

1800 K Street, NW  
Suite 400  
Washington, DC 20006

**Phone:** 1.202.775.3270  
**Fax:** 1.202.775.3199

**Web:**  
[www.csis.org/burke/reports](http://www.csis.org/burke/reports)



# Iran, Iraq, and the Changing Face of Defense Cooperation in the Gulf

**Anthony H. Cordesman**  
Arleigh A. Burke Chair in Strategy

*October 28, 2010*

**CSIS**

CENTER FOR STRATEGIC &  
INTERNATIONAL STUDIES

Burke Chair  
in Strategy

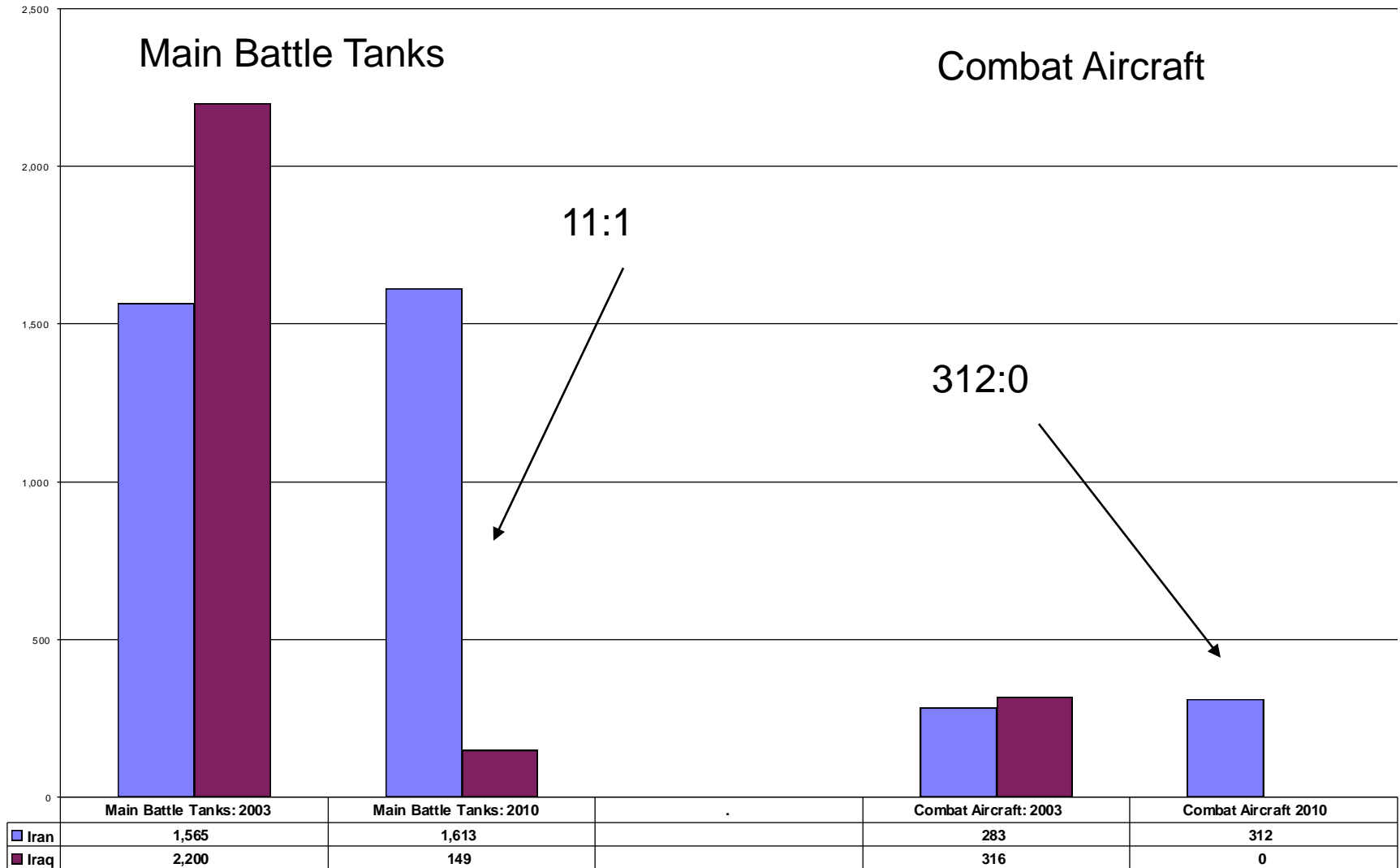
# The Ongoing Changes in the Balance

- **Loss of Iraq as a Counterbalance to Iran; Risk of “Shi’ite Crescent”**
- **Fragile structure of energy transport, and critical facility targets.**
- **GCC lead in military spending and arms imports.**
- **Impact of access to US technology; US as key partner.**
- **Potential GCC lead in conventional forces.**
- **Need to adapt to threat from Iranian asymmetric warfare capabilities.**
- **Emerging Iranian missile, chemical and potential nuclear threat.**
- **Steadily more sophisticated threat from extremists and terrorism.**
- **Instability in Yemen, the Horn, and Red Sea area.**
- **Rise of piracy.**

# Iran, Iraq, and the Uncertain Power Vacuum to the Northwest

- **Loss of Iraq as Counterbalance to Iran; cannot be corrected before 2007-2010.**
- **US force posture in Kuwait and Upper Gulf uncertain after 2011.**
- **“Shi’ite crescent:” Future ties between Iran, Iraq, Syria, and Lebanon.**
- **Impact on Jordan and Israel; “spillover” from Arab-Israeli conflict into the Gulf.**

# Iran vs. Iraq: 2003 vs. 2010



# Details of Iraq's Loss of Deterrent and Defense Capability: 2003-2007

Category	2003			2010		
	Iraq	Iran	Force Ratio	Iraq	Iran	Force Ratio
Active Manpower	424,000	513,000	8:10	191,957	523,000	2:5
Reserve Manpower	650,000	350,000	19:10	0	350,000	NA
Main Battle Tanks	2,200	1,565	7:5	149	1,613	1:10
OAFVs	1,300	815	8:5	505	725	7:10
APCs	2,400	590	4:1	1,479	650	23:10
Towed Artillery	1,900	2,085	9:10	0	2,010	NA
SP Artillery	150	310	1:2	0	310	NA
MRLs	200	889	1:5	0	876	NA
Combat Aircraft	316	283	11:10	0	312	NA
Attack Helicopters	100	85	6:5	0	50	NA
Major SAM Launchers	225	205	11:10	0	234	NA

# The Problem of Vulnerability

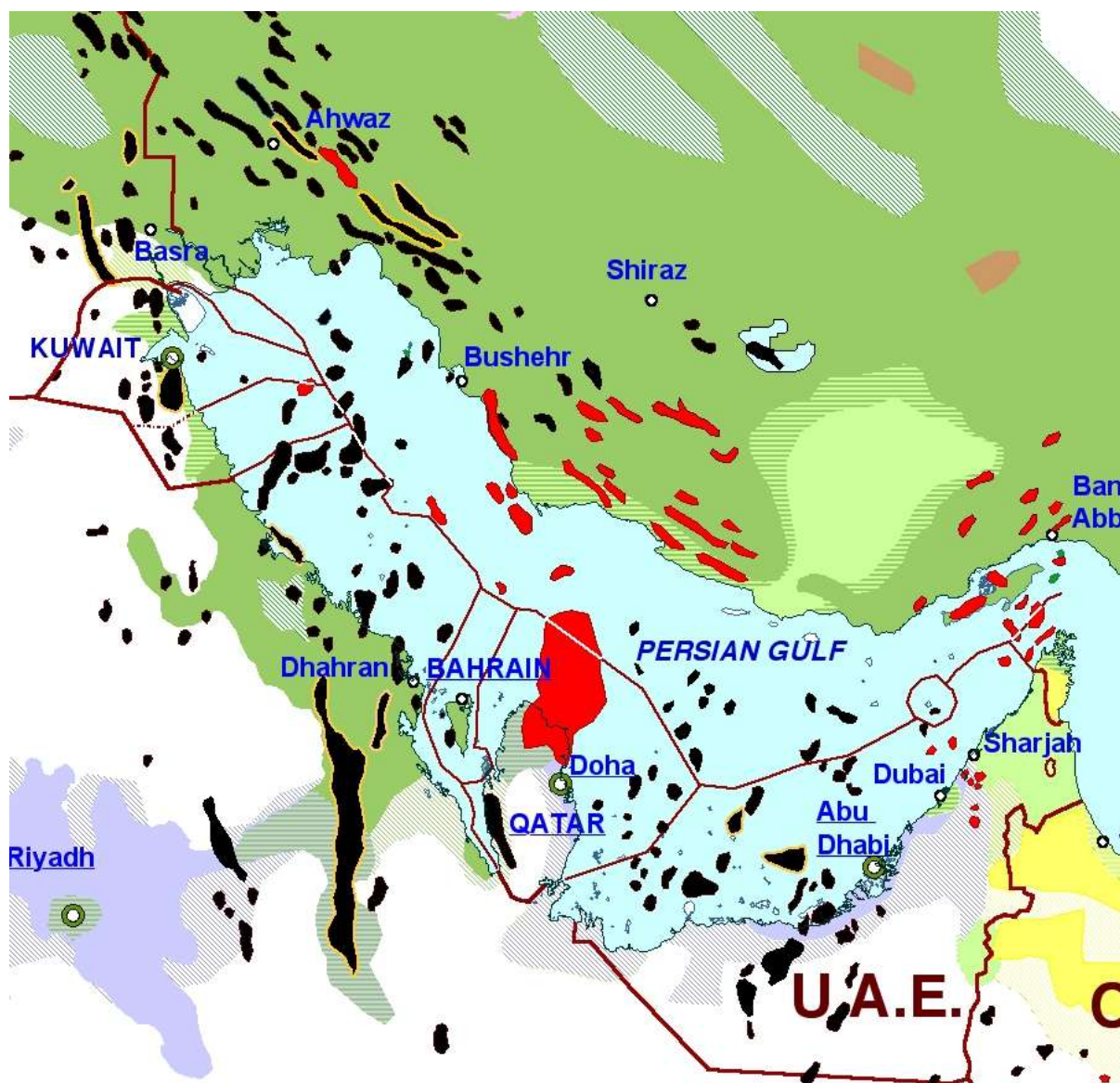
- **Vulnerability extends throughout Gulf, into Gulf of Oman, and in nearby waters of Indian Ocean, Gulf of Aden, Horn, and Red Sea**
- **Increasing range of anti-ship missiles, and use of UAVs/UCAVs, smart mines, light guided weapons, fast small craft all changing the threat. .**
- **Key on and offshore oil and other facilities highly exposed, vulnerable and involve very long-lead repairs.**
- **Same is true of critical coast petroleum facilities, and desalination plants -- perhaps the most critical infrastructure facilities extent.**
- **Many key facilities have no grids, networks, or substitutes.**
- **Security often basic, poorly trained, and not realistically tested. Need active “red team” testing, and attention to sabotage as well as attack.**
- **Need passive defense plans, and repair and recovery plans and capability.**
- **Quick reaction forces to deal with infiltration, offshore, coastal attack critical.**

# Hormuz: Breaking the Bottle at the Neck



- 280 km long, 50 km wide at narrowest point.
- Traffic lane 9.6 km wide, including two 3.2 km wide traffic lanes, one inbound and one outbound, separated by a 3.2 km wide separation median
- Antiship missiles now have ranges up to 150 km.
- Smart mines, guided/smart torpedoes,
- Floating mines, small boat raids, harassment.
- Covert as well as overt sensors.

# Vulnerability of Gulf Oil Fields



## Primary Oil and Gas Deposits in the Middle East and the Shia Majority Areas.

- A Major Oil field
- A Super-Giant Oil field
- A Major Gas field

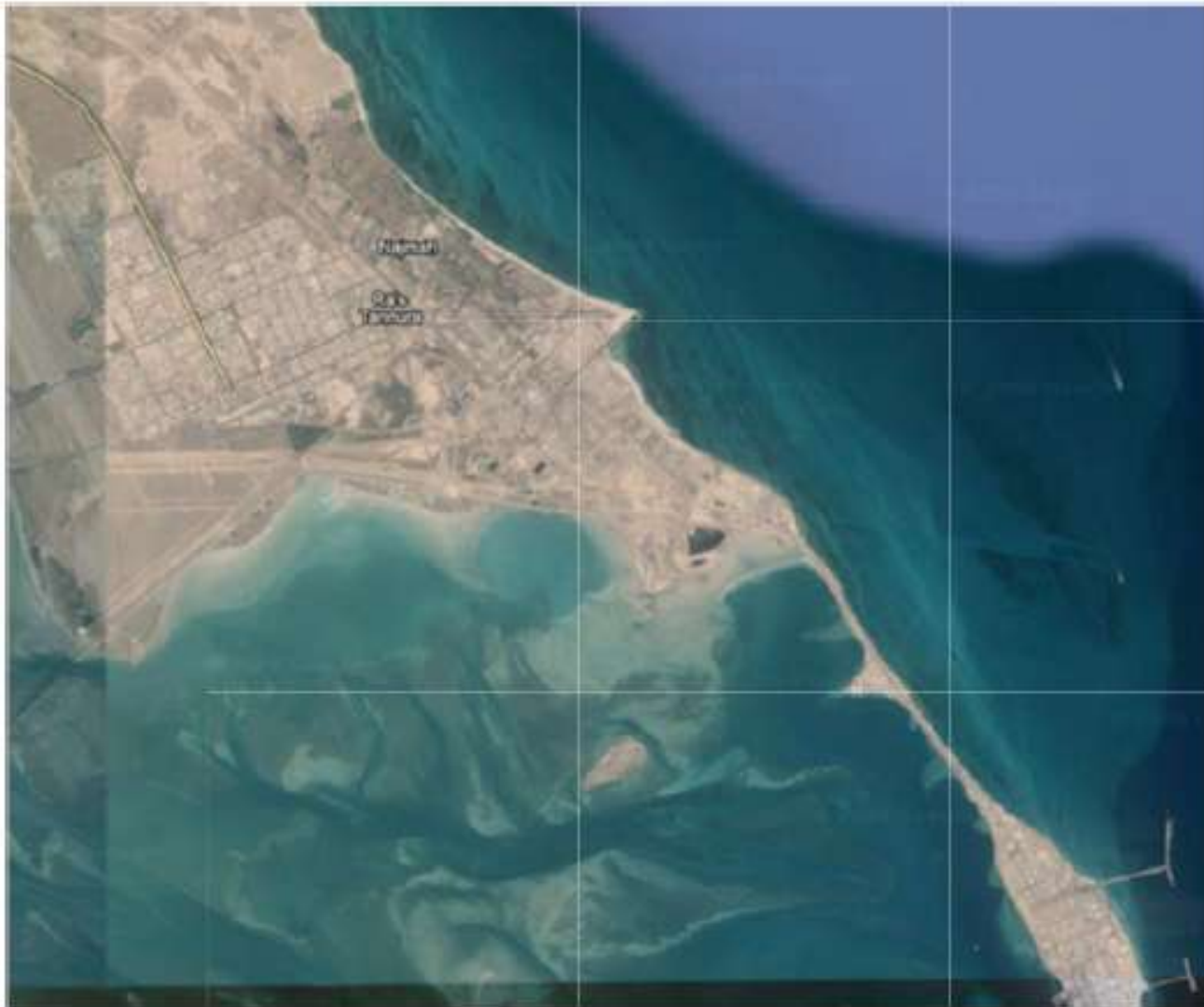
### Islam:

- Shiism (to include Alevis/Alawis)
- Sunnism (Hanafi, Shafi'i, Maliki)
- Hunbli
- Ibadism
- Christianity
- Judaism
- Other

- Mixed population areas
- Sparsely populated areas
- Uninhabited areas



# Ras Tanura



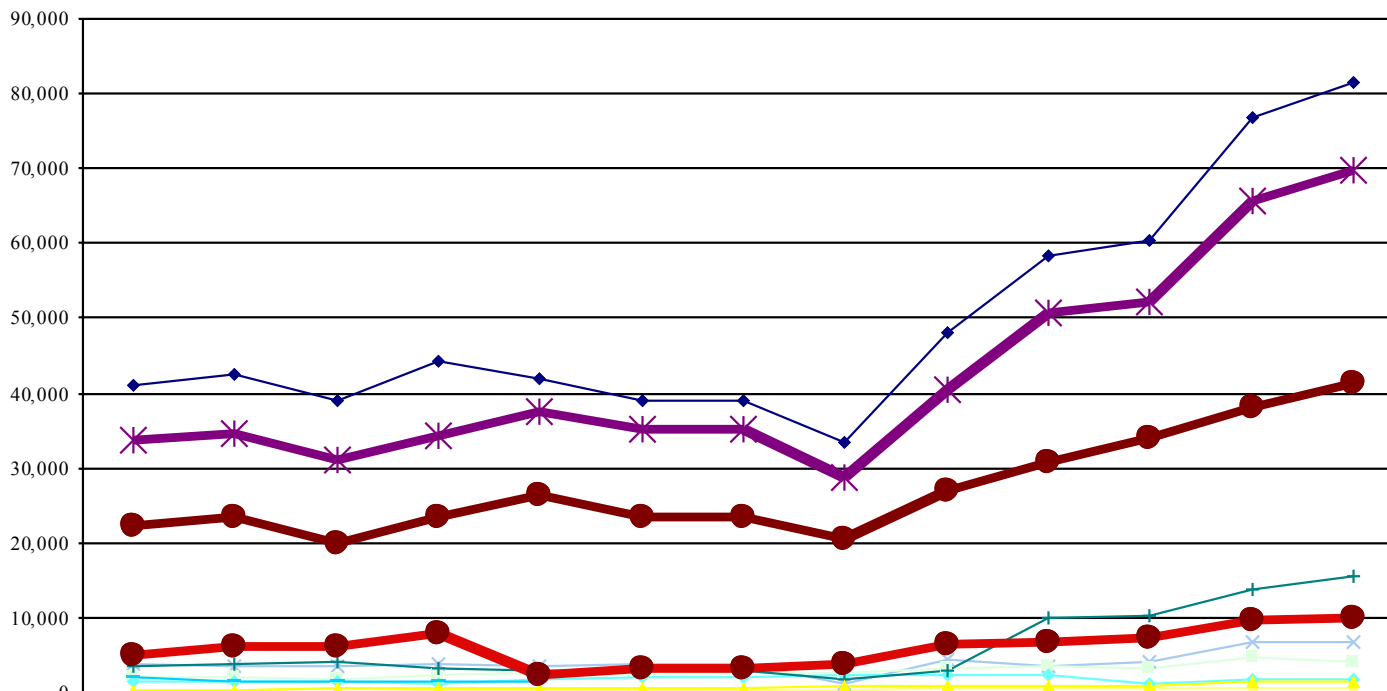
# Desalination Plant



# Exploiting the Southern Gulf Edge in Defense Resources

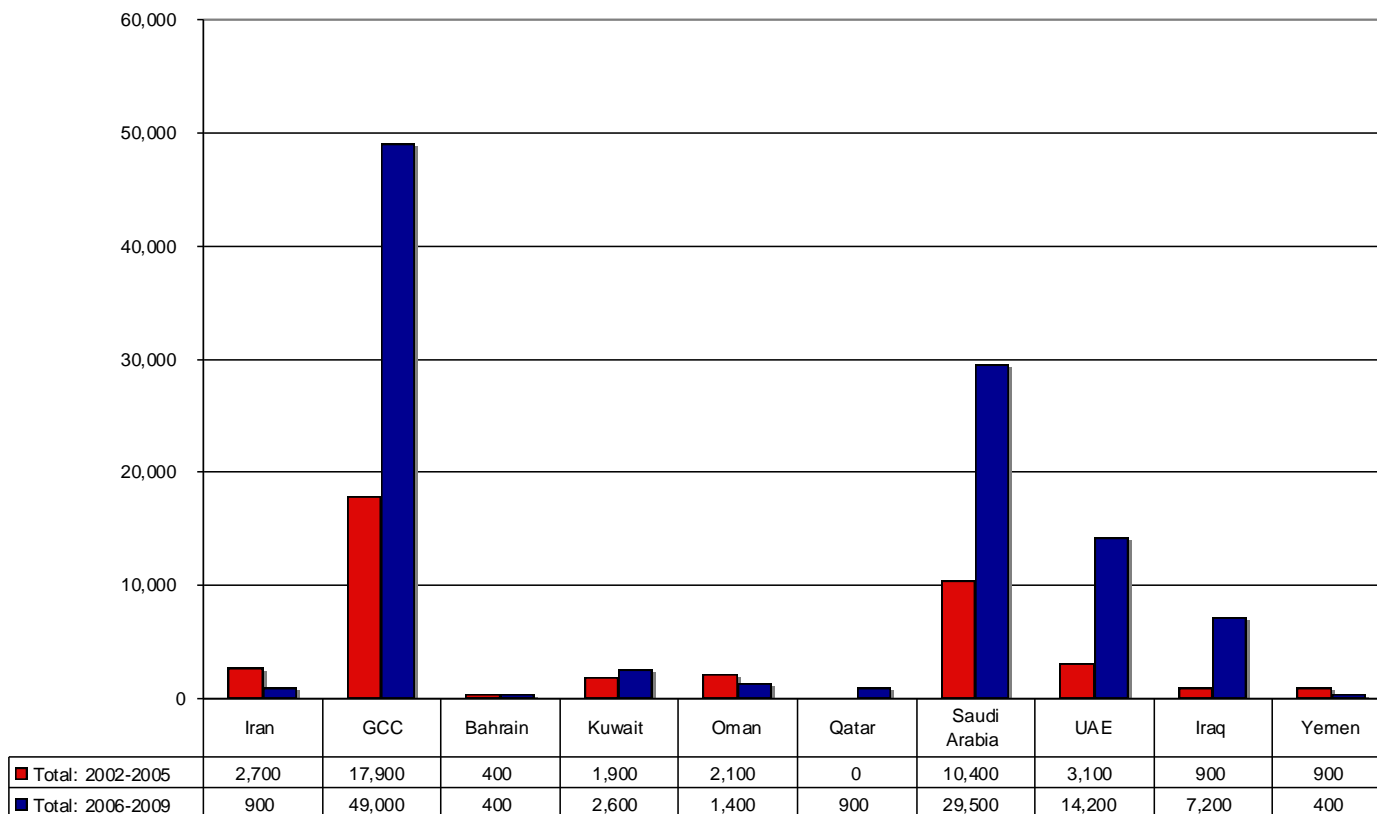
- Southern Gulf (GCC) states have massive lead in military spending:
  - 8:1 over 1997-2009, and Saudi Arabia alone more than 4 times Iran.
  - Sharp increase in lead since 2004, as react to Iranian threat.
- Far greater lead in arms imports, led by Saudi Arabia and UAE. GCC states clearly reacting to Iranian build-up.
  - GCC states lead Iran by 54:1, Iraq and GCC by 62:1 during 2005-2009.
- Far better access to advanced weapons and technology from US, Europe, Russia, and China. Massive advantage in “bang for buck.”
- Critical problem is integration and interoperability.
- Advances in training technology, IS&R, and command and control allow far quicker and more integrated action.
- *But, Southern Gulf states cripple their military through lack of integration and interoperability, bickering and rivalry.*

# Comparative Military Spending: 1997-2009: GGC Leads Consistently by More than 8:1



	1997	1998	1999	2000	2001	2002	2003	2004*	2005	2006	2007	2008	2009
Bahrain	387	427	472	342	355	352	350	191	559	498	550	552	697
Kuwait	3,827	3,614	3,401	3,933	3,614	3,720	3,720	1,275	4,539	3,640	4,002	6,810	6,650
Oman	2,126	1,913	1,701	2,232	2,551	2,445	2,657	2,764	3,210	3,410	3,298	4,657	4,060
Qatar	1,382	1,382	1,488	1,275	1,807	2,020	2,020	2,232	2,327	2,430	1,090	1,750	1,750
UAE	3,614	3,933	4,039	3,189	2,976	2,976	2,976	1,701	2,817	9,888	10,292	13,730	15,470
Saudi Arab	22,323	23,386	19,878	23,386	26,256	23,599	23,599	20,515	27,000	30,810	34,020	38,200	41,200
GCC Total	33,659	34,655	30,979	34,357	37,559	35,112	35,322	28,678	40,452	50,676	52,142	65,699	69,827
Yemen	437	421	456	529	570	547	596	940	1,001	858	927	1,490	1,550
Iraq	1,982	1,382	1,488	1,488	1,488	?	?	?	?	?	?	?	?
Iran	4,996	6,165	6,060	7,972	2,232	3,189	3,189	3,720	6,590	6,759	7,310	9,590	10,000
Gulf Total	41,074	42,623	38,983	44,346	41,849	38,848	39,107	33,338	48,043	58,290	60,379	76,779	81,377

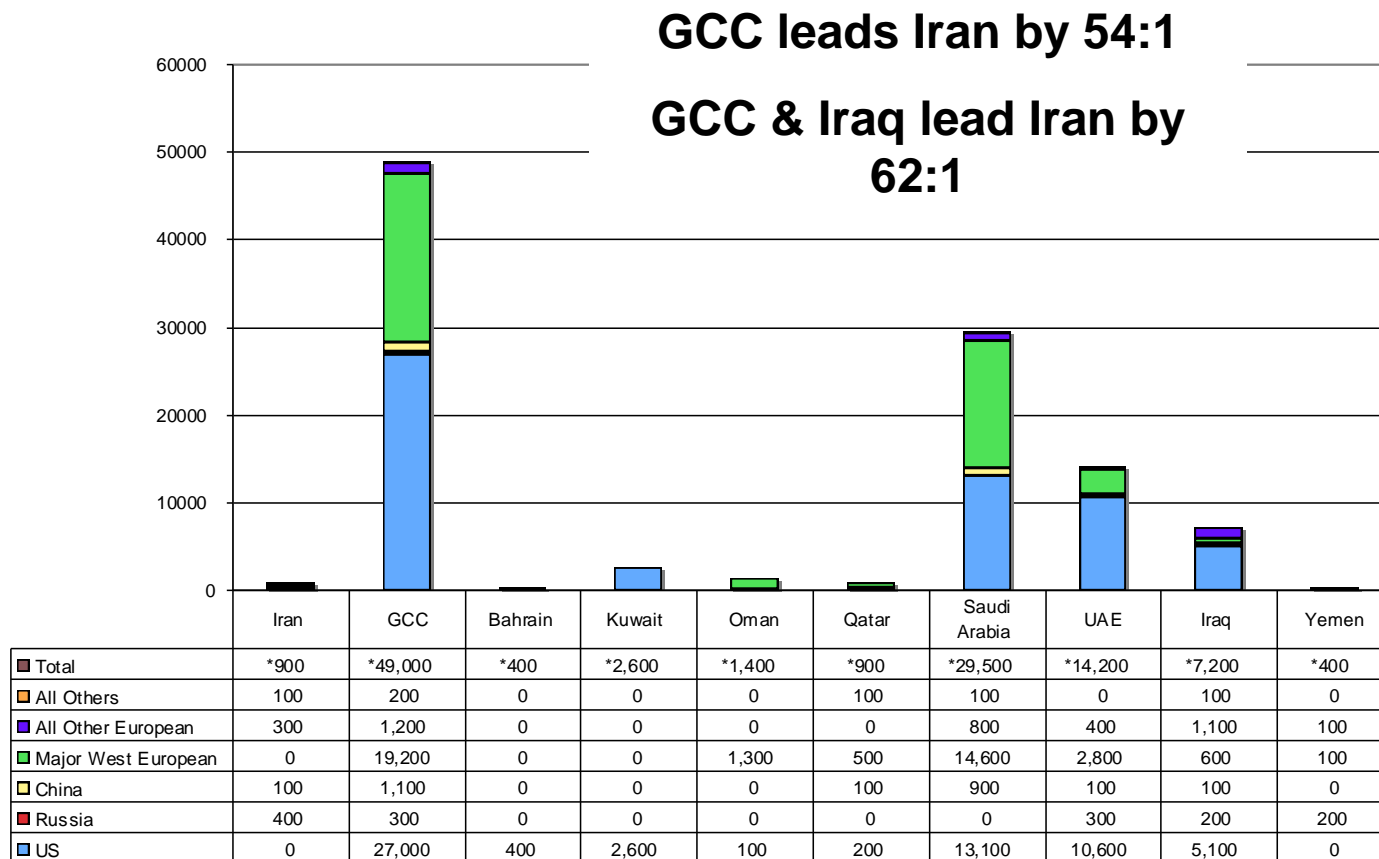
# Gulf Arms Orders: “The Iraq Down, Iran Up Effect:” 2002-2005 vs. 2006-2009



0 = Data less than \$50 million or nil. All data rounded to the nearest \$100 million.

Source: Adapted from Richard F. Grimmett, *Conventional Arms Transfers to the Developing Nations*, Congressional Research Service, various editions.

# New Arms Orders by Supplier: 2005-2009



0 = Data less than \$50 million or nil. All data rounded to the nearest \$100 million.

Source: Adapted from Richard F. Grimmett, *Conventional Arms Transfers to the Developing Nations*, Congressional Research Service, 2000 edition, pp. 53-44, and 57-58.

## The GCC Threat to the GCC

- **Vast lead in military spending and arms imports**
- **Support from US, Britain, France**
- ***But,***
- **Poor Mission Focus with Limited Coordination**
- **Lack of Integration, Standardization**
- **Problems in Large-Scale Exercises and Training;  
Military Realism**
- **Problems in Jointness – including security services,  
police, and intelligence – and combined arms.**
- **Lack of Balanced Force Development: Manpower  
Quality and Sustainability**

# Ties to US Provide a Decisive Advantage in Deterrence and Defense

- **US must reshape strategic posture in leaving Iraq, but bases in Kuwait, Bahrain, and Qatar. Contingency facilities in UAE and Oman. Rapid reinforcement capability for Saudi Arabia and Iraq**
- **US technical edge will grow steadily relative to Iran, as will effectiveness of arms imports from US.**
- **US Army still in process of making forces far more expeditionary and capable of rapid deployment.**
- **Britain and France retain important power projection capabilities.**
- **“Soft” US assets in terms of intelligence, surveillance, reconnaissance, counterterrorism analysis, and missile warning offer further advantage.**
- **High degree of interoperability and common exercise training which could be rapidly increased by better cooperation within GCC states and between them and a suitable Iraqi government.**
- **US missile defense systems and assets, and “extended regional deterrence,” offer critical new options for the future.<sup>6</sup>**



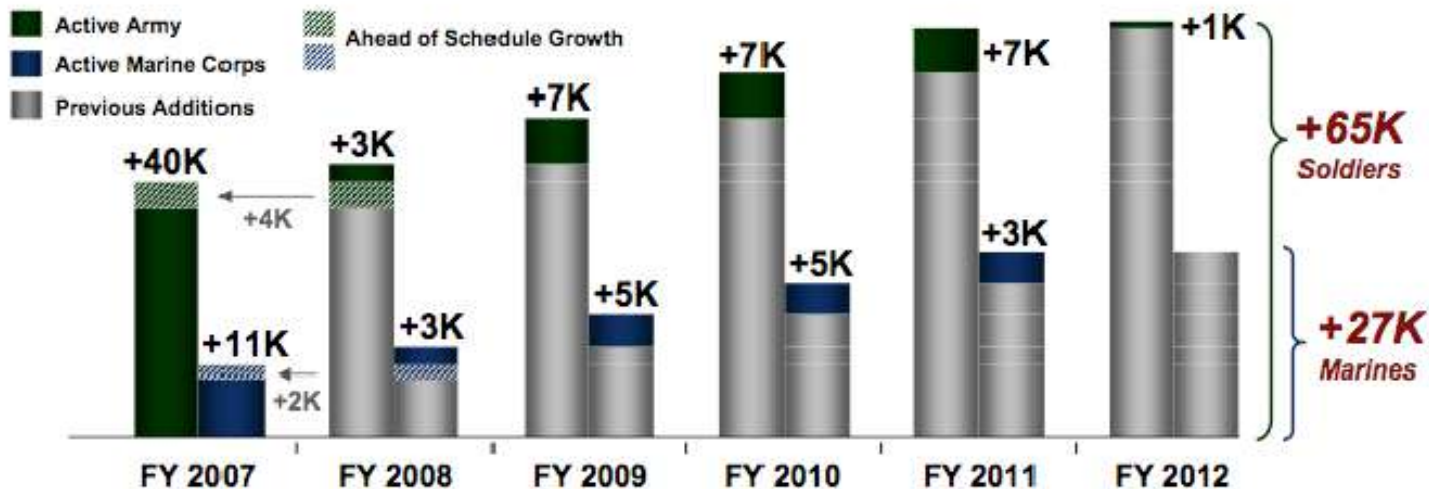
# Keeping a Decisive US Qualitative Edge in US Forces and Arms Transfers to the Gulf (\$10.5B in FY087 & FY09)

Joint Ground Capabilities	Joint Maritime Capabilities	Joint Air Capabilities	Space-based Capabilities
<ul style="list-style-type: none"> <li>- Future Combat Systems:                             <ul style="list-style-type: none"> <li>• Ground and air systems</li> </ul> </li> <li>- 119 Stryker Vehicles</li> <li>- 5,249 High Mobility Multi-purpose Wheeled Vehicles</li> <li>- 1,061 Heavy Tactical Vehicles</li> <li>- 3,187 Medium Tactical Vehicles</li> <li>- 29 M1A1 Abrams Tank Upgrades</li> <li>- Chemical Weapons Demilitarization</li> </ul>	<ul style="list-style-type: none"> <li>- CVN 21 Carrier Replacement</li> <li>- 1 Virginia Class Submarine</li> <li>- 1 DDG-1000 Destroyer</li> <li>- 2 Littoral Combat Ships</li> <li>- 2 T-AKE Auxiliary Dry Cargo Ships</li> <li>- CVN Refueling Complex Overhaul</li> <li>- 2 Joint High Speed Vessels</li> </ul>	<ul style="list-style-type: none"> <li>- 16 F-35 Joint Strike Fighters</li> <li>- 20 F-22A Raptors</li> <li>- 36 V-22 Ospreys</li> <li>- 23 F/A-18 Hornets</li> <li>- 22 E/A-18G Growlers</li> <li>- 16 CH-47 Chinooks</li> <li>- VH-71 Helicopter</li> <li>- KC-X Aerial Refueling Tanker</li> <li>- 59 Predators, Reapers and Warriors</li> </ul>	<ul style="list-style-type: none"> <li>- 2 Space Based Infrared Systems</li> <li>- 4 Expendable Launch Vehicles</li> <li>- GPS Satellite</li> <li>- 1 Mobile User Objective System</li> <li>- Transformational Satellite</li> <li>- Advanced Extremely High Frequency Satellite</li> <li>- Wideband Global SATCOM</li> <li>- Ballistic Missile Defense</li> </ul>
<p><i>Basic Research +\$0.3B in FY 2009 (+\$1.4B FY09-FY13)</i></p>			

# Increase Ground Capabilities

**+\$8.7B**  
FY08 - FY09

<b>Army</b> Active	<b>42</b>	Brigade Combat Teams (482.4K Soldiers)	➔	<b>48</b>	Brigade Combat Teams (547.4K Soldiers)
	<b>12/12</b>	Months Home Station / Months Deployed		<b>24/12</b>	Months Home Station / Months Deployed
<b>Marine Corps</b> Active	<b>2.5</b>	Marine Expeditionary Forces (175K Marines)	➔	<b>3</b>	Marine Expeditionary Forces (202K Marines)
	<b>7/7</b>	Months Home Station / Months Deployed		<b>14/7</b>	Months Home Station / Months Deployed



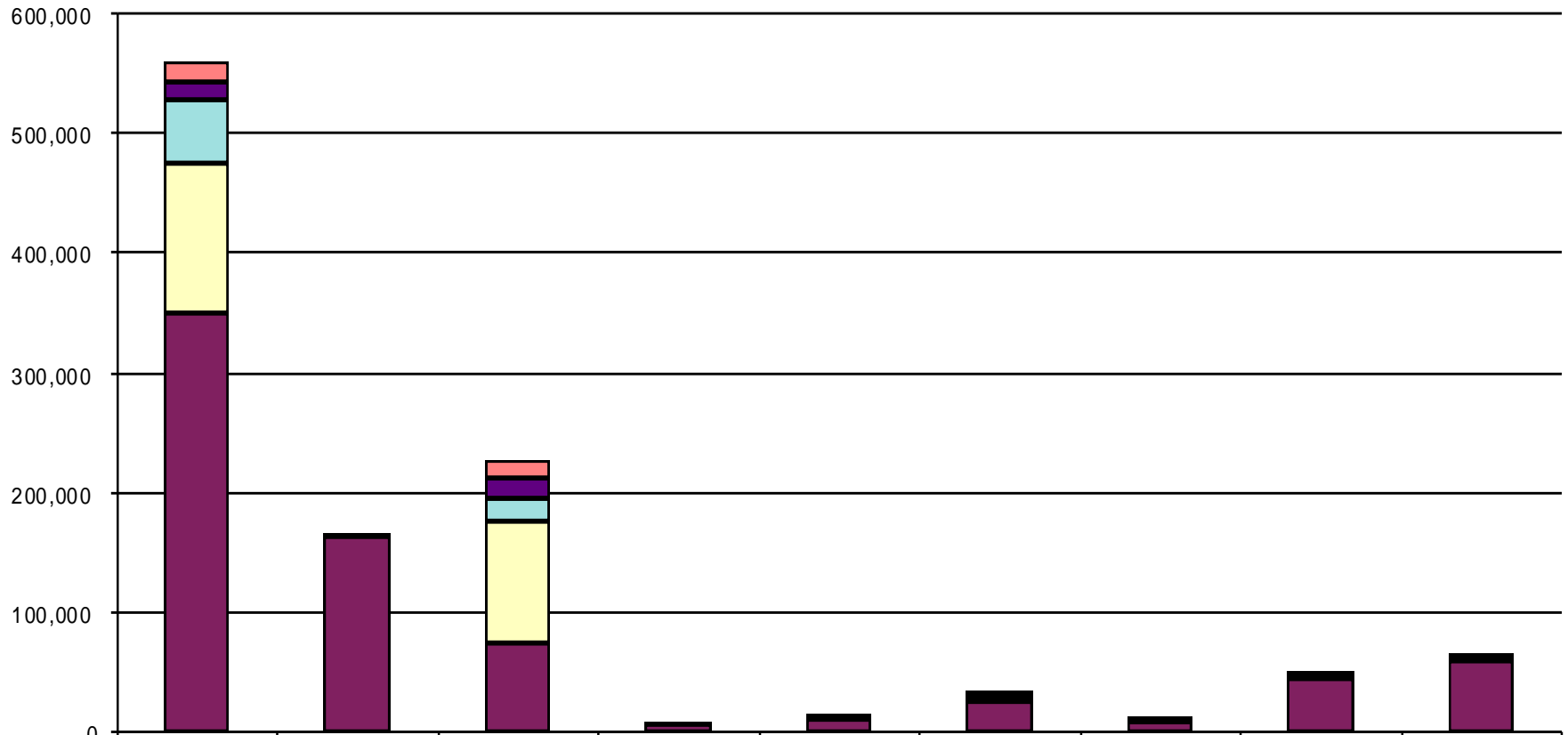
Source: FY 2009 DoD Budget Request; FY 2008 Budget; FY 2007 Supplemental

Numbers may not add due to rounding

# The Southern Gulf Leads in the Conventional Military Balance

- **Iran is anything but the Hegemon of the Gulf.**
  - **Many key systems date back to the time of Shah, or are Russian and Chinese designed/built systems of limited quality and often dating back to Vietnam era.**
- **Southern Gulf states lead in land and air quantity in every area except total manpower and towed artillery.**
  - **Iran cannot exploit this lead except in Iraq and Kuwait without major restructuring of sustainment, mobility, and power projection training.**
- **Southern Gulf states have major lead in land, air, surface to air missile, and naval force quality.**
- **Iran leads in major surface vessels, but cannot exploit in the face of US opposition.**
- **Iran's industrial base may eventually improve its competitiveness, but so far is more claims and hype than real.**

# Comparative Military Manpower: 2010



	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen
Navy	18,000	1,100	15,500	700	2,000	4,200	1,800	2,500	1,700
Air Def	15,000	0	16,000	-	-	-	-	-	2,000
Air	52,000	1,200	20,000	1,500	2,500	5,000	1,500	4,500	3,000
Guard	125,000	0	100,000	-	-	-	-	-	-
Amy	350,000	163,500	75,000	6,000	11,000	25,000	8,500	44,000	60,000

Derived from IISS, Military Balance, 2010

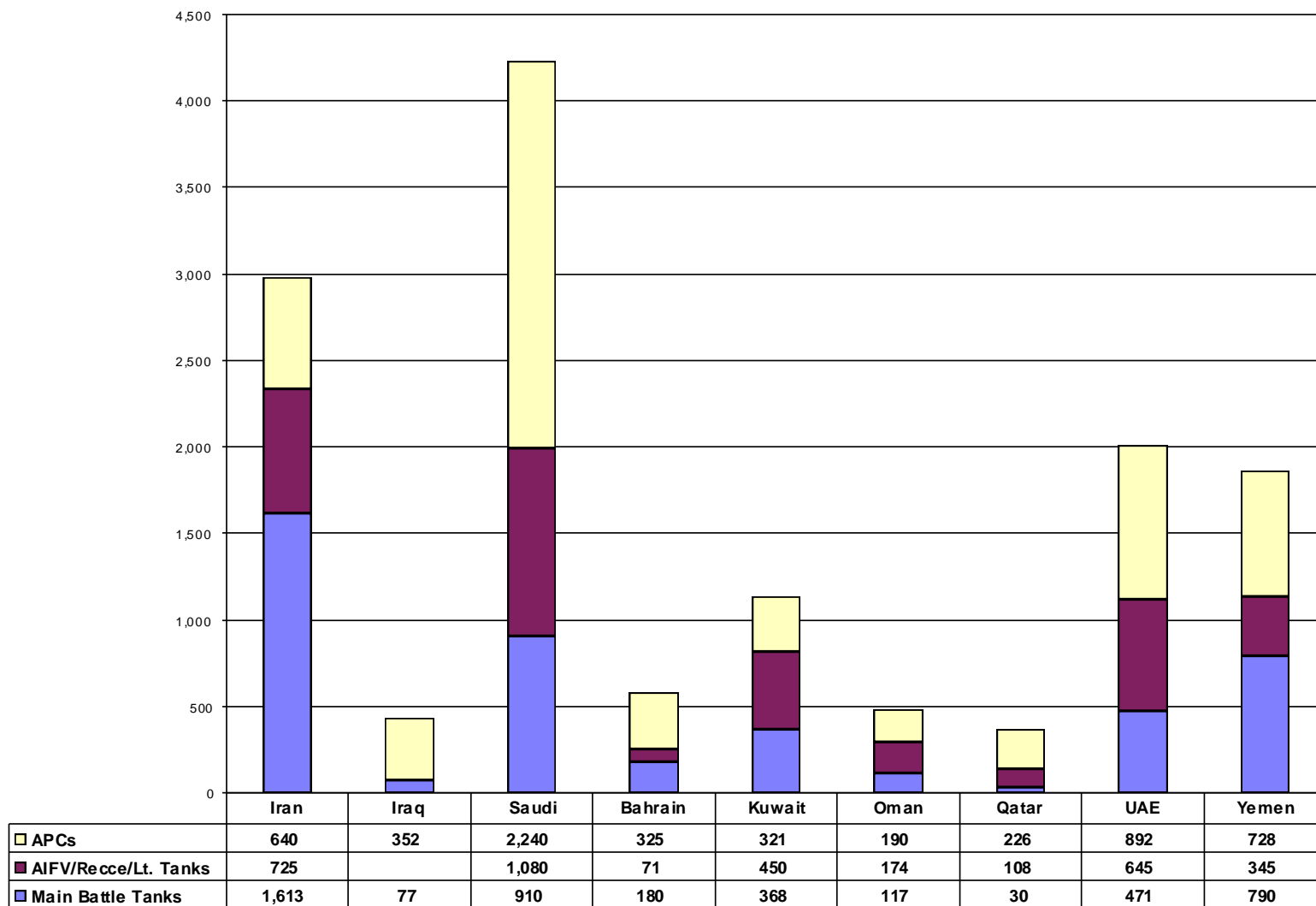
## Land Force Threats

- **Iranian Threat to Kuwait and Iraq**
- **Iranian permissive amphibious/ferry operation.**
- **Iranian dominance of Iraq; Invited In to Replace US?**
- **Spillover of Iraqi Sunni-Shi'ite power struggles.**
- **Yemeni incursion into Saudi Arabia or Oman**

***But:***

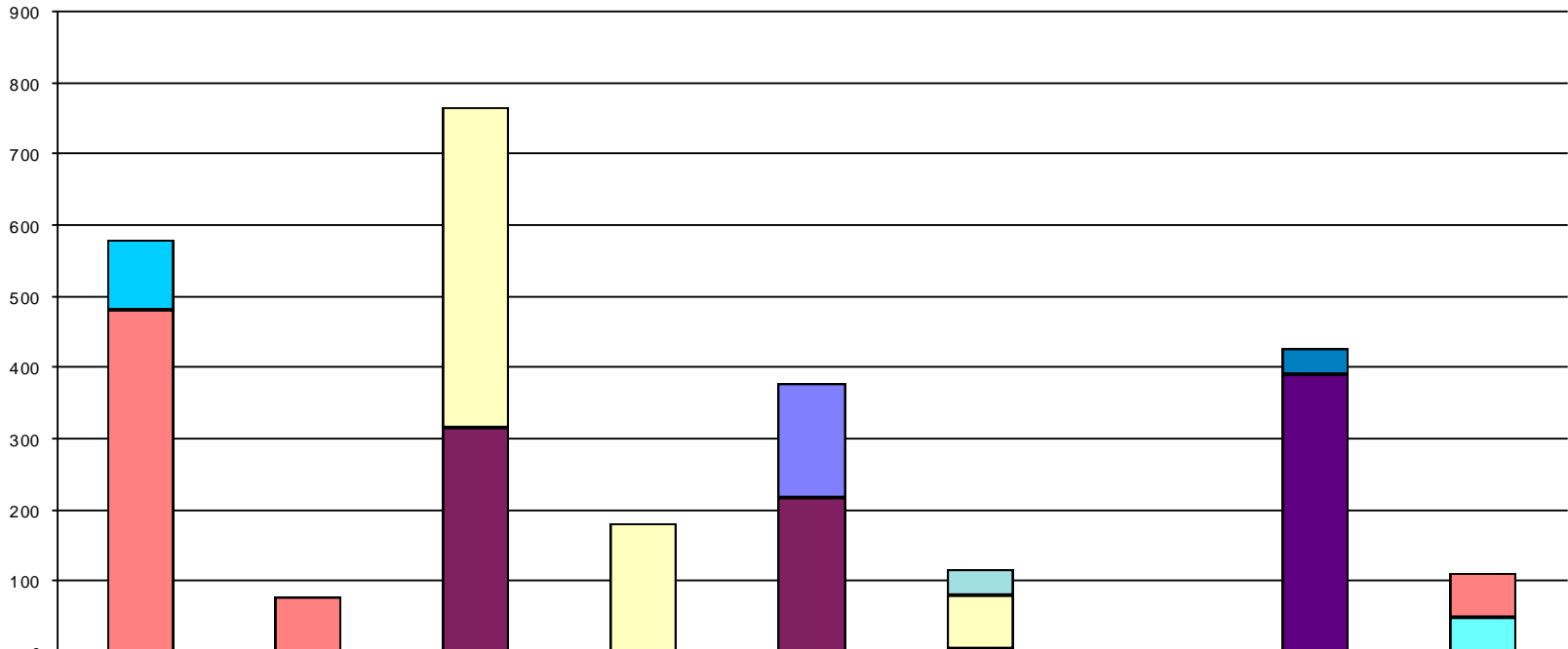
- ***Low near-term probability.***
- ***High risk of US and allied intervention.***
- ***Limited threat power projection and sustainability.***
- ***Unclear strategic goal.***

# Comparative Armored Vehicle Strength in 2010



Source: Estimated by Anthony H. Cordesman using data from various editions of the IISS The Military Balance and Jane's Sentinel.

# Comparative Modern Tank Strength, 2010



	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen
Zulfiqar	100								
OF-40								36	
T-72	480	77							60
M-84					159				
Leclerc								390	
Challenger 2						38			
M-60A3			450	180		73			
M-60A1						6			50
M-1A2			315		218				

Source: Estimated by Anthony H. Cordesman using data from the IISS, The Military Balance, various editions.

## Air/Missile Threats

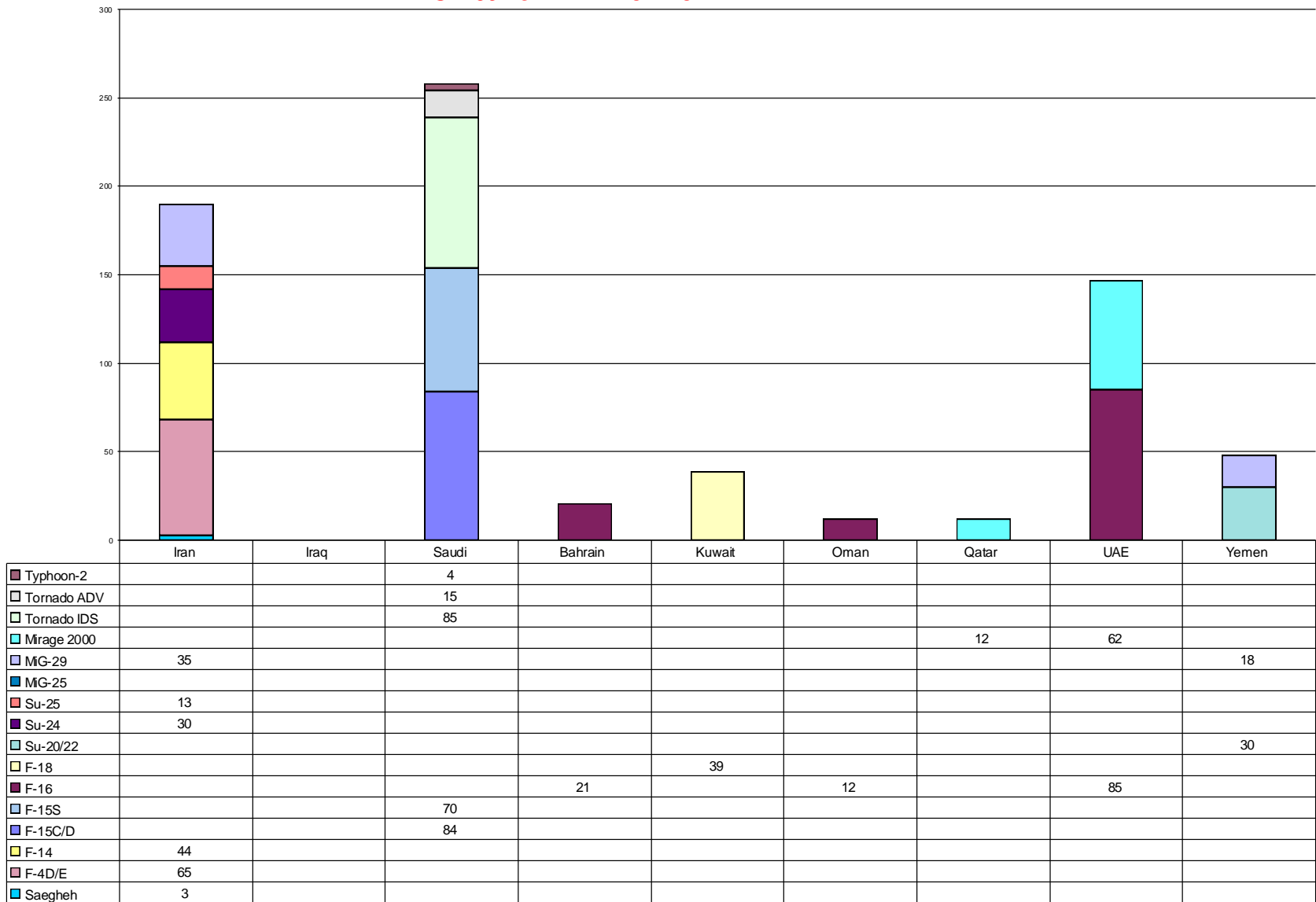
- **Precision air strikes on critical facilities: Raid or mass attack.**
- **Terror missile strikes on area targets; some chance of smart, more accurate kills.**
- **Variation on 1987-1988 “Tanker War”**
- **Raids on offshore and critical shore facilities.**
- **Strikes again tankers or naval targets.**
- **Attacks on US-allied facilities**

### ***But:***

- ***Low near-term probability.***
- ***High risk of US and allied intervention.***
- ***Limited threat power projection and sustainability.***
- ***Unclear strategic goal.***

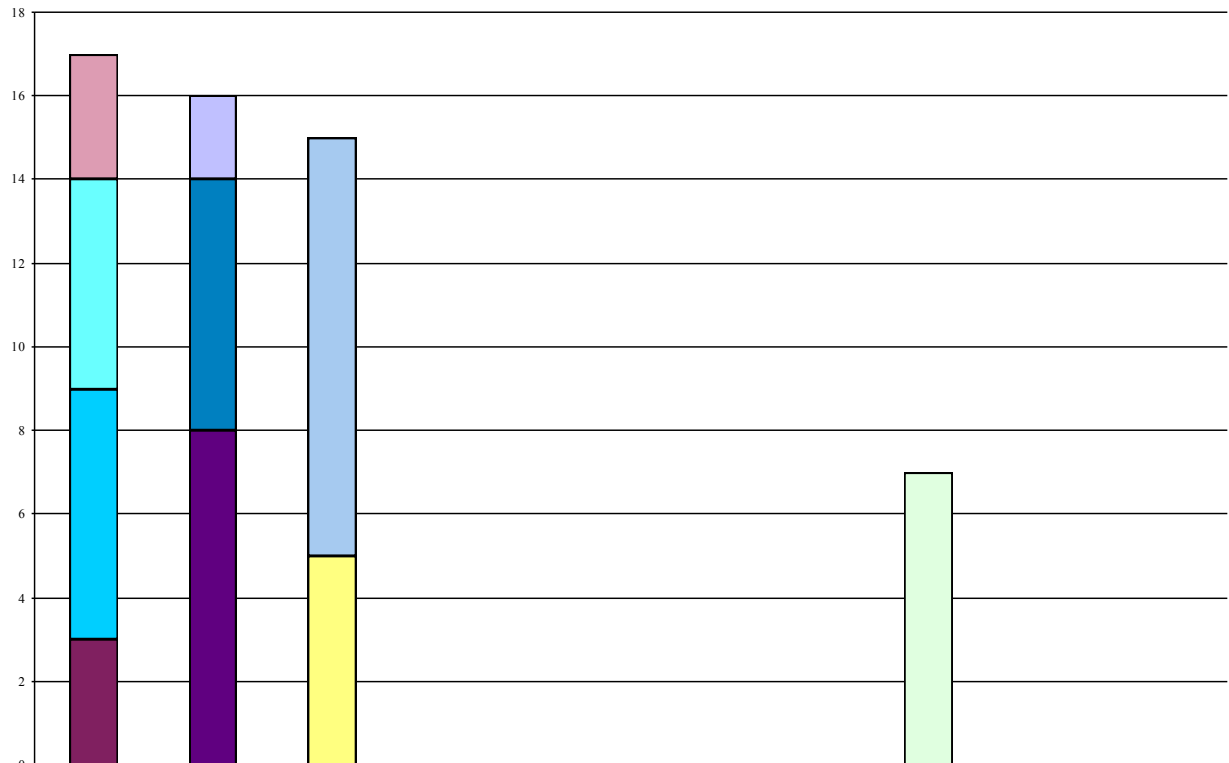


# Comparative High Quality Fighter/Attack Aircraft in 2010



Source: Adapted by Anthony H. Cordesman from various sources and IISS, [The Military Balance](#), various editions and Saudi experts.

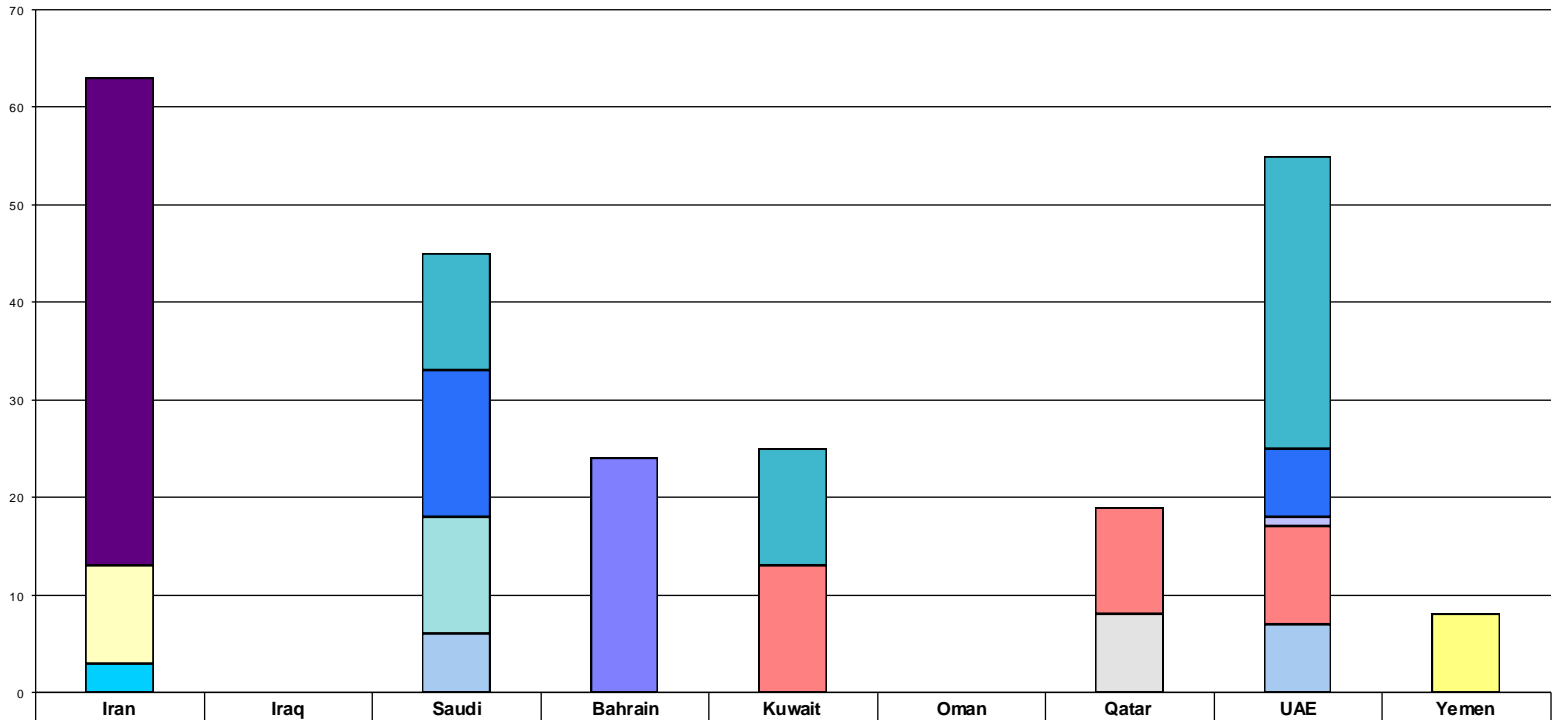
# Comparative Gulf AC&W, ELINT, and Reconnaissance Aircraft, 2010



	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen	
P-F3 Orion	3									
P-3MP Orion	5									
Tornado IDS			10							
E-3A AWACS			5							
Mirage 2000 RAD								7		
RF-4E	6									
Da-20 Falcon ELINT	3									
SB7L-360		2								
Cessna 208B		6								
CH-2000		8								

Source: Adapted by Anthony H. Cordesman from IISS, The Military Balance, various editions.

# Comparative Gulf Armed Helicopters: 2010



	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen
AH-64/AH-64D			12		12			30	
AS-565			15					7	
AS-550C3								1	
AS-532 Exocet			12						
SA-342 HOT					13		11	10	
AH-1J	50								
AH-1E				24					
SH-3D	10								
Commando Exocet							8		
AS-332 Exocet			6					7	
Mi-35 Hind									8
RH-53D	3								

# Gulf Land-Based Air Defenses In 2010

Country	MajorSAM	Light SAM	AA Guns
Bahrain	8 I Hawk MIM-23B	60 R BS-70 18 FIM-92A Stinger 7 Cro tale	27 guns 15 Oerlikon 35 mm 12 L/70 40 mm
Iran	16/150 I Hawk 3/10 SA-5 45 SA-2 Guideline	SA-7/14/16, HQ-7 29 SA-15 Some QW-1 Misaq 29 TOR-M1 Some HN-5 5/30 Rapier 10 Pantsyr (SA-22) Some FM-80 (Ch Crotale) 15 Tiger cat Some FIM-92A Stinger	1,700 Guns ZSU-23-4 23mm ZPU-2/4 23mm ZU-23 23mm M-1939 37mm S-60 57mm ZSU-57-2
Iraq			
Kuwait	5/24 I Hawk Phase II I 5/40 Patriot PAC-2	12 Aspide 12 Starburst Asp ide Stinger	12 Oerlikon 35mm
Oman	None	Blowpipe 8 Mistral 2 S P 12 Panstsy r S1E	26 guns 4 ZU-23-2 23 mm 10 G DF-005 Skyguard 35
mm		34 SA-7 6 Blindfire S7 13 Martello 20 Javelin 40 Rapier	12 L-60 40 mm
Qatar	None	10 Blowp ipe 12 FIM-92A Stinger 9 Roland II 24 Mistral 20 SA-7	?
Saudi Arabia	16/128 I Hawk 4-6/16-24 Patriot 2 17/73 Shahine Mobile	40 C rotale 500 Stinger (AR MY) 500 Mistral (AD F)	1,220 guns 92 M-163 Vulcan 20 mm 30 M-167 Vulcan 20 mm
(NG)	16/96 PAC-2 launchers 17 ANA/FPS-117 radar 73/68 Crotale/Shahine	500 FIM-43 Redeye 500 Rede ye (AD F) 73-141 Shahine static	850 AMX-30SA 30 m m 128 G DF Oerlikon 35mm 150 L-70 40 m m (in sto re) 130 M-2 90 mm (NG)
UAE	2/6/36 I Hawk	20+ Blowpipe 20 Mistral Some Rapier Some Crotale Some RB-70 Some Javelin Some SA-18	62 guns 42 M-3VDA 20 mm SP 20 G CF-BM2 30 mm
Yemen	Some SA-2, 3 Some SA-6 SP	Some 800 SA-7 Some SA-9 SP Some SA-13 SP Some SA-14	530 guns 20 M-163 Vulcan SP 20mm 50 ZSU-23-4 SP 23 mm 100 ZSU-23-2 23 mm 150 M-1939 37 mm 50 M-167 2 0mm 120 S-60 57 mm 40 M-1939 KS-12 85 mm

Source: Adapted by Anthony H. Cordesman from IISS, [The Military Balance](#), [Periscope](#), JCSS, [Middle East Military Balance](#), [Jane's Sentinel](#) and [Jane's Defense Weekly](#). Some data adjusted or estimated by the author.

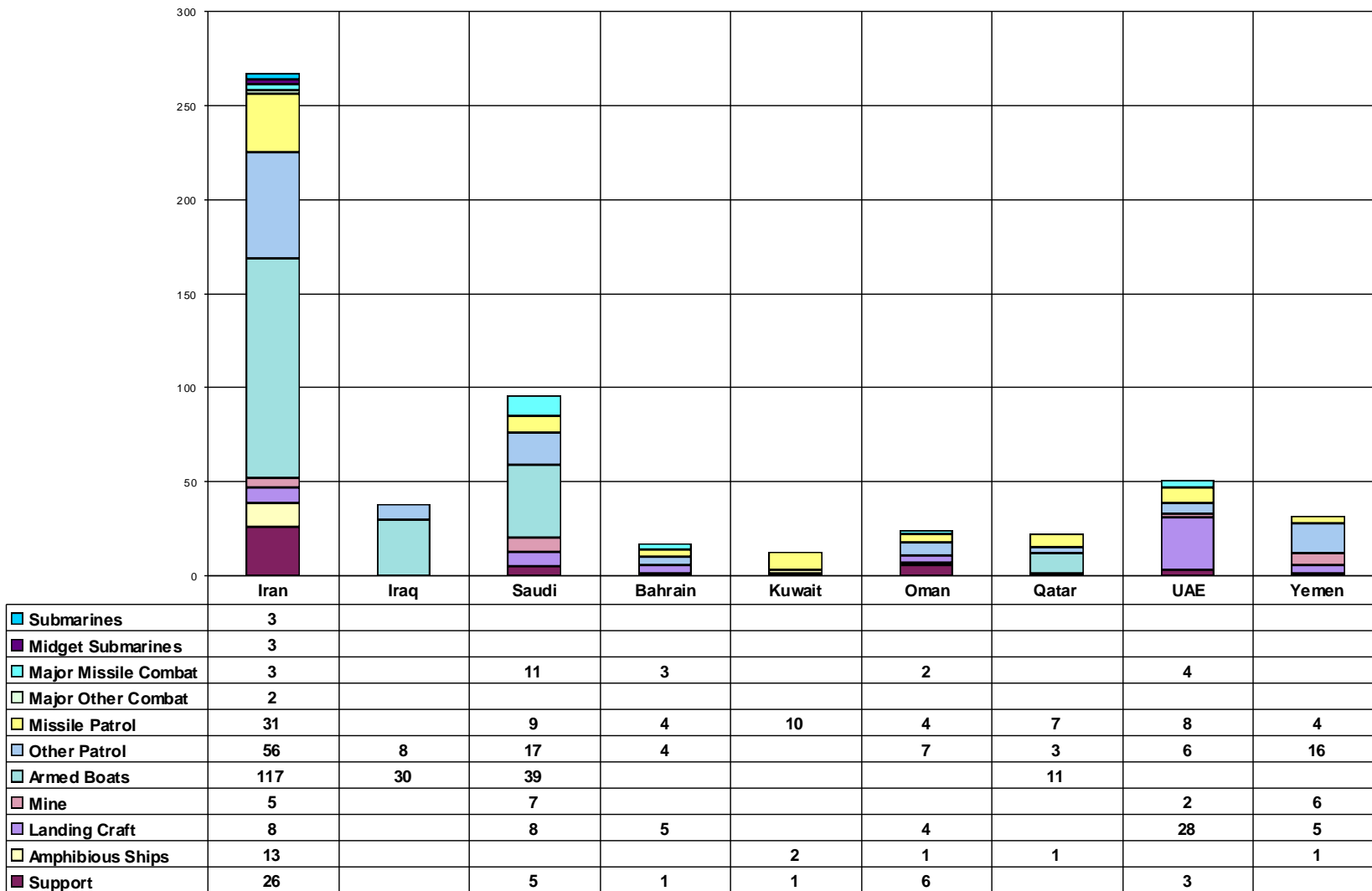
## Naval Threats

- Iranian effort to “close the Gulf.”
- Iranian permissive amphibious/ferry operation.
- Variation on 1987-1988 “Tanker War”
- Raids on offshore and critical shore facilities.
- “Deep strike” with air or submarines in Gulf of Oman or Indian Ocean.
- Attacks on US facilities

### *But:*

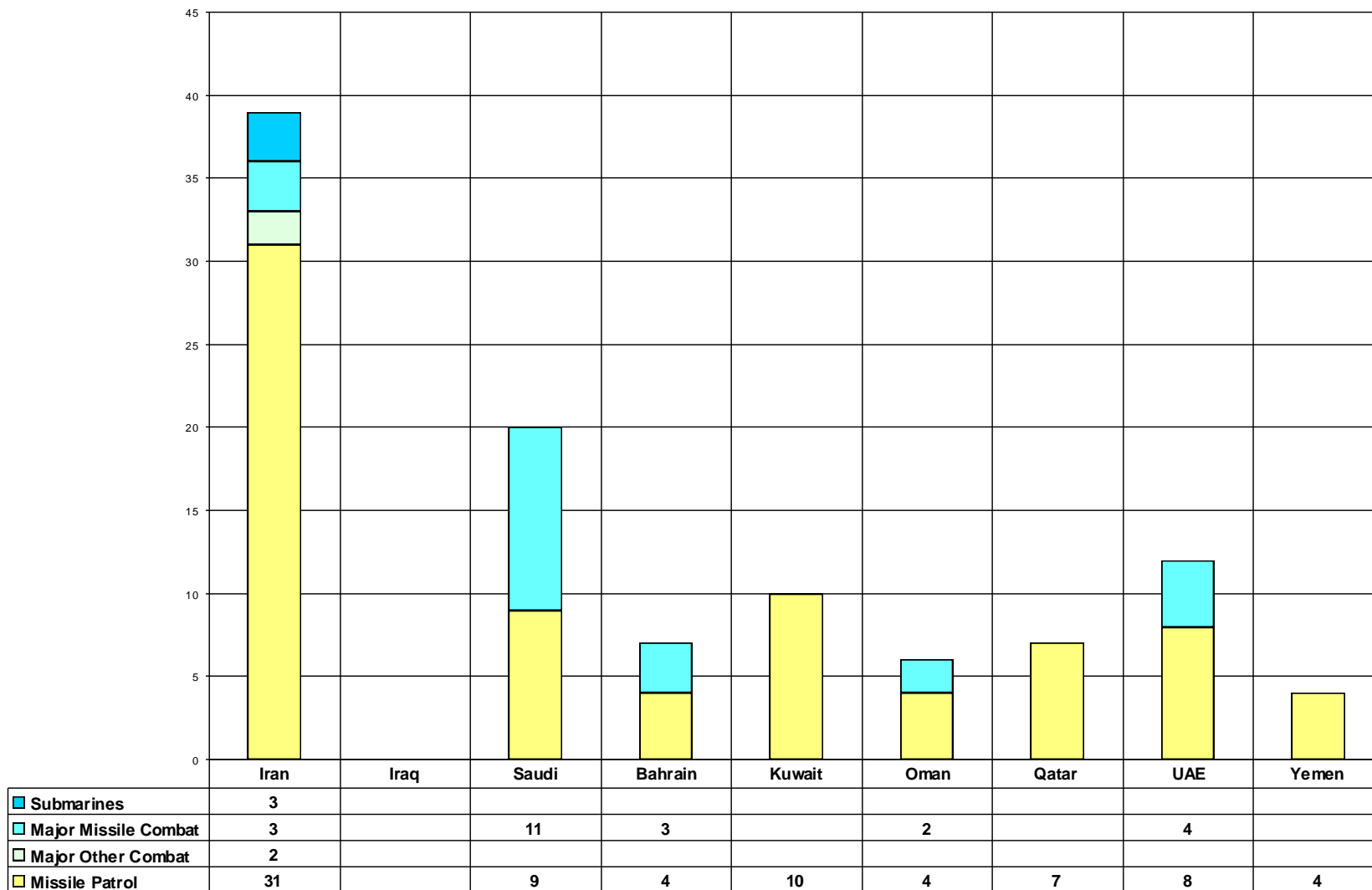
- *Low near-term probability.*
- *High risk of US and allied intervention.*
- *Limited threat power projection and sustainability.*
- *Unclear strategic goal.*

# Comparative Naval Combat Ships in 2010



Source: Adapted by Anthony H. Cordesman from IISS, The Military Balance, various editions.

# Major Combat Warships in 2010



Source: Adapted by Anthony H. Cordesman from IISS, [The Military Balance](#), various editions and material provided by US and Saudi experts.

# Iran Has Major Lead in Asymmetric Warfare Capabilities

- **Iran compensates for its conventional weakness with asymmetric forces, ties to non-state actors and other regional countries, missiles, chemical weapons and its nuclear program.**
- **Has built up a major capability in its IRGC, Basij, and Al Quds force.**
- **Combination of naval, IRGC naval branch, air and missile capabilities are critical threat:**
  - **Submarines, smart mines, land-based anti-ship missiles.**
  - **“Swarming” and selective attrition warfare capability in IRGC naval branch and coastal/offshore raiding forces.**
  - **Training/support of Shi’ite dissidents.**
- **Wears of intimidation and selective attrition offer options hard to deter and defend against/ More convincing than provocation of any attempt to close the Gulf.**



## The Islamic Revolutionary Guards Corps

- **125,000+**, drawing on 1,000,000 Basij.
- **Key is 20,000 Naval Guards, including 5,000 marines.**
  - **Armed with HY-3 CSS-C-3 Seersucker (6-12 launchers, 100 missiles, 95-100 km), and 10 Houdong missile patrol boats with C-802s (120 km), and 40+ Boghammers with ATGMs, recoilless rifles, machine guns.**
  - **Large-scale mine warfare capability using small craft and commercial boats.**
  - **Based at Bandar e-Abbas, Khorramshar, Larak, Abu Musa, Al Farsiyah, Halul, Sirri.**
- **IRGC air branch reported to fly UAVs and UCAVs, and control Iran's strategic missile force.**
  - **1 Shahab SRBM Bde (300-500-700 km) with 12-18 launchers, 1 Shahab 3 IRBM Btn (1,200-1,280 km) with 6 launchers and 4 missiles each.**

## **IRGC Key Assets and Capabilities**

- **The IRGC has a wide variety of assets at its disposal to threaten shipping lanes in the Gulf, Gulf of Oman, and the Caspian Sea.**
- **3 Kilo (Type 877) and unknown number of midget (Qadr-SS-3) submarines; smart torpedoes, (anti-ship missiles?) and smart mine capability.**
- **Use of 5 minelayers, amphibious ships, small craft, commercial boats.**
- **Attacks on tankers, shipping, offshore facilities by naval guards.**
- **Raids with 8 P-3MP/P-3F Orion MPA and combat aircraft with anti-ship missiles(C-801K (8-42 km), CSS-N-4, and others).**
- **Free-floating mines, smart and dumb mines, oil spills.**
- **Land-based, long-range anti-ship missiles based on land, islands (Seersucker HY-2, CSS-C-3), and ships (CSS-N-4, and others. Sunburn?).**
- **Forces whose exercises demonstrate the capability to raid or attack key export and infrastructure facilities.**

## **IRGC Naval Branch Modernization**

- **Large numbers of anti-ship missiles on various types of launch platforms.**
- **Small fast-attack craft, heavily armed with rockets or anti-ship missiles.**
- **More 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 specialized training.**
- **More customized or purpose-built high-tech equipment.**
- **Better communications and coordination between fighting units.**
- **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 U.S. naval surface warfare elements.**
- **Means to mitigate the vulnerability of even small naval units to air and missile attack.**

## IRGC Naval Branch

- The IRGC has a naval branch consists of approximately 20,000 men, including marine units of around 5,000 men.
- The IRGC is now reported to operate all mobile land-based anti-ship missile batteries and has an array of missile boats; torpedo boats; catamaran patrol boats with rocket launchers; motor boats with heavy machine guns; mines as well as Yono (Qadir)-class midget submarines; and a number of swimmer delivery vehicles.
- The IRGC naval forces have at least 40 light patrol boats, 10 Houdong guided missile patrol boats armed with C-802 anti-ship missiles.
- The IRGC controls Iran's coastal defense forces, including naval guns and an HY-2 Seersucker land-based anti-ship missile unit deployed in five to seven sites along the Gulf coast.
- The IRGC has numerous staging areas in such places and has organized its Basij militia among the local inhabitants to undertake support operations.
- IRGC put in charge of defending Iran's Gulf coast in September 2008 and is operational in the Gulf and the Gulf of Oman, and could potentially operate elsewhere if given suitable sealift or facilities.
- Can deliver conventional weapons, bombs, mines, and CBRN weapons into ports and oil and desalination facilities.
- Force consists of six elements: surface vessels, midget and unconventional submarines, missiles and rockets, naval mines, aviation, and military industries.

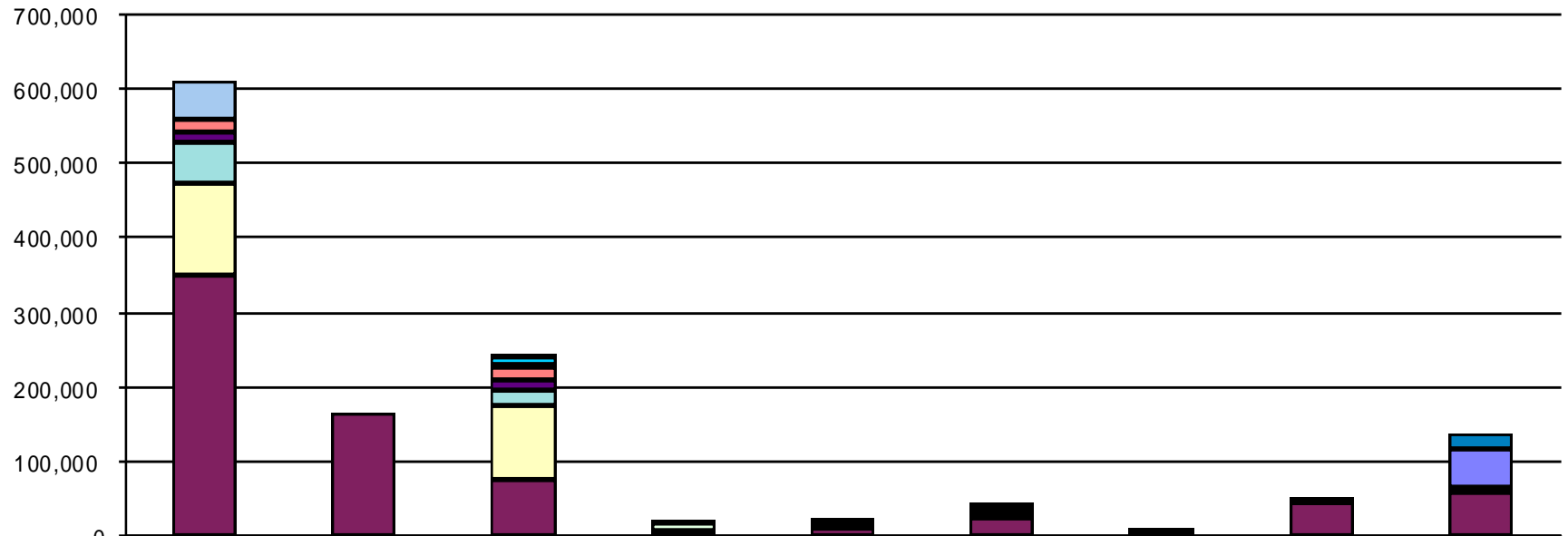
## **IRGC Naval Branch Facilities**

- **The IRGC has numerous staging areas in such places and has organized its Basij militia among the local inhabitants to undertake support operations.**
- **The naval branch has bases and contingency facilities in the Gulf, many near key shipping channels and some near the Strait of Hormuz.**
  - **These include facilities at Al-Farsiya, Halul (an oil platform), Sirri, Abu Musa, Bandaer-e Abbas, Khorramshahr, and Larak.**
- **Iran recently started constructing new naval bases along the coasts of the Gulf and the Sea of Oman for an “impenetrable line of defense.”**
- **On October 27, 2008, Iran opened a new naval base at Jask, located at the southern mouth of the Strait of Hormuz, a strategic chokepoint for Persian Gulf oil.**

## **Most Likely Foreign Threats Are Not Formal Conflicts**

- **Direct and indirect threats of using force. (I.e. Iranian efforts at proliferation)**
- **Use of irregular forces and asymmetric attacks.**
- **Proxy conflicts using terrorist or extremist movements or exploiting internal sectarian, ethnic, tribal, dynastic, regional tensions.**
- **Arms transfers, training in host country, use of covert elements like Quds force.**
- **Harassment and attrition through low level attacks, clashes, incidents.**
- **Limited, demonstrative attacks to increase risk, intimidation.**
- **Strike at critical node or infrastructure.**

# Comparative Paramilitary Manpower: 2010



	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen
Basij	*								
Other	50,000								
Guard				2000	6,600	6,400			
Police				9,000					
Special Security			500						
Border Guard			10,500						
Coastguard			4,500	260	500	400		800	1,200
Tribal Levies						4,000			20,000
MOI Forces									50,000
Navy	18,000	1,100	15,500	700	2,000	4,200	1,800	2,500	1,700

Derived from IISS, Military Balance, 2010

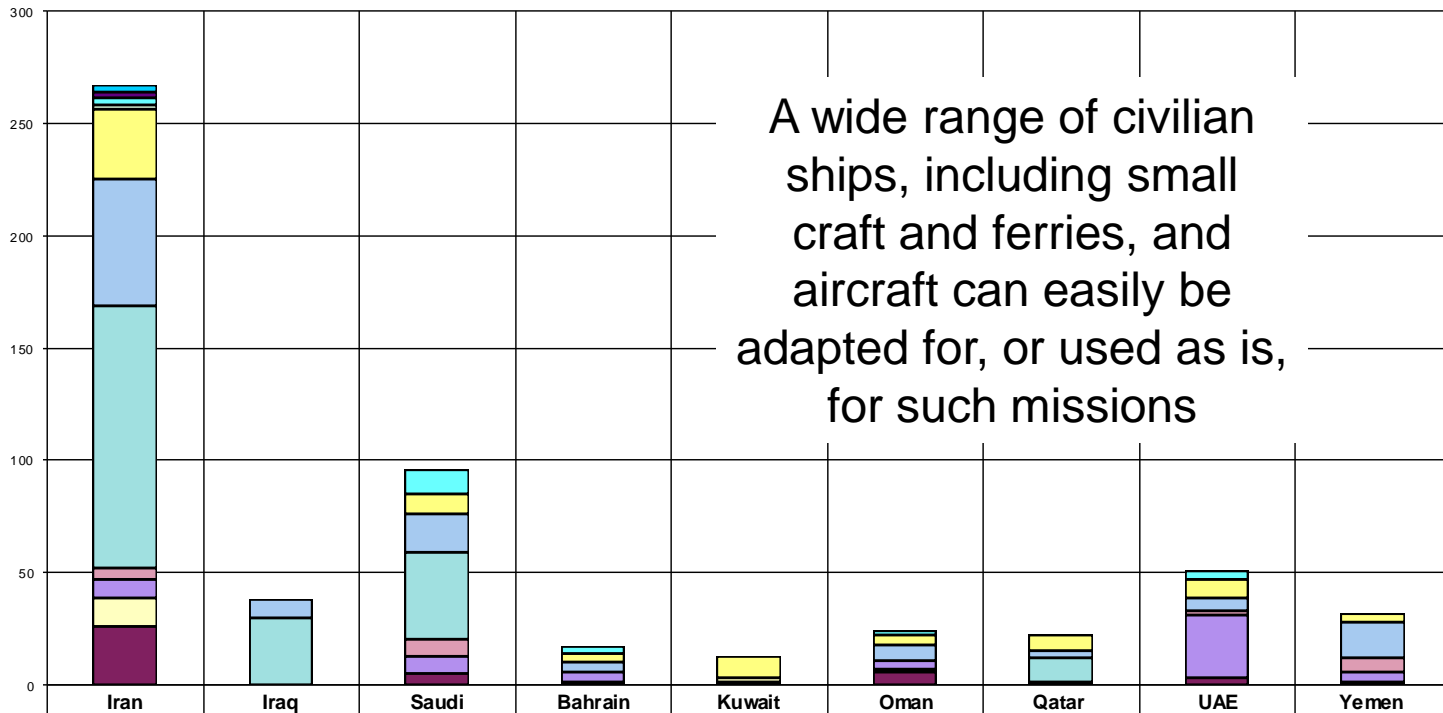
# Steady Build-Up in Coastal and Island Basing and Facilities: Abu Musa



Source: Google maps

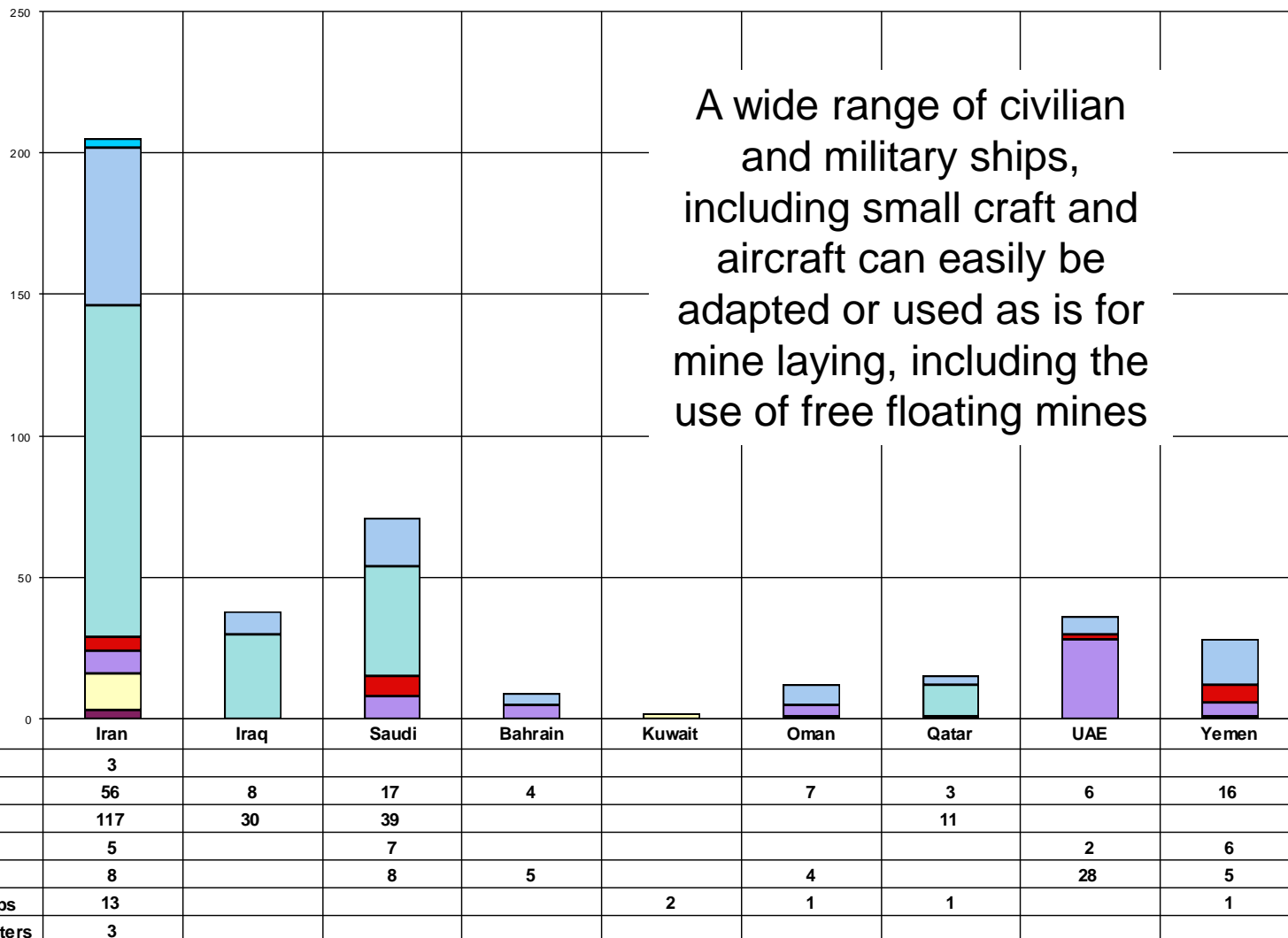


# Key Ships for Asymmetric Warfare

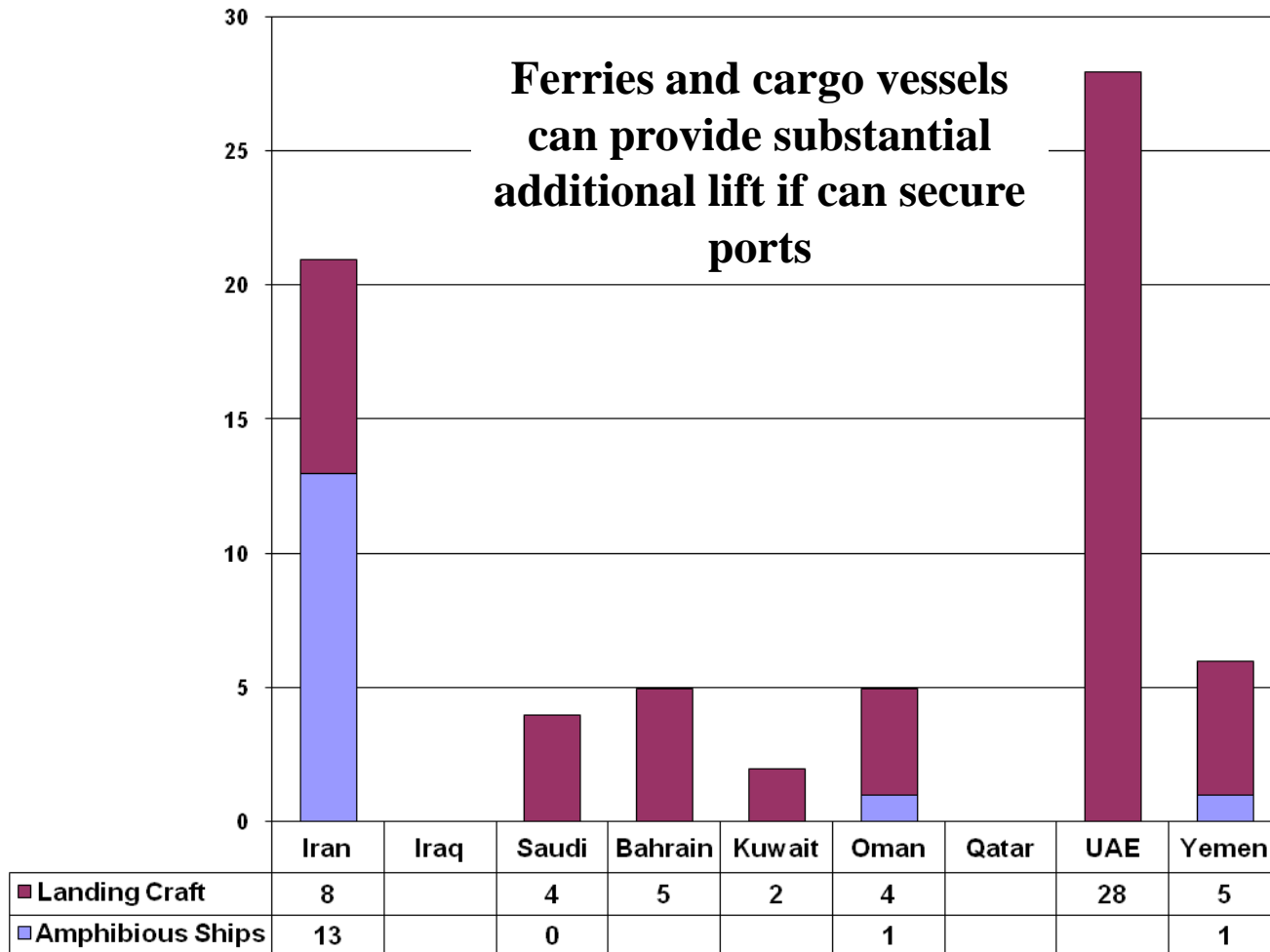


	Iran	Iraq	Saudi	Bahrain	Kuwait	Oman	Qatar	UAE	Yemen
Submarines	3								
Midget Submarines	3								
Major Missile Combat	3		11	3		2		4	
Major Other Combat	2								
Missile Patrol	31		9	4	10	4	7	8	4
Other Patrol	56	8	17	4		7	3	6	16
Armed Boats	117	30	39				11		
Mine	5		7					2	6
Landing Craft	8		8	5		4		28	5
Amphibious Ships	13				2	1	1		1
Support	26		5	1	1	6		3	

# Dedicated and Potential Mine Warfare Forces



# Amphibious Ships & Landing Craft



Source: Adapted by Anthony H. Cordesman from IISS, *The Military Balance*, various editions, Jane's Sentinel series, and material provided by US and Saudi experts. Estimates differ on Saudi landing craft, because of different ways to count operational status. Some experts put the figure at 6 LCMs and 2 LCUs.

## **Need for Better Cooperation in Asymmetric Warfare**

- **Deterrence and conflict prevention as critical as defense.**
- **Again, need integrated GCC force planning and war planning efforts.**
- **Must show GCC will act together. Cannot divide or exploit weakest link.**
- **Tie to cooperation with US, UK, and France: Consider how to cooperate with Iraq.**
- **Exercise realistic “red-blue” war games to determine common options and requirements.**
- **Follow-up with realistic CPXs and FTXs.**
- **Emphasize joint warfare approaches that tie in paramilitary and security forces.**
- **Demonstrate have exercised a retaliatory capability.**
- **Show can strike at critical node or infrastructure; Use air and missile power to retaliate.**

# The Iranian Missile Threat

- **Still very much an evolving force, but key counter to Iran's weakness in air; critical to giving nuclear and chemical weapons**
- **Evidence shows longer-range systems still evolving, with probable shift to solid fueled systems.**
- **Technology and testing to date indicate uncertain reliability and limited accuracy.**
- **Terror weapons even with unitary chemical warheads; conventional warheads will be notably less effective than a conventional bomb of the same size.**
- **Force goals uncertain in terms of size, basing mode, concept of operations and battle management/C4I.**
- **Missile defense offers key option, but requires integration and support from US naval/land forces**
- **Need to think out upgrade of Saudi missile force, what US offer of extended regional deterrence actually means.**

# Idealized Iranian Missile Threat

**Long-Range Ballistic Missiles**

- New Intermediate Range Ballistic Missile or Space Launch Vehicle (SLV) in development
- Likely to develop ICBM/SLV ... could have an ICBM capable of reaching the U.S. before 2015



ms-1096738 / 061437

**Shahab 3/3A**

Range (km)	Payload (kg)
1,350	1,158
1,400	987
1,500	760
1,540	650
1,560	590.27
1,580	557.33
1,600	550
1,780	240
2,000	-

(Source: Missile Defense Program Overview for the European Union, Committee on Foreign Affairs, Subcommittee on Security and Defense. Dr. Patricia Sanders. Executive Director. Missile Defense Agency)

# A Gulf Missile War



## **Chemical Reality, Nuclear Uncertainty**

- **Iran is a declared chemical weapons state under the CWC. BW possible, a BW program likely.**
- **Have all of the technology necessary for design and manufacture of fission weapons.**
- **Have some Chinese weapons design data, via North Korea and AQ Khan network.**
- **Have reached enrichment levels which show can make fissile material within a few years. New heavy water reactor would add plutonium capability.**
- **At least three more advanced variants of centrifuges in production or development.**
- **Range of facilities unknown; has shown is actively building facilities does not declare. Some 80+ known facilities could house some aspect of weapons design and production capability**
- **No picture of timing and force might create. Options range from advancing threshold capability to LOW/LUA to mobile/sheltered-ride out force.**
- **Has already driven Israel into planning and possible force changes; nuclear arms race in the region is already underway.**



300 miles  
500 km

TURKEY

TURKMENISTAN

CASPIAN SEA

Lashkar A'bad

Tehran

Sites circled in red  
unknown pre-mid 2002

IRAQ

Arak

Isfahan

Natanz

IRAN

Saghand

Ardekan

AFGHANISTAN

MIDDLE EAST

- MW Megawatts
- Uranium processing facility
- Uranium mines
- Heavy-water facility
- Research reactors / research facilities
- Uranium enrichment facility
- Light-water reactor (under construction)

KUWAIT

1000 MW

Bushehr

SAUDI ARABIA

BAHRAIN

QATAR

Gachin

PAKISTAN

The Gulf

Gulf of Oman

Vehicle Entrance Ramp  
(before burial)

Bunkered underground  
production halls

Admin/engineering  
office area

*DigitalGlobe Quickbird commercial satellite image*

20 SEP 02

Vehicle Entrance Ramp  
(after burial)

Bunkered underground  
Centrifuge cascade halls

Helicopter  
pads

New security  
wall

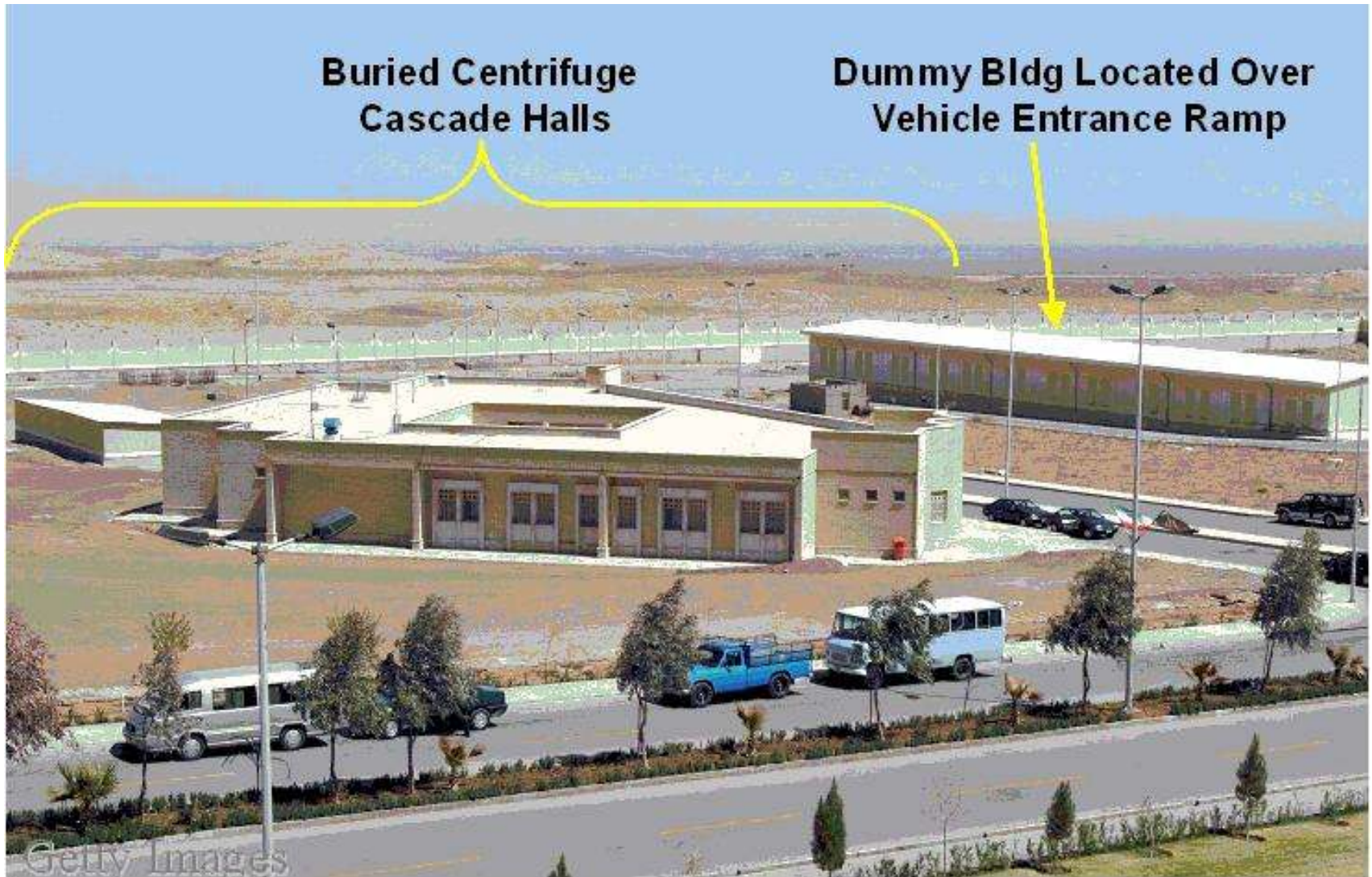
Dummy building  
concealing tunnel  
entrance ramp

Admin/engineering  
office area

*DigitalGlobe Quickbird commercial satellite image*

21 JUL 04

## Effective Concealment



Getty Images

# The Other Threats: Terrorism, Naval, and Regional Instability

- **Yemen and Somalia already in crisis mode; Sudan and Eritrea only marginally better.**
- **Serious Al Qa'ida and terrorist threat in Yemen, Saudi Arabia. Cadre activity in rest of lower Gulf.**
- **Shi'ite extremism could become a problem, already an issue in Iraq.**
- **Piracy in Somalia could become a model for terrorist action as well. Need to boost Saudi Red Sea Fleet.**
- **Southern Gulf states have made major progress in counterterrorism, particularly Saudi Arabia.**
- **Good cooperation with US and European states, although can be improved.**
- **Moderate cooperation within the southern Gulf. Many areas where cooperation could be improved.**
- **Need to systematically improve IS&R and rapid response capability. Time, and interoperability are critical.**
- **Need improvements in facility protection, border and port security.**

## *Range of Hostile Organizations in Region*

***Abu Nidal Organization (ANO)***

***Abu Sayyaf Group (ASG)***

***A-Al qsa Martyrs Brigade Ansar a-Sl unna (AS)***

***Armed Islamic Group (GIA)***

***Asbat al-Ansar***

***Gama'a a-Islamiyya (IG)***

***Harakat ul-Mujahedin (HUM)***

***Hizballah Islamic Jihad Union (IJU)***

***Islamic Movement of Uzbekistan (IMU)***

***Jaish-e-Mohammed (JEM)***

***Jemaah Islamiya Organization (JI)***

***Al-Jihad (AJ)***

***Kahane Chai (Kach)***

***Libyan Islamic Fighting Group (LIFG)***

***Moroccan Islamic Combatant Group (GICM)***

***Mujahedin-e Khalq Organization (MEK)***

***Al-Qaida in the Islamic Maghreb (AQIM) [Formerly Salafist Group] for  
Call and Combat (GSPC)]***

***Al-Qaida (AQ)***

***Al-Qaida in Iraq (AQI)***

***Al-Qaida in the Peninsula***

## *The Continuing Threat: Saudi Arabia*

- In January 2008, new law states anyone convicted of setting up a website supporting terrorism will be sentenced to 10 years in prison and fined five million riyals (about \$1.3 million).
- In a December 2, 2007 press conference at King Saud University, Saudi Interior Minister Prince Naif bin 'Abd Al-'Aziz criticized mosque preachers who call for jihad, saying: "The efforts on the ideological front still leave much to be desired. Security measures in themselves are not sufficient [to stop terrorism] - it is mainly action on the ideological [front] that prevents extremist ideas from infiltrating the minds of the youth."
- In a December 1, 2007 interview with the Saudi daily 'Okaz, published shortly after the terror cells were uncovered and arrested, Prince Naif stressed the important role of the 'ulama and journalists in the ideological struggle against terrorism.
- On December 1, 2007, Saudi government issues announcement prohibiting Saudi youth from waging jihad, called on young Saudis inside the country and abroad who were planning to engage in jihad in areas of conflict to turn themselves in as soon as possible.
- In December 2007, Saudi security forces capture another terrorist cell, which had planned to attack Muslim pilgrims during the Hajj.
- In November 2007, the Saudi Interior Ministry announces that six terrorist cells, with a total of 208 members, were captured. Cells had planned operations including attacks on oil installations and assassinations of security personnel. Had targeted senior clerics who had come out against the terrorist organizations, including Saudi Mufti Sheikh 'Abd Al-'Aziz bin 'Abdallah Aal Al-Sheikh and Senior 'Ulama Council members such as Sheikh Saleh bin Fawzan Al-Fawzan.(
- On October 1, 2007, Saudi Mufti Sheikh 'Abd Al-'Aziz bin 'Abdallah Aal Al-Sheikh issued a fatwa prohibiting Saudi youth from engaging in Jihad in Iraq.

## *Meeting the Challenge of Regional and Internal Terrorism and Instability*

- **Directly engage in ideological struggle for the future of Islam and religious legitimacy.**
- **Continue to strengthen counterterrorism forces and capabilities.**
- **Improve cooperation in GCC in counterterrorism and intelligence.**
- **Strengthen border, coastal, and port security.**
- **Reduce sectarian tensions and discrimination.**
- **Fairer treatment of foreign labor.**
- **Strengthen bilateral cooperation with U.S. and Europe.**
- **Strengthen cooperation with Interpol, UN, and other regional counterterrorism centers.**
- **Aid to Yemen and poorer regional states.**



# Acts of Piracy Near Gulf of Aden & Somalia: 2009

