.S. threw the weight of its navy behind Iraq's position in the Iran-Iraq war. A large American Naval force protected oil tanker traffic and provoked and attacked by the IRI, responded crippling Tehran's navy. The Armed Forces of the IRI are still recuperating from the Iran-Iraq war. It lacks major weapons systems needed for it to be revived and modernized into an effective force. Along with harsh international sanctions which have hampered major arms producers from selling weapons and parts needed to repair its conventional military forces, Tehran can only limp along.

Procurement: Clandestine Black Markets for Military Parts

The IRGC –Quds are working strenuously in a clandestine black -markets to buy spare parts to keep their forces operational. In addition there have been many attempts by individuals in the U.S. trying to smuggle older F-4, F-5, and F-14 aircraft parts to IRI, which have been uncovered. This is an ongoing game of cat and mouse for example in 2011 a California man was convicted of not only trying to sell aircraft parts but an entire F-5B Tiger II fighter jet to the IRI. There is an international black-market arms market beating a path to IRI's door. US Intelligence officials say that IRI has only been able, through reverse engineering, to produce about 15% of the parts needed for F-4, F-5, and F-14 aircraft. But these are drastic stop-gap measures and insufficient to support effective aircraft operations. Even the US military decided to retire the F-14 aircraft from its forces because they were too labor intensive and prone to mechanical problems to sustain. IRI's military industry has been able to cannibalize, various military equipment. The most sophisticated combat aircraft in IRI's inventory includes some 25 F-14 Tomcats, 65 F-4 Phantoms, and 60 F-5 Tigers from the American, 24 F-1 Mirages from Iraqi pilot defections during the 1991 Gulf war, and 13 Su-25 Frogfoot, 30 Su-24 Fencer and 25 Mig-29 Fulcrums from Russia. The Russia aircraft will be the most capable and in the best service condition owing that Russia and China keeps selling maintenance requirement parts. The Mirages stand a good chance of being in fairly good condition too, due to black-market procurements channels left over from the Saddam sanctions era. [46]

The acquisition of new Chinese, Polish and Ukrainian main battle tanks has allowed for the expansion of the armored forces.

IRGC Field Artillery: is divided into regiment-sized groups. In the late 1990s, the IRGC was re-equipped with the Iranian-built Boraq tracked armored personnel carrier. IRGC has been given a key role in the deployment of Iran's medium and long-range ballistic missiles. In July 2000, the IRGC stated that it had formed five new ballistic missile units, today apparently equipped with the Qiyam-1 (or Qiam) intermediate-range ballistic missile, ranges from 1,300 to 1,800 Kilometers (807 mi to 1118 mi). The Qiyam missile is manufactured in the IRI and is rapidly becoming the backbone of the IRGC missile forces. The missile Qiyam Missile itself is reminiscent of IRI military industry other designs which are derivatives of the SCUD-family, specifically the Shahab-2/SCUD-C. The major difference was of the "triconic" warhead and the removal of the four stabilizing fins at the rear of the missile and the addition of a guidance system. They also have a variety of other missiles at their disposal such as Zelzal series. [47] In addition the IRGC are equipped with a number of different cruise missiles such as the domestically produced Ghader & Zafar cruise missiles. [48]

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46). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: May 16, 2012 pages 35-42 Man \Who Tried to Export Jet to Iran Gets 46 Months September 13, 2011 Associated Press| by Randall Chase military.com/news/article/man-who-tried-to-export-jet-to-iran-gets-46-months.html
47). Iran Equips IRGC With 'Qiyam-1' Ballistic Missiles March 29 2012
http://www.asian-defence.net/2012/03/iran-equips-irgc-with-qiyam-1-ballistic.html
48). Iran's Newest Cruise Missile Ghader http://defensetech.org/2011/08/23/irans-newest-cruise-missile/#ixzz1uiUbPNFX



Tehran's strategic missile forces are central to its deterrence strategy, International Political leverage in part because they are implicitly linked to CBRN programs. IRI has the largest inventory of ballistic missiles in the Middle East, (probably cruise missiles) along with the largest domestic missile/cruise production. The IRGC, which has operational control over IRI's missile forces, continues to extend the range and improve the performance of its ballistic missiles, several classes of which can range Israel and the Gulf countries. Their limited accuracy suggests they would not be useful in a conventional counter-force role. Instead, they are probably intended for strategic targets such as cities, oil production and export facilities, ports and water desalinization plants, unless armed with CBRN payloads. [49]

Islamic Revolutionary Guard Corps

- **From, CIA Unclassified 2010 Military Report on Iran: CDA Congressional Directive Action**

"The strength of the IRGC is estimated at 130,000 personnel, 31 Provincial Corps (two in Tehran Province) generally comprised of armor and infantry brigades, and artillery groups.

Additionally, each IRGC Brigade is allocated ten Basij Battalions, called Hossein Battalions, which support the IRGC Brigade in its combat operations. "Page 4

http://www.scribd.com/doc/29296633/CIA-Report-WMD-Proliferation-721-Apr10

- Again to note, various intelligence agencies reports on the Armed Forces of the IRI differ. I am providing the reader with a comparison contrast.

ISLAMIC REVOLUTIONARY GUARD CORPS IRGC ARMED FORCES			
IRGC Formations			
Type	Divisions	Independent Brigades Groups	Brigades in Divisions
Armored	4		
Mechanized/ Infantry	16		
Special Forces		3	
Artillery		6	
SSM		1-2	
Naval Marine Amphibious		1	
Air Born		1	
TOTAL	20	13-14	

Note: The IRGC has possibly reorganized as 26 divisions without independent brigades. IRGC divisions are smaller in size than army divisions, sometimes equivalent to the Strength of one brigade.

The Gulf Military Balance In 2012 page 25 CSIS/ORG ISS.ORG IL/IRAN 06/11

49). Iran's Military Doctrine Michael Connell http://iranprimer.usip.org/resource/irans-military-doctrine

"The IRGC operates most of Iran's surface-to-surface missiles and is believed to have custody over potentially deployed nuclear weapons, most or all other chemical, biological, radiological, and nuclear (CBRN) weapons, and to operate Iran's nuclear-armed missile forces if they are deployed." Iran's Revolutionary Guards 6/28/06 Page 3 Iran's Revolutionary Guards, the Al Quds Force, and Other Intelligence and Paramilitary Forces Anthony H. Cordesman Arleigh A. Burke Chair in Strategy August 16, 2007

- **Evolution of IRGC Chemical Defense Brigades**

After the end of the Iran-Iraq War the IRGC militia was restructured from its rag-tag loose organization and transformed into a conventional military structure. Between August 1988 and September 1988, the IRGC's ground forces were reorganized into 21 infantry divisions, 15 independent infantry brigades, 21 air defense brigades, three engineering divisions, and 42 armored, artillery, and *chemical defense brigades*. The IRGC was given new uniforms, and, in September 1991, 21 new military ranks (divided along four categories of soldiers, fighters, officers, and commandants) were created, from private to general. [50]

The creation of the IRGC Chemical Defense Brigades was paramount, especially after the loss of tens of thousands of Iranian soldiers (estimates from 300,000 to 2 million) to Iraq's chemical weapons. IRI military forces were for the most part incapable of fighting in chemical warfare environment. Tehran's ruling body realized they were facing every growing Iraqi chemical / biological weapons arsenal, and a ruthless sadistic sociopath Saddam Hussein in change of it.

The 1925 Geneva Protocol signed by International Community " *For the Prohibition of the use of in war of , Asphyxiating Agents, Poisonous or other Gases, and the use of Bacteriological Methods of Warfare , became the international mechanism that experts believed would create a stringent norm against the use of both Chemical and Biological Warfare agents* ". [51]

On the eve of the Iran-Iraq War, the 1925 Geneva Protocol stood as the controlling legal authority on the issue of chemical weapons. The Protocol's language did not ban the research, production, stockpiling, weaponization, or even retaliatory use of CW. In addition, the treaty did not contain an enforcement mechanism that allowed its transgressions to be punished appropriately by the international community.

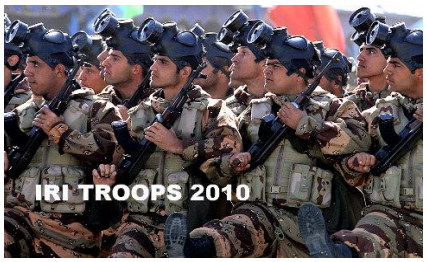
- ***The Islamic Republic of Iran Petitioned the International Community to stop Saddam's use of chemical weapons as highlighted in the 1925 Geneva Protocol, it fell on deaf ears.***

070296_cia_72566_72566_01.tx **Declassified Documents Iran/Iraq War**
Subject: CW USE IN IRAN-IRAQ WAR DIRECTOR OF CENTRAL INTELLIGENCE AGENCY

"IN SOME BATTLES THE CHEMICAL CASUALTIES (Iranian) HAVE BEEN IN THE THOUSANDS, WHICH HAS OVERWHELMED THE MEDICAL TRANSPORTATION SYSTEM (Iran) AND CAUSED SECONDARY CONTAMINATION CASUALTIES AMONG THE TRANSPORTATION AND MEDICAL STAFFS' WHICH ARE CAUSING HUNDREDS OF CHEMICAL CASUALTIES OF SECONDARY AND THIRD CONTACT CONTAMINATION" [52]

50). Iran's Military Forces after the Iran/Iraq War page 36
http://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1320/MR1320.ch4.pdf
51). Chemical Weapons and the Iran-Iraq War: A Case Study in Noncompliance contributor to Jane's Defence publications. Page 44
52). Federation of American Scientist http://www.fas.org/irp/gulf/cia/960702/72566_01.htm

Evolution of IRGC Chemical Defense Brigades: the Iran/Iraq War



Understanding the Iran/Iraq war and how it shaped the development of IRI's Armed Forces CBRN War doctrine and capabilities.

In November of 1983 Saddam launched a series of horrific chemical warfare attacks on unprotected Iranian Troops. Suffering heinous numbers of causalities in this Iraqi attack, Tehran began its first attempts to highlight Iraq's flagrant violation of the 1925 Geneva Protocol. The Islamic Republic began to circulate color pamphlets in Western Europe that depicted chemical casualties in Tehran hospitals. Despite this public relations campaign to call attention to the Iraqi chemical attacks, American and Europe largely fell silent. In March 1984 Tehran desperate presented some fifty horrifically wounded chemical warfare casualties to various European nations (the United Kingdom, Belgium, Austria, Switzerland, and Sweden). This was in order to graphically display the heinous results of Iraqi chemical attacks. Despite the apparent evidence that Iraq had indeed used CW agents against the Islamic Republic, Tehran's efforts came to nothing. However for Iraq the lack of international criticism only emboldened Saddam Hussein to expand his chemical war against Tehran. [53]

Janbazan Affairs Organization, Tehran Medical Report, Iran / Iraq War

"The exact number of injured persons during the eight years of Iraq-Iran conflict is not available, but according to JAO report, 398,587 individuals sustained injuries that required prolonged medical and health care following primary treatment. Of them, 52,195 (13%) were injured due to the exposure to chemical warfare agents such as mustard gas or nerve agents. Due to delayed manifestation of symptoms in chemical agent exposure, the number of Iranian chemical warfare victims will increase in the future. In addition, 218,867 Iranians died due to war injuries and it number included 56,575 army forces personnel (25.8%), 41,040 Islamic Revolutionary Guards Corps (IRGC) (18.8%), and 87,822 volunteers (40.1%). Meanwhile, civilians (mostly women and children) account for 15.3% (N=33,430) of total deaths. The mean age of martyrs was 23 years old. A major consequence of these deaths was that it left more than 144,000 children orphaned. Prisoners of war comprise 42,875 Iranian victims. They were captured and kept in Iraqi detention centers for many years after the war was over (from 2.5 to more than 15 years). Finally, we should point out that the number of untraceable individuals is not precisely known."

Iranian Casualties During The, Eight Years Of Iraq-Iran Conflict
Tehran, August 2nd 2007 Rev Saúde Pública 2007 page 41 http://www.scielosp.org/pdf/rsp/v41n6/6852.pdf

This official estimate does not include the civilian population contaminated in bordering towns or the children and relatives of veterans, many of whom have developed blood, lung, and skin complications, according to the Organization for Veterans of Tehran.

Saddam's Unmerciful Chemical Warfare Blitz: Not only did the Iraqi Dictator Saddam Hussein employ chemical weapons against the IRI, he waged chemical warfare on an apocalyptic scale against civilians, the Iraqi Kurds. Saddam's al-Anfal Campaigns, was a series of genocidal chemical warfare operations against the Kurds in Northern Iraq. [54] Saddam's Anfal campaigns, however, have largely been divorced from the history of the Iran-Iraq War. After 1986, both the Patriotic Union of Kurdistan (PUK) and the Kurdistan Democratic Party (KDP), the two major parties, received support from Tehran and sometimes took part in joint military raids against Iraqi government positions; the KDP also had a rear base inside Iran. [55]

53). Chemical Weapons and the Iran-Iraq War: A Case Study in Noncompliance, Javed Ali page 48 cns.miis.edu/npr/pdfs/81ali.pdf
54). Human Rights Watch, Genocide in Iraq: The Anfal Campaign Against the Kurds , July 1993, www.unhcr.org/refworld/
55). Iraq's Crime of Genocide: The Anfal Campaign against the Kurds Daniel Pipes Middle East Quarterly June 1996 http://www.danielpipes.org/709/iraqs-crime-of-genocide-the-anfal-campaign-against-the-kurds



Evolution IRGC Chemical Defense Brigades the Iraqi al-Anfal Campaign

The al-Anfal Campaign was a series of systematic CW and possible biological warfare attacks against the Kurdish population of northern Iraq, conducted between 1986 and 1989 and culminating in 1988. The campaign also targeted other minority communities in Iraq including Assyrians, Shabaks, Yazidis, Jews, Mandeans, and many villages belonging to these ethnic groups were also destroyed. Human Rights Watch estimates that between 50,000 and 100,000 people were killed during al–Anfal; Kurdish officials have put the number as high as 182,000. Destruction of 4,500 villages and massacre of civilian population, mass graves related to al–Anfal have been found in Hatra, near Mosul, and in Samawa, southeast of Baghdad. Not since the Nazis death camps of WWII, had the world see so many innocent civilians killed with chemical warfare agents. [56]

Halabja, in March 1988 Iraqi Chemical warfare attack, in which up to 5,000 Kurdish civilians died the incident caused a brief international furor.

Halabja The attack killed between 3,200 and 5,000 Kurdish people, and injured around 7,000 to 10,000 more, most of them civilians; thousands more died of complications, diseases, and birth defects in the years after the attack. The incident, which has been officially defined as an act of genocide against the Kurdish people in Iraq, was and still remains the largest chemical weapons attack directed against a civilian-populated area in history. [57]

'Iraqi General ,Ali Hasan al-Majid, Saddam's Hussein relative who implemented the Kurdish genocidal chemical warfare operations, announced in May 1988:

"I will kill them all with chemical weapons! Who is going to say anything? The International community? Fuck them! The international community, and those who listen to them!" [58]

Saddam christened Ali Hasan al-Majid with a name that stuck with the rest of his life,

"Chemical Ali".

Footnote:"Chemical Ali" was executed on Monday, January 25, 2010 after having been convicted on 13 counts of killings and genocide.



56) The Crimes of Saddam Hussein By Dave Johns 1988 The Anfal Campaign http://www.pbs.org/frontlineworld/stories/iraq501/events_anfal.html

57).Halabja Memorial Foundation http://halabja.eu/english/yeke.php?besh=Nusraw&perrge=nusraw&nujimare=18

58). Iraq's Crime of Genocide: The Anfal Campaign against the Kurds Daniel Pipes Middle East Quarterly June 1996 http://www.danielpipes.org/709/iraqs-crime-of-genocide-the-anfal-campaign-against-the-kurds



Evolution of IRGC Chemical Defense Brigades

■ The Iraqi Dictator Saddam Hussein had waged a genocidal war, openly against Kurdish civilians, and on an unheard scale of destruction using chemical warfare before the International community. His military generals publicly gloated, insulted the impotence of world leaders. For the Iranian people it must have seemed Saddam was a minion of the Dajjal. (Endtimes Demon)

War of the Cities: The Iran –Iraq War

As if this was not enough Saddam, beginning March 1985 Iraqi Scud missiles started to rain down on the Islamic Republic cities. By 1988 Iraq's missile superiority greatly advantaged it in the War of the Cities, enabling Iraqi military units to rollback the progress previously made by Iranian forces in the ground war, ultimately recapturing the strategic Al-Faw peninsula in Iraq. Iraq was able to give the Scud missile over twice its normal 300 kilometers, and some did missiles fly well over 500 kilometers. This was enough range for Iraq to reach Tehran and Qom from positions south of Baghdad.

The impact of Iraq's new missile, the Al Husayn and air strikes on the Islamic Republic was far different than in the past. Where the Iranians had previously been able to adapt to the relatively limited and short lived Iraqi bombing efforts, the Al Husayn missile had a terrifying collective traumatic effect on the population of Islamic Republic. Because of the ineptitude of the world community, with cold indifference to the genocidal chemical warfare, the civilian casualties, it was more than likely these missiles could contain chemical warfare agents.

IRI's armed forces did improve its chemical defense gear during 1986 and 1987 period. This equipment, however, only offered moderate protection against mustard and nerve gas, and even fully equipped troops suffered large numbers of casualties when they were exposed to Iraqi gas attacks. In addition ground forces lacked the detectors, command and control systems, and equipment to provide effective protection from nerve gas.

However it is true the IRI had forced Saddam on several occasions to ask for a cease fire, where Khomeini refused, this round of escalation changed matters. The Islamic Republic had the bulk of its armored inventory captured by Iraq. Saddam kept his strategic bombing against economic targets, and its attacks on Iranian shipping. Billions of dollars wasted, a half a million or more battlefield deaths with tens of thousands of wounded. IRI Prime Minister Mehdi Bazargan attacked Khomeini for continuing the war, the new Islamic Republic was coming apart. Many of Iran's top Officials along with Khomeini fled Tehran to safety. According to some reports, nearly a million Iranians had fled Tehran by mid-March 1985 and several million more had fled by late April 1985 alone. Protests against the war had become more frequent and protest rallies had been put down by troops at Komeinyshahr and Isfahan.

In 1988 Khomeini, fearing the disintegration of his Islamic Republic of Iran accepted a UN Cease-Fire. On August 8, 1988, the fighting came to a formal end. The Security Council of the UN met and announced a ceasefire effective dawn on August 20, 1988, Ayatollah Khomeini died on 03 June 1989. Roughly 100 of the Iraqi missiles had landed in Tehran and virtually all had hit near population targets. It is estimated the missile attacks on Tehran itself between killed more than 2,000 people, and wounded hundreds.

59). Iran war of the cities NTI http://www.nti.org/country-profiles/iran/delivery-systems/

Evolution of IRGC Chemical Defense Brigades



It is important to note the IRGC is the only professional military force outside of Iraq that has military leaders who fought almost a decade of war involving chemical weapons.

Tehran found itself facing the genocidal specter of Saddam Hussein on its border with the most powerful military force outside of Israel. The Islamic Republic Military Forces were spent, the economy in shambles. The once grand Shah's Armed Forces of Iran was no more. But there was more to come, from the remnants of the Shah's covert agencies, deep in the bowels of Iraq came terrifying information. From the crucial intelligence information which came out of Iraq, the Islamic Republic became even more desperate to rebuild its military capabilities as quickly as possible. This Iraqi intelligence became one of Tehran's more closely guarded secrets. A war torn desolated country, a crippled Iranian population would fallen into the abyss of chaos had the Iraqi intelligence became public. In June of 1988 as the warfront deteriorated, Ali Akbar Hashemi-Rafsanjani was made commander and chief of all of military forces of the Islamic Republic of Iran by Ayatollah Khomeini. [60] Rafsanjani became the corner stone of building the IRGC into a professional force. As a gifted coalition builder, Rafsanjani ended the destructive rivalries among regular, ideological, and paramilitary forces by integrating them under one command. The true depth Iraqi Intelligence secret would not be known, until late 1995 when United Inspectors (UNSCOM) had been in Iraq for several years. Saddam had been defeated and forced into a corner after his grandiose military invasion of Kuwait in 1991 by Coalition Forces headed by the US. Saddam's deadly arsenal of chemical weapons also contained biological warfare agents and it was incredibly advanced, and largest ever seen in the Middle East. Saddam was eager to position Iraq as the dominant regional Arab military and political power in the entire Middle East and North Africa. In early 1970s a oil prices spiked Iraq gained huge revenues, this new economic wealth Saddam's began to explore every aspect of WMD proliferation. Thus began the nuclear, chemical, biological, and ballistic missile programs during the mid-1970s, and all of these CBRN activities expanded in 1974. [61]

The IRGC Naval Branch undergoes extensive exercises and demonstrates capabilities that show it could deliver conventional weapons, bombs, mines, and CBRN weapons into ports and oil and desalination facilities,
Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12, Page 79

"Iranian decision makers concluded that the international community's tepid response to Iraq's chemical attacks signaled that the global powers were more likely to reward violations of international law than to recognize the dangerous precedent Iraq had established, as least when Iran was the involved in such conflicts. Iraq's CW attacks reinforced Iran's strategic insecurities, and most likely motivated Iran to try to acquire or produce WMD, especially CW agents. Moreover, given the effectiveness of Iraqi CW attacks against Iranian forces (especially during the latter stages of the campaign), Iranian commanders also began to appreciate the tactical, if not strategic, utility of CW on the battlefield"

Chemical Weapons and the Iran-Iraq War: A Case Study in Noncompliance Javed Ali The Nonproliferation Review/Spring 2001 page 54

60). Rafsanjani to Head Iran Armed Forces: Khomeini Move Follows Serious Iranian Losses in War With Iraq June 02, 1988|Associated Press articles.latimes.com/1988-06-02/news/mn-5911_1_armed-forces
61). Chemical Weapons and the Iran-Iraq War: A Case Study in Noncompliance Javed Ali The Nonproliferation Review/Spring 2001 page 45

International Officials cite the Islamic Republic of Iran under the Shah had signed the 1925 Geneva Protocol prohibiting the use of chemical and biological weapons. He also signed the 1972 Biological and Toxin Weapons Convention, a treaty prohibiting the development and stockpiling of biological weapons. According to these officials Tehran is bound to these treaties and "therefore " would not violate them.

One hundred and forty nations sign the 1972 Biological and Toxin Weapons Convention. In addition, official reports quote the late Ayatollah Khomeini who stated that such weapons were prohibited by the Quran. Saddam Hussein signed both 1925 Geneva Protocol and 1972 treaties. It did not prevent Iraq from developing chemical - biological weapons and stockpiling enormous arsenals of these deadly agents. As discussed earlier, during the Iran –Iraq war Tehran pleaded to the International community concerning Iraqi violations and use of chemical weapons. Who in turn did nothing enraged the Islamic Republic of Iran considers these treaties worthless.

- **It is particularly puzzling that Intelligence Officials can so easy brush aside the threat of biological and chemical warfare dangers and willing to gamble the lives of so many people in Middle East and beyond.**

24th Bessat Brigade CW IRGC : The National Council of Resistance of Iran (NCRI) and other exiled groups have a mixed record of providing accurate intelligence concerning the IRI, but there has been several critical revelations providing the IAEA with investigate leads, uncovering hidden CBRN facilities, such as the heavy water reactor at Arak, Kolahdouz Complex, Ardekan Nuclear Fuel Site. Accusations brought by the NCRI, in the past, have proved to be accurate in regards to Iran's Ashura/Ghadr-110 ballistic missile program, as well as Iran's continuation of its nuclear program after 2003. (More of this on this will be found in other chapters). [62]

NCRI: *"**A special organization dubbed Special Chemical, Biological and Nuclear Industries has been set up in the Ministry of Defense. This entity is also involved in chemical and biological activity. This organization is in charge of arming the regime with microbial and chemical bombs and has been strengthened during Khatami's presidency. The organization is also responsible for procuring technological needs of microbial and chemical weapons as well as chemical and microbial bombs**." [63]*

NCRI: 24th Bessat Brigade

"Since 1999, the chemical offense 24th Bessat Brigade of the GC has been re-established in a much larger scale. This brigade which was dissolved in the fall of 1990 had used chemical bombs and shells with chemical heads in its Artillery units during the Iran-Iraq war in the 1980s. The headquarters of this brigade is in a military barrack base in the city of Boroujerd in Lorestan Province". [64]

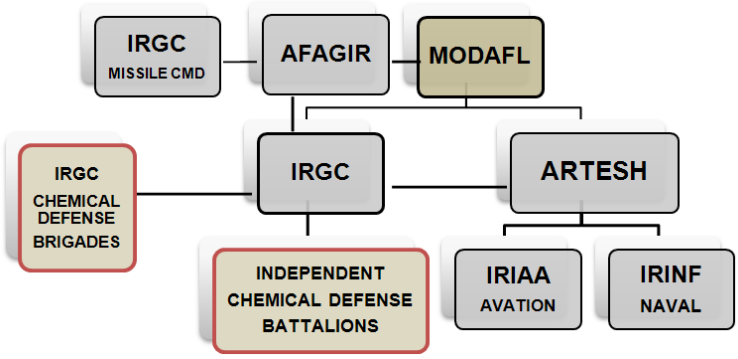
The 24th Bessat Brigade personnel are handpicked highly trained in offensive bio. & chem. Warfare , The Officers and senior NCOs' are given college intensive level course covering medical , chemical and biological subjects at the Imam Hossein University of the Islamic Revolutionary Guards Corps, located in northern Tehran, which is involved in chemical and biological technology. [65]

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62) Iran's Nuclear Program: Recent Developments CRS Report for Congress Order Code RS21592 August 15, 2003 page 3 http://www.iwar.org.uk/news-archive/crs/24050.pdf
63). Iranian Weapons of Mass Destruction, The Birth of A Regional Nuclear Arms Race ? Cordesman & Seitz 2009 page 172
64). IBID 2
65). Remarks By Alireza Jafarzadeh U.S. Representative Office, National Council Of Resistance Of Iran August 14, 2002 iranwatch.org/privateviews/NCRI/perspex-ncri-topsecretprojects-081402.htm

Aerospace Force of the Army of the Guardians of the Islamic Revolution (AFAGIR)

AKA the Islamic Revolutionary Guard Corps Aerospace Force (IRGC -AF),



AFAGIR is estimated to comprise of 52,000 personnel, stationed at 10 fighter bases, 19 fighter/fighter bomber and trainer squadrons, one reconnaissance squadron, and 10 transport/tanker squadrons. While the exact force structure is unclear, the AFAGIR is estimated to include 5,000 additional personnel and possess some capability to support ground attack missions. [66] The AFAGIR maintains the largest inventory of the Islamic Republic's missiles forces.[67]

- ***AFAGIR is blending of the IRGC Air Force and Missile forces, but more importantly it the outgrowth Mosaic Doctrine Warfare.***

The Ministry of Defense and Armed Forces Logistics (MODAFL) was created for a unified command-and-control structure for IRI's armed forces. Although MODAFL technically controls the Revolutionary Guards Corps (IRGC), the IRGC in fact enjoys substantial autonomy and pursues separate defense projects. [68]



Research has lead me conclude there are at least two other CBRN Brigades along with an unknown number of independent Battalions. These independent battalions would facilitate distribution, employment of chemical and biological warfare munitions throughout the different branches and units of the Armed Forces. This ability would be a military necessity to wage a competent chemical & biological war, from employment of chemical artillery shells, C-B aerial bombs, sprays, to C-B UAVs, missile and cruise missiles delivery. The Aerospace Force of the Army of the Guardians of the Islamic Revolution (AFAGIR) is in charge of all of Tehran's missile capabilities, and the bulk there of. It would be strategic and tactical necessity to have its own CBRN Brigade.

In the light of the Mosaic Doctrine; cruise missiles play a force multiplier role when mounted on older jet aircraft. For the fraction of the cost of new fighter aircraft, plus the cost and years of training a pilot you can purchase several fairly technologically advanced cruise missiles. With these advanced cruise missiles an antiquated jet fighter would have with serious military capabilities. This is especially when some models of cruise missiles traveling as fast as Mach II & III. Cruise missiles are a superior delivery system for chemical and biological warfare agents. As with a ballistic missile there are tremendous g-forces involved with delivery, not so with cruise missiles, this is also even more critical with delivering biological warfare agents (covered in in-depth in the chapter on missiles).

AFAGIR is parallel to the Artesh, Islamic Republic of Iran Air Force (IRIAF), the regular air branch of the Military of , the Revolutionary Guards' have their own air force. They share facilities with the IRIAF.

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66). Iran's Military Power , Statement before the Committee on Armed Services United States Senate 14 April 2010 Lieutenant General Ronald L. Burgess, Jr., United States Army Director, Defense Intelligence Agency http://armed-services.senate.gov/statemnt/2010/04%20April/Burgess%2004-14-10.pdf
67). IISS Military Balance 2007, p.225.
68). Ministry of Defense and Armed Forces Logistics (MODAFL) www.globalsecurity.org/military/world/iran/mod.htm



IRGC Mosaic Military Doctrine's Evolution

In 2007, Major General Mohammad Ali Jafari became the new commander in chief of the IRGC. Jafari earned his stripes during the Iran-Iraq War, in which he was chief of the IRGC's Najaf base. After the war, Jafari served as commander of IRGC Ground Force for more than a decade, 1994-2005. He then became chief of the newly established IRGC Strategic Studies Center. Under his supervision, the center began to conduct research into "velvet revolutions" and alleged U.S. soft regime change policies were infecting Iran. He argued that the IRGC should focus on future internal threats to the Islamic Republic's stability. This led the IRGC to establish the Al-Zahra and Ashoura Brigades which serve as anti-riot forces within the organizational framework of the paramilitary Basij Resistance Force. [69]

His second prominent reform involved dividing the IRGC into thirty one commands, one for each province and two for Tehran. Since its beginning the IRGC had been a centralized military structure. The provincial basis of IRGC units is an improvement towards the local commanders' control over recruitment. This also restructures IRGC capabilities as an anti-riot force and guards the organization against any attempts to decapitate it, as in the event of a U.S. or Israeli military strike against the Islamic Republic. [70]

IRGC THIRTY-ONE COMMANDS
IMAM SADEGH CORPS::: Bushehr
QAMAR BANI HASHEM CORPS::: Chaharmahal and Bakhtiari Province
ASHURA CORPS::: East Azerbaijan Province
FAJR CORPS::: Fars Province
QODS CORPS::: Gilan Province
NEYNAVA CORPS::: Golestan Province
ANSAR AL-HOSSEIN CORPS::: Hamedan Province
IMAM SAJJAD CORPS::: Hormozgan Province
AMIR AL-EMENIN CORPS::: Ilam Province
SAHEB AL-ZAMAN CORPS::: Isfahan Province
SARALLAH CORPS::: Kerman Province
KERMANSHAH PROVINCE CORPS:::
ALI-YE ASR CORPS ::: Khuzestan Province
BEIT AL-MOGHADDAS CORPS::: Kordestan Province
FATH CORPS::: Kohkiluyeh & Boyer Ahmadi Province
ABOL-FAZL AL ABBAS CORPS::: Lorestan Province
ROUH-ALLAH CORPS::: Markazi Province
KARBALA CORPS::: Mazandaran Province
JAVAD AL-A'EMEH CORPS::: North Khorasan Province
SAHEB AL-AMR CORPS::: Qazvin Province
ALI IBN-E ABI-TALEB CORPS::: Qom Province
IMAM AL-REZA CORPS::: Razavi Khorasan Province
NEYNAVA CORPS::: Semnan Province
SALMAN CORPS::: Sistan-Baluchistan
ANSAR AL-REZA CORPS::: South Khorasan Province
SEYYED AL-SHOHADA CORPS::: Tehran Province
MOHAMMAD RASULOLLAH CORPS::: Greater Tehran
SHOHADA CORPS::: West Azerbaijan
AL GHADIR CORPS::: Yazd
ANSAR AL-MADHI CORPS::: Zanjan Province
HAZRAT-E ABBAS CORPS::: Ardebil Province

Saberin IRGC Fast-Response Battalions: Each Provincial Corps has a unit called the Saberin. It is a rapid response military element. There is a total of 33 plus. [71]

The third prominent reform came after the Hezbollah -Israel War of 2006. This highlighted the IRGC combat analysis and assessment of American Forces in Iraq. The Islamic Republic military and intelligence agencies had been carefully building up the Lebanese Hezbollah militant forces based on Mosaic Doctrine. In Fact the IRI must have spent at least 2 billion dollars in Lebanon for this purpose. (This issue is covered in-depth in IRI-Israel chapter) For example, the overwhelming number of close quarters combats engagements in 2006; some of the Hezbollah involved may have expected to annihilate the IDF ground forces by surprise safely at pointblank range, but in many of these cases, the Hezbollah were accepting decisive engagement in the context of protracted firefights that are more consistent with intent to hold ground. [72] Demonstrably the Hezbollah in 2006 had changed their ground tactics much to the surprise of not only to Israeli Forces but the International Military Community as well. The Hezbollah ground tactics and strategy mirrored General Vo Nguyen Giap, engagements from the American Vietnam War. General Giap developed the tactical concept of, "Hugging the Belt". By engaging at close quarters American soldiers were unable to employment their two most viable assets in combat, calling for artillery and air support. [73]

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69). What Do Structural Changes in the Revolutionary Guards Mean? Ali Alfoneh | AEI Online September 23, 2008 aei.org
70). IBID 69
71). Unclassified Report on Military Power of Iran. U.S. Department of Defense. April 2010.
72). The 2006 Lebanon Campaign And The Future of Warfare: Implications for Army and Defense Policy Stephen Biddle Jeffrey A. Friedman September 2008, page 38 http://www.strategicstudiesinstitute.army.mil/pdffiles/pub882.pdf
73). People's War, People's Army The Viet Cong Insurrection Manuel for Underdeveloped Countries By General Vo Nguyen Giap

- **Mosaic Doctrine Key Pillars: Having up-to-date intelligence about the perceived enemy's movements and activities, and second, increasing the regime's missile capabilities.** Cordesman and Seitz: Iranian Weapons of Mass Destruction 1/12/09 Page 14

Mosaic Warfare Doctrine in the 2006 Israel- Hezbollah War: On September 3 2007 Gen. Jafari stated, *"Given the enemy's numerical or technological superiority, the IRGC would make use of "asymmetrical" warfare capabilities that were developed in the Iran-Iraq War*". He also said Hezbollah successfully used this type of warfare in 2006, against Israel ground and air forces. [74] During the 2006, 33-day war Hezbollah not only used unguided surface-to-surface rockets, improvised explosive devices (IEDs), and rocket-propelled grenades (RPGs), it also employed a number of guided weapons against Israeli forces, in particular anti-tank missiles and, in one instance, an anti-ship cruise missile (ASCM). IRGC, moved to and is refining towards a more network-centric combat force model, Divisions and brigades are lightweight, mobile infantry units equipped with weaponry such as MANPATS/MANPADSs (Man portable antitank and antiaircraft weapons) that serve to counter or deflect enemies' strengths without challenging them on their own level. These units would fight on the defensive, alternately pulsing and swarming around an invading army, aiming to bleed them out not through decisive engagements but through consistent, omnipresent attrition reducing their enemy's ability to wage war. The Islamic Republic has made tremendous leaps and bounds in recent years, towards establishing this doctrine. The IRGC is receiving nearly unlimited funding compared to other branches as well as directing arms procurement strategies.

"Even in a war between state armed forces, different forms and degrees of asymmetry may develop. The more extreme the asymmetry, the less validity of classical military doctrine. There is no longer a simple clash between masses striving to destroy one another in the theater of operations rather, a multilevel and multidimensional reality is created," Page 37, The Nature of War Ron Tira

IRGC Shift: Battalions Rather Than Brigades Form the Backbone of Independent Maneuver Units

Jafari abolished the traditional system of brigades and divisions and replaced them with 31 provincial "Corps". Also within the IRGC Corps, there was a shift towards battalions rather than brigades for forming the backbone of independent maneuver units with an emphasis on mobility, autonomy. In addition to the maneuver battalions, the IRGC-GF also maintains thousands of squads that operate without parent units and are designed to roam the battlefield autonomously. Jafari's combined the Basij militia and the regular IRGCGF. Instead of being an entirely separate force, the Basij is now part of specific IRGCGF units. Specifically, 10 battalions of Basij are now assigned to each provincial corps. [75] According to the January 20, 2003, issue of Sobh-e Sadeghnewspaper, the region is divided into two resistance areas: Tehran Province, which is subdivided into three resistance zones (Shemiran, Rey, and Eslamshahr), and Tehran City, which is subdivided into four resistance zones (the northwest Qods zone, the southwest Abouzar zone, the northeast Shahid Beheshti zone, and Pupil's Basij Zone with an independent command). This basic structure was incorporated into the so-called "Mosaic Doctrine" of the Islamic Revolutionary Guard Corps (IRGC). Conceived in summer 2008, this doctrine merged the Basij into the IRGC's provincial structure. Specifically, the Guards and the Basij are divided into thirty-one units: one unit per province and two units for the Tehran area (one for Greater Tehran and one for Tehran City). The Basij statute stipulates that the militia's mission is to "create the necessary capabilities in all individuals believing in the Constitution and the goals of the Islamic Republic to defend the country, the regime of the Islamic Republic, and aid people in cases of disasters and unexpected events." Rather than having independent bases, the Basij is physically organized at mosques, government administrative offices, factories, and educational institutions. This and other factors make it impossible to establish precisely how many members the Basij has. [76]

74). Iran New Commander Takes Over Revolutionary Guards September 4, 2007 (RFE/RL)
75). The Ideological-Political Training of Iran's Basij Dr. Saeid Golkar Middle East Brief September 2010
76) The Basij Resistance Force: A Weak Link in the Iranian Regime? February 5, 2010 Ali Alfoneh | Washington Institute for Near East Policy www.aei.org/article/foreign-and-defense-policy/regional/middle-east-and-north-africa/the-basij-resistance-force/

Organization for the Mobilization of the Oppressed, the Basij and the Mosaic Doctrine

Basij Ashura & Al-Zahra Battalions, Karbala and Zolfaqar Combat Cells

Since Basij is comprised of both men and women, General Jafari established Al-Zahra Battalions (for women) and Ashura battalions for men, numbering 300–350 personnel each. All members of the battalions are trained to use light arms and rifles. Since Gen. Jafari assumed command of the IRGC on September 1, 2007, the Basij have received extensive organizational and logistical support by the Revolutionary Guards that has enabled it to form 30,000 new combat cells, each of them 15-20 members strong, named Karbala and Zolfaqar. These units cooperate closely with the army of the IRGC. Some Ashura battalions are regularly trained in riot-control tactics and how to deal with domestic uprisings. [77]

- **Basij forces eventually evolved into three main groups, the Regular Section, Military Section, and Active Section. The Active Basij' receive supplementary training and coordinate with the IRGC on active duty and Special Basij Members. Special Basij' are considered honorary soldiers in the IRGC.**
- **The Basij Regular and Special Members are subdivided into five units: the Pupil Basij, the Student Basij, the University Basij, the Public Service Basij, and the Tribal Basij.**
- **Basij Imam Hossein Battalions are composed of Basij war veterans who cooperate closely with the IRGC ground forces.**
- **Basij Imam Ali Battalions , deal with security threats [78]**



The Basij was restructured to Mirror the Hezbollah's Military Configuration.

Members of the younger Pupil Basij are aged between 12-15 and those of the elder Pupil Basij between the ages of 15-18. There are special summer camps for members of the Pupil Basij. Basij's networks weave across cities and neighborhoods. Basij reserves and other elements mirror the Hezbollah concept of the part-time guerrilla who lives in his village, practices in occasional drills and keeps a modest stock of weaponry, but for the most part remains a citizen and only rises to fight when the threat arrives and who blends in with the local civilian populace because for all intents and purposes, he or she is part of the local civilian populace. Additionally Basij members act as "morality police" in towns and cities by enforcing the wearing of the hijab; arresting women for violating the dress code; prohibiting male-female fraternization; monitoring citizens' activities; confiscating satellite dishes and "obscene" material; intelligence gathering; and even harassing government critics and intellectuals. Basij volunteers also act as bailiffs for local courts. [79] For General Jafari the Basij is the cornerstone in ferreting out and preventing a velvet revolution. As seen in the disputed 2009 presidential elections riots, and since, the Basij forces has played a pivotal role in controlling the Iranian people, and reinforcing Ali Khamenei's rule. The Basij organizational structure divides each city in Iran—depending on its size and population—into "resistance areas." Each resistance area is then divided into resistance zones, each zone into resistance bases, and each base into several groups. The smaller towns and villages have Basij "resistance cells." Sensitive social housing areas, such as housing for members of the regular army, also appear to have a special Basij presence. [80]

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77).The Ideological-Political Training of Iran's Basij Dr. Saeid Golkar Middle East Brief September 2010 http://www.brandeis.edu/crown/publications/meb/MEB44.pdf
78).The Basij Resistance Force Ali Alfoneh http://iranprimer.usip.org/resource/basij-resistance-force
79).The Ideological-Political Training of Iran's Basij Dr. Saeid Golkar Middle East Brief September 2010
80).http://www.brandeis.edu/crown/publications/meb/MEB44.pdf
The Basij Resistance Force A Weak Link in the Iranian Regime? Ali Alfoneh | Washington Institute for Near East Policy February 05, 2010 http://www.aei.org/



IRGC Al Qods (Jerusalem) Force Division (IRGC –QF)

Its name, Qods (Quds), is the Arabic word for Jerusalem, and this name signifies a promise that one day the IRGC will liberate Jerusalem from the Jewish colonizers and destroy Israel. [81]

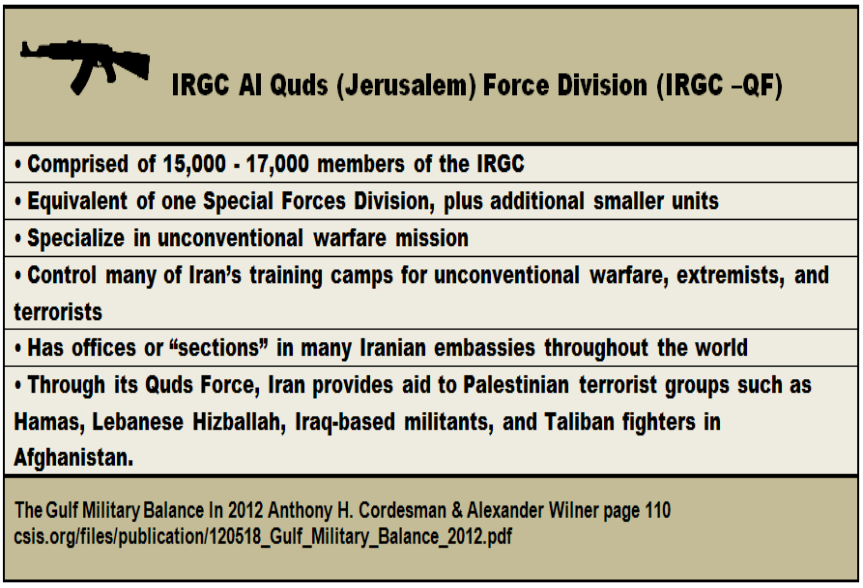
The primary mission of the Quds Force is to organize, train, equip, and finance foreign Islamic revolutionary movements. Quds Force maintains and builds contacts with militant Islamic organizations throughout the world. General Suleiman has been in charge of the IRGC-QF since 1998. Originally IRGC-QF was loosely created unit by Hashemi Rafsanjani during the Iran-Iraq war which evolved into a special ops branch from its covert activities. After the Iran-Iraq War the Quds Force continued to support the Kurds fighting Saddam Hussein. The Quds also expanded their operations into other areas, most notably aiding Ahmed Shah Massoud's Northern Alliance against the Soviets during the Soviet war in Afghanistan. [82] However it did not become an official branch of the IRGC until 1990. The IRGC-QF has become strategically importance for expanding International activities.

Sudan & the IRGC-QF : Sudan declared itself an Islamic state in 1990, Sudan's General Bashir visited Tehran and said the two countries shared a common duty to propagate Islam, especially after the American military buildup in Saudi Arabia. [83] After a visit in 1991 to Khartoum by the then President, Hashemi Rafsanjani, agrees to grant military and economic assistance to Sudan, extending to it the potential to not only consolidate its power at home but also to materially and morally promote Islamic groups. It was during this period when the IRI began a building series of collective International militant training camps in Sudan. Of which the new enlarged Qods Forces would be in charge of. (This will be covered extensively in a subsequent chapter). Thus began the IRGC-QF the harbinger of International Islamic terrorism. [84]

The U.S. State Department considers Islamic Republic of Iran the world's "most active state sponsor of terrorism." [85]

According to the U.S. Department of Defense, IRGC- QF has been "involved in or behind some of the deadliest terrorist attacks of the past 2 decades."[86]

- **The IRGC Intelligence Branch (IRGC-IB):** The Qods Forces work closely with the IRGC-IB and the Ministry of Intelligence and Security. The IRGC-IB has roughly 2,000 staff members of its intelligence force are a largely politicized force with a political missions. [87]



81). Iranian Entity: IRGC-Qods Force http://www.iranwatch.org/suspect/records/irgc-qods-force.html
82). The Revolutionary Guards' Role in Iranian Politics by Ali Alfoneh Middle East Quarterly Fall 2008, pp. 3-14
83). Sudan Is Seen As Safe Base For Mideast Terror Groups Published: January 26th, 1992, NYT
84).Iran Continues to Back Al-Bashir's Sudan 27.09.2011 emanuelle.vesely@realite-eu.org
85). Unclassified Report on Military Power of Iran. U.S. Department of Defense. April 2010.
http://www.fas.org/man/eprint/dod_iran_2010.pdf
86).IBID 5
87). Iranian Weapons Of Mass Destruction: The Broader Strategic Context 2008, Anthony H. Cordesman page 48



IRGC & Mosaic Land Warfare Doctrine

IRGC still retains designated heavy "corps" with conventional AFV (armored fighting vehicles) and artillery support. Since the Mosaic Doctrine calls for autonomy and self-reliance, support units such as artillery groups which are only designed to act in support of other larger formations rather than accomplish objectives are fading from use. Also, because of this, battalions would likely retain a greater range of equipment within their organization in order to facilitate greater autonomy from their parent units. Mechanization is provided by the Safir-74 and T-72 tanks supported by BMP-1/2 IFV's. With some use of the M113, the Boragh being the most common there still appears to be a shortage of AFVs. The Type-63 APC is also used, but at what rate is unknown. Self-propelled artillery appears to remain limited to 2S1s and the few M-1978 remaining in service, though at least 2 battalions of Raad-2s are likely. HM 41s, M-46s and D-30s are common when it comes to towed systems. The IRGC also operates rocket artillery. [88]

The mosaic defense plan allows the Islamic Republic Armed Forces to take advantage of strategic depth and Iran's formidable geography to mount an insurgency against invading forces.

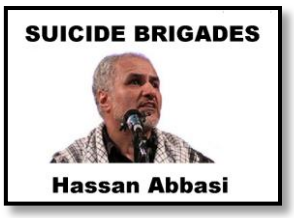
According to Mosaic doctrine, in order to realize its defense capacity in scope and depth, the IRGC-GF has been organizing and equipping its units on the basis of a battalion-based plan. The main characteristic of this strengthening measure has been to pay particular attention to the volume of the battalion's fire power—with special stress on its anti-armor and anti-helicopter capacity as well as self-reliance and mobility of the combat battalion. Whereas the Artesh mix of armored, infantry and mechanized units, would constitute Tehran's initial line of defense against invading forces. IRGC –GF troops would support this effort, but they would also form the core of popular resistance, the bulk of which would be supplied by the Basij, the IRGC's paramilitary volunteer force. [89] The majority of IRI's population centers and major lines of communication are spread out within the interior of the country. The surrounding borders are ringed by rugged mountain ranges that serve as natural barriers to invasion. As enemy supply lines stretched into Iran's interior, they would be vulnerable to interdiction by special stay-behind cells, which the IRGC has formed to harass enemy rear operations. However, this doesn't apply to one area in Iran the southwest of the country in the Khuzestan province. Mostly flatlands and covered in light desert, Khuzestan is perfectly suited for the US style of warfare, with nowhere to hide, US air-power and armor maneuvering forces would rein supreme. In fact, many top Islamic Republic military analysts consider it a given assumption that an invading power would occupy Khuzestan in the opening thrust. The Khuzestan province area would most likely defended with CBRN warfare.

Mosaic Land Warfare Doctrine Mobilization: Mo'in Plan, the IRGC has developed a wartime mobilization plan for the Basij, called the Mo'in Plan, according to which Basij personnel would augment regular IRGC units in an invasion scenario. IRGC and Basij exercises have featured simulated ambushes on enemy armored columns and helicopters. Much of this training has been conducted in an urban environment. [90]

- **IRGC Ansar Ul Mehdi Corps:** The Ansar-Ul-Mehdi (Followers of Imam Mehdi) Corps is primarily responsible for the protection of top officials of government and parliament (excluding the Supreme Leader). They are also the bodyguard force for the top scientists, staff of the nuclear and missile programs. As an elite, secretive force within the IRGC Ground force, its officers are entrusted with many other special assignments, Like Counter Intelligence & Covert Operations beyond Iran's borders. The corps has four layers of protection for top officials and the agents go to each layer according to their experience and loyalty. The current commander of Ansar-Ul-Mehdi is Colonel Asad Zadeh. [91]

87). Corps, the Pasdaran http://azadeganiran.com/PDf/IRGC-Report-Saremi.pdf
88).The 2006 Lebanon War and the evolution of Iranian Ground Tactics Cpt. Marc Lindemann, New York National Guard
89). IBID 2
90). Iranian Revolutionary Guard Corps: Terrorist Organization http://iranprimer.usip.org/resource/irans-military-doctrine
91). IBID 2

The Lovers of Martyrdom Garrison, Mosaic Warfare Doctrine & Suicide Brigades



The IRGC suicide garrison formed in mid-2000 by IRGC former commander Dr Hassan Abbasi, at the IRGC military & strategy research facility the Doctrinal Analysis Center for Security without Borders. Hassan Abbasi currently he is the chief of Iran's National Security & Strategic research center. [92]

Suicide Martyrdom Operations, Evolved Out of the Iran –Iraq War & Played a Pivotal Role in Stopping Saddam's Invasion of Iran

Basij was founded by the revolutionary leader Ayatollah Ruhollah Khomeini to provide volunteers for "human wave" attacks in the Iran-Iraq war (1980-88). Outgunned by the much better trained and equipped Iraqi army of Saddam Hussein and held at bay by Iraqi minefields, the Basij units ended up using tens of thousands of boys as young as 12 who were drafted to serve as martyrs. With golden-colored keys around their necks to enter paradise, they were trained to run straight into Iraqi fire and through the minefields in wave after bloody wave. The impoverished families from which the boys were selected were rewarded with emoluments hard to resist. Following the death of their children, families were publicly praised. At least 100,000 Iranian boys were thus sacrificed. [93]

"The record of suicide terrorism from 1980 to 2001 exhibits tendencies in the timing, goals, and targets of attack that are consistent with this strategic logic but not with irrational or fanatical behavior: (1) timing— nearly all suicide attacks occur in organized, coherent campaigns, not as isolated or randomly timed incidents; (2) nationalist goals—suicide terrorist campaigns are directed at gaining control of what the terrorists see as their national homeland territory, specifically at ejecting foreign forces from that territory; and (3) target selection—all suicide terrorist campaigns in the last two decades have been aimed at democracies, which make more suitable targets from the terrorists' point of view."

American Political Science Review Vol. 97, No. 3 August 2003 The Strategic Logic of Suicide Terrorism Robert A. Pape the University of Chicago, page 3 http://danieldrezner.com/research/guest/Pape1.pdf

Supreme leader Ali Khamenei's, "*Martyrdom-seeking operations mark the highest point of the greatness of a nation and the peak of is epic. A man, a youth, a boy, and a girl who are prepared to sacrifice their lives for the sake of the interests of the nation and their religion is the symbol of the greatest pride, courage, and bravery" [94]*

Abbasi is the architect of the so-called "War Preparation Plan and Mosaic Doctrine

As part of the Mosaic Doctrine suicide operations would play a major military role somewhat like the Kamikazes of WWII, except there would be a combination of military suicide operations against an invading Army on land, sea and air. In addition there would be convert International suicide attacks against the aggressor(s).

The Islamic Republic of Iran was origin of the Islamic Suicide Bomber, which began in the Iran - Iraq War* My Life Is a Weapon: A Modern History of Suicide Bombing Christopher Reuter, 2006 *page 11

92). Iran's Suicide Brigades Terrorism Resurgent by Ali Alfoneh *Middle East Quarterly* Winter 2007, pp. 37-44
93). Suicide Bombing as Worship Dimensions of Jihad by Denis MacEoin Middle East Quarterly Fall 2009, pp. 15-24
94). Iran's Suicide Brigades Terrorism Resurgent Ali Alfoneh | Middle East Quarterly January 01, 2007

Mosaic Warfare Doctrine & Suicide Brigades

Enlisting Volunteers Online: On July 26, 2006, the Iranian news agency Alborz announced that volunteers could sign up online for the "Army of the Fighters of Muhammad" online. The news agency report explained that the Army of the Fighters of Muhammad was recruiting fighters to be sent to Lebanon, for the Hezbollah –Israel war and that those interested in signing up could also call a telephone number in Tehran. According to the report, the minimum age for enlisting is 16. [95]

An even more specific application form lets volunteers mention where they want to conduct their suicide mission:

- ***Fighting against the American forces in Iraq;***
- ***Fighting against the Israeli forces in Palestine;***
- ***Killing author Salman Rushdie. [96]***

Suicide Brigades: ***To avoid International criticism the Islamic Republic ceased to advertise creation of the IRGC suicide divisions after and passed this responsibility to a nongovernmental organization called "The International Headquarters for Honoring Muslim Martyrs." This group openly to recruits volunteers from all walks of life.***

An Iranian View of US Psychological Operations in Iraq and Afghanistan 2007 By Njdeh Asisian www.au.af.mil/info-ops/iosphere/07spring/iosphere_spring07_asisian.pdf

Abbasi, in a speech at Khaje Nasser University Iran, he stated "a martyr deals directly with god and sells his soul only to god." He added "Only certain people deserve to participate in the suicide operations." Abbasi noted that "The members of Lebanon's Hezbollah are dear, because they only sell their soul to the god." In addition he said "Our Islamic Revolution is the only Revolution which is directed towards god; therefore, we have to be very attentive to our revolution. He added that "We never dissected the Ayatollah Khomeini's statement when he called the United States Great Satan." Abbasi states that "America means enemy, and enemy means Satan. [97] Even prior to his election 2005 as president, Ahmadinejad helped initiate a recruitment campaign for suicide operations in the IRGC and Basij forces. With Iranian children's cartoons celebrating the prospect of martyrdom against an invading enemy, "martyr" recruitment has accelerated since Ahmadinejad's election, and the administration has even taken online applications through a designated website. On October 2005, only months after Ahmadinejad's inauguration, Samadi told the media that "40,000 have already signed up for martyrdom-seeking operations," boasting that they had been, "organized into three battalions of volunteers with more to follow in due course." Samadi later said in July 2006, that the number of would be bombers had grown to 55,000. Suicide bombing units have been created in cities across the IRI, with leaders even openly asking people to participate in these units. In 2006 the Basij began a recruitment drive throughout the Islam Republic .The Basij printed applications for new recruits wanting to join these suicide groups. This application it was mentioned that

"in order to achieve all-round readiness against the enemies of Islam and the sacred Islamic Republic and to protect the foundations of Islam, the Lovers of Martyrdom Garrison plans to organize 'a martyrdom-seeking division' for each province in the country and give them specific and specialized training. We therefore request all our pious brothers and sisters, who are committed and determined to defend Islam, if willing, to submit two photographs of themselves and a copy of their identity cards, and the filled-in application form below to the following address, so that preparations for their organization and training could begin." [98]

95) The Ayatollahs' suicide bombers Fox News, September 7, 2008 Alireza Jafarzadeh
96).An Iranian View of US Psychological Operations in Iraq and Afghanistan By Njdeh Asisian www.au.af.mil/info-ops/iosphere/07spring/iosphere_spring07_asisian.pdf
97). An Iranian View of US Psychological Operations in Iraq and Afghanistan 2007 By Njdeh Asisian http://www.au.af.mil/info-ops/iosphere/07spring/iosphere_spring07_asisian.pdf
98). The 2006 Lebanon War and the evolution of Iranian Ground Tactics Captain Marc Lindemann, New York National Guard page 112 http://usacac.army.mil/CAC2/MilitaryReview/Archives/English/MilitaryReview_20100630_art015.pdf



Mosaic Doctrine & Suicide Brigades

IRGC Mohammad Reza Jafari told the weekly Parto Sokhan in summer 2005 that a military base under his command, the "Lovers of Martyrdom Garrison," had begun to recruit and train volunteers for "martyrdom-seeking operations." He added that:

- ***"Martyrdom-seeking Division will be formed for each province in the country, organized in brigades, battalions and companies." [99]***

Military Exercises' & Martyrdom Tactics

There have been only been two mentions of a military exercise for the suicide brigades around the Karaj Dam. Muhammad-Reza Ja'afari, commander of the Gharar-gah-e Asheghan-e Shahadat (Congregation of the Lovers of Martyrdom) training camp, referred to one exercise as the "Labeik Ya Khamenei" (We are responding to your call, Khamenei). [100]

- **Basij Martyrdom Elements**

Since 2004, the Iranian religious-political leadership and the military command staged a bottom-up review of the massive self-sacrifice experience of the 80s, adding to its new elements, gained particularly from the Iraqi and Palestinian insurgency, and even Al-Qaeda suicide terrorist attacks. Simultaneously, it has launched a public, widely covered by the media, a campaign to recruit dedicated suicide personnel (esteshadiyoon, or 'those who are martyrdom') to its military and paramilitary structures, namely the IRGC and Basij forces. [101]

- **Martyrdom Operations and Their Religious Legitimacy**

The issue of martyrdom operations and their religious legitimacy has been repeatedly discussed by Tehran's ayatollahs the general consensus it is a holy Islamic obligation. In a 2011 fatwa by Iranian Ayatollah Taqi Mesbah-e Yazdi and posted on his website ruled that martyrdom operations were not only legitimate but were a duty incumbent upon every Muslim. And any Muslim who believes differently has been corrupted by western propaganda. In addition he wrote that Israeli civilians, children were to be regarded as legitimate targets. [102]

- **U.S. Naval Study of Suicide Bombings, Strategic Logic**

Virtually every suicide bombing is conducted by an organization and takes place within the context of an overall campaign. In a comprehensive study of suicide attacks from 1981 to 2006, of the 2,157 cases, or 98%, fall within an identifiable campaign. Rare is the individual who spontaneously decides to become a suicide bomber. [103]

> ***"The IRI asymmetric doctrine is firmly based on the specifics of the Shia branch of Islam a religious mainstream in Iran. The philosophy of sacrifice and suffering historically rooted in Shia eschatology and Iranian culture, after the Islamic revolution of 1979 has been enhanced by radical and extreme interpretations of Islam, generated and preached by the ruling clerical regime. According to its politico-spiritual guidance, delivered to the military forces personnel and the population, the martyrdom for the sake of Islam is a religious duty an encouraged and rewarding way for true believers "***
>
> Obsolete Weapons, Unconventional Tactics, and Martyrdom Zeal How Iran Would Apply its Asymmetric Naval Warfare Doctrine in a Future Conflict. By Jahangir Arasli December 2006 The George C. Marshall European Center for Security Studies Page 14

99) The Ayatollahs' suicide bombers Fox News, September 7, 2008 Alireza Jafarzadeh
100).Iran's Suicide Brigades By Ali Alfoneh Middle East Quarterly January 1, 2007
101). Obsolete Weapons, Unconventional Tactics, and Martyrdom Zeal How Iran Would Apply its Asymmetric Naval Warfare Doctrine in a Future Conflict. By Jahangir Arasli December 2006 The George C. Marshall European Center for Security Studies
102). Iranian Ayatollah Approves Killing Israeli Civilians, including Children, May 30, 2011 Special Dispatch No.3875 http://www.memri.org/report/en/0/0/0/0/0/0/5328.htm
103). Suicide Bombers in CONUS/ A Monograph by LCDR Philip E. Kapusta U.S. Navy School of Advanced Military Studies United States Army Command and General Staff College Fort Leavenworth, Kansas AY 06-07 page 18

Suicide Brigades Tehran's Female Suicide Bombers: Olive Daughters

In April 2005, the semi-official Daily Iran announced the formation of a unit of female suicide bombers nicknamed the Olive Daughters. The Baztab news website, which is associated with Mohsen Rezai, head of the Islamic Revolutionary Guard Corps (from 1981 to 1997) and since secretary of the Expediency Council, cited one Firouz Rajai-Far, who said, **"*The martyrdom-seeking Iranian women and girls … are ready to walk in the footsteps of the holy female Palestinian warriors, realizing the most terrifying nightmares of Zionists*."** [104]

In late January 2008, the Media Supervision Committee of Iran's Ministry of Culture and Islamic Guidance ordered the closure of the, *Women's Movement Monthly Zanan magazine*, which had been published for some 16 years. The order came after the magazine published an investigative article on suicide bomber recruitment and enlistments for martyrdom operations, focusing on the women volunteers. The reasons given for closing down the magazine was, for breaking the law, defaming military and revolutionary institutions, publishing reports and raising issues that undermine society's spiritual security, morale, and ideological strength, that create a sense of insecurity in society and discredit the status of women in the Islamic Republic of Iran.

The bottom-line is that the Islamic Republic of Iran remains the single country in the world, which officially cultivates and recruits committed personnel for suicide missions and has units in its military force structure for such ends.

World Islamic Organization Headquarters for Remembering the Shahids In 2008 Firooz Rajai-Far, a woman leader of the martyrdom movement and secretary-general of the World Islamic Organization Headquarters for Remembering the Shahids, stated that some 20,000 women have already signed up for martyrdom operations, constituting a third of the volunteers. Rajai-Far stated that because martyrdom was a "religious duty," women did not require the permission of their fathers, their husbands, or "even of the ruling jurisprudent" - currently Iranian Supreme Leader Ali Khamenei - to volunteer for martyrdom operations. *She also stated that she approved of sending even seven-year-old children on suicide missions during a war*. Rajai-Far herself has signed up for martyrdom operations, and has threatened the U.S. with suicide operations against its interests in the Gulf. [105]

Suicide Bomber Recruitment for Attacks on Bahrain 2011 More recently in February and March 2011, Bahrain experienced a turbulent period of Shiite civil unrest inspired in part by Arab Spring revolutions and in part by local dissatisfaction with government policies. Lingering frustration among the Shiite majority with being ruled by the Sunni government was a major root cause. To quell the Shiite uprising required help from military forces from Saudi Arabia, U.A.E., and Kuwait under the aegis of the GCC Peninsula Shield. The Tehran leaders, furious over the Saudi intervention in Bahrain and what they call crimes against the Shiites of that country openly created centers to recruit volunteers for suicide bombings against Saudi Arabia's interests worldwide. Tehran's Ayatollah Mesbah Yazdi led the registering volunteers to participate in suicide bombings against Saudi Arabia. Bahrain is a small island state near the western shores of the Persian on one side is Saudi Arabia on the other side the Islamic Republic of Iran. The population in 2010 stood at 1,234,571, including 666,172 non-nationals Bahrain is one of the most densely populated countries in the world; about 89% of the population lives in the two principal cities of Manama and Al Muharraq. Approximately 66% of the indigenous population is originally from the Arabian Peninsula and Iran. [106]

104). Iranian Women's Magazine Shut Down for Publishing Investigative Article on Martyrdom Movement
By: M. Nissimov, Y. Mansharof and A. Savyon http://www.memri.org/report/en/0/0/0/0/0/0/3228.htm
105). IBID 1
106). Iran Orders Attacks on Saudi Interests Worldwide Oct 2011 Shia-News: http://www.shia-news.com/fa/pages/?cid=20367

Naval Submarine Forces IRI	
Swimmer Delivery Vehicle	8-14
Midget Submarine	12-14
Kilo Class Submarine	3
Iran and The Gulf Military Balance Page 63 By Alexander Wilner October 27, 2011	

The Growing Mix of Asymmetric Naval Warfare Capabilities

Evolving Naval Asymmetric Warfare, The Persian Gulf / Straits of Hormuz confined space, which is less than 100 nautical miles wide in many places, limits the maneuverability of large surface assets, such as aircraft carriers. The Strait is about 120 miles long, 60 miles wide at the eastern, and 24 miles wide at the western end, with a complex system of narrow shipping lanes (about 2 miles) separated into outbound and inbound traffic. The Persian Gulf is 615 miles (990 km) long and between 40 and 210 miles (65–338 km) wide, covering an area of approximately 92,600 square miles (240,000 km2). Its average depth is 164 feet (50 m), with a maximum depth of 197–328 feet (60–100 m) at the entrance to the Strait of Hormuz. Most of the deep areas of the Persian Gulf are inside IRI's territorial waters.

The Straits of Hormuz it plays to the strengths of Iran's naval forces, especially the IRGC-Navel Forces. The Gulf's northern coast is dotted with rocky coves ideally suited for terrain masking and small speed boat operations.

Naval Submarine Forces:

The Islamic Republic has the largest submarine naval force in the Region and the only one in the Persian Gulf. Their small mini –subs provides considerable offensive asymmetric warfare capabilities. [107] The Nahong Class midget submarine, a small midget submarine suited to mine laying and special operations with possible limited anti-ship strike capability. Armament is likely to consist of mines carried externally although it is possible that 533mm torpedoes could also be carried in this manner as is the case with similar submarines in WW2. [108] Ghadir Class Midget Submarine These boats are credible littoral submarines well suited to mine lying, infiltration/Special Forces operation and limited anti-surface warfare. Their torpedo tubes could conceivably carry the Shkval rocket torpedo or even submarine launched cruise anti-ship missiles which the two branches of naval forces reportedly have.[109]

Sabehat 15" Swimmer Delivery Vehicle , Submersible (SDV) A small "two man" design typical of special forces insertion vehicles, the type is only suitable for coastal operations. These types of SDVs can be launched from a ship or under-slung from a large helicopter (Sea King, Mi-8 Hip or Chinook). There are at least three minor variations on this type, all of which would be an ideal platform for suicide naval operation against a larger naval vessel. Advanced models can ferry 3 - 7 divers. [110]Mines could include the potent Chinese designed EM52 fast rising rocket mine which can be laid in deep water, attacking its target by firing a rocket up into the underbelly of the ship, so fast that evasive action is unlikely. The EM52's rocket is unguided and is less sophisticated than some equivalent top-end naval mines, but it does offer Tehran's Naval Forces a serious threat to other Persia Gulf Naval Forces and oil shipping. [111]

107). Submarine forces (Iran), Submarines - Submarine forces
http://articles.janes.com/articles/Janes-Underwater-Warfare-Systems/Submarine-forces-Iran.html
108). Iran's Naval Forces: From Guerilla Warfare to a Modern Naval Strategy ,2009 Office of US Naval Intelligence
http://www.oni.navy.mil/Intelligence_Community/docs/iran_navy_forces.pdf … 109). IBID 108
110). Al-Sabehat 15 Swimmer Delivery Vehicle http://www.globalsecurity.org/military/world/iran/al-sabehat.htm
111). Iran's Developing Military Capabilities, page 58 Anthony H. Cordesman CSIS Books 2006
111a). U.S. aircraft carriers face Iranian stealth subs in the Persian Gulf. And remote controlled ones too January 19, 2012
http://theaviationist.com/tag/submarine/



The Growing Mix of Naval Asymmetric Warfare Capabilities

U.S. Vice Adm. Mark I. Fox, Commander, Naval Forces Central Command, commander, U.S. 5th fleet, Reported in 2012,

"Iran has prepared a fleet of suicide bomb boats while building up its naval forces in the Gulf,"

"They have increased the number of submarines … they increased the number of fast attack craft. Some of the small boats have been outfitted with a large warhead that could be used as a suicide explosive device," [112]

In an 2012 interview with the Fars News Agency, IRI Rear Adm. Farhad Amiri said that IRI's ordinary submarines, are covered with coatings that make them stealth, since "do not allow sound to travel through them and do not reflect waves sent by sonar systems", could by the worst threat U.S. aircraft carriers will have to face next time they cross the Strait of Hormuz. This may or not be true but the super quite diesel –electric engines and small size make them difficult to track and find. [113]

According to Iranian Student's News Agency (ISNA), designers built a remotely-controlled submersible Phoenix displacing only 3 kg. The agency calls the vehicle "submarine"; her surface speed is 12 mps and submerged speed is 10 mps. Phoenix has one screw and is capable to monitor within a 1-meter radius. Surveillance camera can be mounted as well, capable to carry out surveillance missions for one meter. Mono-propel propulsion and fin system maneuver are some features of the 3-kg submarine. (More Information will be covered in the chapter IRI's Naval Forces). [114] The Armed Forces of Iran has continued to improve the capabilities and training of its conventional forces for asymmetric warfare in recent years and, has also built up specialized elements within its force structure. As of 2012, some of the key recent developments in Iran's growing asymmetric capabilities included: anti-ship missiles, smart mines, light guided weapons, and UCAVs, (Unmanned Combat Aerial Vehicles) .These are effective asymmetric tools to counter the superior conventional forces of its neighbors and the US.

- **The development of the Karrar and R'ad UCAVs in early 2010, both of which have a range in excess of 1000 km (621 miles) and can destroy targets with guided munitions.**
- **The installation of a "Coastal Defense Missile" system along the country's 1,500 mile coastline, a move deemed the "appropriate strategy" to protect the country from attack.**
- **The development of the Khalij Fars ("Persian Gulf") anti-ship ballistic missile.**
- **The introduction of new high-speed combat boats armed with guided missiles and torpedoes such as the Seraj-1 and the Zalfaqar.**
- **The introduction of the Bavar-2 flying boat, which is equipped with night vision and armed with machine guns and rockets.**
- **Increasing use of SDVs ("Swimmer Delivery Vehicle"), which can be used for inserting Special Forces elements or laying mines covertly. [115]**

112). U.S. Navy: Iran prepares suicide bomb boats in Gulf By Warda Al-Jawahiry Feb 12, 2012 http://www.reuters.com
113). 'Iran stealth subs could lie in wait to hunt hostile aircraft carriers' **Tehran Times** 18-Jan-2012
http://www.iranian.com/main/news/2012/01/18/iran-stealth-subs-could-lie-wait-hunt-hostile-aircraft-carriers
114). Iranian Designers Built Remotely-Controlled Submersible Phoenix Displacing 3 kg http://navaltoday.com/2012
115) Iran & The Gulf Military Balance Rev 3 Cordesman/Wilner, page 71 AHC 2/29/12

Artillery Battalions Have Increasing Access to Battlefield Surveillance Radars; UAV's and Networked Data From Other Batteries;

UAV's like the Mohajer for target spotting. This is probably the most significant update as it allows precise fire rather than relying on sheer volume alone to hit a target. Artillery Detection and Fire Control Systems Fire coordination is one area that has seen significant expansion in recent years Battery-wide fire control systems are making an appearance, for instance, networking is being introduced allowing batteries to share targeting data and even allowing the commander to control them remotely. One example is the AFC (artillery fire-control) which appears to be a copy, or at least, influenced by the Fotona ARTES-1000 system. The ARTES-1000 is composed of three parts an observers module that designates the target, a gun module that calculates fire-solutions for the gunners and a command module that networks data within the battery. The observer's module features laser range-finders, GPS receiver, possible thermal imaging, as well as multiple types of data-links to the gun module. It can either be used with a forward observer, or with the gun itself. The gun-module features graphic displays and a ballistic computer and can be linked directly into a gun-laying system. All three modules are made with solid-state electronics Another system is the artillery fire control computer" (FCSS-85) which is manufactured by IEI and is a smaller man portable system designed to be used with most of Iran's towed guns and rocket artillery. Newer generation self propelled guns like the Raad-2 have night and all-weather sights installed increasing their engagement potential. While these improvements are not revolutionary more represent a concerted advantage over their neighbors, they nonetheless are a step up for IRI's artillery groups. [116]The expansion of MLRS platforms compared to pre-revolution times also reflect the preferred style of combat during the Iran-Iraq war, which was massed fire bombardments. Smaller caliber weapons like the 107 mm Type-63 have been mass-produced and are omnipresent within the IRIGF. However it is important to remember that with this weapon, they're often deployed as an integrated infantry support weapon, not necessarily with artillery groups or battalions where it's short range would restrict its usefulness anyway. Because of this, one might not even consider them as an actual artillery asset, but rather, more as an infantry support weapon like a recoilless rifle. The majority of Iran's stock of 'true' rocket artillery is composed of 122 mm BM-21 and its domestic equivalent, the HM-20, Mortars fit into much the same category as the 107 mm rockets - technically artillery, but deployed in such a manner that they are integrated directly into infantry units making them more of an infantry support weapon, then a direct artillery asset - the exception being the 120 mm mortars. However, it is difficult to estimate the total numbers because they are smaller assets compared to larger artillery and as they are heavily produced domestically, making them much harder to track. [117]

"Underwater is a good area (of activity) that is used by our forces but in an asymmetric and small-scale form, meaning that we are not seeking to build large and giant submarines since they are vulnerable.
These new high-speed small-sized equipments [sic] (vessels) will have an underwater function similar to the performance of small speedboats in seas, an ability that has worried the enemy.
Accordingly, we must use the same asymmetric approaches in building tools and equipments and even in defining our tactics.
In addition to rapid transfer of forces and detection of the enemy's surface and subsurface vessels, these submarines can identify military targets and carry Special Forces, while they also enjoy rapid swamp power and have radar (sonar) evading capability. The system enjoys high-precision in targeting." –
Major General Mohammed Ali Jafari, April 24, 2011.

"We should sketch out plans in a bid to resolve problems, and our goal should be winning the upper hand in the balance of powers in asymmetric wars."
Brigadier General Ahmad Miqani, Commander of Khatam ol-Anbia Air Defense Base, July 6, 2009.

116). Fotona ARTES-1000 (Slovenia), Land systems - Observation and surveillance - Forward observation
http://articles.janes.com/articles/Janes-Electro-Optic-Systems/Fotona-ARTES-1000-Slovenia.html
117) Open Source Intelligence Project Independent and objective analysis of current Iranian military capability using open-source nonclassified information. 2011

Summary: Artillery, Rocket Artillery, and Mortars

In December 1997 Iran unveiled two indigenous new full-tracked SPHs (self propelled howitzer) the 122 mm Thunder-1 and the 155 mm Thunder-2.

Iran has some 2,600-3,200 operational medium and heavy artillery weapons and multiple rocket launchers. This total is very high by regional standards, and reflects the continuing buildup of artillery strength that began during the Iran-Iraq War.

Towed Artillery comprises the largest part of IRI's artillery while only a small part consists of self-propelled Gun (Artillery, SPG). Iran has shifted toward focusing production on lightweight mobile towed guns such as a domestic copy of the D-30 as well as producing their own type of self-propelled guns, with enhanced creditable upgrades for their MLRS's systems. In 2011 IRI's Defence Industries Organization unveiled a wheeled (truck) self propelled 155mm Howitzer the 155 mm/39 HM41. The 155 mm/39 caliber HM41 fires a rocket-assisted High-Explosive (HE) projectile; a maximum range of 30,000 m can be achieved. Firing an unassisted HE projectile, a maximum range of 22,000 m can be obtained. This includes a 155 mm HE ERFB-BB artillery projectile which is claimed to have a maximum range of 34 km which is less than some comparable Western-produced 155 mm projectiles of this type which typically have a maximum range of 39.6 km. It is cable of firing chemical warfare rounds. In appearance is very similar to the Republic of Korea upgraded 155 mm/39-calibre M114, which is called the KH179 but is understood to be an upgraded version of the US 155 mm M114 towed howitzer. [118]

BASIR, Laser Targeting Artillery System



In 2012 Tehran unveiled laser targeting artillery system called "BASIR". BASIR put Iran among the five countries in the world with laser targeting technology. He said except US and Russia the three other countries have obtained similar systems through technology transfer. Vahidi insisted that the current project was the work of young Iranian experts in the country's defense industries and research institutions.

Basir is designed to destroy tanks, military vehicles, bridges, and other moving or non-moving targets with high precision. It is also capable of identifying and locating targets. The projectile, has a range of 20 km (12 mi), is very useful in mountainous areas.

According to Iran's defense industries the system works according, after an artillery shell is fired it falls into an electronic cone whose center is aimed at the target marked by a separate electronic device in the hands of an operator some distance away from the target. [118a]

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118). DIO 155 mm 39-calibre HM41 howitzer (Iran), Towed anti-tank guns, guns and howitzers
http://articles.janes.com/articles/Janes-Armour-and-Artillery/DIO-155-mm-39-calibre-HM41-howitzer-Iran.html
118 a). Iran Unveils New Smart Weapons System Called "BASIR" Jan. 30, 2012 http://presstv.com/detail/223994.html

119). On page 45 Chart Adapted from IISS, The Military Balance, Periscope, JCSS, Middle East Military Balance,, CSIS U.S. and Iranian Strategic Competition: Iran and the Gulf Military Balance 2012, Jane's Sentinel and Jane's Defense Weekly Artillery, Rocket Artillery, and Mortars and Chart

Artillery	2008	2009	2010	2011	2012
Self-Propelled Guns & Howitzers	298	298	298	298	299
Subtotal - SP artillery	25	25	25	25	25
122mm (M-1974) 2S1	50	50	50	50	50
122mm Thunder/Raad 1	-1	-1	-1	-1	
170mm (M1978) Koksan	20	20	20	20	20
155mm M109	150	150	150	150	150
155mm Thunder/Raad 2	-1	-1	-1	-1	-1
175mm M107	25	25	25	25	25
203mm M110	30	30	30	30	30
Towed Guns and Howitzers	1890	1890	1890	1890	1890
105mm M101	200	200	200	200	200
122mm D-30	500	500	500	500	500
122mm Type 54/60	100	100	100	100	100
130mm M-46/ Type-59	800	800	800	800	800
152mm (PRC)	30	30	30	30	30
155mm G-5	30	30	30	30	30
155mm GHN-45	100	100	100	100	100
155mm M114	100	100	100	100	100
203mm M115	30	30	30	30	30
Mortars over 160mm	-1	-1	-1	-1	-1
320mm	-1	-1	-1	-1	-1
Mortars under 160mm	-2	-2	-2	-2	-2
107mm M-30	-1	-1	-1	-1	-1
120mm M-65	-1	-1	-1	-1	-1
Rocket Artillery					
MRLs Multi –Rocket Launch Systems	248	248	248	248	248
107mm Type 63	100	100	100	100	100
122mm BM-21	100	100	100	100	100
122mm Hadid/Azrash/Nur	50	50	50	50	50
230mm Oghab	-1	-1	-1	-1	-1
240mm Fajr-3	-1	-1	-1	-1	-1
Rockets	256	256	256	256	256
Subtotal - rockets	260	260	260	260	260
333mm Fajr-5	-1	-1	-1	-1	-1
333mm Shahin 2	-1	-1	-1	-1	-1
355mm Nazeat	-1	-1	-1	-1	-1
610mm Zelzal-2	-1	-1	-1	-1	-1
Artillery Total	2689	2689	2689	2689	2690

IRI is also attempting to compensate for the resulting lack of modern artillery and artillery mobility by replacing its US-made self-propelled weapons with other self-propelled systems. IRI's Defence Industries has purchased 60-80 Soviet 2S1 122 mm self-propelled howitzers, and has developed an indigenous version called Raad (Thunder 1/Thunder 2). The Thunder 1 is a 122mm weapon similar to Russian designs. The Thunder 2 is a "rapid fire" 155 mm self-propelled weapon. Both systems are now in deployment. Iran had some 5,000 mortars. These include 107 mm and 120 mm heavy mortars and 800-900 81mm and 82 mm mortars. The Iranian army has at least several hundred of its heavy mortars mounted on armored vehicles. [120]

ROCKET ARTILLERY						
ROCKET	RANGE	DIAMETER	LENGTH	MASS	WARHEAD	COMMENT
	km	mm	m	kg	kg	
Haseb	9	107	.84	19	8	
Noor	18	122	2.05	45	18	
Arash	20	122	2.82	65	18	BM-21 Grad
Arash	20	122	3.20	72	18	BM-21 Grad
Oghab	34-45	230	4.82	360	70	
Fajr-3 / Ra'ad	45	240	5.20	408	45	DPRK M-1985
Shahin-1	13	333	2.90	384	190	
Shahin-2	20	333	3.90	530	190	
Fajr-5	75	333	6.48	915	90	DPRK ?
Naze'at-4	90				.	.
Naze'at-5					.	.
Naze'at-6	105	355	6.30	900	85	FROG
Naze'at-10	140	450	8.30	1,850	250	FROG
Mushak-120	130	450	.	.	500	Fateh-110 / NP-110 / Iran 130
Zelzal-2	100-200	610	8.46	3,545	.	Zelzal-2 / FROG-7

Fajr-3 / Fajr-5, and Zelzal Artillery Rockets

The 240-millimeter Fajr-3 missile has a range of some 25 miles, and the 333-millimeter Fajr-5 missile has a range of about 45 miles. Production of the Fajr-3 missile, with an estimated range of 45 km, was estimated to have started in 1991. IRI Defense Industries have for some time been manufacturing the Naze'at (Iran-130), which is similar to the Shahin series. Fajr-3 has the same caliber, range and warhead weight as three known North Korean systems. The Fajr-5 missile, which is launched from a mobile platform, reportedly has a range of between 60-70 kilometers. The Fajr-5 is manufactured by the Iran, but reportedly with help from North Korea and China. Like the Katyusha rocket and the Scud missile, however, at the limit of its range it is accurate only within a radius of around one kilometer. There are unconfirmed though plausible reports that IRGC has tested a chemical warhead for the Fajr-5. In May 2006 it was reported that the improved Fadjr-5 rocket launcher system had four 333 millimeter calibers launch tubes. Before launching four hydraulic jacks are lowered to the ground in provide a stable fire platform. This kind of new chassis also remarkably enhances in the cross country mobility. The totally enclosed cab can hold the driver and other two crew members. Also has another totally enclosed crew compartment behind the cab may embark other crew members. [121]

The Fadjr-5 rocket launcher system has a primary mission of attacking ground targets. With the installation of a radar system, it also may have the ability to track and attack seaborne targets.

The "Thirty- Bomb Rocket Truck" is designed and manufactured for quick and exact firing operations in any geographical condition and for destroying the enemy's motorized armored devices with higher mobility. It should be noted that this weapon is mounted on Benz LA911. It is of high value because of its quick transposition and crossing through road and off-road. [122]

120). Iran's Military Forces and Warfighting Capabilities: The Threat in the Northern Gulf 2007 Cordesman & Kleiber Page 58
121). Iranian Rocket Artillery, www.globalsecurity.org/military/world/iran/mrl-iran.htm
122). Iranian Artillery Rockets http://www.fas.org/man/dod-101/sys/land/row/mrl-iran.htm

Artillery units exist, both as Independent Artillery "Groups" which are composed of, Three Artillery Battalions, and as Integrated Artillery Battalions within regular divisions and brigades.

- **Two troops make up a battery that has an added command vehicle. Four batteries then make up a battalion.**



Independent artillery units within the military are organized by "groups" rather than the traditional brigade structure. Groups have three artillery battalions each. It is likely that they function as artillery brigades in other armies, that is, they are intended to function as supplementary units to be attached to larger divisions rather than function independently as maneuver brigades.

T**he Independent Artillery Groups Include :**
- **33rd - Tehran, Tehran Province**
- **11th - Maragheh, East-Azerbaijan province**
- **44th and 55th - Isfahan, Isfahan province**
- **22nd - Shahreza, Isfahan province**

Self-Propelled Guns: are usually deployed in battalion's with 3 batteries of 4 guns each. This compares to the normal 16-gun battalions found elsewhere.





Towed Gun Battalions: on the other hand have on average 3 batteries of 6 guns each, though this often varies widely. These are of course supported by numerous towing trucks, repair facilities, personnel transports and other support vehicles.

MLRS Systems: at least the larger calibers (Fajr series), are organized into battalions of sixteen launchers. The organization starts out as a "troop" with four launchers each, as well as a repair truck, two transports, and two loading vehicles. Two troops make up a battery that has an added command vehicle. Four batteries then make up a battalion.



- The bulk of the artillery inventory emerged from the Iran-Iraq war in relatively strong shape compared to the rest of armed forces inventory; most artillery pieces consisted of towed artillery while only a small part consists of self-propelled guns. In recent years IRI's military industry has shifted toward focusing production on lightweight mobile towed guns such as a domestic copy of the D-30 as well as producing their own type of self-propelled guns, such as the advanced Raad-2 (Thunder II) as well as investing in credible upgrades for their MLRS's. The smallest of Tehran's towed guns, is the 105 mm howitzer

The D-74, as well its Chinese copy, the Type 60, serves within IRGC artillery battalions, and within armored units. The gun shares the same type of single-axle, split-trail carriage as the D-20. This supports a 122 mm cannon with a long 6.4 m barrel with a double-baffle muzzle brake. Exact ammunition is unknown

The D-30, **122-mm howitzer**, is domestically manufactured under the name HM-40. It is a primary medium-weight gun within artillery battalions. It is an effective design intended to be mobile but still pack the punch of a larger gun against relatively un-entrenched units. It features a distinctive tripod design which allows it a full 360 degree traverse range. It's extremely low depression allows it to be used in the direct fire role. The 122 mm 2A18 cannon is the same used on the 2S1 self-propelled howitzer. The gun has a very distinctive box-shaped cover on the recoil mechanism, making it easy to identify. [123]

123). Iranian Military Capability 2011 - Ground Forces - March 15th 2011 http://www.scribd.com/doc/50826129/Iranian-Military-Capability-2011-Ground-Forces-March-15th-2011



The 130mm M-46, or more usually, the Type-59 Chinese copy, is one of the most numerous towed artillery pieces in Iranian inventory. Iranian M-46's fire standard HE, smoke rounds, HEAT sub-munitions as well as HE base-bleed shells which boost the range from 27.5 km to 36 km, and more recently HE-RAP shells. Shells can accept the M203-A proximity fuse. IRI purchased 1,006 M-46/Type-59's, both from China as well as from North Korea during the Iran-Iraq War. Some estimates put the remaining number in service as around 800. IRI military industries are not is not domestically producing this gun meaning it is likely slated for removal from front-line service in favor of larger calibers.

- ***The 130mm M-46 forms the backbone of many of the artillery groups.***

The 155 mm HM-41 is a domestic upgrade and production line of the US M114 howitzer The gun is a medium battlefield howitzer and is experiencing an increased presence in the military forces inventory following domestic production. The gun features a conventional carriage with a single-axle split-trail design. The original M-114 had a short barrel with no muzzle brake, while the HM-41's barrel has been lengthened and features a double baffle muzzle brake. This is probably based on research of the late Engineer genius G. Bull who built Saddam Hussein's supper gun in Iraq. IRI's SPG's Thurder I & Thurder II are based on his research. IRI now manufactures a variety of semi-fixed ammunition for the new HM-41's, including HE (High Explosive), smoke, illumination, HEAT sub-munitions and HE-base bleed shells. Shells can accept the M203-A proximity fuse.

155 mm HM-41 SPG Version: in 2011, this variant of the HM-41 was unveiled, a truck mounted version with the gun on the rear of a MAN truck. The role of such a system provides a low cost, self-propelled artillery support capability to units that would otherwise be forced to rely on towed guns due to a shortage of conventional self-propelled units. [124]

GHN-45 155mm Howitzer: Purchased illegally from Austria during the Iran-Iraq war, along with unknown number captured from the war. Unlike most towed guns in inventory, the GHN-45 has a double-axle design for its carriage, while maintaining the usual split-trails. The gun has a distinctive hydro-pneumatic recoil system. The GHN-45 fires a particularly effective high-fragmentation shell that can produce a shrapnel shower; it has an incredible range of 45 kilometers, far exceeding that of any U.S. or allied tube artillery. The GC-45 (Gun, Canada, 45-calibre) is a 155 mm howitzer designed by Gerald Bull's Space Research Corporation (SRC) in the 1970s. The most publicized use of the design was in Iraq, where it formed the basis of their artillery units and was cause for considerable worry on the part of the allied forces in the Persian Gulf War. Max Range 39.6km (18mi).

- **GHN-45 155mm Howitzer maintains a prominent role within Artesh units on the western border with Iraq.**

GHN-45 has such indirect fire flexibility that it can be employed in the traditional gun, howitzer and mortar roles, and can cover an area of almost 1000 km2 from a single firing position. The gun is capable of maximum sea level ranges of 30 km with ERFB projectiles and 39 km with ERFB base bleed projectiles. The G5 is fully compatible with NATO standard 155-mm ammunition and has a direct fire range of 3000 meters (using a Frag-HE round). 300 were originally purchased from Austria; current estimates put the remaining number at 100. [125]

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124). **Iranian** Military Capability 2011 - Ground Forces - March 15th 2011 http://www.scribd.com/doc/50826129/Iranian-Military-Capability-2011-Ground-Forces-March-15th-2011
125). GHN-45 155mm 45-calibre, towed gun howitzer , http://www.globalsecurity.org/military/world/rsa/g5.htm

M-115 203 mm Howitzer is the largest of towed artillery piece, the massive 203 mm M-115 is a super-heavy howitzer. Features are a double-axle design much like the GHN-45 and a large, short barrel with a hydro-pneumatic recoil system. Out of the original 50 delivered, only handfuls remain in service with the army in Isfahan; estimates put 30 still in service.



Raad-2 155 mm HM44 Howitzer (Thunder-2) SPG, tracked In early September 1997 it was reported that Iran had successfully tested a locally built rapid fire mobile field gun known as Raad-2 (Thunder-2). It uses a turret that has a similar layout to the M109A1 155mm/39-cal self-propelled howitzer It was described as being able to fire five rounds per minute. The gun's range was reported as 30 km (19 mi), and it also includes features such as a laser range-finder and a semi-automatic loading system. The gun looks exactly like 155mm/39-cal M185 gun from M109A1 and is fitted with a double baffle muzzle brake, fume extractor, screw breech mechanism, hydro-pneumatic recuperator and a hydraulic recoil brake. It uses the Iranian-made Boragh APC chassis; it is described as being able to move with a speed of 70 km/h (43 mph) on the battlefield. The improvements to the power pack as well as the significant, if unverifiable, upgrades to the fire-control and targeting mechanism could well make the Raad-2 equivalent to the newer (if not newest) generations of the M-109

- **Raad-2M is the same but with an upgraded engine.** This is powered by a model 5TDF water-cooled diesel engine developing 700 hp that gives a power-to-weight ratio of 19.4 hp/ton. This engine was developed and manufactured in the Ukraine and was originally fitted in the T-64 series MBT and is a member of a complete family of very compact diesel engines. Maximum road speed of the Raad-2M is quoted as 60 km/h with a maximum road range of 450 km. http://www.army-guide.com/eng/product2366.html

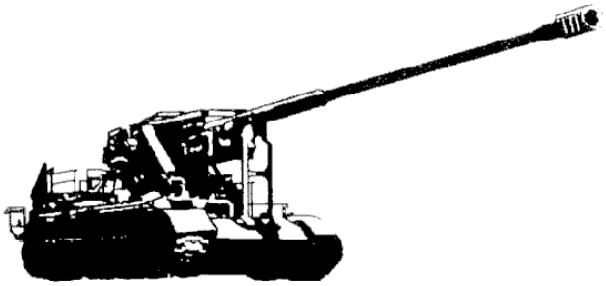
Raad-I 122 mm Howitzer SPG (Thunder -1) tracked was the first -developed self-propelled artillery system by IRI defense industries and successfully tested in 1996. Early in 2002, it was revealed that the 122 mm Raad-1 was then in quantity production by the Iranian Defence Industries Organisation (DIO), Armor Industries Group. The Raad -1 is fitted with a turret from the Soviet 2S1 Gvosdika self-propelled howitzer. Some howitzers were locally modified. Vehicle is fitted with a load assisting system and has maximum rate of fire of 4 - 5 rounds per minute. The Raad 1 fires all standard Soviet 122-mm projectiles, including HE-FRAG, HEAT, cluster, smoke and illumination. Maximum range of fire is 15.2 km with HE-FRAG projectile. A total of 40 projectiles are carried.

Dispersion of Short Range Artillery Systems Directly into Infantry Units: Instead of relying upon traditional communication lines to ensure that artillery groups are able to provide rapid, pinpoint artillery support when requested; an easier solution has been adopted. This solution is the dispersion of short range artillery systems directly into the infantry units, specifically with weapons systems like 107 mm rockets and mortar systems that don't require constant support by dedicated artillery units. They are simple and numerous enough that they are able to be widely dispersed across all units. The failure to do this has been one problem the US military has faced in Iraq and Afghanistan, critical time is lost calling in air or artillery support where a small, short ranged system like an 81 mm mortar could easily do the job of a LGB or 155 mm shell.

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125). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: May 16, 2012 pages 30-32
126). Defence Industries Organization Raad-1 122 mm self-propelled gun-howitzer (Iran), Self-propelled guns and howitzers (tracked)
http://articles.janes.com/articles/Janes-Armour-and-Artillery/Defence-Industries-Organization-Raad-1-122-mm-self-propelled-gun-howitzer-Iran.html

M-1978 170 mm SPG Koksan Tracked is a massive North Korean artillery piece based on a turret-less Type-59 tank chassis with two stabilizing spades at the rear. The 170 mm gun is in an open mount with no superstructure, and is stabilized when firing by 2 large retractable spades at the rear. The Koksan is named after the city in North Korea where it was first seen by the West in 1978. The M-1978 version carried no on-board ammunition supply. IRI purchased at least 20-30 from North Korea during the tail-end of the Iran-Iraq war.



- **It is believed the only remaining number, around a battalion sized element, serves with the IRGC forces in the Kerman province. The small number remaining indicates that this is likely the only unit they remain in service with.**

Ammunition: High-Explosive Submunitions Projectiles, Biological or Chemical Ammunition

Range Estimated at "40,000 m" to "over 50km"
24 miles / 40 km = extended range full-bore hollow-base
30 miles / 50 km = extended range full-bore base-bleed
35 miles / 60 km = rocket assisted projectile (RAP)
[127]

Note: Possible chemical and biological warfare agent munitions, including Missile Warheads



"Jane's cited various reports that Iran had "developed 155mm artillery shells, mortar rounds, aerial bombs for chemical fill, and possibly chemical warheads for Scuds." Jane's and other news outlets circulated reports that Iran utilized mines for chemical delivery systems. Iran's Shahab missile is also believed to be capable of carrying chemical warheads. In 2002, Iran tested a new version of its Muajar-4 (Mohajer) unmanned aerial vehicle, which some experts claim could be used for delivery of chemical or biological agents. In 2008 and 2009, Iran tested a number of missiles, including the Sajjil-2, a solid-fueled missile with a range of 1,900 kilometers, and the Shahab-3 missile."

Iran Chemical, Nuclear Threat Initiative nti.org/country-profiles/iran/chemical/

One point of note is the chemical and biological capability of IRI's artillery. A good portion of the available information about Iran's artillery makes a specific point of noting which rockets and shells are capable of carrying Chemical & Biological Warfare Agents which is nearly all of them.

Iran An Overview of Delivery Systems and Possible CBRN Weapons Programs Anthony H. Cordesman Arleigh A. Burke Chair in Strategy Revised2006

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127).170 mm M1978 self-propelled gun Koksan (Korea, North), Self-propelled guns and howitzers (tracked)
http://articles.janes.com/articles/Janes-Armour-and-Artillery/170-mm-M1978-self-propelled-gun-Koksan-Korea-North.html

Rocket Artillery Systems



General All Purpose 107 mm Rocket Systems: The 107 mm rocket is a short range support weapon designed to provide saturation fire in a relatively mobile package. It can be used in both direct and indirect fire. Indirect fire sighting is accomplished by optics similar to mortar sights. The rocket most commonly has a contact fuse, but can also be equipped with a proximity fuse. *The single and double launchers are deployed in man portable configuration officially intended for use by irregular forces.* This was displayed in Iraq when insurgents used 107 mm rockets in scattered attacks against US and GOI (government of Iraq) facilities. The larger 12-round carriers can both be mounted directly on vehicles like the Safir, or towed behind trucks on a wheeled carriage, as well as being moderately man-portable. There is also a naval variation which features a bank of 11 or 19 rockets which are gyro stabilized in an electrically controlled mount and with a rudimentary fire control. These are sometimes referred to as RL.2's and RL.4's which may be a slightly different earlier version. These systems fire the unguided 107 mm Haseb rocket which is spin stabilized and can be fitted with an immediate or delayed impact fuse, and less commonly, a proximity fuse. It has an 8.5 m range and it carries a 6.39 kg HE or HEI warhead. The lethal radius is 12.5 m. They are sometimes referred to as the Fajr-1.

122 mm Rocket Systems

The 122 mm rocket systems are a step up from the 107 mm, transitioning from infantry support to full-size artillery designed to provide a high volume of rapid indirect fire against large area targets. The HM-20-1 is actually closer to the 107 mm single and double launchers in terms of doctrinal use. Its single-launch nature means it's more ideally suited for irregular troops or a guerrilla insurgency. The HM-20 is four banks of 10 tubes in two sections, which is one way to tell them apart from single large mass found on the BM-11/21. The system is mounted on a variety of 6x6 vehicles. It features a hydraulic traversing and elevating system with electronic firing controls. As with the 107 mm, a naval version also exists, the HM-23 which features an 8 or 16 barrel launcher. The HM-23 has also been used on ground vehicles, in one instance replacing the bed on a Land Cruiser truck. In addition to this, IRI's military forces maintains sizable inventory of the original BM-11 and BM-21 MLRs launchers. Some types use the same telescopic and panoramic sights as the BM-21 while others use an unknown fire-control system. Three rocket types exist, all unguided, the first, the Noor, sometimes called the Arash 3, is the smallest and has the shortest range. The Arash 1 and Arash 2 provide a boost in the maximum range of the system. All of them can be carried in racks which facilitate quick reloading. Iranian 122mm rockets carry a basic HE warhead as well as AP and AT submunitions, while HE-FRAG and fuel-air explosives are suspected. It carries both an impact and 'M-112K' proximity fuse. The rockets are both spin and fin stabilized.



Specifications: Arash-1 Rocket
Caliber: 122 mm
Weight: 65 kg
Length: 2.81 m
Max Range: 21.5 km
Warhead: 18.3 kg

Specifications: Arash-2 Rocket
Caliber: 122 mm
Weight: 72 kg
Length: 3.2 m
Max Range: 30 km
Warhead: 18.3 kg

Specifications: Noor/Arash-3 Rocket
Caliber: 122 mm
Weight: 45 kg
Length: 2.05 m
Max Range: 18 km
Warhead: 18.3 kg

128). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: 129). May 16, 2012 pages 30-34 2). Iranian Rocket Artillery, www.globalsecurity.org/military/world/iran/mrl-iran.htm 3). Iranian Artillery Rockets http://www.fas.org/man/dod-101/sys/land/row/mrl-iran.htm

The Noor MLRS: is designed as part of light weight artillery weapons, and is based on the Chinese YJ-82. Noor missiles come in two configurations one SSM (surface to surface missile) & ASCM (anti- ship cruise missile). The Noor MLRS was developed through a joint program between China Aerospace Science & Industry, and the IRGC Aerospace Industry.

The Oghab: is a 320 mm caliber unguided artillery rocket that is spin stabilized in flight, has a maximum range of 34 kilometers, and a 70-kilogram HE fragmentation warhead -- although chemical warheads may be available. While it may have a chemical warhead, it has an operational CEP that has proved to be in excess of 500 meters at maximum range. Further, Iran has no ability to target accurately the Oghab or any other long range missile against mobile or point targets at long ranges, other than a limited ability to use RPVs.

Shahin I :(sometimes called the Fajr 4) is a trailer-launched 333 mm caliber unguided artillery rocket. Two rockets are normally mounted on each trailer, and they have with a solid propelled rocket motor, a maximum range of 75 kilometers, and a 175-kilogram conventional or chemical warhead. The Shahin evidently can be equipped with three types of warheads: a 180 kilogram high explosive warhead, a warhead using high explosive submunitions, and a warhead that uses chemical weapons. There is a truck-mounted version, called the Fajr 5, with a rack of four rockets. Specifications: Shahin-1 Rocket Caliber: 333 mm Weight: 498 kg Length: 3.9 m Max Range: 20 km Warhead: 190 kg ROF: 3 rd/min Rocket Caliber: 333 mm Weight: 564 kg, Max Range: 30 km Warhead: 190 kg ROF: 3 rd/min

Shahin II: is a slightly larger and longer ranged version of the Shahin 1. They are both launched from rails reminiscent of the Nazeat or Oghab more than other MLRS's. The rockets carry HE, HE-FRAG warheads with impact fuses and are fin-stabilized. A version of the Shahin, the Shahin-3 has been adapted to air-to-surface attack. The Shahin does not appear to be in extensive service.

The Nazeat Family of Rockets: was an attempt by Iran to develop a FROG-7 equivalent during the 1980's with considerable help from China. They are sometimes called "Mushak", which simply means missile. The Nazeat system can be mounted on several platforms, including the 6x6 Mercedes-Benz trucks that also carry the Fajr-series rockets such as the 2631 series. The rocket itself comes in two variants, the Nazeat-6H and the Nazeat-10H.

Nazeat rocket artillery units are equipped with communications vans, meteorological vans and a global positioning system for surveying the launch sites.

Both are single-stage, solid-fueled and carry HE warheads, though can be equipped with a variety of warheads including sub-munitions or even CBRN payloads. They are unguided and fin-stabilized by four rear fins. Specifications: Nazeat-6H Configuration: Single stage, solid fuel Weight: 960 kg Length: 6.29 m Diameter: 356 mm Max. Range: 100 km Min. Range: 80 km Warhead: 130 kg

Some reports indicate there are two variants of the Nazeat solid-fueled rocket system a 355.6 mm caliber rocket with 105 kilometers range and a 150-kilogram warhead, and a 450 mm caliber rocket with a reported range of 130-150 kilometers and a 250-kilogram warhead. Both systems have maximum closing velocities of Mach 4-5, but some suffer from poor reliability and accuracy. Other reports indicate all Nazeats are 335.6mm and there are four versions of progressively larger size, with ranges from 80 to 120 kilometers. It is claimed to have a CEP within 5% of its range.

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130). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: May 16, 2012 pages 30-34 2). Iranian Rocket Artillery, www.globalsecurity.org/military/world/iran/mrl-iran.htm 3). Iranian Artillery rockets http://www.fas.org/man/dod-101/sys/land/row/mrl-iran.htm

Falaq -1: is similar to the Soviet BM-24 system. Nothing is known about the Falaq-2 launch differences, though it probably remains the same with less total capacity due to size constraints. The rockets are launched from a six cell launcher mounted on the back of a light tactical vehicle like a pickup truck. It requires stabilizers to be deployed before firing. However, a single tube, man-portable configuration is also possible and would then be used as the same manner as described in the 107 mm section, as a weapon primarily for irregular forces. Both rockets are short ranged, only being able to reach out 10-11 km, though they carry large warheads. Specifications: Falaq-1 Rocket Caliber: 240 mm Weight: 111 kg Length: 1.32 m Max Range: 10 km, Warhead: 50 kg.

Tactical Ballistic Missiles (TBMs) Short- and medium-range missiles are often collectively referred to as theater or tactical ballistic missiles (TBMs). Long and medium-range ballistic missiles are generally designed to deliver nuclear weapons because their payload is too limited for conventional explosives. Tactical Ballistic Missiles role lies between conventional artillery and ballistic missiles. TBMs weapons are designed to be used to support tactical battlefield objectives by attacking strategic targets.

Naval Role? Maritime role, the larger caliber artillery rockets are not used in the direct-fire role, but rather as actual artillery, used in conjunction with conventional AShMs (Anti-ship missile) as a standoff weapon. While they have only been seen deployed alongside actual AShMs, it's possible they could be used as a standalone weapon. However, it is worth noting that they might not even be used in the "anti-ship" role. Rather they might be fired in conjunction with AShMs in order to overwhelm ships defenses without the intent for the unguided rockets to actually damage the ship. The challenge here would be to correctly coordinate the waves of rockets and missiles.

Tactical ballistic missiles on the other hand have never actually been alluded to by, or seen in service with the IRI's military for this role, however, it makes an interesting thought experiment given that Islamic Republic of Iran military forces are known to operate both large caliber MLRS's as well as ballistic missiles in the anti-ship role.



Zelzal Tactical Missile: ***They are usually equipped with unitary HE warheads though can be equipped with sub-munitions or CBRN payloads.***

The Zelzal Family of Rockets: is another development of the attempt to build a FROG-7 equivalent. It is a later development then the Nazeat and is considerably larger. They are sometimes called "Mushak", which simply means missile. The launch platform is the same as the Nazeat, a 6x6 Mercedes-Benz truck with elevating launch ramp. Though now, the Mercedes 2631 trucks are becoming more common. Though rarely used, the Zelzal is also able to be launched from the ZIL 8x8 TEL used with the FROG-7 system. In September 2009, a new configuration was tested, mounting three missiles on a single static launch ramp. The fact that it is static is surprising given that mobility is often seen as one of the key attributes of the system. One explanation for this is that the static launch is just for testing, this is backed up by early pictures of the Fateh-110 being tested on a similar static mount.

Zelzal-3 which is often seen on exercise fired in large salvos. IRI's military forces have also demonstrated against Kurdish militias that they have both the proclivity and the ability to sustain these large salvos. The missiles are often seen being launched in battalion or larger formations

131). The Gulf Military Balance In 2012 Anthony H. Cordesman Alexander Wilner Arleigh A. Burke Chair In Strategy Working Draft: 132). May 16, 2012 pages 30-34 2). Iranian Rocket Artillery, www.globalsecurity.org/military/world/iran/mrl-iran.htm 3). Iranian Artillery rockets http://www.fas.org/man/dod-101/sys/land/row/mrl-iran.htm



Zelzal Rocket Variations: The Zelzal is considerably larger than the Nazeat and comes in several versions, the Zelzal-1/1A/2/3/3B. The most commonly seen is the -3/3B with the earlier versions becoming harder to spot. The Zelzal-1 is then shortest of all the variants, has a bullet shaped nose and lacks the distinctive spin stabilization nozzles of the later models. The Zelzal-2 also has a bullet nose and appears extremely similar to the Zelzal-1. However, it features the spin stabilization nozzles just below the warhead. The Zelzal-3 and -3B both have conical warheads, the latter with a smaller warhead that begins to taper off almost immediately after the stabilization nozzles. The Zelzal-2 is often seen in conjunction with the Zelzal-3 TEL (which is labeled as such) which has led to confusion over the identity of the Zelzal-2 and 3. All variants are single-stage, solid fueled, unguided and fin stabilized by four rear non-moving fins. They are also spin stabilized by jets just below the warhead which fire at launch giving it a distinctive profile. Supposedly, production halted or at least slowed down in 2001. This may or may not be true; it is also possible that it only referenced a specific generation of Zelzal. At any rate, if it was true that the Zelzal program was at one time canceled, it appears to have been revived following the renewed focus on asymmetrical deterrent weapons like TBMs. Or maybe, the stocks are just so large that, while production has in fact stopped, they are still maintained as keystone part of the strategy. The possibilities are near endless with one guess nearly as good as another at this point. Some have claimed that the latest versions of the Zelzal have inertial and terminal guidance. The fin configuration however rules this out. This may be a reference to the Fateh-110. [133]

Specifications: Zelzal-1
Configuration: Single stage, solid fuel
Weight: 2,950 kg
Length: 8.3 m
Diameter: 601 mm
Max Range: 125-130 km
Warhead: 600 kg
Guidance: none

Specifications: Zelzal-1A
Configuration: Single stage, solid fuel
Weight: 2,950 kg
Length: 8.3 m
Diameter: 601 mm
Max Range: 160 km
Warhead: 500 kg
Guidance: none

NOTE: Information not precise, sources vary

Specifications: Zelzal-1A
Configuration: Single stage, solid fuel
Weight: 2,950 kg
Length: 8.3 m
Diameter: 601 mm
Max Range: 160 km
Warhead: 500 kg
Guidance: none

Specifications: Zelzal-2
Configuration: Single stage, solid fuel
Weight: 3,450-3,545 kg
Length: 8.3-8.46 m
Diameter: 601 mm
Max Range: 300 km
Warhead: 210-600 kg
Guidance: none

Specifications: Zelzal-3
Configuration: Single stage, solid fuel
Weight: 4,000 kg
Length: 9.58 m
Diameter: 616 mm
Max Range: 200 km
Min Range: 180 km
Warhead: 900-950 kg
CEP: <1000 m
Guidance: none

Specifications: Zelzal-3B
Configuration: Single stage, solid fuel
Weight: 3,600 kg
Length: 9 m
Diameter: 616 mm
Max Range: 260 km
Min Range: 235 km
Warhead: 600 kg
CEP: <1300 m
Guidance: none

IRI developed a twin-missile launcher system for the Zelzal-2 short range missile, effectively doubling the firing rate of the system. Salvo firing is considered by Iran to be the most effective missile-defense countermeasure. The new launcher was tested in public for the first time Sunday 27 September 2009, firing a single Zelzal-2 missiles, fired for a dismounted new multiple launcher while a second missile was standing by on the second rail. [134]

133) The New IAEA Report And Iran's Evolving Nuclear And Missile Forces Anthony H. Cordesman Arleigh A. Burke Chair in Strategy , 2011
134).Iran Develops Twin-Launcher for Zelzal-2 Short Range Rocket http://defense-update.com/20090927_iran-develops-twin-launcher-for-zelzal-2-short-range-rocket.html

Fateh-110 Tactical Ballistic Missile Alternate Names: Mershad; Zelzal-2 variant

Fateh-110
Guidance system: Inertial & electro-optical terminal
Speed: 3.5 Mach
Single-stage solid
Speed : 3.5 Mach
Launch Weight 3,450 kg
Range 210 km
Warhead Single warhead, 500 kg, HE, chemical, submunitions
Dimensions missile Length, 8.86 m; Width, 3.37 m; Height, 2.4 m

The Fateh A-110 is a short-range, road-mobile, solid-propellant ballistic missile based on the Russian made missile R-65 FROG, but other source said it is a copy of the Chinese DF-11. An unconfirmed report stated that some technologies were purchased from the Argentinean Alacran ballistic missile program, whilst other reports have suggested that the design was based on the Russian R-65 FROG. It is most likely a modified version of the unguided Zelzal-2 ground-to-ground missile, with the addition of control and guidance systems. The Fateh A-110 was designed to replace many of the aging Scud systems currently used in the IRI's armed forces. Iran began developing the Fateh A-110 in 1997. The Fateh A-110 has mainly been seen being fired from a fixed launcher similar to the one used by the Russian S-75 Guideline surface-to-air missile. IRI has designed a launch vehicle to make Fateh A-110 road mobile. In September 2010, the IRI Defense Ministry announced that army units are equipped with a third generation of Fateh-100 missile with an upgraded range of 300 km. Variants

Fateh-110: First variant, with a range of 200km.

Fateh-110/II or Fateh A-110A: Second Generation Announced in 2004 with the range increased into 250 km.

Fateh-110/III or Fateh 3 A-110B: Third Generation Announced in 2010. Reports say the range, accuracy and speed is increased.

Khalij Fars: is an Anti-ship ballistic missile based on Fateh-110, unveiled in 2011. IRI claims it is a precision guided weapon, which is hotly debated in intelligent circles as its capabilities. It carries a 650 kg warhead at Mach III. Tehran calls it its aircraft carrier killer.

Fateh A-110 uses a single-stage solid propellant engine and has a range of 210 km (130 miles), although it is possible that extra boosters could be added in order to increase its range to 400 km (249 miles). The missile might be as accurate as 100 m CEP using a combination of inertial guidance and a Global Positioning Satellite (GPS) system, though some sources suggest that the accuracy is much lower, and that the missile is incapable of much inflight maneuvering or correction. Iranian sources claim that the weapon has a high degree of accuracy, a claim that would suggest inflight control systems that are not apparent from photos of the missile. It can carry a payload of some 500 kg and is most likely intended to deliver only high explosive, chemical, or submunitions warheads.

The possibility remains, however, that IRI could deploy the Fateh A-110 with biological or nuclear warheads

The Fateh-110(A) can be mounted on a 6x6 truck similar to the Zelzal and Nazeat, though the TEL mechanism more closely resembles the SA-2 or Tondar-69 TBM. Recently the missile was shown mounted on the exact same TEL as that associated with the Zelzal.

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135) The New IAEA Report and Iran's Evolving Nuclear And Missile Forces Anthony H. Cordesman Arleigh A. Burke Chair in Strategy, 2011
136). Iran Missile Chronology http://www.nti.org/media/pdfs/iran_missile.pdf?_=1316474223
137).www.armyrecognition.com/iran_iranian_army_missile_systems_vehicles_uk/fateh_fatah_a-110_short_range_ground-to-air_ballistic_missile_technical_data_sheet_specifications_.html

3rd Generation Fateh



The third generation is also externally identical to the Fateh-A110 though, according to DM Vahidi, it features improved accuracy and the ability to perform evasive maneuvers against ABM systems. This announcement was accompanied by a video of the impact from testing, a rarity among Iranian missile announcements; this lends at least some credence to the claim of improved accuracy. However this is by no means definitive. Video evidence suggests the missile uses a gimbaled gyro, most likely mechanical, for the INS guidance. The third generation is in production, with the first batch was delivered to the IRGC in time to coincide with Sacred Defense Week 2010. Later, during the same week, Fars News announced that the missile had a range of 300 km (186 mi). Some sources have claimed a combination of inertial and GPS guidance, however this is unconfirmed. Other sources have claimed EO terminal guidance, but this is not supported by the missiles appearance. Its poor CEP is attributable to its small control surfaces; (CEP: <750 m) instead of having regular jet vanes at the rear of the missile. The warhead may separate from the missile body in the terminal phase.

It is also noteworthy that there are reports that claim that the Fateh A-110 missile may be based on the Chinese DF-11A missile, which has a range of 200 to 300 km (124 mi & 186 mi) and is capable of carrying nuclear warheads. This is yet another example of the uncertainties that are still surrounding IRI's domestic missile programs, as well as its stockpile numbers and capabilities.

Fajr Rocket (MLRS) Artillery Family

The Fajr-3: is a 240 mm self-propelled MLRS system originally derived from the North Korean M-1985. Some sources say mass production began in 1990 while others say it was first tested in 1996. This might be explained by the difference with producing a copy, and then later, testing a newer generation of the weapon. The weapons system was first mounted on the original 6x6 Isuzu used by the North Koreans where the Mercedes-Benz 2631 has become the standard for newer generation models. The MLRS itself consists of two banks of six tubes each. The rockets can be fired in a salvo, in 48-96 seconds, or individually.

Fajr-3
Caliber: 240 mm
Weight: 407 kg
Length: 5.2 m
Max Range: 43 km
Warhead: 90 kg

It is a safe bet that the same fire-control system used in the Fajr-5, is also used in the Fajr-3. The 240 mm rockets have a 90 kg warhead, usually HE, HE-FRAG, but can likely carry submunitions, incendiary, smoke and chemical payloads as well; they have a maximum range of 43 km. They are spin and fin stabilized, but unguided. If the Fajr-3 being unguided rocket system, if as inaccurate as some research claims, coupled with combined with small number of rockets that can be launched in a salvo prevent the Fajr-3 from being a truly effective system in the tactical role. However if used as a chemical weapons delivery system for saturation, it could be effective. The Fadjr-3 is a truck-mounted system with a 12 round launcher for 240mm rockets.

138). Iran Missile Chronology http://www.nti.org/media/pdfs/iran_missile.pdf?_=1316474223
139). The New IAEA Report And Iran's Evolving Nuclear And Missile Forces Anthony H. Cordesman Arleigh A. Burke Chair in Strategy , 2011

Fajr-5

The Fajr-5 uses the same mount system as the Fajr-3, with the newer generation using the Mercedes-Benz 2631 truck.

Fajr-5
Caliber: 333 mm
Weight: 915 kg
Length: 6.48 m
Max Range: 75 km
Warhead: 175 kg

Fajr-3/5
Truck-Mounted Launcher
Length: 10 m
Height: 3.34 m
Width: 2.5 m
Max Speed: 60 km/h
Barrels: 12
Elevation 0 - 57
Traverse: 90 left - 100 right

The Mercedes-Benz 2631 truck 6 x 6 forward control chassis and the platform is now integrated into a complete weapon system rather than an individual launcher. To provide a more stable firing platform four hydraulically operated stabilizers are lowered to the ground before firing. The new chassis has improved cross-country mobility and the forward control fully enclosed cab provides space for the driver and two passengers.

Another fully enclosed cabin to the immediate rear of the cab houses the remainder of the crew. The new Mercedes-Benz chassis is similar to that manufactured in China, which is used as the basis for the Norinco (China North Industries Corporation) 122 mm (40-round) Type 90 ARS. Also added is a networking system that enabled data-links within and between batteries. Another feature added is remote fire capability under which the command vehicle can link all Fajr-5's within a 20 km range.

Naval Role? It has been reported installation of naval surface search radar which indicates IRI might use the MLRS in an anti-shipping role. At the very least, they appear to be able to link together with other anti-ship assets like the Noor or the Raad and share their targets. Iranian Officials at AIO says that radar can be added to give the system the capability to track and engage naval targets. The Fajr-5 missile, which is launched from a mobile platform, reportedly has a range of 75 kilometers (50 mi).

The rockets have a 175 kg warhead, which can likely carry a variety of payloads including HE, HE-FRAG, incendiary, smoke or sub-munitions. They are spin stabilized, but unguided. Also a two stage version of the rocket is reported to be produced with a length of 9 m and range of 190 km. But this variant is launched from TELs similar to Zelzal missiles which only has the capacity for a single rocket



• The Fadjr- 5 is truck mounted 333 mm caliber unguided artillery rocket with a solid propelled rocket motor, a maximum range of 75 kilometers, and a 175-kilogram conventional or chemical warhead. It carries four rockets, and they can evidently be equipped with three types of warheads: a kilogram high explosive warhead, a warhead using high explosive submunitions, and a warhead that uses chemical weapons.http://csis.org/files/media/csis/pubs/060728_gulf_iran.pdf

140). Iranian Rocket Artillery, www.globalsecurity.org/military/world/iran/mrl-iran.htm
141). Iranian Artillery Rockets http://www.fas.org/man/dod-101/sys/land/row/mrl-iran.htm
142) The New IAEA Report And Iran's Evolving Nuclear And Missile Forces Anthony H. Cordesman Arleigh A. Burke Chair in Strategy , 2011

Tondar 69 Tactical Ballistic Missile (CSS-8) (SA-2)

Type: **Short**-range, road-mobile, solid-propellant, single warhead, ballistic missile. The Tondar-69 is a conversion of the HQ-2 SAM to a guided surface-to-surface missile like the Fateh-110.



Tondar-69/CSS-8
Configuration: 2-stage, Solid and/or liquid fuel
Weight: 2,650 kg
Length: 10.8 m
Diameter: .65 m
Max Range: 150 km
Min Range: 50 km
Warhead: 190 or 250 kg
Guidance: INS

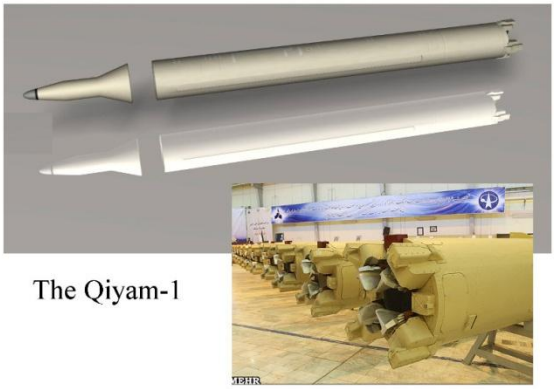
IRI purchased 200 M-7 (CSS-8) Short-Range Ballistic Missiles (SRBMs) with 30 Transporter-Erector-Launchers (TELs) from China in 1989, and to have called these missiles Tondar 69. The Iranians also called their own version of the Chinese C-802 air-to-surface and surface-to-surface missiles Tondar, which has caused considerable confusion. The M-7 was developed in China from the former Russian S-75 (SA-2 'Guideline') Surface-to-Air Missile (SAM), and the development program in China was designated project 8610 and M-7 (the export version). The Chinese HQ-2 SAM was also based on the S-75. [142] The Tondar missile system is mounted on a static launcher like the HY-2, though can probably be easily towed and a self-propelled platform like a 6x6 truck is not out of the question given the mounting of missiles like the Fateh-110. Some sources indicate that the liquid-fueled 2nd stage has been replaced with solid fuel, but this is unconfirmed. Some sources list the CEP as ranging from 50 m – 150 m, while this is possible, there is no conclusive evidence. Moreover, such a small CEP is significantly better then that found on the Fateh-110 which should be assumed to use a comparable system because they're roughly of the same generation and if the Tondar-69 carried a much more effective INS, it would logically find its way into the Fateh-110.

Qiyam-1 (Qiam 1) Qiyam 1 "Uprising-1, " missile resembles a Shahab-3 variations while according to photos, it is smaller than Shahab-3. It was tested on 20 Aug 2010 and is claimed to have more of a chance to evade interception because unlike other Shahab variants, the missile is liquid fueled, has no fins. The warhead could maneuver as it plunged to earth (which makes it more difficult for anti-missile systems to hit). This is one weapon the Tehran has put a lot of money and effort into. It was known that they were building an extended range (from 1,300 to 1,800 kilometer) version of their Shahab 3 ballistic missile. The Shahab 3/Qiyam 1 missiles are basically 1960s technology, with the addition of GPS guidance. Russian and North Korean missile technology has been obtained to make these missiles work. [143]



- **The Qiyam-1 is being massed produced and deployed to Islamic Revolutionary Guards**
- **The Qiyam-1 puts all of Israel within range, even if fired from deep inside Iran. Chemical warheads (with nerve gas) are thought to be available for this missile.**
- **Any warheads designed for the Ghadr-1 and Sajjil-2 can also be used by the new Qiyam-1 missile. The consolidation of warhead and re-entry vehicle design is economical and efficient**. [143a]

142)http://articles.janes.com/articles/Janes-Strategic-Weapon-Systems/Tondar-69-CSS-8-Iran.html Tondar 69 (CSS-8) (Iran), Offensive weapons
143). Iran Equips IRGC with Large Numbers of 'Qiyam 1' Ballistic Missiles 23 May 2011
http://thearkenstone.blogspot.com/2011/05/iran-equips-irgc-with-large-numbers-of.html
143a). Qiam (Qiyam) Iran's new missile 2010
26 August 2010 IISS Experts' Commentary - Generation Qiam(Qiyam): Iran's new missile
http://www.iiss.org/whats-new/iiss-experts-commentary/generation-qiam-irans-new-missile/



The Qiyam-1

According to some assessments, the Qiyam-1 could have a range up to 800 km (497 mi.) and carries a 500 kg warhead.

Doug Richardson, "Iran begins deliveries of Qiam 1 finless ballistic missiles", Jane's Defense Review, 6 June 2011.

The Qiyam-1 This is the first IRI missile without fins. Fins on a missile are not useful on descent, but are used to aerodynamically stabilize the missile during boost. If you have a good enough guidance system that can sense changes in the motion of the missile and feedback corrections quickly enough, you can actively stabilize the missile and don't need fins. The reason you would like to get rid of fins is that they add mass and aerodynamic drag to the missile, which slows it down and reduces its range for a given payload. This would also compensate for a smaller nosecone warhead.

Clearly unguided missiles (even model rockets) need fins for stabilization during launch. Missiles with advanced guidance systems, like U.S. ICBMs, clearly don't.

The Qiyam-1 without fins strongly suggests that engineers replaced the antiquated, Soviet-built guidance unit used in the Shahab-2 with a more modern one, most likely a strap-down unit capable of continuously making course corrections during the boost-phase. While the addition of a more capable navigation and guidance unit will certainly improve the accuracy of the Qiyam -1 relative to the Shahab-2. The improved guidance system may rely on ground controls rather than relying on an internal guidance system in the missile. For example, ground radars can track the flight of the missile and a ground station can radio guidance maneuvers to the missile. This could increase the accuracy of the missile during boost phase and allow the active control needed to remove the fins, although it might not be necessary for that. This kind of guidance can be done for short-range missiles since the boost phase remains within the range of the radar, and this is what was done on a number of early, short-range missiles.

- **This has resulted in missile designs that apparently will function properly about 80 percent of the time, and deliver a warhead of about one ton, to a range of some 1,700 kilometers,(1056 mi) to within a hundred meters of where it was aimed. By current standards, this is a pretty effective weapon.**

The Qiyam-1 nosecone has a smaller diameter conically-shaped forward section, behind which is a short, 0.6m-diameter cylindrical section. The cylindrical section is mated to a conically-shaped flange that attaches to the airframe. The 'baby-bottle' shape appears to be a copy of Ghadr-1(and Sajjil-2) nosecone, although the conical flange that connects the warhead to the airframe has been truncated for the Qiyam-1 to account for its smaller airframe diameter. The Qiyam-1 airframe is 0.88m in diameter, while the main body of the Ghadr-1 is 1.25m. An interesting point, however, is that the Ghadr-1 warhead, when it detaches from the main body before re-entering the earth's atmosphere, separates at a point about half-way up the cylindrically shaped flange. The diameter of the flange at the separation point is 0.88m, the same diameter as the Qiyam-1 airframe. This means that any warheads designed for the Ghadr-1 and Sajjil-2 can also be used by the new Qiyam-1 missile. The consolidation of warhead and re-entry vehicle design is economical and efficient.

145). Arms Control Wonk - Iran's Qiam Missile Comments (2010) 146). Iran Military Forum - Qiam-1 Missile Tested Successfully (2010) Iran Military Forum - Qiam-1 Missile is now Being Delivered to IRGC (2011) Posted by Author: Galen Wright http://thearkenstone.blogspot.com/2011/05/iran-equips-irgc-with-large-numbers-of.html 147). Qiam Iran's new missile 2010
26 August 2010 - - IISS Experts' Commentary - Generation Qiam: Iran's new missile
http://www.iiss.org/whats-new/iiss-experts-commentary/generation-qiam-irans-new-missile/

Tehran and the IRGC have demonstrated a serious intent in rocket artillery, ballistic missiles and cruise missiles. IRGC research, development faculties and programs has created one of the largest missiles forces in the region. In addition the Islamic Republic of Iran has one of the most diverse missile R&D programs in the world. This robust, diverse arsenal of ballistic missiles contains of particular note are IRI's medium-range ballistic missiles (MRBMs), which include the Shahab-3, The Qiyam-1 and its longer range variants. Based on the North Korean Nodong-1, the Shahab-3 has a range of 1,000 to 1,500 km, (621 miles to 932 mi) and can potentially reach targets throughout the Middle East. IRGC research, development has shown that it can modify rocket airframes built with SCUD technology and utilize rocket motors obtained from North Korea or elsewhere.

It has developed a two-stage space launch vehicle and launched a satellites into earth orbit,
Tehran important technical strides in recent years with regard to missile development: it has successfully placed three satellites into low earth orbit using its own two-stage launch vehicle; it has built and successfully tested multi-stage missiles; it has improved missile guidance; and it has improved and diversified the fuel used to propel its missiles. These developments allow IRGC forces to extend the range of their missiles and to deploy and fire them more quickly.

- **IRGC has also worked to ensure survivability of its missile forces: missiles can be mounted on mobile hidden launchers and deployed to newly built silos.**

Other MRBMs include variants of the Shahab-3, such as the Shahab-3A, Shahab-3B, Shahab-4 (Ghadr-1), Sejil, and the BM-25. These missiles have ranges of 1,500 to 2,500 km, (932 mi to 1553 mi) and are thought to be able to strike at targets throughout the Middle East, Turkey, and southeast Europe.



BM-25: In November 2007, U.S. Defense Secretary Robert Gates announced that North Korea had sold Iran a missile with a range of 2,500 kilometers (1553 mi). The BM-25, a modified version of the Soviet SS-N-6, which is a single-stage, liquid-fueled, submarine-launched ballistic missile with a range of 2,400 to 3,000 km and the ability to carry a nuclear warhead.

- **Ballistic Missiles/ Nuclear Warheads, November 2011: The International Atomic Energy Agency reports that under Project 111, Iran allegedly studied how to integrate a new spherical payload onto the Shahab-3 missile, including a high explosive and detonation package suitable for use in an implosion device.**

In 2008, the International Atomic Energy Agency reported that it had been shown documents containing evidence of high explosives testing, and work done to redesign the inner payload chamber of the Shahab-3 re-entry vehicle to accommodate a "nuclear device." This effort was known as "Project 111." In November 2011, the Agency reported that Iran may have explored a number of missile warhead designs suitable for delivering a nuclear payload. The Agency said it was "increasingly concerned" about activities in Iran "related to the development of a nuclear payload for a missile."[148]

- **Cruise Missiles: December 2011 - January 2012: Iran test fires Qader, Nasr, and Mehrab missiles during the Velayat-90 naval exercise in the Persian Gulf and the Sea of Oman, according to Iran's Ministry of Defence. The Qader is an anti-ship cruise missile with a range of 200 km and is described as an upgrade of Iran's Noor missile. The Nasr is a short-range anti-ship missile, which was tested for the first time during the exercise. The Mehrab is a naval surface-to-air missile with anti-radar and anti-jamming capabilities, according to Iranian Naval officials. February 2012: Iran inaugurates a production line for the Zafar naval cruise missile, which is a short-range, anti-ship, radar-guided missile, according to Iran's defense minister. A first shipment of missiles is delivered to the IRGC. The Zafar appears to be a modified version of the Chinese C-701AR missile, according to analysts. [149]**

(This and more will be covered in a separate chapter)

148). Iran's Ballistic Missile Programs, IranWatch Updated May 2012 http://www.iranwatch.org/wmd/wmd-iranmissileessay.htm
149). Iran Missile Milestones, Iran Watch *Updated May 2012* *http://www.iranwatch.org/wmd/wponac-missilemilestones.htm*



The Islamic Republic of Iran Naval Forces

IRI has two independent naval forces: the Islamic Republic of Iran Navy (IRIN) part of the Artesh, whose existence predates Iran's 1979 Revolution, and the Islamic Revolutionary Guard Corps Navy (IRGCN), which evolved separately in midst of the Iran-Iraq war (1985). In terms of its overall size, the IRIN is the smallest of Tehran's conventional military services, with a total complement of around 18,000 active duty personnel. The IRIN also has two marine brigades (approximately 2,600 personnel) of naval infantry. The IRGCN is assessed to have slightly larger complement of 20,000. Both the IRIN and the IRGCN operate as distinct services, with parallel chains of command. [150]The Islamic Republic employs its naval forces as a strategic – tactical political military tool to convey, project and coerce its foreign policy ambitions and priorities. Its naval irregular warfare capabilities have been a means to literally hold the International Community hostage, by threatening to close the Straits of Hormuz a vital economic petroleum sea highway. [151]

While a third of traded crude passes through the Strait of Hormuz less than a quarter of crude consumed by American is transported through the strait. So by threatening the strait and the flow of oil, Tehran has been threatening more than just Washington. This has often included not only close allies of the United States, but also those that have provided support or remained neutral on the Islamic Republic and other issues such as nuclear important to Washington. Countries sharing the Persian Gulf (IRI, Oman, UAE, Saudi Arabia, Qatar, Bahrain, Kuwait and Iraq).Gulf States in 2006 produced 28 percent of the world crude oil supply and hold an estimated 55 percent of the world crude oil reserves (728 billion barrels). In 2009, about a third of all seaborne traded oil and roughly 17 percent of all traded oil worldwide passed through this most important oil chokepoint (15.5 billion barrels/day). About 18 percent of the world demand in Liquefied Natural Gas (LNG) also goes through the Strait. Both Naval forces have as their primary mission to protect the Islamic Republic's maritime interests and defend the IRI from sea-based threats. The IRIN, for instance, with its larger, longer-range surface assets, is considered to be more of a blue/green water navy, while the IRGCN, whose inventory consists primarily of small fast-attack craft, is more ideally suited to be a coastal defense force. [152]

Mosaic Doctrine, Restructuring of the IRIN & IRGCN: Since 2007 the IRIN and IRGCN have been undergoing a reorganization that has included new base openings and a re-division of duties between the navies. The IRGCN has essentially remained a "guerrilla force at sea," paralleling the structure of IRGC Ground forces on land with a decentralized command. Although the two navies have traditionally shared operations in the Caspian Sea, Persian Gulf, and Gulf of Oman, the reorganization split the IRIN and IRGCN areas of responsibility.

The IRIN was assigned to the Gulf of Oman and Caspian Sea, while the IRGCN was given full responsibility for operations in the Persian Gulf. However there are some overlapping duties and both branches will hold joint naval war games. The IRIN continues to occupy bases inside the Persian Gulf, although the Gulf itself is now under the operational control of the IRGCN as a result of a major naval reorganization that began in 2007. [153]

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151). Iran's Naval Forces: From Guerilla Warfare to a Modern Naval Strategy 2009 Office of US Naval Intelligence page 11
http://www.oni.navy.mil/Intelligence_Community/docs/iran_navy_forces.pdf
152). Strait of Hormuz Iran Playing With Fire Around The Strategic Bottleneck 29/12/2011
http://middleeastinfo.wordpress.com/2011/12/29/strait-of-hormuz-iran-playing-with-fire-around-the-strategic-bottleneck/
153). Increased U.S. Anti-Mine Presence in the Persian Gulf June 11, 2012
http://www.stratfor.com/analysis/increased-us-anti-mine-presence-persian-gulf 4). IBID 1

Despite its antiquated surface fleet, the IRIN has managed to perform operations as far away as the Gulf of Aden over the last three years, and it continues to incrementally modernize. It has also emphasized development of its asymmetric assets, investing heavily in subsurface and anti-ship missile capabilities.

Middle East Security Report 1, Iran's Two Navies Commander Joshua Himes, U.S. Navy October 2011

Islamic Republic of Iran Naval Forces The 2007 Naval forces reorganization witnessed the establishment of the IRIN Southern and Northern Fleets, each of which theoretically has jurisdiction over IRIN forces deployed from Iran's southern and northern littorals. The IRIN is organized into four naval districts, and four operational zones. IRIN headquarters are located at Bandar Abbas, Jask, Chabahar, and Bandar Anzali. The IRIN's four operational zones encompass the southern littorals of the Caspian Sea, the northern Gulf of Oman, and the Strait of Hormuz. The IRIN's 1st District at Bandar Abbas is co-located with a similarly designated IRGCN headquarters, suggesting that the two services have overlapping responsibilities in this strategically significant area. Draftees are expected to serve 18 months in the Navy. Officers, who earn the equivalent of bachelor's and master's degrees at the Imam Khomeini Naval Academy in the town of Nowshahr, are obliged to serve longer terms than their enlisted counterparts. The Islamic Republic of Iran Navy (IRIN) has been given the responsibility for expanding Iran's maritime presence from the Persian Gulf, leaving the Iranian Revolutionary Guard Corps Navy (IRGCN) responsible for the defense of the Islamic Republic in the Persian Gulf itself. The IRI's regime views its naval resources as its most visible counterforce to U.S. and allied operations off of the Islamic Republic's shores and the best prepared of Iran's military services to conduct conventional military operations.

- **IRI's Naval Mosaic Doctrine Strategic Triangle :** The Mosaic doctrine naval reorganization reflects Tehran's focuses on a strategic triangle that extends from the Bab al- Mandeb between Djibouti and Yemen, across the Arabian Sea to the Strait of Hormuz, and across the Indian Ocean to the Malacca Strait. This area encompasses strategic maritime commerce/ oil routes that the Islamic Republic deems essential to securing the future of its economic sector. Under the new structure, the IRIN will patrol the Caspian Sea, the Gulf of Oman, and the area from Bandar Abbas, near the Strait of Hormuz, to Pasa Bandar, near Pakistan. This shift involves establishing new bases in the area, and utilizing existing capitol ships as well as submarines. IRIN naval forces are now solely focused on providing defense in depth and extended deterrence. This concept includes the Gulf of Oman where the IRIN can emphasize its coastal defense and subsurface capabilities, but also expands as far as the Gulf of Aden, where the IRIN is now, somewhat surprisingly, conducting its 12th consecutive anti-piracy patrol since 2008. December 2010 agreements with Djibouti may portend a greater logistics footprint in the Gulf of Aden, allowing a larger IRIN presence in this region. The IRIN has been able to maintain this increased operational tempo, despite widespread doubts of its logistical and materiel readiness. Following the conflicts of the 1980s, the IRIN invested heavily in its subsurface and cruise missile inventories with the procurement of numerous modern anti-ship cruise missiles as well as three Russian Kilo class submarines.(In 2012 the kilo class submarine , the Tareq completed major overhauls. [154] Due to limited domestic repair and overhaul facilities, the IRIN has faced readiness and endurance challenges, but domestic production capability appears to be improving. The most compelling changes in IRIN inventory are in the subsurface and cruise missile categories. According to Joshua Himes, an analyst for the Centre for Strategic and International Studies, the increased responsibility for the IRIN is to extend Iran's layered defense against any direct seaborne threat.

According to *Jane's*, the IRIN's aviation branch "is one of the few air elements in any Gulf navy," with 2,000 personnel, three aging P-3s, other assorted maritime patrol craft, and helicopters.

154). Navy's Historic Mediterranean Deployment: Timing Is Everything MAR 21, 2011 http://csis.org/publication/ Iran relaunches 154a). Iran Relaunches Russian-made submarine May 29, 2012 http://www.timesunion.com/news/article/Iran-relaunches-Russian-made-submarine-3591406.php#ixzz1yIKGGbeW 14 page 12

155). Two Navies IRIN Platforms & Capability The Artesh Middle East Institute Viewpoints, page 40: • www.mei.edu

The Islamic Republic of Iran Naval Forces IRIN
Islamic Revolutionary Guard Naval Forces IRGCN

The IRGCN are armed with new, more lethal, high-speed small boats, and complemented by expanding supporting capabilities such as extended range coastal radars, 'smart' anti-ship ballistic missiles, and even IRGCN-operated submarines, the IRGCN's capabilities has increased significantly since assuming responsibility for defending the Persian Gulf in 2007. [156]

IRGC naval forces have focused on adding and upgrading its inventory of high-speed vessels with missile and torpedo capabilities. Recent additions include twelve modern Peykaap/Tir class small boats, a domestic production line for Bladerunner vessels, and at least twelve Bavar 2 stealth flying boats. Development programs seek to increase the top speed of existing craft from 55 knots to 80-85 knots, along with increasing balance and maneuverability designed to enable cruise-missile and torpedo capabilities. Cross-naval developments include anti-ship ballistic missiles (range 250-300km, 155 mi to 186 mi), radars (range 500km, 310 mi), coastal radar (range 300km, 186 mi), and ship-borne radar (range 60km, 37 mi). IRI has also increased its stockpiles of C-802 anti-ship cruise missiles, which have been reverse engineered in two models, the Noor CM and the most recent Ghader CM. [157]

Iranians are preparing for guerilla war at sea, like operations on land , when two unequal opponents face each other , the best way for the weak side is to resort to a war of attrition and guerilla operations," ,

Retired Rear Admiral Ali-Asghar Kazemi, Professor Tehran University Iran Plans for Attrition in the Gulf, Kahwaji Riad, May 2006 page 1

Iranian Military Dualism

Apart from the martyrdom-suicide operations, the Iranian military system has another feature, which precisely fits into the asymmetric warfare doctrine and makes it even more distinctive from any which precisely fits into the asymmetric warfare doctrine and makes it even more distinctive from any state-run military systems across the globe. This is a unique hybrid organization of the IRI Military which consists of regular Armed Forces (often referred to as Army or Artesh) and the Islamic Revolutionary Guard (IRGC a.k.a. Pasdaran) .It is hard to find similar historical precedents of coexistence of such parallel, double track military forces , save the former Nazi Germany (Wehrmacht and Waffen –SS) and Saddam's Iraq(the Republican Guard).

Obsolete Weapons, Unconventional Tactics, and Martyrdom Zeal: How Iran Would Apply its Asymmetric Naval Warfare Doctrine in a Future Conflict By Jahangir Arasli page 16 George C. Marshall European Center for Security Studies No. 10 April 2007 ISSN 1863-6039

IRGCN has been constituted as a coastal defense force largely focused on asymmetric / irregular warfare and mobile combat capabilities in the Persian Gulf. Larger than the IRIN, the IRGCN consists of 20,000 personnel and anywhere from hundreds to several thousand ships and small crafts. [158]

Cruise Missiles; Most of Iran's larger surface combatants are armed with anti-ship cruise missiles, domestically-produced variant of the Chinese C-801/ C-802, CMs, the Noor & Ghader cruise missiles. The IRIN is also assessed to have seven mine warfare ships, 44 coastal and inshore patrol craft, approximately ten amphibious ships, and a replenishment vessel the Kharg the largest Iranian military vessel by tonnage. Trends in Iranian naval acquisition and domestic production indicate a strong emphasis on self-reliance a lesson learned from the Iran-Iraq war when spare parts were hard to acquire due to foreign sanctions. Current acquisition efforts appear to be focused along four separate lines of development, including medium-heavy submarines, midget submarines, large surface assets, and medium-size missile patrol craft. The C-802 is a 20 foot long, 360mm, and 1,500 pound missile with a 360 pound warhead. [159]

156). Middle East Security Report 2011
157). Iran's Two Navies Cmder Joshua Himes, U.S. Navy, A Maturing Maritime Strategy, page 7 158).IBID 1 3).
159). The Artesh Navy: Iran's Strategic Force By Dr. Michael Connell, Director of Iranian Studies Program | JAN 31, 2012http://www.mei.edu/content/artesh-navy-irans-strategic-force

Islamic Republic of Iran Naval Forces / Islamic Revolutionary Guard Naval Forces

Cruise Missiles IRGCN; The IRGCN has established a coastal defense brigade structure, including naval guns, and to manage anti-ship missile elements. There are HY-2 Seersucker land-based anti-ship missile units deployed in five to seven sites along the Persian Gulf coast. The HY-2s have ranges of approximately 100 kilometers, (62 mi) which can be directed to a target by an aircraft or unmanned aerial vehicle. (China has anti-ship missiles with 200-280 kilometer ranges (124 mi to 173 mi), but it is not believed these have been sold to Tehran.) U.S. experts note that IRGCN forces can attack targeted ships with C-701, C-801, C-802 and Iranian-made anti-ship cruise missiles not only from its own shores, but Gulf islands, and oil platforms using relatively small mobile launchers. As part of its asymmetric and flexible construct, the IRGCN developed a C2 (command & control) structure that rewards aggressive, independent-minded subordinates. [160]

SS-N-22 "Sunburn" (aka "Sunburst") Cruise Missile Some sources have claimed that Tehran has bought as many as eight Soviet-made SS-N-22 "Sunburn" (aka "Sunburst") anti-ship missile launch units from Ukraine and has deployed them near the Straits of Hormuz. However, U.S. experts have not seen firm evidence of such a purchase and doubt that Islamic Republic has operational holdings of such systems. But other intelligence agencies believe that the IRGC has deployed up to a battalion in the Gulf. The "SS-N-22" is also a title that actually applies to two different modern long-range supersonic sea skimming systems the P-270 Moskit (also called the Kh-15 or 3M80) and the P80 or P-100 Zubi/Onika. So this may be the cruise missile. [161]

C-801s and C-802s Cruise Missiles It is believed that the Armed Forces have at least 100 C-801s and C-802s. One source notes that Tehran may have imported up to 100 C-801s and eight launchers in 1987-1988 and built its arsenal to 200 by 1994 as well as the ability to produce the C-801 indigenously (under the designation "Tondar"). Another source notes that Tehran may have deployed its C-701 missiles (The radar-guided C-701 is designated "Kosar" by Iran) at launching bases under construction at Bandar Abbas, Bandar Lengeh, Bushehr, and Bandar Khomeini. [162] Following the 1991 Gulf War IRI imported the C-802 anti-ship cruise missile from China. No international agreement bans transfers of anti-ship missiles, and the C-802 is not covered by the MTCR, which controls exports of ballistic and cruise missiles that can deliver 500 kg warheads to 300 km (186 mi). The IRGC naval forces have at least 40 light patrol boats, 10 Houdong guided missile patrol boats armed with C-802 anti-ship missiles.



Kh-55 cruise missile nuclear cruise missile : *The most deadly know cruise missile IRI forces is also known to have is the imported eighteen (possibly more) Kh-55 cruise missiles from Ukraine in 2001. The Kh-55 has a range of 3,000 kilometers, enabling it to reach targets as far away as Israel. This cold war era CM is designed to deliver a nuclear payload. [163]*

Naval Mines: IRI is believed to have the 4th largest sea mine inventory (around 5000) in the world behind the United States, Russia, and China. Up to 1000 of the sea mines are of the Chinese EM11 bottom-influence mine; the EM31 moored mine; and the EM52 rocket-propelled rising mine. All of these mines are of Chinese domestically produced designs, and the Chinese are the largest supplier of mines to the IRI since 1998. [164] The IRGC has a wide range of sea- ocean mine warfare capabilities .The IRIN and the IRGCN regularly exercise laying mines. The combined naval forces can use submarines and five aging mine warfare ships. But all IRGCN patrol vessels and many Iranian commercial vessels can lay mines. U.S. Navy intelligence estimates that Tehran has the Chinese EM52, a rocket-propelled anti-ship mine, and that the Iranian purchase of three Russian KILO-class submarines probably included modern magnetic, acoustic and pressure-sensitive mines. [164]
(Missiles and cruise missiles are covered to a greater extent in a subsequent chapter)

160). "Iran, Navy," I HS Jane's Sentinel Security Assessment, May 5, 2011
161).Cordesman/Wilner, Iran & the Gulf Military Balance Rev 3 AHC 2/29/12 page 52
162). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 page 52
163). Iran Missile NTI, http://www.nti.org/country-profiles/iran/delivery-systems/
164). September 25, 2007 5th Fleet Focus: Iranian Underwater Warfare Capabilities
http://www.informationdissemination.net/2007/09/5th-fleet-focus-iranian-underwater.html

IRGCN was put in charge of defending the Islamic Republic of Iran's Gulf coast in September 2008 it is not only operational in the Persian Gulf and the Gulf of Oman, it could potentially operate elsewhere if given suitable sealift or facilities.

- The IRGCN and related forces has numerous staging areas in such places and has organized its Basij militia among the local inhabitants to undertake support operations.



IRGCN has the capability to deliver conventional munitions such as bombs and mines, to CBRN munitions into ports and oil and desalination facilities.

IRGCN Summary

• IRGCN Forces Consists Of Six Elements: Surface Vessels, Midget & Unconventional Submarines, Missiles, Rockets, Naval Mines, Aviation, and Military Industries.
• Large numbers of anti-ship missiles on various types of launch platforms.
• Small fast-attack craft heavily armed with rockets or anti-ship missiles.
• Fast mine-laying platforms.
• Enhanced subsurface warfare capability with various types of submarines and sensors.
• More small, mobile, hard-to-detect platforms, such as semi-submersibles and unmanned aerial vehicles.
• More timely intelligence and effective counterintelligence/deception.
• Enhanced ability to disrupt the enemies command, control, communications, and intelligence capability.
• The importance of initiative, and the avoidance of frontal engagements with large US naval surface warfare elements.
• Means to mitigate the vulnerability of even small naval units to air and missile attack.
• The IRGC has numerous staging areas in such places and has organized its Basij militia among the local inhabitants to undertake support operations. [165]

IRGCN Naval Infantry

According To 2011 Janes Report, IRGCN Has 4 Brigades of Naval Infantry

"Marines, Within the Pasdaran Inqilab (IRGCN) there is brigade strength Marine Force; additionally the navy has three brigades of marines. These four brigades are believed to be limited to small raids with, due to the lack of effective sealift, a mission to defend the coasts, islands and oil platforms. The Revolutionary Guards operate fast attack, surface craft in both suicide and mass-attack missions. They may also be the operators of the Gahjae and Kajami semi-submersible fast attack craft. "

Special Forces (Maritime) (Iran), Amphibious and special forces appearing in
Jane's Amphibious and Special Forces Dec 09, 2011
Janes.com/articles/Janes-Amphibious-and-Special-Forces/Special-Forces-Maritime-Iran.html

Of all countries surrounding the Persian Gulf, the Islamic Republic of Iran possesses the largest navy. The surface fleet is made up of several different types of frigates. The most important are the three Saam/Alvand class frigates, equipped with Chinese C-802 anti-ship missiles. The Saam class dates from the early seventies. IRI also deploys two Moudge class frigates that it has built itself; these ships are copies of the Alvand class. The Naval surface fleet also includes several outdated corvettes of the Bayandor and Hamzed classes, each equipped with C-802 missiles. Apart from these the navy also possesses many patrol, attack and missile boats that are stationed mostly within the Persian Gulf. Iran also fields a couple landing crafts which grant it a limited amphibian capability. Most the larger surface combatants are armed with anti-ship cruise missiles, including the Noor a domestically-produced variant of the Chinese C-801. The IRIN is also assessed to have seven mine warfare ships, 44 coastal and inshore patrol craft, approximately ten amphibious ships, and a replenishment vessel the Kharg the largest Iranian military vessel by tonnage. [166]

165). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 pages 81-82
166). The Artesh Navy: Iran's Strategic Force Dr. Michael Connell, Director of Iranian Studies Program | JAN 31, 2012
http://www.mei.edu/content/artesh-navy-irans-strategic-force

Islamic Republic of Iran Naval Forces: Naval Rapid Deployment Capabilities/ Forces: Tehran's Naval Forces has significant amphibious assets by Gulf standards, and the IRIN and IRGCN have independent marine forces. These assets are large enough to move a battalion-sized force relatively rapidly, and include: 3 Hengam-class (Larak-class) LST amphibious support ships (displacement of 2,940-tons loaded) that can carry up to six tanks, 600 tons of cargo, and 227 troops; 3 Iran Hormuz-class (South Korean) LSTs (2,014-tons loaded) that can carry up 9 tanks and berth 140 troops, and. 3 Hormuz-21 class 1,80-ton LSTs and 3 Fouque class 176-ton LSLs. The amphibious ships give it the theoretical capability to deploy about 1,000 troops, and theoretically about 30-40 tanks in an amphibious assault but Naval forces has never demonstrated that it has an effective over-the-shore capability. But they might use commercial ferries and roll on-roll off ships if it felt they could survive. The amphibious and airborne units of the Iranian military forces comprise a consequential power projection capability, by regional standards. Naval forces significant amphibious lift gives its marines the capability to conduct limited amphibious raids along the Gulf coast. Those same amphibious units, in conjunction with its airborne forces could threaten the Musandum Peninsula. Naval infantry and Special Forces prepare / practice to seize various ports and cities of the Gulf. In each of these scenarios, however, very limited air support would be available. During April and May 1992, Iran staged the largest amphibious exercise it had conducted since the end of the Iran-Iraq War. This exercise took place in the Straits of Hormuz at the same time that Iran was reasserting its control of Abu Musa. The exercise lasted 11 days, demonstrating Iranian capabilities to block the Straits from an outside invader (i.e., the US). The exercise covered an area of some 10,000 square miles of ocean, and involved 45 surface ships, 150 small craft, and an unknown number of Iranian Air Force aircraft. [167] Artesh forces does not train seriously for long-range maneuver and does little training for amphibious warfare or deployment by sea. It does not practice difficult amphibious operations, particularly across the beach operations. It could, however, deploy into Kuwait and cross the border into Iraq. It can also move at least brigade-sized mechanize units across the Gulf by amphibious ship and ferry if it does not meet significant naval and air opposition to any such movement. However it lacks the air strength and naval air and missile defense capabilities to be able to defend such an operation. But according to Mosaic Doctrine these deficiencies could be overcome with suicide attacks by air, land and sea , couple with cruise missile SCUD missile attacks layered attacks. Limited forms of CBRN could be used as a force multiplier. [168]

- In recent years, Iran has made great achievements in its defense sector and attained self-sufficiency in producing essential military equipment and systems. IRI is the only country in the world that has fitted its navy's hovercrafts with surface-to-surface missiles. In October 2011 IRI's domestically-built Jamaran destroyer, rescued an Iranian oil tanker from a pirate attack near the Bab-el-Mandeb Strait. In pursuit of its objective to play a more prominent role on the world stage, the IRIN has engaged in several out-of-area deployments, most notably to the Gulf of Aden and the Red Sea, where the IRIN has been conducting counter-piracy operations alongside the NATO, Russian, Chinese, and Indian navies. On at least one occasion, an Iranian submarine has accompanied these long-range patrols in order to "collect data." Since 2009, IRIN vessels have conducted several high profile port visits to Sri Lanka, Oman, Saudi Arabia, Djibouti, and Syria. On the way to the Syrian port of Latakia, two of the IRIN's vessels, the frigate Alvand and the replenishment vessel Kharg, transited the Suez Canal and entered the Mediterranean, the first vessels to do so since the 1979 Revolution. While the significance of these deployments is largely symbolic, they nevertheless represent a technological achievement on the part of the IRIN, at least by regional standards. Moreover, by planting the Iranian flag in locations as far afield as the Mediterranean and the Southern Indian Ocean, the IRIN has signaled its aspirations to play a more dominant role on the regional stage. [169]

168). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 pages 81-82 169). The Artesh Navy: Iran's Strategic Force Dr. Michael Connell, Director of Iranian Studies Program | Jan31, 2012 mei.edu/content/artesh-navy-irans-strategic-force 3). Office of Naval Intelligence, "Iran Naval Forces," and Joshua C. Himes, "Iran's Maritime Evolution," *Gulf Analysis Paper*, Center for Strategic and International Studies, July 2011

Class	Type	Number	Origin	Year
Thondor (Hudong)	Fast Attack Craft (Missile)	10	China	1994-1996
Peykaap (IPS-16)	Fast Attack Craft (Torpedo)	15	North Korea	2002-2003
Peykaap II (IPS-16 mod)	Fast Attack Craft (Missile)	25	North Korea	2006
Peykaap-18 (Tir)	Fast Attack Craft (Torpedo)	10	North Korea/Iran	2002-2004
Kaman (Combatant II)	Fast Attack Craft (Missile)	6-10	France	1977-1981
Azarakhsh (China Cat)	Fast Attack Craft (Missile)	6-11	China	2001-2004
Seraj	HSPB (Coastal)	In Prod.	Iran	2010
Ya Mahdi	HSPB (Coastal Missile)	In Prod.	Iran	2010
Zolfaghr	Fast Attack Craft (Missile)	In Prod.	Iran	2010
Pashe (MIG-G-1900)	HSPB (Inshore)	10	Iran	
Ghaem (MIG-S-1800)	HSPB (Inshore)	6-20	Iran	
Murce (MIG-G-0900)	HSPB (Inshore)	20	Iran	
Ashura (MIG-G-0800)	HSPB (Inshore)	20	Iran	
Zafar (MIG-S-2600) (Chaho)	HSPB (Coastal)	3	Iran/North Korea	
Tareq (Boghammer)	HSPB (Coastal)	30 – 40	Sweden/Iran	1983
Ghadir	Midget submarine	6	Iran	2009-2010
Hormuz-21	Landing Ship	2	The Netherlands	1984-1985
Hormuz-24	Landing Ship	3	South Korea	1985-1986
Kajami (Taedong-B)	Submersible Attack Craft	1	North Korea	2002-2003
Gahjae (Taedong-C)	Submersible Attack Craft	2	North Korea	2002
IRGCN (Various sources including IISS Military Balance, Global Security, IHS Janes, "Gulf Military Balance" by Center for Strategic and International Studies 2011				

It is clear that Islamic Republic of Iran is aiming for asymmetrical strategy of naval warfare in the Persian Gulf. While the surrounding countries are based on conventional maritime combat, IRGCN chooses to deploy fast, short but heavy surprise attacks against heavier slower vessels of other countries. Tehran's military Leaders realized after the Iran –Iraq tanker war and Operation Earnest Will and Operation Prime Chance that the Persian Gulf is relatively small for a conventional maritime struggle and offers little room for maneuvering, especially to units operating in a larger fleet context.

- **Operation Earnest Will** (24 July 1987 – 26 September 1988) was the largest American Naval convoy operation since World War II. It was for U.S. military protection of Kuwaiti owned tankers from Iranian attacks in 1987 and 1988, three years into the Tanker War phase of the Iran–Iraq War. The numerous ships used in Operation Ernest Will mostly consisted of Battleship Battle Groups, Carrier Battle Groups, Surface Action Groups and ships from the Pacific's Third and Seventh fleets and the Mediterranean-based Sixth fleet. [170]
- **Operation Prime Chance** (August 1987 – June 1989) was a United States Special Operations Command operation intended to protect U.S.-flagged oil tankers from Iranian attack during the Iran–Iraq War. The operation took place roughly at the same time as Operation Earnest Will (July 1987 – December 1988), the largely Navy effort to escort the tankers through the Persian Gulf. The operation was begun after the mining of the U.S.-flagged Kuwaiti oil tanker Bridgeton. [171]

170). Joint Special Operations in Support of Earnest Will Autumn/Winter 2001–02 / JFQ
http://www.dtic.mil/doctrine/jel/jfq_pubs/0629.pdf
171).IBID 1

Summary, Tehran's asymmetrical Naval Strategy and Tactics for the Persian Gulf: are aimed at quickly mobilizing a large number of patrol boats in a certain sector, conduct a rapid powerful attack and then quickly withdraw. IRI's Naval Forces knows it is difficult to defeat a Close in Weapons System (CIWS) with only one or even a few missiles. Small, fast and agile boats allow simultaneous attacks from several sides against a frigate in order to overwhelm the CIWS system. Fast attack vessels also allow rapid attacks against oil rigs and merchant shipping in the Persian Gulf. During Operation Earnest Will Iran's brown water capability was vulnerable to attack helicopters, especially at night. We could assume that Iran has learned lessons from this episode and equipped its patrol and attack boats with the necessary technology and surface to air missiles to fend off this threat. Most of these fast attack and patrol boats are under the command of the Revolutionary Guard and are spread around several bases such as Farsi and Sirri Island. [172]

SDVs	8
Submarines	3
Midget Submarines	12
Major Missile Combat	5
Major Other Combat	1
Missile Patrol	57
Other Patrol	76
Armed Boats	117
Mine	7
Landing Craft	14
Amphibious Ships	17
Support	26

Cordesman/Wilner, Rev 3 AHC 2/29/12
Iran & The Gulf Military Balance

Most countries around the Persian Gulf deploy small yet capable 'green water navy'.

- **Green-water navy** is terminology created to describe a national naval force that is designed primarily to provide coastal defense and may be beginning to acquire the ability to sustain operations on the open ocean (blue -water navy). It is a relatively new term, and has been created to better distinguish, and add nuance, between two long standing descriptors: blue-water navy and brown-water navy.

The most powerful maritime power in the Persian Gulf without a doubt is the Islamic Republic of Iran. It is interesting to note that IRI has a navy that functions as both 'green water navy' and a 'brown water navy'.

- **Brown water navy** any naval force that has the capacity to carry out military operations in river or littoral environments. The term "brown-water" generally describes river environments carrying heavy sediment loads, such as from soil runoff or flooding. Since presence of "brown water" requires a soil source, whether riverine or coastal, the term has become associated with littoral navies.

The Iranian green water capabilities are built around its frigates and Kilo class submarines. We can see that Tehran's Naval Forces has recently deployed these ships more often in the Arabic and Red Sea; these vessels have even operated in the Mediterranean sea for a limited time. While Tehran's frigates are small compared to western frigates, they are capable of power projection and supporting the Islamic Republic's status as a regional power. A notable trend is the capability to develop and build its own ships. Isolated from western ships and western shipbuilding technology, IRI has been forced to produce its own ships. So far this capability is limited to constructing patrol boats and mini submarines, but the capabilities seem to be evolving towards the construction of larger ships through the construction of small frigates based on the Alvand class. IRI has also developed its capability to construct submarines since up to now it has concentrated on the construction of small Ghadir class mini submarines, but currently intends to build larger submarines with a displacement of 1000 tons. While this submarine would still be smaller than Kilo Class submarines, it is definitely an improvement of capabilities over the Ghadir class of submarines. The green water navy (IRIN) is concentrated in the naval base of Bandar Abbas, where it has direct access to the Arabic Sea while it can still be deployed to the Persian Gulf. In the Persian Gulf IRI predominantly deploys brown water navy (IRGCN) based on patrol and attack boats, as opposed to surrounding countries. [173]

172). Office of Naval Intelligence, "Iran Naval Forces," and Joshua C. Himes, "Iran's Maritime Evolution," *Gulf Analysis Paper*, Center for Strategic and International Studies, July 2011
173). The Naval Balance of Power: The Persian Gulf , Frederik Van Lokeren Aug 2011
http://gcreport.com/index.php/analysis/192-the-naval-balance-of-power-the-persian-gulf

Summary IRI Naval Forces

- IRGCN forces can also use shore-based and air-launched anti-ship missiles and cruise missiles (ACSMs), other commercial ports, small harbors and contingency facilities to support and deploy a wide range of military assets. These assets include surface ships, mines, land-based anti-ship missiles, maritime patrol aircraft, and combat aircraft with anti-ship missiles, UAVs, and UCAVs. These assets include shore batteries of ASCMs along Iran's coast and on its islands in the Gulf, many of which are on mobile launchers. It is notable that the US never successfully targeted Iraq's anti-ship missile assets during the war to liberate Kuwait although they were deployed along far smaller coastal areas. [174]

Many of Tehran's missiles can be deployed on the smaller, harder to detect, and more expendable ships and boats in the Iranian Navy and the Naval Branch of the IRGC, or on Jet fighters. Some could be remotely target by maritime patrol aircraft or UAVs. Most of Iran's missiles are either Chinese-made, or derive from Chinese designs. They include the CSS-N-2 Silkworm, CSS-C-3 Seersucker (C-201), CSS-N-4 Sardine (C-801 Noor, C-801K), CSS-N-8 Saccade (C-802), C-701/TL-10 Kowsar, Sejil, Ra'ad, Nasr, and the Ghader. [175]

"While the IRIN is expanding its operational footprint, the IRGCN strategy remains focused on increasing its lethality and complexity in the Persian Gulf and Strait of Hormuz. In addition to aggressively expanding its inventory of missile patrol craft to complement existing asymmetric strategic pillars of mine warfare and coastal defense cruise missiles, the IRGCN may be expanding its strategy with the integration of subsurface assets.28 It is unclear how quickly this can happen in light of training, domestic production, and personnel constraints. With the IRIN focus more on the extended soft power role, it is possible that Ghadir and other mini-sub ventures will ultimately belong to the IRGCN, leaving the IRIN to operate with the Kilo/follow-on submarines in the blue-water environs. "

Iran's Maritime Evolution by Joshua C. Himes CSIS 2011 Gulf Analysis Paper

In 2011 two IRIN ships completed a historic transit to the Mediterranean, a Kilo class submarine has transited from Bandar Abbas and operated in the Red Sea, and the IRIN is on its 14th anti-piracy patrol in the Gulf of Aden since late 2008—maritime milestones that no one would have predicted from the Islamic Republic of Iran just a few years ago.

As we have learned IRI's Naval forces deadly sea mining warfare abilities, coupled with the current weaknesses in the countermine operations capability of the US and Arab Gulf navies pose a serious threat and stability to the security of the Persia Gulf. Virtually any military or commercial vessel is capable of laying mines if it has the physical capacity to carry them. Consequently, the IRGCN and the IRIN forces are capable of seeding the Gulf and Strait of Hormuz with a large number of mines in a relatively short period of time. And with having built up an estimated 4th largest inventory of sea mines in the world, reveals Tehran's deadly naval warfare asymmetrical stratagems. Tehran's Naval Forces would likely seek to use this capability as well as its large arsenal of both modern smart mines and antiquated moored contact mines to deny US forces access to the Gulf and render it impassable to commercial traffic.

Khalij Fars Anti-ship ballistic missile: is based on Fateh-110, unveiled in 2011. IRI claims it is a precision guided weapon, with the ability to hit moving targets, however hotly debated in intelligent circles as its true capabilities. It carries a 650 kg warhead at Mach III. Tehran calls it an aircraft carrier killer. IRI ballistic missile arsenal lacks the proven ability to carry out precision strikes. In a February 2011 Tehran press conference, the Khalij Fars is allegedly capable of striking at moving ships in the Gulf at ranges of up to 150 km. (93 mi) these capabilities remain unconfirmed . [176]

174). Iranian Military Capability 2011." Open Source Intelligence Project 2011. January 2011.
175). Cordesman/Wilner, Iran & The Gulf Military Balance Rev 3 AHC 2/29/12 pages 115 & 120
176). Iran mass producing smart ballistic missiles: IRGC chief.‖ Tehran Times, February 8, 2011.

Chapter Summary: **The BM-25 (aka Musanda) Nuclear Missile,** several of these missiles were believed to have been delivered to the IRI in 2005 from North Korea however transfers haven't been verified. In 2006 Israel's military intelligence chief stated that Tehran had received a shipment of North Korean-supplied BM-25 missiles. [177]Missile said to be capable of carrying nuclear warheads



The BM-25, known to NATO as the SS-N-6, has an estimated range of 2414 km (1,500 miles) to 3218 km (2,000 miles). The BM-25 is longer and heavier and carries more fuel, adding up to further ranges Characteristics of the warhead are unknown, though a 1000 kg payload would probably serve to carry a medium sized HE, submunitions, chemical, or nuclear warhead. The BM-25 is based on the R-27: an intermediate range, liquid propellant, submarine-launched ballistic missile deployed by Russia in the 1960s. Though the missile technology is obsolete in Russia, it is believed to have been employed in North Korea for the last decade. [178]

Having survived the early challenges of the 1979 Iranian Revolution with the vast purges and executions of military leaders by Khomeini, the Artesh was able to continue to maintain its independent identity during the Iran-Iraq war and beyond. During and after the Iran/Iraq War the Artesh was unable to prevent the imposition of IRGC officers into senior Artesh command posts. Successive defense ministers have been derived from the IRGC, but not the Artesh. From Khomeini to Khamenei these Supreme Leaders have also attempted to "IRGC" the Artesh, with mixed success. Programs of political and ideological training and placement of former IRGC volunteers into Artesh ranks has yet to bear the radical Islamic fervor. Unlike the IRGC and the Basij militia forces, the Artesh personnel did not seek martyrdom in the Iran –Iraq War of the 1980's. This is evident by the casualties' comparison numbers among the IRGC, Basij and Artesh. The question of who sacrificed most in the Iran-Iraq war, remains in dispute and is an important factor in Artesh-IRGC relations. Ayatollah Khomeini believing he was chosen by God held a belief that his Islamic Revolution Guards and Basij personnel were divine in nature. These forces were led by a fiery Islamic God, being lead by God meant his soldiers would be unstoppable. However with the invasion of Iran by Iraq in 1980, following eight bloody years of war altered Khomeini's belief.

In the 1980's the Islamic Revolution Guards and Basij personnel were mainly composed of civilians with little to none military training. They were up against professionally trained Iraqi military forces such as Saddam's elite Republican Guards employing chemical warfare agents. The IRGC and Basij forces sent to the front was in reality no more than cannon fodder. The initial loses on the Iran –Iraq front, along with Saddam's armed forces rolling into the IRI stopped Khomeini's final planned purges, mass executions of the Shah's Imperial Forces (Artesh). Saddam Hussein shocked the revolution fever backed to reality. Artesh was the only truly trained professional military force capable of dealing with Saddam Hussein's onslaught. The lessons of Iran/Iraq were instrumental in reforming the IRGC. This led to reorganizing of the IRGC along the lines of a professional modern military. [179] Over three decades have passed since the creation of Islamic Republic of Iran; the most of today's Artesh personnel has not experienced serving in the Shah's military or were even born at the time of the 1979 Revolution. They did not experience Khomeini's horrors of the 1979 revolution. It is highly unlikely that this Artesh would engage in civil war with the IRGC to overthrow Ayatollah Khamenei. This is evident by post-2009 contested presidential election events. In the wake of mass arrests after the 2009 contested presidential elections Pro -Green supporters within the ranks of Artesh was left alone. In an official gathering in December 2010, Major General Attollah Salehi, Commander-in-Chief of the Iranian Army said that during his visits to Army barracks, he would see the pictures of the leaders of the "sedition" (The Islamic Republic's present hard-line leadership refers to opposition leaders and 2009 presidential candidates Mir Hossein Mousavi and Mehdi Karrubi as leaders of sedition) hanging on the walls. [180]

177). Institute for Contemporary Affairs Vol. 5, No. 26 20 June 2006 The Global Range of Iran's Ballistic Missile Program Uzi Rubin Jerusalem Issue Brief http://jcpa.org/brief/brief005-26.htm
178). Missiles of the World Musudan http://www.missilethreat.com/missilesoftheworld/id.185/missile_detail.asp
179).Middle East Institute Viewpoints, Nov 2011 The Artesh: Iran's Marginalized Regular Military page 18 • www.mei.edu
180). IBID 3 page 16

Chapter Summary

- **The Islamic Revolutionary Guard Corps (IRGC) is called in Arabic "Sepah-e Pasdaran-e Enghelab-e Islami", namely "The Islamic Revolutionary Guard Corps"**

While both the IRGC and the Artesh report to Iran's Ministry of Defense Armed Forces Logistics, international sanctions on the Islamic Republic of Iran have generally focused on members of the IRGC and the companies they operate. Unlike the IRGC, whose Qods Force is tasked with exporting Iran's revolutionary ideals, and arming and training foreign proxy forces like Hezbollah, the Artesh is responsible solely for the security of the Iranian state. IRGC's connection to Iran's nuclear program has made it the key concern among the armed entities in Iran. In October 2007, the US designated the IRGC under Executive Order 13382, which gives the US president the right to block American entities from maintaining financial connections with Iranians involved in the production or proliferation of weapons of mass destruction (WMD), The UN and the European Union have also. (181)

Implosion Type Nuclear Bomb IRGC



"The research department of the Revolutionary Guards was involved in a detailed study of the "implosion technique" in a military case near Kerman and as you know this technique is only for use in nuclear bombs , "

Testimony by Dr. Alireza Assar, exiled Iranian nuclear scientist in a press conference - Paris July 2005. http://ncr-iran.org/index2.php?option=com_content&do_pdf=1&id=248

In 1983, the IRGC established a "strategic research and nuclear technology" center in Tehran. As of 2008 many as 400 nuclear experts and engineers work at this facility. Accounts by defectors, including former Ministry of Defense consultant and nuclear physicist Alireza Assar, provide proof that a nuclear weapons program exists and that it has been run by the IRGC since 1988. [182]



Shin-mim-re (Chemical, Biological, and Radiological) Units were first created during the Iran-Iraq war and they have evolved into potent CBRN warfare force of the IRI. Shin-mim-re units routinely are part of military exercises along with the Artesh and the IRGC. Analysts have used this fact to support theories on the existence of Iran's offensive chemical and biological weapons. [183]

On January 31, 2012, the US Director of National Intelligence, James R. Clapper, stated that the Iranian is becoming increasingly bolder in its support for regional proxies, namely the Syrian regime, Hezbollah, and Hamas, as well as various other burgeoning surrogates created in the wake of the Arab Spring. He also said, in Afghanistan Iran is attempting to undermine any strategic partnership between the United States and Afghanistan. In addition to the Hezbollah in Lebanon, IRGC has supplied and trained a number of non-state clients across the region, including Shi'ite militias in Iraq, Afghan insurgents, Hamas in Gaza, and the Houthi rebels in Yemen. [184]

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181). United States Department of the Treasury, Press Release, "Fact Sheet: Designation of Iranian Entities and Individuals for Proliferation Activities and Support for Terrorism," October 25, 2007, http://www.treasury.gov/press-center/press-releases/Pages/hp644.aspx.
182). Iran's Islamic Revolutionary Guard Corps An Open Source Analysis By Matthew M . Frick issue 49, 2d quarter 2008 / JFQ
183). IBID 2
184). Unclassified Statement for the Record on the Worldwide Threat Assessment of the US Intelligence Community for the Senate Select Committee on Intelligence. James R. Clapper. January 31, 2012. www.dni.gov/testimonies/20120131_testimony_ata.pdf

Chapter Summary

- ***IRGC and Qods Forces are tasked with exporting Khomeini Radical Islamic totalitarianism. The IRGC & Qods Forces were the pandemic epic center of Islamic Suicide bombing belief which is brutalizing and engulfing the world.***

The Islamic Revolutionary Guard Corps (IRGC)

The Islamic Revolutionary Guard Corps has a complex structure that includes both political and military units. The IRGC has close ties to the foreign operations branch of the Iranian Ministry of Intelligence and Security (MOIS), particularly through the IRGC's Qods force. The Qods Force maintains International operational capabilities. It has become entrench covertly and overtly in the Middle East and North Africa, and recent years have witnessed an increased presence in Latin America, particularly in Venezuela. As U.S. involvement in global conflicts deepens, contact with the Qods Force, directly or through extremist groups it supports, will be more frequent and consequential. The Qods Force is a branch of the IRGC that is assigned to special operations, irregular and unconventional warfare duties. The Qods military force has become the number one priority in the Armed Forces in terms of funding, training, and equipment. It plays a major role in giving Iran the ability to conduct unconventional warfare overseas using various foreign movements as proxies, and is thought to be composed of 15,000 men. The Islamic Revolutionary Guard Corps and its Qods military force is the tip of the spear for exporting Khomeini Radical Islamic totalitarianism revolution across the face of the earth.

IRGC has provided direct support to terrorist groups, assisting in the planning of terrorist acts and their capabilities. The Qods Forces provides material support to Hamas, Hezbollah, Iraq Militants and Afghanistan's Taliban. In 2006 Israel interdicted a merchant vessel FRANCOP which had 60 tons of military equipment for the Hezbollah. The IRI has been cited by the United Nations ten times for such activities. Tehran's provides 100-200 million dollars a year. Over three decades the IRI has methodically cultivated an international network of sponsored terrorist surrogates capable of conducting effective plausibly deniable attacks against Israel and America. [185]

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IRGC's Qods Force: Narco- Trafficking

In 2012 The U.S. Department of the Treasury designated Iranian Islamic Revolutionary Guard Corps Qods Force (IRGC-QF) General Gholamreza Baghbani as a Specially Designated Narcotics Trafficker pursuant to the Foreign Narcotics Kingpin Designation Act (Kingpin Act). This is the first use of the Kingpin Act against an Iranian official. [186] (This will be covered extensively in a subsequent chapter)

185). Unclassified Report on Iranian Military Power - April 2010
http://www.iranwatch.org/government/us-dod-reportmiliarypoweriran-0410.pdf
186). Treasury Designates Iranian Qods Force General Overseeing Afghan Heroin Trafficking Through Iran 3/7/2012
http://www.treasury.gov/press-center/press-releases/Pages/tg1444.aspx

Chapter Summary

- ***With more than 75 million people, Iran is by far the most populous country in the Persian Gulf and along with Egypt and Turkey, among the most populous in the entire Middle East. The Islamic Republic also has the largest military and naval submarine forces in the Gulf.***

In the last two decades former and current cadres of the IRGC have gained total grip on all three branches government. They are in control of judiciary, executives, governors, mayors; some 50 percent represent Members of Parliament. They are in control of sport, schools and universities and in control of their curriculum, and they have even just started controlling kindergartens. The IRGC and Al Qods have vast economic resources beyond the military budget, and prestige; they enjoy access to the best recruits. In the face of foreign aggression, the abstract notion of "guarding the Revolution and its achievement" may be a reference to the IRGC's role in maintaining the ideological nature and survival of the regime.



The IRGC has established its own theological seminaries, such as the Martyr Mahallati University which trains ideological/political indoctrination officers or Clerical Commissars.

After successfully setting up and running the Imam Hossein University, two years ago the IRGC established a seminary which would raise its future cadres, and the best name for them would be "guard-clerics". This plan, called the "Discerning Ambassadors," goal is to produce a new wing of IRGC. This idea is grounded upon the belief that by raising and teaching new IRGC cadres from reliable IRGC families within their own ideological system, these trained children can occupy key posts after their fathers retire. This program started more than 2 years ago and it has completed its first phase successfully. [187]

Aging military equipment operated by the IRIA –GF fail to provide the Artesh with the capacity to conduct large-scale conventional offensive operations and as such can only project very limited power against the Gulf States or any other outside forces. However it's Mosaic Doctrine / Irregular Warfare and cruise missile and missile capacities' offset the armed forces conventional military short comings. The tremendous CBRN force multiplier given even to limited CM & missile attacks is notwithstanding.

With the IRGC as a political-military organization runs a host of economic and business entities and exercises great influence through its former members in the three branches of power, including the Defense Ministry and Defense Industries Organization. Having its finger in every pie, the IRGC interferes in political, economic, social, military, and foreign affairs of the country. Meanwhile, the Artesh has been forced to remain apolitical and confine itself to its mission within the military doctrine of the Islamic Republic.

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187). IRGC's Plan to Control the Middle East and Prepare for the Next War Posted on August 28, 2012 by iran1
http://iranbriefing.net/?p=14921



The end of the Iran –Iraq war in 1988 coincided closely with Khomeini's death and the rise of the new regime of Supreme Leader Khamenei. President Rafsanjani (1989 to 1997) sought to modernize Iran's governing structures and military forces. During the Iran–Iraq War Rafsanjani was the *de-facto* Commander-in-Chief of the Islamic Republic's Armed Forces. In 1989, the parliament approved a measure merging the IRGC and the IRIA armed forces under a single ministry and headquarters, the Ministry of Defense and Armed Forces Logistics (MODAFL). The most dramatic change in the power balance occurred in September 2007 under President Mahmoud Ahmadinejad (2005-present), when the *basij* was formally subordinated to the IRGC.

- ***The Islamic Revolutionary Guards Corps' elite Qods (Jerusalem) Force is the most secret of the Iranian regime's numerous military organizations. Since its inception in 1990, the clerics have kept it under such secrecy that even many top officials in Tehran know nothing about the "Qods Force" except the name of its commander.***

The Al Qods Force is referred to as the "seed of the International Islamic Army" by its commanders, has now turned into the IRGC's most active, skilled, and elite unit. It includes the Corps' most experienced commanding officers and personnel. The Qods Force has different directorates for different countries. For example, there are directorates for Turkey, Iraq, Afghanistan, etc.. Its task is defined as "commanding, planning, and executing extra, territorial operations of the Islamic Revolutionary Guards Corps." Its commander directly reports to the Supreme leader, Khamenei.

Iran's Ministry of Intelligence and Security (MOIS) - VEVAK

The Ministry of Intelligence and Security (MOIS) is ranked by experts as one of the largest and most active intelligence agencies in the world. And yet it has been shrouded in so much mystery that apart from occasional revelations, little has ever been made public about its operations and functions. The notable exception to this came in 1998, when a series of gruesome murders of Iranian dissidents by MOIS hit squads led to the disclosure of a catalogue of crimes that had been committed by MOIS agents for more than a decade. The MOIS is no ordinary intelligence agency. It has been behind 600 known acts of terrorism the Iranian regime has sponsored around the world since the 1980s.

MOIS, Al Qods Forces will be covered extensively in a chapter 10