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The New Balance of Gulf Arms

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Even before the current "oil crunch," fundamental changes began to take place in the arms trade to the Gulf. The end of the Iran-Iraq War, the Gulf War, UN sanctions against Iraq, and "dual containment" had a major impact on both Gulf military expenditures and arms imports. Iraq lost the ability to recapitalize its military forces, much less modernize them effectively. Iran spent far less on both its total military forces and arms than it had during the Iran-Iraq War. Contrary to conventional wisdom, Southern Gulf military expenditures and arms transfers also dropped significantly.

Since the Gulf War, Iraq has virtually had to drop out of the race. It has had no major arms imports since the UN embargo in mid-1990. Iran has lacked the funds and access to arms to launch a major new conventional arms build-up, and has taken advantage of its rival's defeat to limit its expenditures. The Southern Gulf states did make significant purchases at the time of the Gulf War, but then cut back to levels notably lower than before Iraq invaded Kuwait.

These cuts in arms sales are certain to accelerate as part of the "oil crunch." A loss of 30-40% on oil revenues has a major impact in a region where governments get an average of 70-80% of their revenues from oil exports. Countries like Saudi Arabia have already had to delay existing arms contracts, and many other countries are having to delay new purchases and delay or cancel existing orders. Only the UAE seems committed to the continuing kind of truly reckless arms purchases that wasted so much money in the past, and the other Southern Gulf states are learning to be far more cautious as to how they use their funds.

At the same time, some things do not change. Iraq is not importing arms because it cannot, and its present government seems certain to choose guns over butter the moment sanctions are lifted. Iran has not given up its ambitions. It has kept a carefully focused build-up in the lower Gulf. Both Iran and Iraq continue to develop long-rang missile systems and continue to proliferate. The tendency of the Southern Gulf states to buy a "dog's breakfast" of different arms from different sources has not changed at all. They spend less, but generally

without a proper focus on their military needs and with little real interest in regional cooperation and interoperability.

Arms Transfers Since the Gulf War in Constant Dollars

Tables One and Two summarize the recent trends in the regional arms imports. It is important to note that these figures are based on declassified US intelligence data, not guesswork by some NGO, and that they show the trends in arms imports in directly comparable constant 1996 US dollars. Comparisons in current dollars can still have value, but they do not provide a true picture of changes over time.

The following broad trends shape the patterns in the arms sales to the Northern and Southern Gulf that are reflected in these tables:

- Iranian conventional arms imports have dropped to about one-fifth to one-fourth of their Iran-Iraq War level.

- Iraqi military expenditures have dropped to about one-tenth of their Iran-Iraq War level, as measured in constant dollars. Iraqi has had no major arms imports since 1990.

- The rise in deliveries to the Southern Gulf that occurred following the orders placed during the Gulf War was much smaller than many analysts seem to realize. Southern Gulf arms purchases and deliveries are now at notably lower levels than they averaged before the Gulf War. They now average about half of their pre-Gulf War level in constant dollars.

- Southern Gulf arms purchases are driven largely by the purchases of Kuwait, Saudi Arabia, and the UAE. Bahrain, Oman, and Qatar have been comparatively small importers, and their economies have experienced little strain.

- The net effect has been to fundamentally change the balance of conventional arms in the Southern Gulf. Since 1990, the trends in new conventional arms deliveries have sharply

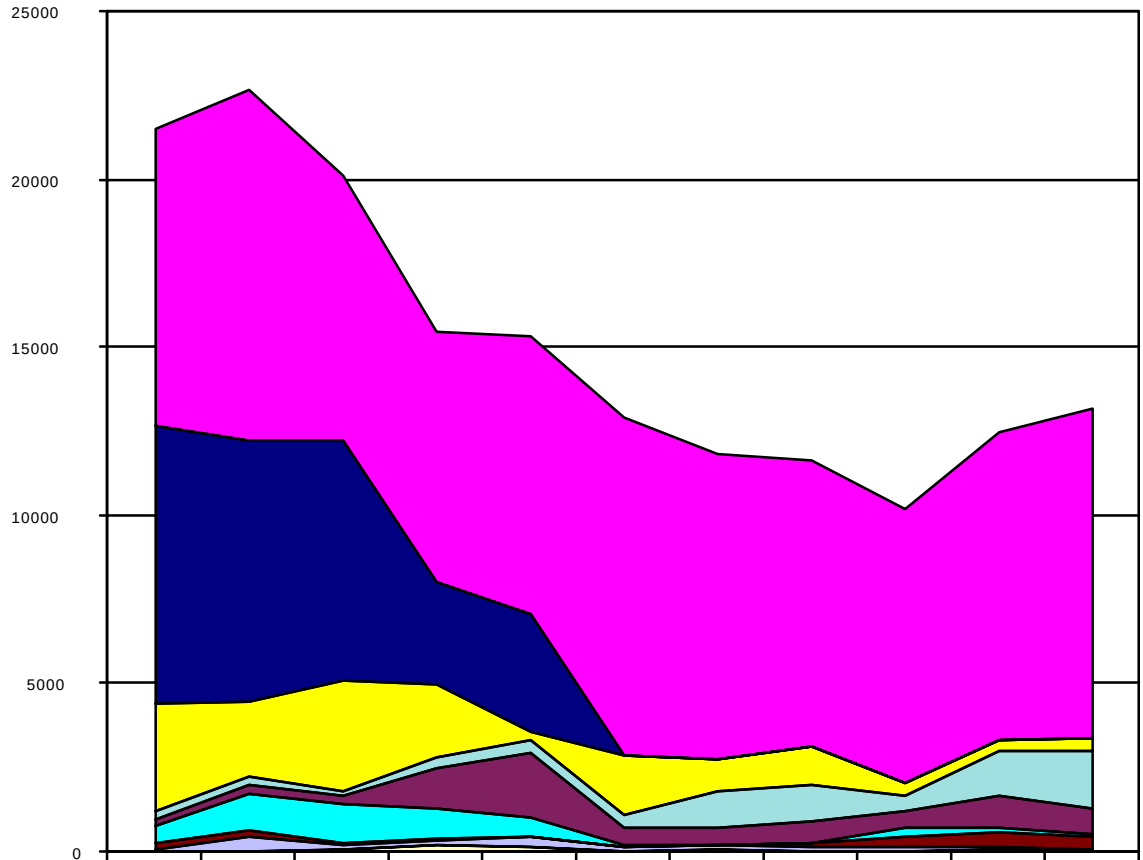
favored the Southern Gulf and the strategic interests of both the Southern Gulf states and the West..

While declassified US intelligence data are only available through this period, an examination of other sources indicates that the trends shown in this table are valid through the end of 1998. There have been no major new Iraqi imports, only minor increases in Iranian imports, and a steady decline in most Southern Gulf imports.

Table One

Cumulative Arms Imports of the Gulf States - 1984-1995

(Constant $1996 Millions)



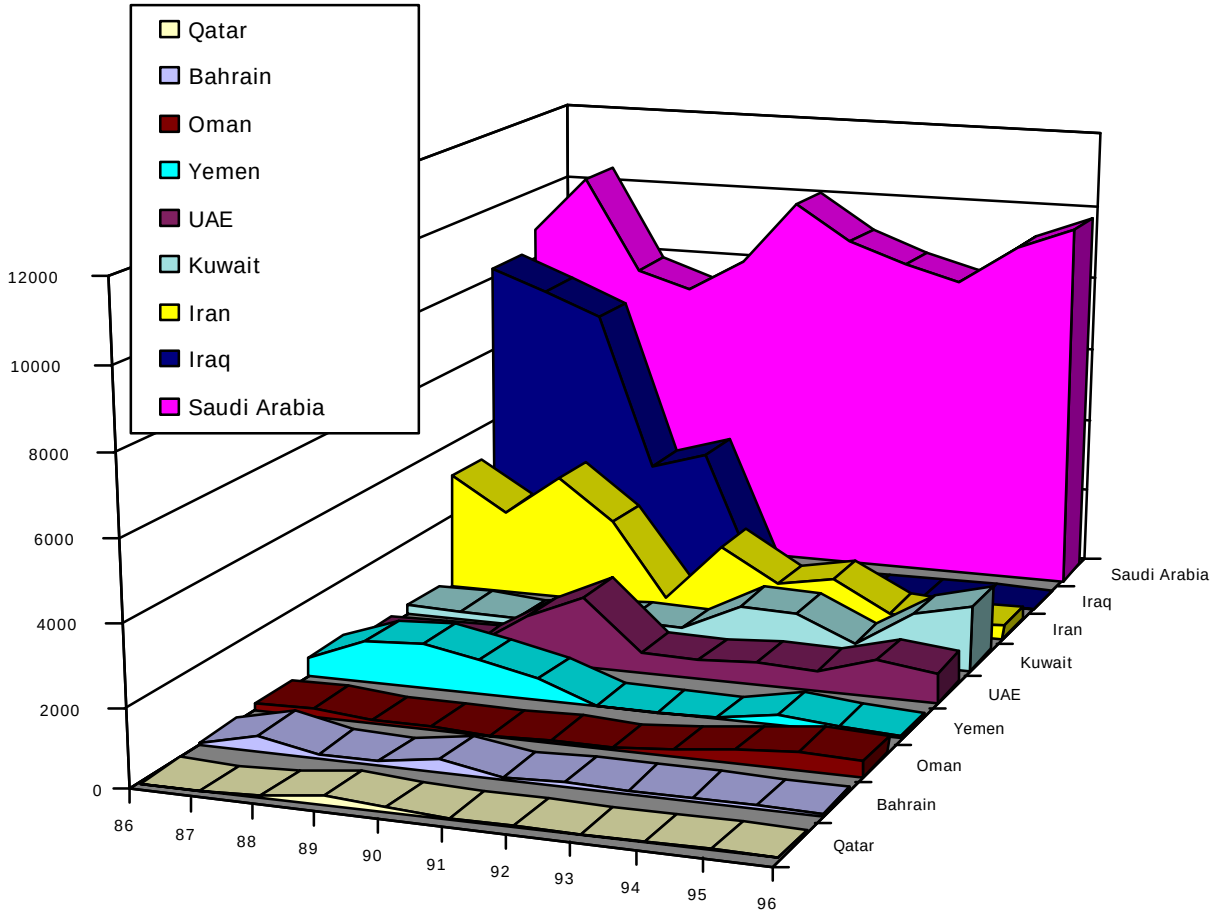
	86	87	88	89	90	91	92	93	94	95	96
Saudi Arabia	8832	10410	7880	7442	8303	10010	9088	8535	8128	9168	9800
Iraq	8288	7774	7117	3050	3508	0	0	0	0	0	0
Iran	3125	2240	3304	2196	222	1800	931	1174	406	306	350
Kuwait	258	250	153	329	409	349	1095	1067	406	1324	1700
UAE	217	264	241	1190	1871	529	526	613	547	968	775
Yemen	513	1054	1150	885	573	45	5	21	261	143	80
Oman	163	211	76	73	12	56	11	139	302	438	380
Bahrain	82	422	127	98	327	79	120	96	104	71	50
Qatar	7	0	38	220	117	22	44	11	10	51	5

Source: Adapted by Anthony H. Cordesman from US Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers, , GPO, Washington, various editions.

Table Two

Comparative Arms Imports of the Gulf States – 1986-1996

($96 Constant Millions)



Source: Adapted by Anthony H. Cordesman from US Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers, GPO, Washington, various editions.

New Arms Agreements versus New Deliveries

Table Three summarizes the recent trends in new arms purchases and actual deliveries before and after the Gulf War. These estimates are made in current dollars, but cover sales through 1996. They also provide a way of tracking the average patterns in sales during the period just before the Gulf War, during and immediately after the Gulf War, and since 1997.

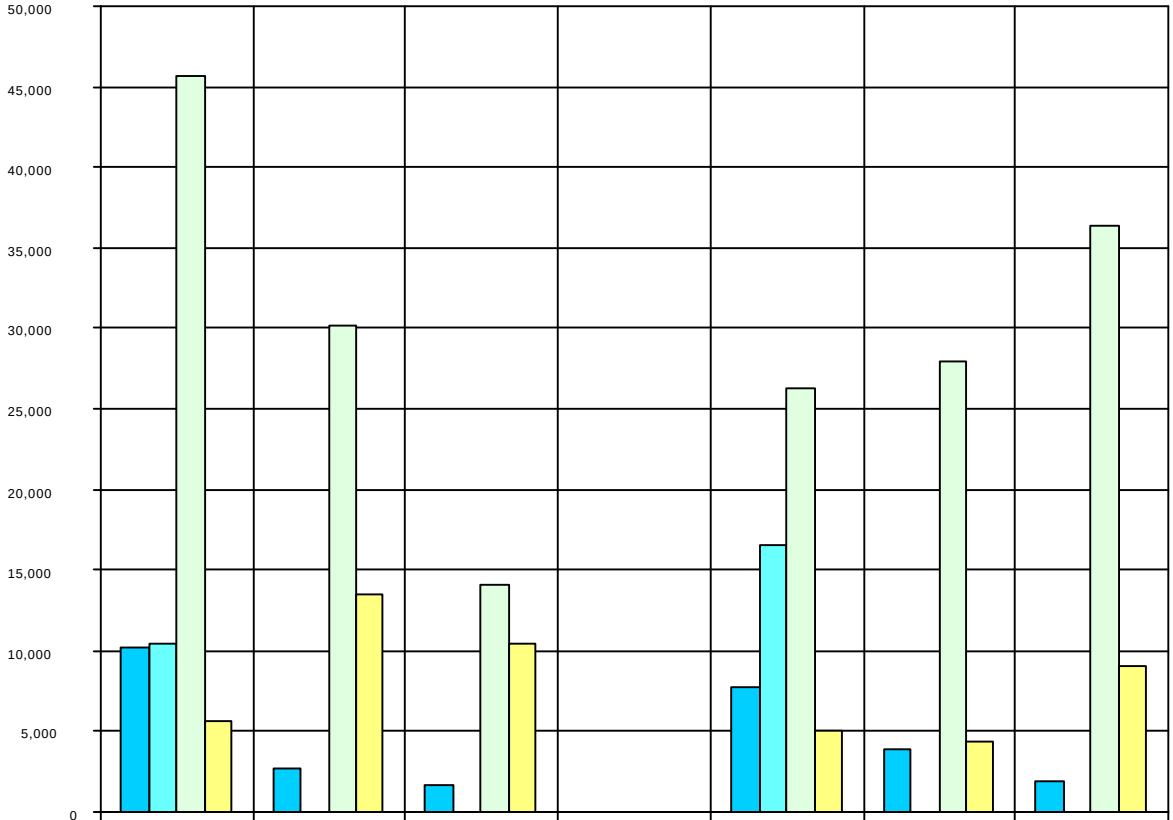
It is again clear that new agreements in the Northern Gulf have fallen precipitously since the Gulf War, and that new agreements in the Southern Gulf are reaching average levels far lower than those made during a similar period before the Gulf War. It is also clear, however, that the drop in actual arms sales has been much sharper than the drop in deliveries would indicate. The previous data on deliveries often reflects the impact of arms orders placed years before the actual delivery. Table Three shows, however, that total new arms orders have dropped from $ 72.0 billion in the four year period from 1987-1990 to $ 46.4 billion in 1991-1994, and $ 26.2 billion in 1994-1997.

The drop in new orders and deliveries the Northern Gulf is particularly striking. Recent new orders are less than 10% of the volume of new orders at the end of the Iran-Iraq War and before the Gulf War. Southern Gulf arms imports, however, have also dropped. They shrank from $ 51.3 billion in the four year period from 1987-1990 to $ 42.7 billion in 1991-1994, and $ 24.6 billion in 1994-1997. Saudi new orders totaled only one-third of the amount during 1994-1997 that they did during 1987-1989.

Table Three

Gulf Arms Agreements and Deliveries: 1987-1997

($Current Millions)



	Agreements: 87-90	Agreements: 91-94	Agreements: 94-97		Deliveries: 87-90	Deliveries: 91-94	Deliveries: 94-97
Iran	10,200	2,700	1,600		7,800	3,900	1,900
Iraq	10,500	0	0		16,600	0	0
Saudi Arabia	45,700	30,200	14,100		26,300	27,900	36,400
Other GCC	5,600	13,500	10,500		5,100	4,400	9,000

Iran	10,200	2,700	1,600	7,800	3,900	1,900
Iraq	10,500	0	0	16,600	0	0
Northern Gulf	20,700	2,700	1,600	24,400	3,900	1,900
Total GCC	51,300	43,700	24,600	31,400	32,300	45,400
Bahrain	600	200	300	800	300	200
Kuwait	3,500	5,700	2,300	1,300	2,500	4,500
Oman	400	600	600	200	300	1,200
Qatar	100	2,000	2,200	300	0	700
Saudi Arabia	45,700	30,200	14,100	26,300	27,900	36,400
UAE	1,000	5,000	5,100	2,500	1,300	2,400
(GCC less Saudi)	5,600	13,500	10,500	5,100	4,400	9,000
Yemen	300	1,200	700	2,800	300	500

0 = less than $50 million or nil, and all data rounded to the nearest $100 million.
Source: Richard F. Grimmett, Conventional Arms Transfers to the Developing Nations, Congressional Research Service, various editions.

"Focused Poverty" in the Northern Gulf.

For all the criticism of UN sanctions and "dual containment," it is clear from Tables Two to Four that they have not been without their benefits. Iraq has had virtually no arms imports since 1990. Even before the Gulf War, it would have taken about $1.5 billion a year in imports to sustain Iraq's military machine. Iraq's massive equipment losses during the Gulf War have reduced its need for imports to sustain existing systems, but have created a massive new set of requirements to rebuild Iraq's forces and act on the lessons of the Gulf War.

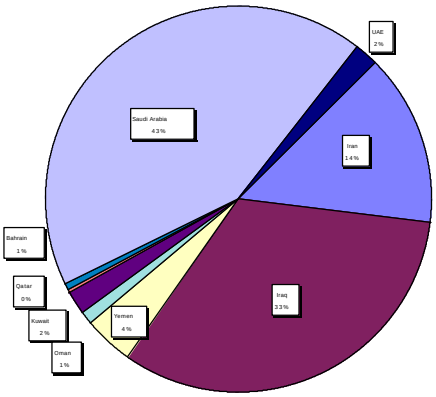
The full strategic impact of these differences has already been illustrated in discussing Table Three. It can also be illustrated, however, in terms of market share. Table Four shows just how dramatic the shift has been in the share of Northern Gulf orders versus those of the Southern Gulf, and it is important to stress that these patterns have now gone on for a decade. Iran and Iraq have no prospect of getting the funds or aid to suddenly reverse these patterns, and even if they had the money, it would take years to obtain the resulting deliveries.

Table Four:

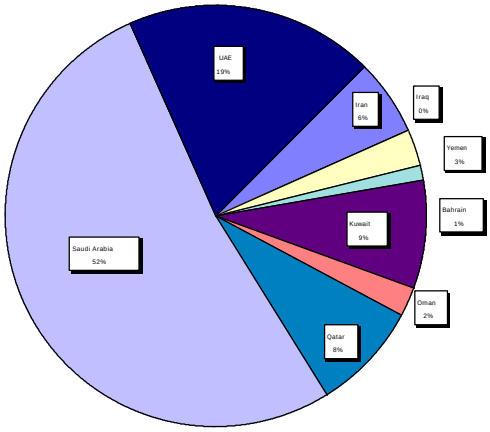
The Arms Orders of "Stabilizing" versus "Destabilizing States" in the Gulf

(New Agreements in $Current Millions)

Before the Gulf War: 1987-1990



After the Gulf War: 1994-1998



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

The Case of Iraq

Iraq has paid many prices for its invasion of Kuwait, but one price has clearly been the inability to maintain and modernize its conventional arms imports. When Iraq invaded Kuwait, it was the dominant regional military power in the Gulf. It had decisively defeated Iran during the spring and summer of 1988, in battles that cost Iran some 45-55% of its inventory of major land force weapons. Furthermore, the US and Britain had inflicted major losses on the Iranian Navy in the "tanker war" of 1987-1988. Iraq had the only modern, combat-effective armored and mechanized forces in the Gulf and an air force that was emerging as combat-effective for the first time. It had massive missile forces and chemical warfare capabilities, was beginning to deploy large numbers of biological weapons, and was making substantial progress in developing a nuclear capability.

Iraq has rebuilt and reorganized its forces that survived the Gulf War. It still has some 2,700 main battle tanks in its active forces, and can still launch a force of five heavy divisions against Kuwait with only limited warning. In spite of Desert Fox and the war of attrition that has followed, it still has around 350 combat aircraft and significant land-based air defense assets. Kuwait has only two light combat-ready brigades with an active strength of less than 174 tanks, and 40 modern F-18A/B fighters. Saudi Arabia has an excellent air force with 315 modern F-15s and Tornados, but it only has about 650 operational main battle tanks in its combat-capable main divisions and its land-forces are scattered over much of the Kingdom.

At the same time, Iraq has only about half the land and air capability it had when Desert Storm began. Many of its missile, chemical, biological, and nuclear capabilities have been dismantled by UNSCOM and the IAEA, and its efforts to develop its military industries have been severely limited by the impact of seven years of UN sanctions. Iraq has not had any significant imports of arms or military technology since the summer of 1990, and has had no opportunity to react to many of the lessons of the Gulf War. In fact, Iraq's arms imports have been reduced to levels that are so low that US intelligence no longer releases an estimate.

Iraq's regime has not changed in character and it remains a significant threat to all its neighbors. It is likely to be a revanchist state as long as Saddam Hussein is in power, and will remain determined to rebuild its military power as soon as it can do so. However, Table Five shows that Iraq now faces massive problems in terms of military obsolescence. Table Six shows that Iraq also has built-up such a massive deficit in terms of new arms orders and deliveries that it will take years to correct the situation.

While it is impossible to make reliable estimates, it is difficult to see how Iraq could recapitalize and modernize its forces for less than $35 to $50 billion dollars. Even if all sanctions stopped today, it would take at least half a decade for Iraq to buy and receive deliveries on such orders. In the interim, Iraq has no choice other than to smuggle what it can, seek to transform its military industries from centers of vainglorious rhetoric to centers of actual production, and obtain what it can.

Table Five

Iraqi Dependence on Decaying, Obsolete, or Obsolescent Major Weapons

Land Forces

- 600-700 M-48s, M-60s, AMX-30s, Centurions, and Chieftains captured from Iran or which it obtained in small numbers from other countries.
- 1,000 T-54, T-55, T-77 and Chinese T-59 and T-69 tanks
- 200 T-62s.
- 1,500-2,100 (BTR-50, BTR-60, BTR-152, OT-62, OT-64, etc
- 1,600 BDRM-2, EE-3, EE-9, AML-60, AML-90
- 800-1,200 towed artillery weapons (105 mm, 122 mm, 130 mm, and 155 mm).
- Unknown number of AS-11, AS-1, AT-1, crew-portable anti-tank-guided missiles.
- More than 1,000 heavy, low-quality anti-aircraft guns.
- Over 1,500 SA-7 and other low-quality surface-to-air guided missile launchers & fire units.
- 20 PAH-1 (Bo-105); attack helicopters with AS-11 and AS-12, 30 Mi-24s and Mi-25s with AT-2 missiles, SA-342s with AS-12s, Allouettes with AS-11s and AS-12s.
- 100-180 worn or obsolete transport helicopters.

Air Force

- 6-7 HD-6 (BD-6), 1-2 Tu-16, and 6 Tu-22 bombers.
- 100 J-6, MiG-23BN, MiG-27, Su-7 and Su-20.
- 140 J-7, MiG-21, MiG-25 air defense fighters.
- MiG-21 and MiG-25 reconnaissance fighters.
- 15 Hawker Hunters.
- Il-76 Adnan AEW aircraft.
- AA-6, AA-7, Matra 530 air-to-air missiles.
- AS-11, AS-12, AS-6, AS-14; air-to-surface missiles.
- 25 PC-7, 30 PC-9, 40 L-29 trainers.
- An-2, An-12, and Il-76 transport aircraft.

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Air Defense

- 20-30 operational SA-2 batteries with 160 launch units.
- 25-50 SA-3 batteries with 140 launch units.
- 36-55 SA-6 batteries with over 100 fire units.
- 6,500 SA-7s.
- 400 SA-9s.
- 192 SA-13s

Navy

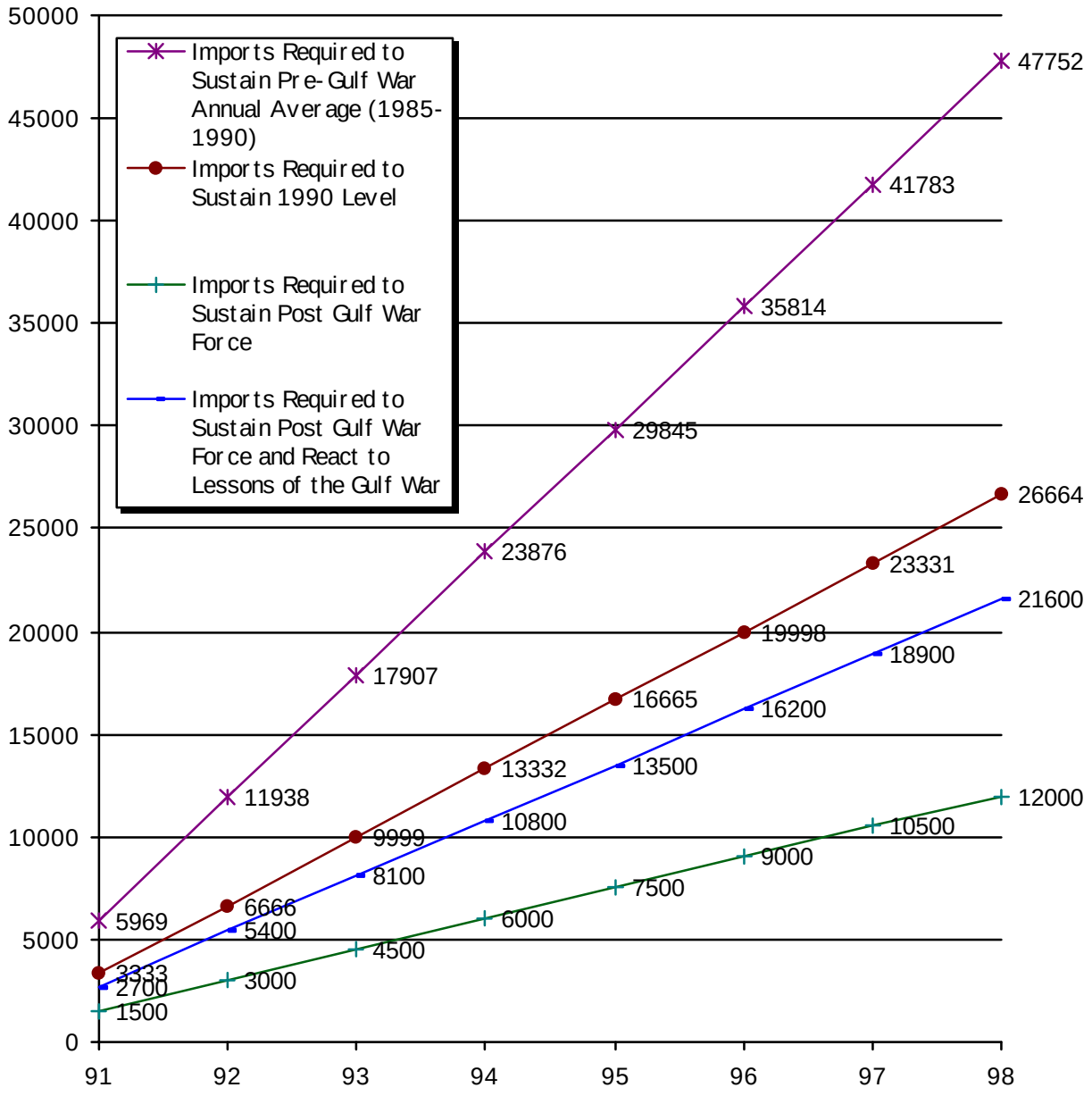
- *Ibn Khaldun*.
- Osa-class missile boat.
- 13 light combat vessels.
- 5-8 landing craft.
- *Agnadeen*.
- 1 Yugoslav Spasilac-class transport.
- Polnocny-class LST.

Source: Estimate made by Anthony H. Cordesman based discussions with US experts.

Table Six

he Iraqi Cumulative Arms Import Deficit Enforced by UN Sanctions

(Measured in $US 97 Constant millions)



Source: Adapted by Anthony H. Cordesman from US Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers, 1995, GPO, Washington, 1996.

The Case of Iran

Iran in contrast, has partially recovered from its defeat in the Iran-Iraq War, and is again a major military power by Gulf standards. However, it is scarcely a modern military power by the standards of the US. Its post-Gulf War arms imports have been far smaller than most analysts predicted. Table Seven shows the patterns in Iran's arms imports since the end of the Iran-Iraq War in 1988. It is clear that Iran did not keep up its spending after 1988, in spite of the loss of nearly half its inventory of major land weapons in the final battles of the war. It is equally clear that Iran took full advantage of Iraq's shattering defeat in the Gulf War in 1991, and made further major cuts in its arms imports. Ironically, the US sanctions that came years later not only had little impact on Iran's arms imports, but Iran's only increases in arms imports have come since US sanctions have gone into force.

As Table Eight shows, this does not mean that Iran's conventional arms imports have not involved some significant purchases. Iran has developed carefully focused military capabilities The massive infantry-artillery dominated forces of the Iran-Iraq War are being replaced by forces that focus on specific missions. It has developed a substantial capability to threaten shipping through the Straits of Hormuz and the rest of the Gulf, and has developed a substantial capability for unconventional warfare that it can project into the Gulf and throughout the region. It has steadily expanded its missile, chemical, biological warfare capabilities, and is seeking nuclear weapons.

At the same time, the arms purchases listed in Table Eight only partially offset the steadily growing obsolescence of its Western-supplied equipment reflected in Table Nine. Iran has given its economy a higher priority than arms ever since the end of the Iran-Iraq War and has had only limited total imports of modern aircraft and armor. The US and its allies have blocked many transfers of advanced arms to Iran, particularly from Europe and the FSU.

According to declassified US intelligence estimates, Iran signed new agreements worth $10.2 billion during the four year period between 1987-1990 -- the time between the final years of the Iran-Iraq War and the Gulf War. Iran's new arms agreements again dropped sharply

during the four-year period following the Gulf War, and totaled only $4.8 billion during 1991-1994. Despite some reports of a massive Iranian military build-ups -- new agreements during 1991-1994 totaled only a quarter of the value of the agreements that Iran had signed during the previous four years.

Iran signed only $1.6 billion worth of new arms agreements during 1994-1997 -- a period heavily influenced by an economic crisis inside Iran, low oil revenues, and problems in repaying foreign debt. Iran ordered $200 million from Russia, $900 million from China, $100 million from other European states (mostly Eastern Europe), and $300 million from other countries (mostly North Korea). The drop in agreements with Russia reflected both Iran's financial problems and the result of US pressure that had led President Yeltsin not to make major new arms sales to Iran. Iran's new agreements with China and North Korea heavily emphasized missiles and missile production technology. Similar trends took place in deliveries. Iran took delivery on $7.8 billion worth of arms in 1987-1990, $$3.0 billion in 1990-1993, and $1.9 billion in 1994-1997.

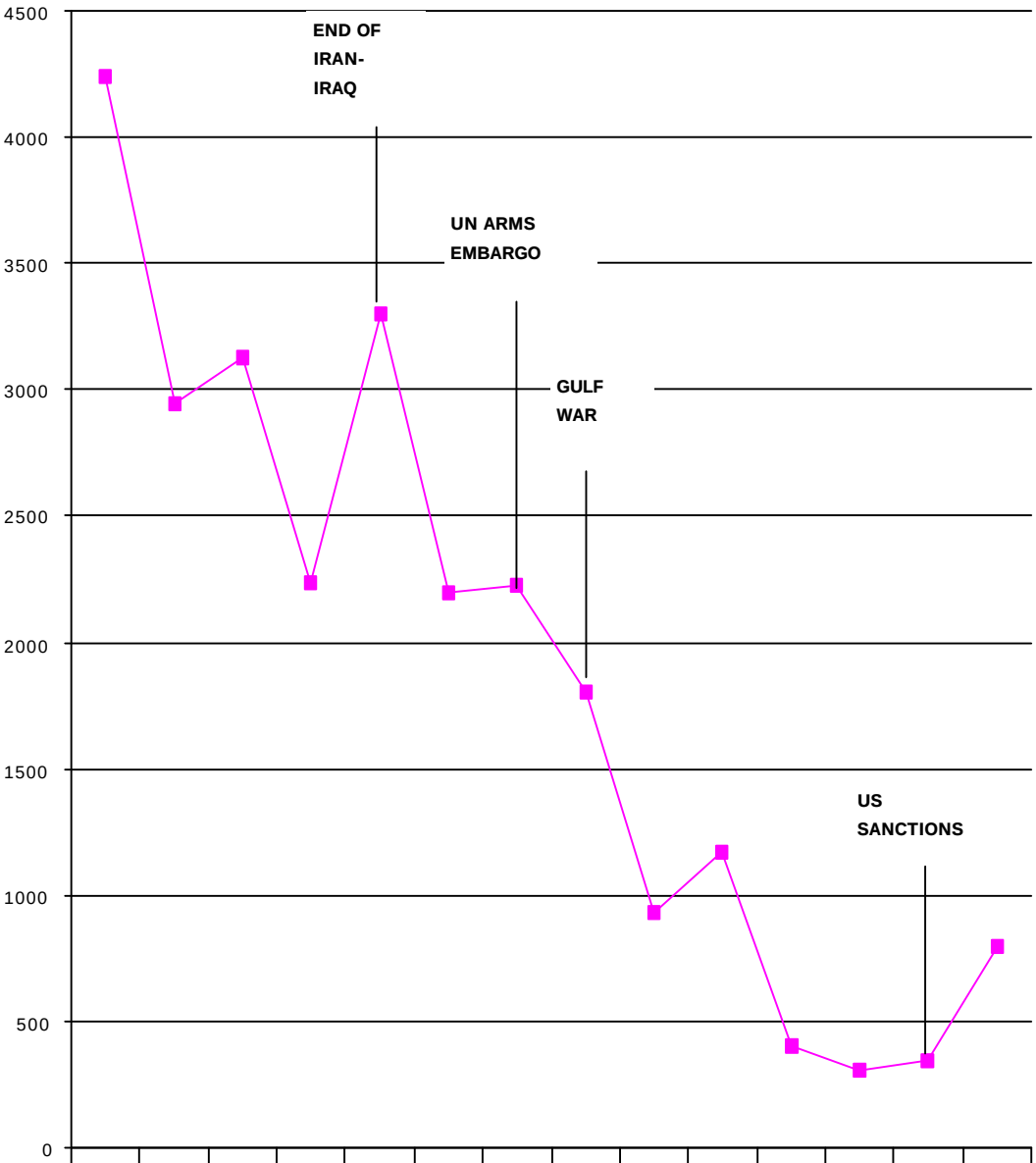
Moreover, Iran is in the middle of considerable political change. The election of President Khatami in May 1997, has revealed a growing divisions between Iran's "moderates," "traditionalists" and extremists. Iran has steadily improved its relations with its Southern Gulf neighbors. There is at least some prospect that the US and Iran can reestablish diplomatic relations over the next few years, although no one can predict the future course of the Iranian revolution and how "moderate" Iran will really become.

It is Iran's continuing focus on weapons of mass destruction and systems that may threaten tanker traffic and the Southern Gulf that makes Iran dangerous in spite of its relatively low level of arms imports and the obsolescence or low quality of much of its order of battle. These orders are shown in Table Five, and they make an impressive list. Iran has bought enough arms to rebuild its army to the point where it can defend effectively against a weakened Iraq. It has begun to rebuild its air force and land-based air defenses, and can put up a far more effective defense than in 1988. It has restructured its regular forces and the Iranian Revolutionary Guards

Corps to improve the defense of its Southern Gulf coast and create a far more effective ability to attack naval forces, tanker traffic, offshore facilities, and targets along the Southern Gulf coast.

Table Seven

Value of Iranian Arms Deliveries
(Constant $96 millions)



	84	85	86	87	88	89	90	91	92	93	94	95	96	97
Arms Deliveries	4237	2941	3125	2240	3304	2196	2222	1800	931	1174	406	306	350	800

Adapted by Anthony H. Cordesman from ACDA, World Military Expenditures and Arms Transfers, various editions.

Table Eight

Key Iranian Equipment Developments - Part One

LAND

- Russian, and Polish T-72 Exports. Reports indicate Iran has procured about 120 T-72Ss from Russia, and 100 T-72M1s from Poland since 1990. Inventory of about 220 T-72s of various types in mid-1996.
- Claims to be producing the Iranian-made Zolfaqar MBT, an M-48/M-60-like tank.
- Has upgraded to T-54/T-54 called "Safir-74. Claims to have upgraded Iraqi T-54s captured in Iran-Iraq War.
- Purchased Russian BMPs. Inventory of 300 BMP-1s and 100 BMP-2s in mid-1996.
- Russia may be licensing Iranian production of T-72 and BMP-2.
- Domestic production of a Chinese version of the BMP called the Boragh.
- Domestic production of an APC called the BMT-2 or Cobra.
- Possible purchase of 100 M-46 and 300 D-30 artillery weapons from Russia.
- Testing prototype of 122 mm self-propelled gun called Thunder.
- Has shown a modified heavy equipment transporter called the "Babr 400."
- Russian and Asian AT-2s, AT-3s, and AT-4s. Does not seems to include 100 Chinese Red Arrows.
- Chinese and 15+ North Korean 146 mm self-propelled weapons
- Has 60 Russian 2S1 122 mm self-propelled howitzers in inventory.
- Growing numbers of BM-24 240 mm, BM-21 122 mm and Chinese Type 63 107 mm MRLs
- Iranian Hadid 122 mm - 40 round MRL
- Manufacturing Iranian Arash and Noor rockets (variants of Chinese and Russian 122 mm rockets)
- Manufacturing Iranian Haseb rockets (variants of Chinese 107 mm rocket)
- Manufacturing Iranian Shahin 1 and 2, Oghab, Nazeat 5 and 10 (may be additional versions), and Fajr battlefield rockets

AIR/AIR DEFENSE

- Keeping up to 115 combat aircraft that Iraq sent to Iran during Gulf War. Seem to include 24 Su-4s and four MiG-29s.
- Has 30 MiG-29s with refueling in inventory, may be receiving 15-20 more from Russia
- Has 30 Su-24s in inventory (probably Su-24D version), may be receiving 6 to 9 more from Russia
- May be negotiating purchase of AS-10, AS-11, AS-12, AS-14/16s from Russia
- Has Su-25s (formerly Iraqi), although has not deployed.
- May be trying to purchase more Su-25s, as well as MiG-31s, Su-27s and Tu-22Ms
- Considering imports of Chinese F-8 fighter and Jian Hong bomber
- Has 25 Chinese F-7M fighters with PL-2, PL2A, and PL-7 AAMs.
- Has purchased 25 Brazilian Tucano trainers and 25 Pakistani MiG-17 trainers. Uncertain report has bought 12 MiG-29UB trainers from Russia.
- Has bought 12 Italian AB-212, 20 German BK-117A-3, and 12 Russian Mi-17 support and utility helicopters.
- Iran claims to have fitted F-14s with I-Hawk missiles adapted to the air-to-air role
- Claims to produce advanced electronic warfare systems.
- IRGC claims to be ready to mass produce gliders.

Table Eight

Key Iranian Equipment Developments - Part Two

LAND-BASED AIR DEFENSE

- May be negotiating purchase of SA-10, SA-12, SA-14/16s from Russia
- Reports has acquired four HQ-23/2B (CSA-1) launchers and 45-48 missiles, plus 25 SA-6, and 10-15 SA-5 launchers.
- Has acquired Chinese FM-80 launchers and a few RBS-70s
- More SA-7s and HN-5s man-portable missiles; may have acquired 100-200 Strelas.
- Reports is seeking to modernize Rapier and 10-15 Tigercat fire units
- May be modifying and/or producing ZSU-23-4 radar-guided anti-aircraft guns.
- Claims to produce advanced electronic warfare systems.

SEA

- Claims will soon start producing 6 multi-purpose destroyers.
- Has taken delivery on three Russian Type 877EKM Kilo-class submarines, possibly with 1,000 modern magnetic, acoustic, and pressure sensitive mines.
- Reports has North Korean midget submarines have never been confirmed
- Has obtained 10 Hudong-class Chinese missile patrol boats.
- US Mark 65 and Russian AND 500, AMAG-1, KRAB anti-ship mines
- Reports that Iran is negotiating to buy Chinese EM-52 rocket-propelled mine
- Iran claims to be developing non-magnetic, acoustic, free-floating and remote controlled mines. It may have also acquired non-magnetic mines, influence mines and mines with sophisticated timing devices.
- Wake-homing and wire-guided Russian torpedoes
- Seersucker (HY-2) sites with 50-60 missiles - Iran working to extend range to 400 km.
- Has 60-100 Chinese CS-801(Ying Jai-1 SY-2) and CS-802 (YF-6) SSMs.
- Iran is developing FL-10 anti-ship cruise missile which is copy of Chinese FL-2 or FL-7.
- Boghammer fast interceptor craft

MISSILES

- Obtained up to 250-300 Scud Bs with 8-15 launchers
- Up to 150 Chinese CSS-8 surface-to-surface missiles with 25-30 launchers.
- Reports that China is giving Iran technology to produce long-range solid fuel missile
- Iran-130 missile (?)
- Has bought North Korean Scud Cs with 5-14 launchers
- South Korea reports Iran has bought total of 100 Scud Bs and 100 Scud Cs from North Korea.
- May be developing the Zelzal-3 missile with a range of 900 kilometers with Chinese and North Korean support.
- Iran may be planning to purchase North Korean No-Dong 1/2s
- Iran also interested in North Korea's developmental Tapeo Dong 1 or Tapeo Dong 2.
- Claims will launch its first experimental satellite by 2000 with Russian aid.
- Reports of tunnels for hardened deployment of Scuds and SAMs.

CBW

- Chemical weapons (sulfur mustard gas, hydrogen cyanide, phosgene and/or chlorine; possibly Sarin and Tabun)
- Biological weapons (possibly Anthrax, hoof and mouth disease, and other biotoxins)
- Nuclear weapons development (Russian and Chinese reactors)

Source: Based on interviews, reporting in various defense journals, and the IISS, Military Balance, various editions.

Table Nine

Iranian Dependence on Decaying Western Supplied Major Weapons - Part One

Military Service	Weapon Type	Weapon Number	Comments
Land Forces			
	Chieftain tank	240-260	Worn, under-armored, underarmed, and underpowered. Fire control and sighting system now obsolete. Cooling problems.
	M-47/M-48	150-260	Worn, under-armored, underarmed, and underpowered. Fire control and sighting system now obsolete.
	M-60A1	150-160	Worn, under-armored, underarmed, and underpowered. Fire control and sighting system now obsolete.
	Scorpion AFV	70-80	Worn, light armor, underarmed, and underpowered.
	M-114s	70-80	Worn, light armor, and underarmed, and underpowered
	M-109 155 mm SP	150-160	Worn, Fire control system now obsolete. Growing reliability problems due to lack of updates and parts.
	M-107 175 mm SP	20-30	Worn, Fire control system now obsolete. Growing reliability problems due to lack of parts.
	M-110 203 mm SP	25-35	Worn, Fire control system now obsolete. Growing reliability problems due to lack of parts.
	AH-1J Attack heli.	100	Worn, avionics and weapons suite now obsolete. Growing reliability problems due to lack of updates and parts.
	CH-47 Trans. heli.	35-45	Worn, avionics now obsolete. Growing reliability problems due to lack of updates and parts.
	Bell, Hughes, Boeing, Agusta, Sikorsky helicopters	350-445	Worn, Growing reliability problems due to lack of updates and parts.
Air Force			
	F-4D/E FGA	55-60	Worn, avionics now obsolete. Critical problems due to lack of updates and parts.
	60 F-5E/FII FGA	60	Worn, avionics now obsolete. Serious problems due to lack of updates and parts.
	F-5A/B	10	Worn, avionics now obsolete. Serious problems due to lack of updates and parts.
	RF-4E	8	Worn, avionics now obsolete. Serious problems due to lack of updates and parts.
	RF-5E	5-10	Worn, avionics now obsolete. Serious problems due to lack of updates and parts. (May be in storage)

F-14 AWX	60	Worn, avionics now obsolete. Critical problems due to lack of updates and parts. Cannot operate some radars at long ranges. Phoenix missile capability cannot be used.

Table Nine

Iranian Dependence on Decaying Western Supplied Major Weapons - Part Two

Military Service	Weapon Type	Weapon Number	Comments
Air Force - Continued			
	P-3F MPA	5	Worn, avionics and sensors now obsolete. Many sensors and weapons cannot be used. Critical problems due to lack of updates and parts.
	Key PGMs	-	Remaining Mavericks, Aim-7s, Aim-9s, Aim-54s are all long past rated shelf life. Many or most are unreliable or inoperable.
	I-Hawk SAM	150-175	Worn, electronics, software, and some aspects of sensors now obsolete. Critical problems due to lack of updates and parts.
	Rapier SAM	30	Worn, electronics, software, and some aspects of sensors now obsolete. Critical problems due to lack of updates and parts.
Navy			
	Babar DE	1	Worn, weapons and electronics suite obsolete, many systems inoperable or partly dysfunctional due to Critical problems due to lack of updates and parts.
	Samavand DDG	5	Worn, weapons and electronics suite obsolete, many systems inoperable or partly dysfunctional due to Critical problems due to lack of updates and parts.
	Alvand FFG	3	Worn, weapons and electronics suite obsolete, many systems inoperable or partly dysfunctional due to Critical problems due to lack of updates and parts.
	Bytander FF	2	Obsolete. Critical problems due to lack of updates and parts.
	Hengeman LST	4	Worn, needs full scale refit.

Source: Estimate made by Anthony H. Cordesman based on the equipment counts in IISS, Military Balance, 1995-1996, "Iran," and discussions with US experts. Note that different equipment estimates are used later in the text. The IISS figures are used throughout this chart to preserve statistical consistency.

The "Dog's Breakfast" in the Southern Gulf.

The data in Tables One to Three have shown the patterns in Southern Gulf arms purchases. They have shown that Saudi Arabia is the region's largest arms buyer. At the same time, they reflect the fact that Saudi Arabia's economic and budget deficit problems led to significant cuts in the rate of new arms orders in spite of the Gulf War. Saudi new arms agreements dropped from $45.7 billion during 1987-1990 to $30.2 billion in 1991-1994, and $14.1 billion in 1994-1997. Once again, the scale of these cuts in Saudi new orders has often been disguised in media reporting by the momentum of deliveries from past orders. Saudi arms deliveries totaled $26.3 billion during 1987-1990 and 27.9 billion in 1991-1994, and then leaped to $36.4 billion in 1994-1997 as deliveries caught up with the backlog of past orders.

Similar trends affected Kuwait, which ordered $5.0 billion worth of arms during 1990-1993, and only $2.3 billion during 1994-1997, but which saw its deliveries rise from $2.4 billion in 1990-1993 to $4.5 billion in 1994-1997. Although Bahrain and Qatar also followed in Kuwait's pattern, the UAE has emerged a major sustained buyer. It ordered $5.3 billion worth of arms during 1990-1993, and $5.1 billion during 1994-1997. Most of these arms are still to be delivered; the UAE took delivery on $2.6 billion worth of arms in 1990-1993 and $2,4 billion in 1994-1997 .

It is impossible to discuss all of the qualitative problems accompanying these arms purchases, but some trends are painfully clear. For all the rhetoric surrounding the Gulf Cooperation Council, the Southern Gulf states remain as divided as at the start of the Gulf War. Their arms purchases reflect the same lack of effective standardization, interoperability, and focus on key missions. Some countries have made significant improvements in individual aspects of their military capabilities, but most Southern Gulf military planning remains dominated by politics and petty rivalry, and far too many arms purchases focus on new technology and the "glitter factor," rather than effective war fighting capability.

It equally clear that far too many Southern Gulf countries buy arms without a consistent strategy, proper regard for coalition warfare, or meaningful mission priorities. A review of the land force buys since 1991 reveals far too many types of different weapons from different countries both between Southern Gulf states, and often within their force structures. If one looks through both the naval order of battle in the Gulf, and the performance characteristics of the ships purchased since 1991, many naval purchases seem to reflect a contest as to which country can buy the most complex frigate or corvette.

The problems in air orders of battle and land-based air defenses are less obvious, but there are far too many types of aircraft and short-ranged air defense systems that are not integrated into a common and fully-computerized, Southern Gulf wide system or concept of air operations. Only Saudi Arabia has fully integrated airborne sensor and battle management systems into its concept of air operations. Purchases for offensive air operations reflect a lack of meaningful reconnaissance and targeting capabilities, a failure to integrate battle damage assessment into the loop, and a lack of integrated concepts of joint warfare.

This is not to say that individual countries have not made major progress in some areas. However, the fact remains that wasteful and poorly-planned Southern Gulf arms imports are as much a threat to the Southern Gulf as Iran and Iraq. This lack of interoperability is summarized in crude terms in Table Ten, which shows the source of recent arms purchases by Gulf country. This table sharply understates the problem because it does distinguish individual national

suppliers in detail, show what is being purchased, or count purchases of less than $50 million. Nevertheless, one does not have to be a military expert to realize that buying radically different mixes of equipment from a wide range of different suppliers presents major problems in terms of interoperability and standardization.

It is not coincidental that the last two USCENTCOM annual seminars dealing with security assistance have focused on the need to provide for adequate training, infrastructure, and sustainability, and have stressed the fact that Southern Gulf states are buying too many major weapons too quickly. This focus does not mean "buy American," since Europe and Russia are perfectly capable of supplying excellent systems, many of which are better suited to Gulf needs than US systems designed for long range and global deployment. It also does not to halt all new purchases. The Southern Gulf should not cease modernization or its effort to create forces with technological superiority to those of Iran and Iraq. What is does mean is that the Southern Gulf should buy wisely and at the proper rate.

Unfortunately, the cuts in oil export revenues and growing budget deficits make this even more unlikely than in the past, and there is no unifying threat serious enough to catalyze collective action. Furthermore, each Gulf state still has a large backlog of undelivered arms orders which were placed with limited regard to mission priorities, interoperability, and collective defense. The decline in new arms agreements means that Southern Gulf states will have to live with this lack of interoperability and standardization for the next decade. They have already bought many of their arms – and their problems and enduring military ineffectiveness -- for the early 21st Century.

Table Ten

The Dog's Breakfast in the Gulf: Too Many Suppliers Changing Constantly Over Time

(New arms agreements in current US $millions)

Buyer Country	Supplier Country						
	US	Russia	China	Major West European	Other European	All Others	Total
Iran							
1987-90	0	3,500	2,300	200	1,200	1,600	8,800
1991-94	0	200	200	100	100	600	1,200
1994-97	0	200	900	100	100	300	1,600
Iraq							
1987-90	0	300	700	500	500	1,000	3,000
1991-94	0	0	0	0	0	0	0
1994-97	0	0	0	0	0	0	0
Bahrain							
1987-90	300	0	0	0	0	0	300
1991-94	200	0	0	0	0	0	200
1994-97	300	0	0	0	0	0	300
Kuwait							
1987-90	2,500	200	0	200	200	200	3,300
1991-94	3,500	800	0	1,800	0	100	6,200
1994-97	500	800	200	700	0	100	2,300
Oman							
1987-90	100	0	0	600	0	0	700
1991-94	0	0	0	500	0	100	600
1994-97	0	0	0	400	100	100	600
Qatar							
1987-90	0	0	0	0	0	0	0
1991-94	0	0	0	2,000	0	0	2,000
1994-97	0	0	0	2,200	0	0	2,200
Saudi Arabia							
1987-90	18,800	200	300	23,000	2,300	200	44,800
1991-94	15,600	0	0	6,600	100	0	22,300
1994-97	4,200	0	0	7,000	1,100	1,800	14,100
UAE							
1987-90	300	0	0	300	0	400	1,000
1991-94	300	500	0	3,900	100	0	4,800
1994-97	300	400	0	3,700	500	200	5,100

0 = less than $50 million or nil, and all data rounded to the nearest $100 million.
Source: Richard F. Grimmett, Conventional Arms Transfers to the Developing Nations, Congressional Research Service, various editions.

Merchants in Dearth

Table Ten provides some equally useful insights into who sells arms to the Gulf. It shows that the collapse of the Soviet Union, China's failure to develop weapons with advanced military technology, sanctions on Iraq, and Iran's financial problems have all combined to sharply cut the flow of arms *from* Russia and China, as well as *to* Iran and Iraq. During the four-year period from 1987-1990, Russia and China signed nearly $7 billion worth of new arms agreements with Gulf states, with $6.8 billion going to the Northern Gulf and $700 million going to the Southern Gulf. During the four-year period from 1994-1997, they signed only $1.1 billion dollars worth of new arms agreements with the Northern Gulf state. In contrast, they signed $1.4 billion worth of new arms agreements with the Southern Gulf, largely with Kuwait and the UAE.

Table Eleven shows that the figures are very different if they are calculated in actual deliveries, largely because of the immense "pipeline" of ongoing deliveries resulting from orders placed during the Iran-Iraq War and the period before the Gulf War. During the four-year period from 1987-1990, Russia delivered $8.8 billion worth of arms to the Gulf, with $1.1 billion going to Iran and $7.4 billion going to Iraq. China delivered $7.3 billion worth of arms to the Gulf, with $2.5 billion worth going to Iran, $1.8 billion going to Iraq, and $3.0 billion going to Saudi Arabia (largely long-range missiles). During the four year period from 1994-1997, Russia and China still delivered $2.7 billion worth of arms, although only $1.5 billion worth went to Iran and none to Iraq, while $800 million went to Kuwait, $100 million to Saudi Arabia, and $300 million to the UAE.

This massive decline in conventional arms sales helps explain some of the willingness of Russian and Chinese firms to sell the technology and equipment needed for long-range missiles and weapons of mass destruction to the Gulf. The collapse of the Warsaw Pact has left the Russian arms industry with vast over-capacity and the near-collapse of the Russian economy has left everyone desperate to sell. Chinese arms sellers cannot compete with the high technology

Western-made arms that dominated the Gulf War and has lost much of its past market for conventional arms.

These trends have had another side effect. The decline in Russian and Chinese sales has inevitably raised the share of Western sales as a percentage of total sales to the Gulf. The has led many inside and outside the Gulf to talk about the West "dominating" Gulf arms sales, and some have focused on the US as if it were driving regional arms sales. It is certainly true that the collapse of the Iranian and Iraqi markets has increased the Western share of the Gulf arms market, but it is equally true that Iran and Iraq still have very powerful conventional forces and still pose serious threats to the Southern Gulf. There is still a very real need for the Southern Gulf states to improve their forces even if they are not doing so particularly wisely.

Another fact shown in Table Ten is that Western sales to the Gulf are not increasing and the US is not dominating them. There are eight major arms buyers in the Gulf, excluding Yemen (which placed a total of only $500 million worth of orders during 1994-1997, almost none of which came from the US or major West European states).

The US has never delivered any meaningful arms to Iraq, nor has it made any significant contribution to its efforts to proliferate. It has not sold any arms to Iran since the fall of the Shah. These are not minor points. The military balance in the Gulf is not some kind of game in which all sides are equal players. Iran and Iraq are the proven or potential aggressors. They are the threat, not the Southern Gulf states. It is sales to these two countries that are the problem, and they have come almost solely from Russia, China, Europe, and North Korea (the driving force behind the "All Others" category in Table Eleven.

Since 1987, the US has dominated new arms agreements in selling to only two of the eight Gulf states: Bahrain and Kuwait. It has never been a major seller to Oman and Qatar, which are supplied largely by Europe. US sales to Europe have been only a fraction of the UAE's purchases. In fact, 60% of all new French arms orders in 1998 – some $5.0 billion out of total exports of $8.3 billion -- came from the UAE. The seemingly endless discussions of US F-

16 sales disguise the fact that the French arms industry would have virtually collapsed without the UAE market. Many of the US transfers to Bahrain have been on concessional terms, and Bahrain has never been a major arms buyer. As Tables Ten and Eleven show, the US ceased to be the major seller to Kuwait after 1994.

The US is often seen as dominating the Saudi market. It does not, and it certainly has not increased sales to Saudi Arabia since the Gulf War. A review of new arms agreements during 1987-1990, 1991-1994, and 1994-1997 shows that the US sold more than 50% of new Saudi arms agreements only during the period from 1991-1994. West European sales exceeded US sales during two of the three periods, and have nearly doubled US sales in the most recent period. The US sold only 30% of the $14.1 billion in new sales to Saudi Arabia during 1994-1997, versus 42% in 1987-1990 and 70% in 1991-1994. There is something almost incredible about the fact that Saudi Arabia bought $81.2 billion worth of arms during this period, but the US sold well under half of these arms.

It is equally important to note that Saudi Arabia has scarcely made recklessly large new purchases since the Gulf War. The massive Saudi buys during 1987-1990 were driven by what was then the very real risk that Iraq would be defeated in the Iran-Iraq War. It is important to note that virtually every Gulf and Western newspaper was still reporting successful Iranian offensives and stressing the risk of an Iranian victory as late as February 1988. Saudi Arabia did make major buys of the US land and air equipment that had won the Gulf War during 1991-1994, but its total new purchases were less than 50% of its purchases in the previous four years – even measured in current dollars. Since that time, Saudi new purchases have dropped steadily, and so has the US share of such sales.

As might be expected, the decline in sales shown in Tables Ten and Eleven has also had a major economic impact. It is impossible to make meaningful statistical comparisons of Gulf arms transfers relative to the trends in GNP, total government expenditures, total exports and imports, and other measures of the burden arms sales place on national economies without going into immense statistical detail by country. Further, no meaningful directly comparable data are

available for the period after 1997 have yet been declassified – in spite of the statistical rubbish sometimes used to make such estimates.

In broad terms, however, the declassified data made available by the US intelligence community shows that Gulf arms sales arms sales have dropped steadily as an economic burden on Gulf states. This is obvious in the case of Iran and Iraq, but it is equally true of most Southern Gulf states. For example, Saudi arms imports peaked as a percent of Saudi exports in 1986, when they totaled 34% in constant 1996 US dollars. They totaled 19% in 1991, when Saudi arms purchases surged to $10.0 billion. In 1996, they still totaled 17%, but this was only because of past orders. New orders had dropped to about 7% of the value of all exports – the lowest figure in nearly a quarter of a century.[i]

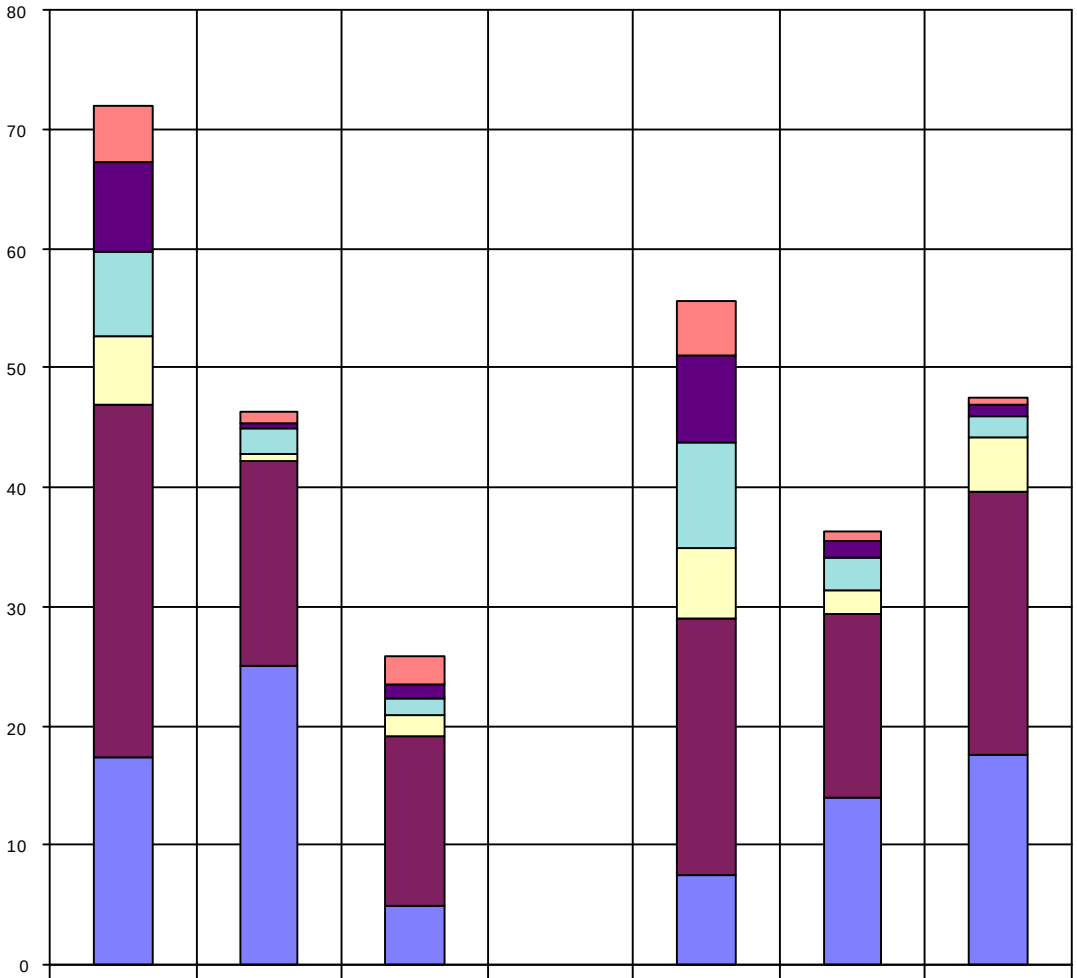
It is worth noting, that Iraq spent nearly 50 % of all its export income on arms during the Iran-Iraq War (it survived only because of massive loans) and was still spending nearly 30% in 1990, two years after it "won" the Iran-Iraq War. Iran's large population means that its economy must spend far more of its export income on its people to function, and it is not directly comparable to Iraq or Saudi Arabia. Nevertheless, the trend is still revealing. Arms deliveries to Iran peaked at about 32% of all exports during the Iran-Iraq War, dropped to 16% in 1989, to 10% immediately after the Gulf War, and then to 6% in 1992. They were already only about 2% during 1994-1996 before the US imposed sanctions.

As for the rest of the Southern Gulf, no country has ever devoted anything like the percentage of its exports and economy to arms purchases as Saudi Arabia. Kuwait reached levels of 11-15% during the peak years after the Gulf War, but now is well below 8%. Bahrain has not spent more than 3% since 1988, and now spends less than 1%. Oman has never spent more than 7%, and now spends less than 4%. Qatar's arms deliveries peaked at 7.2% of its exports in 1989, and it has averaged less than 1.5% since 1993. US arms imports peaked at 7% of total export income in 1990. They have since averaged below 4%.

Table Eleven

Major Supplier Share of Gulf Arms Agreements and Deliveries: 1987-1997

($Current US Billions)



	Agreements: 87-90	Agreements: 91-94	Agreements: 94-97		Deliveries: 87-90	Deliveries: 91-94	Deliveries: 94-97
All Others	4.8	1	2.5		4.6	0.7	0.7
China	7.5	0.4	1.1		7.3	1.4	0.9
Russia	7	2.2	1.4		8.8	2.8	1.8
All Other Europe	5.8	0.7	1.8		6	1.9	4.4
Major West Europe	29.5	17	14.1		21.4	15.4	22.2
US	17.4	25.1	5		7.5	14	17.5

0 = less than $50 million or nil, and all data rounded to the nearest $100 million.
Source: Richard F. Grimmett, Conventional Arms Transfers to the Developing Nations, Congressional Research Service, various editions.

The Future of Gulf Arms Sales

It is important to note several things about the patterns reflected in the previous tables. Gulf arms sales change in cycles, and rise and fall in proportion to real and perceived threats. Market shares vary sharply over time by both purchaser and supplier. There also is no reason to assume that the kind of decline in arms sales that has taken place since the end of the Iran-Iraq War and the Gulf War will continue into the future. Only the fact that Iraq suffered massive military losses in the Gulf War, and has been under an arms embargo since mid-1990, has led to the level of declines in conventional arms imports that has occurred since the Gulf War. If Iraq had emerged out of the Iran-Iraq War unchallenged, Iran would almost certainly have bought far more arms. If Iraq had not been checked in its ambitions in 1991, the resulting arms race in the Southern Gulf would almost certainly have approached total desperation. As a result, the patterns in arms sales since 1990 provide no guarantees for the future.

The Gulf may well be on the edge of a new kind of arms race that is not fully reflected in these figures. Iran and Iraq may well find that their cuts in conventional arms transfers act as an incentive to proliferate, and it is long-range missiles and weapons of mass destruction which are the status symbols of the 21st century, not tanks and fighter planes. Iran's test of the Shahab 3 has already inspired Saudi Arabia to consider modernizing its own long-range missile force in spite of its economic problems, and Iraq built massive new additions to its missile production facilities after the Gulf War in spite of its economic problems and sanctions. Only the strikes during Desert Fox have delayed Iraq's capability to rapidly produce missiles with ranges far beyond the now-legal 150 kilometers the moment that sanctions are lifted. Both Iran and Iraq are working on long-range cruise missiles as well. This means that at some point the Southern Gulf states may have to make massive new investments in ballistic and cruise missile defense, air defense, and civil defense.

This, in turn, may require the US to make major changes in its power projection forces and military expenditures. The US "edge" in conventional weapons provides a high degree of regional deterrence, containment, and stability today. These capabilities are critical to countering

the Iranian development of a focused threat to Gulf shipping that is summarized in Table Seven, and to defending Kuwait and Saudi Arabia from Iraq's still massive conventional threat. In the not too distant future, however, the US is almost certainly going to have to shift more of its force posture to one that has a lower profile in the region and the rest to forces which are truly "over-the-horizon." It also is going to have to provide power projection capabilities to deter and defend against Iranian and Iraqi threats or use of weapons of mass destruction. Barring a sudden and totally uncharacteristic regional outbreak of arms control and common sense, the current patterns in arms sales may only be the lull before the next storm.

Note: A full analysis of military expenditures, arms transfer costs, and country-by-country statistics on the economic burden of arms sales can be found in the Middle East Military Balance section of the Middle East section on CSIS.ORG.

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