

CSIS

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Trends in the Asian Military Balance

**A Comparative Summary of Military
Expenditures; Manpower; Land, Air, Naval, and
Nuclear Forces; and Arms Sales**

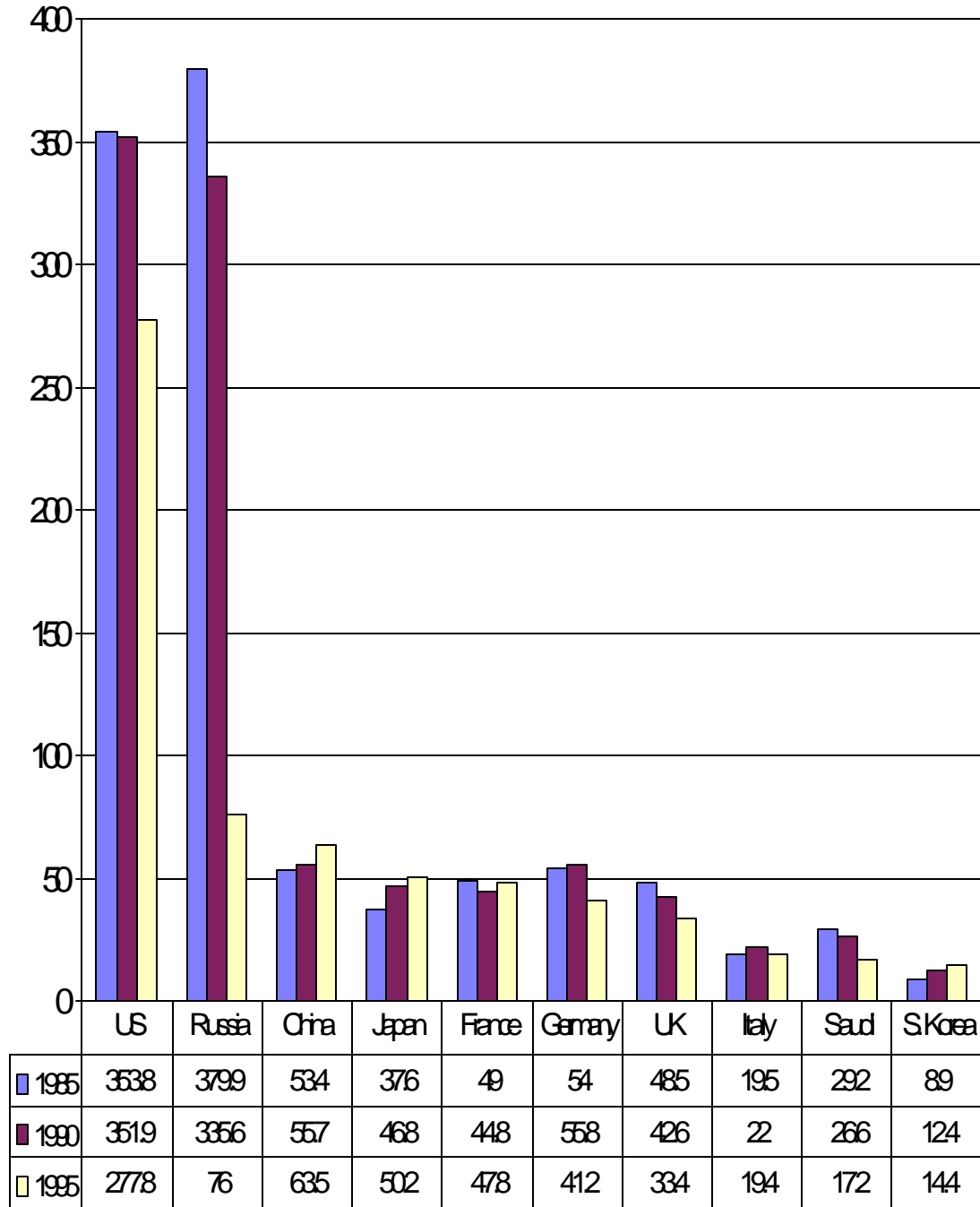
**Anthony H. Cordesman
CSIS**

July 28, 1999

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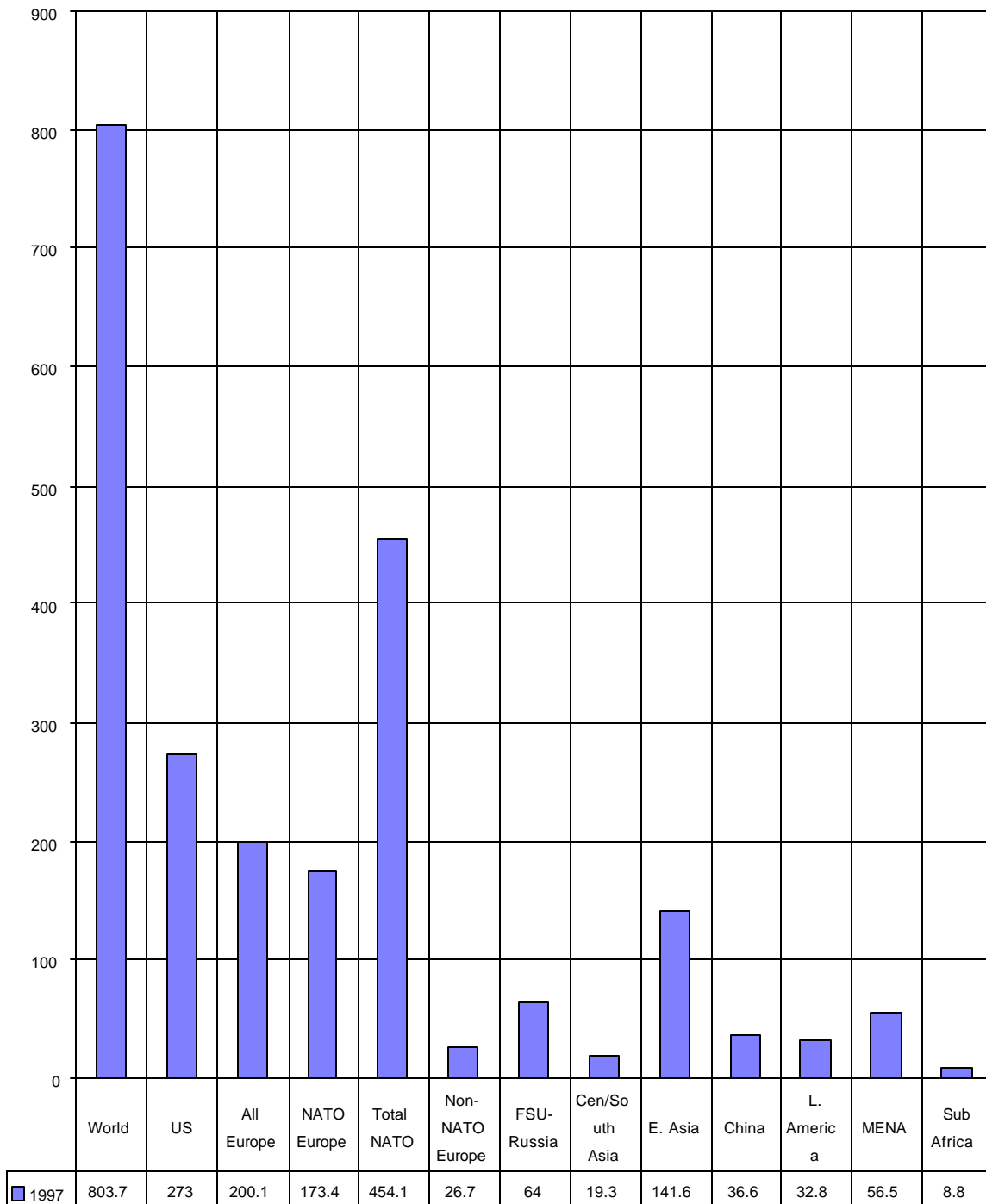
Military Spending by the Major Powers in 1985, 1990, and 1995
(In \$US 1995 Billions)



Source: Adapted by Anthony H. Cordesman ACDA, World Military Expenditures and Arms Transfers, 1996, Washington, GPO, 1997.

World Defense Spending: 1998

(Spending In \$US Billions)

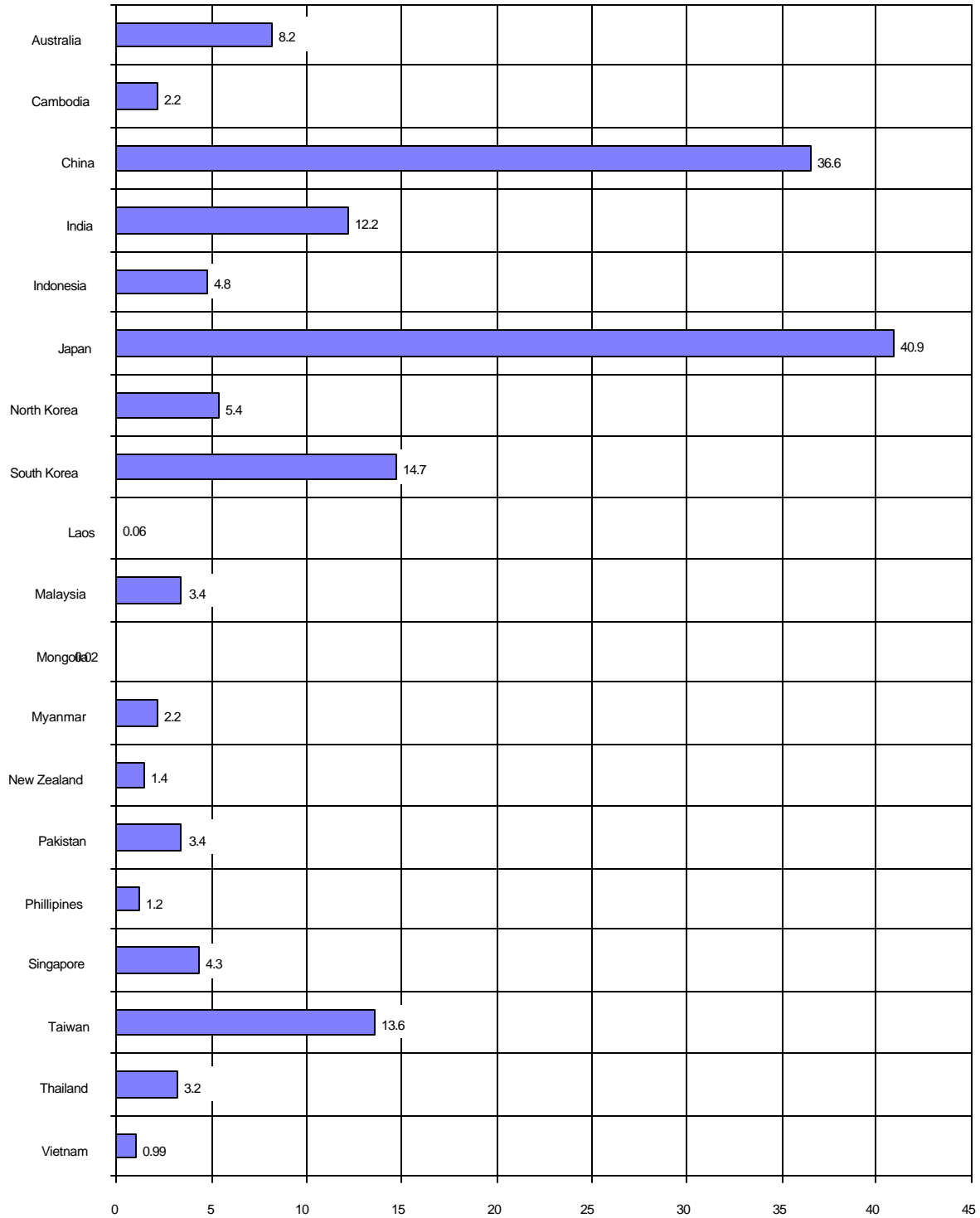


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Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

Asian Defense Spending: 1998

(Spending In \$US Billions)



Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

Asian Military Forces in 1998-1999 - Part One

	<u>China</u>	<u>Japan</u>	<u>Taiwan</u>	<u>S. Korea</u>	<u>N. Korea</u>	<u>Vietnam</u>	<u>Indonesia</u>	<u>Thailand</u>	<u>India</u>
Manpower (1,000s)									
Total Active	2,935	235	376	660	1,054	572	299.2	254	1,145
Regular	2,935	235	376	660	1,054	572	299.2	254	1,145
National Guard & Other	-								
Reserve	1,200	47.9	1,657	4,500	4,700	3,000	400	2,005	535
Paramilitary	600	12	26.5	3,504	3,915	4,050	1,776		1,943.5
Strategic Missile									
Forces (1,000s)	90	-	-	-	-	-	-	-	-
ICBM	17+	-	-	-	-	-	-	-	-
IRBM	70+	-	-	-	-	-	-	-	-
SSBN/SBLM	1/12	-	-	-	-	-	-	-	-
Army and Guard									
Manpower (1,000s)	2,200.2	148	240	548	923	500	235.2	150	980
Regular Army Manpower	2,200.2	148	240	548	923	500	235.2	150	980
Reserve (1,000s)	1,200	46	1,500	-	750	-	-	-	340
Total Main Battle Tanks	8500	1130	710	2,050	3,400	1,300	325	253	3,500
Active AIFV/ Lt. Tanks	1,600	130	1,130	-	540	900	124	292	1,450
Total APCs	4,500	890	950	2,460	2,200	1,100	563	940	157
Self Propelled Artillery	?	310	315	1,000	4,500	265	-	-	180
Towed Artillery	14,500	470	1,060	3,500	3,500	2,300	195	409	4,175
MRLs	?	90	170	156	2,200	730	-	-	210
Mortars	?	1,310	-	6,000	7,200	-	875	-	2,100
SSM Launchers	-	60	-	-	84	-	-	-	3-5
Light SAM Launchers	-	680	-	1,020	10,000+	12,500	93	-	4,615
AA Guns	-	90	400	600	7,800	12,000	415	274	2,400
Air Force									
Manpower (1,000s)	470	44.5	68	52	85	30	21	40	110
Air Defense Manpower	(220)	-	-	-	-	(15)	-	-	-
Total Combat Aircraft	4,970	379	392	461	661	196	77	212	778
Bombers	420	-	-	-	82	-	-	-	-
Fighter/Attack	400+	50	327	255	526	65	53	43	370
Fighter/Interceptor	4,000+	249	-	130	-	125	12	42	370
Recce/FGA Recce	290	20	6	28	-	-	-	7	16
COIN/OCU	-	-	-	58	-	-	12	83	25
AEW C4I/BM/EW	-	18	4	-	-	-	-	3	7
MR/MPA	-	-	14	-	-	4	3	8	7
Transport Aircraft	485	42	36	26	300	70	74	28	223
Tanker Aircraft	-	-	-	-	-	-	2	-	-
Total Helicopters	225	49	20	18	283	103	34	149	355
Armed Helicopters****	135+	-	-	143	-	33	-	4	34

Major SAM Launchers	-	126	140	310	300	396	-	-	280
Light SAM Launchers	-	-	-	-	-	-	24	-	-
AA Guns	-	-	-	-	-	-	-	-	-

Asian Military Forces in 1998-1999 - Part Two

	<u>China</u>	<u>Japan</u>	<u>Taiwan</u>	<u>S. Korea</u>	<u>N. Korea</u>	<u>Vietnam</u>	<u>Indonesia</u>	<u>Thailand</u>	<u>India</u>
Total Naval									
Manpower (1,000s)	265	43	68	60	46	42	43	64	55
Major Surface Combatants									
Carriers	-	-	-	-	-	-	-	-	2
Destroyer –Guided Missile	18	9	7	7	-	-	-	-	5
Other Destroyer	-	-	11	-	-	-	-	-	-
Frigate-Guided Missile	34	50	5	21	3	2	10	7	8
Other Frigate	2	1	13	12	-	6	7	5	11
Corvettes	-	-	-	4	4	-	16	5	18
Patrol Craft									
Missile	185	3	53	11	42	10	4	6	8
Torpedo and Coastal	250	-	-	-	206	19	7	9	7
Inshore, Riverine	395	1	45	107	155	23	30	40	11
Submarines									
SLBN	(1)	-	-	-	-	-	-	-	-
SSN	(5)	-	-	-	-	-	-	-	-
SSG	(1)	(16)	-	-	-	-	-	-	-
Mine Vessels	121	35	16	14	25	11	12	5	20
Amphibious Ships	55	6	21	15	-	7	28	9	9
Landing Craft	140	-	400	36	260	30	80	51	10
Support Ships	164	22	20	12	7	30+	15	11	27
Marines (1,000s)	5	-	30	25	-	30	12	18	1
Naval Air									
Naval Aircraft									
Bomber	146	-	-	-	-	-	-	-	-
FGA	40	-	-	-	-	-	-	27	22
Fighter	411	-	-	-	-	-	-	-	-
MR/MPA	8	100	31	23	-	-	21	23	46
Armed Helicopters	-	-	21	-	-	-	10	7	75
ASW Helicopters	-	110	9	47	-	-	4	7	6
SAR Helicopters	-	20	-	-	-	-	4	21	6
Mine Warfare Helicopters	-	10	-	-	-	-	-	-	-
Other Helicopters	20	25	-	-	-	-	4	-	-

**** Includes navy, army, national guard, and royal flights, but not paramilitary.

***** Includes in Air Defense Command

Source: Adapted by Anthony H. Cordesman from interviews, International Institute for Strategic Studies, Military Balance (IISS, London); various data available from Jane's, and Military Technology, World Defense Almanac

US Forces in the Pacific – Part One

	<u>Army</u>	<u>Air Force</u>	<u>Navy</u>	<u>Marine Corps</u>
<u>Pacific Command (PACOM) Headquartered at Hawaii</u>				
<u>Hawaii</u>	21,540 USARPAC 1 Lt. Inf. Div (2 Lt. Inf. Bde) 1 ARNG inf bde.	4,525 PACAF 1 wing 2 C-135B 15 F-15A 4 C-130H 8 KC-135R 2 EC-130	19,500 US PACFleet 7 submarines 16 PSC 10 support & Misc. Ships	3,900 HQ Pacific 1 MEB
<u>Japan</u>	1,600 1 Corps Hq. Support Units	14,760 1 AF HQ 102 Combat Aircraft 54 F-15CD 48 F-16 4 C-21A 2 E-3A 16 C-130E/H 15 KC-135 5 HC-130N/P 4 MC-130E 3 UH-1N 8 HH-60	7,300 HQ 7 th Fleet Yokosuka 1 CV 8 PSC 3 Submarines 3 Amphibious ships	21,000 1 MEF
<u>South Korea</u>	27,250 1 Army HQ 1 Inf. Division (2 Bde/6 Bn) 2 SP Arty Bn 1 MLRS Bn. 1 AD Bn.	8,660 90 Combat Aircraft 3/72 F-16 1/6-A-10/12 OA-10 1/5 MH-53	-	-
<u>Alaska</u>	6,750 1 Lt. Inf. Bde	9,530 1 AF HQ/5 Sqn. 2/36 F-15C/D 1/18 F-15E 1/18 F-16C/D 1/6A-10,6 OA-10	-	-

US Forces in the Pacific – Part Two

	<u>Army</u>	<u>Air Force</u>	<u>Navy</u>	<u>Marine Corps</u>
<u>Australia</u>	-	-	100 Commo facility 2 SEWS stations 1 SIGINT station	-
<u>Singapore</u>	-	40 Supt Sqn.	100 Log. Facilities	-
<u>Guam</u>	-	2,100 1 Hq	4,600 MPS-3 w/ equip for 1 MEB 4 MPS ships Air station, commo & support	-
<u>Diego Garcia</u>	-	-	900 MPS-2 w/ 5 MPS ships for 1 MEB air station, support facilities.	-
<u>San Diego</u>	-	-	3 rd Fleet HQ	1 MEF

US Pacific Fleet at Sea

Headquarters Pearl Harbor
Main Bases: Pearl Harbor, San Diego, Bangor and Everett

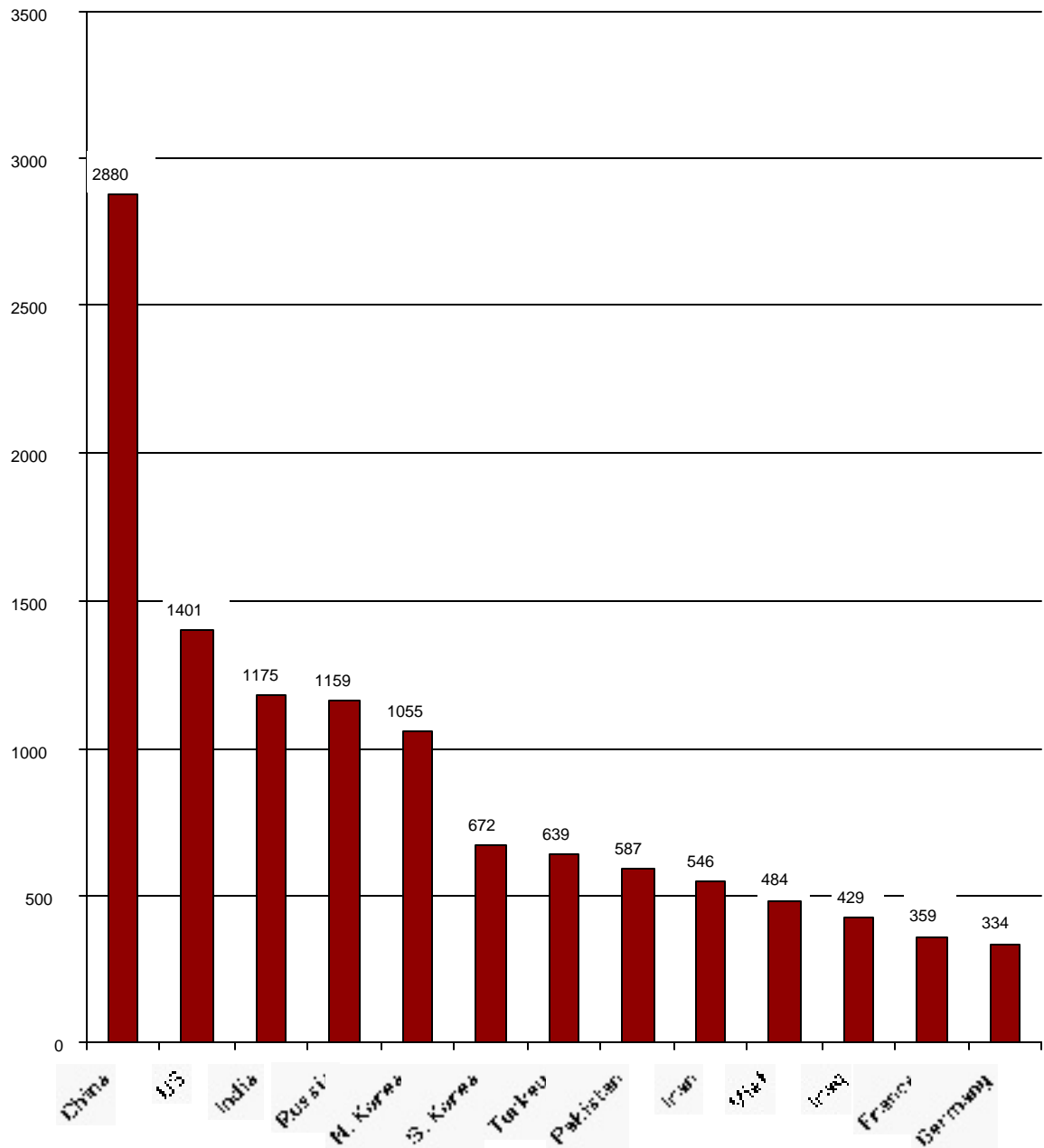
3rd Fleet (HQ San Diego) Covers Eastern and Central Pacific, Aleutian Islands, Bering Sea, etc.
Forces typically include 4 Carrier Battle Groups, 4 URGs, amphibious group.

7th Fleet (HQ Yokosuka, Japan) Covers Western Pacific, Japan, Phillipines, ANZUS, and Indian Ocean.
Forces typically include 1 Carrier Battle Group, 1 URGs, 1 amphibious readiness group/MEU.

<u>Submarines</u>		<u>Principal Surface Combatants</u>		<u>Amphibious Ships</u>	
SSBN	7	Carriers	6	LCC	1
SSGN	5	Cruisers	29	LHD	2
SSN	27	Guided Missile Destroyers	2	LHA	3
		Destroyers	15	LPH	1
		Guided Missile Frigates	12	LPD	7
				LSD	6
				LST	1

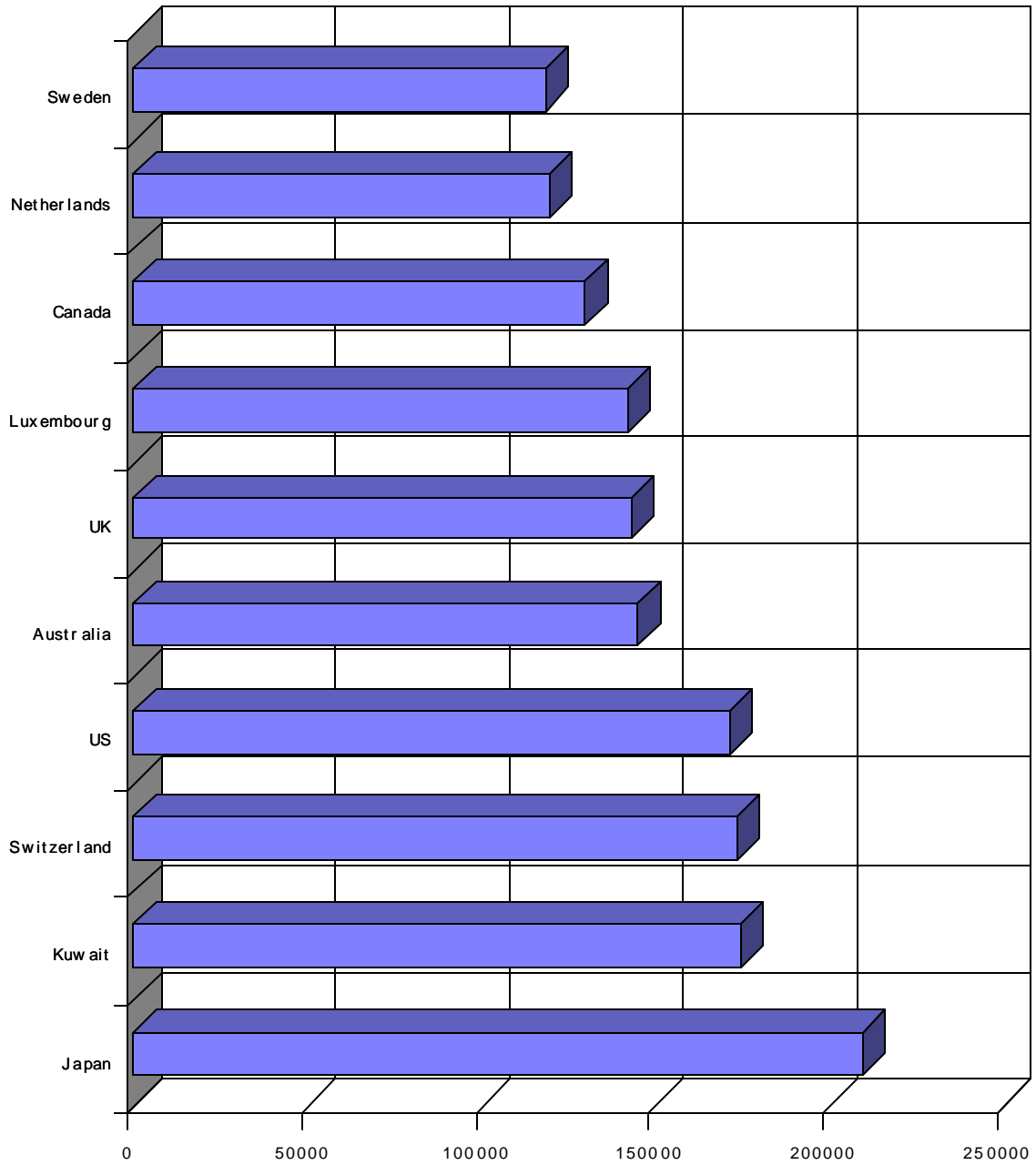
Source: Adapted by Anthony H. Cordesman from data on Defenselink and the IISS, Military Balance, 1998-1999, pp. 29-30

Military Manpower in Selected Major Military Powers in 1998 (In 1,000s)



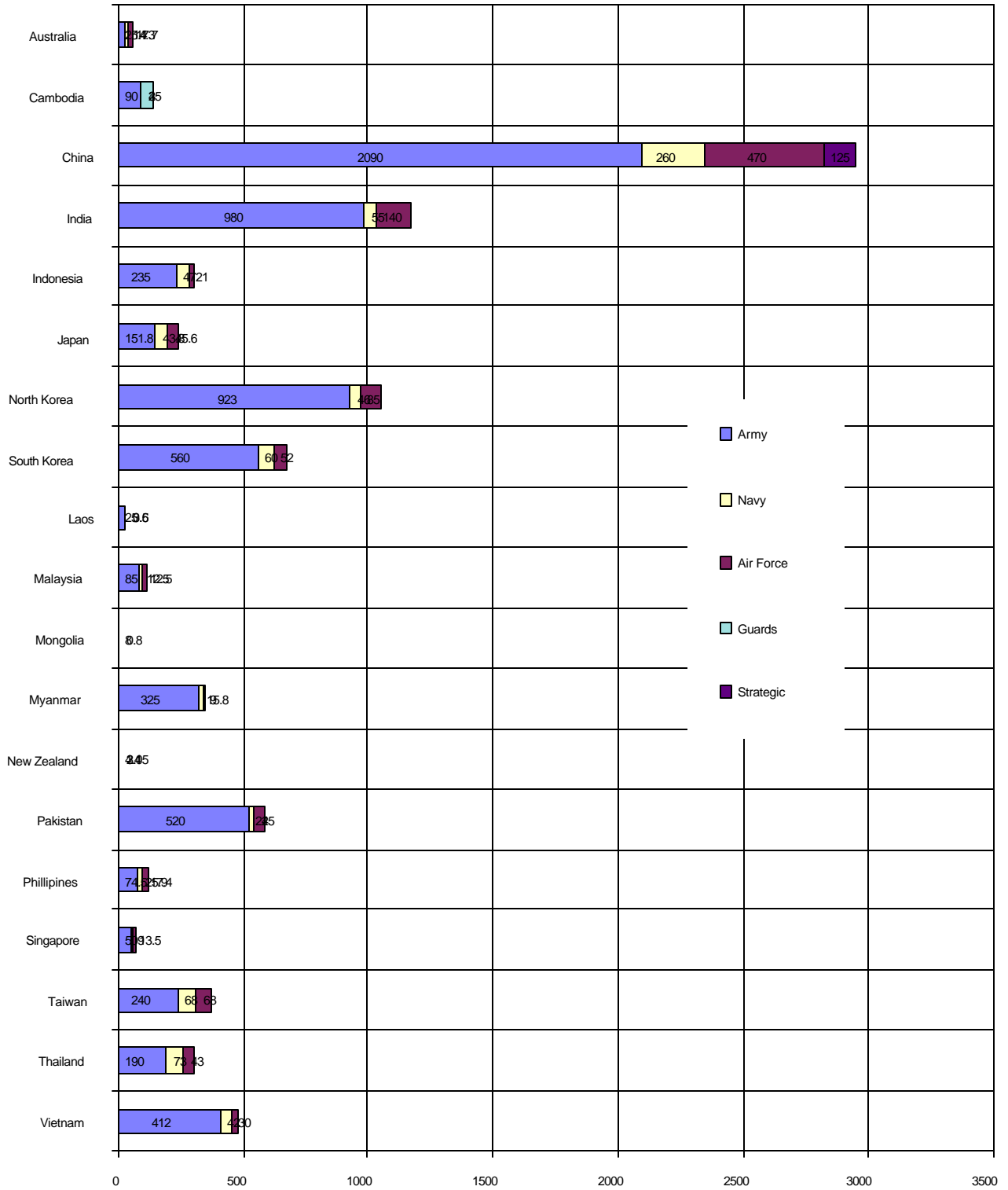
Source: Adapted by Anthony H. Cordesman from the IISS Military Balance, 1998-1999.

Top Ten in Military Spending Per Active Man & Woman in Uniform (1996 Spending In \$US 1996)



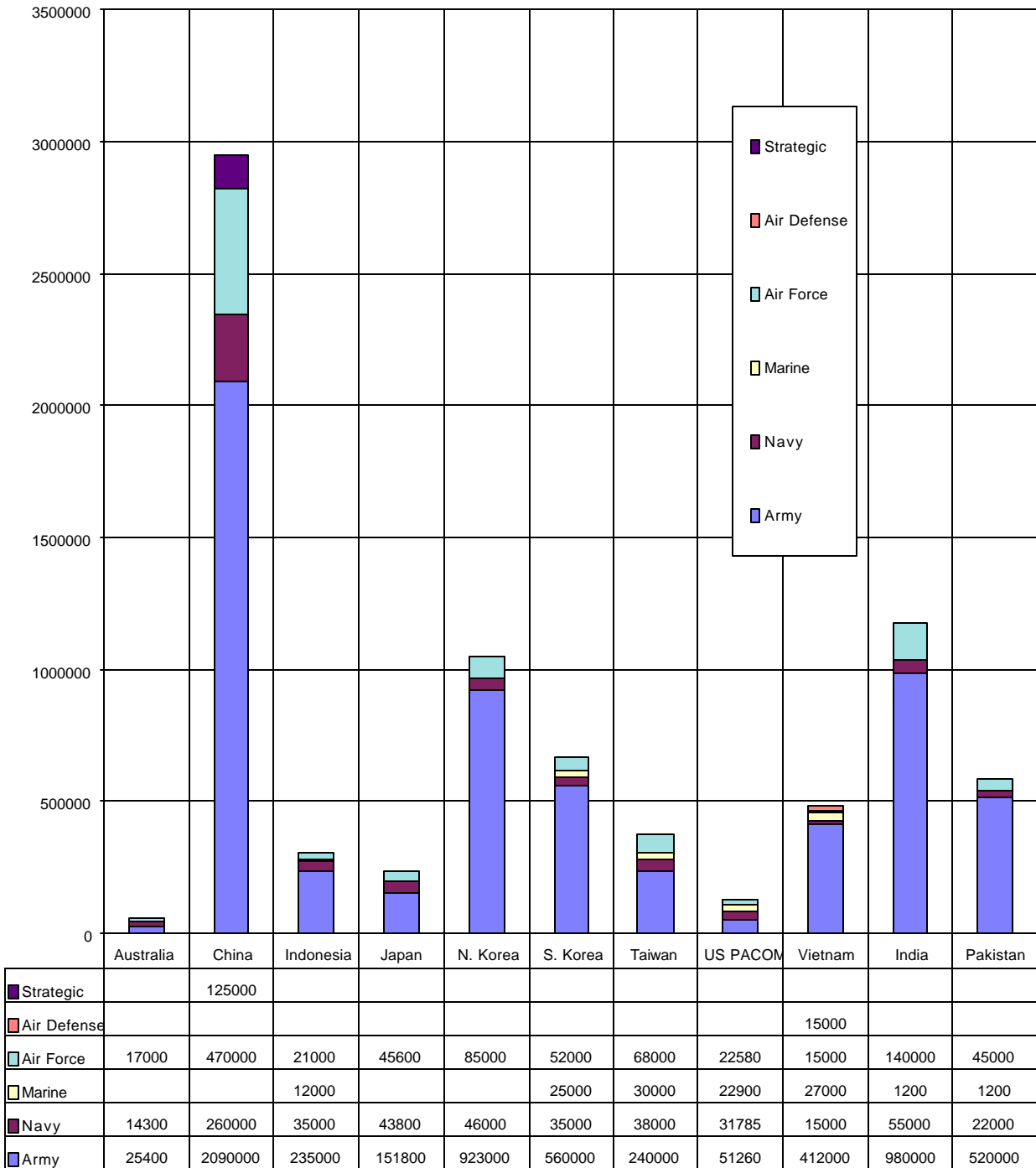
Source: Adapted by Anthony H. Cordesman ACDA, World Military Expenditures and Arms Transfers, 1996, Washington, GPO, 1997.

Asian Active Military Manpower: 1999 (In Thousands on Active Military by Service)



Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

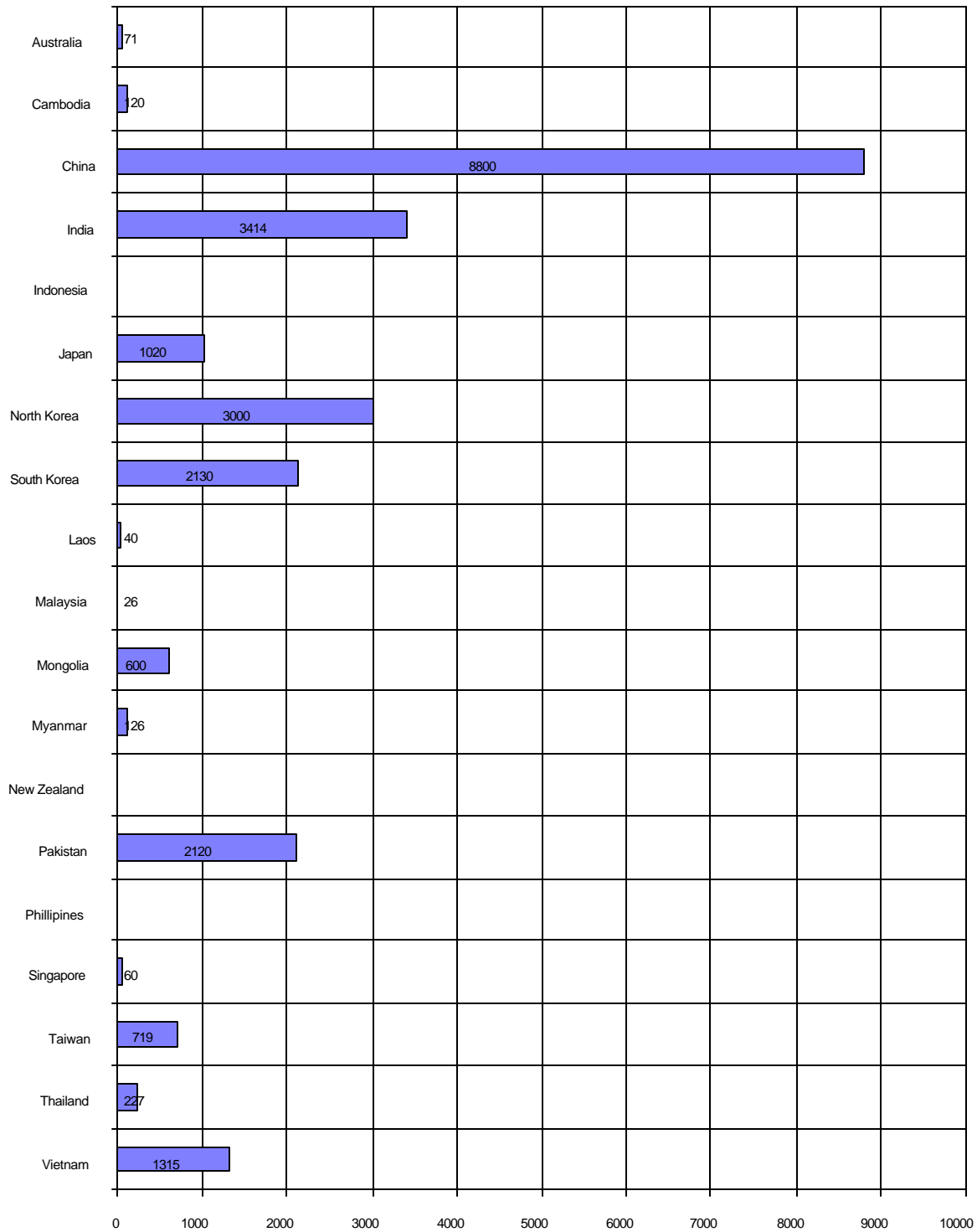
Asian Military Manpower in Key Powers in 1999



Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1998-1999.

Asian Main Battle Tanks: 1999

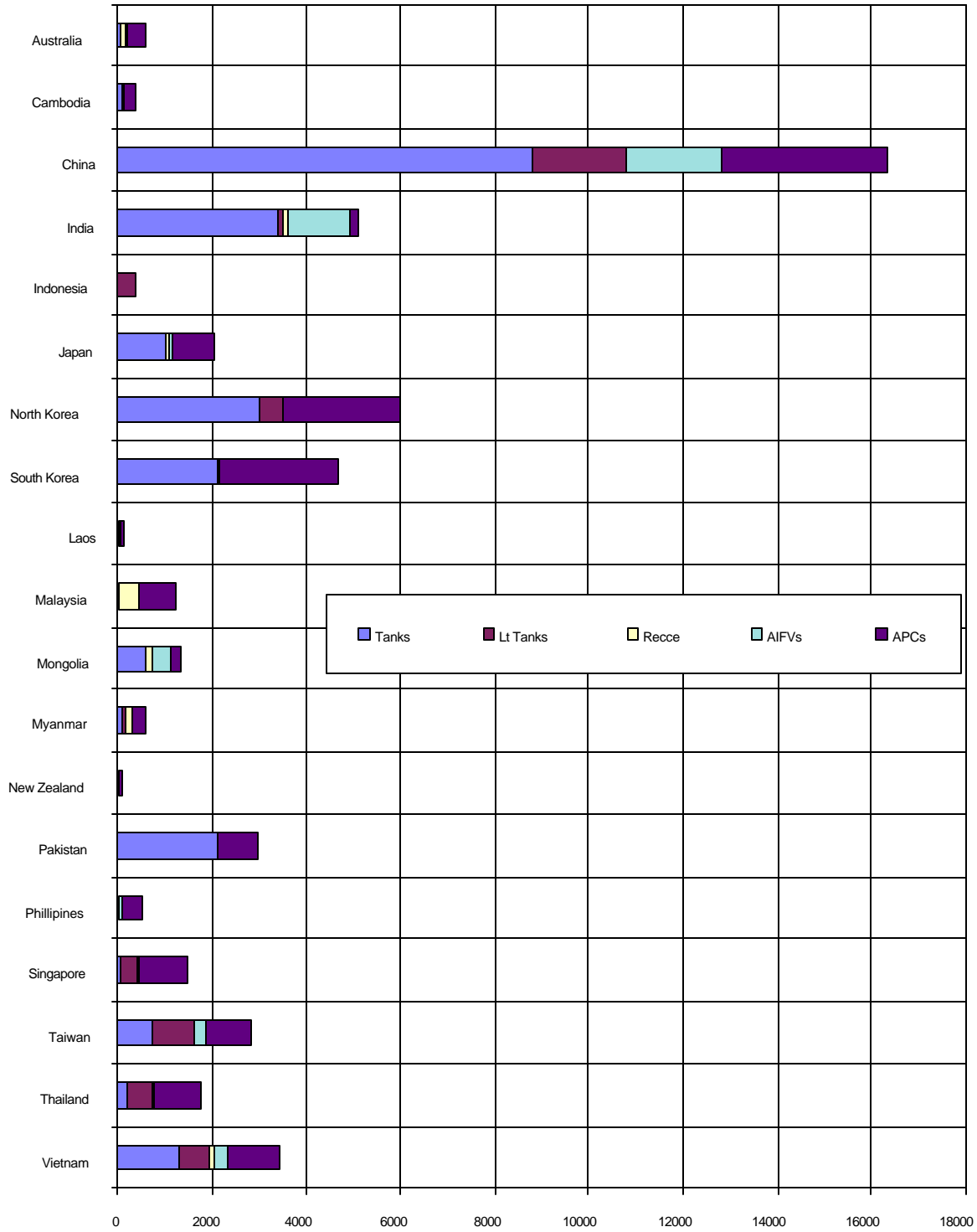
(Number in Active Service)



Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

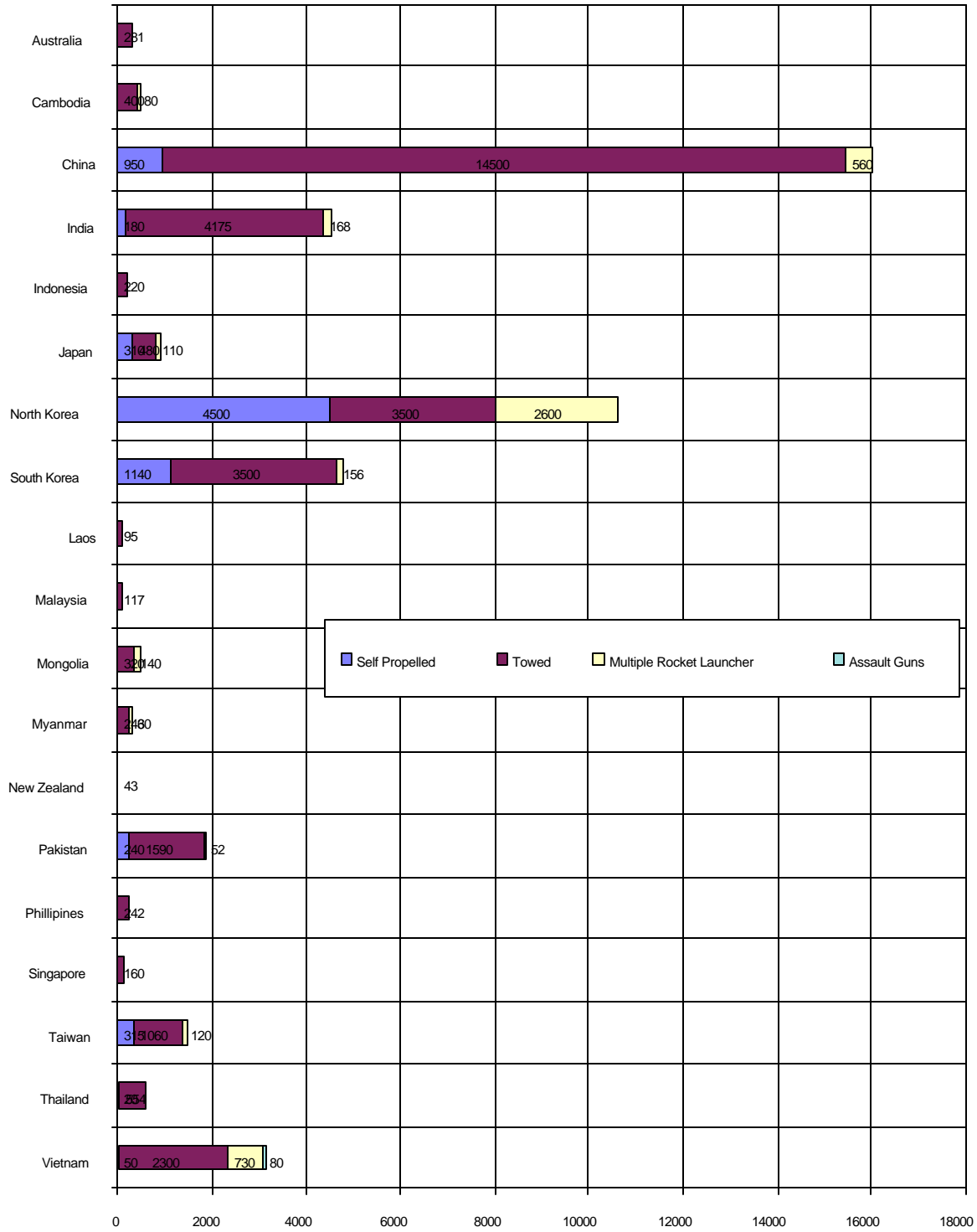
Asian Armored Fighting Vehicles: 1999

(Number of Tanks, OAFVs, APCs, Recce in Active Service)



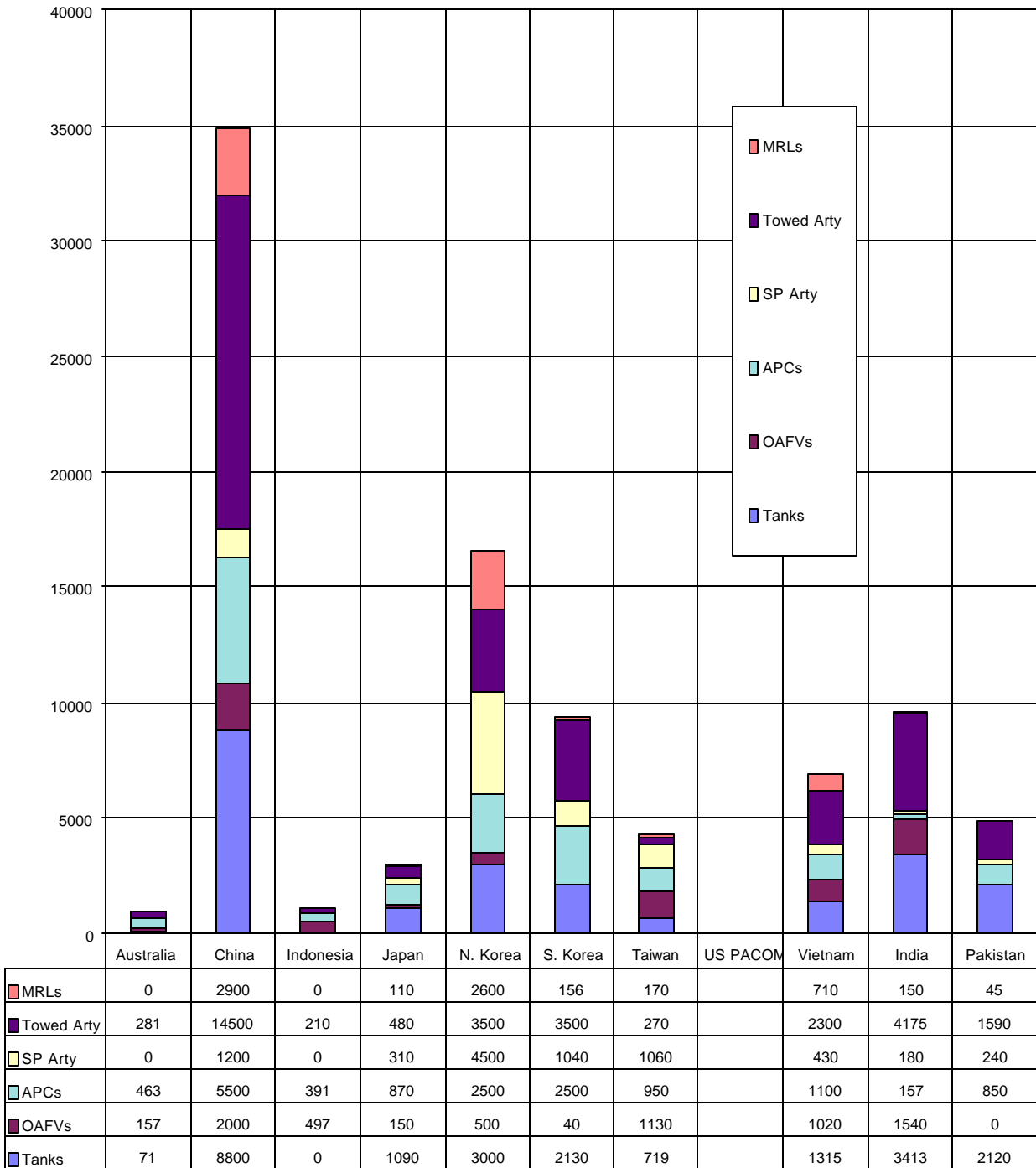
Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

Asian Artillery Strength: 1999 (Number in Active Service)



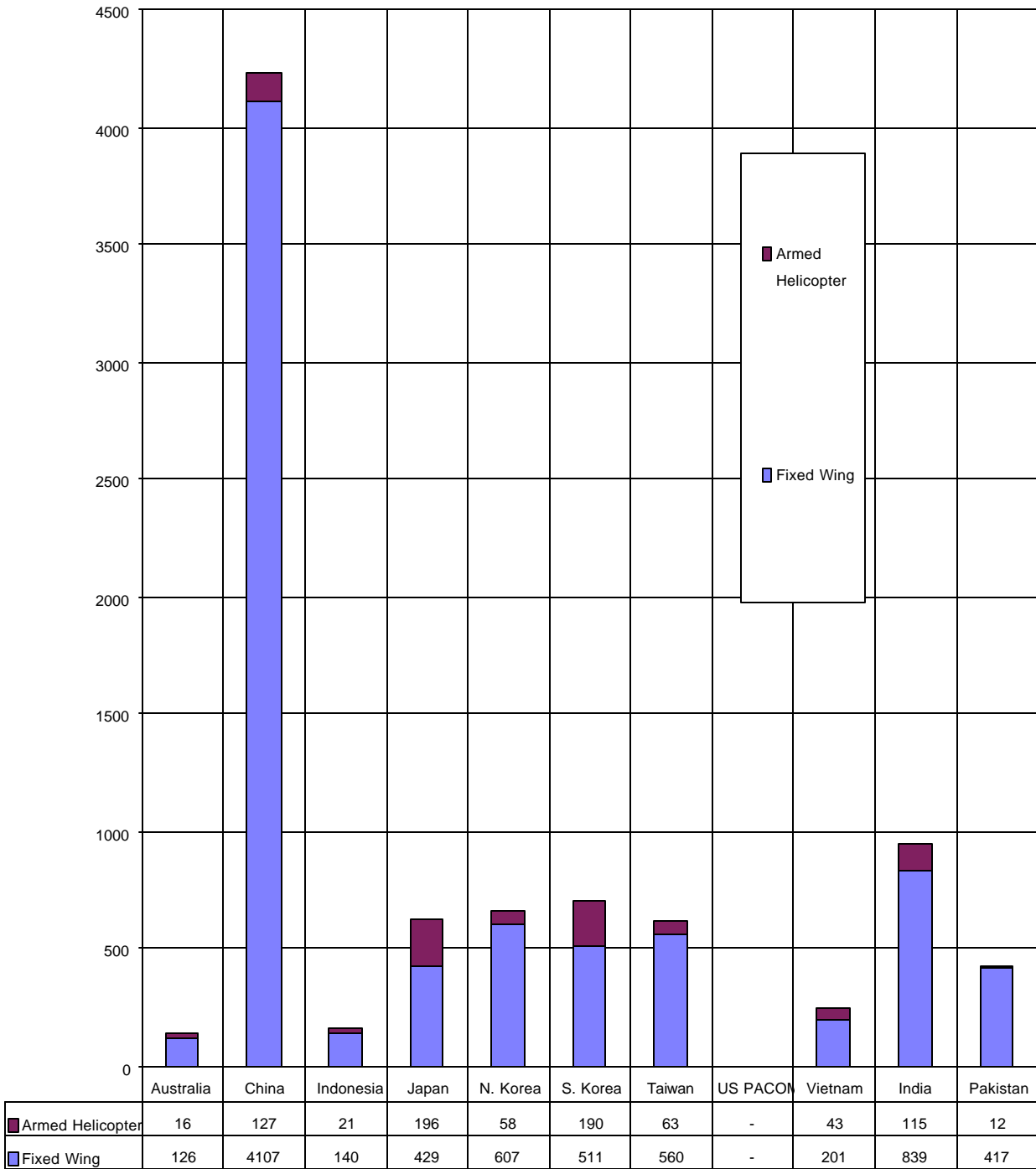
Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

Asian Land Weapons in Key Powers in 1999



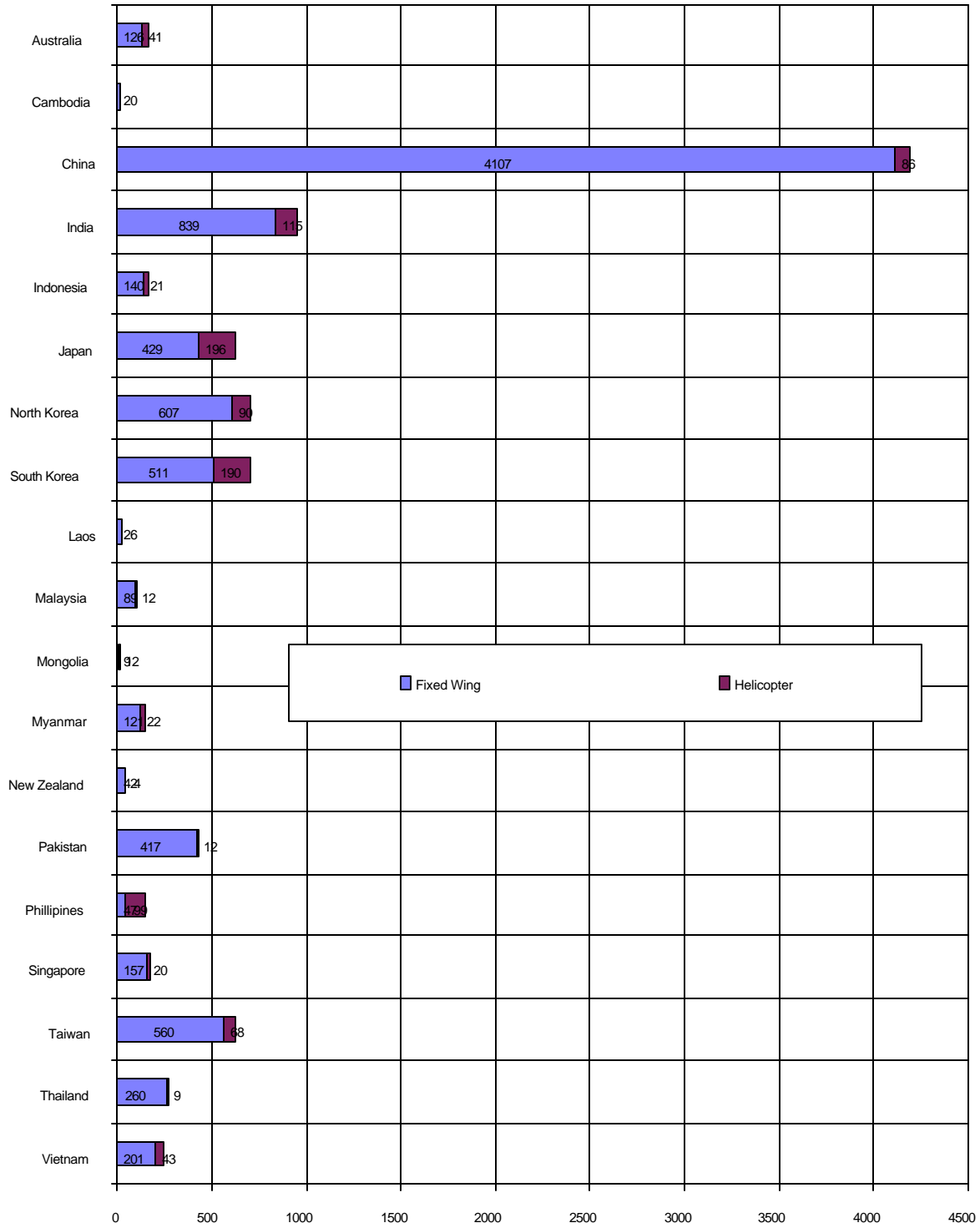
Source: Adapted by Anthony H. Cordesman from the IISS, *Military Balance, 1998-1999*.

Asian Fixed and Rotary Wing Combat Aircraft in Key Powers in 1999



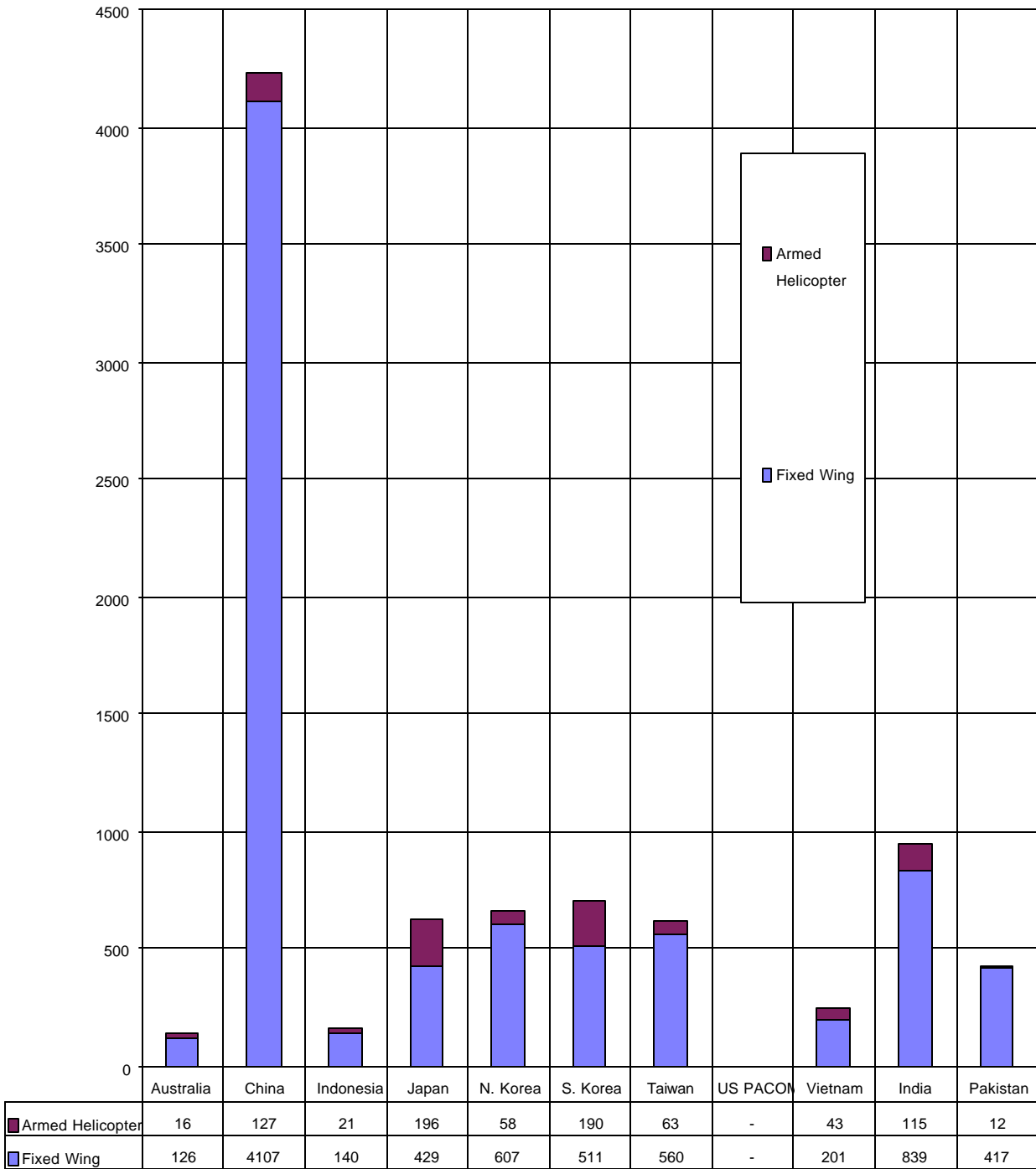
Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1998-1999.

Asian Fixed and Rotary Wing Combat Aircraft: 1999 (Number in Active Service)



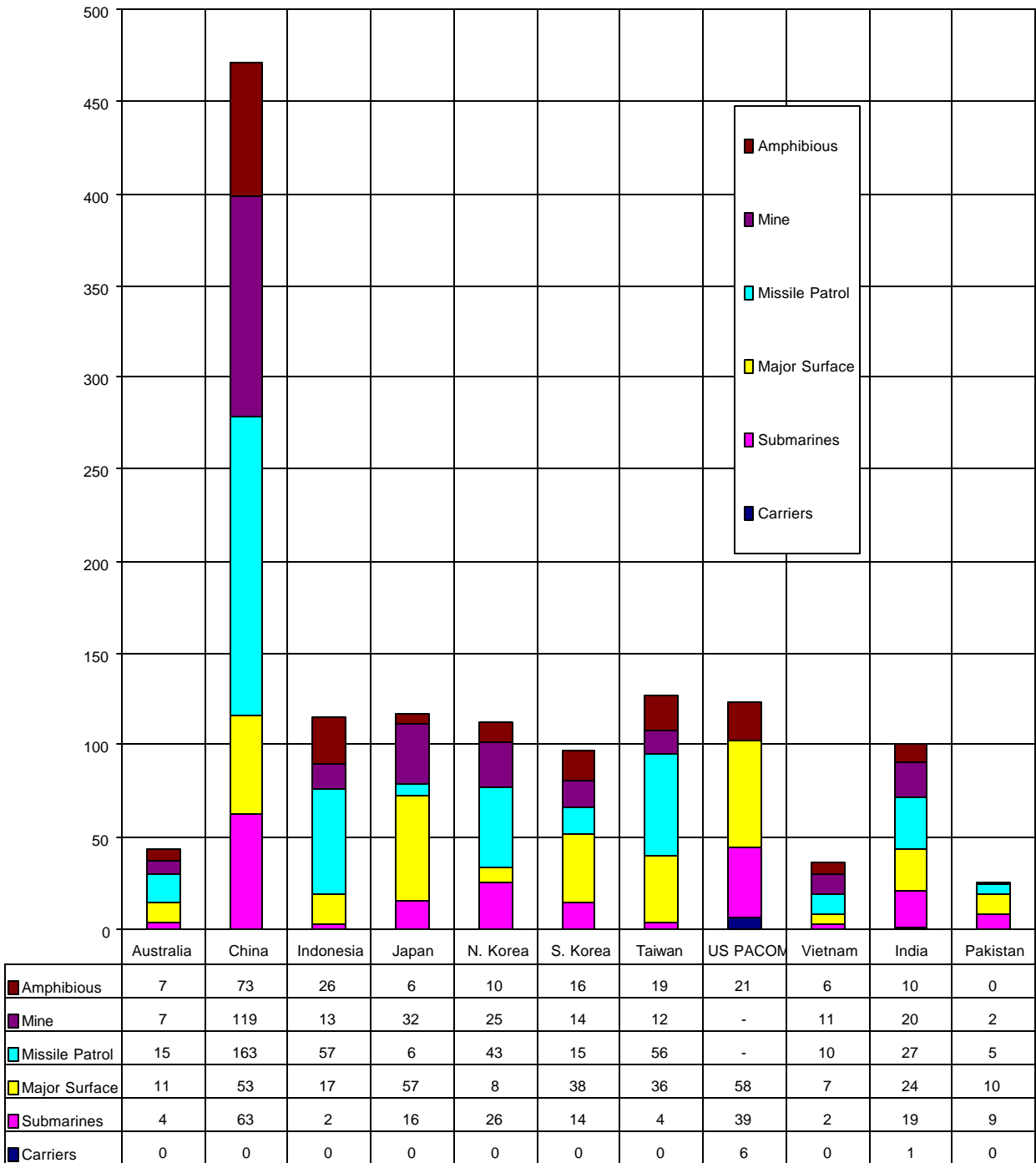
Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999.

Asian Fixed and Rotary Wing Combat Aircraft in Key Powers in 1999



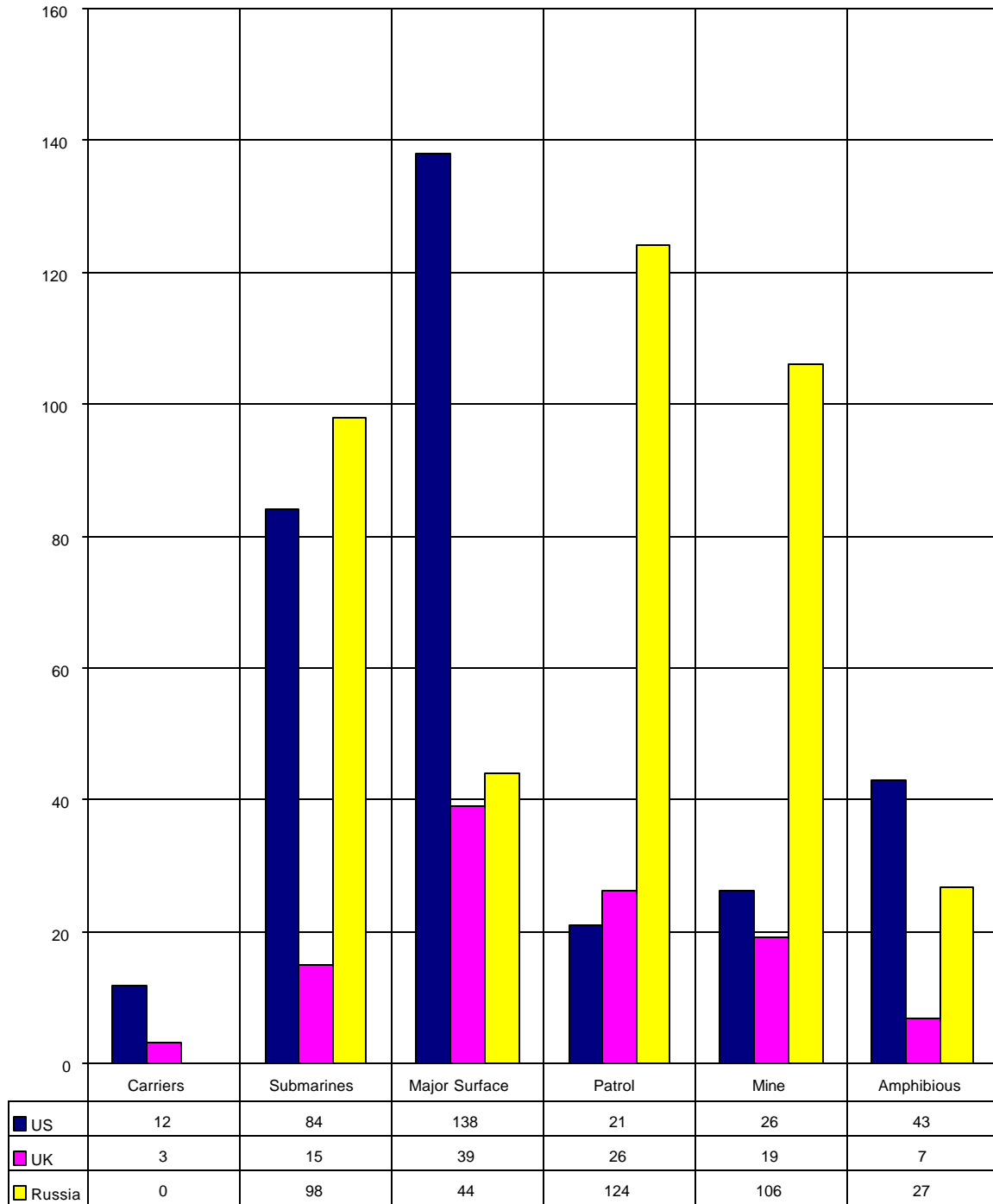
Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1998-1999.

Asian Naval Combat Ships in Key Powers 1998



Source: Adapted by Anthony H. Cordesman from the IISS, *Military Balance, 1998-1999*.

Western Naval Combat Ships Affecting the Asian Balance in 1999



Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1998-1999.

The Nuclear Dimension – Part One

<u>Country</u>	<u>Sea-Based</u>	<u>Land Based</u>	<u>Air Force</u>
<u>US</u> (33,500 nuclear weapons)*	18 SSBM/432 SLBM +2/16 Poseidon C-3 tubes in ex-SSBN 10 SSBN-747 with up to 24 Trident D-5 (240 SLBM) 8 SSBN-726 with up 24 Trident C-4 (192 SLBM)	590 Minuteman III 50 Peacekeeper MX (+115 Minuteman II Offline which are still START accountable)	179 Active. 329 START accountable 12-14 B-2A 66 B-52H with up to 20 ALCM each 95 B-1B
<u>Russia</u> (62,500 nuclear weapons)*	26 SSBN/412 SLBM 4 Typhoon with 20 SS-N-20 each (80) 7 Delta IV with 16 SS-N-23 each (112) 10 Delta II with 16 SS-N-18 each (160) 5 Delta I with 12 SS-N-8 each (60) In addition, 16 SSBN and 228 missiles remain START accountable: 2 Typhoon/40SS-N-20 1 Yankee 1/16 SS-N-16 4 Delta II/64 SS-N-8 9 Delta I/108 SS-N-8 11 Oscar SSGN with 24 SS-N-19 3 Yankee SSGN with 20+ SS-N-21 1 Yankee SSGN/12 SS-NX-24 10 AkulaSSN/SS-N-21 3 Sierra SSN/SS-N-21 12 Victor III/SS-N-15	180 SS-18 (RS-20) Mostly Mod4/5 w/ 10 MIRV 188 SS-19 (RS-18) Mostly Mod3,6 MIRV 168 in Russia 20 in Ukraine* SS-24 (RS22) with 10 MIRV 36 Rail in Russia 46 Silo in Ukraine* 360 SS-25 (RS12M) single warhead mobile & silo launch in Russia 36 SH-11 Galosh & 64 SH-08 Gazelle ABMs	66 Active, 5 Training, 14 Test & 44 in Ukraine 28 Tu-95H6 with AS-15 ALCM (+5 in Ukraine)* 32 Tu-95H16 with AS-15 (20 in Ukraine)* 6 Tu-160 with AS15 (19 in Ukraine)* 8 Tu-95 and 6 Tu-160 Test 5 Tu-95G Training

* Without nuclear warhead or weapons.

The Nuclear Dimension – Part Two

<u>Country</u>	<u>Sea-Based</u>	<u>Land Based</u>	<u>Air Force</u>
<u>France</u> (1,400 nuclear weapons)*	4 SSBN/64 SLBM 3 L'Inflexible with 16 M-4/TN-71 or 75 1 Le Triomphant with 16 M-45/TN-75		3/60 Mirage-2000N (AMSP) 36 Super Etendard AMSP

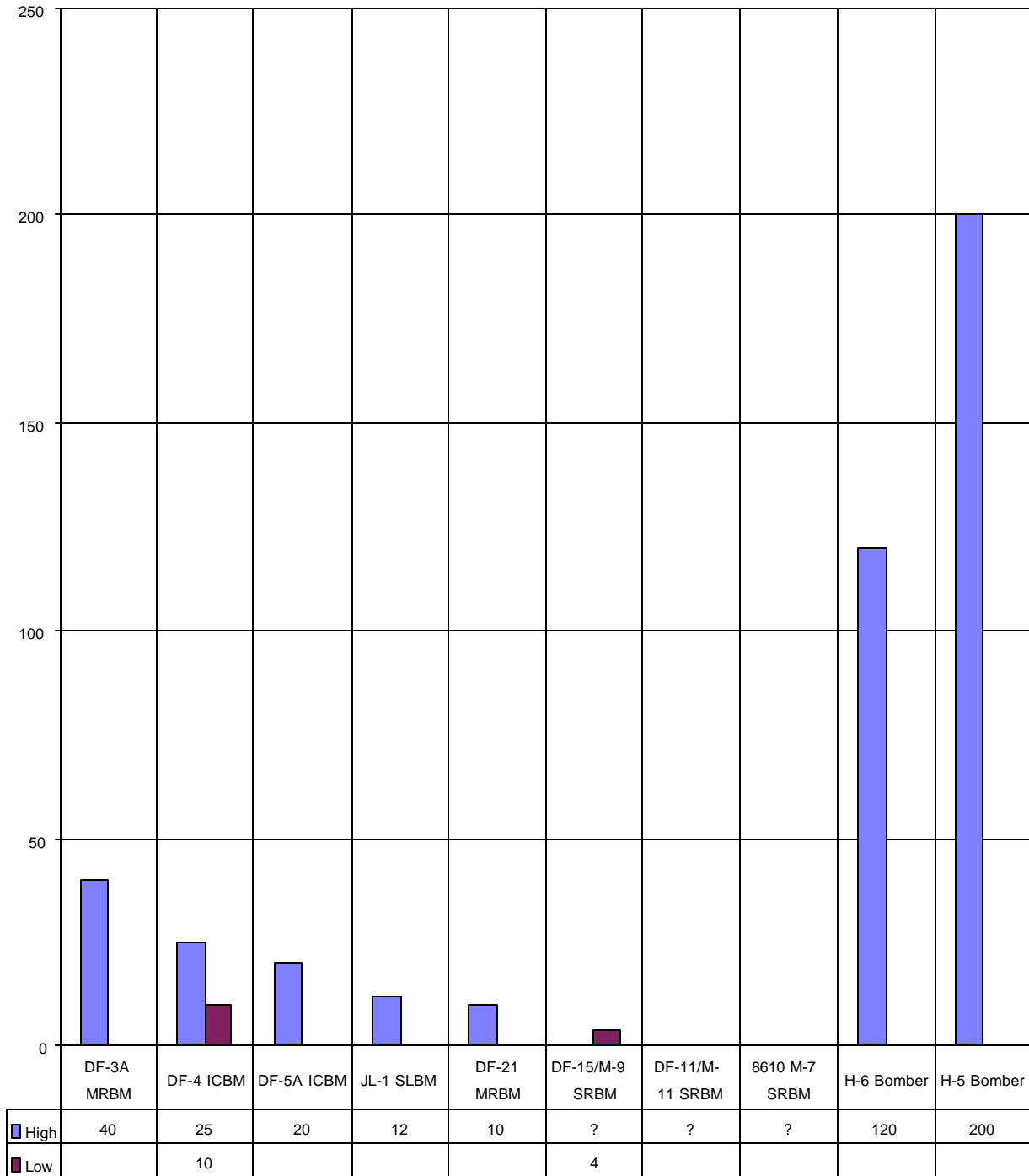
<u>United Kingdom</u> (1,100 nuclear weapons)*	3 SSBN/48 SLBM 3 Vanguard SSBN with up to 16 Trident D-5 each and maximum of 48 warheads per boat.		

<u>China</u> (500-1,300 nuclear weapons)*	1 Xia SSBN with 12 CSS-N-3 (J-1) 1 Romeo SSGN?	7 CC-4 (DF-5) MIRV ICBM 10 CSS-3 (DF-4) ICBM 38 CSS-2 (DF-3 IRBM) 8 CSS-5 DF-21 IRBM 4 DF-15 CSS-6/M-9 SRBM (600 km) ? DF-11 CSS-7/M-11 SRBM (120-300 KM)	Up to 120 H-6, Some nuclear capable. 200+ H-5?

* Estimate by Sergei Rogov

Source: Adapted by Anthony H. Cordesman from the IISS, Military Balance, 1998-1999

Chinese Deployed Nuclear-Capable Delivery Systems



Source: Adapted by Anthony H. Cordesman from IISS, Military Balance, 1998-1999, and Shirley A. Kan, China: Ballistic and Cruise Missiles, Congressional Research Service, CRS 97-391 F, September 28, 1998

Chinese Missile Programs and Developmentsⁱ

Type	Chinese Name	US Name	No. Deployed	Range (Km)	Warhead (Kg)	CEP (M)	Launch Platform	Fuel	Status
ICBM	DF-4 ⁱⁱ	CCS-3	10-25	5500+	2200	1370	land-mobile	liquid	in service
ICBM	DF-% A ⁱⁱⁱ		CSS-4	20	13,000	3,200	500 hardened silo	liquid	in service
ICBM	DF-31 ^{iv}	-	-	8000	700	?	land-mobile	solid	after 2000
ICBM	DF-41 ^v	-	-	12,000	800	?	land-mobile	solid	after 2010
MRBM	DF-3A ^{vi}	CSS-2	40+	2800	2150	1000	land-mobile	liquid	in service
MRBM	DF-21 ^{vii}	CSS-5	10	1800	600	?	Mobile-TEL	solid	in service
MRBM	DF-25 ^{viii}		-	-	1700	2000	? land-mobile	solid	after 2000
SLBM	JL-1 ^{ix}	CSS-N-3	12	1700	600	?	Xia SSBN	solid	in service
SLBM	JL-2 ^x	-	-	8000	700	?	094 SSBN	solid	after 2005
SRBM	DF-15 ^{xi}	CSS-6	4+	600	500	300	Mobile TEL	solid	in service
SRBM	DF-11 ^{xii}	CSS-7	?	300	500	?	Mobile TEL	solid	in service
SRBM	8610 ^{xiii}	CSS-8	?	150	190	?	Mobile launcher	solid	in service
	M-71	(mod HQ-2 SAM)							

ⁱ Adapted from work by Shirley A. Kan in China: Ballistic and Cruise Missiles, Congressional Research Service, CRS 97-391 F, September 28, 199

ⁱⁱ Deployed since 1980. Response time of 2.5 hours, strap-down inertial guidance. Stored in caves and mountainside tunnels.

ⁱⁱⁱ Deployed since 1981, most targeted on the US. Gyroplatform inertial guidance with on-board computer and storable liquid fuel. Deployed in hardened underground silos. Normally kept unfueled and without warheads

^{iv} Possible MIRVing capability. Booster tested in 1998.

^v Supposedly road, rail, river mobile.

^{vi} Deployed since 1971, strap-down inertial guidance. Reaction time 110 minutes. China sold 36 to Saudi Arabia.

^{vii} Same fuel and guidance as JL-1. Automatic command-control-firing system from TEL. Reports of terminal guidance, possible radar. May be a DF-21A. First regiment deployed in 1985.

^{viii} Land mobile for truck transfer from semi-hardened sites to launch sites. No reports of test firings. One report that development has been abandoned

^{ix} All on one Jia submarine. Deployed since 1983, successful underwater launch tests in 1988. Operational status uncertain. Gyroplatform inertial guidance with on-board computer.

^x To be deployed on new 094 SSBN with 16 tubes each. First SSBN that could target US from waters near China.

^{xi} Launch from mobile TEL with preparation time of 30 minutes. Strap-down inertial guidance with on-board computer with terminal velocity correction. May be seeking GPS guidance. Four fired in Taiwan crisis in 1995. Three landed in general target area, one crashed prematurely. Four more fired in Taiwan crisis in 1996. Four landed in general target area. Some reported indicate that 20-30 more had been prepared for firing.

^{xii} US imposed sanctions on China and Pakistan because this system was sold to China.

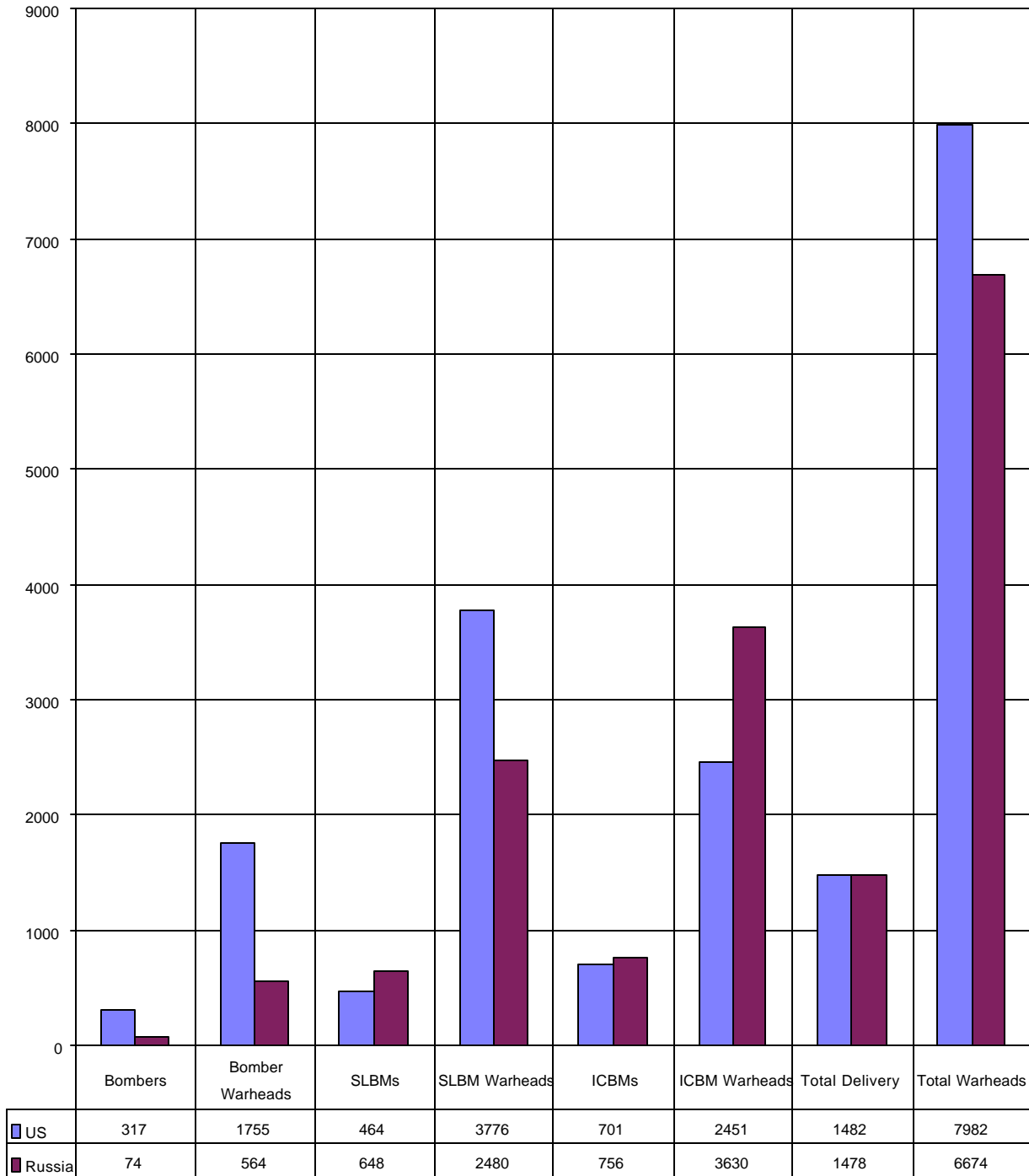
^{xiii} Unconfirmed reports that Iran has acquired this missile technology.

North Korean Missile Programs and Developments

<u>Type</u>	<u>Names</u>	<u>Range (KM)</u>	<u>Warhead (Kg)</u>	<u>Stages</u>	<u>Service Status</u>
SRBM	Hwasong 5, Scud B Storable liquid fuel; TEL launch Sold to Iran and a number of other states.	302-340	1000	1	Since 1985
SRBM	Hwasong 6, Scud C Storable liquid fuel; TEL launch. Sold to Iran and Syria. Deployed in hardened, underground shelters in North Korea.	500	770	1	Since 1989
MRBM	No Dong 1, Rodong 1, Scud D Storable liquid fuel; Uses missile-erector-launcher (MEL). Seems similar to Shihab 3 in Iran and Ghauri program In Pakistan. First test over East China Sea in May 1993, but did not go over 500 kilometers. Iranian and Pakistani observers present at test. Estimate 50-100 missiles no produced.	1,350	1200	1	Since 1997
IRBM	Taep'o-Dong 1, No-Dong 2, Rodong 2, Scud X Some reports is similar to the Chinese DF-3.	1,500- 2,200	700- 1,000	2	1998?
SLV	Taep'o-Dong 1 Space Launch-Vehicle Partially successful test launch on August 23, 1998. Claim launched small satellite.	4,000	50-100	3	1998
ICBM	Taep'o-Dong 2, No Dong 3	4,000- 6,000	700- 1,000	2	2000+
ICBM	?	6,000+	100-500	3	?

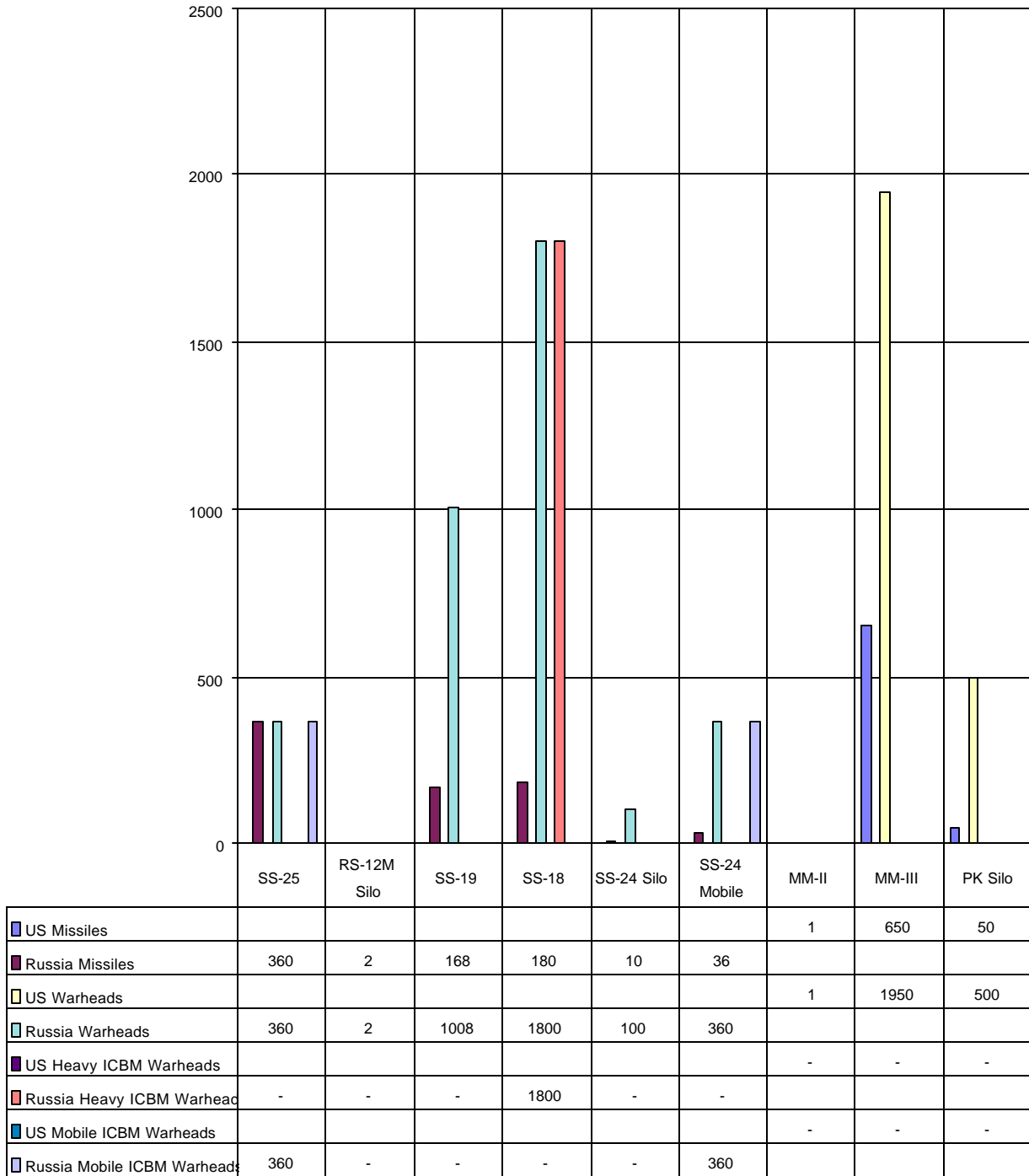
Source: Adapted from Joseph S. Bermudez, Jr., "The Rise and Rise of North Korea's ICBMs, International Defense Review, 7/1999, pp. 57-61.

US and Russian Deployed Strategic Nuclear Forces



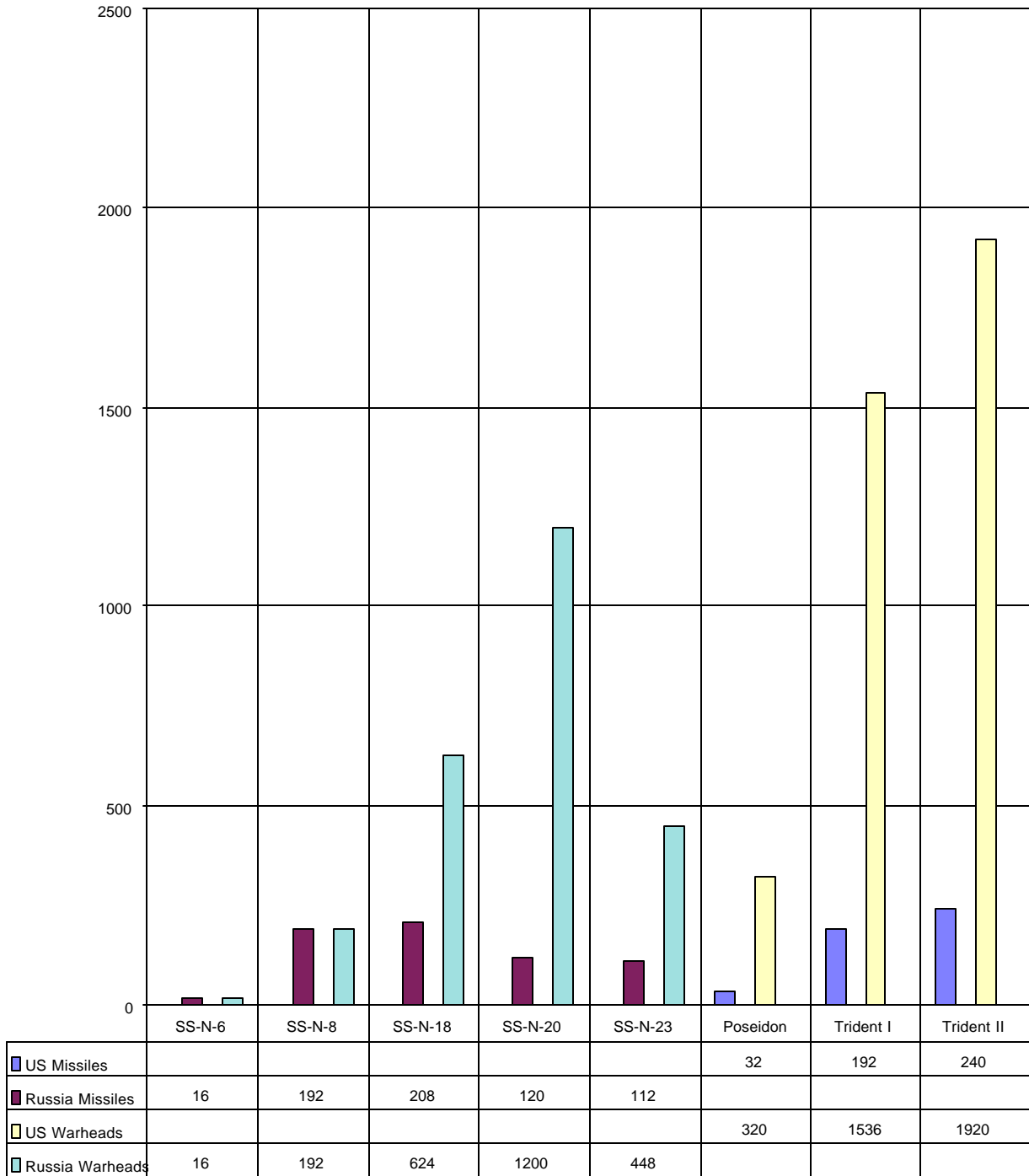
Source: Adapted by Anthony H. Cordesman from *Jane's Defense Weekly*, February 10, 1998, pp. 23-26.

US and Russian Deployed ICBM Missiles



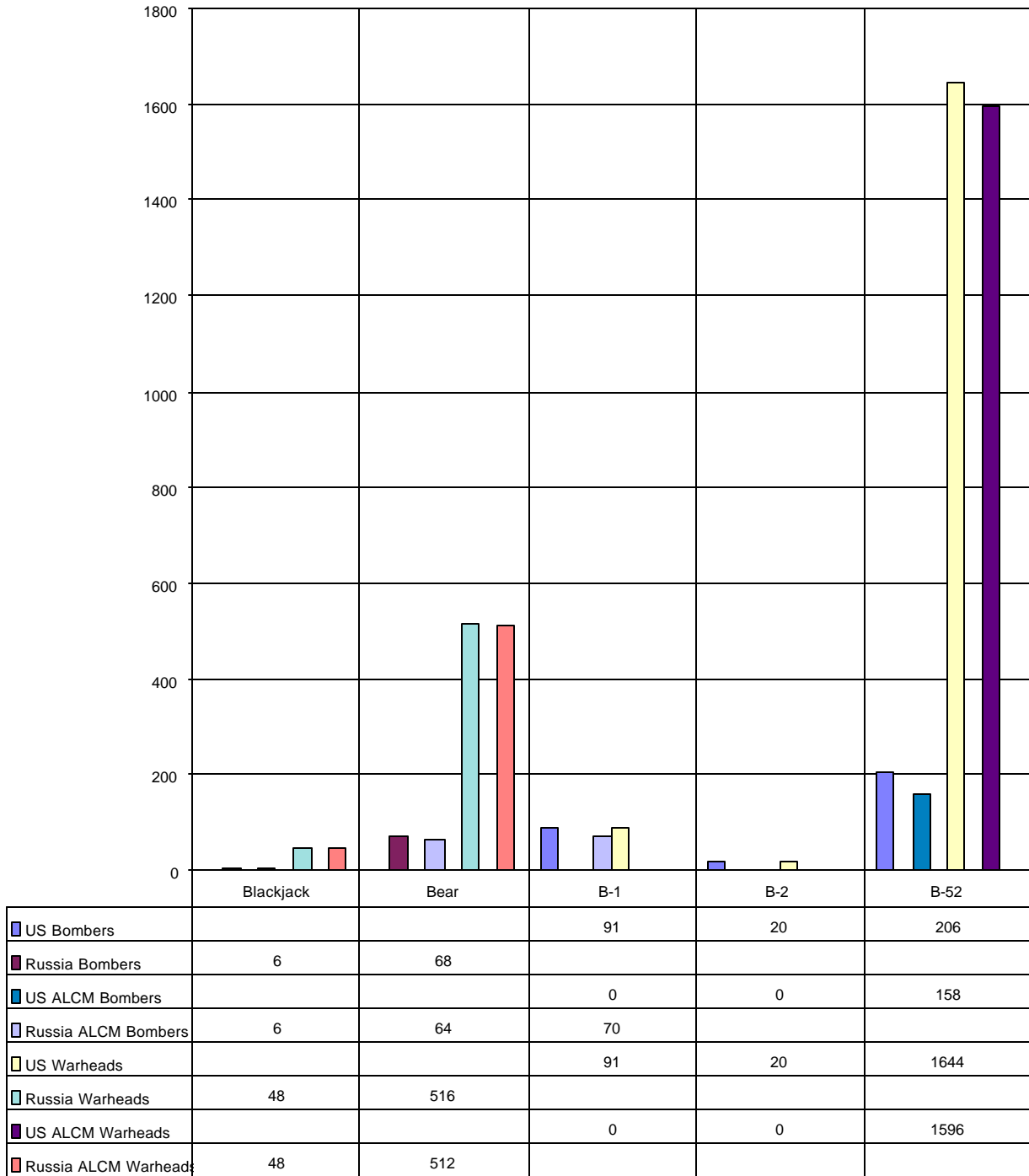
Source: Adapted by Anthony H. Cordesman from *Jane's Defense Weekly*, February 10, 1998, pp. 23-26.

US and Russian Deployed SLBM Missiles



Source: Adapted by Anthony H. Cordesman from Jane's Defense Weekly, February 10, 1998, pp. 23-26.

US and Russian Deployed Heavy Bombers



Source: Adapted by Anthony H. Cordesman from *Jane's Defense Weekly*, February 10, 1998, pp. 23-26..