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THESIS

DEFENSE SPENDING DATABASES FOR COUNTRIES IN THE ASIA-PACIFIC REGION: AN ANALYSIS AND COMPARISON

by

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March 2001

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The purpose of this research was to identify and analyze a select number of unclassified databases that cover defense spending and other defense related criteria for countries in the Asia-Pacific region. A thorough search was first conducted for databases with defense information on countries in the Asia-Pacific region. Initial sorting criteria were identified and applied to create a list of databases to be evaluated in detail. These databases were then evaluated and discussed in detail using additional evaluation criteria that were developed. Conclusions were then drawn, and recommendations made, for the best databases to be used by defense and policy analysts in the future. This research recommended the following databases. For defense spending information, the Australian Defense Intelligence Organization's Defense Economic Trends in the Asia-Pacific 1999 was recommended. For defense capabilities information, the International Strategic Studies Association's Defense and Foreign Affairs Handbook was recommended. For arms sales and transfers information, the SIPRI Yearbook was recommended for use. The best all around defense database on the Asia-Pacific region was judged to be the International Institute of Strategic Studies' Military Balance 2000/2001.

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ABSTRACT

The purpose of this research was to identify and analyze a select number of unclassified databases that cover defense spending and other defense related criteria for countries in the Asia-Pacific region. A thorough search was first conducted for databases with defense information on countries in the Asia-Pacific region. Initial sorting criteria were identified and applied to create a list of databases to be evaluated in detail. These databases were then evaluated and discussed in detail using additional evaluation criteria that were developed. Conclusions were then drawn, and recommendations made, for the best databases to be used by defense and policy analysts in the future. This research recommended the following databases. For defense spending information, the Australian Defense Intelligence Organization's Defense Economic Trends in the Asia-Pacific 1999 was recommended. For defense capabilities information, the International Strategic Studies Association's Defense and Foreign Affairs Handbook was recommended. For arms sales and transfers information, the SIPRI Yearbook was recommended for use. The best all around defense database on the Asia-Pacific region was judged to be the International Institute of Strategic Studies' Military Balance 2000/2001.

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I. INTRODUCTION

A. BACKGROUND

An analysis of recent American foreign policy interests shows a distinct preoccupation with European developments following the end of the Cold War. Over the past decade, the United States was concerned primarily with the transition of the former communist Soviet Union to a democratic Russia, the reunification of Germany, the transformation and expansion of the North Atlantic Treaty Organization (NATO) and the conflicts in the Balkans following the disintegration of Yugoslavia. However, the Asia-Pacific region is likely to assume a much greater importance in American foreign policy for the new Bush Administration and beyond. There are numerous reasons why the Asia-Pacific region will move to the forefront of American foreign policy. For the purposes of this thesis, the Asia-Pacific region is comprised of South Asia, Central Asia, East Asia and Oceania.

The Asia-Pacific region experienced healthy economic growth before the Asian financial crises of 1997. Commensurate with this economic growth, many countries in Asia embarked on military modernization programs until 1997. Total Asian defense spending exceeded that of the Middle East and almost matched that of Western Europe during the 1990-1998 time period. From 1990-1998, defense spending in East Asia increased 2.1 percent annually (in constant dollar terms), South Asia increased 2.6 percent and Australia increased 1.0 percent. This is in contrast to other regions in the world during the same time period, where defense spending decreased (U.S. defense spending decreased 4.6 percent). Among the Asian countries with high long-term growth

in defense spending were Singapore (6.6 percent annual increase), India (3.6 percent) and China (3.3 percent on an official budget basis) (U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000).

Most of the world's largest armed forces are in the Asia-Pacific region, as shown in Table 1.

Country	**Size of the Armed Forces** (personnel)
China	2.8 million
United States	1.4 million
Russia	1.2 million
India	1.2 million
North Korea	1.1 million
South Korea	0.67 million
Turkey	0.64 million
Pakistan	0.59 million
Iran	0.54 million
Vietnam	0.48 million

Table 1. The Eight Largest Armed Forces in the World. Source: U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000.

Six of the eight nations on the above list are within the Asia-Pacific region, again underscoring the importance of the region to future U.S. foreign and defense policy.

The 1997 Asian economic crises reduced the money available for defense spending in Asia. Most Asian countries slowed or cancelled purchases. Operations were curtailed, exercises with allies were reduced and reorganizations in pursuit of increased efficiency and reduced costs occurred. Typically, readiness and personnel were emphasized in lieu of operations. If the economic downturn persists, Asian nations will be forced to make choices regarding where to spend their dwindling defense dollars. In spite of this, most Asian nations are anxious to restart their modernization plans because modernization is a continuous process, Exclusive Economic Zones (EEZs) need policing

and the geopolitical future of the region remains uncertain. U.S. foreign and defense policy analysts will need to keep abreast of these dynamics.

The effects of the Asian economic crises on defense spending are shown below.

Country	**1997**	**1998**	**1999**
Australia	-3.9	1.3	5.4
China	11.4	9.7	Not Available
India	20.8	9.0	Not Available
Indonesia	7.7	-34.9	Not Available
Japan	1.1	-1.0	0.6
Korea	3.2	-8.1	-0.4
Malaysia	-6.7	-29.9	2.0
Singapore	12.8	12.1	Not Available
Thailand	14.9	-39.4	-13.2

Table 2 Real Change in Official Defense Budgets in Asia, 1997-99. Source: U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000.

Asia is the world's largest arms importer, with a 41 percent share in 1998 (U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000). The United States is the dominant supplier of arms to East Asia, while Russia and China are the primary suppliers to South Asia (U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000). Pressure to sell arms will continue, arising from surplus inventory following the break-up of the former Soviet Union. The Russian need to raise hard currency from arms sales will be another significant pressure. In light of the continuing economic problems in Asia, more countries might turn to cheaper Russian and Chinese arms. Asian efforts to modernize have concentrated on high-tech equipment for naval and air defenses; command, control and communications systems; intelligence systems; multi-role fighter aircraft; modern naval ships, anti-ship missiles; electronic warfare systems; rapid deployment forces; and in the case of China, Pakistan and India, nuclear

forces. These factors point to the need for more American foreign and defense policy analysis of the Asia-Pacific region.

The Asia-Pacific region lacks a comprehensive collective security arrangement similar to NATO, reflecting, instead, a loose multi-polar setting. As a consequence of this structure, the current period of relative stability could be upset by military tension and competition if political relations deteriorated. This could happen if modernization plans discussed above are renewed.

U.S. military presence has been essential to maintaining the stability that has enabled most nations in the Asia-Pacific region to build their economies. U.S. treaty alliances with Japan, South Korea, Australia, Thailand, and the Philippines, and our commitment to keeping approximately 100,000 U.S. military personnel in the region, serve as the foundation for America's continuing security role.

Key countries and geographical areas that foreign and defense policy analysts will focus on include Japan, the Korean Peninsula, China, Southeast Asia and South Asia. These countries and areas are key because of their ability to significantly influence the stability of the entire region.

Japan

The United States and Japan have reaffirmed that our bilateral security relationship remains the cornerstone for achieving common security objectives and for maintaining a stable and prosperous environment for the Asia-Pacific region. This security cooperation extends to promoting regional peace and stability, seeking universal adherence to the Nuclear Non-Proliferation Treaty, and addressing the dangers posed by

transfers of destabilizing conventional arms and sensitive dual-use goods and technologies. Japan has the largest defense budget in Asia, the most modern forces and the resources for further modernization. Their military is strictly for homeland defense right now.

However, this is conditional on the continuing large U.S. presence in the region to maintain stability. Should the U.S. significantly alter its role in the region, the continuing debate in Japan on how much military spending is enough and what role the Japanese military should play in the 21st century would become more polarized. As a result, the Japanese might develop nuclear forces and power projection capabilities. This would resonate throughout Asia, where past Japanese aggression has not been forgotten.

Korean Peninsula

Tensions on the Korean Peninsula remain a principal threat to the peace and stability of the Asia-Pacific region. The South Koreans enjoy significant defensive advantages with their entrenched positions along a short border and significant American military support. Furthermore, the South Korean gross domestic product (GDP) of $422 billion far surpasses the North Korean GDP of $21 billion (U.S. Pacific Command, "Asia-Pacific Economic Update," January 2000). This should allow Republic of Korea (ROK) forces to modernize, while North Korean forces stagnate. However, North Korea's economic woes and enigmatic leadership threaten the possibility of an attack out of desperation. Their unknown weapons of mass destruction (WMD) program is another potentially destabilizing wildcard. A peaceful resolution of the Korean conflict with a non-nuclear peninsula is a U.S. foreign policy goal. A parallel strategic interest is the elimination of a chemical/biological threat on the peninsula. Fortunately, relations

between the Koreas have been warming recently and an eventual reunification of Korea now seems plausible. Regardless, military spending by both Koreas remains an item of great interest.

China

An overarching U.S. interest is China's emergence as a stable, open, secure and peaceful state. The prospects for peace and prosperity in Asia depend heavily on China's role as a responsible member of the international community. It will be difficult to pursue the U.S. foreign policy goal of preventing any one power from dominating a region with China. The Chinese clearly see a greater regional role for themselves in the future than they now possess. China does not pose a threat in the near term, with low readiness, poor training, shaky logistics and obsolete equipment. Its power projection capabilities are insufficient to invade Taiwan or conduct land excursions outside its borders. Although its armed forces are numerically the largest in East Asia (despite recent downsizing), its nuclear forces are modest.

Of greater concern, however, is the evidence that China has been engaging in a military build-up over the past decade. Details of the Chinese military build-up and the amount of military spending by the People's Republic remain items of conjecture and educated guesswork. This is partially due to the secretive Chinese regime, but it is also due to the accounting mechanisms used by the Chinese for their military spending, with People's Liberation Army (PLA) spending hidden under construction, administration and state organizations. Thus, China's future military posture remains an important item of conjecture. China's recent deployment of missiles opposite Taiwan and their bellicose attitude towards the United States give concern for the future and could be significant

indicators. The China-Taiwan issue is another principal threat to the peace and stability of the Asia-Pacific region. The Chinese clearly see a democratic and independent Taiwan as the end result of 100 years of western meddling in Chinese affairs, and that this situation must be rectified.

Southeast Asia

U.S. strategic interest in Southeast Asia centers on developing regional and bilateral security and economic relationships that assist in conflict prevention and resolution and expand U.S. participation in the region's economic growth. U.S. security aims in Southeast Asia are twofold: (1) maintaining robust security alliances with Canberra, Manila and Bangkok, as well as sustaining security access arrangements with Singapore and other ASEAN countries; and (2) healthy, pragmatic relations with a strong, cohesive ASEAN capable of supporting regional stability and prosperity. This is an area of remarkable dynamism. Opportunities for future economic growth abound in Asia, while ocean trade routes remain vulnerable to military interdiction. A prosperous and open Asia-Pacific region is key to the economic health of the United States. Among some of the more volatile Southeast Asia issues are; 1) conflict between the ruling authorities in Burma and the democratic opposition; 2) democratic incoherence in Indonesia and political reconciliation in East Timor; 3) building of democratic institutions and encouragement for human rights in Cambodia; and 4) thawing relations with Vietnam.

South Asia

South Asia has experienced an important expansion of democracy and economic reform, with India being the world's largest democracy. The United States has urged

India and Pakistan to take steps to reduce the risk of conflict and to bring their nuclear and missile programs into conformity with international standards. However, the recent exploding of nuclear weapons by both countries is of great concern. If both countries develop hair-trigger, vulnerable nuclear forces, rapid nuclear escalation in a crisis might occur. If both sides develop survivable, controllable nuclear forces, mutual deterrence could evolve and produce stability. India has a far larger military than Pakistan, but Pakistani forces are more sophisticated. India has won three wars against Pakistan in the last 50 years. The continuing pseudo-war over Kashmir provides a spark that could ignite another regional war.

Because of trends in defense spending and modernization, the important role U.S. military power plays in the stability of the region, and the regional dynamics discussed above, foreign and defense policy analysts are very interested in defense spending in the Asia-Pacific region. Most analysts do not have access to classified information, so the unclassified databases become very important.

B. PURPOSE

The purpose of this thesis is to identify, analyze and categorize unclassified databases that cover defense spending in countries in the Asia-Pacific region.

C. SCOPE

The scope of this thesis will include: (1) identifying countries in the Asia-Pacific region for which defense spending data is desired; (2) identifying as many of the Asia-Pacific defense spending databases as possible and performing a preliminary evaluation; (3) from the initial list of databases, reducing the number by developing and applying basic criteria; (4) determining detailed factors to use in evaluating the remaining

databases; (5) evaluating the remaining databases to include as a minimum similarities, differences, strengths and weaknesses and other evaluation factors; and (6) making recommendations as to what databases defense and foreign policy analysts would find most useful.

D. METHODOLOGY

The methodology used in this thesis will consist of the following steps:

- Countries in Asia for which defense spending is desired will be identified
- A thorough search will be conducted for both published and web-based databases with defense spending information pertaining to the Asia-Pacific region, from which an initial list of defense databases will be compiled
- Basic sorting criteria will be identified to apply to the initial list of Asia-Pacific defense databases
- The basic sorting criteria will be applied to the initial list of Asia-Pacific defense databases to create a final list to evaluate in detail. In other words, unsuitable databases will be dropped from the initial list, and promising databases will be kept for further detailed evaluation
- Detailed evaluation criteria will be developed and applied to the final list
- Finally, recommendations will be made for the defense databases to be used by defense and foreign policy analysts of defense spending in the Asia-Pacific region

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II. IDENTIFICATION AND DISCUSSION OF INITIAL SOURCES OF ASIA-PACIFIC DEFENSE INFORMATION

A. COUNTRIES IN THE ASIA-PACIFIC REGION

For the purposes of this thesis, the following countries were considered to be in the Asia-Pacific region. This determination was based on review of a geographic atlas at the Naval Postgraduate School library, as well as the manner in which the Asia-Pacific region was divided geographically in several of the initial defense information sources reviewed for this thesis. The resulting countries and regional sub-divisions were widely accepted in the sources consulted above. Other countries in the region were excluded for reasons explained below.

REGION	COUNTRY
SOUTH ASIA	Afghanistan
	Bangladesh
	India
	Nepal
	Pakistan
	Sri Lanka
CENTRAL ASIA	Kazakhstan
	Kyrgyzstan
	Tajikistan
	Turkmenistan
	Uzbekistan
EAST ASIA	Brunei
	Burma
	Cambodia
	China
	Indonesia
	Japan
	Korea, North
	Korea, South
	Laos
	Malaysia
	Mongolia
	Philippines
	Singapore
	Taiwan
	Thailand
	Vietnam
OCEANIA	Australia
	Fiji
	New Zealand
	Papua, New Guinea
TOTAL	31 Countries

Table 3. Countries in the Asia-Pacific Region.

There are a number of countries in the Asia-Pacific region that were not included for the reasons listed below.

Country	Reason
Bhutan	India guides foreign relations and supplies military aid
Hong Kong	China provides military defenses
Kiribati	No regular military forces
Macau	China provides military defenses
Maldives	No regular armed forces
Pitcairn Islands	United Kingdom provides military defenses
Samoa	No regular armed forces
Solomon Islands	No regular armed forces
Vanuatu	No regular armed forces

Table 4. Countries in the Asia-Pacific Region Not Included in this Study. Source: CIA World Fact Book.

Although the Afghanistan military does not exist on a national basis, some elements of the former Army, Air and Air Defense Forces, National Guard, and Border Guard Forces still exist, but are factionalized among various groups. In addition, Afghanistan is involved in arms trade. Hence, it was included in this study.

B. IDENTIFICATION AND DISCUSSION OF INITIAL SOURCES OF ASIA-PACIFIC DEFENSE INFORMATION

To build the initial list of Asia-Pacific defense information sources, a thorough search of the web was conducted using a variety of key words and phrases. The Microsoft Network search engine was primarily used, although other search engines were used as well. In addition, the Dudley Knox Library at the Naval Postgraduate School in Monterey was consulted for published sources. The initial web-based and published sources of defense related information that were found are listed below, along with a short description for each one. Where applicable, foreign sources of defense information have been noted.

- **Air University Library**: The Air University Library website at Maxwell Air Force Base is a collection of links to defense related information. The website URL is www.au.af.mil/au/aul/aulv2.htm.

- **The Asian Journal of Political Science**: The Asian Journal of Political Science is a publication of the Department of Political Science, National University of Singapore. The Journal publishes articles in the fields of political theory, comparative politics, international relations and public administration. The main focus is on Asia and issues relevant to this area. The website URL is

  www.fas.nus.edu.sg/pol/AJPS/asian_journal_of_political_science_frame.htm.

- **The Asia-Pacific Defense Forum**: The Asia-Pacific Defense Forum is a professional military journal published quarterly by the Commander-in-Chief of the United States Pacific Command to provide a forum for military personnel of the Asian and Pacific areas. The website which describes the publication is located at www.pacom.mil/forum/forum.htm.

- **Cato Institute**: Founded in 1977, the Cato Institute is a non-partisan public policy research foundation. The Cato Institute seeks to broaden the public policy debate to allow consideration of options that are consistent with the principles of limited government, individual liberty, and peace. The Institute has a Defense Studies area, which publishes articles and pamphlets. The Cato Institute also has an extensive links collection. The homepage URL is www.cato.org.

- **Center for Defense Information (CDI):** Founded in 1972, as an independent monitor of the military, the Center for Defense Information is a private, non-governmental, research organization. Several military fact sheets relating to Asia-Pacific region defense data were found on this website. The website URL is www.cdi.org. The URLs for the fact sheets are www.cdi.org/issues/nukef&f/database and www.cdi.org/issues/wme.

- **Center for Strategic and International Studies (CSIS)**: The Center for Strategic and International Studies is a bipartisan public policy research institution dedicated to analysis and policy impact. Based in Honolulu, Hawaii, the Pacific Forum of CSIS operates as the Asia-Pacific arm of the CSIS of Washington, D.C. Besides acting as a forum, CSIS leads numerous research projects. The homepage URL is www.csis.org and the URL of the Pacific Forum is www.csis.org/pacfor.

- **CIA World Factbook**: The CIA World Factbook was created as an annual summary and update to the National Intelligence Survey studies. The first classified Factbook was published in August 1962, and the first

unclassified version was published in June 1971. The Factbook is an on-line database that has information on defense spending and forces in the Asia-Pacific region, as well as other countries around the world. The URL of the Factbook is www.odci.gov/cia/publications/factbook.

- **The Commonwealth Institute**: The Commonwealth Institute is a non-profit, non-governmental public policy research organization. Since its inception in 1991, the Commonwealth Institute's Project on Defense Alternatives (PDA) has sought to adapt security policy to the challenges and opportunities of the post-Cold War era. The PDA has published a number of defense studies. The URL of the Commonwealth Institute is www.comw.org/index.html.

- **Defense Intelligence Organization (DIO)**: The Defense Intelligence Organization is part of the Australian Department of Defense. It provides defense and intelligence information for Australian defense and government policy planning. It recently made available on-line Defense Economic Trends in Asia, 1999. The URL of the DIO is www.defence.gov.au/dio and the URL of Defense Economic Trends in Asia, 1999 is www.defence.gov.au/dio/index.html

- **Federation of American Scientists (FAS)**: The Federation of American Scientists conducts analysis and advocacy on science, technology and public policy, including national security, nuclear weapons, arms sales, biological hazards, secrecy, and space policy. FAS is a privately-funded non-profit policy organization. FAS was founded as the Federation of Atomic Scientists in 1945 by members of the Manhattan Project who produced the first atomic bomb. FAS is dedicated to ending the worldwide arms race, achieving complete nuclear disarmament, and avoiding the use of nuclear weapons, and much of its work has been in nuclear arms control and disarmament. Their Military Analysis and Special Weapons sections contain extensive information on U.S. conventional weapons capabilities and international nuclear weapons systems, facilities and capabilities. They have a collection of links, including a link to debates, hearings and reports in Congress on military affairs. The website URL is www.fas.org/index.html.

- **Foreign Military Studies Office (FMSO)**: The Foreign Military Studies Office at Fort Leavenworth, Kansas, researches, writes and publishes from unclassified sources about the military establishments, doctrines and strategic, operational and tactical practices of foreign armed forces. It also studies a variety of civil-military and transnational security issues affecting the U.S. military. They maintain an extensive research links collection, including links to Asia and South Asia areas of interest. The website URL is www.call.army.mil/fmso/fmso.htm.

- **Global Beat**: The Global Beat is managed by the Global Reporting Network – a program of the Center for War, Peace and the News Media at New York University's Department of Journalism and Mass

Communication. The Global Beat is a web resource center primarily intended for journalists and editors who cover international issues. Their website on East Asian security has a number of briefs and articles on the Asia-Pacific region. The website URL is www.nyu.edu/globalbeat.

- **Heritage Foundation**: Founded in 1973, the Heritage Foundation is a research and educational institute whose mission is to formulate and promote public policies based on conservative principles. Their Asia and Pacific Center recently published the U.S. and Asia Statistical Handbook, 2000-2001. The website URL is www.heritage.org and the URL of the U.S. and Asia Statistical Handbook, 2000-2001 is www.heritage.org/bookstore/2000/us-asia.

- **Institute for Defense and Disarmament Studies (IDDS)**: The Institute for Defense and Disarmament Studies, located in Cambridge, Massachusetts, is a think tank for research and education on ways to reduce the risk of war, minimize the burden of military spending and promote democratic institutions. They provide the IDDS Database 2000: World Arms Holdings, Production & Trade. A comprehensive study of Chinese military capabilities is also located on this website. The homepage URL is www.idds.org. The URL of the database is www.idds.org/dbindex.html. Their database could not be opened on-line and the subscription rates are prohibitive ($300 per year for non-profit organizations and $800 per year for others). Accordingly, it was not evaluated further for this thesis.

- **Institute for National Strategic Studies (INSS)**: The Institute for National Strategic Studies is part of the U.S. National Defense University (NDU) at Fort McNair, Virginia. The National Defense University educates military and civilian leaders through teaching and research in national security and military resource strategy, joint and multinational operations, information strategies, operations, and resource management, acquisition, and hemispheric defense studies. The INSS has an Asia-Pacific research team, which has published a number of articles on the Asia-Pacific region. The Asia-Pacific research team also provides a link to The Country Analysis Briefs (CABs), which provide an overview of the energy situation for all countries that are of current interest to energy analysts and policy makers in Asia. Their Center for the Study of Chinese Military Affairs has information and numerous links relevant to the Chinese military. The URL for the homepage is www.ndu.edu/inss/insshp.html.

- **Institute of Peace and Conflict Studies (IPCS)**: The New Delhi, India based IPCS is a think tank concerned with South Asian security issues. It aims to analyze, inform and nurture debates on crucial strategic choices affecting South Asia. This website is a way to view the international security situation as seen from one Indian point of view. The URL is www.ipcs.org.

- **International Institute for Strategic Studies (IISS)**: The International Institute for Strategic Studies, founded in 1958, is a private, non-membership organization for the study of military strategy, arms control, regional security and conflict resolution. Each year they publish a comprehensive review and analysis of defense spending, titled the Military Balance (year). Their *Strategic Digest* covers the six-week period preceding its date of issue, listing items of lasting interest appearing in IISS publications and those written by IISS staff and research associates appearing in outside publications. The URL of their website is www.sipri.se.

- **International Relations and Security Network (ISN)**: The Center for Security Studies and Conflict Research, headquartered in Zurich, Switzerland, specializes in the field of Swiss security policy, international security studies and conflict analysis. The Center has developed and maintains two electronic information services – the ISN and the Information Management System for Mine Action (IMSMA). In addition to its collection of links, the IRSN publishes books, journals and bulletins. The URL of the homepage is www.isn.ethz.ch.

- **International Strategic Studies Association (ISSA)**: The International Strategic Studies Association is a worldwide membership non-governmental organization of people involved in national issues management, and particularly national and international security and strategic policy. The Association, founded in 1982, creates forums where people in these areas can exchange information and views. Its Defense and Foreign Affairs Handbook has been published for 25 years. The URL of their homepage is www.strategicstudies.org/main.htm.

- **Jaffee Center for Strategic Studies (JCSS)**: The purpose of the Jaffee Center is to conduct research on matters related to Israel's national security as well as to Middle East regional and international security affairs. The Jaffee Center, headquartered in Israel at the Tel Aviv University, provides one Israeli point of view on the international security situation. The homepage URL is www.tau.ac.il/jcss.

- **Library of Congress, Area Country Studies**: This website contains the on-line versions of books previously published in hard copy by the Federal Research Division of the Library of Congress, under the Country Studies/Area Handbook Program sponsored by the U.S. Department of the Army. Because the original intent of the Series' sponsor was to focus primarily on lesser-known areas of the world or regions in which U.S. forces might be deployed, the series is not all-inclusive. At present, 101 countries and regions are covered. Some country studies were published as long ago as 1987. The website URL is cweb2.loc.gov/frd/cs/cshome.html.

- **Military Spending Working Group (MSWG)**: Formed in 1994, the Military Spending Working Group is an American coalition of two dozen

research and advocacy organizations seeking to educate members of the public, news media, and government about the possibility and desirability of reducing excess military spending globally. It is basically a military "watch dog" group. It provides links to other similarly aligned non-governmental organizations (NGOs). The homepage URL is lcweb2.loc.gov/frd/cs/cshome.html.

- **National Bureau of Asian Research (NBR)**: The NBR is a non-profit, non-partisan institution that conducts advanced research on policy issues in Asia. It also serves as a clearinghouse for Asia research conducted worldwide. The NBR sponsors projects that examine the economic, political, and strategic questions affecting U.S. relations with East, Central, and South Asia, as well as Russia. The National Bureau of Asian Research has started a major research program to track the evolving strategic environment in the Asia-Pacific. The program will combine traditional estimates of strategic and military balance with economic, resource, and demographic data, and focus on perceptions that drive policymaking. The NBR has a links collection, a publishing area and is the source of several regional studies on subjects in the Asia-Pacific region. The URL for NBR is www.nbr.org.

- **National Security Study Group (NSSG)**: The NSSG or U.S. Commission on National Security is a bipartisan commission chartered by the U.S. Congress to provide the most comprehensive government-sponsored review of U.S. national security in more than 50 years. They have posted three different reports (Phase I, II and III). Phase I examined alternative futures for the United States and the world through 2025. Phase II postulated the role the United States should play in that world. Phase III has recommended the modification or creation of new national security structures to implement the strategies proposed in Phase II. Their reports are currently the focus of much interest in the U.S. Congress. The website URL is www.nssg.gov.

- **South Asia Analysis Group (SAAG)**: The objective of this group, headquartered in India, is to advance strategic analysis and contribute to the expansion of knowledge of Indian and international security and promote public understanding. The website URL is www.saag.org.

- **Stockholm International Peace Research Institute (SIPRI)**: SIPRI, headquartered in Stockholm, Sweden, conducts research on questions of conflict and cooperation of importance for international peace and security. They try to contribute to an understanding of the conditions for peaceful solutions of international conflicts and for a stable peace. They publish the SIPRI Yearbook, provide a links collection and have several on-line databases. The databases include data on military expenditures and their Facts on International Relations and Security Trends (FIRST) database, which will be discussed in detail later. The homepage URL is www.sipri.se.

- **War, Peace and Security World Wide Web Server**: This is a collection of links and other publications on international security and military issues, past, present and future. It is operated from the Information Resource Centre of the Canadian Forces College, located in Toronto, Ontario. The homepage URL is www.cfc.dnd.ca.

- **U.S. State Department**: The Bureau of Verification and Compliance, an arm of the U.S. State Department, is responsible within the Department for the overall supervision (including oversight of both policy and resources) of all matters relating to verification and compliance with international arms control, nonproliferation, and disarmament agreements and commitments. As such, they publish a document titled World Military Expenditures and Arms Transfers (WMEAT) and provide an Annual Report to Congress on Military Expenditures (ARME). The State Department has reported to the U.S. Congress in their Annual Report on Military Expenditures. The homepage URL is www.state.gov/index.cfm and the on-line version of WMEAT can be found at www.state.gov/www/global/arms/bureau_vc/reports_vc.html. ARME can be found on-line at www.state.gov/www/global/arms/99_amiextoc.html.

The majority of the sources found were in the United States. Do these 28 sources of defense information represent all sources of information available? The answer is no. Given the size of the world wide web and the number of countries with governments and citizens interested in defense information, there are doubtless many more official and unofficial sources available in other countries and lesser known sites available in the United States. However, these sources came up repeatedly when various combinations of key words were used in the web-based search. Many of these sources reference one another as sources for information, although the manner in which the data is presented can be quite different. With these factors in mind, I believe these sources to be among the primary unclassified accessible sources available for defense information.

III. DEVELOPMENT OF CRITERIA FOR SORTING THE INITIAL ASIA-PACIFIC DEFENSE INFORMATION SOURCE LIST

The primary research question of this thesis is which are the most useful databases on defense spending in the Asia-Pacific region? For the purposes of the thesis, the Asia-Pacific (or Asian) region was defined in the previous chapter, as was the initial list of Asia-Pacific defense information sources. To assess the usefulness of the information sources in this initial list, evaluation criteria were developed. These initial evaluation criteria were then applied to the list to eliminate those information sources that were not going to be evaluated in detail (i.e., not useful enough to be examined further). The initial evaluation criteria developed are listed below.

- Does the information source provide a spending breakout by service for the each country?
- Does the information source show the types of equipment a country is building or buying?
- Does the information source provide force structure information?
- Does the information source provide defense trend information?
- Does the information source provide defense spending as a percentage of GDP?
- Is the information source current?
- How many countries in the Asia-Pacific region does the information source cover?

A discussion of the initial evaluation criteria follows.

- **Criterion #1:** Does the information source provide a spending breakout by service for the each country?

  Discussion: Information on spending by service will show the analyst where the country is spending its defense funding. Is the country emphasizing air power, sea power or land power? Answers to these questions might indicate where a country sees its primary threats, or how it would use its military capabilities should it engage in conflict.

- **Criterion#2:** Does the information source show the types of equipment a country is building or buying?

  Discussion: The actual military capabilities of the countries in the Asia-Pacific region are difficult to assess without this information. This criterion provides the latest changes to country orders of battle by showing the newest equipment that they are building or buying.

- **Criterion#3:** Does the information source provide force structure information?

  Discussion: Manpower, division equivalents, combat aircraft and major naval combatants are often used to compare existing combat capabilities and are seen as a means of basic comparison. This comparison can be misleading though, as it doesn't indicate with precision the capabilities of individual combat units. Any further detail may, however, result in too much information and cause difficulties in organizing it. The basic measure above strikes a balance between too much and too little information on combat capabilities.

- **Criterion #4:** Does the information source provide defense trend information?

  Discussion: Trend information is extremely important. It shows what has been happening with respect to a country's defense establishment, and trend information suggests what might happen in the future based on the pattern observed in the past. Comparing trend information between potential adversaries can be a useful assessment of the extent of a real or perceived arms race.

- **Criterion #5:** Does the information source provide defense spending as a percentage of GDP?

  Discussion: While not an absolute measure of defense spending, this information provides an interesting point of comparison with other countries and is an indication of how much of a country's economic resources are being devoted to defense spending. It is a good indicator of unsupportable spending (too high a percentage of the GDP) or under spending (too low a percentage of the GDP).

- **Criterion #6:** Is the information source current?

  Discussion: For a source to be useful to an analyst, it must be current. Realistically, the data in a published or web based source will always be at least 1-2 years old, as it takes time to gather, organize, and publish or post the data. Therefore, the 2000 edition of a database is likely using data from 1999 or 1998, which makes it even more important that the information source be as new as possible. A source that is updated every 3 years is of little use as, significant changes in defense expenditures can occur with each new annual budget. The best possible situation would be if information sources were published or posted (and therefore updated) on

an annual basis. For the purposes of the initial evaluation of information sources, "current" was defined as being published or made available on the web in 1999 or 2000.

- **Criterion #7:** How many countries in the Asia-Pacific region does the information source cover?

  Discussion: The database being evaluated will be far more useful if it covers most or all of the countries in Asia. Simply stated, the more countries covered, the better the database will be.

These seven criteria were judged to be a good starting point for evaluation of Asia-Pacific defense information sources. Undoubtedly, there are analysts and policy makers who are interested in different information. The final evaluative criteria discussed later in the thesis were developed in an attempt to address this concern.

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IV. DISCUSSION AND APPLICATION OF CRITERIA TO INITIAL ASIA-PACIFIC REGION DEFENSE DATABASE LIST

Following the development of the list of Asia-Pacific region defense information sources and the initial evaluation criteria, the criteria were then applied to the list of information sources. Table 7 shows the results of the application (see Appendix A). If the source was a published source, the published source was obtained and evaluated. If the source was a website, then the website was evaluated. Shaded information sources in the table indicate sources eventually selected for detailed evaluation.

Several conclusions were drawn from Table 7. With the exception of the Library of Congress Country Studies website, all of the defense information sources offered current information on defense related issues, indicating that this criterion was not a useful discriminator. However, almost half of the defense information sources did not have the data to meet any of the other initial evaluative criteria.

In addition, it was quickly realized that, to be classified as a defense database (not merely a defense information source), the website or published source had to have hard data (numbers, tables, graphs, etc.) on defense, on different countries, available in one location (specialized website, book, etc.). This was in addition to the other criteria. The "one location" concept became critical. A defense and policy analyst with enough time and resources could research numerous articles, dedicated websites, periodicals and books and eventually find much of the defense information required. However, many defense and policy analysts do not have the time and resources to do that, and the convenience of the "one location" concept becomes indispensable. In essence, having

hard defense data in one location became a mandatory criterion not considered previously. After applying this criterion, almost half of the defense information sources could not be classified as defense databases.

Instead, the majority of the defense information sources were repositories of information in several different formats. The formats found were as follows. Often, the defense information source contained a combination of the formats. Many defense information sources contained a collection of web-based links to other sites of related interest, such as the Air University Library website at Maxwell Air Force Base. Some defense information sources were forums for discussions on defense. The Asia-Pacific Defense Forum, a professional military journal published quarterly by the U.S. Pacific Command, is an example of this approach. The NBR is an example of an information source that gathers, organizes and makes available published articles from different periodicals and research projects, serving as a clearinghouse for Asia research conducted worldwide. Other defense information sources published their own periodical, articles, research projects and books, such as the International Institute of Strategic Studies, with their *Strategic Digest.* Some defense information sources published several websites dedicated to areas of specialized interest. The Center for Defense Information is an example, with their World Military Expenditures website.

Defense information sites that met other criteria besides the currency criteria, and had hard defense data in one location are listed below.

- Center for Defense Information
- Center for Strategic and International Studies
- CIA World Factbook
- Defense Intelligence Organization

- Federation of American Scientists
- Heritage Foundation
- Institute for Defense and Disarmament Studies
- Institute for National Strategic Studies
- Institute for Peace and Conflict Studies
- International Institute for Strategic Studies
- International Strategic Studies Association
- Library of Congress Area Country Studies
- National Bureau of Asian Research
- Stockholm International Peace Research Institute
- U.S. State Department

A decision then had to be made whether to perform a detailed evaluation of the above list, or whether to further reduce the list. The factor resulting in the decision to further reduce the list was to keep the scope of this study to a manageable length, hence requiring a reduction in the number of databases for detailed evaluation.

To further reduce the database list, two more criteria were applied in combination. The original criterion of the number of Asia-Pacific region countries covered was reexamined. It was quickly realized that a defense and policy analyst interested in the Asia-Pacific region would require information on numerous Asia-Pacific region countries to gain an overall appreciation for defense trends and issues in the region. The next question was then, how many countries did a defense database have to cover to be useful? Eventually, the minimum number of 15 countries was chosen as a criterion for further evaluation. As the Asia-Pacific region country list had 31 countries, the final country criteria required that approximately half of those countries had to be covered for the Asian defense database to be valid, which seemed reasonable. Finally, to be selected, the database had to cover at least one of the initial criteria (besides the number of countries

covered criterion). Since the currency criterion was met by the databases almost without exception, this meant that several databases would be eliminated due to inadequate numbers of Asia-Pacific region countries covered.

The final list of Asia-Pacific defense databases to be evaluated in detail, after application of the two revised criteria in combination (at least 15 Asia-Pacific countries covered and at least one other criterion met), was as follows.

Asia-Pacific Defense Database	**Number of Asia-Pacific Region Countries Covered**
Center for Defense Information	14
Center for Strategic and International Studies	19
CIA World Factbook	31
Defense Intelligence Organization	21
Heritage Foundation	31
International Institute for Strategic Studies	31
International Strategic Studies Organization	31
Library of Congress Area Country Studies	23
Stockholm International Peace Research Institute	30
U.S. State Department	31

Table 5. Final List of Asia-Pacific Defense Databases.

Although the Center for Defense Information did not meet the final country criteria of a minimum of 15 countries covered (covering 14 countries instead), it was deemed close enough to proceed with final evaluation. The real break point in numbers of countries covered occurred at the 6 or 7 country point, which further supported keeping this database in the final list.

V. DEVELOPMENT OF FINAL EVALUATION CRITERIA TO APPLY TO THE ASIA-PACIFIC DEFENSE DATABASE LIST

In producing the list of detailed evaluation criteria to apply to the final Asia-Pacific defense database list, the prospective needs of defense and policy analysts were carefully considered. The evaluation of the remaining defense databases was therefore heavily based on their usefulness to the defense and policy analyst.

The following are the final evaluative criteria that were applied to the remaining Asia-Pacific defense databases. They were chosen and broadly organized into five areas, which corresponded to key areas of interest with respect to defense spending and related trends in the Asia-Pacific region.

A. FINAL EVALUATION CRITERIA

1. General Information

- How many of the countries in Asia does the database cover?
- How current is the information in the database? How often is it updated?
- Does the database show trends (data over time)? Which data is shown with trends?
- How accessible is the database? Where can it be found?
- Is the database easy to use (user friendly) and how is it organized?
- Is there a cost to use the database?

2. Spending Information

- Does the database show military expenditures as a percentage of GDP?
- Does the database show military spending as a percentage of the total government budget?
- Does the database provide a dollar basis for spending and is the spending data adjusted for inflation where applicable?

3. **Capabilities Information**

- What type of equipment is a country buying or building?
- Does the database have existing force structure information, to include as a minimum, size in manpower of the military, numbers of division-equivalents, combat aircraft, major naval combatants and the command and control organization of the military?
- Does the database show the type of force (conscript, all-volunteer or combination) of each country?
- Does the database list power projection capabilities for each country (long-range strategic weapons and platforms, strategic airlift, strategic and amphibious sealift)?
- Does the database describe any space-based capabilities for a country (global positioning, tracking, targeting and communications capabilities)?
- Does the database have training and morale information for each country (i.e., intangible factors of effectiveness)?
- Does the database give WMD (nuclear, biological and chemical) capabilities for each country?

4. **Other Internal and External Factors**

- Does the database list existing international alliances and agreements that each country is involved in?

5. **Arms Sales and Transfers**

- Does the database list data on arms sales and transfers for each country?

A discussion of the final evaluative criteria follows.

- **Criterion #1:** How many of the countries in Asia does the database cover and are there some countries which are considered essential for inclusion?

  Discussion: The first part of this criterion was previously discussed in Chapter III as one of the initial evaluation factors. One of the initial criteria applied to sort the initial set of databases was whether the databases being considered for evaluation covered at least 15 of the countries in the Asia-Pacific region. However, a database will be far more useful if it covers most or all of the countries in this region.

  The second part of this criterion was later added upon further consideration. Are there certain countries that should be in a database, and what would be the criteria to determine their importance for inclusion in the databases to be evaluated? Should the inclusion of these countries be a factor in assessing the quality of the databases? There are some countries in the Asia-Pacific region, which, by virtue of several factors, can

significantly influence the region with their armed forces. Hence, the answer both of the above questions is yes.

The following are factors which are indicators of significant influence. A country having any one of these characteristics of its military establishment should be included in the databases being evaluated. However, it is likely that, if a country exhibits at least one of the characteristics below, that it exhibits others.

- Amount of defense spending relative to other countries in the region in U.S. dollars, and as a percent of GDP: The top country in each of these two factors should be covered in the databases. In the absence of the final recommendations for the best databases, the CIA World Fact Book was used as the source for this information. North Korea has the highest percentage of GDP and Japan has the highest amount of defense spending in U.S. dollars.

- Size of armed forces relative to other countries in the region: Again, the top regional country in this factor was chosen. The CIA World Fact Book was used as the source for this information also. It has total military manpower for each country. China has the largest armed forces in the region, as well as the world.

- Suspected or confirmed WMD capabilities: The implications of having WMD are evident - the ability to attack another country in the region, using WMD, which could have a strategic impact far out of proportion to numbers of weapons used. A good example of this would be North Korea; a small, poor country with suspected WMD capabilities, which could greatly affect the region. Identification of those countries with confirmed WMD is objective, while identification of those countries with suspected WMD is subjective. China, India and Pakistan all have confirmed WMD, while North Korea has suspected WMD.

- Regional power projection capabilities to include long-range strategic weapons and platforms, strategic airlift, and amphibious sealift: A country's ability to project power outside of its borders indicates abilities to interdict shipping lanes and other strategic supply lines, deliver WMD, invade other countries, and support long-range efforts logistically. Countries with this ability can affect the region and hence must be included in the databases being evaluated. China, India, Pakistan, North Korea and Australia all fall into this category (Australia because of their aircraft carrier).

- On-going external conflicts or a history of conflicts with other countries in the region: A history of long-standing enmity between two countries based on ethnicity, territory, or prior wars might be a source for future conflict. While the projection of history into the future is subjective in nature, history is a good indicator for future conflict. India and Pakistan have fought three wars in the last 53

years, and Kashmir continues to be a source of dispute – an excellent example of an existing dispute and a history that points to the likelihood of future conflict. China and Taiwan; North Korea and South Korea; India and Pakistan; and Japan and China are loci for future conflicts based this criterion.

Table 6 lists the countries that exhibit at least one of these factors and which should have been covered by the databases that were evaluated.

Country
Australia
China
India
Japan
Pakistan
Korea, North
Korea, South
Taiwan

Table 6. Countries Mandatory to the Asia-Pacific Defense Databases.

- **Criterion #2:** How current is the database? How often is it updated?

  Discussion: This criterion was one of the initial evaluation factors and was discussed in Chapter III. As this research is being completed in the spring of 2001, a database was considered current if it was published or posted in a 1999 or 2000 version.

- **Criterion #3:** Does the database show trends (data over time)? Which data is shown with trends?

  Discussion: The first part of this criterion was one of the initial evaluation factors and was discussed in Chapter III. That criterion was taken a step further by asking which data was shown with trends.

- **Criterion #4:** How accessible is the database? Where can it be found?

  Discussion: If a database is inaccessible, it is of little use. For example, a published database found in libraries is not as accessible as a web-based database that is available free of charge on the web (which anyone with a web connection and personal computer can access). For purposes of this analysis, web-based databases will be considered the most accessible, and published databases that have to be ordered or found in a library will be considered the least accessible.

- **Criterion #5:** Is the database easy to use (user friendly) and how is it organized?

  Discussion: This criterion is subjective. It primarily covers ease in navigation through the database, and how the information in the database is presented and organized.

- **Criterion #6:** Is there a cost to use the database?

  Discussion: Proprietary databases are less desirable than free databases. This criterion aligns closely with accessibility, as databases that charge the user are, by definition, less accessible.

- **Criterion #7:** Does the database show military expenditures as a percentage of GDP?

  Discussion: This criterion was one of the initial evaluation factors and was discussed in Chapter III.

- **Criterion #8:** Does the database show military spending as a percentage of the total government budget?

  Discussion: Again, this information provides an interesting point of comparison with other countries and is an indication of how much of a country's government fiscal resources are being devoted to defense spending.

- **Criterion #9:** Does the database provide a dollar basis for spending and is the spending data adjusted for inflation where applicable?

  Discussion: This is a measure of dollars spent, adjusted to a base year for inflation where applicable, for defense expenditures for each country. Where this data is adjusted to the same currency and same base year for each country, this criterion provides another point of comparison. The dollar is the common currency for this purpose.

- **Criterion #10:** What type of equipment is a country buying?

  Discussion: This criterion was one of the initial evaluation factors and was discussed in Chapter III.

- **Criterion #11:** Does the database have existing force structure information, to include at a minimum, size in manpower of the services, numbers of division-equivalents, combat aircraft, major naval combatants and the command and control organization of the military?

  Discussion: This criterion was one of the initial evaluation factors and was discussed in Chapter III. The description of the command and control organization was added as useful information. During development of the initial evaluation factors, additional force structure information was deemed to be too much information. Upon further consideration, this conclusion was deemed to be in error. If presented properly, additional force structure information could be very useful to defense and policy

analysts. For example, if numbers and types of weapons platforms are listed, this could be an additional indicator of capability. This information would be even more significant if the platforms were sophisticated, and were therefore force multipliers.

- **Criterion #12:** Does the database show the type of force (conscript, all-volunteer or combination) of each country?

  Discussion: The answer to this question is an important, although not definitive, indicator of quality. Generally, all volunteer forces, although more expensive to recruit and pay, are of higher quality than conscript (drafted) forces. Obviously, combinations of the two fall somewhere in between.

- **Criterion #13:** Does the database list power projection capabilities for each country (long-range strategic weapons and platforms, strategic airlift, strategic and amphibious sealift)?

  Discussion: As discussed above, power projection can mean interdiction of shipping lanes and other strategic supply lines through a variety of means, delivering WMD or conventional warheads with long-range missiles or carrier based aircraft to targets in another country, and invasion (overland or amphibious) of another country.

- **Criterion #14:** Does the database describe any space-based capabilities for a country (global positioning, tracking, targeting and communications capabilities)?

- **Discussion:** Space-based capabilities greatly enhance military effectiveness. From simply telling ships, aircraft and ground forces where they are located, to providing mid-course targeting updates to ICBMs, to providing critical intelligence information, space-based capabilities are a force multiplier that can't be ignored. Space-based capabilities can be a source of significant vulnerability.

- **Criterion #15:** Does the database have training and morale information for each country (i.e., intangible factors of effectiveness)?

- **Discussion:** Training and morale are subjectively evaluated, but are closely linked to effectiveness, and are difficult to measure. A force with sophisticated weapons that cannot use all of the capabilities of the platforms is diminished in effectiveness. A good example of this was the Iranian use of U.S. made F-14s during the Iran-Iraq War. While in possession of arguably the most effective aircraft in the world at the time, the Iranians were unable to capitalize on this asset because the U.S. advisors on the F-14 use had pulled out of the country in the late 1970s (it should be noted that the lack of a spare parts supply line for the F-14s was a factor also).

- **Criterion#16:** Does the database give WMD (nuclear, biological and chemical) capabilities for each country?

- **Discussion:** Although the likelihood of the use of WMD by a sovereign nation is low, their existence adds a completely new dynamic to international relations in the region. They provide a measure of deterrence against aggression and, if used, may quickly decide the tactical or strategic outcome of a conflict. Their suspected presence in the hands of an economically isolated rogue state of questionable stability, e.g., North Korea, provides another problem for defense policy analysts.

- **Criterion #17:** Does the database list international alliances and agreements for each country?

- **Discussion:** The presence of alliances and agreements can tell the analyst how a conflict might spread if war breaks out. They can also indicate stability in the region or in certain areas of the region, as well as providing a measure of the state of relations between various countries.

- **Criterion #18:** Does the database list data on arms sales and transfers for each country?

  Discussion: Proliferation of both conventional weaponry and WMD is of great concern to the defense policy analyst. This criterion can be an indicator of capability, if it details what is being bought, sold or transferred and who is involved in the transaction. It could also indicate a propensity towards instability or greater stability, depending on who is purchasing the equipment. Although many countries purchase weaponry for defensive purposes, several purchase weapons to prepare for aggression. By knowing which countries the exporting country is selling to, the analyst can also make deductions about foreign policy and strategy.

One of the original evaluation criteria, defense spending breakout by service, was dropped during this process. There was no information in this criterion that could not be imparted by a combination of total defense spending, force structure, arms transfer data and weapons being bought or built.

In summary, the above criteria were chosen based on assumed utility for the defense policy analyst. It is acknowledged that there may be other criteria analysts might be interested in; every researcher will have different needs. However, the above criteria provided a sound basis of information for defense expenditures and issues in the Asia-Pacific region.

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VI. A PUBLIC POLICY ANALYST'S GUIDE TO SIGNIFICANT ASIA-PACIFIC DEFENSE DATABASES - APPLICATION OF THE FINAL EVALUATION CRITERIA TO THE ASIA-PACIFIC DEFENSE DATABASE LIST

In this chapter, the final evaluation criteria are applied to the Asia-Pacific defense databases. Table 8, found in Appendix A, is a comparison table showing how the databases fared against the evaluation criteria. The databases were not rated against criterion #4 in the table, as this is purely a discussion criterion. Many of the conclusions in the table are qualified, and these are discussed as well, under the individual database discussions. Discussions of each database follow. Sample sections of each database are included in Appendix B. Table 9, found in Appendix A, is a detailed listing comparing country coverage between databases.

A. CENTER FOR DEFENSE INFORMATION

1. Description

This database is a collection of several small on-line databases and fact sheets that are available free of charge. They will be individually described, and then evaluated as a whole. They comprise:

- U.S. Military Spending vs. the World, FY 1997-01
- Military Strengths of U.S., Allied and Selected Other Armed Forces
- The Asian Military Situation
- Nuclear Weapons Database

U.S. Military Spending vs. the World is a collection of fact sheets for fiscal years 1997 through 2001, which give total military spending for several countries, including nine countries in the Asia-Pacific region. Its sources are given as the U.S. Department of Defense (DOD) and IISS.

Military Strengths of U.S., Allied and Selected Other Armed Forces is a fact sheet, which shows the military forces of several countries, including eight countries in the Asia-Pacific region. The armed forces statistics covered include numbers of active and reserve troops, heavy tanks, armored fighting vehicles, airplanes, helicopters, major warships, amphibious/mine/support ships and military budget. This data is all from 1996 except for defense expenditures, which were from 1995. Its sources are given as IISS, DOD and the CIA.

The Asian Military Situation is a collection of individual country fact sheets (one for each of 14 countries in the Asia-Pacific region). Each country fact sheet has total armed forces, defense budget, details on the country's army, navy and air force, paramilitary forces (where applicable), a short discussion on trends and a military assessment. No source is given for this information.

The Nuclear Weapons Database gives numbers of strategic and non-strategic nuclear weapons for China, India and Pakistan and basic statistics on the delivery vehicles and warheads. CDI finishes each country's nuclear weapons facts in this section with a short discussion of their nuclear weapons program. CDI then goes into further detail on the delivery systems and warheads in a separate section. Sources are given as Jane's Information Group and IISS for this data.

2. Assessment

a. General Information

The CDI database only covers 14 countries in the Asia-Pacific region and, for several fact sheets, that number is less. Australia is not covered, which is a noticeable omission. The data in the CDI database is current with the exception of the data in the

comparative Military Strengths of U.S., Allied and Selected Other Armed Forces fact sheet, which is five to six years old. This greatly diminishes the value of this fact sheet. No trended information is provided. The CDI database is easily accessible on the web, but is not published and is not available as a PDF style document. As will be seen during other evaluations, PDF documents are useful to download as an entire database, to be referenced and/or printed later.

The CDI database is organized logically, although switching between the different fact sheets and databases can get tedious. Overall, the database is simple, and of manageable length. If the analyst had to print the entire database while on-line, it would not be difficult. Although the CDI database as a whole does not show trended data, the defense and policy analyst could obtain top line spending trends by calling up the various military spending sheets for fiscal years 1997 through 2001. As this data is in then year dollars, not constant dollars, the utility of the comparison would be somewhat lessened. A short discussion of general trends in military spending is included as part of the individual country fact sheets in the Asia-Pacific region Military Situation database. As stated earlier, there is no cost to access the CDI database.

b. Spending Information

Spending data is first given in the U.S. Military Spending vs. the World Fact Sheets. As a snap shot comparison in then year dollars, this information is useful. CDI acknowledges that, in some cases, actual expenditures may be much higher than official budget figures and compensates for this, although they don't say how. Comparison among countries in the Asia-Pacific region is difficult using this method of presentation. Spending information for the last two years is also given in the individual

country fact sheets, as part of the Asia-Pacific region Military Situation database. This really does not allow the analyst to establish a trend. Spending as a percentage of GDP and combined government expenditures (CGE) is not given in any CDI database. As such, CDI the spending information is relatively weak.

c. Capabilities Information

Capabilities information in the CDI database takes several forms, 1) as part of the Comparative Military Strengths fact sheet, 2) as part of the individual country fact sheets in the Asian Military Situation database, and 3) as part of the Nuclear Weapons Database. As discussed earlier, the Comparative Military Strengths fact sheet is of limited utility due to the age of its data. This is unfortunate, as this is a superior method of comparison. The capabilities information in the individual country fact sheets is better, as it is current, and goes into more detail. Comparison with this information is more difficult, however. The assessment discussions at the end of the individual country fact sheets are useful, covering the latest developments of importance and also power projection capabilities.

The strongest display of CDI's capabilities information is in the nuclear weapons arena. Several levels of detail are available and country-country comparison is possible. An omission in this area is North Korea, although any substantive information regarding North Korea's nuclear weapons program is likely to be classified or conjecture. Chemical/biological information is not available for countries in the Asia-Pacific region in the CDI database, another omission. The CDI database therefore covers three of the seven capabilities criteria, and is useful to the defense analyst in that regard.

d. Other Internal and External Factors

No information is given by CDI for this evaluation factor.

e. Arms Sales and Imports

No information is given by CDI for this evaluation factor.

f. Summary

The CDI defense database is an example of repackaged data from secondary sources that can be summarized as follows:

g. Strengths

- Nuclear weapons data is available in different formats and levels of detail
- Country fact sheets with capabilities and spending information are succinct, and up-to-date, with useful discussions on trends and overall military assessments
- Simplicity is a strength here
- Free and easy to access

h. Weaknesses

- Can become tedious switching among their databases, especially when load times are long
- No coverage of smaller countries in the Asia-Pacific region
- No coverage of Australia
- Limited spending information
- Comparative Military Strengths fact sheet could be very useful, but its data is very old

B. CIA WORLD FACTBOOK

1. Description

The CIA World Factbook is an on-line database that provides a series of country profiles on most of the countries in the world. The individual country profiles are divided into the following sections.

- Geography
- Government

- People
- Economy
- Communications
- Transportation
- Military
- Transnational Issues

Other information provided includes reference maps, explanatory notes, the United Nations, international organizations and groups and other information.

The military sections in the country profiles provide details on the respective military services, military manpower and military spending. The military service information gives the names of the ground, naval, air, marine, and other defense or security forces. The military expenditures information gives current military expenditures in U.S. dollars. The Factbook admits that the data for military expenditures should be treated with caution because of different price patterns and accounting methods among nations, as well as wide variations in the strength of their currencies. Military expenditures are also given in percent of GDP terms.

The military manpower data includes:

- Military manpower - availability: This entry gives the total numbers of males and females age 15-49 and assumes that every individual is fit to serve.
- Military manpower - fit for military service: This entry gives the number of males and females age 15-49 fit for military service. This figure tries to correct for the health situation in the country and reduces the maximum potential number to a more realistic estimate of the actual number fit to serve.
- Military manpower - military age: This entry gives the minimum age at which an individual may volunteer for military service or be subject to conscription.
- Military manpower - reaching military age annually: This entry gives the number of draft-age males and females entering the military manpower

pool in any given year and is a measure of the availability of draft-age young adults.

The Factbook has a sort feature where the complete country list can be displayed with just one piece of data (i.e., military spending as a percentage of GDP) shown. This allows some comparison, but only if the countries compared are close to one another in the alphabet. The sources for the Factbook are given as a variety of U.S. government sources.

2. Assessment

a. General Information

The Factbook covers all 31 countries in the Asia-Pacific region. The information is current, with the current edition of the Factbook using information available as of 1 January 2000. The Factbook is an annual document. No trend information is given in the Factbook, a significant omission. The Factbook is available in a number of versions and is very accessible. Besides being available for viewing on-line, two downloadable versions in compressed ZIP format are available, one for high bandwidth users and another version for low bandwidth users. A printed version is available from the U.S. Government Printing Office (GPO) for $75.00. The Factbook is well organized, and its homepage is easy to navigate. The countries are all in alphabetical order, so it is easy to find the desired country. Within the individual country profiles, the analyst need only go to the relevant section and review the data.

b. Spending Information

Current military spending information is given for each country both in current U.S. dollar figures and as a percentage of GDP. Military spending as a percentage of total government budget is not given, although it can be computed from the

information in the country profiles. No tables showing country-to-country comparisons are available for this data.

c. Capabilities Information

No military capabilities information is given in the Factbook, which is a major weakness. However, the communications section for each country can give the analyst some idea of the country's space-based communications capabilities. As this is not military specific, its usefulness is limited.

d. Other Internal and External Factors

The international organizations that each country participates in are provided in the government section in each country profile. It is presented as a list of abbreviations, and without explanations, is of limited use.

e. Arms Sales and Imports

No data is provided for this evaluation criterion, another weakness.

f. Summary

The CIA World Factbook is an official U.S. Government database that provides a relatively complete profile for every country in the world. As such, it can be best summarized as a "jack-of-all-trades" database that provides very limited defense information.

g. Strengths

- Current spending data is provided
- The Factbook is available free of charge
- It covers all countries in the Asia-Pacific region

h. Weaknesses

- No defense information, except on spending, is provided
- No trend information is provided
- Country-to-country comparisons are not facilitated

C. CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

1. Description

CSIS provides The Asian and Chinese Military Balance: A Comparative Summary of Military Expenditures, Manpower, Land, Air, Naval, and Nuclear Forces, and Arms Sales. The Asian and Chinese Military Balance is a 77-page document organized into eight sections, as follows.

- Comparative military spending
- Comparative military forces
- Comparative military manpower
- Comparative land weapons
- Comparative air weapons
- Comparative naval weapons
- Nuclear missile programs and developments
- Arms transfers

This database has numerous graphics, data tables and technical notes. The author of this database is Mr. Anthony Cordesman.

2. Assessment

a. General Information

The Asian and Chinese Military Balance covers up to 19 countries in the Asia-Pacific region in its data tables and bar charts, covering all of the mandatory countries in evaluation criterion #1. This database is current with this edition of the database using information available as of early 2000. Trended information is given in different formats in the military spending and arms transfer sections, which will be discussed below. This database is available in a downloadable PDF version only, in the Military Balance section of the CSIS website. The Balance is logically organized and of reasonable length. The PDF document can be slow to navigate through depending on the

speed of the computer and the Internet connection being used, but it can always be printed out. The Balance is available free of charge.

b. Spending Information

Military spending information is given for each country in current U.S. dollar figures. Military spending as a percentage of total government budget and GDP is not given. The spending information that is given, however, is presented in several formats and over different time periods. Where trended spending information is given, it is presented in 1995 or 1997 U.S. dollars. After starting with world and regional defense spending information, the author then provides a 1998 comparative spending bar chart for all the Asia-Pacific region countries. Trended spending information is further provided in three-dimensional chart form for the major Asia-Pacific countries for 1985-1997. The author takes this chart one step further and provides three spending charts showing trends for likely adversaries only: Taiwan, Japan and China; South Korea and North Korea and; India and Pakistan. These charts are very useful and are unique to this database (comparative trending between likely adversaries), with the exception of SIPRI's FIRST system. The graphics, however, can be difficult to read if the document is printed out in black and white. Sources for the spending information section are given as the U.S. State Department (World Military Expenditures and Arms Transfers).and the IISS publication, The Military Balance 1998-1999. The lack of two of the three spending criteria is compensated for by the superior trended and comparative presentations of the remaining spending criterion.

c. Capabilities Information

The capabilities information is very detailed in the force structure area. Mr. Cordesman starts with detailed comparative data charts on Asia-Pacific region

military forces in 1998 and 1999. These charts include the basic force structure information in the evaluation criteria, but then further break the information down into numbers and types of nuclear, land, air and sea equipment for nine countries in the Asia-Pacific region. The Balance then goes into more detail in separate sections on manpower, air, land and sea forces. Comparative bar and data charts are provided in all of these sections. The manpower section has comparative data and bar charts on manpower by service.

In the nuclear weapons section, the Balance gives numbers and details on nuclear delivery systems for China, Pakistan and India. Of interest are the quotes from U.S. DOD and National Intelligence Council (NIC) sources on Chinese nuclear modernization. Another plus is a two-page section on the status of North Korean missile developments. This section uses information from sources such as the CIA, NIC and DIA to build a qualitative picture of the North Korean missile program, a feature unique among all of the databases. Chemical and Biological capabilities for these countries are discussed, another unique contribution. The conventional and WMD sections in this database are very strong in the force structure, and WMD areas. It should be noted that CSIS also maintains a separate even more comprehensive database, which concentrates solely on WMD capabilities for the U.S., Russia, Ukraine, China, India, Pakistan, North Korea, France and the United Kingdom. However, as can be seen from Table 7, some capabilities information is missing. The sources for the capabilities information are given as the IISS, Jane's Information Group, DOD, International Defense Review, the Congressional Research Service and the World Defense Almanac. The capabilities information in the Balance is very useful to the defense and policy analyst.

d. Other Internal and External Factors

No data is provided on the international organizations that each country participates in.

e. Arms Sales and Imports

Fully one quarter of the Balance is devoted to arms transfers. After starting with world and regional arms transfer information, Mr. Cordesman concentrates primarily on Chinese arms transfers, with some data on the North Koreans as well. The charts on this subject are titled as follows.

- Trends in Chinese Arms Exports and Imports vs. Total Exports 1986-1996
- Trends in Chinese Arms Exports and Imports 1986-1996
- Trends in Chinese Arms Deliveries and New Agreements with the Developing World: 1990-1997
- Percentage of Chinese New Agreements Going to Given Regions of the Developing World: 1990-1997
- Chinese Deliveries of Actual Major Weapons: 1987-1997
- Chinese Deliveries of Tactical Missiles: 1983-1997

Again, these charts can get tedious if they are viewed in black and white. It is also difficult to discern what a few of the charts in this section are trying to show. The strength of this section is limited by the fact that it concentrates almost solely on the Chinese, although admittedly, the full title of the Balance alludes to this focus. The primary source for the data in this section is the U.S. State Department (World Military Expenditures and Arms Transfers).

f. Summary

The Asian and Chinese Military Balance is a concise, highly effective repackaging of data from other secondary sources that are well documented. Its

spending, capabilities and arms transfer areas are strong, with the force structure and WMD criteria being the best documented.

g. Strengths

- The Balance is available free of charge
- The Balance is easy to access and download
- The charts can be very useful, if viewed in color
- Compares likely adversaries both in chart and tabular form
- Military force structure data is detailed
- WMD discussions and data are very strong
- The chemical and biological discussions are unique
- It's the only database with North Korean WMD discussion
- Arms transfer data for China and North Korea is detailed
- Trending and comparisons are facilitated
- Specializes on the Asia-Pacific region

h. Weaknesses

- Some spending and capabilities evaluation factors are missing
- No arms transfer data for countries other than China and North Korea
- Charts are sometimes busy, confusing and difficult to view in black and white

D. DEFENSE INTELLIGENCE ORGANIZATION

1. Description

The DIO has made available on-line, Defense Economic Trends in the Asia-Pacific 1999. The authors' stated purpose for this document is to

> Analyze trends in defense spending in the Asia-Pacific since 1990. In doing so, it gathers defense data and national income data to enable comparisons over time and between countries, and identifies various data sources and explains why they differ. (Defense Intelligence Organization, Defense Economic Trends in the Asia-Pacific, 1999)

The 50-page database is organized into sections on North Asia, Association of South East Asian Nations (ASEAN), South Asia and the South Pacific. Each of these

sub-regional sections starts with an overview, which describes current economic performance and defense budget developments. Included in the overview are trended bar charts and graphs on recent real GDP growth and decline, defense budgets in 1995 U.S. dollars and defense budgets as a percentage of government spending, for the countries in that sub-region only. Following each overview are individual country assessments on economic performance and defense budgets.

Following the sub-region sections, fully two-thirds of the database is comprised of detailed data charts for 1990-1999. Each country has its own chart, which lists data for the years 1990-1999 in the following categories.

Official Defense Budget

- Defense budget in current Australian dollars
- Defense budget in 1995 Australian dollars
- Defense budget in 1995 U.S. dollars
- Defense budget real growth in percent
- Defense budget in percent of GDP
- Defense budget in percent of government spending
- Defense budget per capita in 1995 U.S. dollars

Defense Spending – International Monetary Fund

- Defense budget in current Australian dollars
- Defense budget in 1995 U.S. dollars

Similarly detailed data is provided in each chart for GDP. The authors then use the above data charts to build data charts comparing all 21 countries for the following defense information.

- Defense budget in 1995 U.S. dollars
- Defense budget real growth in percent

- Defense budget in percent of GDP
- Defense budget in percent of government spending
- Defense budget per capita in 1995 U.S. dollars

DIO's sources for the defense data are listed as official budget sources from national governments and the International Monetary Fund (IMF), although it acknowledges that defense data for Taiwan until 1993 is sourced from the IISS. The IMF data is provided to readers to allow comparisons between countries' official budget figures and IMF estimates of their actual military spending.

The DIO acknowledges that the other primary publishers of similar data are the IMF, the IISS, the U.S. State Department and the SIPRI. With the exception of the IMF, all of these sources are compared in the final database evaluations in this thesis. The DIO provides notes on these other publishers of similar data, specifically how they compile their data. This provides interesting points of comparison.

2. Assessment

a. General Information

The DIO covers 21 countries in the Asia-Pacific region, which is adequate. The DIO covers all of the mandatory countries in criterion #1. The most notable omission here is of the entire Central Asian sub-region. Given the geographic location and focus of the Australian authors of this database, this omission is understandable. The information is current (the latest date of information is given as July 31, 1999), and the introduction states that the DIO database is an annual document, initiated in 1990. Trended information is given for all three defense spending criteria for the 1990's, which is a definite strongpoint.

This book is available on-line in a free downloadable PDF version. The organization of the database is simple. General economic and defense summaries are grouped by sub-region and country in the first third, while the latter two thirds consist of trended defense and economic data by individual country and in a comparison format. Some of the charts and graphs are difficult to interpret unless viewed in color. The fact that the database concentrates solely on the Asia-Pacific region is convenient, and contributes to its brevity and conciseness.

b. Spending Information

All three of the spending criteria are covered in this database. As mentioned above, this data is trended from 1990-1999, and two sources are given for some criteria to compare official government statements to a neutral source (in this case, the IMF). The overviews include trended bar charts and graphs on recent real GDP growth and decline, defense budgets in 1995 U.S. dollars and defense budgets as a percentage of government spending. However, the database is not always consistent in providing the same charts for every sub-region. In one interesting example, a graph comparing ASEAN 5 and Australian defense budgets in current U.S. dollars for 1968-1999 is given. The charts in the latter two thirds of the database give a complete defense spending picture for the Asia-Pacific region in the 1990's.

Because of the extensive trended and comparative information, Defense Economic Trends in the Asia-Pacific 1999 is the strongest database in the defense spending area. Unfortunately for the analyst, the strength of the database ends at this point, as no other defense information is provided. This is the major weakness of this database.

c. Capabilities Information

No information is given for this criterion.

d. Other Internal and External Factors

No information is given for this criterion.

e. Arms Sales and Transfers

No information is given for this criterion.

f. Summary

Defense Economic Trends in the Asia-Pacific 1999 is a specialized database that concentrates on defense spending, and organizes it in a very useful manner. In this area it is without peer.

g. Strengths

- Defense spending information that is trended and comparative
- It is available free of charge and is easy to access and download
- Concentrates solely on the Asia-Pacific region
- Concise

h. Weaknesses

- No other information besides the defense spending information
- No coverage of Central Asia
- Some charts and graphs are diminished unless viewed in color

E. HERITAGE FOUNDATION

1. Description

The Heritage Foundation publishes the U.S. and Asia Statistical Handbook 2000-2001, a small, pocket sized 127-page book. Following a short introduction, which covers such topics as the Asia-Pacific region economic outlook, potential threats to economic freedom and the Asia-Pacific region security challenge, the Statistical Handbook provides a series of comparative bar charts and data tables. Following useful sub-regional

maps, it then has a short (approximately one page each) economic analysis of each country in the Asia-Pacific region. The last half of the Statistical Handbook is comprised of individual country descriptions, which cover the following areas such as land, population, political and economic statistics and the military. The military section for each country is further broken down into the following areas.

- 1999 military budget
- Increase over 1998 military budget
- Defense outlay as a share of GDP
- Defense outlay as a share of government spending
- Total regular military forces and forces by service
- Ballistic missiles
- Combat aircraft
- Naval vessels
- Security alliance with the U.S.
- Other Security alliances
- U.S. military installations (in the country)
- U.S. military personnel (stationed in the country)
- Foreign military personnel
- Armed opposition groups

The author of the Statistical Handbook is given as Pablo Pasocolan. Sources for the Statistical Handbook include the CIA World Factbook, the IISS (The Military Balance 2000-2001), the Far Eastern Economic Review, and other NGOs and U.S. Government Sources.

2. Assessment

a. General Information

The Statistical Handbook covers all 31 countries in the Asia-Pacific region, and is a good example of a full coverage document, which concentrates almost

solely on the Asia-Pacific region, in a reasonable length. The information is current, and the introduction states that the Statistical Handbook is an annual document. Trended information is given, but only for economic statistics. The complete book is not available on-line in a downloadable PDF version. Only the first half of the book is available on-line as a "sample." The individual country sections are missing from this "sample."

If the analyst desires the whole book, then $7.50 must be sent to the Heritage Foundation. Admittedly, this rate is very reasonable, and the on-line ordering process is simple, with credit card orders being accepted. A copy of the database was ordered for this thesis and it arrived in about a week. The Statistical Handbook is well organized. The thin, conveniently packaged pocket format is a plus also, compared to some of the other larger published databases. Like all PDF software, the PDF sample document can be slow to navigate, depending on the speed of the computer and the Internet connection being used, but it can always be printed out.

b. Spending Information

All three of the spending criteria are covered in the Statistical Handbook. Two comparative bar charts are provided, 1999 defense spending as a share of GDP and 1999 defense spending in billions of U.S. dollars. These bar charts cover the top 15 of the countries in the region for each of these two criteria. As stated above, the individual country sections cover 1999 military budget, increase over 1998 military budget, defense outlay as a share of GDP and defense outlay as a share of government spending. The only trend given is the increase of the military budget over 1998, a major weakness.

c. Capabilities Information

The capabilities information for each country is concise, covering the force structure criteria by providing total regular military forces and forces by service, ballistic missiles, combat aircraft, and naval vessels. The combat aircraft are further sub-divided into fixed wing aircraft and helicopters, and the naval vessels are broken down by type. Thus, several capabilities criteria are covered, but several are not. Although ballistic missile data is given, no chemical or biological information is provided, and therefore only part of the WMD criterion is covered. Interestingly enough, ballistic missiles by type are listed for North Korea, albeit with no explanation. Capabilities comparisons between countries are difficult with no comparative tables or charts in this area.

d. Other Internal and External Factors

The short listing of security alliances (not by acronym, but by type of alliance) is useful and helps the defense and policy analyst understand how conflict would spread if it broke out.

e. Arms Sales and Imports

No information is given for this criterion.

f. Summary

The U.S. and Asia Statistical Handbook is a concise, general interest source of information on the Asia-Pacific region. It skims a lot of defense information in top-level format, and should be considered a good start for the defense and policy analyst. However, its weaknesses are significant. Several trend charts on defense spending, comparison charts in military equipment and some arms transfer data would have made this database the best available.

g. Strengths

- The Handbook is cheap and easy to purchase
- The country coverage is strong
- Security alliances listing by type, instead of acronym, is useful
- The thin, pocket format is convenient
- Good overall information provided, although some gaps exist
- Concentrates on the Asia-Pacific region

h. Weaknesses

- Almost no trended information
- No arms transfer data is given
- Comparative information is very limited

F. INTERNATIONAL INSTITUTE OF STRATEGIC STUDIES

1. Description

IISS publishes the Military Balance 2000/2001, an assessment of the military capabilities and defense economics of 170 countries. Country-by-country entries list military organizations, weapons and equipment holdings, personnel, and relevant economic and demographic data. It also includes essays analyzing key global issues, such as the international arms trade, information technology, command and control and unmanned aerial vehicles.

The three-quarter-inch-thick soft back book, published in October 2000, is divided into country entries grouped by region (Part I) and analyses and tables (Part II). Each regional discussion starts with a short essay covering the major military and economic developments affecting security policy in the region. This is followed by a short essay for each country in the region. These short essays cover recent developments in military spending and trade in weapons. The short essays are interspersed with trended data charts covering different topics for the major countries in the region. A data table is

then provided showing arms orders and deliveries 1998-2000 for all countries in the region. The regional analyses are completed by individual country data charts with recent trended defense spending data and detailed armed forces orders of battle. The data in the current edition is as of 1 August 2000. No specific sources are given for The Military Balance, and the authors state that the assessments are its own, based on a wide variety of sources. They state that the tables are based on the most accurate data available, or, on the best estimate that can be made with reasonable confidence.

2. Assessment

a. General Information

The Military Balance covers all 31 countries in the Asia-Pacific region, and therefore has strong country coverage. Trended information is given on a variety of topics. The book is not available on-line and can be ordered for $126 (individuals) and $155 (institutions). These are yearly subscription rates, and a new volume is published every year. The high cost obviously limits its accessibility. CD-ROM versions have been made available for the volumes published from 1992-1996. These CD-ROM versions have search capabilities, which can be very useful for electronic databases. However, the age of the CD-ROM editions limits their usefulness.

The organization of this book could be improved. The data tables in the regional essay sections in Part I do not always cover the same topics, and Part II of the book could have been integrated into Part I, so that all information on one region would be in one place. In order to keep the thickness of the book to a manageable size, data has been compressed by the extensive use of abbreviations. This method of data presentation can be confusing. To assist the analyst, a laminated card is provided at the back of the

book, which is an alphabetical index of abbreviations. This card may be detached and used as a bookmark. Given the book's strengths, these issues are relatively minor.

b. Spending Information

Two of the three spending criteria are covered in the book, with spending as a percentage of total government budget missing. Defense expenditures and defense budget data are provided in U.S. dollars and local currency for 1998-2001. Exchange rates are provided for each year comparing the local currency to the U.S. dollar. Defense spending as a percentage of GDP is given in the back of the book in Part II. As this edition is for 2000/2001, only budgeted defense data for 2000-2001 is provided, and actual expenditures are given for 1998-1999. Additional defense spending data, such as spending by function, spending by service or spending by major procurement, is given in the data tables interspersed throughout the country narratives. As stated earlier, the use of these data tables is not consistent. Part II of the book contains trended, comparative defense spending tables, with the countries grouped by region. These tables include.

- Defense expenditures in U.S. dollars for 1985, 1998 and 1999
- Defense expenditures per capita for 1985, 1998 and 1999
- Expenditures as a percent of GDP for 1985, 1998 and 1999
- Numbers in armed forces for 1985 and 1999
- Estimated reservists for 1999
- Para-military personnel for 1999

These tables are very useful, making this source the only one to group both spending and force size data in a comparative, trended format.

c. Capabilities Information

Several of these criteria are covered in this database. Arms orders and deliveries and the country narratives together give a good picture of recent arms

acquisitions. Force structure information is detailed with personnel strengths by service, number of service units (divisions, squadrons, etc.) and numbers and types of major weapon platforms. Where applicable, the conscription is noted. With some knowledge of platform capabilities, the analyst can discern power projection capabilities from the detailed force structure information. Space-based capabilities and training/morale information are not discussed. Nuclear capabilities are given, but chemical and biological capabilities are not. The capabilities area is therefore fairly strong.

d. Other Internal and External Factors

No information on international agreements and alliances is given.

e. Arms Sales and Imports

Besides the tables in Part I showing arms orders and deliveries 1998-2000 for the countries in each region, additional international arms trade data is shown in the tables in Part II of the book. This information includes the value of arms exports deliveries and market share for China for 1987 and 1993-1999. The value of arms imports to nine countries in the Asia-Pacific region for 1987 and 1993-1999 is also provided. The trended arms transfer spending data in Part II of the book, combined with the recent arms deliveries by platform type in Part I of the book, present one of the most complete pictures on arms transfers of any database.

f. Summary

The Military Balance 2000/2001 is a database based on primary sources that serves as a reference for many of the databases being evaluated. This should give an indication of the high regard that others hold for it. The extensive trended, comparative data on multiple criteria, combined with useful narrative explanations of defense developments, is superior.

g. Strengths

- Regional overviews are useful
- Additional data tables in Part I, although not consistently provided, are useful
- Trended, comparative data tables in Part II on arms trade, defense expenditures and force structure are without peer
- Very detailed force structure and capabilities information
- Good discussions on individual countries
- Arms import information by weapons platform is useful

h. Weaknesses

- Expensive and not available on-line
- Compressed data with abbreviations can be tedious to read
- Could be more efficiently organized

G. INTERNATIONAL STRATEGIC STUDIES ASSOCIATION

1. Description

The ISSA has been publishing the Defense and Foreign Affairs Handbook (DFAH) since 1976. The hardbound 1999 edition of the DFAH covers 238 countries in its 1800 pages. The book has a section on each country. Within each country section, there is defense information, which covers the following.

- Defense overview
- Structure
- Chemical/biological capabilities (if applicable)
- Key personnel
- Total armed forces in manpower
- Paramilitary forces (if applicable)
- Available manpower
- Service period
- Annual military expenditures
- Alliances and organizations
- Offensive and defensive strategic forces (if applicable)

- Army, navy and air force orders of battle

No specific sources are given for the DFAH, but since the information covered is so broad, a wide variety of sources are probably used. The DFAH is clearly meant to be a single volume reference on all countries of the world. As such, its utility as an Asia-Pacific region defense database is limited.

2. Assessment

a. General Information

DFAH covers all 31 countries in the Asia-Pacific region. The latest edition of DFAH is the 1999 version, and it is published every three years, the previous edition being the 1996 version. Little trended data is given for any defense information. The organization of the book does not facilitate comparisons and no tabulated comparative data is provided. DFAH is only available as a hardback book and can be ordered from the ISSA for $242.00. This makes it the most expensive of all the databases being evaluated. Since it is also only available in hardcover format, this database can be considered the least accessible of all. DFAH is logically organized by country in alphabetical order.

b. Spending Information

Only the total military budget figure is given for each country, in both U.S. and local currency. It cannot be determined whether the U.S. dollar figure has been adjusted to a base year. Two years of military budgets are given, which consisted in this edition of 1997 and 1996 data. Thus, what little spending data was given, is dated. However, the DFAH meets the currency criterion, being published in 1999. Overall, the defense spending information is lacking in DFAH.

c. Capabilities Information

In contrast, all of the capabilities criteria are covered in the DFAH. The defense overview for each country details the latest weapons being built or bought. The force structure criterion is more than adequately covered in the service orders of battle. Each service order of battle has manpower, service period, organization, deployments (locations) and equipment. The organization and deployment information together represent a complete top-level picture of how each service is organized and where its forces are located, something found in no other defense database being evaluated. The equipment section has numbers and types of major weapons platforms. Conscription, if used, is noted for each service. The defense overviews and military equipment sections give a good idea of power projection capabilities, making this again one of the few databases to cover this criterion. The defense overviews and strategic defense systems give a picture of space-based capabilities. The DFAH is the only database to sufficiently cover this information. Training and morale information are discussed in the defense overviews and in the individual service sections. WMD are covered, as are chemical/biological capabilities. The DFAH is again one of the few databases to cover chemical/biological capabilities. Overall, the DFAH is one of the strongest of all of the databases in the capabilities area, although no trended data are provided in this area.

d. Other Internal and External Factors

Alliances and organizations are both listed and briefly discussed, and the discussions are very useful.

e. Arms Sales and Imports

Arms trade is discussed in the defense overview sections, but the discussion is far from rigorous. This area is fairly weak compared to other databases.

f. Summary

The DFAH is a very good reference, possibly the best, in the capabilities and internal/external factors areas. Its spending information is lacking. The complete lack of trended and comparative data is a problem, the DFAH essentially being a snapshot in time of each country's defense establishment. The comments by the editors interspersed throughout the book, provide valuable insight on murky issues or data.

g. Strengths

- Overview essays are very detailed and informative
- Capabilities information is complete
- Alliance and organization list is very useful
- Comments by editors help interpret the information

h. Weaknesses

- Minimal trended data
- No comparative data
- No tabulated data
- Minimal defense spending information
- Inaccessible and very expensive

H. LIBRARY OF CONGRESS

1. Description

The Library of Congress Area Country Studies Series website contains the on-line versions of books previously published in hard copy by the Federal Research Division of the Library of Congress. Because the original intent of the Series' sponsor was to focus primarily on lesser-known areas of the world or regions in which U.S. forces might be deployed, the Series is not all-inclusive. At present, 101 countries and regions are covered.

The Country Studies Series presents description and analysis of the historical setting and the social, economic, political, and national security systems and institutions

of the countries covered. Each book is divided into chapters featuring a country profile, historical setting, society and its environment, economy, government and politics and national security.

The national security section of each book is further divided into a number of military topics. Military topics covered vary from book-to-book. As an example, the national security section on Pakistan is sub-divided as follows.

- A historical perspective
- Pakistan's evolving security dilemma
- Armed services
    - Constitutional basis and missions
    - Defense strategy
    - Ministry of defense
    - Army and paramilitary forces
    - Navy
    - Personnel and training
    - Uniforms, rank and insignia
    - Military production
    - Budget
    - Military justice
    - Foreign security relationships
    - Role of Islam
- Internal security

Thus, each Area Country Study attempts to paint a complete picture of the country in question. The books were all written between 1987 and 1996 and are dated as follows.

- Bangladesh, September 1988
- Cambodia, December 1987
- China, July 1987

- India, September 1995
- Indonesia, November 1992
- Japan, January 1994
- Kazakhstan, March 1996
- Krygystan, March 1996
- Laos, July 1994
- Nepal, September 1991
- North Korea, June 1993
- Pakistan, April 1994
- Philippines, June 1991
- Singapore, September 1989
- South Korea, June 1990
- Tajikistan, March 1996
- Thailand, September 1987
- Turkmenistan, March 1996
- Vietnam, December 1987

The sources for the military information in the Area Country Studies are given as SIPRI and IISS (The Military Balance).

2. Assessment

a. General Information

The Library of Congress database covers 23 countries in the Asia-Pacific region, but does not cover Taiwan and Australia, significant omissions. Its biggest gap is in the Oceania sub-region, where none of those countries are covered. However, the biggest problem with this database is the age of its information. The newest information (on Central Asia) is five years, while the information on China, Thailand and Vietnam is 14 years old. Because of this, the database is of little use in many respects. There is no indication that the database is updated on a regular basis. Trended information is given in

the individual country appendices, but only for total defense spending (and it is obviously outdated). Since each Area Country Study is essentially a book that has been put on the web, tables of contents are provided, which easily guide the defense and policy analyst to the desired information. Navigation on the website to find the country of interest is also simple. As stated above, the Area Country Studies are available on-line, although not in a PDF version. They may also be ordered from the U.S. Government Printing Office, and the price varies per book. Ordering all available books on the Asia-Pacific region countries would cost hundreds of dollars, so this method of review is prohibitively expensive.

b. Spending Information

All three of the spending criteria are covered in each Area Country Studies, although not in tabular format. The analyst therefore has to dig for the information. Figures are given in both current U.S. dollars and the local currency. No comparative charts or graphs are provided. As stated above, all of this information is at least five years old.

c. Capabilities Information

Several of these criteria are covered in this database. For example, the military production section for Pakistan covers the latest (for that time) equipment being bought or produced, making this database only one of four to cover this information criterion. Detailed force structure information in the form of orders of battle for each service is given in the appendices for each country. Orders of battle are divided into personnel strength, numbers of military units (divisions, squadrons, etc.) and numbers and types of weapon systems. This database was only one of three to discuss the type of

force (volunteer or conscript) and one of only two databases to discuss training and morale information. Nuclear forces are discussed, but other WMD are not.

d. Other Internal and External Factors

A useful section on foreign military relations describes relations and alliances with other countries.

e. Arms Sales and Imports

Some information on weapons imports is given under the individual service narratives.

f. Summary

At first look, the Library of Congress database covers many of the evaluation criteria, and appears to be very comprehensive. Each section on the military has relevant detailed narrative discussion on numerous facets of the military in question. However, the age of the information, the paucity of trended data, and the lack of comparative charts and tables make this database of little use.

g. Strengths

- Covers some defense information areas that few other databases cover
- Free and easily accessible on the web
- Detailed narrative discussions

h. Weaknesses

- All data is very outdated
- Few quick reference data tables
- No comparative data
- Little trended information
- Narrative format requires time to find information

I. STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE

1. Description

SIPRI has several available sources of defense information that can be used by defense and policy analysts. SIPRI publishes the SIPRI Yearbook annually. SIPRI also has defense data in their Military Expenditure and Arms Production Project (MEAPP), which is available on-line. SIPRI has other on-line systems called the Facts on International Relations and Security Trends (FIRST), and the SIPRI Military Expenditure Database (SMED). There are therefore four different sources within the SIPRI network of defense data.

The SIPRI Yearbook is organized into three separate parts. Within each part are subjects covered every year and essays unique to that edition only. The 1999 edition is the edition evaluated for this thesis. It is organized as follows.

- Part I: Security and conflicts, 1998
- Part II: Military spending and armaments, 1998
- Part III: Non-proliferation, arms control and disarmament, 1998

The primary areas of interest for this thesis are in Part II, which contains the following chapters.

- Chapter 7. Military expenditure*
- Chapter 8. Military research and development (including China, India and Pakistan)
- Chapter 9. Nuclear tests by India and Pakistan
- Chapter 10. Arms production*
- Chapter 11. Transfers of major conventional weapons*

The asterisked chapters above appear every year in the SIPRI Handbook. Chapter 7 has a series of regional summaries on recent military expenditure trends, along with numerous data tables interspersed in the narrative and in the appendices to the chapter.

Chapters 8 and 9 are narrative updates on their respective subjects. Chapter 10 is a narrative summary of arms production developments, and chapter 11 is the update on conventional arms transfers. Chapter 11 also has tabulated data in the narrative, as well as in an appendix at the back of the chapter. Part III has essays on chemical, biological, nuclear and conventional arms control and proliferation. These essays are in the SIPRI Yearbook every year.

Chapter 7 also has an essay in its appendix entitled The Military Expenditure of China, 1989-1998. It discusses the following areas.

- An analysis of the transparency of the data
- An analysis of military expenditures in different budget categories including
    - People's Armed Police
    - RDT&E
    - Construction
    - Production
    - Arms Imports
- An analysis of military expenditure from extra-budgetary sources, including earnings from domestic business activities and arms exports

Short summaries of each chapter in the SIPRI yearbooks for 1993-2000 are available on-line. No specific sources are given for the SIPRI Handbook, but like the IISS Military Balance, the assessments are its own, based on a wide variety of primary sources.

The on-line SIPRI Military Expenditure and Arms Production Project starts with summary paragraphs detailing recent trends. The following relevant tables are then presented.

- Military expenditures as a share of GDP for 1990-1998 for selected countries, including seven countries in the Asia-Pacific region
- World and regional military expenditure estimates, 1990-99, in 1995 constant U.S. dollars. This information is also provided in bar chart format

These tables are really not meant to be a substitute for the other two on-line databases and the SIPRI Yearbook. As they do not provide any information that is not available in the SIPRI Yearbook, MEAPP will not be evaluated further.

The SIPRI Military Expenditure Database has, for 160 countries, the following information.

- Military expenditure in local currency, at current prices,
- Military expenditure in US dollars, at constant (1995) prices and exchange rates,
- Military expenditure as a share (percent) of gross domestic product (GDP).

The data are presented on a calendar year basis for the last ten years. This data mimics data provided in the SIPRI Yearbook. However, the on-line system was not functional during the preparation of this thesis, and will not be evaluated further. SIPRI was queried by e-mail as to the status of SMED, but the query was not answered.

The FIRST system is a system that allows a defense and policy analyst to proceed through an on-line menu by performing the following steps.

- Choose a country of interest
- Build a request for information on the country by checking boxes pertaining to various facts on international relations and security trends
- Display the information requested
- If desired, show some information side-by-side with same information from one or two other countries

As can be seen from the description of the SIPRI databases, their information is extensive and is available in several different locations. Determining where to go for what information could therefore be very challenging for the analyst not familiar with their system. As stated above, only the SIPRI Yearbook and the FIRST system will be evaluated. No specific sources are given for the SIPRI Yearbook. FIRST uses a variety of sources, including other think tanks.

2. Assessment

a. General Information

The SIPRI Yearbook covers 30 countries in the Asia-Pacific region (omitting Laos). The SIPRI data is current and is updated on a regular basis, the SIPRI Yearbook is published every year. Trended data is available in the SIPRI Yearbook. The book is published and can be ordered from SIPRI for $99.00. The organization of the SIPRI Yearbook makes it easy for the analyst to find what is needed. However, the data tables could have been consolidated for ease of reference. In order to get the complete data picture on a country, the analyst needs to move back and forth in the book. FIRST covers 27 countries in the Asia-Pacific region, and is simple in concept. The analyst just checks the countries and data criteria of interest and enters the query. FIRST pulls many of its answers to data queries from other NGOs outside of SIPRI. FIRST is really therefore an information transfer agreement between SIPRI and other NGOs, as much as it is a SIPRI database. With the high cover price, the SIPRI Yearbook is not an accessible document for the defense and policy analyst. The FIRST system is, however, available free of charge. SIPRI does request that the analyst fill out a survey form before initially using the FIRST system. The FIRST system was inoperable during part of the

research for this thesis, and many categories of data queries were returned with error messages or no data available messages.

b. Spending Information

In the military expenditure chapter (chapter 7), the SIPRI Yearbook has tables of military expenditures as a share of GDP, CGE and in constant 1995 U.S. dollars, 1989-1998, for South Asia (two countries), East Asia (five countries) and Central Asia (five countries). Each of these tables allows comparison between the different countries in each sub-region. In the appendices to the chapter, it displays military expenditure by region and country in local currency, for 1989-1998, followed by the same information in 1995 constant U.S. dollars. Military expenditure by region and country, as a percentage of GDP, 1989-1997, is also shown for the same countries in the appendices. The more extensive tables in the appendix to chapter 7 do not show military spending as a share of CGE. The regional summaries in chapter 7 are very informative. The military expenditure essay on China is a boon for those defense and policy analysts wanting more detailed information on China's secretive and confusing military expenditures, but it is unique to the 1999 edition. FIRST pulls military expenditures in local currency, in constant U.S. dollars and as a percentage of GDP from the SIPRI Yearbook, and displays this information. This data can be displayed in a ten-year series, and the ten-year series can be compared with similar data for one or two other countries. For India, this defense spending information was shown for 1990-1999. Interestingly enough, the current expenditure data in FIRST did not come from the 2000 edition of the SIPRI Yearbook, but the 1999 edition. The defense spending information that SIPRI provides is therefore strong, and is among the best of the group.

c. Capabilities Information

Surprisingly, considering the thickness and scope of the SIPRI Handbook, capabilities information is almost non-existent. An appendix to chapter 11 details major arms trade by weapon type, which gives the analyst an idea of the latest equipment procured by Asia-Pacific countries. Indian, Chinese and Pakistani nuclear weapons capabilities are detailed in several of the essays on a basic level, these essays being focused on arms control and disarmament (treaties, etc.). General chemical and biological capabilities are discussed in part III, but also from an arms control and disarmament perspective. The SIPRI Yearbook is relatively weak in the capabilities area. FIRST is slightly better, and provides total military manpower and military manpower broken down by service. This data, along with numbers of reserves by service, numbers of conscripts and terms of service can be shown for the last ten years. In the case of India, it was shown from 1988-1998. FIRST also has detailed descriptions of nuclear weapons delivery systems and capabilities. Overall, the capabilities information available in SIPRI is fair.

d. Other Internal and External Factors

No information is provided on international alliances and agreements in the SIPRI Yearbook or the FIRST system.

e. Arms Sales and Transfers

Chapter 11 in the SIPRI Yearbook has several data tables on arms transfers, as follows.

- The leading recipients of major conventional weapons from the six major suppliers 1994-1998 by region and country (including 13 countries in the Asia-Pacific region)

- The 72 leading recipients of major conventional arms 1994-1998 (including 18 countries in the Asia-Pacific region)
- Register of the transfers and licensed production of major conventional weapons in 1998, specifically detailing what arms were transferred and what type of transfer agreement was used (including information on 23 countries in the Asia-Pacific region)

The arms import and export information provided by SIPRI is very detailed and useful to the defense and policy analyst. FIRST can list transfers and licensed production of major conventional weapons if desired. SIPRI's presentation in this area is almost equal to the State Department database and the IISS book, the Military Balance.

f. Summary

The SIPRI Yearbook is a standard reference for many on global arms developments, with detailed spending and arms transfer information. However, other areas are lacking, and considering the price of the book, there are sources available that provide similar information in a more usable format for less money. The FIRST system adds little (except in the capabilities area) that SIPRI does not have, but it is available free of charge. However, the ability to query defense spending information, trend it and then compare it with one or two other countries is truly unique. This electronic database, where queries can be built and customized, is impressive. Once FIRST is made more reliable and expanded, it could well set the standard for Internet based defense databases of the future.

g. Strengths

- The Yearbook's trended comparative spending information is very detailed
- The Yearbook has detailed arms transfer data by cost as well as by weapon system
- The Yearbook has up-to-date essays on topics of concern

- FIRST allows the analyst get defense spending information, trend it and then compare it with other countries
- FIRST is a unique, innovative concept

h. Weaknesses

- Yearbook cost and accessibility
- The Yearbook has little capabilities information
- Format of the Yearbook does not lend itself to data analysis
- FIRST isn't working all the time and many queries come back blank

J. U.S. STATE DEPARTMENT

1. Description

The U.S. State Department provides two sources, which together, constitute the database on Asia-Pacific region defense spending to be evaluated. They submit the "Annual Report on Military Expenditures" (ARME) to the U.S. House and Senate, of which the latest version is 1999. They also publish, through their Bureau of Verification and Arms Control, World Military Expenditures and Arms Transfers (WMEAT). The latest version of WMEAT is dated 1998.

ARME contains data on 32 countries, including seven countries in the Asia-Pacific region. Each country entry is organized as follows.

- Summary narrative
- Military spending section
  - Amount (local and U.S. currency)
  - Percentage of GDP
  - Percentage of government budget
  - Trends discussion
- Role of the armed forces
  - Size of the armed forces in manpower
  - Political role of the armed forces
  - Civilian control of the armed forces

- Reducing military spending section
  - Discussion of feasibility of reducing spending
  - Discussion of U.S. efforts to encourage reduced military spending
  - Country efforts to reduce military spending
  - Discussion on whether the country has provided accurate military spending data to international organizations and the U.N.
  - Discussion of country participation in regional talks to reduce military spending
- Assessment of military budget accuracy
  - Discussion of accuracy and completeness of submissions
  - Discussion of the transparency of military budget

The last four editions of ARME (1996-1999) are available on the State Department archive website.

WMEAT primarily consists of five data tables, as follows.

- Table I: Military expenditures, armed forces, GNP, central government expenditures, population and ratios using this data for 1987-1997. This data is provided by country for 167 countries, including all 31 countries in the Asia-Pacific region
- Table II: Arms transfer deliveries, total trade and ratios using this data for 1987-1997 by region and country
- Table III: Value of arms transfer deliveries, cumulative 1995-1997 by major supplier and recipient region and country
- Table IV: Value of arms transfer deliveries and agreements 1987-1997 by supplier and recipient region
- Table V: Number of major weapons delivered to regions and groups, by supplier and weapon type, cumulative by period, with the periods being 1986-1988, 1989-1991, 1992-1994 and 1995-1997

Charts are also provided in WMEAT for regional trends 1987-1997 and all of the countries are ranked by each of 17 variables. WMEAT is available on the State Department archive website for 1996-1998. It has been published since 1967, and there are publishers that provide earlier editions of WMEAT. The 1998 edition of WMEAT

was not released until April 2000, which made the data three years old before it was even published. No sources are given for either WMEAT or ARME, but they are almost certainly based on primary sources and U.S. analysts' evaluations.

2. Assessment

a. General Information

WMEAT covers all 31 countries in the Asia-Pacific region, while ARME covers 7 countries. The inadequate coverage in the ARME is a weakness, but is understandable given that voluntary submission by foreign countries is the method by which data is gathered. Among the omissions in ARME are China, North Korea, Australia, Japan, South Korea and Taiwan. These omissions are significant. The ARME is current (1999 version), while WMEAT is slightly outdated (1998 version). As can be seen in the table descriptions above, data in WMEAT is trended as far back as 1987, a definite plus. ARME discusses trends but does not tabulate trended data. Both documents are updated annually. ARME is available on-line as an HTML file, while WMEAT is available on-line as a PDF file. The PDF files for WMEAT were very slow to view, when they could be viewed at all. WMEAT is also published and is available from the U.S. Government Printing Office for $25.00, a reasonable price. Both documents are logically organized, ARME by country with a simple table of contents to guide the analyst, and WMEAT by data table, with five major tables to choose from.

b. Spending Information

All three spending criteria are covered by the State Department database. ARME covers them for the current year only (1999), while WMEAT covers them from 1987-1997. Military expenditures in ARME are in local currency and U.S. dollars. Military expenditures in WMEAT are in current year dollars and constant 1997 dollars.

While ARME has a short discussion of the most recent defense spending trends for each country, WMEAT tabulates all three spending criteria from 1987-1997, so trends are easy to discern. WMEAT also tabulates military spending per capita for 1987-1997, although this is not one of the evaluation criteria. For each country, ARME asks and answers interesting questions on the role of its armed forces and the issue of reducing military spending. An assessment of military budget accuracy is also conducted for each country. Only the latter question is relevant to this analysis. Given the voluntary submission nature of the ARME spending data, the assessment of military budget accuracy is mandatory. These assessments are interesting, and provide insight into each country's internal and international accountability for its defense spending budget.

Overall, the State Department spending information is very strong. The only weaknesses are that side-by-side country comparisons of the trended defense spending data are not provided. The fact that the WMEAT data ends in 1997 is somewhat mitigated by ARME providing the information for 1999. The DIO database is the only one that provides better defense spending information than the State Department database.

c. Capabilities Information

Both ARME and WMEAT are weak in this area, with military manpower being the only capabilities information provided. ARME breaks this figure down into manpower by service, while WMEAT trends the total military manpower from 1987-1997. WMEAT also calculates and trends the ratio of armed forces per 1000 people, although the usefulness of this ratio is debatable.

d. Other Internal and External Factors

No information is provided on international alliances and agreements in either ARME or WMEAT.

e. Arms Sales and Transfers

While ARME has no information in this area, fully 80 percent (Tables II-V) of WMEAT is devoted to arms export and import data. In Table II, each country's arms exports and imports are available in U.S. dollars from 1987-1997. The ratios of arms imports to total imports, and arms exports to total exports are tabulated and similarly trended. Table III shows the value of arms transfer deliveries by region and country, from each of the major arms suppliers in the world, including China. This data is available from 1995-1997, but is not trended. Table IV trends the same data from 1987-1997, but keeps it at the regional level. Central Asia, East Asia and South Asia are among the regions broken out. Table V shows, for each region, the numbers of land armaments, naval craft, aircraft and missiles delivered from the major arms suppliers, including China. These weapons categories are further broken down into different types of weapon platforms. WMEAT provides information on arms transfers and deliveries on-par with that of the IISS publication, The Military Balance 2000/2001. Its only weakness is that the data stops in 1997.

WMEAT also ranks all 167 countries using all data categories given or ratios computed (17 rank lists total). The usefulness of this method of presentation is debatable, as the countries are not grouped by region, or by potential adversaries.

f. Summary

The State Department database, consisting of WMEAT and ARME, provides an excellent picture of the military spending and arms transfer situations in the Asia-Pacific region, for most of the last decade. One might say it is always "finishing in second place," but that statement describes it well with respect to the spending and arms transfer areas. Its primary weaknesses are the weapons capabilities area, and the somewhat dated nature of the data in WMEAT. WMEAT is referenced by several other databases as a source, an indication that is widely recognized.

g. Strengths

- Trended, comparative spending and arms transfer data in WMEAT are among the best
- WMEAT and ARME are accessible and free, on the web
- Assessment of the military budget accuracy in ARME is necessary and interesting

h. Weaknesses

- The most recent WMEAT edition is 1998
- Country comparisons with the spending data are not facilitated in either ARME or WMEAT
- Country coverage in ARME is weak
- Little capabilities information in either WMEAT or ARME

Given the above database evaluations, several interesting conclusions can be reached. These are detailed in the following chapter.

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VII. CONCLUSIONS AND RECOMMENDATIONS

Several general conclusions can be drawn from this thesis.

Not one of the Asia-Pacific region defense databases evaluated in detail met all of the evaluation criteria. Some omissions can be considered serious shortcomings, given that there are certain types of information required by defense and policy analysts. Other omissions are simply because each database has its own purposes and caters to a different audience.

There are numerous databases with information on Asia-Pacific region defense developments. This thesis evaluated only a few of the information sources available. The amount of information available is primarily due to the information explosion that has occurred with the growth and acceptance of the World Wide Web.

The evaluation of databases is necessarily both a subjective and objective process. While many of the evaluation factors developed can be applied in an objective manner, there are others that require an opinion, when applied to the databases.

The evaluation criteria attempted to represent information that the defense and policy analyst would find useful in working on security issues in the Asia-Pacific region. However, different analysts require different information. It is acknowledged that the evaluation criteria developed are but one way to examine the worth of these databases.

With those conclusions in mind, the following recommendations are made for the use of the Asia-Pacific region defense databases evaluated in detail, based on application of the evaluation criteria.

A. BEST SOURCES FOR DEFENSE SPENDING INFORMATION

Because of the current, extensive, trended and comparative spending information which covered all three defense spending criteria, Defense Intelligence Organization's Defense Economic Trends in the Asia-Pacific 1999 is recommended for the Asia-Pacific region defense spending area. The fact that it is free and downloadable as a PDF document makes it even more attractive. Its only weakness in this area is that the DIO omits some of the smaller countries in the region. The fact that this database is highly specialized allows it to take the nod in this area.

The U.S. State Department Annual Report to Congress on Military Expenditures and World Military Expenditures and Arms Transfers sources, and the Center for Strategic and International Studies' Asian and Chinese Military Balance are recommended alternates. The weaknesses in this area for these two databases are that, the WMEAT source is slightly outdated, as per the evaluation criterion, and the Military Balance source is missing two of the spending evaluation criteria. Both of these databases are free and downloadable from the Internet also. The CSIS spending comparisons between likely adversaries are highly informative.

SIPRI's FIRST system is an innovative concept that also deserves mention in the defense spending area. It does not have bar charts or graphs however, and only up to three countries can be compared in two of the three defense spending criteria.

B. BEST SOURCES FOR CAPABILITIES INFORMATION

The International Strategic Studies Association's Defense and Foreign Affairs Handbook has the most extensive capabilities information, covering all of the capabilities criteria, and is recommended for this information area. Its defense overview essays are

extensive in scope and very useful. Its weaknesses are that this information is not trended and comparative. In addition, its cost might be prohibitive. The CSIS Asian and Chinese Military Balance and the International Institute of Strategic Studies' Military Balance are recommended alternates. IISS omits several capabilities criteria and is costly, although less so than the DFAH. However, it covers many of the capabilities criteria. CSIS omits several capabilities criteria also, but is extremely strong in the force structure and WMD criteria. CSIS also facilitates comparison between different countries' forces.

C. BEST SOURCES FOR INFORMATION ON ALLIANCES AND AGREEMENTS

The best sources for this information are Heritage's U.S. and Asia Statistical Handbook and the ISSA DFAH. Both list alliances and agreements and give an idea of what the alliances and agreements mean to the regional power structure.

D. BEST SOURCES FOR INFORMATION ON ARMS SALES AND TRANSFERS

The SIPRI Yearbook is the best source of arms sales and transfer information with its tables on the leading recipients of major conventional weapons, and its register of the transfers and licensed production of major conventional weapons. The SIPRI Yearbook is costly, however. SIPRI's FIRST is free but doesn't add much to their Yearbook in this area. IISS' Military Balance is a close second in this area. The trended arms transfer spending data in Part II of the book, combined with the recent arms deliveries by platform type in Part I of the book present one of the most complete pictures on arms transfers of any database. The U.S. State Department WMEAT is also a close alternate, its only weakness being that its data is slightly outdated. For those interested on Chinese arms sales and transfers, the more specialized CSIS database is a

recommended alternate with its detailed Chinese and North Korean arms transfer information.

E. BEST ALL AROUND DATABASE

The International Institute of Strategic Studies Military Balance 2000/2001 is the best overall database for Asia-Pacific defense information, based on the criteria developed in this thesis. While not the best in any one area of information, its solid overall coverage of all 31 countries in the Asia-Pacific region makes it the database of choice. The extensive trended, comparative data on multiple criteria, combined with useful narrative explanations of defense developments, are superior. If price and accessibility are grave concerns, than the Center for Strategic and International Studies Asian and Chinese Military Balance and the Heritage U.S. and Asia Statistical Handbook 2000-2001 are valid options for overall coverage. The Heritage document, despite its concise pocket format, is a surprisingly useful overview, and is recommended as the first source for the defense and policy analyst just getting started on research about the Asia-Pacific region.

APPENDIX A. TABLES

Database	Spending Breakout by Service	Equipment Procured	Force Structure Information	Trends	% of GDP	Current (1999-2000)	Number of Countries
Air University Library	No	No	No	No	No	Yes	N/A
Asian Journal of Political Science	No	No	No	No	No	Yes	N/A
Asia Pacific Defense Forum	No	No	No	No	No	Yes	N/A
CATO Institute	No	No	No	No	No	Yes	N/A
Center for Defense Information	No	Yes	Yes	Yes	Yes	Yes	14
Center for Strategic and International Studies	No	No	Yes	Yes	No	Yes	19
CIA World Fact Book	No	No	No	No	Yes	Yes	31
Commonwealth Institute	No	No	No	No	No	Yes	N/A
Defense Intelligence Organization	No	No	No	Yes	Yes	Yes	21
Federation of American Scientists	No	No	Yes	No	No	Yes	3
Foreign Military Studies Office	No	No	No	No	No	Yes	N/A
Global Beat	No	No	No	No	No	Yes	N/A
Heritage Foundation	No	No	Yes	Yes	Yes	Yes	19
Institute for Defense and Disarmament Studies	No	Yes	Yes	No	No	Yes	N/A
Institute for National Strategic Studies	No	No	Yes	No	No	Yes	6
Institute of Peace and Conflict Studies	No	No	Yes	No	No	Yes	7
International Institute for Strategic Studies	No	Yes	Yes	Yes	Yes	Yes	31
International Relations and Security Network	No	No	No	No	No	Yes	N/A
International Strategic Studies Association	No	Yes	Yes	No	No	Yes	31

Jaffee Center for Strategic Studies	No	No	No	No	No	Yes	N/A
Library of Congress Country Studies	No	Yes	Yes	No	Yes	No	23
Military Spending Working Group	No	No	No	No	No	Yes	N/A
National Bureau of Asian Research	No	Yes	Yes	Yes	No	Yes	6
National Security Study Group	No	No	No	No	No	Yes	N/A
South Asia Analysis Group	No	No	No	No	No	Yes	N/A
Stockholm International Peace Research Institute	Yes	Yes	No	Yes	Yes	Yes	30
War, Peace and Security WWW Server	No	No	No	No	No	Yes	N/A
U.S. State Department	No	32	Yes	Yes	Yes	Yes	31

Table 7. Sources of Asia-Pacific Region Defense Information.

	CDI	CIA	CSIS	DIO	Heritage	IISS	ISSA	U.S Library of Congress	SIPRI	U.S. State Department
General Information										
1. How many countries covered?	14	31	19	21	31	31	31	23	30	31
2. Current (1999 or 2000 Edition)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
3. Does the database show trends?	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
4. How accessible is the database?	Web	Web/Book	Web	Web	Book	Book	Book	Web/Book	Book	Web/Book
5. Is it easy to use and how is it organized?	[redacted]									
6. Is there a cost?	No	Yes/75.00	No	No	Yes/7.50	Yes/126.00	Yes/242.00	Yes	Yes/99.00	No
Spending Information										
7. Military expenditures as a percentage of GDP?	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
8. Military spending as a percentage of total budget?	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes
9. Adjusted dollar basis for spending?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capabilities Information										
10. What type of equipment is bought?	No	No	No	No	No	Yes	Yes	Yes	Yes	No
11. Force structure information?	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes
12. Type of force?	No	No	No	No	No	Yes	Yes	Yes	No	No
13. Power projection capabilities?	Yes	No	No	No	No	Yes	Yes	No	No	No
14. Space-based capabilities?	No	No	No	No	No	No	Yes	No	No	No
15. Training and morale information?	No	No	No	No	No	No	Yes	Yes	No	No
16. WMD capabilities?	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Other Internal and External Factors										
17. International alliances and agreements?	No	Yes	No	No	Yes	No	Yes	Yes	No	No
Arms Sales and Transfers										
18. Data on arms sales and transfers?	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

Table 8. Asia-Pacific Region Defense Database Comparison.

		B of V&C	CIA	ISSA	IISS	Heritage	SIPRI	L of C	DIO	CSIS	CDI
South Asia	Afganistan	■	■	■	■	■	■	■	■	■	■
	Bangladesh	■	■	■	■	■	■	■	■	■	■
	India	■	■	■	■	■	■	■	■	■	■
	Nepal	■	■	■	■	■	■	■	■	■	■
	Pakistan	■	■	■	■	■	■	■	■	■	■
	Sri Lanka	■	■	■	■	■	■	■	■	■	■
Central Asia	Kazahstan	■	■	■	■	■	■	■	■	■	■
	Krygystan	■	■	■	■	■	■	■	■	■	■
	Tajikstan	■	■	■	■	■	■	■	■	■	■
	Turkmenistan	■	■	■	■	■	■	■	■	■	■
	Uzbekistan	■	■	■	■	■	■	■	■	■	■
East Asia	Brunei	■	■	■	■	■	■		■	■	■
	Cambodia/Kampuchea	■	■	■	■	■	■	■	■	■	■
	China	■	■	■	■	■	■	■	■	■	■
	Indonesia	■	■	■	■	■	■	■	■	■	■
	Japan	■	■	■	■	■	■	■	■	■	■
	Korea, North	■	■	■	■	■	■	■	■	■	■
	Korea, South	■	■	■	■	■	■	■	■	■	■
	Laos	■	■	■	■	■		■	■	■	■
	Malaysia	■	■	■	■	■	■	■	■	■	■
	Mongolia	■	■	■	■	■	■	■	■	■	■
	Myanmar/Burma	■	■	■	■	■	■	■	■	■	■
	Philippines	■	■	■	■	■	■	■	■	■	■
	Singapore	■	■	■	■	■	■	■	■	■	■
	Taiwan	■	■	■	■	■	■	■	■	■	■
	Thailand	■	■	■	■	■	■	■	■	■	■
	Vietnam	■	■	■	■	■	■	■	■	■	■
Oceania/Australasia	Australia	■	■	■	■	■	■		■	■	■
	Fiji	■	■	■	■	■	■		■	■	
	New Zealand	■	■	■	■	■	■		■	■	■
	Papua, New Guinea	■	■	■	■	■	■		■	■	
Total		**31**	**31**	**31**	**31**	**31**	**30**	**23**	**21**	**19**	**14**

Table 9. Country Coverage Comparison

APPENDIX B. DATABASE SAMPLES

FACT SHEET

Prepared by the Center for Defense Information
Ph: (202) 332-0600/Fax: (202) 462-4559

By Christopher Hellman, Senior Analyst

February 7, 200

Last of the Big Time Spenders:

U.S. Military Budget Still the World's Largest, and Growing

Selected Countries	Military Budget
United States	$305.4 Billion
Russia*	$55.0
Japan	$41.1
China*	$37.5
United Kingdom	$34.6
France	$29.5
Germany	$24.7
Saudi Arabia	$18.4
Italy	$16.2
South Korea	$11.6
Taiwan	$10.7
India	$10.7
Brazil	$10.3
Turkey	$8.9
Australia	$7.2
Netherlands	$7.0
Israel	$6.7
Canada	$6.7
Spain	$6.0
Iran	$5.7
Greece	$3.8
Poland	$3.2

Norway	$3.2
Kuwait	$3.0
Syria	$2.9
Pakistan	$2.7
Denmark	$2.6
Belgium	$2.5
Egypt	$2.2
Portugal	$1.6
Iraq	$1.4
Libya	$1.3
North Korea	$1.3
Yugoslavia	$1.3
Czech Republic	$1.2
Vietnam	$0.9
Cuba*	$0.8
Hungary	$0.7
Sudan	$0.4

Figures are for latest year available, usually 1999. Expenditures are used in a few cases where official budgets are significantly lower than actual spending.

* 1998 Funding

Table prepared by Center for Defense Information.
Sources: International Institute for Strategic Studies, Department of Defense

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"For 45 years of the Cold War we were in an arms race with the Soviet Union. Now it appears we're in an arms race with ourselves."

Admiral Eugene Carroll, Jr., U.S. Navy (Ret.)
Deputy Director
Center for Defense Information

[HOME] [ISSUE AREAS]

Military Strengths of U.S., Allied, and Selected Other Armed Forces

These figures indicate the large size of U.S. military forces compared with potential adversaries. Any simple "bean count" such as this understates the full military strength of the U.S. and its allies. These data portray neither the generally higher capabilities of U.S. and allied weaponry, nor the unrivaled U.S. capabilities in communications, intelligence gathering, logistics, training, maintenance, and global mobility.

	Active Troops	Reserve Troops	Heavy Tanks	Armored Infantry Vehicles	Air planes	Helicopters	Major Warships	Amphibious, Mine, & Support Ships	Military Budget (Billions)
U.S.	1,547,000	2,045,000	10,900	32,545	11,189	7,925	239	164	$265
France	409,000	337,000	890	4,553	1,563	811	60	69	$38
Germany	340,000	415,000	2,988	6,396	820	779	31	82	$32
U.K.	240,000	260,000	541	4,054	1,147	710	52	52	$33
Other NATO	1,523,000	2,656,000	9,768	16,890	3,956	1,827	205	312	$65
Australia	56,000	38,000	71	710	297	153	15	21	$7
Japan	240,000	48,000	1,130	940	946	674	80	63	$45
South Korea	633,000	4,500,000	2,110	2,520	618	621	44	41	$16
U.S. & Allies	4,988,000	10,299,000	28,398	68,581	20,536	13,500	726	804	$501
Cuba	105,000	135,000	1,575	1,100	208	90	4	18	<$1

Iran	513,000	350,000	1,440	950	476	613	7	40	$3
Iraq*	383,000	650,000	2,700	2,900	473	500	1	7	$3
Libya	80,000	40,000	2,210	1,990	749	200	6	23	$1
North Korea	1,128,000	550,000	3,400	2,200	1,139	283	28	32	$5
Sudan	89,000	--	280	570	95	36	--	--	<$1
Syria	423,000	650,000	4,600	3,750	599	257	5	13	$2
Total	**2,721,000**	**2,375,000**	**16,205**	**13,460**	**3,739**	**1,979**	**51**	**133**	**$15**
China*	2,930,000	1,200,000	8,250	4,500	6,100	513	117	340	$32
India	1,145,000	950,000	3,500	1,507	1,501	473	45	54	$8
Pakistan	587,000	513,000	2,050	850	656	180	20	9	$4
Russia	1,520,000	2,400,000	17,650	28,330	5,674	2,903	299	868	$48
Vietnam	572,000	3,000,000	1,300	1,400	322	103	8	48	$1
Other Nato									
Belgium	47,000	276,000	334	1,031	314	86	2	15	$3
Canada	71,000	38,000	114	1,858	485	146	23	10	$8
Denmark	33,000	72,000	353	618	99	40	8	17	$3
Greece	171,000	291,000	1,735	2,324	548	228	22	40	$4
Italy	329,000	584,000	1,164	2,954	626	543	40	56	$20
Netherlands	74,000	131,000	734	1,353	181	122	20	35	$8
Norway	30,000	255,000	170	223	113	36	16	18	$4

Portugal	54,000	210,000	186	354	164	40	14	14	$2
Spain	206,000	420,000	698	2,059	487	258	24	48	$7
Turkey	508,000	379,000	4,280	4,116	939	328	36	59	$6
Other NATO Total	**1,523,000**	**2,656,000**	**9,768**	**16,890**	**3,956**	**1,827**	**205**	**312**	**$65**

1996 data except where noted. * 1995 expenditures.

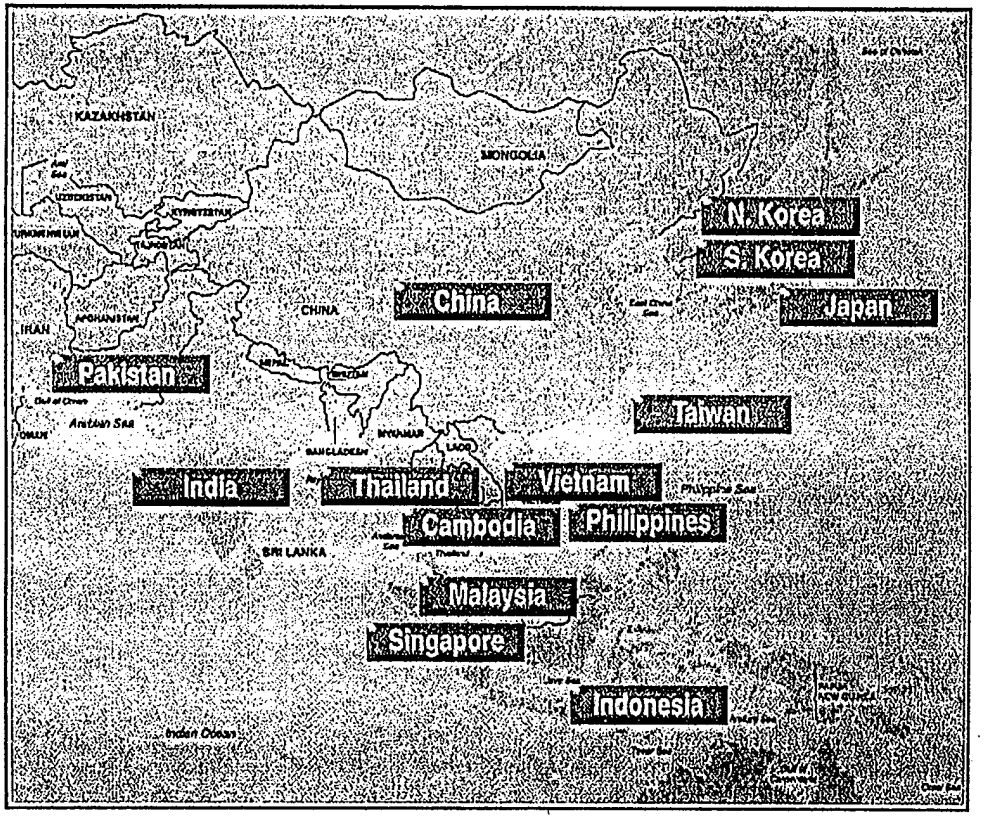
Other NATO (North Atlantic Treaty Organization) includes Belgium, Canada, Denmark, Greece, Italy, Netherlands, Norway, Portugal, Spain, Turkey.

Includes equipment in store. Figures are estimates.

Sources: IISS, DOD, CIA. Table prepared by Center for Defense Information.

[HOME] [ISSUE AREAS]

ASIAN MILITARY SITUATION



[Recent Developments]

COUNTRIES

- Pakistan
- India
- China
- North Korea
- South Korea
- Japan
- Taiwan
- Thailand
- Vietnam
- Cambodia
- Philippines
- Malaysia
- Singapore
- Indonesia

For more information about Asian Military Situations please contact Nicholas Berry.

Pakistan

Pakistan Armed Forces

Total Armed Forces:

active - 612,000

reserve - 513,000

Defence Budget:

1999 - $2.9 billion

2000 - $3.3 billion

Army: Pakistan Army

active - 550,000

22 combat divisions

2,285+ tanks

20 attack helicopters

supporting artillery/air defense guns and missiles

Navy: Pakistan Navy

active - 22,000

10 SSK and SSI submarines

8 principal surface combatants

9 patrol and coastal combatants

3 mine countermeasures

Naval Air arm with 5 combat aircraft and 9 armed helicopters

Air Force: Pakistan Air Force

active - 40,000

353 total combat aircraft including
6 fighter/ground attack squadrons (120+ aircraft)
12 fighter squadrons (192+ aircraft)

supporting air defense guns and missiles

Paramilitary Forces active - 288,000

Assessment:

Capable of defense of homeland against all existing and foreseeable theats (India). Limited ability to defend waters outside direct coastline. No apparent force projection capabilities. In terms of personnel, is half the size of India's. Pakistan followed India's 1998 underground nuclear tests with tests of its own, and have adopted a nuclear deterrent strategy towards India. The main flashpoint between the two South Asian rivals is control over Kashmir, where guerillas supported by Pakistan periodically cross the Line of Control into India, with the most recent battles fought in 1999 among the Kargil mountains.

Trends:

Over the past ten years, military spending fluctuated. The majority of the money has been devoted towards modernization. Pakistan has purchased military technology amd missiles from China, although China cut off missiles sales in 2000. Indigenous missile development continues. The level of the country's nuclear capability is uncertain because of a lack of reliable evidence. Arms control agreements with India are lacking.

[HOME] [ISSUE AREAS]

NUCLEAR WEAPONS DATABASE

NUCLEAR ARSENALS

➢Current Nuclear Arsenals -- includes links to country databases.
➢Likely START II Nuclear Arsenals, 2003 -- includes links to individual weapons systems.

BY COUNTRY

➢United States Arsenal
➢Russian Federation Arsenal
➢United Kingdom Arsenal
➢French Arsenal
➢Chinese Arsenal
➢Israeli Delivery Systems
➢Indian Delivery Systems
➢Pakistani Delivery Systems

Interested in viewing more nuclear facts, please click here.

For more information on Nuclear Weapons, please contact Bruce Blair or Chris Hellman.

[HOME] [ISSUE AREAS]

Total Nuclear Weapons: 100+

Go to CDI's Nuclear Weapons Database: Israel's Possible Nuclear Delivery Systems

▲ back to the top

Pakistani Nuclear Arsenal

Possible Nuclear Delivery Systems

Possible Delivery System	Year Deployed	Maximum Range (km)	Launcher Total	Warhead	Warhead Yield	Notes
Missiles						
Hatf 1	~1995	80	18	500	unknown	-
Hatf 2	Testing	300	unknown	500	unknown	-
M-11 (DF-11, CSS-7)	1992 (not deployed)	300	40	800	unknown	Supplied by Chinese
Air						
F-16 Falcon	1983	630	34	5,400	unknown	assumed in nuclear bomb delivery role

Summary of Pakistan's Possible Nuclear Delivery Systems: N/A

Strategic Nuclear Weapons: 0

Nonstrategic Nuclear Weapons: 15-25

Total Nuclear Weapons: 15-25

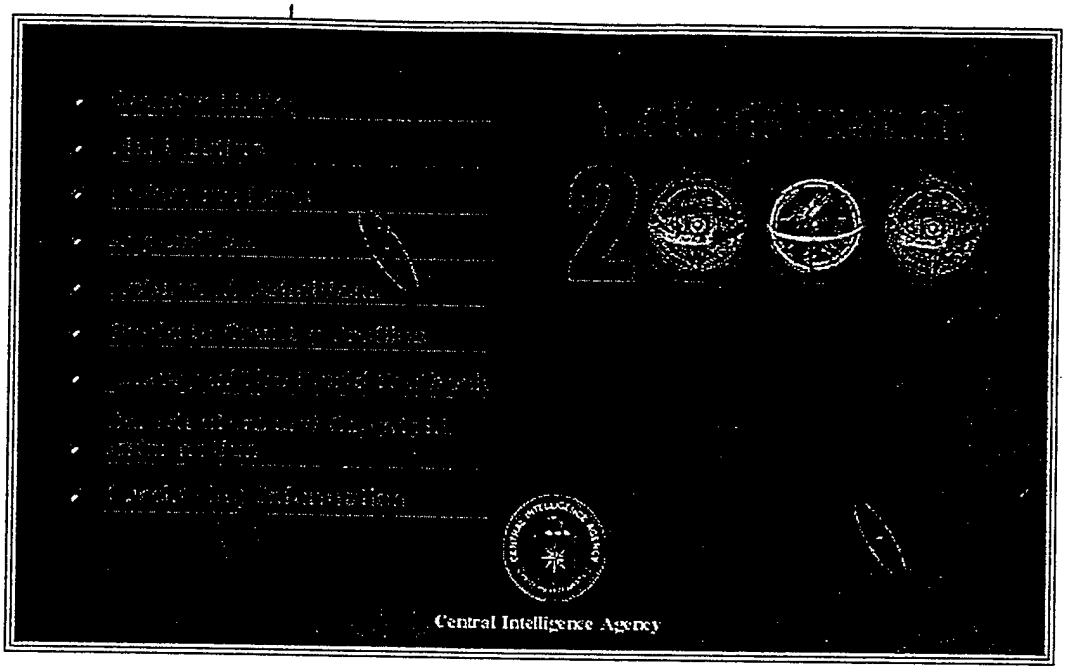
Go to CDI's Nuclear Weapons Database: Pakistani's Possible Nuclear Delivery Systems

▲ back to the top

[redacted]Russian Nuclear Arsenal

Strategic Delivery Systems

Strategic Nuclear Delivery Vehicle	Year Deployed	Maximum Range (km)	Launcher Total	Warhead	Warhead Yield	Notes
ICBM						
SS-18 (R-20) Satan mod 4/5/6	1975	11,000	180	10 x MIRV	500 KT / 750 KT / 20 MT	silo-based
SS-19 (RS-18) Stiletto mod 3	1982	10,000	167	6 x MIRV	550KT	silo-based
SS-24 Scalpel (RS-22)	1987	10,000	46	10 x MIRV	300-500 KT	silo/rail based
SS-25 Sickle (RS-12M Topol)	1985	10,500	352	single RV	750 KT	road mobile/silo
SLBM						
SS-N-18 Stingray	1982	6,500	208	3 MIRV	200 KT	In 13 Delta



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In general, information available as of 1 January 2000 was used in the preparation of this edition.

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[Country Listing] [*The World Factbook* Home]

Pakistan

Introduction
Geography
People
Government
Economy
Communications
Transportation
Military
Transnational Issues

Pakistan

Introduction

[Top of Page]

Background: The separation in 1947 of British India into the Muslim state of Pakistan (with two sections West and East) and largely Hindu India was never satisfactorily resolved. A third war between these countries in 1971 resulted in East Pakistan seceding and becoming the separate nation of Bangladesh. A dispute over the state of Kashmir is ongoing. In response to Indian nuclear weapons testing, Pakistan conducted its own tests in 1998.

Geography

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Location: Southern Asia, bordering the Arabian Sea, between India on the east and Iran and Afghanistan on the west and China in the north

Geographic coordinates: 30 00 N, 70 00 E

Map references: Asia

Transportation

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Railways:
total: 8,163 km
broad gauge: 7,718 km 1.676-m gauge (293 km electrified; 1,037 km double track)
narrow gauge: 445 km 1.000-m gauge (1996 est.)

Highways:
total: 247,811 km
paved: 141,252 km (including 339 km of expressways)
unpaved: 106,559 km (1998 est.)

Pipelines: crude oil 250 km; petroleum products 885 km; natural gas 4,044 km (1987)

Ports and harbors: Karachi, Port Muhammad bin Qasim

Merchant marine:
total: 20 ships (1,000 GRT or over) totaling 288,249 GRT/444,451 DWT
ships by type: bulk 1, cargo 15, container 3, petroleum tanker 1 (1999 est.)

Airports: 118 (1999 est.)

Airports - with paved runways:
total: 82
over 3,047 m: 12
2,438 to 3,047 m: 21
1,524 to 2,437 m: 32
914 to 1,523 m: 14
under 914 m: 3 (1999 est.)

Airports - with unpaved runways:
total: 36
1,524 to 2,437 m: 7
914 to 1,523 m: 9
under 914 m: 20 (1999 est.)

Heliports: 7 (1999 est.)

Military

[Top of Page]

Military branches: Army, Navy, Air Force, Civil Armed Forces, National Guard

Military manpower - military age: 17 years of age

Military manpower - availability:
males age 15-49: 34,632,509 (2000 est.)

Military manpower - fit for military service:
males age 15-49: 21,206,148 (2000 est.)

Military manpower - reaching military age annually:
males: 1,604,806 (2000 est.)

Military expenditures - dollar figure: $2.435 billion (FY99/00)

Military expenditures - percent of GDP: 3.9% (FY99/00)

Transnational Issues

[Top of Page]

Disputes - international: status of Kashmir with India; water-sharing problems with India over the Indus River (Wular Barrage)

Illicit drugs: producer of illicit opium and hashish for the international drug trade (poppy cultivation in 1999 - 1,570 hectares, a 48% drop from 1998 because of eradication and alternative development); key transit area for Southwest Asian heroin moving to Western markets; narcotics still move from Afghanistan into Balochistan Province

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[Country Listing] [*The World Factbook* Home]

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To comment: Acordesman@aol.com

The Asian and Chinese Military Balance

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

Anthony H. Cordesman
Arleigh A. Burke Chair in Strategy

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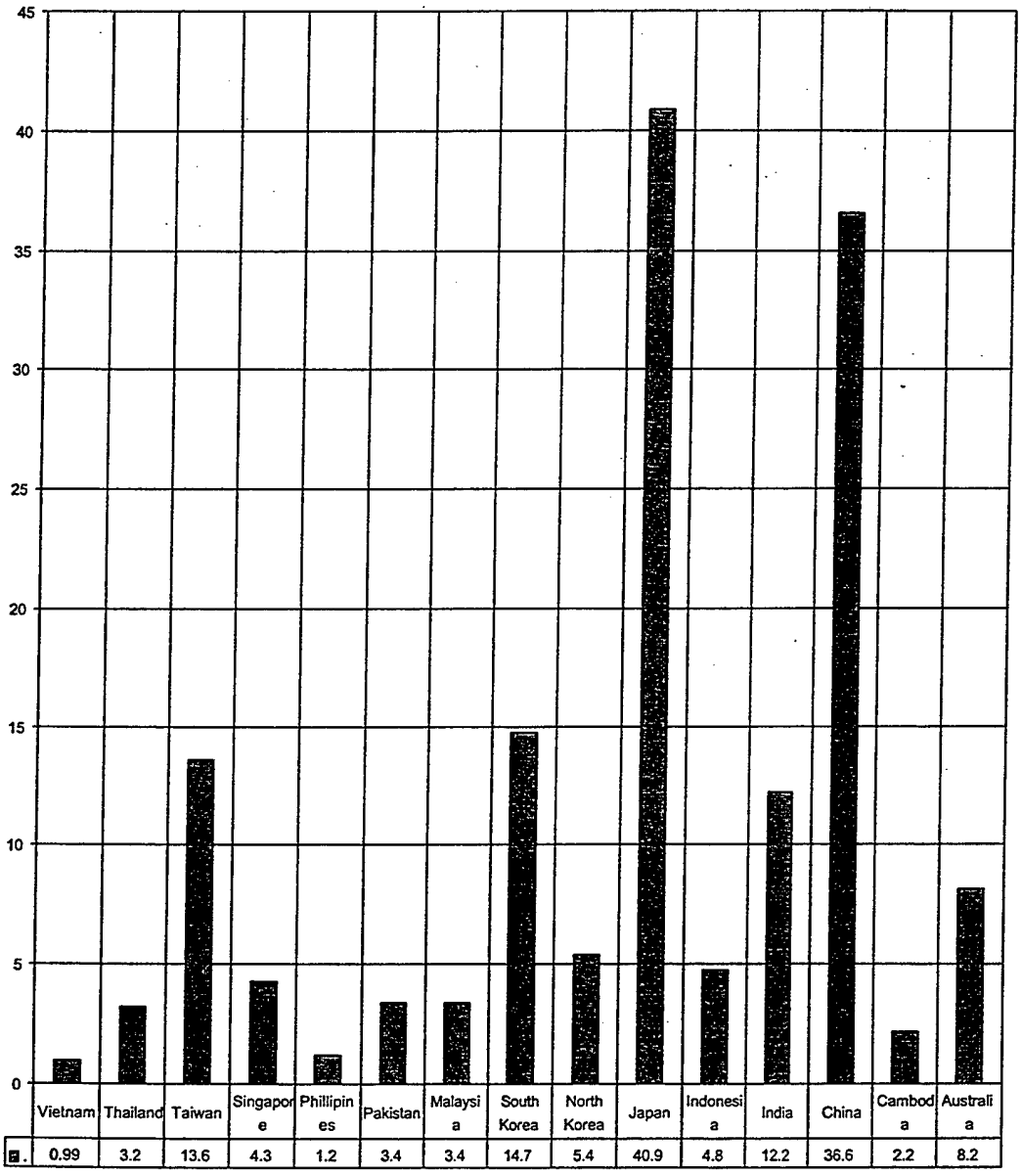
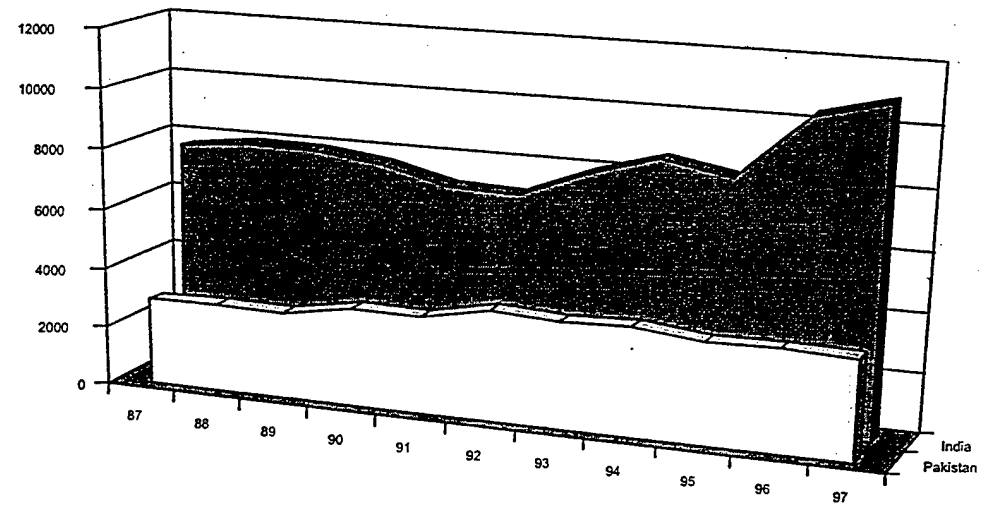
Defense Spending by the Major Asian Powers: 1998
(Spending In $US Billions)



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

Trends in Indian and Pakistani Military Spending: 1985-1997

(Constant $1997 Millions)



	87	88	89	90	91	92	93	94	95	96	97
Pakistan	2900	2940	2930	3290	3260	3710	3600	3670	3430	3500	3380
India	7690	7930	7920	7650	7080	7010	7910	8590	8170	10300	10900

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

Asian Military Forces in 1998-1999 - Part One

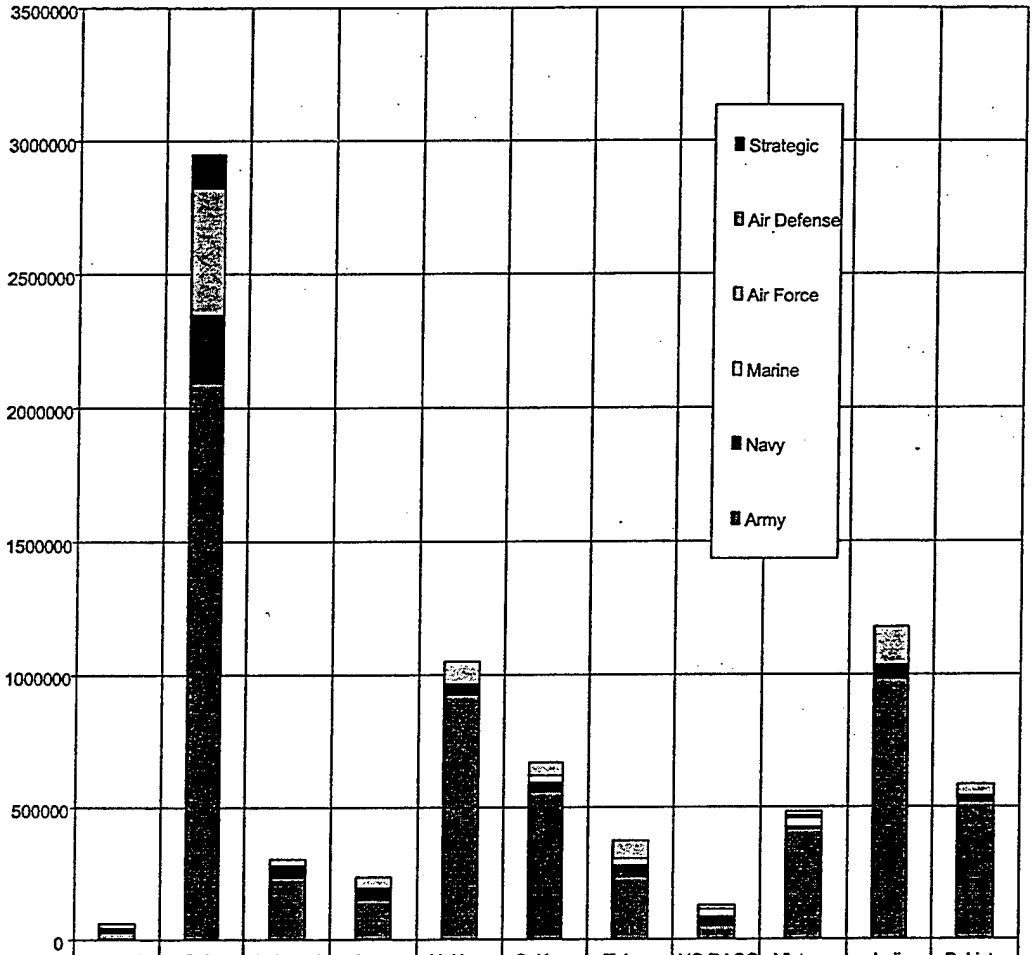
	China	Japan	Taiwan	S. Korea	N. Korea	Vietnam	Indonesia	Thailand	India
Manpower (1,000s)									
Total Active	2,935	235	376	660	1,054	572	299.2	254	1,145
Regular	2,935	235	376	660	1,054	572	299.2	254	1,145
National Guard & Other	-								
Reserve	1,200	47.9	1,657	4,500	4,700	3,000	400	2,005	535
Paramilitary	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

	China	Japan	Taiwan	S. Korea	N. Korea	Vietnam	Indonesia	Thailand	India
Total Naval Manpower (1,000s)	265	43	68	60	46	42	43	64	55
Major Surface Combatants	54	63	36	44	7	8	33	17	44
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	63	17	4	4	25	0	2	-	19
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	25	12	-	-	-	-	1	1.3	5
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

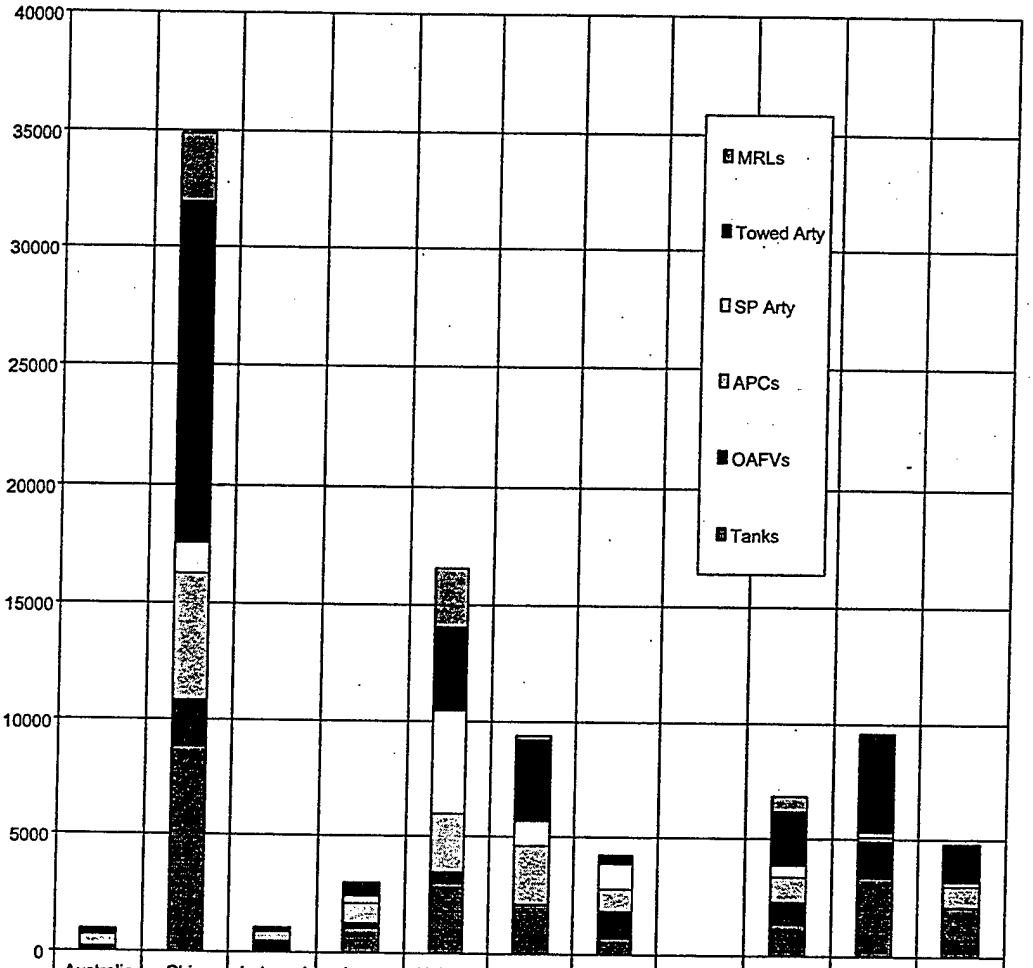
Asian Military Manpower in Key Powers in 1999



	Australia	China	Indonesia	Japan	N. Korea	S. Korea	Taiwan	US PACO	Vietnam	India	Pakistan
Strategic		125000									
Air Defense									15000		
Air Force	17000	470000	21000	45600	85000	52000	68000	22580	15000	140000	45000
Marine			12000			25000	30000	22900	27000	1200	1200
Navy	14300	260000	35000	43800	46000	35000	38000	31785	15000	55000	22000
Army	25400	2090000	235000	151800	923000	560000	240000	51260	412000	980000	520000

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

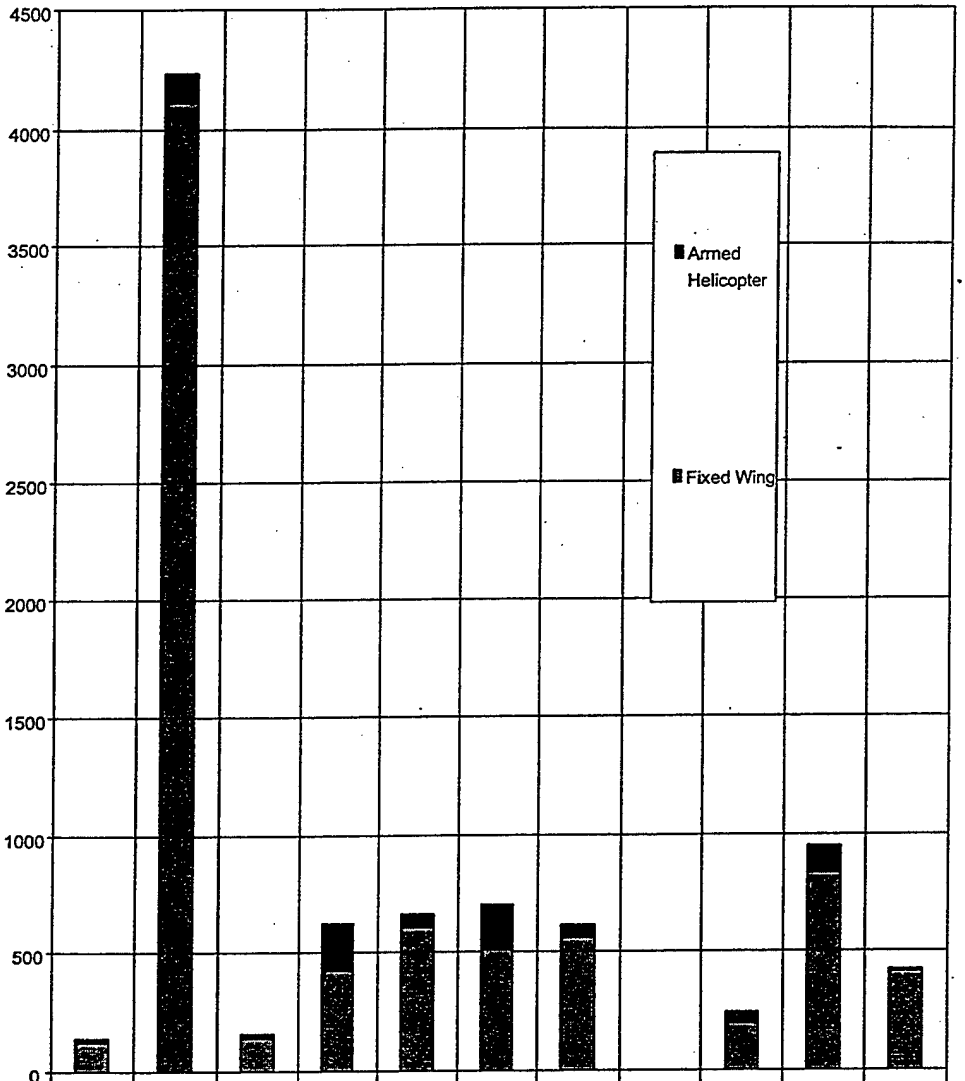
Asian Land Weapons in Key Powers in 1999



	Australia	China	Indonesia	Japan	N. Korea	S. Korea	Taiwan	US PACO	Vietnam	India	Pakistan
MRLs	0	2900	0	110	2600	156	170		710	150	45
Towed Arty	281	14500	210	480	3500	3500	270		2300	4175	1590
SP Arty	0	1200	0	310	4500	1040	1060		430	180	240
APCs	463	5500	391	870	2500	2500	950		1100	157	850
OAFVs	157	2000	497	150	500	40	1130		1020	1540	0
Tanks	71	8800	0	1090	3000	2130	719		1315	3413	2120

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

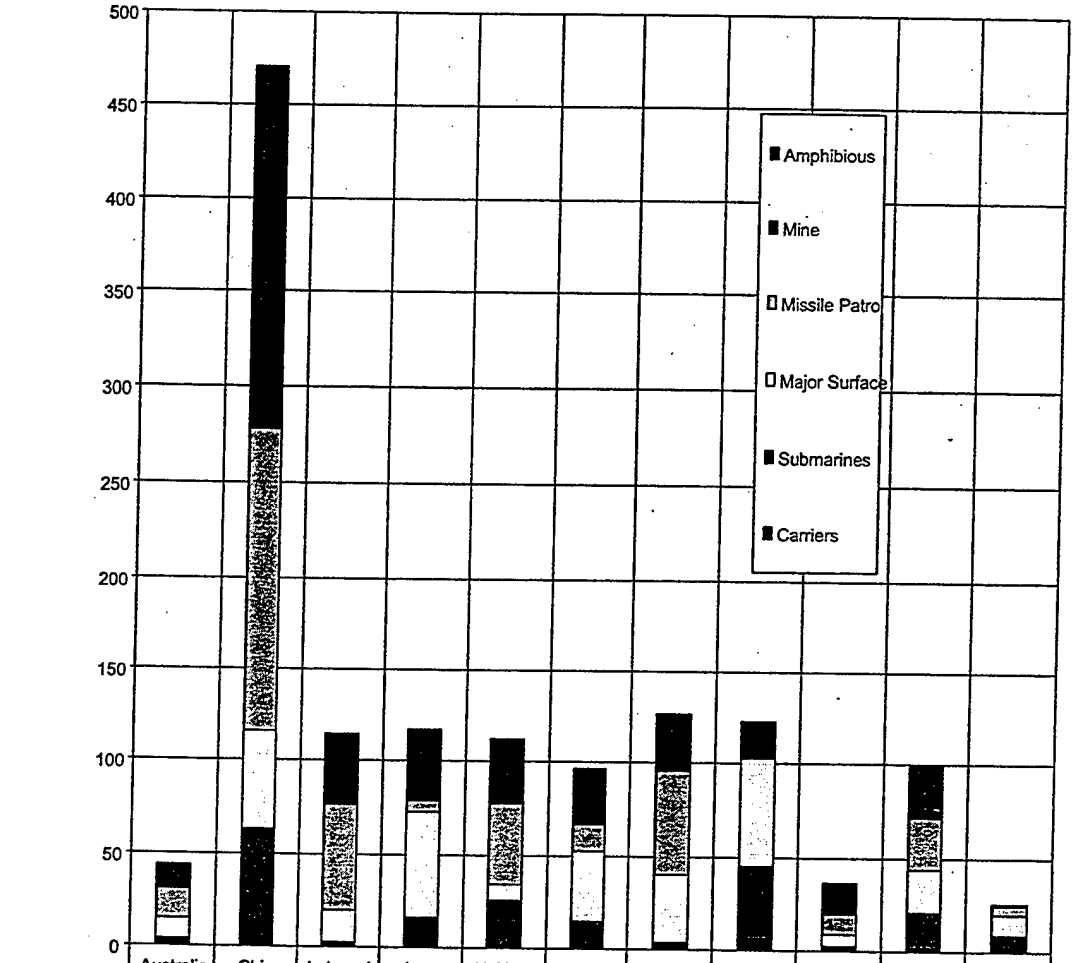
Asian Fixed and Rotary Wing Combat Aircraft in Key Powers in 1999



	Australia	China	Indonesia	Japan	N. Korea	S. Korea	Taiwan	US PACO	Vietnam	India	Pakistan
Armed Helicopter	16	127	21	196	58	190	63	-	43	115	12
Fixed Wing	126	4107	140	429	607	511	560	-	201	839	417

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

Asian Naval Combat Ships in Key Powers 1998



	Australia	China	Indonesia	Japan	N. Korea	S. Korea	Taiwan	US PACC	Vietnam	India	Pakistan
Amphibious	7	73	26	6	10	16	19	21	6	10	0
Mine	7	119	13	32	25	14	12	-	11	20	2
Missile Patro	15	163	57	6	43	15	56	-	10	27	5
Major Surface	11	53	17	57	8	38	36	58	7	24	10
Submarines	4	63	2	16	26	14	4	39	2	19	9
Carriers	0	0	0	0	0	0	0	6	0	1	0

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

The Uncertain Status of North Korean Force Developments

- There is no debate within the US intelligence community over the fact that North Korea has long had large stocks of chemical and biological weapons, and has deployed them in warheads that can be used in its Scud and extended range Scud missiles. There is more debate over whether North Korean has nuclear weapons and is continuing its nuclear weapons development and production program.
- The first major reports of North Korea's nuclear program began in 1993, when analysts found satellite reconnaissance evidence that a North Korean nuclear reprocessing center at Yongbyon had gone had begun to process plutonium. This led to a diplomatic confrontation and talks where the Clinton administration obtained a North Korean pledge to freeze plutonium production at the site. In exchange, the United States, South Korea and Japan agreed to give the North oil and technical assistance to build a peaceful nuclear power program. The agreement called for international monitoring of the Yongbyon site, and Energy Department experts were allowed to encase the spent fuel rods at the center to ensure that they could not be used for warheads. Before this production freeze, however, North Korea was able to produce about 26 pounds of weapons-grade plutonium. As a result, a consensus developed that North Korea could produce one or two bombs.
- The current debate focuses on what North Korean has done since that time. The Clinton Administration initially declared that North Korea had agreed to freeze its entire nuclear program. It later became clear, however, that the agreement covered only Yongbyon and did not preclude nuclear activity at other sites. North Korea then dumped radioactive nuclear fuel out of the heavy water reactor into a cooling pool in order to replace it with fresh fuel rods. The US intelligence community estimated that the spent fuel rods contained enough plutonium for 10 nuclear warheads, and this raised serious questions as to whether North Koreans was covertly going on with its nuclear program.
- A report in the *New York Times*, which has been informally confirmed by several US experts, indicates that the Defense Intelligence Agency (DIA) began to report that it had detected a series of other secret sites, many of them underground, that analysts suspected were related to an ongoing nuclear program. By the late-1990's, DIA and the National Imagery and Mapping Agency, compiled a list of at least 10 potential sites which raised questions about their function without providing clear evidence of any weapons activity.
- One installation, at Kumchangri, was believed to house an underground nuclear reactor and plutonium reprocessing operation. In May 1999, this led the US to pressure North Korea to allow an inspection of the installation which had the same visual signatures as if North Korea was installing an underground a reactor, including the water supplies for water cooling. When North Korea did allow inspection, however, the US only found a series of empty tunnels with no large underground chamber able to hold a nuclear reactor. Another inspection in May 2000 had the same result.
- The *Times* reported that some intelligence experts feel the US gave North Korea too much warning before inspecting the site, making it possible for the North Koreans to hide its purpose. However, State Department officials became leary of the DIA estimates, another installation DIA suspected proved to be nothing more that an underground storage site for the memorabilia of the North Korean leadership.
- This eventually led Secretary of State Madeleine K. Albright and Lt. Gen. Patrick Hughes, director of the DIA, to clash over intelligence report suggesting that North Korea had built a storage installation that housed components for nuclear warheads. State Department officials indicated that DIA was reporting an over-pessimistic picture. DIA indicated in turn that the State Department was too willing to overlook reports of suspicious activity. In their view, the failure of a single inspection does not mean the United States should stop pressing the North Koreans about suspect installations, including the building suspected of housing warhead components. Some of the debate focused on an installation DIA suspected of being a storage building for components of nuclear warheads. The identity and exact location of this center, whose existence has not been released, but the Times reports that intelligence on the storage center was obtained at least three years ago, and was based not only on spy satellite photographs and intercepted communications, but also on "human intelligence" -- spies -- reporting to DIA.[3]
- What is clear is that North Korea is steadily acquiring more advanced missile forces in spite of major economic problems, its rapproachment talks with South Korea in June 2000, and its agreements to suspend the test firing of long-range missiles in September 1999 and June 2000. It has tested a booster that could allow it to develop missiles that could strike the US, and it has had a serious nuclear weapons development effort in the past. As Table III.5 shows, North Korea also has a wide range of missile programs. It also has already deployed large numbers of shorter-range missiles with chemical and probably biological warheads. These include extended range Scud-type missiles with ranges over 1,300 kilometers. The US intelligence community also reported in June 2000 that North Korea did not suspend any other aspects of development and production after it agreed to suspend missile tests in September 1999.
- North Korea launched a multistage Taepo Dong-1 missile across Japan on August 31, 1998 -- in an effort to place a satellite in orbit. The mission failed, but the United States and its allies were surprised and shocked by the missile's 2,000-kilometer range. David J. Osias, an officer of the Defense Intelligence Agency, stated that "The third stage concerns

us. Nobody knew they had it," during a national media update April 26-27, 1998 at the Army Space and Missile Defense Command headquarters.[4]

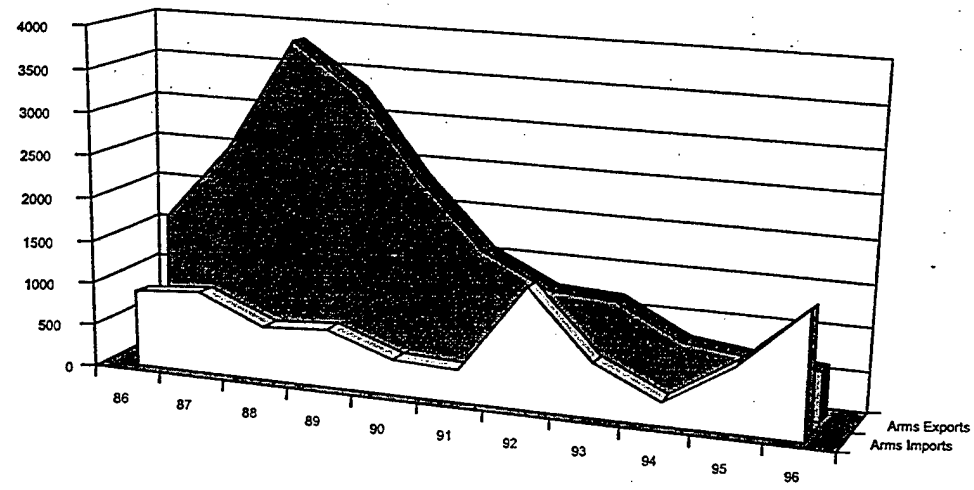
- North Korea has limits. The Tapeo Dong 1 test was a failure, and the missile was anything but an advanced design. The first stage was modified from a liquid-fueled Scud and the second from the No Dong. Both are 1960s technology. The third stage was a small, solid-fueled rocket designed to put a small satellite into space. It was too small to carry a nuclear weapon or an effective biological payload and dispersal system, and the system was so inherently inaccurate that it was unclear it had growth potential to hit a city-sized target. US experts feel that North Korea has since abandoned work on the Taepo Dong-1 missile, and is now developing the Taepo Dong-2. This missile is a two-stage system that uses a cluster of No Dong engines in the first stage and a single No Dong in the second stage. It has never been tested.[5]
- Furthermore, North Korea agreed to suspend further tests of long-range missiles in September 1999 -- largely as a result of the negotiating efforts of former Secretary of Defense William Perry,.[6] This agreement was reached after the NIC report was written, and was renewed in June 2000.. However, US intelligence community also reported in June 2000 that North Korea did not suspend any other aspects of development and production after it agreed to suspend missile tests in September 1999.
- A CIA report in August 2000 also summarized the state of proliferation in North Korea as follows,[7]
- P'yongyang continues to acquire raw materials from out-of-country entities to produce WMD and ballistic missiles. During the reporting period, there were increased reflections of North Korean procurement of raw materials and components for its ballistic missile programs from various foreign sources, especially through firms in China. North Korea produces and is capable of using a wide variety of chemical and possibly biological agents, as well as their delivery means.
- During the second half of 1999, Pyongyang sought to procure technology worldwide that could have applications in its nuclear program, but we do not know of any procurement directly linked to the nuclear weapons program. We assess that North Korea has produced enough plutonium for at least one, and possibly two, nuclear weapons. The United States and North Korea are nearing completion on the joint project of canning spent fuel from the Yongbyon complex for long-term storage and ultimate shipment out of the North in accordance with the 1994 Agreed Framework. That reactor fuel contains enough plutonium for several more weapons.
- P'yongyang continues to seek conventional weapons via the gray market. In 1999, for example, North Korea acquired MiG-21 fighter aircraft from Kazakhstan.
- ...Throughout the second half of 1999, North Korea continued to export significant ballistic missile-related equipment and missile components, materials, and technical expertise to countries in the Middle East, South Asia, and North Africa. P'yongyang attaches a high priority to the development and sale of ballistic missiles, equipment, and related technology. Exports of ballistic missiles and related technology are one of the North's major sources of hard currency, which fuel continued missile development and production.
- These factors help explain why the report of the National Intelligence Council has seen North Korea as presenting the most serious near term threat to the US, and why this threat has been used as the rationale for setting early deadlines for the deployment of a US NMD system:[8]
- "After Russia and China, North Korea is the most likely to develop ICBMs capable of threatening the United States during the next 15 years.
- North Korea attempted to orbit a small satellite using the Taepo Dong-1 SLV in August 1998, but the third stage failed during powered flight; other aspects of the flight, including stage separation, appear to have been successful.
- If it had an *operable* third stage and a reentry vehicle capable of surviving ICBM flight, a converted Taepo Dong-1 SLV *could* deliver a light payload to the United States. In these cases, about two-thirds of the payload mass would be required for the reentry vehicle structure. The remaining mass is probably too light for an early generation nuclear weapon but could deliver biological or chemical (BW/CW) warfare agent.
- Most analysts believe that North Korea *probably will test* a Taepo Dong-2 this year, unless delayed for political reasons. A two-stage Taepo Dong-2 could deliver a several-hundred kilogram payload to Alaska and Hawaii, and a lighter payload to the western half of the United States. A three-stage Taepo Dong-2 could deliver a several-hundred kilogram payload anywhere in the United States.
- North Korea is much *more likely* to weaponize the more capable Taepo Dong-2 than the three-stage Taepo Dong-1 as an ICBM."
- These comments are particularly striking in view of the fact North Korea launched a multistage Taepo Dong-1 missile across Japan on August 31, 1998 -- in an effort to place a satellite in orbit. The mission failed, but the United States and

its allies were surprised and shocked by the missile's 2,000-kilometer range. David J. Osias, an officer of the Defense Intelligence Agency, stated that "The third stage concerns us. Nobody knew they had it," during a national media update April 26-27, 1998 at the Army Space and Missile Defense Command headquarters.[9]

- The fact remains, however, that the Korean test was a failure, and that the missile was anything but an advanced design. The first stage was modified from a liquid-fueled Scud and the second from the No Dong. Both are 1960s technology. The third stage was a small, solid-fueled rocket designed to put a small satellite into space. It was too small to carry a nuclear weapon or an effective biological payload and dispersal system, and the system was so inherently inaccurate that it was unclear it had growth potential to hit a city-sized target. US experts feel that North Korea has since abandoned work on the Taepo Dong-1 missile, and is now developing the Taepo Dong-2. This missile is a two-stage system that uses a cluster of No Dong engines in the first stage and a single No Dong in the second stage. It has never been tested.[10]
- Furthermore, North Korea agreed to suspend further tests of long-range missiles in September 1999 -- largely as a result of the negotiating efforts of former Secretary of Defense William Perry,.[11] This agreement was reached after the NIC report was written, and was renewed in June 2000.

Trends in Chinese Arms Exports and Imports: 1986-1996

(Constant $1996 Millions)

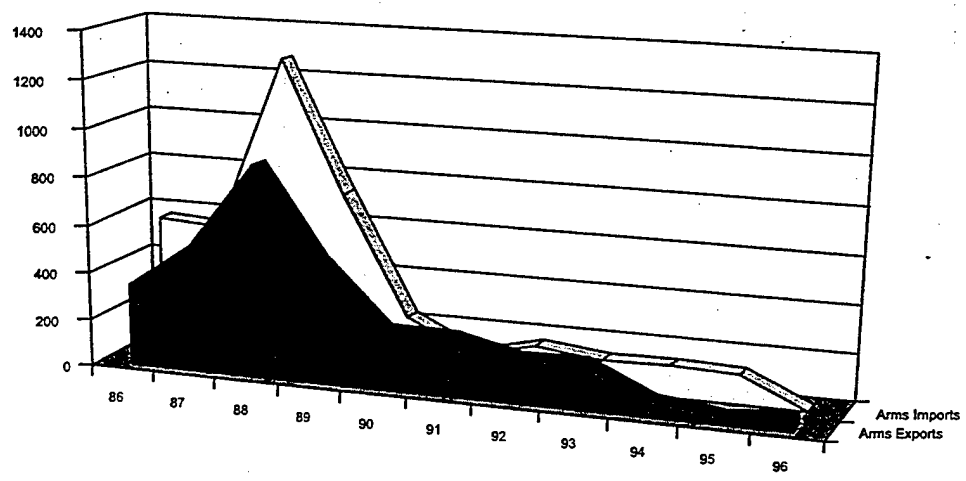


	86	87	88	89	90	91	92	93	94	95	96
Arms Imports	883	955	623	671	409	382	1423	640	281	789	1500
Arms Exports	1630	2503	3813	3294	2339	1575	1204	1174	755	662	600

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

Trends in North Korean Arms Exports and Imports: 1986-1996

(Constant $1996 Millions)



	86	87	88	89	90	91	92	93	94	95	96
Arms Exports	340	527	890	512	246	247	186	192	63	31	50
Arms Imports	571	553	1271	732	234	101	164	128	135	122	0

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

DEFENCE ECONOMIC TRENDS IN THE ASIA–PACIFIC

1999

CONTENTS

Tables

Defence spending and economic trends

Cross-country comparisons

SOUTH ASIA (INDIA AND PAKISTAN)

OVERVIEW

Defence spending by India and Pakistan accounts for over 90 per cent of total military expenditure in South Asia. Both countries have evaded the worst of the Asian economic downturn as they are not as exposed to short-term international capital flows. Consequently, they have experienced relatively high levels of economic growth in recent years (see figure 10) and, indeed, over the past decade. But in 1999, domestic economic pressures and the fiscal burden stemming from the conflict in Kashmir will make it difficult to sustain such growth levels.

The deep-rooted hostility between the two nations has continued to place upward pressure on their defence budgets. But, as illustrated in figure 11, Pakistan has not been able to maintain defence spending growth at the level achieved by India and its defence budget is now less than one-third the size of India's (even though, as a percentage of GDP, Pakistan's defence spending is double that of India).

INDIVIDUAL COUNTRY ASSESSMENTS

India

India's domestic structural weaknesses have slowed its economic growth and will constrain its medium-term prospects. Real growth in GDP for 1999 is forecast at just over five per cent, well down from the mid-90s levels of around eight per cent. India's future performance will be affected by the ability of a new government to improve business and investor confidence (which has waned due to political instability) and make progress in the slowing economic reform agenda.

Following a slight decline in the level of defence spending in the early 1990s, India's defence budget has experienced relatively strong growth since 1993. In 1999, India's defence budget of Rp 456.9 billion (about US$9.9 billion in 1995 terms) is 25 per cent larger than the 1990 budget in real terms.

Pakistan

Pakistan continues to grapple with domestic economic problems, and its poor budgetary position makes it difficult to maintain defence spending levels. Defence expenditure and debt servicing account for around two-thirds of Pakistan's total government outlays. Pakistan's official defence budget in 1999 of Rp 139 billion (US$3.1 billion in 1995 terms) was worth nearly four per cent less than the 1998 budget in real terms. The recently released FY2000 budget indicates that the defence vote will suffer a real decline for the third year in a row. As a result, Pakistan is actually spending less on defence in real terms in 1999 and 2000 than it was in 1990. Although Pakistan's defence budget has declined as a percentage of GDP in recent years, it still accounts for almost one-quarter of government spending.

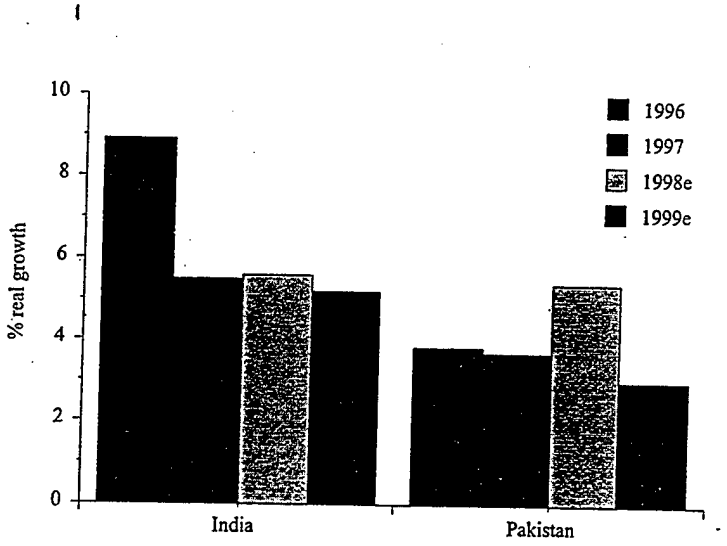


Figure 10. India and Pakistan: Real GDP growth 1996–99 (%)

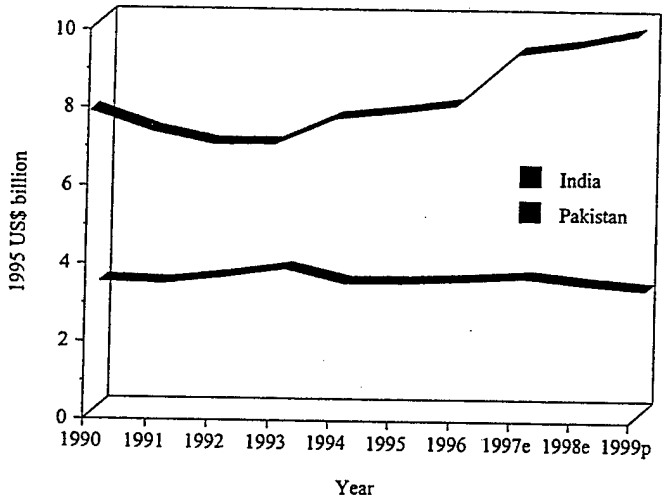


Figure 11. India and Pakistan: Defence budgets 1990–99 (1995 US$)

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p	2000p
Official defence budget:											
Current Rp bn	58.7	65.3	75.8	87.8	89.1	101.9	115.0	131.4	133.9	139.0	142.0
1995 Rp bn	102.0	100.3	105.8	112.8	101.4	101.9	103.8	106.4	101.3	97.5	92.3
1995 US$ bn	3.2	3.2	3.3	3.6	3.2	3.2	3.3	3.4	3.2	3.1	2.9
Real growth (%)	8.0	(1.6)	5.4	6.6	(10.1)	0.5	1.8	2.5	(4.8)	(3.7)	(5.4)
% of GDP	6.9	6.4	6.3	6.5	5.7	5.4	5.3	5.2	4.7	4.4	4.1
% of govt spending	30.6	27.5	25.7	26.6	24.6	24.0	22.3	24.0	22.9	*22.4*	*22.1*
Per capita (1995 US$)	28.7	27.4	28.1	29.1	25.4	24.7	24.5	24.4	*24.5*	*22.9*	*21.0*
GDP:											
Current Rp bn	855.9	1,020.6	1,211.4	1,341.6	1,573.1	1,882.1	2,165.5	2,503.3	2,823.1	3,134.6	3,486.9
1995 US$ bn	47.0	49.6	53.5	54.5	56.6	59.5	61.8	64.1	67.6	69.6	71.7
Real growth (%)	4.5	5.5	7.8	1.9	3.9	5.1	3.8	3.7	5.4	3.0	3.0
Per capita (1995 US$)	418.4	428.5	448.4	443.9	447.8	457.1	460.8	463.9	*517.4*	*517.1*	*516.8*
Govt spending (current Rp bn)	192.1	237.4	294.4	330.5	362.9	425.4	515.2	547.8	583.9	*620.0*	*642.2*
Population (m)	112.4	115.8	119.2	122.8	126.5	130.3	134.2	138.2	*130.6*	*134.6*	*138.7*
Consumer price index (% change)	9.1	11.8	9.5	10.0	12.4	12.4	10.4	11.4	8.0	7.0	8.0
Defence spending – IMF:											
Current Rp bn	...	...	...	...	...	...	...	...	...	...	...
1995 US$ bn	...	...	...	...	...	...	...	...	...	...	...

Fiscal year ending 30 June

Table 14. Pakistan: Defence spending and economic trends

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p
Australia	6.39	6.70	6.81	7.05	7.41	7.22	7.28	7.00	7.19	7.50
Brunei	0.30	2.87	0.32	0.30	0.37	0.28	0.33	0.33	0.33	0.29
Burma	2.88	0.34	2.58	2.22	2.39	2.72	2.47	2.15	1.80	1.57
Cambodia	...	0.08	0.12	0.11	0.19	0.17	0.12	0.09	0.08	0.08
Canada	9.55	9.92	7.35	9.10	8.86	8.03	7.49	6.99	6.54	6.00
China	6.39	6.84	9.52	7.05	7.52	7.55	7.89	8.98	9.85	11.26
Fiji	0.03	0.03	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03
India	7.87	7.34	7.02	7.04	7.70	7.86	8.06	9.40	9.61	9.91
Indonesia	2.05	2.07	2.16	2.23	2.45	2.63	2.88	2.93	2.01	2.14
Japan	46.25	47.49	48.44	49.10	49.46	50.22	51.76	52.48	52.02	52.03
Laos	...	...	0.12	0.12	0.12	0.11	0.08	0.07	0.05	0.03
Malaysia	1.52	2.04	2.05	2.19	2.27	2.39	2.48	2.25	1.89	2.03
New Zealand	...	0.83	0.76	0.69	0.66	0.70	0.71	0.73	0.69	0.70
Pakistan	3.23	3.17	3.35	3.57	3.21	3.22	3.28	3.36	3.20	3.09
Papua New Guinea	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.06	0.05	0.04
Philippines	1.35	1.31	1.40	1.17	0.97	1.02	1.00	1.40	1.30	1.48
Singapore	2.89	2.96	3.27	3.27	3.39	3.97	3.92	4.27	4.95	4.99
South Korea	12.02	12.91	13.41	14.11	14.20	14.33	15.90	16.84	15.48	14.94
Taiwan	9.33	9.86	10.18	12.48	11.50	10.86	11.28	11.12	11.13	10.02
Thailand	2.80	2.93	3.20	3.51	3.63	3.68	3.88	4.38	2.71	2.57
United Kingdom	41.05	40.68	38.89	37.42	36.50	33.96	34.21	32.55	33.08	32.36
United States	349.23	326.64	309.56	293.21	268.21	266.30	260.30	258.40	250.46	248.30
Vietnam	...	...	1.14	0.97	1.62	1.45	1.93	2.01	1.51	...

Table 24. Comparative defence expenditure, constant 1995 US$ billion

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p
Australia	3.9	4.8	1.7	3.5	22.0	(2.6)	0.8	(2.4)	2.6	4.4
Brunei	(1.9)	19.2	(0.7)	(13.0)	5.2	(25.8)	19.5	1.4	(1.2)	(11.9)
Burma	6.0	(0.3)	(10.2)	(13.8)	80.6	13.9	(9.3)	(12.8)	(16.2)	(13.0)
Cambodia	...	...	44.5	(10.8)	7.7	(9.7)	(30.9)	(23.9)	(13.3)	4.0
Canada	2.7	3.9	(4.1)	(4.4)	(2.6)	(9.4)	(6.7)	(6.7)	(6.4)	(8.3)
China	8.5	6.9	7.5	(4.1)	6.7	0.4	4.4	13.8	9.7	14.4
Fiji	42.5	-7.6	-20.4	17.3	-1.4	2.8	21.0	-10.9	-8.0	5.6
India	9.2	(6.7)	(4.3)	0.2	9.5	2.1	2.6	16.6	2.2	3.2
Indonesia	3.4	1.2	4.3	3.3	9.6	7.3	9.7	1.6	(33.1)	6.9
Japan	3.5	2.7	2.0	1.4	0.7	1.5	3.1	1.4	(0.9)	0.0
Laos	...	...	...	(2.1)	0.8	(10.7)	(28.2)	(16.1)	(24.2)	(33.3)
Malaysia	12.2	34.8	0.6	6.6	3.7	5.1	4.0	(9.3)	(16.1)	7.5
New Zealand	...	...	(8.5)	(8.9)	(4.1)	4.7	2.3	2.3	(4.5)	0.6
Pakistan	8.0	(1.6)	5.4	6.6	(10.1)	0.5	1.8	2.5	(4.8)	(3.7)
Papua New Guinea	5.9	5.4	8.2	(6.4)	(4.7)	(5.8)	1.5	31.0	(16.7)	(13.9)
Philippines	(0.6)	(3.1)	6.9	(16.2)	(17.0)	4.4	(1.8)	40.9	(7.8)	14.5
Singapore	15.1	2.7	10.3	0.1	3.4	17.3	(1.3)	8.9	16.1	0.7
South Korea	2.7	7.4	3.8	5.2	0.7	0.9	10.9	5.9	(8.1)	(3.5)
Taiwan	4.5	5.6	3.3	22.6	(7.9)	(5.5)	3.9	(1.5)	0.1	(9.9)
Thailand	11.6	4.7	9.4	9.8	3.4	1.2	5.5	12.8	(38.1)	(5.0)
United Kingdom	(1.8)	(0.9)	(4.4)	(3.8)	(2.5)	(6.9)	0.7	(4.9)	1.6	(2.2)
United States	(1.4)	(6.5)	(5.2)	(5.3)	(8.5)	(0.7)	(2.3)	(0.7)	(3.1)	(0.9)
Vietnam	...	...	...	(14.8)	67.7	(10.3)	32.4	4.2	(24.9)	...

Table 25. Comparative real growth in defence spending (percentage change)

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p
Australia	2.09	2.22	2.19	2.18	2.18	2.04	1.98	1.89	1.85	1.86
Brunei	5.58	6.41	6.43	5.84	7.42	5.52	6.18	6.03	5.78	4.92
Burma	3.58	3.59	2.94	2.39	2.40	2.55	2.17	1.81	1.48	1.26
Cambodia	...	3.50	4.73	3.96	7.02	5.90	3.85	2.87	2.49	2.49
Canada	1.79	1.90	1.81	1.69	1.58	1.40	1.28	1.14	1.06	0.90
China	1.64	1.64	1.57	1.36	1.26	1.06	1.01	1.06	1.08	1.16
Fiji	1.90	1.87	1.38	1.56	1.45	1.46	1.71	1.55	1.41	1.48
India	2.94	2.73	2.48	2.19	2.22	2.09	1.97	2.18	2.11	2.07
Indonesia	1.43	1.35	1.33	1.29	1.31	1.30	1.32	1.28	1.06	1.10
Japan	0.97	0.96	0.97	0.98	0.98	0.98	0.97	0.97	0.99	1.01
Laos	...	...	8.59	7.94	7.39	6.13	4.11	3.45	2.51	1.61
Malaysia	2.63	3.27	3.03	3.00	2.84	2.73	2.62	2.22	2.03	2.16
New Zealand	...	1.56	1.42	1.20	1.12	1.16	1.15	1.12	1.07	1.05
Pakistan	6.86	6.40	6.26	6.54	5.66	5.41	5.31	5.25	4.74	4.43
Papua New Guinea	1.46	1.41	1.34	1.11	1.03	1.03	1.00	1.34	1.09	0.91
Philippines	2.03	1.98	2.11	1.73	1.38	1.37	1.29	1.73	1.61	1.81
Singapore	5.12	4.92	5.08	4.60	4.32	4.66	4.35	4.42	5.06	5.07
South Korea	3.79	3.73	3.68	3.66	3.40	3.15	3.26	3.27	3.33	3.15
Taiwan	4.94	4.85	4.69	5.41	4.68	4.17	4.10	3.80	3.62	3.14
Thailand	2.50	2.42	2.45	2.47	2.35	2.18	2.15	2.43	1.63	1.54
United Kingdom	3.94	3.98	3.83	3.61	3.37	3.06	3.01	2.77	2.76	2.68
United States	5.09	5.01	4.62	4.29	3.80	3.67	3.48	3.34	3.04	2.89
Vietnam	...	...	7.26	5.72	8.81	7.18	8.70	8.43	6.03	...

Table 26. Comparative defence expenditure as a percentage of GDP

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p
Australia	8.88	8.68	8.32	8.17	8.27	7.88	7.59	7.36	7.58	7.73
Brunei	15.03	15.35	12.05	11.13	14.66	9.94	9.50	10.10	9.98	9.09
Burma	22.34	24.29	26.28	24.15	23.59	23.80	27.29	29.34	36.43	44.79
Cambodia	...	44.96	48.29	36.06	48.46	34.85	22.43	18.82	19.45	22.07
Canada	7.53	7.70	7.16	6.73	6.49	7.05	6.74	6.53	6.34	5.55
China	8.41	8.66	8.61	8.05	9.46	9.33	9.38	8.98	6.46	6.71
Fiji	7.44	6.68	4.99	5.29	4.99	5.12	5.37	4.55	4.33	5.02
India	17.03	16.04	14.47	14.63	14.73	14.80	13.74	15.14	15.37	14.00
Indonesia	7.78	8.18	7.17	7.71	8.10	8.85	8.94	8.00	3.69	5.55
Japan	6.28	6.23	6.30	6.41	6.41	6.65	6.45	6.39	6.35	6.01
Laos	...	...	41.52	44.28	31.63	29.84	19.63	16.38	20.68	21.57
Malaysia	8.73	11.43	10.48	11.57	12.02	12.17	11.58	10.17	8.27	9.06
New Zealand	...	3.75	3.70	3.42	3.26	3.54	3.60	3.38	3.13	3.01
Pakistan	30.56	27.51	25.75	26.57	24.55	23.95	22.32	23.99	22.93	22.42
Papua New Guinea	4.22	3.99	4.22	3.42	3.33	3.68	3.93	4.24	3.49	3.12
Philippines	10.37	10.31	10.73	9.36	7.52	7.64	6.98	8.98	8.14	8.93
Singapore	24.38	23.17	27.76	30.23	29.86	32.30	27.49	21.62	28.37	25.00
South Korea	23.43	22.57	21.72	21.74	19.28	17.77	17.49	17.44	18.88	16.19
Taiwan	31.62	28.22	26.50	30.84	29.13	27.93	27.19	26.11	25.85	22.73
Thailand	17.81	16.64	15.74	15.14	14.75	14.27	12.28	13.66	9.60	9.68
United Kingdom	10.47	10.00	8.88	8.53	8.12	7.35	7.23	6.88	6.69	6.39
United States	23.09	20.73	19.92	18.85	17.16	16.71	16.20	15.69	16.05	15.61
Vietnam	...	...	33.82	20.51	31.08	25.81	33.73	33.33	24.94	...

Table 27. Comparative defence expenditure as a percentage of government spending

	1990	1991	1992	1993	1994	1995	1996	1997	1998e	1999p
Australia	374.3	387.5	389.3	398.8	415.3	399.5	397.6	377.9	383.2	395.4
Brunei	1,162.6	1,305.1	1,202.6	1,100.6	1,304.1	942.3	1,096.5	1,083.6	1,043.3	968.1
Burma	69.6	69.0	60.9	51.5	54.4	60.4	53.8	46.4	37.6	32.1
Cambodia	...	9.4	13.2	11.4	20.1	17.7	11.7	8.7	6.9	7.0
Canada	344.9	354.0	335.3	316.9	305.1	273.5	250.0	230.8	216.0	195.5
China	5.5	5.8	6.2	5.9	6.2	6.2	6.4	7.2	7.8	8.9
Fiji	45.7	41.6	32.7	37.4	36.4	36.4	44.1	38.7	35.2	36.6
India	9.4	8.6	8.1	8.0	8.6	8.6	8.6	9.8	9.9	10.0
Indonesia	11.4	11.4	11.7	11.9	12.8	13.5	14.6	14.6	9.8	10.3
Japan	374.6	383.1	389.3	393.4	395.1	400.2	411.6	417.7	412.8	411.6
Laos	...	...	27.7	26.3	25.7	22.3	15.5	12.6	9.3	6.0
Malaysia	85.3	110.1	107.8	111.9	112.9	115.3	117.3	103.9	85.0	89.1
New Zealand	...	243.8	221.1	200.8	190.4	196.5	199.4	193.6	183.4	182.6
Pakistan	28.7	27.4	28.1	29.1	25.4	24.7	24.5	24.4	24.5	22.9
Papua New Guinea	13.3	13.7	14.5	13.4	12.5	11.6	10.8	14.9	12.0	10.1
Philippines	22.0	20.5	21.4	17.5	14.2	14.4	13.9	19.1	17.2	19.3
Singapore	1,064.9	958.9	1,027.9	1,004.2	1,007.7	1,144.1	1,085.0	1,140.9	1,261.5	1,270.0
South Korea	280.4	298.2	306.5	319.2	318.1	317.7	349.0	366.1	333.4	320.5
Taiwan	458.6	479.5	490.5	596.0	544.2	510.0	525.5	513.5	509.9	455.6
Thailand	50.1	51.7	55.9	60.6	61.9	61.9	64.7	72.2	44.2	41.5
United Kingdom	713.2	703.8	670.4	643.1	625.1	579.5	581.9	551.6	558.6	544.5
United States	1,397.4	1,292.9	1,212.0	1,135.9	1,029.0	1,011.9	976.5	959.1	919.7	902.1
Vietnam	...	...	16.4	13.6	22.4	19.7	25.5	26.2	19.3	...

Table 28. Comparative defence expenditure per capita, constant 1995 US$

U.S. AND ASIA STATISTICAL HANDBOOK

2000–2001 EDITION

Compiled and Edited by
Paolo Pasicolan

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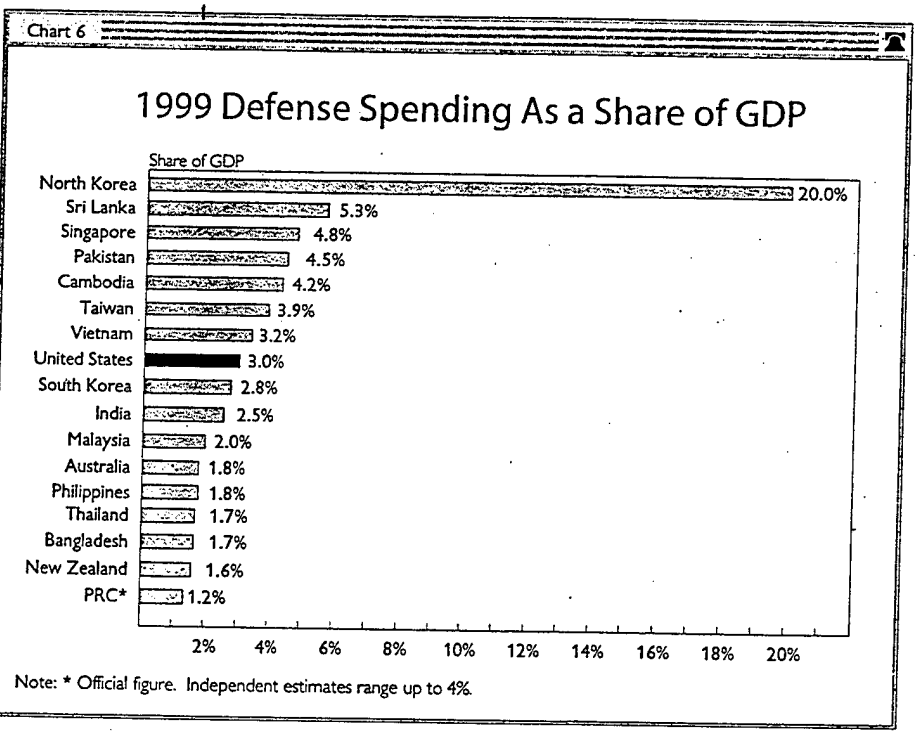
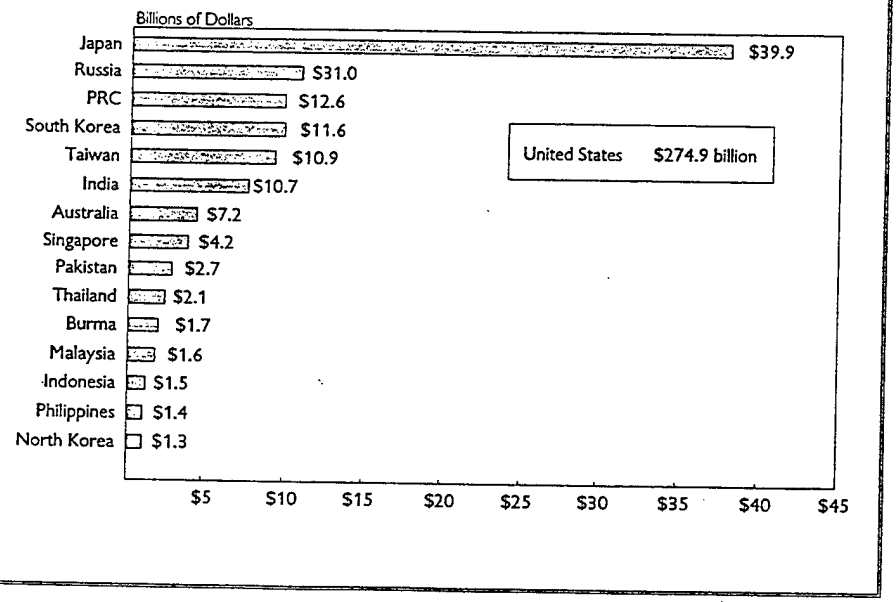
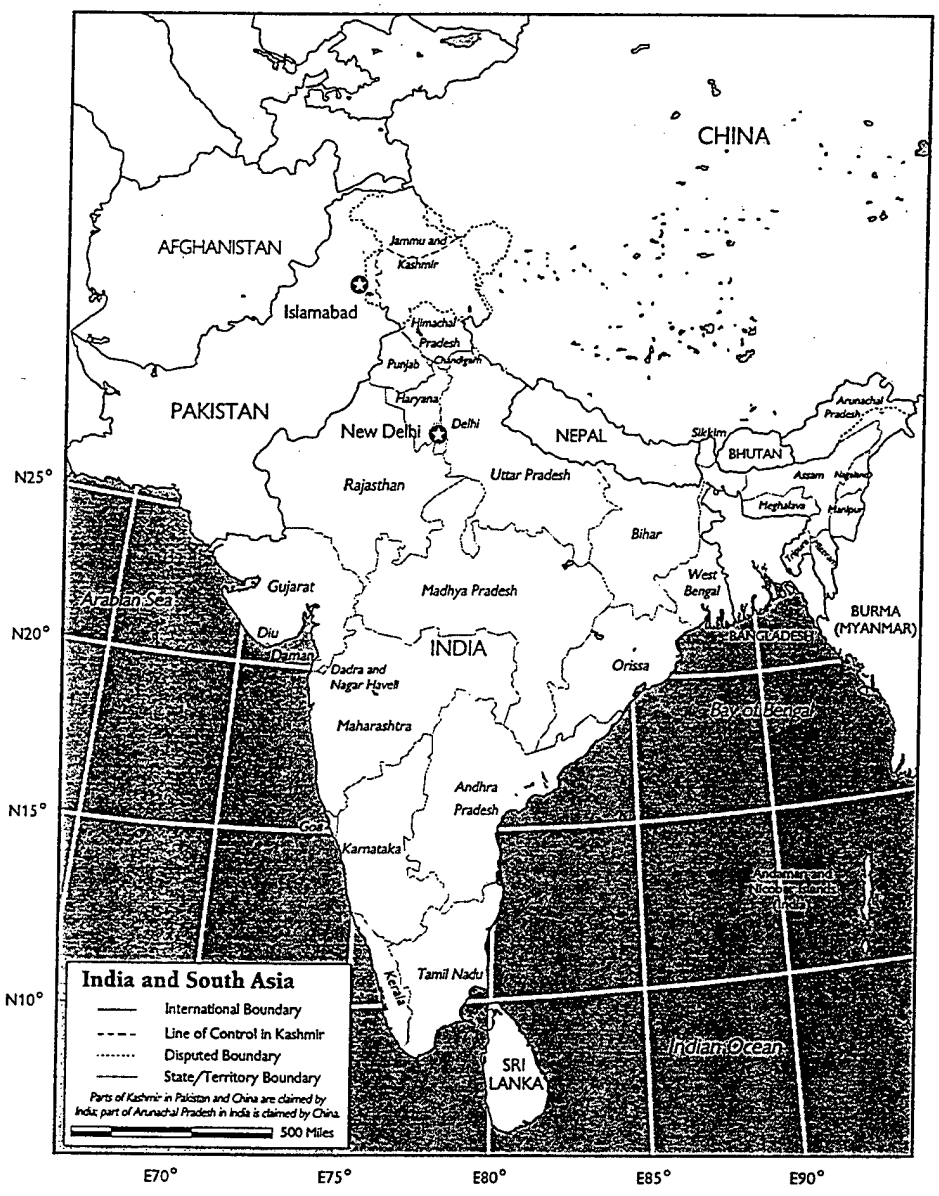


Note: * Official figure. Independent estimates range up to 4%.

Chart 7

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Himachal Pradesh
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Chandigarh
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New Delhi
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NEPAL
Sikkim
BHUTAN
Arunachal Pradesh
Assam
Nagaland
Meghalaya
Manipur
Tripura
Mizoram
Rajasthan
Uttar Pradesh
Bihar
West Bengal
Gujarat
Arabian Sea
Madhya Pradesh
BURMA (MYANMAR)
BANGLADESH
Diu
Daman
INDIA
Orissa
Dadra and Nagar Haveli
Bay of Bengal
Maharashtra
Andhra Pradesh
Goa
Karnataka
Andaman and Nicobar Islands (India)
Tamil Nadu
Kerala
SRI LANKA
Indian Ocean
N25°
N20°
N15°
N10°
E70°
E75°
E80°
E85°
E90°
India and South Asia
International Boundary
Line of Control in Kashmir
Disputed Boundary
State/Territory Boundary
Parts of Kashmir in Pakistan and China are claimed by India; part of Arunachal Pradesh in India is claimed by China.
500 Miles

products are all subject to excise duty. All goods imported into New Zealand are liable for a Goods and Services Tax of 12.5 percent. New Zealand controls the importation of firearms, explosives, pesticides, plants, and animals. Publications, films, audio recordings, and computer disks are also restricted for objectionable material. Some agricultural goods are restricted on phytosanitary grounds, particularly poultry and egg products.

In May 1998, the Copyright Act and the Medicines Act were amended to remove the prohibition on parallel importing, allowing the importation of legitimate goods into New Zealand without the permission of the holder of the intellectual property rights. Enacted by the government to expand discounted prices for consumers, it has also resulted in an increase in the importation of pirated goods. Manufacturers have expressed concern that parallel imports will result in damage to their reputations, due to the import of dated products, products which are not suitable for New Zealand conditions.

The government has not discriminated against foreign interests. American-owned companies, with large minority ownerships in shares, now manage the former government monopoly of railroad and telephone systems. Very few government-owned enterprises remain to be privatized. New Zealand's Post letter-delivery monopoly ended in 1998 with several smaller companies entering the market, and the government has increased competition in the electricity market by breaking-up the state-owned Electricity Corporation of New Zealand into three separate entities.

PAKISTAN

U.S. Exports to:	$1.7 billion
U.S. Imports from:	$0.50 billion
THF Index of Economic Freedom:	3.40

Maximum import tariffs have been reduced from 92 percent in 1994 to 35 percent in March 1999. Import licenses have been abolished on items not on the negative list (68 items banned mostly for religious, health, or security reasons). However, certain detrimental import restrictions, mostly questionable fees, have continued. Importers have also complained that customs officials arbitrarily set import trade prices and often demand bribes. U.S. pharmaceutical manufacturers face discriminatory application of the internal sales tax on raw materials. Testing facilities for agricultural products are inadequate and standards are inconsistently applied, resulting in occasional discrimination against U.S. farm products. Government procurement practices lack transparency. Market pricing is often complicated by the country's complex tax structure, which includes a number of taxes and customs duties that marketers must build into their final sales prices. Concerns about the protection of intellectual property include copyright and patent laws inconsistent with the TRIPS agreement, persistently high levels of piracy and trademark infringement, nominal fines for infringers, and lack of patent protection for pharmaceutical products. Imported computer software and, until recently, film videos, are nearly 100 percent pirated.

In a new policy announced in April 1999, foreign investment on a repatriable basis has now been allowed in the manufacturing, infrastructure, hotels and tourism, agriculture, services, and social sectors. However, investors often face unstable policy conditions, particularly on large infrastructure projects. The government of Pakistan has been known to refuse to honor contractual commitments. In the past, foreign banks have faced numerous restrictions, but during WTO negotiations in December 1997, Pakistan promised greater freedom of entry and operation for foreign banks. However, new foreign entrants to the general insurance market are still virtually barred while foreign firms wishing to compete in the life insurance market face several obstacles. Under a WTO agreement, Pakistan committed to providing market access and national treatment for the telecommunications services industry.

PHILIPPINES

U.S. Exports to:	$12.4 billion
U.S. Imports from:	$7.2 billion
THF Index of Economic Freedom:	2.85

The Philippines' tariff reform program is gradually lowering tariffs on nearly all items toward a goal of zero to five percent by 2004. The average nominal tariff rate was 9.98 percent in 1999 and is scheduled to decline to 8.09 percent by 2000. However, certain sensitive agricultural products, such as grains, coffee, sugar, livestock, and meat products, are practically exempted from the program. Rice is further subject to quantitative restrictions. In January of 1999, tariff rates on a range of products, including textiles and apparel, were raised. All products, including imports, are subject to a 10 percent value-added tax. U.S. exporters of automobiles and distilled spirits have complained of the discriminatory nature of excise taxes that apply to their products. Certain items are subject to various import regulations, including fish, firearms and ammunition, coal and derivatives, chemicals, pesticides, and used vehicles. The government regulates prices for basic public services, such as transport, water, and electricity. The government also remains a major factor in the market for rice and other agricultural products. Software, music, and film piracy is widespread and trademark infringement remains a major problem. Enforcement agencies generally will not proactively target infringement unless the copyright owner brings it to their attention and works with them on surveillance and enforcement actions.

Foreign investments are restricted in certain sectors because of constitutional constraints, public health, and ethical reasons. No foreign investment is permitted in mass media, retail trade, and processing of rice and corn. Varying foreign ownership limitations cover advertising, public utilities, education, and the exploration and development of natural resources, among others. Foreign equity in commercial banks is limited to 60 percent as well. Recent amendments to the General Banking Act temporarily allow 100 percent foreign ownership of banks classified as distressed. Preferential treatment of local suppliers is practiced in government purchases of pharmaceuticals, rice, corn,

PAKISTAN

LAND

Area: 300,664 square miles (778,720 sq. km., slightly less than twice the size of California)
Cultivated: 27% Forest: 5% Pasture: 6%
Resources: land, extensive natural gas reserves, limited petroleum, poor quality coal, iron ore, copper, salt, limestone

POPULATION

1999 Estimate: 138,123,359 Annual Growth: 2.18%
Life Expectancy: 53.38 years Literacy: 37.8% (female: 24.4%)
Infant Mortality: 91.86 Fertility: 4.73
Ethnic Divisions: Punjabi, Sindhi, Pashtun (Pathan), Baloch, Muhajir (immigrants from India and their descendants)
Religions: Sunni Muslim: 77%; Shi'a Muslim: 20%; Christian, Hindu and other: 3%

Urban Population: 35% Telephones per 1,000 People: 19.38
TVs per 1,000 People: 87.86 Computers per 1,000 People: 3.94

POLITICAL

Official Name: ISLAMIC REPUBLIC OF PAKISTAN
Capital: Islamabad
Type of Government: Military Regime
Chief of State: President Rafiq TARAR
Head of Government: Chief Executive General Pervez MUSHARRAF
Foreign Minister: Abdus SATTAR

2000 Freedom House Index (1 is highest, 7 is lowest)
Political Rights: 7.00 Civil Liberties: 5.00

THF Index of Economic Freedom Score (1 is most free, 5 is least free)
2000: 3.40 1999: 3.45 1998: 3.20

1999 Voting with U.S. at U.N.: 25.0%
FY 1999 U.S. Foreign Assistance (Estimated Allocations)
Economic: U.S.$ 2,200,000 Military: None.

ECONOMY

Currency: Rupee, 1 U.S.$ =51.78 PRs
Major Industries: cotton cloth and yarn, fertilizer, cement, sugar, paper products
Major Agricultural Products: wheat, rice, cotton, sugarcane, corn
Major Imports: machinery, petroleum and products, transport equipment, chemicals, foodgrains, iron, steel, edible oils, chemical fertilizers, drugs and medicine, tea, electrical goods
Major Exports: cotton cloth and yarn, synthetic textiles, cotton, rice, leather, fish, carpets, petroleum products, footwear
Per Capita GDP: U.S.$ 1,570

ECONOMIC STATISTICS

(Billions of US$, percentages where appropriate)

	1993	1994	1995	1996	1997	1998	1999
GDP	48.018	51.764	59.824	59.710	60.127	60.928	60.300
Growth (%)	1.91	3.89	5.14	4.99	1.23	3.30	3.91
CPI Rise (%)	9.97	12.37	12.34	10.37	11.38	6.23	4.14
Exports	7.100	8.086	8.052	10.618	9.599	8.655	9.072
to U.S.	0.897	1.012	1.197	1.266	1.442	1.692	1.741
Imports	9.795	9.407	13.028	13.435	11.947	8.970	10.988
from U.S.	0.811	0.718	0.941	1.271	1.240	0.720	0.497
CurAccount	-2.903	-1.814	-3.352	-4.440	-1.713	-1.800	-2.900
U.S. FDI	0.255	0.389	0.425	0.497	0.548	0.505	0.488
FDI in U.S.	0.017	0.022	0.030	0.019	0.012	0.010	0.004

Pakistan is the 56th largest U.S. trading partner.

MILITARY

1999 Military Budget: U.S.$ 2,700,000,000
Increase over 1998: -15.6%
Outlay as a Share of GDP: 4.5%
As a Share of Government Spending: 24.9%

Total Regular Forces: 587,000
Air Force: 45,000 Army: 520,000
Marines: 1,200 Navy: 20,800 Reserves: 513,000

Ballistic Missiles: unknown total [*MRBM*: 10 Ghauri-1 (range: 1,500 km.), unknown qty. of Ghauri-2 (range: 2,300 km.), unknown qty. of Shaheen-2 (range: 2,300 km.); *SRBM*: unknown qty. of Hatf-2 (range: 300 km.), 30-80 Hatf-3 (range: 800 km.), unknown qty. of Shaheen-1 (range: 750 km.); *BSRBM*: 18 Hatf-1 (range: 80 km.)
Combat Aircraft: 418 (including 12 armed helicopters)
Naval Vessels: 10 Submarines, 8 Frigates, 5 Fast Attack (Missile) Craft, 1 Coastal Patrol Craft, 3 Inshore Patrol Craft, 3 Minesweepers

Security Alliance with U.S.: None.
Other Security Alliances: Friendship and Non-Aggression Treaty with the PRC (1960)
U.S. Military Installations: None.
U.S. Military Personnel: 26 (4 Army; 1 Navy; 16 Marines; 5 Air Force)
Foreign Military Personnel: UN (UNMOGIP): 46 military observers from 8 countries
Armed Opposition Groups: None.

The International Institute for Strategic Studies

The Military Balance

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Central and South Asia

MILITARY DEVELOPMENTS

Regional Trends

Central and South Asian countries continue to use more government resources on military expenditure than any region other than the Middle East. The pattern of regional tensions and conflicts are little changed. Relations between India and Pakistan remain tense and terrorism continues in Kashmir. The interminable war in Sri Lanka continues to drain the country's human and material capital. In Afghanistan, the *Taleban* struggles to eliminate the remaining opposition in the north. In Central Asia, government forces, Islamic fighters and drug gangs clash in Tajikistan, Uzbekistan and, increasingly, Kyrgyzstan.

India and Pakistan

In 2000, there has been no positive movement towards improved relations between India and Pakistan. While there were few major incidents across the Line of Control in Kashmir, terrorism by Islamic groups in Indian-held Kashmir continued unabated, despite a brief cease-fire in July–August 2000. The IISS estimates that 1,000 people were killed by terrorist acts in Kashmir over the year to August 2000, bringing the total since 1989 to 23,000. On 24 July, the leader of the armed Islamic group *Hizbul Mujahidin*, Abdul Majid Dar, announced a unilateral cease-fire, following the Indian government's release of several prominent separatist leaders and statements from senior Indian ministers that they were ready to open a dialogue with the militant groups. On 29 July, soon after the cease-fire announcement, India suspended military operations against the separatists. The *Hizbul Mujahidin* began talks with government representatives in Srinagar on 3 August. Ninety people were killed in a surge of violence perpetrated by guerrilla groups opposed to the dialogue. Despite the violence the talks made a promising start, but they stalled because New Delhi refused the *Hizbul's* demand to include Pakistani representatives. The talks ended on 4 August and the Indian armed forces resumed military operations against the insurgents.

The nuclear capabilities of India and Pakistan were little changed during 2000. India was far from acquiring the capabilities needed to meet the demands of the ambitious draft nuclear doctrine, published by the government's Strategic Policy Advisory Board in 1999. New Delhi has not formally endorsed the doctrine and, while there has been an increase in defence-budget plans, only modest steps are being taken towards improving nuclear-delivery capabilities by aircraft and missile. The *Agni*-2 missile has not been tested since April 1999. There have been tests of the land- and sea-launched 150–250 kilometre range *Prithvi* missile, but these are not thought to be nuclear-capable. The land, sea and air delivery capabilities set out in the draft doctrine would require substantially more spending than currently envisaged. It would probably cost in the order of $500 million a year over the next ten years to develop the warheads, missile capabilities and command-and-control systems laid out in the document.

Pakistan's missile capabilities have continued to advance. The 2,400km-range *Shaheen* 2 is ready for flight-testing. The longer-range version of the *Hatf* 1 surface-to-surface missile (SSM) tested successfully over its 100km range. The new design permits a greater payload, improved accuracy and a greater flexibility in warheads. A total of 30 600km-range *Hatf* 3 (based on the Chinese M-11) are reported to be in service. There are also thought to be 12 1,500km-range *Ghauri* 1 missiles operational. A 2,500km-range *Ghauri* 2, which would be capable of striking anywhere in India, has undergone static-engine testing. These high-priority programmes go some way towards counterbalancing India's superiority in conventional forces, which budget plans for the

next five years will increase further. Increased demands have been placed on these forces; in particular, ensuring that Pakistani-supported guerrillas do not repeat the 1999 incursion into the Kargil area of Indian-held Kashmir. India maintains a greater military presence in that region than before. It has set up a new Army corps, XIV Corps, based in Leh and Nimu, to be responsible for the northern border areas. XV Corps remains headquartered in Srinagar, focusing on counter-terrorism operations in Kashmir. Internal security problems place continuing demands on military resources. In the Assam region, for example, security forces are engaged in a campaign against separatist groups such as the National Democratic Front of Bodoland (NDFB) and the United Liberation Front of Assam (ULFA).

Central Asia

In August 1999, hostages were seized in the Batken region of Kyrgyzstan, by an Uzbek terrorist group led by Juma Namangoni of the Islamic Movement of Uzbekistan (IMU). This, and subsequent events, have led to increased resources devoted to border defence and countering Islamic militancy. Among the hostages seized by Namangoni's group were the deputy commander of the Kyrgyz Interior Troops and four geologists from Japan. Namangoni made a number of demands, including that President Islam Abdughanievich Karimov of Uzbekistan should release 50,000 prisoners, mostly Muslims, held on terrorism charges. At the same time, he and his estimated 400 supporters claimed that they intended to launch an Islamic crusade against Uzbekistan. In an already insecure region, suffering the depredations of criminal gangs involved in the drug trade, these events further exposed the weakness of the area's security forces. The international nature of the incident also excited the interest of major powers both within and beyond the region. China, France, India, Russia, Turkey and the US, which are all sensitive to perceived Islamic threats, have supported countervailing action. For example, in April 2000, the US announced that it had earmarked $10m to provide training and equipment for Uzbek counter-terrorism and anti-drug units on the Afghan border. The US has offered similar packages to Kazakstan and Kyrgyzstan. In May 2000, China agreed an estimated 11m yuan ($1.3m) aid programme to help equip Kazakstan's armed forces, as well as a similar arrangement for Tajikistan to the value of 5m yuan ($0.6m) in July. Also in July, French Defence Minister Alain Richard signed a military-aid agreement that included the establishment of a joint commission on 'military-technical co-operation and defence technology'. In the same month, the Chief of the Turkish General Staff, General Huseyin Kivrikolgu, agreed to an aid package involving military-technical cooperation reportedly worth $1m. Russia has stepped up its programme of assistance and exercises through the Commonwealth of Independent States (CIS) network. In March and April 2000, Russia ran *Exercise Southern Shield*, involving the forces of Kazakstan, Kyrgyzstan and Tajikistan in counter-terrorist operations. Even Uzbek forces took part, although only on their own territory. This was an unusual step, as Uzbekistan normally stands aside from CIS activities and is normally particularly sensitive about Russian military activities in the region. The rising Islamic militancy in 2000, particularly the Batken incident, has made such activities more acceptable. However, the object of the foreign donors – to strengthen the region's armed forces – is unlikely to promote stability. Indeed, there was a fresh surge of violence in the Batken area during August 2000, in which ten Kyrgyz soldiers and 30 IMU rebels were reported killed. Uzbek security forces also caught members of the IMU infiltrating the border into Uzbekistan. There continue to be tensions among all the regional states, particularly between Uzbekistan, Kyrgyzstan and Tajikistan, exacerbated by the problem that state borders bear little relation to the geographic dispersion of different ethnic groups and clans. Also, the flow of drugs and associated criminal gangs from Afghanistan through the Fergana valley is unlikely to abate in the near future. The drought in Afghanistan during 2000 will significantly reduce the opium crop; however, this

will not reduce drug-gangs' activities or the accompanying violence, but simply raise the price of the drugs.

In Afghanistan, the *Taleban* have increased their pressure on the Northern Group of forces led by Ahmad Shah Masood with a vigorous summer 2000 offensive. Their campaign focused on Taloqan, an important Northern Group base, and further north towards Eshkamesh. Even if the *Taleban* capture Taloqan, it is questionable whether they can hold it until winter sets in. They have not succeeded in capturing the base before and have not been able to hold territory captured in the area in previous years. The object of their military offensive is clearly to put a stranglehold on the supply routes to Masood's forces in the Panjshir valley and from the Tajikistan border. Nevertheless, Masood continues to receive support from Iran, Russia and Uzbekistan, and there seems to be no end in sight for this conflict. Over the year to August 2000, 10,000 people were killed as a direct result of conflict in Afghanistan, bringing the total since 1992 to 76,000. Despite US pressure, Pakistan has been unable to exert any real influence on the *Taleban* regime to moderate its excesses or to deliver up the Saudi dissident Usama bin Laden to help bring an end to the international terrorist activities of his group.

Sri Lanka

In Sri Lanka, the 17-year civil war has claimed 66,000 lives. The Liberation Tigers of Tamil Eelam (LTTE) launched a major offensive on the Jaffna peninsula in April 2000, but this lost momentum and government forces inflicted substantial casualties on the rebels. Air power was an important factor in blunting the LTTE attacks, both in the form of bombing raids and in the use of aircraft to send supplies to the beleaguered government forces trapped on the peninsula. In addition to their attacks on military bases, mainly in the north, the LTTE continue their terrorist campaign, carrying it to the capital Colombo. One of the more dramatic attacks in Colombo in 2000 was the killing of Industry Minister C.V. Gooneratne and 20 others by a suicide bomber during June celebrations honouring the country's war heroes. President Chandrika Kumaratunga's government put a devolution plan before parliament in August that contained a new constitution granting the provinces considerable autonomy and effectively turning the country into a federation. Kumaratunga hoped this could lead to peace talks with the LTTE; however, the plan was decisively voted down by the opposition United National Party. While attempting a political solution, the government has also strengthened the armed forces. In 2000, the Air Force took delivery of eight *Kfir* combat aircraft from Israel as well as delivery, at short notice, of four MiG-27 fighter, ground-attack (FGA) aircraft from Ukraine. The MiG-27s were soon in action against rebel forces.

DEFENCE SPENDING

Regional defence spending increased in 1999 by 3.1% in real terms to $21.7bn (measured in constant 1999 US dollars). Economic performance in the area remained strong, with gross domestic product (GDP) higher by over 5% in real terms, driven mainly by India's steady growth. India accounted for most of the regional defence-spending increase with a 10.2% rise to $13.9bn, measured in constant 1999 US dollars. This was well over the budget of $12.4bn. The 1999 defence budgets of Pakistan and Sri Lanka fell by 13% and 18% respectively in real terms. Budget allocations have increased in terms of national currency, but since these two countries import nearly all their major equipment, the depreciation of their currencies has hit them hard. The defence budgets of Central Asian countries remain difficult to access, although spending is known to be increasing, boosted by foreign aid.

India

India's defence budget for 2000 rose by nearly 30% to Rs709bn ($15.9bn) in nominal terms or 20% in real terms over the previous year. The increase – the biggest ever – will be partly financed by an increase in income tax, for the second year running. The latest defence budget amounts to 2.8% of GDP compared with 2.4% in 1998.

The Army will receive Rs349bn ($7.8bn), which is Rs30bn more than in 1999. It plans to acquire unmanned aerial vehicles, battlefield radar, improved artillery and up to 310 T-90 main battle tanks (MBT) from Russia. The additional costs of the Army's deployment in Kashmir following the Kargil border conflict, which is estimated at Rs100m per day, will be met by an extra allocation of Rs17.3bn.

The Indian Air Force will receive Rs143bn to help fund 66 advanced jet trainers, ten more *Mirage* 2000D fighters and the continued upgrade of its MiG-21 fighters. The trainers are urgently needed to curb the increasing number of flying accidents. However no decision on which aircraft to buy had been made by mid-2000. Such characteristic delay bedevils the Indian procurement system, which the Chief of the Army Staff, General V. P. Malik, has described as 'tedious, time consuming procedures' that hold up acquisitions even when parliament has allocated the funds. The main contenders remain the British *Hawk*, the French *Alphajet* and the Russian MiG-AT. Another regular cause of accidents is that the ageing MiG-21 fleet is desperately in need of the upgrade programme now underway. The 60 Jaguars are also being upgraded. A significant advance in capability was marked by the delivery in 2000 of the last of 40 Russian Su-30MK FGA aircraft.

The Indian Navy receives an increase of Rs10bn in the 2000 budget, bringing its allocation to Rs81bn ($1.8bn). The bulk of the extra funds are to develop naval aviation capabilities. India continues to negotiate with Russia about the transfer of the 45,000-tonne carrier *Admiral Gorshkov*. A Memorandum of Understanding between the two countries was signed in December 1999 and it is believed that the ship is currently being refitted in St Petersburg at India's expense. It is also believed that India wants to acquire about 20 MiG-29Ks from Russia for the carrier and forgo upgrading the *Sea Harrier* aircraft, at a cost of $200m, in order buy the MiGs. However, doubts remain about India's ability to finance the running of the carrier. Moreover, if the plan to have two carriers by 2010 is to be fulfilled, the *Viraat*, currently in refit, will have to be replaced within the decade. This is a financial burden that the Navy is unlikely to be able to bear. In other naval aviation developments, India is in negotiation with Russia to upgrade its 13 maritime-reconnaissance aircraft (eight Tu-142 and five Il-138). Linked to this deal is a negotiation to lease at least four Tu-22M3s for four years from Russia. If this arrangement goes ahead, it is not clear whether these aircraft would be operated in a maritime role or for wider tasks.

Further enhancements to the Indian Navy's surface combatants are based on Russian designs but are mostly built in India. The first *Brahmaputra*-class guided-missile frigate was commissioned in early 2000; two more are to follow. However, the class is without its main weapon system, the *Trishul* surface-to-air missile, which has not yet started trials. The third of the *Delhi*-class guided-missile destroyers will be commissioned in late 2000; it is hoped to build another three. In May 2000, the first of the *Kashmir*-class (*Krivak* III design) guided-missile frigates was launched in St Petersburg and it should be delivered to India in early 2002. Two more will be delivered by late 2003. Construction of an improved *Kashmir*-class frigate will start in India in late 2000 for first delivery in 2007. Two more of the *Kashmir*-class are on order. They are general-purpose frigates but will have a strong anti-submarine capability. The tenth and last *Kilo*-class diesel submarine was commissioned in mid-2000 and is armed with *Klub* anti-surface-ship missiles. It has been reported that the *Kilos* are not as effective as expected due to problems with their batteries.

Table 20 Indian defence budget by service/department, 1995–2000

(1998 US$m)	1995	%	1996	%	1997	%	1998	%	1999	%	2000	%
Army	4,673	53.0	4,630	53.4	5,663	57.2	5,218	52.2	5,816	48.5	7,074	46.1
Air Force	2,274	25.8	2,221	25.6	2,468	24.9	2,271	22.7	2,329	19.4	3,126	20.4
Navy	1,246	14.1	1,175	13.5	1,168	11.8	1,448	14.5	1,538	12.8	1,776	11.6
R&D	454	5.1	429	4.9	365	3.7	431	4.3	632	5.3	670	4.4
DP&S,other	165	1.9	221	2.6	237	2.4	618	6.2	1,673	14.0	2,705	17.6
Total	8,812	100	8,676	100	9,901	100	9,986	100	11,988	100	15,351	100
% Change		9.0		-1.6		14.1		0.9		20.0		28.0

Table 21 Indian defence and military-related spending by function, 1998–2000

(US$m)	1998 outturn	1999 outturn	2000 budget
Personnel, Operations & Maintenance			
MoD	84	75	81
Defence Pensions	1,762	2,560	2,702
Army	5,351	5,719	6,005
Navy	761	835	910
Air Force	1,336	1,430	1,778
Defence ordnance factories	N.A.	1,173	1,288
Recoveries & receipts	-1,846	-1,298	-1,337
Sub-Total	7,448	10,494	11,427
R&D, Procurement and Construction			
Tri-Service Defence R&D	138	151	186
Army	667	1,446	1,867
Navy	740	781	938
Air Force	882	971	1,475
Other	111	52	81
Sub-Total	2,538	3,401	4,547
Total Defence Budget	9,986	13,895	15,974
Other military-related funding			
Paramilitary forces	891	918	953
Department of Atomic Energy	586	363	461
Department of Space	366	342	382
Intelligence Bureau	57	71	74
Total	1,900	1,694	1,870

Although not published in the defence budget, there is increased funding in 2000 for the atomic energy and space programmes, both featuring military-specific projects. Together the two divisions are budgeted to receive $843m in 2000, up from $705m in 1999.

Pakistan

Pakistan's official defence budget rose from Rs142 ($2.9bn) in 1999 to Rs170bn ($3.2bn) in 2000, but as usual no detailed breakdown is available. *The Military Balance* estimates that spending in 1999 was above budget (and official outlay figures) at $3.5bn. The figure would probably have

been higher still but for a $134m reduction in spending to divert funds to public works in rural areas.

Pakistan took delivery of a further eight upgraded *Mirage* 3 and *Mirage* 5 combat aircraft from France. A joint programme with China for the development and production of the FC-1 combat aircraft continues, with a planned in-service date of 2005. In the meantime, it is reported that Pakistan took delivery of a part-order for 50 F-7MG FGA aircraft from China in 2000.

In late 1999, the Pakistan Navy commissioned its first *Khalid*-class (French *Agosta B*) diesel submarine. Two more are being built under licence in Karachi, to be ready in 2002. They will replace the ageing *Hangor*-class boats first commissioned in 1969. It is still uncertain whether air-independent propulsion will be fitted; even without, the new vessels will greatly enhance Pakistan's submarine capabilities. If indigenous construction is successful, Pakistan may export them, with Saudi Arabia and Qatar as possible buyers. Funding, however, remains difficult for the Pakistani Navy; it cannot yet afford to replace the *Atlantique* maritime-reconnaissance aircraft shot down by India in 1999.

Sri Lanka

The war between government forces and the LTTE resulted in 1999 defence spending of Rs57.2bn ($807m), according to official figures, which was approximately Rs17.2bn ($242m) over budget. The official budget for 2000 has been set at Rs45bn ($699m). Given the increased tempo and scale of military operations, this budget too will almost certainly be overspent.

Bangladesh

Concerned by the military build-up of its neighbours, Bangladesh has decided to upgrade its ageing fleet of combat aircraft. In 2000 eight air-defence MiG-29s were delivered from Russia in a contract reputedly worth $115m. They will all be based at Dhaka and will replace obsolescent MiG-21s and Chinese copies of the MiG-19. The Navy is also expected to take delivery of a South Korean *Ulsan* frigate.

Table 22 Arms orders and deliveries, Central and South Asia, 1998–2000

Country	Country supplier	Classification	Designation	Quantity	Order date	Delivery date	Comment
Bangladesh							
	SF	PCO	***Madhumati***	1	1995	1998	
	PRC	FGA	**F-7**	24	1996	1997	Deliveries to 1999
	RF	radar	**IL-117 3-D**	2	1996	1999	Requirement for 3 more
	RF	hel	**Mi-17**	4	1997	1999	Following delivery of 12 1992–96
	PRC	trg	**FT-7B**	4	1997	1999	
	US	tpt	**C-130B**	4	1997	1999	
	RF	FGA	**MiG-29B**	8	1999	1999	Order placed 1999 after delay
	ROK	FF	***Ulsan***	1	1998	2002	
	Cz	trg	**L-39ZA**	4	1999	2000	Following delivery of 8 in 1995
India	dom	SSN	**ATV**	1	1982	2007	
	dom	ICBM	***Surya***		1983		Development
	dom	SLBM	***Dhanush***		1983	2003	Failed test firing April 2000
	dom	SLCM	***Sagarika***		1983	2003	300km range. May be ballistic
	dom	MRBM	***Agni* 1**		1983	1998	
	dom	MRBM	***Agni* 2**		1983	2000	Tested April 1999

Country	Country supplier	Classification	Designation	Quantity	Order date	Delivery date	Comment
	dom	MRBM	*Agni* 3		1983		Dev. Range 3,500km
	dom	SSM	*Prithvi* 150	75	1983	1995	Low-volume prod continues
	dom	SSM	*Prithvi*		1983	1999	Naval variant. Deployed Jan 1999
	dom	SSM	*Prithvi* 350		1983	1998	Land and naval variants in dev
	dom	SAM	*Akash*		1983	1999	Development. High-altitude SAM
	dom	SAM	*Trishul*		1983	1999	In development
	dom	ATGW	*Nag*		1983	1999	Ready for production mid-1999
	dom	AAM	*Astra*		1999	2002	Dev. 1st test planned July 1999
	dom	FGA	*LCA*	7	1983	2005	
	RF	SSK	*Kilo*	10	1983	2000	Last of 10 delivered in 2000
	dom	FFG	*Brahmaputra*	3	1989	2000	1st delivered in 2000
	dom	hel	ALH	12	1984	2000	Delivery may slip to 2001
	dom	ELINT	HS-748		1990		Development
	dom	FSG	*Kora*	2	1990	1998	2nd delivered in 1999
	dom	UAV	*Nishant*	14	1991	1999	Dev. 3 prototypes built. 14 pre-production units on order
	dom	DD	*Delhi*	3	1986	1997	1st in 1997, 2nd 1998, 3rd 2000
	dom	LST	*Magyar*	2	1991	1997	1 more under construction
	RF	AD	256	24	1994	1996	12 units in 1996, 12 1998–99
	dom	FSG	*Kora*	2	1994	2000	
	dom	sat	*Ocean sat*	1	1995	1999	Remote sensing
	dom	AGHS	*Sandhayak*	2	1995	1999	Following delivery of 6 1981–93
	RF	TKR AC	IL-78	6	1996	1998	First 2 delivered early 1998
	RF	ASSM	SS-N-25	16	1996	1997	Deliveries continue
	RF	FGA	Su-30MK	40	1996	1997	Delivery ended in 2000
	Il	PFC	*Super Dvora* MK3	6	1996	1998	First delivery 1998. Il designation T-81
	RF	FF	*Krivak* 3	3	1997	2002	1 for delivery by 2002, 2 by 2003
	RF	hel	KA-31	3	1997	2002	
	Ge	SS	Type 209	2	1997	2003	To be built in Ind
	US	MPA	P-3C	3	1997		Delayed due to sanctions
	UK	FGA	*Harrier* TMk4	2	1997	1999	2 ex-RN ac for delivery 1999
	RSA	APC	*Casspir*	90	1998	1999	
	RF	SLCM	SS-NX-27		1998	2004	For *Krivak* 3 frigate. First export
	UK	FGA	*Jaguar*	18	1998	2001	Upgrade for up to 60
	RF	FGA	MiG-21	125	1999	2003	Upgrade. Fr and Il avionics
	dom	MBT	*Arjun*	124	1999	2001	
	Fr	FGA	*Mirage* 2000	10	1999	2002	Approved but not contracted
	dom	trg	HJT-36	200	1999	2004	
	Pl	trg	TS-11	12	1999	2000	Option on 8 more
	dom	CV	*Viraat*	1	1999	2001	Upgrade
	RF	CV	*Admiral Gorshkov*	1	1999	2003	MoU signed
	Slvk	ARV	T-72 VT	42	1999	2001	
	Pl	ARV	WZT-3	43	1999	2001	
	Il	arty	M-46	35	1999	2000	Il upgrade

Country	Country supplier	Classification	Designation	Quantity	Order date	Delivery date	Comment
	dom	AAM	***Astra***		1999		Live Firing due 2001
	dom	MPA	**Do-228**	7	1999		Deliveries completed by 2003
	Il	arty	**M-46**	35	1999	2000	Requirement for further 500
	RF	hel	**Mi-17iB**	40	2000	2001	
	RF	MBT	**T-90**	310	2000		186 to be built in Ind
	Il	UAV	***Searcher* 2**	20	2000		In addition to 8 delivered in 1999
Kazakstan	RF	FGA	**Su-27**	16	1997	1999	4 delivered early 1999, 10 in 1997
	RF	SAM	**S-300**		1997	2000	
Pakistan	dom	sat	***Badar* 2**				Development
	dom	sat	***Badar* 1**				Multi-purpose sat. In operation
	US	APC	**M113**	775	1989	1990	Licensed prod; deliveries to 1999
	dom	MBT	***Al-Khalid***		1991	1998	In acceptance trials
	Fr	MHC	***Munsif***	3	1992	1992	Second delivered 1996. Third 1998
	PRC	FGA	**FC-1**		1993	2005	With PRC, req for up to 150
	dom	MRBM	***Ghauri* 1**		1993	1998	Range 1,500km. Aka *Hatf* 5
	dom	MRBM	***Ghauri* 2**		1993	1999	Dev. Aka *Hatf* 6
	dom	MRBM	***Ghauri* 3**		1993		Dev. Based on *Taepo-dong* 2
	dom	SSM	***Hatf* 3**		1994	1999	In-service. Based on M-11
	dom	SSM	***Shaheen* 1**		1994	1999	Prod 1999. Based on M-9. Aka *Hatf* 4
	Fr	SSK	***Khalid***	3	1994	1999	1st in 1999, 2nd 2001, 3rd 2002
	Fr	FGA	***Mirage* III**	40	1996	1998	Upgrade. 8 delivered by 1999
	Ukr	MBT	**T-80UD**	320	1996	1996	Final 105 delivered in 1999
	dom	PFM	**Mod. *Larkana***	1	1996	1997	Commissioned 14 August 1997
	PRC	PFM	***Shujat* 2**	1	1997	1999	
	PRC	FGA	**F-7MG**	50	1999	2001	Unconfirmed
Sri Lanka	Il	UAV	***Super Scout***				
	Ukr	cbt hel	**Mi-24**	2	1995	1996	1 delivered 1998
	UK	ACV	**M10**		1995	1999	Hovercraft
	RF	cbt hel	**Mi-35**	2	1997	1999	May be 4. 5 delivered previously
	US	tpt	**C-130**	3	1997	1999	
	Ukr	cbt hel	**Mi-24**	2	1998	1999	
	PRC	arty	**152mm**	36	1999	2000	
	UK	tpt	**C-130**	2	1999	1999	
	Il	FGA	***Kfir***	8	2000	2000	
	Ukr	FGA	**MiG-27**	4	2000	2000	
	US	tpt hel	**Bell-41ZEP**	2	2000	2000	

Forces Abroad

UN AND PEACEKEEPING

CROATIA (UNMOP): 1 obs CYPRUS (UNFICYP): 1 DROC (MONUC): 9 obs EAST TIMOR (UNTAET): 164 incl 5 obs LEBANON (UNIFIL) 712: 1 inf bn SIERRA LEONE (UNAMSIL): 6 obs

Paramilitary 40,000

POLICE FORCE 40,000

Opposition

COMMUNIST PARTY OF NEPAL (United Marxist and Leninist): armed wing ε1–1,500

Foreign Forces

UK Army 90 (Gurkha trg org)

Pakistan

Pak

rupee Rs		1998	1999	2000	2001
GDP	Rs	2.8tr	3.0tr		
	US$	60.8bn	61.6bn		
per capita	US$	2,400	2,500		
Growth	%	4	3.1		
Inflation	%	6.2	4.1		
Debt	US$	32bn	34.5bn		
Def exp	Rs	180bn	173bn		
	US$	4.0bn	3.5bn		
Def bdgt	Rs	145bn	142bn	170bn	
	US$	3.2bn	2.9bn	3.3bn	
FMA[a] **(US)**	US$	1.5m	2.9m	0.4m	–
FMA (Aus)	US$	0.02m	0.02m		
US$1=Rs		45.0	49.1	52.0	

[a] UNMOGIP 1997 US$7m 1998 US$8m

Population	**148,012,000** (less than 3% Hindu)		
Age	13–17	18–22	23–32
Men	8,755,000	7,501,000	12,112,000
Women	8,337,000	6,815,000	10,735,000

Total Armed Forces

ACTIVE 612,000

RESERVES 513,000

Army ε500,000; obligation to age 45 (men) or 50 (officers); active liability for 8 years after service Navy 5,000 Air Force 8,000

Army 550,000

9 Corps HQ • 2 armd div • 9 Corps arty bde • 19 inf div • 7 engr bde • 1 area comd (div) • 3 armd recce regt • 7 indep armd bde • 1 SF gp (3 bn) • 9 indep inf bde • 1 AD comd (3 AD gp: 8 bde)

AVN 17 sqn

7 ac, 8 hel, 1 VIP, 1 obs flt

EQUIPMENT

MBT 2,285+: 15 M-47, 250 M-48A5, 50 T-54/-55, 1,200 PRC Type-59, 250 PRC Type-69, 200+ PRC Type-85, 320 T-80UD

APC 1,000+ M-113

TOWED ARTY 1,467: 85mm: 200 PRC Type-56; 105mm: 300 M-101, 50 M-56 pack; 122mm: 200 PRC Type-60, 250 PRC Type-54; 130mm: 227 PRC Type-59-1; 155mm: 30 M-59, 60 M-114, 124 M-198; 203mm: 26 M-115

SP ARTY 105mm: 50 M-7; 155mm: 150 M-109A2; 203mm: 40 M-110A2

MRL 122mm: 45 *Azar* (PRC Type-83)

MOR 81mm: 500; 120mm: 225 AM-50, M-61

SSM 80 *Hatf* 1, 30 *Hatf* 3 (PRC M-11), *Shaheen* 1, 12 *Ghauri*

ATGW 800 incl: *Cobra*, 200 TOW (incl 24 on M-901 SP), *Green Arrow* (PRC *Red Arrow*)

RL 89mm: M-20 3.5in

RCL 75mm: Type-52; 106mm: M-40A1

AD GUNS 2,000+ incl: 14.5mm; 35mm: 200 GDF-002; 37mm: PRC Type-55/-65; 40mm: M1, 100 L/60; 57mm: PRC Type-59

SAM 350 *Stinger*, *Redeye*, RBS-70, 500 *Anza* Mk-1/-2

SURV RASIT (veh, arty), AN/TPQ-36 (arty, mor)

AIRCRAFT

SURVEY 1 *Commander* 840

LIAISON 1 Cessna 421, 2 *Commander* 690, 80 *Mashshaq*, 1 F-27, 2 Y-12 (II)

OBS 40 O-1E, 50 *Mashshaq*

HELICOPTERS

ATTACK 20 AH-1F (TOW)

TPT 12 Bell 47G, 7 -205, 10 -206B, 16 Mi-8, 6 IAR/SA-315B, 23 IAR/SA-316, 35 SA-330, 5 UH-1H

Navy 22,000

(incl Naval Air, ε1,200 Marines and ε2,000 Maritime Security Agency (see *Paramilitary*))

BASE Karachi (Fleet HQ) (2 bases being built at Gwadar and Ormara)

SUBMARINES 10

SSK 7

1 *Khalid* (Fr *Agosta* 90B) with 533mm TT, *Exocet* SM39 USGW

2 *Hashmat* (Fr *Agosta*) with 533mm TT (F-17 HWT), *Harpoon* USGW

4 *Hangor* (Fr *Daphné*) with 533mm TT (L-5 HWT), *Harpoon* USGW

SSI 3 MG110 (SF delivery)

PRINCIPAL SURFACE COMBATANTS 8

FRIGATES 8

FFG 6 *Tariq* (UK *Amazon*) with 4 × *Harpoon* SSM (in 3

of class), 1 × *LY-60N* SAM (in 3 of class), 1 × 114mm gun, 6 × 324mm ASTT, 1 *Lynx* HAS-3
FF 2 *Shamsher* (UK *Leander*) with 2 × 114mm guns, 1 × 3 ASW mor, 1 SA-319B hel

PATROL AND COASTAL COMBATANTS 9

MISSILE CRAFT 5
4 *Sabqat* (PRC *Huangfeng*) PFM with 4 *HY* 2 SSM
1 × *Jalalat* II with 4 C-802 SSM
PATROL, COASTAL 1 *Larkana* PCC
PATROL, INSHORE 3
2 *Quetta* (PRC *Shanghai*) PFI
1 *Rajshahi* PCI

MINE COUNTERMEASURES 3

3 *Munsif* (Fr *Eridan*) MHC

SUPPORT AND MISCELLANEOUS 9

1 *Fuqing* AO, 1 *Moawin* AO, 2 *Gwadar* AOT, 1 *Attack* AOT; 3 AT; 1 *Behr Paima* AGHS

NAVAL AIR

5 cbt ac (all operated by Air Force), 9 armed hel
ASW/MR 1 sqn with 3 *Atlantic* plus 2 in store, 2 P-3C (operated by Air Force)
ASW/SAR 2 hel sqn with 6 *Sea King* Mk 45 (ASW), 3 *Lynx* HAS Mk-3 (ASW)
COMMS 5 Fokker F-27 ac (Air Force) hel 4 SA-319B
ASM *Exocet* AM-39

MARINES (ε1,200)

1 cdo/SF gp

Air Force 40,000

353 cbt ac, no armed hel Flying hours some 210
3 regional cmds: Northern (Peshawar) Central (Sargodha) Southern (Faisal). The Composite Air Tpt Wg, Combat Cdrs School and PAF Academy are Direct Reporting Units.
FGA 6 sqn
1 with 16 *Mirage* (13 IIIEP (some with AM-39 ASM), 3 IIIDP (trg))
3 (1 OCU) with 52 *Mirage* 5 (40 -5PA/PA2, 10 5PA3 (ASuW), 2 5DPA/DPA2)
2 with 42 Q-5 (A-5III *Fantan*), some FT-6
FTR 12 sqn
3 (1 OCU) with 40 F-6/FT-6 (J-6/JJ-6), 2 (1 OCU) with 32 F-16 (22 -A, 10 -B), 6 (1 OCU) with 77 F-7P/FT-7 (J-7), 1 with 43 *Mirage* IIIO/7-OD
RECCE 1 sqn with 11* *Mirage* IIIRP
ELINT/ECM 2 *Falcon* DA-20
SAR 1 hel sqn with 15 SA-319
TPT ac 12 C-130 (11 B/E, 1 L-100), 2 Boeing 707, 1 Boeing 737, 1 *Falcon* 20, 2 F-27-200 (1 with Navy), 1 Beech *Super King Air* 200, 2 Y-12 (II), hel 15 SA 316/319, 4 Cessna 172, 1 Cessna 560 *Citation*, 1 *Piper* PA-34 *Seneca*, 4 MFI-17B *Mashshaq*
TRG 30 FT-5, 15 FT-6, 13 FT-7, 40* MFI-17B *Mashshaq*, 30 T-37B/C, 12 K-8

AD 7 SAM bty
6 each with 24 *Crotale*, 1 with 6 CSA-1 (SA-2)

MISSILES

ASM AM-39 *Exocet*, AGM-65 *Maverick*, AS 30, AGM-84 *Harpoon*
AAM AIM-7 *Sparrow*, AIM-9L/P *Sidewinder*, R-530 *Magic*
ARM AGM-88 *Harm*

Forces Abroad

UN AND PEACEKEEPING

CROATIA (UNMOP): 1 obs DROC (MONUC): 29 obs EAST TIMOR (UNTAET): 804 incl 30 obs GEORGIA (UNOMIG): 7 obs IRAQ/KUWAIT (UNIKOM): 6 obs SIERRA LEONE (UNAMSIL): 10 obs WESTERN SAHARA (MINURSO): 6 obs

Paramilitary ε288,000 active

NATIONAL GUARD 185,000

incl *Janbaz* Force, *Mujahid* Force, National Cadet Corps, Women Guards

FRONTIER CORPS up to 65,000 reported (Ministry of Interior)

11 regt (40 bn), 1 indep armd car sqn; 45 UR-416 APC

PAKISTAN RANGERS ε25,000–30,000 (Ministry of Interior)

NORTHERN LIGHT INFANTRY ε12,000; 3 bn

MARITIME SECURITY AGENCY ε1,000

1 *Alamgir* (US *Gearing* DD) (no ASROC or TT), 4 *Barkat* PCO, 2 (PRC *Shanghai*) PFI<

COAST GUARD

some 23 craft

Foreign Forces

UN (UNMOGIP): 46 mil obs from 8 countries

Sri Lanka

Ska

rupee Rs		1998	1999	2000	2001
GDP	Rs	1,029bn	1,113bn		
	US$	16bn	15.7bn		
per capita	US$	4,100	4,200		
Growth	%	5.6	4.2		
Inflation	%	9.4	4.7		
Debt	US$	8.5bn	8.9bn		
Def exp	Rs	63bn	57bn		
	US$	975m	807m		
Def bdgt	Rs	47bn	45bn	52bn	
	US$	733m	635m	700m	
FMA (US)	US$	0.2m	0.2m	0.2m	0.2m
US$1=Rs		64.6	70.9	74.9	

Population
(Sinhalese 74%, T
Hindu 15%, Chris
Age
Men
Women

Total Armed

ACTIVE some 11
(incl recalled res

RESERVES 4,200

Army 1,100 Navy
Obligation 7 yea

Army ε90–95

(incl 42,000 recall
10 div • 3 mech i
• 1 indep SF bde
recce regt (bn) • 4
reserve)

EQUIPMENT

MBT ε25 T-55 (
RECCE 26 *Sala*
AIFV 16 BMP (
APC 35 PRC Ty
Unicorn, 10 S
BTR-80A (rep
TOWED ART
Type-56; 88m
12 PRC Type-
MRL 122mm: 1
MOR 81mm: 27
36 M-43
RCL 105mm: 15
AD GUNS 40m
SURV 2 AN/TI
UAV 1 *Seeker*

Navy 10,000

(incl 1,100 recalled
BASES Colombo (
Karainagar, Tanga
PATROL AND COA
PATROL, OFFSH
1 *Jayesagara* PCC
1 *Parakrambahu* I
PATROL, COAST
2 *Rana* PCC
3 *Sooraya* PCC
PATROL, INSHO
3 *Dvora* PFI<
8 *Super Dvora* PF

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Washington
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Association
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Table 33 Value of arms deliveries and market share, 1987, 1993–1999

(constant 1999 US$m/% *in italics*)

	Total	USSR/ Russia		Warsaw Pact excl. USSR		US		UK		France		Germany		China		Israel		Others	
1987	92,494	32,444	*35.1*	5,729	*6.2*	24,987	*27.0*	7,656	*8.3*	8,291	*9.0*	2,246	*2.4*	2,670	*2.9*	1,519	*1.6*	6,952	*7.5*
1993	48,782	2,919	*6.0*	n.a	*n.a*	27,127	*55.6*	5,312	*10.9*	3,328	*6.8*	1,695	*3.5*	1,247	*2.6*	1,671	*3.4*	5,483	*11.2*
1994	44,517	3,527	*7.9*	n.a	*n.a*	23,872	*53.6*	5,160	*11.6*	3,724	*8.4*	1,563	*3.5*	803	*1.8*	1,541	*3.5*	4,327	*9.7*
1995	48,783	3,023	*6.2*	n.a	*n.a*	24,957	*51.2*	8,090	*16.6*	4,130	*8.5*	1,500	*3.1*	684	*1.4*	1,345	*2.8*	5,054	*10.4*
1996	53,121	3,728	*7.0*	n.a	*n.a*	26,042	*49.0*	10,252	*19.3*	6,108	*11.5*	713	*1.3*	634	*1.2*	1,411	*2.7*	4,233	*8.0*
1997	58,255	2,601	*4.5*	n.a	*n.a*	28,212	*48.4*	11,390	*19.6*	7,718	*13.2*	781	*1.3*	1,040	*1.8*	1,582	*2.7*	4,931	*8.5*
1998	58,006	2,688	*4.6*	n.a	*n.a*	27,584	*47.6*	9,333	*16.1*	10,200	*17.6*	868	*1.5*	521	*0.9*	1,303	*2.2*	5,509	*9.5*
1999	53,365	3,500	*6.6*	n.a	*n.a*	26,205	*49.1*	9,986	*18.7*	6,630	*12.4*	928	*1.7*	260	*0.5*	1,264	*2.4*	4,592	*8.6*

Table 34 Arms deliveries to the Middle East and North Africa, 1987, 1993–1999

(constant 1999 US$m)

	Saudi Arabia	Iraq	Iran	Egypt	Israel	Syria	UAE	Kuwait	Algeria
1987	10,309	7,596	2,388	2,528	3,230	2,809	272	281	983
1993	9,658	n.k.	1,252	2,170	1,823	307	651	1,129	152
1994	8,800	n.k.	434	1,303	1,335	153	575	899	156
1995	9,766	n.k.	543	2,062	835	184	1,031	1,411	250
1996	9,983	n.k.	434	1,736	987	98	814	1,790	272
1997	11,445	n.k.	832	1,144	868	108	868	728	488
1998	10,829	n.k.	651	1,058	1,085	120	977	543	543
1999	6,103	n.k.	481	800	1,504	120	732	314	n.k.

Table 35 Arms deliveries to East Asia, 1987, 1993–1999

(constant 1999 US$m)

	Japan	Taiwan	ROK	DPRK	Vietnam	China	Thailand	Malaysia	Singapore	Indonesia	Myanmar
1987	1,573	1,465	1,053	590	2,669	912	604	99	435	365	28
1993	2,922	1,137	1,942	5	22	654	159	307	148	102	148
1994	2,432	1,112	2,354	100	89	289	434	945	256	55	111
1995	2,496	1,303	1,856	104	217	787	1,193	814	217	184	152
1996	2,550	1,845	1,736	104	272	1,628	759	488	543	868	272
1997	2,332	7,054	1,411	104	162	434	515	326	488	434	326
1998	2,170	6,511	1,421	94	184	488	326	347	923	380	314
1999	1,866	2,604	1,847	90	174	500	410	1,200	619	767	325

(1999 constant prices)	Defence Expenditure									Numbers in Armed Forces		Estimated Reservists	Para-military
	US$m			US$ per capita			% of GDP			(000)		(000)	(000)
	1985	1998	1999	1985	1998	1999	1985	1998	1999	1985	1999	1999	1999
Lithuania	n.a.	139	106	n.a.	38	28	n.a.	1.3	1.0	n.a.	12.1	27.7	3.9
Malta	24	30	27	66	79	72	1.4	0.8	0.8	0.8	1.9	n.a.	n.a.
Moldova	n.a.	53	6	n.a.	12	1	n.a.	4.3	0.5	n.a.	10.7	66.0	3.4
Romania	2,067	905	607	91	40	27	4.5	2.3	1.8	189.5	207.0	470.0	75.9
Slovakia	n.a.	423	329	n.a.	79	61	n.a.	2.0	1.9	n.a.	44.9	20.0	2.6
Slovenia	n.a.	323	337	n.a.	161	167	n.a.	1.6	1.8	n.a.	9.6	61.0	4.5
Sweden	4,730	5,760	5,245	566	648	588	3.3	2.4	2.3	65.7	53.1	570.0	35.6
Switzerland	2,860	3,700	3,108	443	523	439	2.1	1.4	1.3	20.0	27.7	384.9	n.a.
Ukraine	n.a.	1,415	1,437	n.a.	28	29	n.a.	3.3	2.9	n.a.	311.4	1,000.0	116.6
FRY (Serbia-Montenegro)	4,951	1,585	1,654	212	149	149	3.8	9.1	12.4	241.0	108.7	400.0	38.0
Total	25,550	22,408	20,297	251	151	139	4.3	3.3	3.2	1,024.1	1,373.5	6,116.8	477.7
Russia	n.a.	57,107	56,800	n.a.	390	380	n.a.	5.3	5.1	n.a.	1,004.1	2,400.0	478.0
Soviet Union	364,715	n.a.	n.a.	1,308	n.a.	n.a.	16.1	n.a.	n.a.	5,300.0	n.a.	n.a.	n.a.
Middle East and North Africa													
Algeria	1,412	3,125	3,086	64	107	104	1.7	6.5	6.6	170.0	122.0	150.0	181.2
Bahrain	224	410	441	537	669	706	3.5	7.5	7.7	2.8	11.0	n.a.	10.2
Egypt	3,827	2,888	2,988	79	47	48	7.2	3.4	3.4	445.0	450.0	254.0	230.0
Gaza and Jericho	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35.0
Iran	10,523	5,879	5,711	236	95	91	18.0	6.5	6.2	610.0	545.6	350.0	240.0
Iraq	13,752	1,428	1,500	897	66	68	37.9	7.3	7.6	1,000.0	429.0	650.0	50.0
Israel	7,486	9,339	8,846	1,768	1,560	1,465	21.2	9.3	8.9	142.0	173.5	425.0	6.1
Jordan	892	559	588	255	115	117	15.9	7.7	7.7	70.3	104.0	35.0	30.0
Kuwait	2,661	3,674	3,275	1,556	1,670	1,440	9.1	14.3	11.1	12.0	15.3	23.7	5.0
Lebanon	296	586	563	111	139	132	9.0	3.6	3.4	17.4	67.9	n.a.	13.0
Libya	2,000	1,489	1,311	531	248	211	6.2	5.5	4.7	73.0	65.0	40.0	0.5
Mauritania	77	26	24	46	11	10	6.5	2.2	2.0	8.5	15.7	n.a.	5.0
Morocco	950	1,696	1,761	43	58	59	5.4	4.6	5.0	149.0	196.3	150.0	42.0
Oman	3,196	1,792	1,631	1,998	841	737	20.8	12.4	10.9	29.2	43.5	n.a.	4.4
Qatar	445	1,373	1,468	1,411	2,046	2,156	6.0	15.4	15.4	6.0	11.8	n.a.	n.a.
Saudi Arabia	26,618	21,303	21,876	2,306	1,081	1,099	19.6	16.2	15.5	62.5	162.5	20.0	15.5
Syria	5,161	986	989	491	62	60	16.4	5.8	5.6	402.5	316.0	396.0	108.0
Tunisia	618	363	348	87	39	37	5.0	1.8	1.7	35.1	35.0	n.a.	12.0
UAE	3,027	3,056	3,187	2,162	1,184	1,203	7.6	6.5	6.2	43.0	64.5	n.a.	1.0
Yemen	725	404	429	72	23	24	9.9	6.6	6.7	64.1	66.3	40.0	70.0
Total	83,891	60,374	60,023	771	530	514	11.9	7.5	7.2	3,342.4	2,894.9	2,533.7	1,058.8
Central and South Asia													
Afghanistan	425	255	265	24	11	11	8.7	14.5	14.9	47.0	400.0	n.a.	n.a.
Bangladesh	370	631	667	4	5	5	1.4	1.9	1.9	91.3	137.0	n.a.	55.2
Bhutan	8	19	20	18	29	31	4.9	5.4	5.3	3.0	6.0	n.k.	1.0

(1999 constant prices) Defence Expenditure — US$m — US$ per capita — % of GDP — Numbers in Armed Forces (000) — Estimated Reservists (000) — Para-military (000)
1985 1998 1999 1985 1998 1999 1985 1998 1999 1985 1999 1999 1999

India

Total	83,891	60,374	60,023	771	530	514	11.9	7.5	7.2	3,342.4	2,894.9	2,533.7	1,058.8
Central and South Asia													
Afghanistan	425	255	265	24	11	11	8.7	14.5	14.9	47.0	400.0	n.a.	n.a.
Bangladesh	370	631	667	4	5	5	1.4	1.9	1.9	91.3	137.0	n.a.	55.2
Bhutan	8	19	20	18	29	31	4.9	5.4	5.3	3.0	6.0	n.k.	1.0

(1999 constant prices)	Defence Expenditure									Numbers in Armed Forces		Estimated Reservists	Para-military
	US$m			US$ per capita			% of GDP			(000)		(000)	(000)
	1985	1998	1999	1985	1998	1999	1985	1998	1999	1985	1999	1999	1999
India	9,281	13,594	14,991	12	14	15	3.0	3.2	3.4	1,260.0	1,173.0	528.4	1,090.0
Kazakstan	n.a.	508	504	n.a.	34	34	n.a.	2.2	3.5	n.a.	65.8	n.a.	34.5
Kyrgyzstan	n.a.	66	51	n.a.	14	11	n.a.	3.6	4.5	n.a.	9.2	57.0	3.0
Maldives	5	39	41	27	144	150	3.9	9.6	9.6	n.k.	n.k.	n.k.	5.0
Nepal	53	39	42	3	2	2	1.5	0.8	0.8	25.0	50.0	n.a.	40.0
Pakistan	3,076	4,078	3,523	32	29	24	6.9	6.6	5.7	482.8	587.0	513.0	247.0
Sri Lanka	338	995	807	21	53	43	3.8	6.1	5.1	21.6	115.0	4.2	103.3
Tajikistan	n.a.	102	92	n.a.	17	15	n.a.	8.3	7.6	n.a.	9.0	n.a.	1.2
Turkmenistan	n.a.	86	112	n.a.	19	22	n.a.	3.2	3.3	n.a.	19.0	n.a.	n.k.
Uzbekistan	n.a.	670	615	n.a.	29	26	n.a.	4.4	3.9	n.a.	74.0	n.a.	20.0
Total	13,557	21,080	21,731	18	31	30	4.3	5.4	5.3	1,930.7	2,645.0	1,102.6	1,600.2
East Asia and Australasia													
Australia	8,068	7,682	7,775	512	407	407	3.4	2.1	1.9	70.4	55.2	27.7	1.0
Brunei	304	386	402	1,356	1,217	1,240	6.0	6.7	6.7	4.1	5.0	0.7	3.8
Cambodia	n.a.	155	176	n.a.	15	17	n.a.	5.1	5.1	35.0	139.0	n.a.	220.0
China	29,414	38,191	39,889	28	31	32	7.9	5.3	5.4	3,900.0	2,820.0	1,200.0	1,000.0
Fiji	21	34	35	30	43	44	1.2	2.0	1.9	2.7	3.5	6.0	n.a.
Indonesia	3,469	967	1,502	21	5	7	2.8	0.8	1.1	278.1	299.0	400.0	200.0
Japan	31,847	38,482	40,383	264	305	319	1.0	1.0	0.9	243.0	242.6	48.6	12.0
Korea, North	6,158	2,086	2,100	302	97	98	23.0	14.3	14.3	838.0	1,055.0	4,700.0	189.0
Korea, South	9,323	10,461	12,088	227	225	257	5.1	2.4	3.0	598.0	672.0	4,500.0	4.5
Laos	81	34	22	23	7	4	7.8	2.6	2.3	53.7	29.1	n.a.	100.0
Malaysia	2,614	1,891	3,158	168	88	146	5.6	2.6	4.0	110.0	105.0	40.6	20.1
Mongolia	51	21	19	27	9	8	9.0	1.9	1.9	33.0	9.1	140.0	7.2
Myanmar	1,302	2,142	1,995	35	45	42	5.1	5.0	5.0	186.0	343.8	n.a.	85.3
New Zealand	957	898	824	294	236	215	2.9	1.5	1.6	12.4	9.5	6.3	n.a.
Papua New Guinea	53	57	59	15	12	12	1.5	1.0	1.0	3.2	4.3	n.a.	n.a.
Philippines	702	1,521	1,627	13	21	22	1.4	2.3	2.1	114.8	110.0	131.0	42.5
Singapore	1,760	4,936	4,696	688	1,275	1,174	6.7	5.6	5.6	55.0	73.0	275.0	108.0
Taiwan	9,541	14,447	14,964	492	668	687	7.0	4.8	5.2	444.0	376.0	1,657.5	26.7
Thailand	2,777	2,124	2,638	54	35	43	5.0	1.7	1.9	235.3	306.0	200.0	71.0
Vietnam	3,556	943	890	58	12	11	19.4	3.5	3.1	1,027.0	484.0	3,000.0	40.0
Total	112,000	127,456	135,243	242	238	239	6.4	3.6	3.7	8,243.7	7,141.1	16,333.4	2,131.0
Caribbean, Central and Latin America													
Caribbean													
Antigua and Barbuda	3	4	4	42	56	57	0.5	0.6	0.6	0.1	0.2	0.1	n.a.
Bahamas, The	14	26	26	61	90	89	0.5	0.7	0.7	0.5	0.9	n.a.	2.3
Barbados	17	13	12	77	48	44	0.9	0.5	0.5	1.0	0.6	0.4	n.a.
Cuba	2,366	765	750	235	68	67	9.6	5.3	4.8	161.5	65.0	39.0	26.5

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1999

Gregory R. Copley

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Nawaz Sharif; Awami National Party (ANP), led by Khan Abdul Wali Khan; Pakistan Islamic Front (PIF), led by Qazi Hussain Ahmed; Balochistan National Movement, Mengal group (BNM/M), led by Sardar Akhtar Mengal; *Mohajir Quami* Movement, Altaf faction (MQM/A); *Jamiat-i-Islami* (JI); *Jamiat-al-Hadith* (JAH).

Other parties include: *Mutaheda Deeni Mahaz* (MDM), led by Maulana Sami-ul-Haq, which includes *Jamiat Ulema-i-Pakistan*, Niazi faction (JUP/NI) and *Anjuman Sepah-i-Sahaba Pakistan* (ASSP); *Islami-Jamhoori-Mahaz* (IJM-Islamic Democratic Party), which includes *Jamiat Ulema-i-Islami*, Fazlur Rehman group (JUI/F); *Jamiat Ulema-i-Pakistan*, Noorani faction (JUP/NO); *Jamiat Ulema-i-Islam*, Sami-ul-Haq faction (JUI/S); Pakistan Muslim League, Functional group (PML/F); Pakistan National Party (PNP); *Tehreek-e-Insaaf*, Justice Movement launched on April 25, 1996, by Imran Khan.

Voting strength: Senate, 87 seats total: 22 PPP, 17 PML/N, 8 tribal area representatives (nonparty), 6 ANP, 5 PML/J, 5 JWP, 5 MQM/A, 2 JUI/F, 2 PKMAP, 2 JI, 2 NPP, 1 BNM/H, 1 BNM/M, 1 JUP/NI, 1 JUP/NO, 1 JAH, 1 JUI/S, 1 PML/F, 1 PNP, 2 independents, 1 vacant.

National Assembly elections, 217 seats total: 134 Muslim League, 18 PPP, 12 *Haq Parast* Group, 9 Awami National Party (ANP), 3 Baluchistan National Party (BNP), 2 *Jamboori Watan* Party (JWP), 2 *Jamiat-i Ulema-i-Islam Fazlur Rahman* Group (JUI-F), 1 PakistanPeople's Party-Shaheed Bhutto Group (PPP-SB), 1 National People's Party (NPP), 20 independents.

Other groups: Military; *Ulema* (clergy); landowners; industrialists; small merchants.

Terrorist organizations: *Jamaat-i Islami* Party, led by Quazi Hussain and Amir ul-Azim [pseud.], a Sunni Islamist political party affiliated with the IMB that serves as a cover for clandestine and subversive operatives in and from Pakistan. Supported by PIO.

Idara Ahyaul Uloom, led by Murad Ali Shah, a clandestine armed movement, affiliated with *Jamaat-i Islami* Party. Supported by PIO, AIM, IJO.

Lashkar-i-Jhangvi, a secretie Sunni Muslim group named after a killed militant.

4. Economic

GDP: $65.42-billion; $478 *per capita*; real growth rate 3.1% (1997 est.); $64.15-billion; $481 *per capita*; real growth rate 4.6% (1996 est.)

Balance of trade: Trade deficit $3,370-million (1997 est.). Imports, $10.2-billion (f.o.b., 1995 est.); exports, $8.8-billion (f.o.b., 1995 est.).

Budget: Revenues, 439.3-billion *rupees* ($12.6-billion); expenditures, 500.2-billion *rupees* ($14.3-billion) (FY1996-97 budget).

Fiscal year: July 1 - June 30.

Monetary conversion rate: US$1 equals 49.345 *rupees* (August 1998).

Aid: Bi- and multi-lateral commitments (FY1991-92) $2.5-billion; (FY1992-93) $2.5-billion; (FY1993-94) $2.5-billion.

Major trade partners: Imports: 10.7% Japan, 9.3% US, 6.2% Germany, 4.7% UK, 0.4% Hong Kong. Exports: 15.1% US, 7.5% Hong Kong, 6.9% Germany, 6.8% Japan, 6.5% UK.

Major imports: Petroleum products, machinery, transportation equipment, vegetable oils, animals fats, chemicals.

Major exports: Cotton, textiles, cothing, rice.

Major industries: Textiles, food processing, beverages, construction materials, clothing, paper products, shrimp.

Agriculture: World's largest contiguous irrigation system; main crops — cotton, wheat, rice, sugarcane, fruits, vegetables; livestock products — milk, beef, mutton, eggs; self-sufficient in food grain. Agriculture accounts for 25% of GNP. Illegal producer of opium and hashish for export.

Railways: 8,773 km (5450 miles) total; 7,718 km broad gauge, 445 km 1.000 meter gauge, 610 km narrow gauge; 1,037 km broad gauge is double track; 286 km electrified; all State-owned.

Roads: 177,410 km (110,240 miles); 94,027 km paved, 83,383 km gravel, earth.

Ports: 3 major (Gwadar, Karachi, Port Muhammad bin Qasim), 3 minor.

Civil air: 60 major transport aircraft; the national carrier, Pakistan Internatioanl Airlines, operates 48 aircraft.

Airfields: 119 total; 104 with paved runways; 1 with runway over 3,660 meters; 30 with runways 2,440-3,659 meters; 43 with runways 1,220-2,439 meters.

Telecommunications: Good international system of microwave relay and satellites, poor domestic system; 2.3-million telephones (7 per 1,000 popl.); 10.2-million radio and 2.08-million television receivers; 19 AM, 8 FM, 29 TV stations; 1 Atlantic Ocean and 2 Indian Ocean INTELSAT ground stations.

5. Major News Media

Newspapers: *Daily Jang* (771,450), Urdu; *Akhbar-E-Jahan* (238,000); *Nawa-i-Waqt* ("Voice of the Time"; 200,000), Urdu; *Mashriq* (200,000 daily), Urdu; *Dawn* (105,000 daily), English; *Imroze* (65,000), Urdu; *Pakistan Times* (86,451 daily), English; *Morning News* (50,100), English; *Daily News* (50,000), English; *The Muslim*, English; *The Nation*, English.

News agencies: Domestic: Associated Press of Pakistan; Pakistan Press International; United Press of Pakistan. Foreign bureaus also have agencies.

Radio and television: Government-owned radio: Pakistan Broadcasting Corporation. Television: the Pakistan Television Corporation; Shalimar Television net.

6. Defense

Overview:

Pakistan's security concerns flow from its strategic position in South Asia and by virtue of the nations it borders: India, the People's Republic of China (PRC), Afghanistan and Iran. Pakistan continues to have uneasy relations with India, with which it has had three wars and numerous border incidents and other irritations, notably the dispute over the sovereignty of the Kashmir region. Regional arms competition is most pronounced in the area of introduction of high performance fighter aircraft to the subcontinent. In recent years Pakistan has received US F-16 fighter aircraft while the Indians' *Jaguars* were joined by Dassault *Mirage* 2000s, and, by 1987, MiG-29 *Fulcrums* with the same look-down, shoot-down capabilities found in Soviet aircraft.

A large part of the security equation in Pakistan in in the 1980s was Islamabad's support for Afghan *mujahidin* guerilla forces fighting the Soviet occupation of their country, and Afghan/Soviet attempts to cut off this base of support in Pakistan. In 1986, there was a marked increase in Soviet and Afghan Government efforts to harass Pakistan with cross-border air and artillery strikes and sabotage in an effort to intimidate the Government to reduce its support for the Afghan resistance. Some Pakistani analysts feared a possible Soviet desire to fulfill its historical ambitions of securing warm water ports on the Arabian Sea by destabilizing and dividing the region from the rest of Pakistan.

A major source of support in the 1980s was the US, which counted Pakistan as a strategic South Asian ally since the Soviet invasion and occupation of Afghanistan and the loss of Iran as a regional power with the fall of the Shah in 1978. Under a 1982-87 $3.2-billion aid package ($1.5-billion in military aid), Pakistan primarily upgraded its Air Force with the purchase of 40 F-16 fighter aircraft. A new, five-year (1988-93), $4.02-billion aid package ($1.45-billion in military aid) was to go toward 12 additional F-16s, early-warning (AEW) aircraft (never chosen), and anti-tank missiles.

On February 11, 1989, the Army Chief of Staff, General Aslam Beg, announced that Pakistan had successfully test-fired two indigenously-developed long-range surface-to-surface missiles. The missiles, named *Hatf I* and *Hatf II* (after the sword of the Prophet Mohammed) had ranges of 80km and 300km.

Before President Zia's death, the Pakistan Navy had agreed to acquire eight frigates (five *Brooke*- and three *Garcia*-class) and one fleet repair ship on lease from the US Navy, and two *Leander*-class frigates from the Royal Navy. [The *Brooke*- and *Gar-*

cia-class ships were later returned to the US.] Deliveries took place through late 1988 and 1989. The Pakistan Air Force (PAF) in 1989, meanwhile, ordered an additional 12 General Dynamics F-16A *Fighting Falcon* fighters from the US, under the current $4.02-billion aid package with the US, and was reported seeking a further 60.

In March 1989, Pakistan Aeronautical Complex announced that it had jointly developed with China a new basic trainer, the *Karakorum* K-8, basically to replace the license-built Saab MHI-17s in PAF trainer service, and to undertake some of the more advanced training now performed on the aging Cessna T-37 jets. At the same time, the PAF ordered 75 more F-7 fighters from the PRC, replacing the F-6 fighters, 40 of which were given to the Bangladesh Air Force.

In February 1990, the Pakistan Aeronautical Complex (PAC) won an order for 25 *Mushshak* light piston-engine trainer aircraft from the Iranian Revolutionary Guard (*Pasdaran*). Three aircraft had already been delivered for evaluation and the other 22 were to follow. The *Mushshak* is the Pakistani license-built variant of the Swedish Saab MF-17 and PAC earned about $10-million a year supplying parts for the aircraft to Saab, which no longer built the aircraft. PAC had built 92 *Mushshaks* since 1975 and had tested a new, up-engined variant (using a US Teledyne Continental, supercharged) which can climb to twice the height in half the time of the present *Mushshak*. The new variant was called *Shahbaz* (King Hawk); *Mushshak* means "the proficient". PAC's Aeronautical Manufacturing Factory (AMF) was also co-developing the K-8 jet-trainer with the People's Republic of China (PRC). This aircraft, at a cost of about $2.2-million was intended to compete with the $4.5-million CASA 101.

In April 1990, it was reported that Pakistan had begun production of the *Anza-2*, a guided surface-to-air missile with a speed of 300 meters per second. Similar to the US-made General Dynamics FIM-92A *Stinger* shoulder-fired missile, Pakistani press reports indicated that its cost — $3,000 — was less than half that of the *Stinger* and that it has a target-hit ratio of 95 percent. The missile was to be supplied to the Pakistani Armed Forces by year's end.

In 1990, the increase in financial assistance from Saudi Arabia to Pakistan led to the purchase of additional military matériel. This step came at a recently held meeting between Prime Minister Bhutto and King Fahd in Saudi Arabia. In April 1990, it was reported that Pakistan requested Saudi funds to purchase 49 General Dynamics F-16 fighter aircraft, and that the Saudis agreed to back Pakistan in this efffort. It was also reported that at the meeting the Saudis expressed keen interest in "greater interaction between the Saudi and Pakistani armed forces". The Saudi Government viewed Pakistan's strategic importance in relation to Afghanistan and Iran (and after August 2, Iraq).

As part of the military cooperation between Pakistan and Saudi Arabia, Pakistani scientists involved with the country's missile program had left on deputation for Saudi Arabia. Saudi Arabia, like Pakistan, had received a substantial amount of PRC defense technology, and it was believed that the Pakistani scientists were themelves PRC-trained. Pakistan, however, did not have Chinese ballistic battlefield or strategic missiles, but rather was developing its own short-range battlefield ballistic missile, the *Hatf I*, and the longer-range *Hatf II*. Pakistan (like India) concentrated its efforts on achieving acceptable accuracy for its ballistic systems.

In May 1990, it was reported that Saudi Arabia offered to send a squadron of aircraft to Pakistan in the event of war with India.

In June, the Pakistan Government confirmed that it would raise the defense budget by almost eight percent for FY 1990-91. The new amount allocated for defense had increased from 52.2-billion *rupees* (US$2.41-billion) to 62-billion *rupees* (US $2.87-billion). Pakistani Minister of State for Finance Ahsan ul-Haq attributed the increase to India's decision to twice increase its defense budget over the past four months. Independent observers in Pakistan expressed the fear that India and Pakistan had now embarked on a "defense budget war".

In 1990, there were a number of developments in Pakistan's nuclear development program. On February 21, 1990, French President François Mitterrand announced that he had approved the sale of a nuclear power plant to Pakistan, ending a 14-year ban on French sales of nuclear energy equipment to Islamabad.

Pakistan continued to refuse to sign the international nuclear non-proliferation treaty unless India signed as well. Prime Minister Bhutto also restated Pakistan's declaration that it did not have a nuclear weapon, nor did it intend to produce one.

In June, it was reported that Pakistan had requested assistance from the PRC for conducting an over-ground nuclear explosion. The PRC was said to have turned down this request from Pakistan for facilities and other assistance at the Lop Nor nuclear test site. It was understood that the PRC had been informally advising Pakistan on the latter's nuclear progam and in November 1989, before the Kashmir crisis erupted, the PRC had agreed to supply Pakistan with a 300 megawatt nuclear power reactor. However, US officials believed at the time that Pakistan had sufficient computing power to run all the modeling necessary to adequately verify the viability of the country's nuclear weapons technology, so a live test in Lop Nor nuclear test site was not necesssary, and would even be counterproductive, because it would lead to an automatic end of all US military assistance to Pakistan.

This was soon to be of limited importance. Growing US concern over Pakistan's nuclear program led it to invoke the Pressler Amendment and cut off most military aid. The fact that the Soviet Union had withdrawn from Afghanistan must have helped.

In late July, it was reported that Pakistan had commissioned its second research nuclear reactor. The reactor, which was designed by the Beijing Institute of Atomic Energy, uses highly enriched uranium as fuel, light water as moderator, and metallic beryllium as reflector. The advanced tank-and-pour type reactor had been installed at the Center of Nuclear Studies.

On June 9, Pakistan and the PRC signed an agreement to cooperate in various industrial enterprises and the development and manufacture of Pakistan's first indigenously built tanks, the T-69-2 MP (a derivative of the PRC's T-69) and T-85-2.

In mid-1990, there was a warming of military relations between Pakistan and Iran, with 12 senior Pakistani military advisers sent on deputation to Iran for a period of at least three years. Iran had requested a "sizable" Pakistani military presence for the primary purpose of assisting the Iranian Air Force, following the heavy toll suffered by it in the war with Iraq.

In July 1990, it was reported that Pakistan was intent on acquiring modern systems for clearing landmines. Pakistan had purchased a small number of *Aardvark* flail systems in 1989 and was reported satisfied with their performance.

In September 1990, the PAF and PAK Navy purchased French Matra *Mistral* surface-to-air missiles. The other major procurements in final stages were the purchase of tripartite minesweepers from France and the Netherlands and a new scout helicopter, to be decided in competition between the Bell 406 and the MBB Bo-105.

In late July 1990, Pakistan Army Chief General Mirza Aslam Beg laid the foundation of a US$1.15-billion tank construction project at Taxila, 30km (18 miles) west of Islamabad. The new facility was Pakistan's largest defense production complex and would manufacture battle tanks, field guns and armored personnel carriers. The first prototype tank was projected to be ready by June 1991. The factory was to be built at the site of the present Heavy Rebuild Factory, and was to receive substantial support from the US and the PRC, and reportedly would produce up to 200 tanks a year. It was to build or assemble either a General Dynamics M-1 or a Chinese tank. General Dynamics had been attempting to market the M-1 in Pakistan for quite some time, but any potential sale was to be through the US Government's Foreign Military Sales (FMS) program and no agreement concerning the tank had been reached.

In mid-August, following Iraq's invasion of Kuwait, Saudi Arabian King Fahd requested that Pakistan send troops to help in the defense of his kingdom. Pakistan's decision to participate in the Pan-Arab military force against Iraq resulted in much con-

trovery and sectarian feuding in Pakistan. But this was not the first time that Pakistan had dispatched troops or military advisors to Saudi Arabia, from whom it derived considerable revenues from deploying its military personnel. Until 1988, a support force of some 10,000 to 12,000 Pakistani troops was deployed in the Saudi oil-rich north-eastern region, and in 1990 Pakistan had almost 1,000 technicians and training personnel seconded from the Armed Forces working in the country.

In September, it was reported that Pakistan had begun to assemble the Bofors RBS-70 short-range, shoulder-fired surface-to-air missile, a new addition to Pakistan's inventory.

One of the consequences of Prime Minister Bhutto's ouster in early August was the reorganization of the country's powerful military and civilian intelligence services. As one of the first steps, Noor Leghari, head of the Government's Intelligence Bureau (IB), was fired. He was replaced by Zafar Iqbal Rathore, the deputy director of a police academy. In addition, some IB employees were dismissed and seven arrested for allegedly destroying "important documents" following Bhutto's ouster. Maj.-Gen. Asad Durani, former head of Military Intelligence was named head of the Inter-Services Intelligence (ISI). Maj.-Gen. Moghual was appointed Military Secretary (MS) at General Headquarters.

In Spring 1993 the Pakistani Army began to evaluate a proposal to buy up to 300 British war reserve stocks of *Chieftain* (*Stillbrew*) MBTs to be upgraded in Pakistan's Taxila facility but finally selected China's Type 85 MBT. By 1994, Taxila was producing the Type 85II AP MBT in quantity. Prototypes of the indigenous MBT-2000 (*Al-Khalid*) had been completed with the Type 85's 125mm gun, but production was uncertain.

The Pakistan Aeronautical Complex (PAC) at Kamra exists mainly to meet the Air Force's needs, but maintenance and upgrades are carried out on a commercial basis for other Pakistani organizations and friendly air forces. PAC divides into four Factories; *Mirage* Rebuild, F-6 Rebuild (which also handles other Chinese built types), Aircraft Manufacturing and Avionics and Radar.

The *Mirage* Rebuild Factory handled the 50 ex-Australian *Mirages* (43 *IIIO*s and 7 *IIIDO* two-seaters) which reached Pakistan between December 1990 and February 1991. The PAC says it could have refurbished all 50 but the PAF decided to use some as a source of spares. Most were restored to flying status, with perhaps as few as 100 flying hours each.

As F-6s are phased out, the F-6 Rebuild Factory was turning to other Chinese-built types like its A-5-III attack derivative and recently the F-7.

The Aircraft Manufacturing Factory's main achievement was the manufacture of the Saab-designed *Mushshak* light trainer. In 1975-82, 92 were assembled at Risalpur from Saab kits. In 1981-2 the AMF was set up at Kamra and took over assembly, which gradually became total production. Another 100 plus aircraft have been built. Most have gone to the PAF and the Army, but there has recently been an export element too. A version with a turbocharged engine, the *Shahbaz*, has been flown and may be applied as a retrofit to some PAF aircraft. The long term aim is to make AMF the nucleus of an aircraft industry. The next major step was production of the joint Pakistani-PRC NAMC/PC K-8 *Karakorum* 8 basic trainer and light ground attack aircraft. The PAF requirement was for 75 aircraft to replace Cessna T-37s.

By the Autumn of 1992 the Army appeared to have completed evaluation of several light helicopters, the Agusta 109, Aerospatiale SA.342L, Bell 406, MBB 105 and MDHC 530. No decision was announced, but the winner is likely to be built at Kamra. Meanwhile a further 12 SA.315B *Lama* helicopters were ordered to supplement the Army's fleet of six. The first were scheduled to be delivered within 12 to 18 months. The six already in service, delivered in 1987, operated with eight Squadron at Dhamial airfield, though there is normally a 2 to 3 helo detachment based at the mountain village of Sardu for high-altitude operations.

In Spring 1992 the US Congress imposed a ban on delivery of any new military equipment following Pakistan's refusal to sign the nuclear non-proliferation treaty. Three Lockheed P-3C-II Update 2.5 *Orions* were put into storage at AMARC Davis-Monthan AFB until the ban was lifted. The ban also applied to the F-16A/B, of which 41 had been delivered before the ban took effect. This left 70 outstanding, although only 28 of these were built before General Dynamics stopped production of the order.

After the Gulf War, Pakistan began a policy of direct involvement in UN peacekeeping forces, sending troops to Somalia and Cambodia. It hoped to gain a more favorable UN attitude to its own dispute with India over Kashmir.

The US Government, in early 1996, agreed to the release to Pakistan of the P-3C-II *Orions* and associated *Harpoon* air-to-surface missiles (ASMs), and a quantity of AIM-9L air-to-air missiles (mainly for the F-16s). As well, the US agreed to let Pakistan sell to an approved third country the 28 F-16A/B fighters which were mothballed in the US. The next stage of negotiations was for Pakistan to attempt to recover the balance of the funds paid — for the balance of the order for 70 F-16s (42 aircraft) not built — which totalled some $120-million.

Pakistan was under no illusions about India's nuclear weapons program. As long ago as 1989 it admitted that it had made a cold test of a device at the Chinese Lop Nor test range. In January 1998 former Pakistani Army commander Gen. Aslam Beg stated that Pakistan had had a nuclear device since 1987, and enough enriched uranium for weapons production.

When India conducted three nuclear tests on May 11, 1998, the main question was whether Pakistan would implement another claim; that if India exploded a nuclear weapon, Pakistan would explode one the next day. In the event rather longer elapsed. Pakistan's initial three explosions on May 28 may have been designed more as a demonstration of parity than three meaningful tests, but the further testing on May 29 could be seen as a logic step in going from nuclear devices to useable weapons. However Dr Abdul Qadeer Khan, head of Pakistan's nuclear program, said later that the tests used ready-to-fire nuclear warheads.

Whatever the true state of Pakistan's weapon development, it lags further behind India in producing an effective delivery system. India is already deploying the *Prithvi* SSM, whose 150 km range is enough to reach many strategic targets in Pakistan. In contrast Pakistan needs greater range to reach most Indian targets and only tested the *Ghauri* (*Haft V*) SSM for the first time on April 6, 1998. The *Ghauri's* range has hitherto been given as 1,500 km with a 700 kg warhead. Now Pakistani officials say that their nuclear warheads weight less than this, permitting an increase in range. This must be the focus of future Pakistani efforts.

Army Chief of Staff and Chairman of the Joint Chiefs of Staff Gen. Jehangir Karamat resigned in early October 1998 after growing tension with the Prime Minister. Gen. Karamat was regarded as one of the most professional leaders of the Pakistan Army since General Mohammed Zia ul-Haq. He was replaced by Gen. Pervez Musharaf, an artilleryman. At the same time, the Army Quarter-Master General (QMG), Lt.-Gen. Khalid Nawaz, was sent on "early retirement", and Lt.-Gen. Ali Kuli Khan, the Chief of the General Staff (CGS) went "on leave" (pending resignation). Three major-generals, meanwhile, were cleared for promotion to lieutenant-general: Maj.-Gen. Hamid Javed (Heavy Rebuild Factory, Taxila); Maj.-Gen. Mohammed Aziz (ISI); and Maj.-Gen. Khalid Maqbool (GOC). The three-star slots became available with the early retirement of Lt.-Gen. Ali Kuli Khan (CGS); Khalid Nawaz (CGS); and Lt.-Gen. Ziauddin (AG). Lt.-Gen. Ziauddin (he has only one name) became head of ISI.

Incoming COAS Gen. Pervez Musharaf immediately instituted a major shake-up of corps commanders and other senior officers in October 1998.

Structure:

The President is Head-of-State but the Prime Minister functions as supreme commander in time of war.

The individual service chiefs have retained their command

functions over their respective services and are directly responsible to the Ministry of Defence. These individuals all sit on the highest military body, the Joint Chiefs of Staff Committee (JCSC), whose chairman in wartime would serve as Principal Staff Officer to the Prime Minister. If the duties of the JCSC are unchanged, it advises the President on strategic and logistical matters, devises proposals on force size and structure and advises the Government on siting and dispersion of major industries and formulates industrial mobilization plans.

Pakistan has the traditional services of Army, Navy and Air Force. All service headquarters are located in Islamabad. The Army is organized along British lines with corps, divisions, brigades and battalions. There are nine Corps; I Corps at Magla, II (Multan), IV (Lahore), V (Karachi), X (Rawalpindi), XI (Peshawar), XII (Quetta), XXXI (Gujranwala) and XXX (Bahawalpur). Corps are commanded by a lieutenant-general and consist of two or more divisions. All divisions are infantry except for two armored divisions. A mechanized infantry division is scheduled to become operational shortly. Infantry divisions comprise infantry, artillery, engineer, signals and supply units and are formed into three brigades each of three battalions.

Recruitment is voluntary in the Pakistani Armed Forces. Enlistments are usually for periods of seven years, beginning at age 17. Army recruits are trained at training centers run by the unit to which they are assigned, with basic training lasting from 4½ to six months depending on particular arm of service. There are also NCO schools maintained by each arm and service.

Officer training is accomplished at the Pakistan Military Academy, which provides a 2½ year course in academic and military subjects. There is also another route to commissioning, the Army Education Corps, in which university graduate officer candidates attend a short military instruction course before commissioning. Although personnel from all services attend the Pakistan Military Academy, Naval and Air Force officers also attend their own schools. Navy officers attend the Naval Academy for 18 months following a six-month course at the main academy, and Air Force officers attend the Air Force College at Risalpur for a two-year course in academic and technical subjects and flight training. Pakistan also has a Command and Staff College for higher military education.

Chemical and biological warfare capabilities:

Pakistan probably has the capability to produce chemical agents rapidly and load them into suitable munitions. It may also have a program to produce biological agents and munitions. Pakistan has delivery systems suitable for use with chemical or biological munitions. Pakistan signed (and later, in the last quarter of 1997, ratified) the Geneva Protocol without reservations, signed the Chemical Weapons Convention, and signed and ratified the Biological Weapons Convention. It has also signed with India a joint declaration renouncing chemical weapons.

Key personnel:

Minister of Defence: Prime Minister Nawaz Sharif.
Military Secretary: Lt.-Gen. Khalid Nawaz Malik.
Chairman, Joint Chiefs of Staff (acting): Gen. Pervez Musharraf.

Army:

Army Chief of Staff: Gen. Pervez Musharraf.
Chief of General Staff: Lt.-Gen. Muhammad Aziz Khan.
Vice-Chief of the General Staff: Maj.-Gen. Anees Ahmad Bajwa.
Deputy Chief of the General Staff: Maj.-Gen. Ali M. Jan Aurakzai.
Army Director of Procurement: Maj.-Gen Mehmood Shah.
Master General of the Ordnance: Lt.-Gen. Naseem Rana.
Adjutant-General: Lt.-Gen. Amjad Shoaib.
Director, Ordnance Services: Maj.-Gen. Nehmrod Raza.
Corps Commander, Rawalpindi: Not named at press time.
Corps Commander, Quetta Lt.-Gen. Tariq Pervaiz.
Director, Air Defence Command: Lt.-Gen. Iftikhar.
Director-General, Logistics: Maj.-Gen. Julian Peter.
Inspector-General Training and Evaluation Tahir Qureshi.

Navy:

Chief of Naval Staff: Adm. Fasahi Bokhavi.
Cmdr, Pakistan Fleet: Vice Adm. Javaid Iqbal.
Cmdr, Maritime Security Agency: Commodore Usman.

Air Force:

Air Chief of Staff: Air Chief Marshal Pervez Mehadi Qureshi.
Vice-Chief of Air Staff: Air Marshal Ali-ud-din.
Deputy Chief of Air Staff (Administration): Air Marshal Syed Shahid Zulfiqar.
Deputy Chief of Air Staff (Personnel): Air Vice Marshal Ali-ud-din.
Inspector General of the Air Force: Air Vice Marshal Imtiaz Hyder.

Ministry of Defence Production:

Minister of Defence Production: Ch. Shujat Hussain.
Secretary of Defence Production: Lt.-Gen. Lehrasab Ali Khan.
Additional Secretary (I), Defence Production: Maj.-Gen. (Ret.) Agha Ahmad Ali.
Director-General, Military Production: Maj.-Gen. A. Qamar Zaman Chatta.
Director-General, Defence Production: Maj.-Gen. Mohammad Mohsin.
Joint Secretary (I), Defence Production: Altaf H. Agral.
Joint Secretary (II), Defence Production: Brig. Zahid Munir.
Joint Secretary (III), Defence Production: Saleem.

Key addresses:

Ministry of Defence, PAK Secretariat-II, Rawalpindi.

Total armed forces: 482,800.

Paramilitary forces: Civil Armed Forces 65,000, National Guard 75,000, Federal Security Forces 20,000, Frontier Corps 45,000, Pakistan Rangers 16,000, Coast Guard 2,000, Frontier Constabulary 5,100.

Available manpower: 30,519,300; 18,720,100 fit for military service; 1,437,200 reach military age annually.

Service period: Service is voluntary and lasts for two years in all services.

Annual military expenditure: $3.8-billion (131.4-billion *rupees*) (FY1996-97 budget); $3.7-billion (115.25-billion *rupees*) (FY1995-96 budget).

Alliances and organizations: AsDB, CCC, Commonwealth, CP, ECO, ESCAP, FAO, G-19, G-24, G-77, IAEA, IBRD, ICAO, ICC, ICFTU, ICRM, IDA, IDB, IFAD, IFC, IFRCS, ILO, IMF, IMO, INMARSAT, INTELSAT, INTERPOL, IOC, IOM, ISO, ITU, MINURSO, NAM, OAS (observer), OIC, PCA, SAARC, Seabeds Committee, UN, UNAMIR, UNAVEM III, UNCRO, UNCTAD, UNESCO, UNHCR, UNIDO, UNIKOM, UNITAR, UNMIH, UNOMIG, UNOMIL, UNPREDEP, UNPROFOR, UPU, WCL, WFTU, WHO, WIPO, WMO, WTO.

Deployment: Appr. 10,000 abroad in Saudi Arabia, Jordan, Libya, Oman, and the UAE. Somalia (UNISOM), Cambodia (UNTC).

Army Battle Order

Manpower: 550,000.
Reserves: 500,000.
Service period: Voluntary.

Organization:

9 Corps headquarters; 1 field command.
2 armored divisions.
19 infantry divisions.
6 armored reconnaissance regiments.
4 independent armored brigades.
3 air defense brigades.
3 air defense brigades.
8 independent infantry brigades.
8 artillery brigades.
5 Army aviation squadrons; independent flights.
1 Special Services Group.
7 SAM batteries.

Equipment:

Tanks:

MBTs: 392 M-47/-48, 50 T-54/T-55, 50 M-4, up to 800 T-59 (being upgraded), Type 69-II, 160+ Type 85-IIAP.

Light 15 PT-76, 50 T-60/63, status of 50 M-24 is doubtful.
APC: 550 M-113, some type 531.
Armored cars: 90 *Ferret.*
Other: *Aardvark* minesweeping flails.

Artillery:
Guns: 1,000 25 pdr, 100mm, 130mm, 140mm, 155mm towed.
Howitzers: 75mm pack, 105mm pack, M-198 towed, M-109, M-109A2 155mm, M-110A2 203mm SP.
MRLs: 122mm SP.
Mortars: 107mm, 120mm.

Anti-tank:
RCL: Type 52 75mm, M-40A1 106mm.
RL: 75mm, M-20 89mm.
Guns: 57mm towed, 8 M-36 90mm SP.
ATGW: *Cobra*, *TOW* (including 24 M-901 SP).

Air defense:
Guns: 14.5mm, 37mm, 40mm, 57mm, 85mm,
SAM: *Crotale*, 100+ *Stinger*, 6 CSA-1, *Anza* 2. (inc. SP on M-113).

Small arms: HK MG-3 7.62mm assault rifle.

Army aviation:

Pakistan Army Aviation Wing

Headquartered in Dhamial, the Pakistan Army Aviation Wing operates at least 13 light aircraft and helicopter squadrons including those listed below. The Pakistan Army Aviation School, located in Rahwali, uses PAC *Mushshaks* for initial training, Cessna O-1Es for basic training, Bell 47Gs and Bell *JetRangers* for helicopter conversion training, and Sud *Alouette IIIs* for advanced training. Staff/VIP transport is provided with a Cessna 421, two *Turbo Commanders*, and a *Puma*.

Organization:
No 2 Squadron, Lahore, with O-1E, *Mushshak* and UH-1H.
No 3 Squadron, Multan, with O-1E and *Mushshak*.
No 4 Squadron, Dhamial, with Mi-8.
No 6 Squadron, Dhamial, with UH-1H, Bell 412 and Mi-17.
No 7 Squadron, Sharea Faisal, with O-1E and *Mushshak*.
No 8 Squadron, Dhamial, with *Alouette III* and *Lama*.
No 9 Squadron, Peshawar, with O-1E, *Mushshak* and *Alouette III*.
No 13 Squadron, Dhamial, with O-1E and *Mushshak*.
No 21 Squadron, Multan, with *Puma* and UH-1H.
No 24 Squadron, Multan, with *Puma*.
No 25 Squadron, Dhamial, with *Puma*.
No 31 Squadron, Multan, with AH-1F.
No 32 Squadron, Multan, with AH-1F.

Equipment:
Fixed-wing aircraft: Appr.40 Cessna O-1E *Bird Dog* observation and liaison; 1 Cessna 421 liaison; more than 100 PAC *Mushshak* observation and trainers; 2 Rockwell *Turbo Commander 840* liaison and photogrammetric survey.

Helicopters: More than 25 Aerospatiale SA 330 F and SA 330 L *Puma* transports; 12 Agusta-Bell AB 205A-1 and Bell UH-1H transports; 12 Bell 47G and OH-13S helicopter conversion trainers; more than 10 Bell 206B *JetRanger II* and *JetRanger III* scouts and liaisons; less than 20 Bell AH-1F *Cobra* antiarmor operations; 2 Bell 412 VIP transports; 8 Mil Mi-8 *Hip* transports; 8 Mil Mi-17 *Hip* VIP transports and transports; 24 Sud SA 316 B and IAR-316B *Alouette III* liaisons and advanced trainers; 18 Sud SA 315 B *Lama* liaisons and SAR.

Naval Battle Order

Manpower: 26,000 (2,600 officers) including 1,200 Marines and 1,000 seconded to MSA.
Reserves: 5,000.
Service period: Voluntary.

Fleet:

Submarines:
3 *Agosta-90* type (ordered 1992) to commission from 1999.
2 *Agosta-* class.
4 *Hangor*-class.
3 *MG 110*-class midget submarines (with Special Service Group).

Destroyers:
3 *Alamgir*-class (*Gearing FRAM I*-class) with 6 *Harpoon* SSM, *Asroc* ASWM and helicopter deck.

Frigates:
6 *Tariq* (ex-RN *Amazon*)-class with 4 *Harpoon* SSM (not yet fitted), LY60N SAM and 1 *Lynx* HAS3 helicopter.
2 *Zulfiqar*-class with 1 *Alouette* III helicopter.

Light forces:
4 *Azmat*-class (PRC *Huanngfen*-class) FAC(M) with 4 HY-2 system.
3 *Haibat*-class (PRC *Hegu*-class) FAC(M) with HY-2 system.
Larkana II FAC(M) with 2x2 C-802 SSM. (Replaced fourth *Haibat*. 3 more beiieved projected to replace others.)
2 *Gilgit*-class (PRC *Shaghai II*-class) FAC(G).
Rajshahi large patrol craft.
Larkana large patrol craft.

Mine warfare forces:
2 *Munsif*-class minehunters (1 more building).

Miscellaneous vessels: 1 degaussing vessel, 1 oceanographic ship, 7 tugs, 2 AAORs, 2 tankers, 1 water tanker, 1 survey ship.

Marines: 1 Marine Commando/Special Service Group.

Naval aviation:

Pakistan Naval Aviation

Headquartered at Pakistan Naval Station Mehran, near Karachi, Pakistan Naval Aviation is composed of five squadrons. The *Alouette IIIs* and *Lynxes* deploy aboard three *Gearing*-class destroyers (*Alamgir, Taimur,* and *Tughril*), two *Leander*-class frigates (*Shamsher* and *Zulfiqar*), and six *Amazon*-class frigates (*Babur, Badr, Khyber, Shahjahan, Tariq*, and *Tippu Sultan*).

Organization:
No 27 Squadron, PNS Mehran, with F.27.
No 29 Squadron, PNS Mehran, with *Atlantic*.
No 93 Squadron, PNS Mehran, with *Maritime Defender.*
No 111 Squadron, PNS Mehran. with *Sea King*.
No 333 Squadron, PNS Mehran. with *Alouette III* and *Lynx*.

Equipment:
Fixed-wing aircraft: 3 Fokker F.27 Mk 200 *Friendship* transports and EEZ patrol aircraft; 1/1 Fokker F.27 Mk 200MPA/Mk 400M *Friendship* maritime patrol aircraft (upgraded with *Ocean Master* radar and DR 3000A ESM); 3 Lockheed P-3C Update II.5 *Orion* ASW and maritime patrol aircraft; 1 Pilatus Britten-Norman BN2T *Maritime Defender* EEZ patrol aircraft; 3 SECBAT *Atlantic* ASW and maritime patrol aircraft (3 more ex-French used as source of spares).

Helicopters: 2 Sud SA 319 B *Alouette III* ASW; 2 SA 319 B *Alouette III* SAR and liaisons; 3 Westland *Lynx* HAS Mk 3 ASW (ex-Royal Navy); less than 6 Westland Sea King Mk 45 and Mk 45C ASW and ASUW.

NB: In addition, the Pakistan Maritime Security Agency operates a Pilatus Britten-Norman BN2T *Turbine Defender* on EEZ patrol and SAR duties.

Maritime Security Agency: (Set up in 1986 for EEZ patrol) *Nazim* destroyer, 2 *Gilgit*-class FAC(G), 4 *Barkat*-class OPV, 1 BN-2T *Turbine Defender* aircraft.

Customs Service: 19 coastal patrol craft.

Coast Guard: (Under Ministry of Interior, set up in 1985) 4 Crestitalia patrol craft.

Major naval base: Karachi, Gwadar (shore base), Port Qasim.

Air Force Battle Order

***Pakistan Fiza'ya* (Pakistan Air Force)**

Headquartered in Peshawar, the *Pakistan Fiza'ya* (Pakistan Air Force) has been affected by the arms embargo imposed by the United States due to Pakistan's ongoing nuclear weapons program. It has had to rely increasingly on the People's Republic of China as its primary source of combat aircraft.

Manpower: 17,600.
Reserves: 8,000.
Service period: Voluntary.

Organization:
No 1 Squadron, Mianwali, with FT-5.

No 2 Squadron, Masroor, with F-7P and T-33A.
No 5 Squadron, Sargodha, with *Mirage III EP/III O* and *III RP.*
No 6 Squadron, Chaklala, with *Hercules* and Y-12 II.
No 7 Squadron (RTU), Masroor, with A-5C and FT-6.
No 8 Squadron, Masroor, with *Mirage 5 PA2* and *5 PA3.*
No 9 Squadron, Sargodha, with F-16A.
No 11 Squadron (RTU), Sargodha, with F-16A/B.
No 12 Squadron, Chaklala, with 707-340C, 737-300, F.27 and *Falcon.*
No 14 Squadron, Kamra, with F-16A.
No 15 Squadron, Kamra, with F-6.
No 16 Squadron, Peshawar, with A-5C.
No 17 Squadron with F-6.
No 18 Squadron with F-7P.
No 19 Squadron (OCU), Masroor, with F-7P and FT-7.
No 20 Squadron (RTU), Rafiqui, with F-7P and FT-7.
No 22 Squadron (RTU), Masroor, with *Mirage III DP* and *Mirage 5 DPA-2.*
No 23 Squadron with F-6.
No 24 Squadron, Sargodha, with *Falcon.*
No 25 Squadron (OCU), Mianwali, with F-6 and FT-6.
No 26 Squadron, Peshawar, with A-5C.
No 41 Squadron, Chaklala, with *Baron, Seneca* and Cessna 172
No 81 Squadron, Peshawar, with *Alouette III.*
No 82 Squadron, Sargodha, with *Alouette III.*
No 83 Squadron, Rafiqui-Shorkot, with *Alouette III.*
No 84 Squadron, Masroor, with *Alouette III.*
No 85 Squadron, Samungli-Quetta, with *Alouette III.*
No 86 Squadron, Mianwali, with *Alouette III.*
Primary Flying Training Wing, Risalpur, with *Mushshak.*
Basic Flying Training Wing, Risalpur, with T-37B/C and K-8.
No 1 Fighter Conversion Unit, Mianwali, with FT-5.
Combat Commanders' School, Sargodha, with F-7P and *Mirage 5 PA-2.*

Equipment:

Fixed-wing aircraft: 1 Beech *Baron* liaison; 2 Boeing 707-340C transports; 1 Boeing 737-300 VIP transports; 3 Cessna 172N liaison; more than 40 Cessna T-37B/C basic trainers; more than 20 Chengdu FT-5 *Fresco* advanced trainers; 20 Chengdu F-7M *Airguard Fishbed* tactical fighters; less than 100 Chengdu F-7P and F-7MP *Airguard Fishbed* tactical fighters (to be retrofitted with FIAR *Grifo 7* radar); 3 Dassault *Falcon 20 E* and *20 G* VIP transports and EW support aircraft; 40 Dassault *Mirage III E* tactical fighters (fitted by SAGEM with nav/attack systems giving adverse weather/night capability); less than 16 Dassault *Mirage III EP* tactical fighters; less than 12 Dassault *Mirage III RP* tactical reconnaissance aircraft; 3 Dassault *Mirage III DP* operational trainers; 50 AMD-CAC *Mirage III O* tactical fighters (some used as sources of spares for other *Mirages*); less than 25 Dassault *Mirage 5 PA* tactical fighters (to be retrofitted with FIAR *Grifo F3* radar); less than 15 Dassault *Mirage 5 PA2* tactical fighters (to be retrofitted with FIAR *Grifo F3* radar); less than 10 Dassault *Mirage 5 PA3* antiship strike; 2 Dassault *Mirage 5 DPA2* operational trainers; 1 Fokker F.27 Mk 200 *Friendship* staff/VIP transports; appr.25 General Dynamics F-16A Block 15 tactical fighter; appr.10 General Dynamics F-16B Block 15 operational trainers (28 F-16A/Bs embargoed since 1992; 43 more not completed); appr.10 Guizhou FT-7 *Mongol* operational trainers; 1 Harbin (HAMC) Y-12 II transports; 15 IPTN N250-100 transports (on order); 4 Lockheed C-130B *Hercules* transports; 7 Lockheed C-130E *Hercules* transports; 1 Lockheed L-100-20 *Hercules* transports; more than 10 Lockheed T-33A advanced trainers, target towing and liaison aircraft; 55 Nanchang A-5C *Fantan* tactical fighters; 12 Nanchang/PAC *Karakorum 8* advanced trainers and light attack aircraft (ongoing deliveries with likely procurement of 70 more); appr.80 PAC *Mushshak* primary trainers; 1 Piper PA-34 *Seneca II* liaison; 1 Rockwell *Turbo Commander 840* staff/VIP transports; 6 Shenyang FT-2 *Midget* advanced trainers; more than 80 Shenyang F-6 *Farmer* tactical fighter; 51 Shenyang FT-6 *Farmer* operational trainers.

Helicopters: 1 Aerospatiale SA 330 L *Puma* VIP transports; appr.15 Sud SA 316 B and SA 319 B *Alouette III* liaisons.

AAM: *Sidewinder,* R530/-550, PL-5.

Major air bases: Chaklala, Kamra, Masroor, Mianwali, Peshawar, Rafiqui-Shorkot Road, Risalpur, Samungli-Quetta, Sargodha, Sharea Faisal, and Skardu.

7. Major Embassies Abroad

France: 18 rue Lord-Byron, Paris 8e. Tel: (1) 45 62 23 32.
Russia: Sadovo-Kudrinskaya Ul, 17, Moscow.
UK: 35 Lowndes Square, London SW1X 9JN. Tel: (0171) 235-2044, Fax: (0171) 416-8417.
US: 2315 Massachusetts Avenue NW, Washington, DC 20008. Tel: (202) 939-6205, Fax: (202) 387-0484.

8. Major Intelligence Services

Inter-Services Intelligence (ISI): Foreign and regional intelligence collection. ISI, a national-level service, is the principal member of the Pakistan intelligence community.
Director: Gen. Ziauddin (effective October 13, 1998).

Directorate of Military Intelligence (DMI): Army intelligence organization, conducting tactical and strategic intelligence collection and analysis.

Air Force Intelligence: Tactical intelligence and analysis for the Pakistan Air Force.

Naval Intelligence: Tactical intelligence and analysis for the Pakistan Navy.

Intelligence Bureau (IB): Domestic security intelligence.

Federal Investigation Agency (FIA): Crime investigation.

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Pakistan

Army and Paramilitary Forces

The key holder of power in the armed forces and, along with the president and the prime minister, one of the triumvirate that runs the country is the chief of the army staff (COAS)--formerly called the commander in chief. In 1994 this post was held by General Abdul Waheed. The COAS operates from army headquarters in Rawalpindi, near Islamabad. From this position, both Ayub Khan and Zia seized power. Other senior staff positions, at the lieutenant general level, include a chief of general staff, who supervises army intelligence and operations; the master general of ordnance; the quartermaster general; the adjutant general; the inspector general for evaluation and training; and the military secretary. The headquarters function also includes the chief of the Corps of Engineers, the judge advocate general, and the comptroller of civilian personnel, all of whom report to the vice chief of the army staff.

The army is organized into nine corps: First Corps at Mangla; Second Corps at Multan; Fourth Corps at Lahore; Fifth Corps at Karachi; Tenth Corps at Rawalpindi; Eleventh Corps at Peshawar; Twelfth Corps at Quetta; Thirtieth Corps at Gujranwala; and Thirty-first Corps at Bahawalpur. There is also the Northern Area Command, headquartered at Gilgit, directly responsible to army general headquarters.

Active army strength in 1994 was 520,000. In addition, there were 300,000 reserve personnel. Reserve status lasted for eight years after leaving active service or until age forty-five for enlisted men and age fifty for officers.

In 1994 major weapons included nearly 2,000 tanks (mainly Chinese but also 120 M-47s and 280 M-48A5s of United States origin), 820 M-113 armored personnel carriers, 1,566 towed artillery pieces, 240 self-propelled artillery pieces, 45 multiple rocket launchers, 725 mortars, 800 Cobra, TOW, and Green Arrow antitank guided weapons, eighteen Hatf surface-to-surface missiles, 2,000 air defense guns, and 350 Stinger and Redeye missiles and 500 Anza surface-to-air missiles. The army's combat aircraft inventory consisted of twenty AH-1F airplanes equipped with TOW missiles (see table 14, Appendix).

Paramilitary organizations, which were mainly of symbolic importance, included the 185,000-member National Guard, comprising the Janbaz Force--locally recruited militia mainly charged with air defense--and two programs similar to the United States Reserve Officers Training Corps, the National Cadet Corps and the Women Guard. The Women Guard, unlike the National Cadet Corps, included individuals

trained in nursing, welfare, and clerical work. There were also some women in the Janbaz Force, and a very small number of women were recruited into the regular service in limited numbers to perform medical and educational work.

Paramilitary internal security forces were organized on the provincial level but were subordinate to the Ministry of Interior and were commanded by seconded army generals. These forces were in effect an extension of the army for internal security duties. The Pakistan Rangers, headquartered in Lahore, dealt with unrest in Punjab, while the Mehran Force performed similar functions in Sindh. In 1994 their strengths were 25,000 and 24,000, respectively, divided into "wings" of approximately 800 men each. The Frontier Corps, with a strength of 65,000, was based in Peshawar and Quetta with responsibility for the North-West Frontier Province and Balochistan. The corps was responsible to both the Ministry of States and Frontier Regions and to army headquarters. The corps was divided into twenty-seven local units--fourteen in the North-West Frontier Province and thirteen in Balochistan--and included the Chitral Scouts, the Khyber Rifles, the Kurram Militia, the Tochi Scouts, the South Waziristan Scouts, the Zhob Militia, and the Gilgit Scouts. There was also a Coast Guard, subordinate to the Ministry of Interior and staffed by army personnel.

In times of natural disaster, such as the great floods of 1992, army engineers, medical and logistics personnel, and the armed forces played a major role in bringing relief and supplies. The army also engaged in extensive economic activities. Most of these enterprises, such as stud and dairy farms, were for the army's own use, but others performed functions beneficial to the local civilian economy. Army factories produced such goods as sugar, fertilizer, and brass castings and sold them to civilian consumers.

Several army organizations performed functions that were important to the civilian sector across the country. For example, the National Logistics Cell was responsible for trucking food and other goods across the country; the Frontier Works Organization built the Karakoram Highway to China; and the Special Communication Organization maintained communications networks in remote parts of Pakistan.

Data as of April 1994

Section 1 of 1

Pakistan

Navy

In 1994 the navy had some 22,000 personnel. The force included a small Naval Air Arm and the approximately 2,000-member paramilitary Maritime Security Agency, charged primarily with protecting Pakistan's exclusive economic zone. The naval reserve consisted of about 5,000 personnel.

In 1994 the navy had four commands: COMPAK--the fleet; COMLOG--logistics; COMFORNAV--naval installations in the north of Pakistan; and COMKAR--naval headquarters and the only major base at Karachi. There were long-range plans to build a new naval base at Ormara, 240 kilometers west of Karachi, and to improve harbors at Gwadar and Pasni to help alleviate overdependence on Karachi.

The navy's principal combatants in 1994 were six submarines of French origin equipped with United States Harpoon missiles; negotiations with the French for three additional submarines have been reported. The navy had three active old destroyers (one of British and two of United States origin), four United States-made guided missile frigates, six other frigates (two from Britain and four from the United States), and two United States-made and one French-made mine warfare craft. One destroyer and four frigates carried Harpoon missiles; the navy had acquired an unknown number of Mistral close-in surface-to-air missiles from France. There were eight missile craft, and thirteen coastal combatant and patrol craft, all of Chinese origin. The Naval Air Arm had four combat aircraft flown by air force personnel and armed with Exocet missiles and sixteen armed helicopters. The delivery of three P-3C Orion long-range reconnaissance aircraft from the United States had been suspended since 1990 (see table 15, Appendix).

In 1991 a naval special warfare marine commando unit, with a strength of between 150 and 200 men, was established. Its functions, in addition to hull inspection and special operations, included operating three midget submarines.

Although the navy clearly needed to grow, its immediate future was threatened by a reduction in equipment brought about by the Pressler Amendment imposed in 1990 (see The Armed Forces in a New World Order , this ch.). The Pakistan Navy had to return four Brooke (Badr)-class and four Garcia (Saif)-class frigates to the United States at the end of their five-year lease. In addition, one British-made destroyer, the *Babur*, was retired in 1994. At the same time, all three United States destroyers became

fully operational, and an additional six Amazon-class frigates purchased from Britain were to be delivered in late 1994.

Data as of April 1994

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Pakistan

Air Force

In 1994 the Pakistan Air Force had 45,000 active personnel and 8,000 reserve personnel. Headquartered in Rawalpindi, it comprised directorates for operations, maintenance, administration, and electronics. There were three air defense districts--north, central, and south.

In 1994 the air force was organized into eighteen squadrons, with a total of 430 combat aircraft. The mainstay of the air force was the F-16 fighter. Of the forty aircraft originally acquired, thirty-four were in service, divided among three squadrons. Some were reportedly grounded because of a lack of spare parts resulting from the 1990 United States suspension of military transfers to Pakistan (see The United States and the West , ch. 4). Pakistan had an additional seventy-one F-16s on order, but delivery has been suspended since 1990. Other interceptors included 100 Chinese J-6s (which were scheduled to be phased out) and eighty J-7s, organized into four squadrons and two squadrons, respectively. Air-to-air missiles included the Sparrow, Sidewinder, and Magic (see table 16, Appendix).

The air force had a ground-attack role. The air force had three squadrons of Chinese Q-5s (a total of fifty aircraft) as well as one squadron of eighteen Mirage IIIs and three squadrons (fifty-eight aircraft) of Mirage 5s, one squadron of which was equipped with Exocet missiles and was deployed in an antiship role.

In 1994 Pakistan took out of storage thirty of forty-eight Mirage IIIs that it had originally acquired from Australia; the Mirages were grouped into a fighter squadron. Additionally, Pakistan's Mirage 5s were scheduled to be upgraded with French assistance.

The backbone of the transport fleet was formed by twelve C130 Hercules, which had recently been upgraded; plans to acquire more were stymied by the dispute with the United States over Pakistan's nuclear program. There were also smaller transport aircraft and a variety of reconnaissance aircraft.

Data as of April 1994

Section 1 of 1

Pakistan

Personnel and Training

The manpower base of Pakistan, with its population of more than 120 million, is more than adequate to maintain force levels that the country can afford. In 1994 there were an estimated 6.4 million men and 5.7 million women between the ages of eighteen and twenty-two and another 10 million men and 9 million women between the ages of twenty-three and thirty-two. About two-thirds of the individuals in these groups were estimated to be physically fit for service. Although there is provision for conscription, it has not proven necessary because there are more than enough volunteers for a profession that is both honored and, by Pakistani standards, financially rewarding.

Although recruitment is nationwide and the army attempts to maintain an ethnic balance, most recruits, as in British times, come from a few districts in northern Punjab Province and the adjacent North-West Frontier Province. Most enlisted personnel come from rural families, and although they must have passed the sixth-grade level in school, many have only rudimentary literacy skills and very limited awareness of the modern-day skills needed in a contemporary army (see Education , ch. 2). Recruits are processed gradually through a paternalistically run regimental training center, perhaps learning to wear boots for the first time, taught the official language, Urdu, if necessary, and given a period of elementary education before their military training actually starts. In the thirty-six-week training period, they develop an attachment to the regiment they will remain with through much of their careers and begin to develop a sense of being a Pakistani rather than primarily a member of a tribe or a village. Stephen P. Cohen, a political scientist specializing in military affairs, has noted that the army "encourages the *jawan* (basic private) to regard his regiment and his unit as his home or substitute village; and it invests a great deal of time and effort into . . . 'man management,' hoping to compensate in part for generally inferior military technology by very highly disciplined and motivated soldiers." Enlisted men usually serve for fifteen years, during which they participate in regular training cycles and have the opportunity to take academic courses to help them advance.

About 320 men enter the army annually through the Pakistan Military Academy at Kakul (in Abbotabad) in the North-West Frontier Province; a small number--especially physicians and technical specialists--are directly recruited, and these persons are part of the heart of the officer corps. They, too, are overwhelmingly from Punjab and the North-West Frontier Province and of middle-class, rural backgrounds. The product of a highly competitive selection process, members of the officer corps have completed ten years of education and spend two years at the Pakistan Military Academy, with their time

divided about equally between military training and academic work to bring them up to a baccalaureate education level, which includes English-language skills. There are similar programs for the navy at Rahbar (in Karachi) and for the air force at Sarghoda.

The army has twelve other training establishments, including schools concentrating on specific skills such as artillery, intelligence, or mountain warfare. Plans are being drawn up for the National University of Science and Technology, which would subsume the existing colleges of engineering, signals, and electrical engineering. At the apex of the army training system is the Command and Staff College at Quetta, one of the few institutions inherited from the colonial period. The college offers a ten-month course in tactics, staff duties, administration, and command functions through the division level. Students from foreign countries, including the United States, have attended the school but reportedly have been critical of its narrow focus and failure to encourage speculative thinking or to give adequate attention to less glamorous subjects, such as logistics. The air force has an advanced technical training facility at Korangi Creek near Karachi for courses in aeronautical engineering, and the navy's technical training is carried out at Karsaz Naval Station in Karachi.

The senior training institution for all service branches is the National Defence College at Rawalpindi, which was established in 1978 to provide training in higher military strategy for senior officers. It also offers courses that allow civilians to explore the broader aspects of national security. In a program begun in the 1980s to upgrade the intellectual standards of the officer corps and increase awareness of the wider world, a small group of officers, has been detailed to academic training, achieving master's degrees and even doctorates at universities in Pakistan and abroad.

Pakistani officers were sent abroad during the 1950s and into the 1960s for training in Britain and other Commonwealth countries, and especially to the United States, where trainees numbering well in the hundreds attended a full range of institutions ranging from armored and infantry schools to the higher staff and command institutions. After 1961 this training was coordinated under the International Military Education and Training (IMET) program, but numbers varied along with vicissitudes in the United States-Pakistan military relationship. Of some 200 officers being sent abroad annually in the 1980s, over two-thirds went to the United States, but the cessation of United States aid in 1990 entailed suspension of the IMET program. In 1994 virtually all foreign training was in Commonwealth countries.

Pay scales and benefits for enlisted personnel are attractive by Pakistani standards. Officer pay is substantially higher, but with inflation and a generally expanding economy, officers find it harder to make do and feel that they are falling well behind their civilian counterparts in the civil service, where salaries are somewhat higher and the opportunities for gain considerably greater.

Officers retire between the ages of fifty-two and sixty, depending on their rank. The retirement age for enlisted personnel varies similarly according to grade. Retirement pay is modest, especially for enlisted men, but the armed services find ways to make the retiree's lot easier. Especially during periods of martial law, retired senior officers have found second, financially rewarding careers in government-controlled organizations. Land grants to retired officers have been common, and scholarships and medical care are available on a relatively generous basis. In the event of an officer's death on active duty, certain provisions, including grants of free housing, are often extended to his family.

The Fauji Foundation is a semiautonomous organization run for the benefit of active and, especially, retired military personnel and their families. It engages in a variety of lucrative businesses throughout Pakistan and annually produces a surplus of US$30 million for its beneficiaries. The Baharia Foundation provides a similar service to navy families, as does the Shaheen Foundation to those of the air force.)

Section 1 of 1

Pakistan

Budget

Faced with the problem of defense against a much larger enemy from a relatively weak resource base, the military must lay claim to a disproportionate share of the nation's resources even to maintain a minimally effective defensive capability. The military was fortunate in that successive governments--with the exception of the early Bhutto years--believed it necessary to support the armed services as much as possible. This attitude also persisted among the public at large, who accepted the danger from India as real and present.

From 1958 until 1973, the published defense budget accounted for between 50 and 60 percent of total government expenditures. After that time, the proportions were much lower, falling to 40 and even 30 percent levels and ranging between 5 and 7 percent of GNP. At the same time, however, because of an expanding economy, actual expenditures--even allowing for inflation--showed considerable increases. The defense budget for fiscal year (FY-- see Glossary) 1993 was set at Rs94 billion (for value of the rupee--see Glossary), or US$3.3 billion, which represented 27 percent of government spending and almost 9 percent of the gross domestic product (GDP--see Glossary). The published budget understated expenditures by excluding procurement and defense-related research and development as well as funds spent on such activities as intelligence and the nuclear program. (Wirsing 94; Rizvi 124,205,244; Janes; SIPRI)

Data as of April 1994

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Section 1 of 1

Pakistan

NATIONAL SECURITY

Armed forces: Active army strength in 1994 was 520,000, with 300,000 reserve personnel; navy, 22,000 personnel and 5,000 reserves in 1994; air force, 45,000 active personnel and 8,000 reserve personnel; paramilitary forces including National Guard, Frontier Corps, Pakistan Rangers, Mehran Force, Coast Guard, and Maritime Security Agency, exceed 300,000.

Major Military Units: Army: organized in nine corps. Under corps headquarters, twenty-one divisions. Navy: organized in four commands, COMPAK--the fleet; COMLOG--logistics; COMFORNAV--naval installations in the north of Pakistan; and COMKAR--naval headquarters at Karachi. Air Force: organized in eighteen squadrons to defend three air defense districts--north, central, and south.

Military Equipment: Army: Tank inventory mostly Chinese manufacture but includes some United States-made armored personnel carriers; artillery pieces, motorized rocket launchers, mortars, air defense guns, TOW antitank guided weapons, surface-to-surface missiles, ship-to-surface missiles, and surface-to-air missile. Navy: submarines with United States Harpoon missiles; destroyers, guided missile frigates, frigates, surface-to-air missiles, torpedo craft, minehunters, combat aircraft, and armed helicopters. Air Force: mainstay is F-16 fighter; other fighters include Chinese J-6s and J-5s, French Mirages, also C-130 Hercules transportation planes.

Defense Budget: US$3.5 billion in FY 1994, which represented 26 percent of government spending and close to 9 percent of the gross national product.

Foreign Military Relations: Principal military tie with United States but relationship periodically strained. China, a steady source of military equipment, has joined Pakistan in cooperative ventures in weapons production. Security relationships also with Saudi Arabia, Persian Gulf states, Iran, and Turkey.

International Security Forces: Troops contributed to various international security initiatives, including the United States-led alliance in the Persian Gulf War; and the United Nations peacekeeping efforts in Somalia and Bosnia. Pakistan has sent peacekeeping observers to Croatia, Iraq-Kuwait border zones, Liberia, Mozambique, and the Western Sahara.

Internal Security and Police: Internal security occasionally threatened by regional interests, particularly by sectarian violence in Sindh in early 1990s. Police often perceived as abusers of civil rights. Widespread violent crime and narcotics-related incidents potential threats to domestic security.

Data as of April 1994

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[2] When a head of state or government held more than one position,not all offices were for exactly the same term. Dates shown are for the longest period a leader was in power. The name of the head of State was changed from governor general to president under the 1956 constitution.

Table 14. Order of Battle and Major Equipment of Ground Forces, 1994

		Organization or Equipment
Personnel	520,000	
Military units	9	Corps headquarters
	1	Area command (division)
	2	Armored divisions
	19	Infantry divisions
	7	Independent armored brigades
	9	Independent infantry brigades
	9	Corps artillery brigades (2 more forming)
	1	Air defense command (3 air defense groups; 8 brigades)
	7	Engineering brigades
	3	Armed reconnaissance regiments
	1	Special forces group (3 battalions)
	7	Aircraft squadrons
	8	Helicopter squadrons
	1	Independent observation flight
Equipment	1,950+	Tanks
	820	Armored personnel carriers
	1,566	Towed artillery
	240	Self- propelled artillery
	45	Multiple rocket launchers
	725	Mortars
	18	Surface-to- surface missiles
	800	Antitank guided weapons
	850	Surface-to- air missiles

Source: Based on information from *The Military Balance, 1994- 1995*, London, 1994, 159-61.

Table 15. Order of Battle and Major Equipment of Naval Forces, 1994

		Organization or Equipment

Personnel	22,000[1]	
Military units	4	Commands including one fleet headquarters
Equipment	6	Submarines
	3	Destroyers
	10	Frigates
	13	Patrol and coastal combatant craft
	4	Inshore craft
	3	Mine warfare craft
	3	Support and miscellaneous
	4	SA-316B (antisubmarine warfare) helicopters
	6	Sea King Mk 45 (antisubmarine warfare) helicopters
	6	Lynx HAS MK-3 (antisubmarine warfare) helicopters
	4	Atlantic aircraft (operated by air force)

[1] Includes Naval Air Arm and Maritime Security Agency.

Source: Based on information from *The Military Balance, 1994-1995*, London, 1994, 159-61.

Table 16. Order of Battle and Major Equipment of Air Force, 1994

		Organization or Equipment
Personnel	45,000	
Military units	7	Fighter/ground attack squadrons
	10	Fighter squadrons
	1	Reconnaissance squadron
	12	Transport squadrons
	1	Helicopter search-and-rescue squadron
	1	Helicopter transport squadron
	7	Air defense surface-to-air batteries
	1	Antisubmarine warfare/maritime reconnaissance squadron
Equipment		
Fighter/ground attack aircraft	100	J-6/JJ-6
	34	F-16
	80	J-7
	50	Q-5
	30	Mirage III-O
	15	Mirage III-EP

	3	Mirage III-DP
	58	Mirage-5
Transports	12	C-130
	1	L-12
	3	Boeing 707
	3	Falcon 20
	2	F-27-200
	2	Beech
Search and Rescue	6	SA-319
Reconnaissance	12	Combat-capable Mirage III RP
Helicopters (transport)	12	SA-316
	4	SA-321
	12	SA-315 B Lama
Training	12	CJ-6
	30	JJ-5
	24	Mashshaq
	6	MiG-15UTI
	10	T-33A
	44	T-37B/C

Source: Based on information from *The Military Balance, 1994- 1995*, London, 1994, 159-61.

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7. Military expenditure

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I. Introduction

World military expenditure was still on a declining trend in 1998. The best estimates currently available indicate that it was reduced by one-third over the 10-year period 1989–98. Total financial resources devoted to military activities in 1998 amounted to roughly $745 billion.[1] This corresponds to 2.6 per cent of global gross national product (GNP) and $125 per capita.

The global trend in military expenditure of a one-third reduction in real terms during the 10-year period 1989–98 includes wide variation between regions, as shown in table 7.1. The sharpest reduction was in Central and Eastern Europe, the result entirely of developments in the Russian Federation. In Western Europe the 10-year reduction was only 14 per cent. Other regions which exhibited significant reductions of military expenditure are Africa and the Americas, with reductions of 25 and 30 per cent, respectively. In Asia and Oceania military expenditure has been growing continuously; this also applies to most individual countries in the region. Middle East military expenditure in the aftermath of the 1991 Persian Gulf War has been roughly constant and still takes a large share of economic resources there.

The reduction in 1998 was 3.5 per cent in real terms.[2] This was due primarily to the sharp reduction in Russian military expenditure, which fell dramatically in 1998, not because of government priorities but because of economic factors. Non-payment of funds budgeted and an inflation rate much higher than expected meant that actual military expenditure fell far short of that budgeted. Thus, while the budget for 1998 foresaw a reduction in military expenditure of 17 per cent in real terms, provisional figures for actual out-turn show the fall to have been as much as 55 per cent, from $24.9 billion in 1997 to $11.2 billion in 1998 (both figures in constant 1995 prices and at 1995 exchange rates).[3]

[1] This estimate in current dollars is derived from the figure of $696 billion in constant (1995) prices (table 7.1 and appendix 7A) by applying the US inflation rate between 1995 and 1998 (7.1% over 3 years).

[2] Military expenditure estimates for the most recent years are likely to change because the figures for these years are based on budgets adopted and actual expenditures often differ significantly from budget allocations. In addition, the deflators for the most recent year are estimates and therefore also subsequently revised. Thus, the SIPRI estimate for world military expenditures for 1997 has been revised from $704 billion in the *SIPRI Yearbook 1998* to $721 billion in the current volume.

[3] The exchange rate used for the Russian Federation is the purchasing power parity rate as estimated by the World Bank. The choice of method for conversion into dollars has a crucial impact on the international comparison of Russian military expenditure. Using the market exchange rate, Russian military expenditure in 1998 would be $4.9 billion at 1995 prices and exchange rates. Expressed in current prices,

in trend from decline to growth. Proposed budget authority for national defence is planned to increase by 3.6 per cent in real terms between FY 1999 and FY 2005. This represents, in the words of the DOD, 'the first sustained long-term increase in defence funding since the end of the cold war'.[54]

The increase addresses a 'triad' of concerns: (*a*) pay and retirement of military personnel; (*b*) improving military readiness; and (*c*) modernization of military equipment.[55] It included provision for pay increases of 4.4 per cent, effective from 1 January 2000, major improvements in retirement benefits for military personnel, and significant increases for arms procurement for FY 2000 and the next five years—an increase of $53 billion in budget authority for FY 2000 (almost 7 per cent in real terms) and a further 15 per cent increase in FY 2001.[56] A major part of the additional funds will go to missile defence.

Missile defence

In January 1999 the US Secretary of Defense, William S. Cohen, announced a major expansion of US missile defence programmes. These are the National Missile Defence (NMD) programme for the protection of US territory against long-range missiles and the Theater Missile Defense (TMD) programme for the protection of US forces abroad and allied forces and nations against short- and intermediate-range missiles.[57] In recent years Congress has initiated legislation to promote missile defence programmes, but these have been vetoed by the president. The new announcement thus represented a shift in the priorities of the US Administration.

The FY 2000 budget request included an increase of $6.6 billion in funding for NMD compared with FY 1999 and funding will have increased threefold to $10.5 billion by FY 2005. This was motivated by the perception of the existence of 'a growing threat and that it will pose a danger not only to our troops overseas, but also to Americans here at home'.[58] In particular, reference was made to the test by North Korea on 31 August 1998 of a three-stage ballistic missile. The administration's policy has been the '3 plus 3' strategy: to develop NMD technology over a period of three years up to and including the year 2000 sufficiently to allow a system to be deployed three years later, by 2003, if a decision is made to do so. A deployment readiness review is scheduled for the summer of 2000 in order to assess the progress of the NMD programme for a deployment decision.

not with the previous year but with the planned allocation for FY 2000 under the defence plan of the previous year.

[54] 'Department of Defense Budget for FY 2000' (note 52).

[55] Garamone, J., 'New budget boosts pay, readiness, modernization', American Forces Press Service, 22 Jan. 1999, URL <http://www.defenselink.mil/news/>.

[56] 'Department of Defense Budget for FY 2000' (note 52).

[57] Daggett, S., and Shuey, R., *National Missile Defense: Status of the Debate*, CRS Report 97-862 F (Library of Congress, Congressional Research Service: Washington, DC, updated 18 Sep. 1998). On NMD and TMD, see also chapter 12, section VII, in this volume.

[58] US Department of Defense, 'Cohen announces plan to augment missile defense programs', DOD News release, 20 Jan. 1999, URL <http://www.defenselink.mil/news/>.

As regards TMD, the FY 2000 budget included funding for continued flight-testing of the Theater High-Altitude Area Defense (THAAD) programme and increased funding for the Navy Theater-Wide (NTW) programme in order to allow accelerated deployment from the dates currently planned of 2008 and 2010, respectively. In addition, the DOD plans include a proposal to restructure the Medium Extended Air Defense System (MEADS) programme in collaboration with German and Italian partners.

IV. Asia

Military expenditure in Asia has continued to grow after the end of the cold war when the trend has been declining in most other regions. In South Asia this is related to the conflict between India and Pakistan,[59] which was intensified during 1998 by the nuclear testing in both countries,[60] and to the civil war in Sri Lanka. While there are also long-term latent conflicts in East Asia—primarily on the Korean peninsula and between China and Taiwan—and these have influenced the trend in and level of East Asian military expenditure, the rapid economic growth in most East Asian countries has also been a determinant. The financial crisis in 1997 was therefore expected to have a strong impact on East Asian military expenditures.

Military expenditures in the countries of Central Asia are difficult to assess, since the coverage of their defence budgets is unknown and since all economic statistics are uncertain for these countries.

South Asia

India and Pakistan account for more than 90 per cent of military expenditure in the region. In India military expenditure has been on a rising trend since 1992, while in Pakistan the trend was rising until 1993 and has since declined somewhat. In both countries the economic burden of military activities, as measured by their share in GDP and in total government expenditure, is high but has not increased during the most recent 10-year period (table 7.4).

The series of nuclear tests carried out by India and Pakistan during May 1998 were followed by announcements in both countries of further increases in their military budgets. Both countries already divert significant economic resources to military purposes and a significant proportion of their populations lives in poverty.[61] The sanctions imposed by several countries which provide development assistance are likely to impose an additional burden—although

[59] See appendix 1D in this volume.

[60] See chapter 9 in this volume.

[61] India and Pakistan are both classified as countries with low human development according to the United Nations Development Programme (UNDP) human development index (HDI), which is a combined index of GDP per capita, life expectancy and education. Of 175 countries classified, India and Pakistan ranked 139 and 138, respectively. *Human Development Report 1998* (Oxford University Press: Oxford and New York, 1998), Indicators, table 1.

Table 7.4. South Asia: military expenditure, 1989–98

Figures are in US $b., at constant 1995 prices and exchange rates. Figures in italics are percentages.

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	% change 1988–98
Military expenditure											
South Asia	11.3	11.4	11.2	11.2	12.2	12.1	12.6	12.9	13.7	14.3	*27*
India	7.8	7.6	7.1	6.8	7.7	7.8	8.0	8.2	9.1	9.8	*27*
Pakistan	3.0	3.1	3.4	3.6	3.6	3.4	3.4	3.6	3.4	3.3	*11*
Share of GDP											
India	*3.1*	*2.8*	*2.6*	*2.4*	*2.5*	*2.4*	*2.3*	*2.3*	*2.4*	*2.5*	
Pakistan	*6.6*	*6.8*	*6.8*	*6.7*	*6.8*	*6.2*	*5.8*	*5.8*	*5.3*	*4.9*	
Share of CGE											
India	*13.4*	*12.9*	*12.7*	*12.1*	*12.6*	*12.3*	*12.1*	*11.7*	..	*[13.0]*	
Pakistan	*24.5*	*26.8*	*27.0*	*25.5*	*25.0*	*23.8*	*23.9*	..	*[24.0]*	*[24.0]*	

CGE = central government expenditure.

Source: Appendix 7A and the SIPRI military expenditure database.

much less than originally forecast[62]—which also can be seen as the cost of military activities, although not included in the military expenditure measure.

India's defence budget for FY 1998/99 was presented on 1 June 1998, immediately after its series of nuclear tests. It had been raised compared to the level planned and this was motivated by the tests. It represented an increase of 14 per cent over the revised estimates for the previous year in cash terms, roughly 7 per cent in real terms. It also represented an increased economic burden in relation both to GDP and to the total government budget. Still, it was considered inadequate and Finance Minister Yashwant Sinha said in his budget speech that he would consider further increases during the course of the year.[63] The navy received a particular boost of 25 per cent, with additional funds promised in the supplementary budget,[64] and a major modernization programme for the navy was reported in August 1998, amounting to around $2.5 billion.[65] The costs of relocating the Western Fleet to a new base over the next 10-year period are estimated at a further $3.1 billion.[66] This is in the context of fears that India is running into a severe economic crisis, primarily

[62] US economic sanctions, which would be the most serious, have been estimated to cost India around $2.5 billion per year. 'Indian daily optimistic over US sanctions', *Calcutta Telegraph*, 22 June 1998, p. 8, in Foreign Broadcast Information Service, *Daily Report–Near East and South Asia (FBIS-NES)*, FBIS-NES-98-174, 23 June 1998. On the imposition of sanctions, see also chapter 15, section III, in this volume.

[63] 'Defence allocation pegged at 41 000 cr: up by 14 per cent', *Times of India*, 2 June 1998.

[64] Roy-Chaudhury, R., 'Indian naval expenditure in the 1990s', *Strategic Analysis*, vol. 22, no. 5 (Aug. 1998), pp. 675–90. This article provides an account of the trend in India's naval expenditure and its general context.

[65] 'Indian Navy moves forward on modernization program', *Defense News*, 17–23 Aug. 1998, p. 7.

[66] 'Indian Navy plans $3b relocation', *Jane's Defence Weekly*, 30 Sep. 1998, p. 19.

because of excessive government expenditure in a situation when one-half of government revenues is already spent on servicing earlier loans.[67]

The Pakistani budget for FY 1998/99, adopted on 25 June 1998, included an increase in the defence budget by 6 per cent compared to the previous year, or around 0.2 per cent in real terms. It meant an increased share in total government expenditure, which was cut significantly with the explicit purpose of counteracting the effects of economic sanctions following the nuclear testing. Pakistan is vulnerable to sanctions because of its weak economy. More than one-half of the total government budget and two-thirds of government current expenditure is devoted to defence and debt servicing, and the country depends to a great extent on foreign economic aid. The measures introduced in June to counter the adverse economic impact of sanctions included cutting government current expenditure by half and substituting imports with domestic production. The government is also seeking economic aid from Kuwait, Saudi Arabia and the United Arab Emirates.[68]

The sanctions initially announced on Pakistan included the suspension of $1.5 billion in new loans from the IMF, which had been approved in October 1997 for the period 1998–2000, loans from the World Bank of $1.5 billion, and US aid, loans and loan guarantees to the amount of $2.9 billion. By January 1999 the IMF and the World Bank had resumed their financial assistance and the Paris Club of creditor nations had approved the rescheduling of its $3.3 billion foreign debt in return for a Pakistani promise to sign the 1996 Comprehensive Nuclear Test-Ban Treaty before September 1999 and to halt production of fissile material.[69]

East Asia

Military expenditure in East Asia did not decline in 1998, as could have been expected after the financial crisis of 1997–98, but continued to increase, although at a slower rate. This increase was the result of the trends in military expenditure primarily in China,[70] but also in Singapore and Taiwan, which were not affected by the crisis to any great extent. In the five countries most severely affected by the financial crisis—Indonesia, South Korea, Malaysia, the Philippines and Thailand—combined military expenditure fell by almost 7 per cent in real terms in 1998 (table 7.5). Of these only the Philippines did not reduce its defence budget in 1998. Even so, these reductions were not as

[67] 'Dismal state of Indian economy viewed', *Calcutta Anandabazaar Patrike*, 12 Jan. 1999, p. 4 (in Bengali), in FBIS-NES-99-023, 23 Jan. 1999.

[68] 'Pakistan's economy too weak to stand many sanctions', *Financial Times*, 12 June 1998, p. 4.

[69] Islamabad Radio Pakistan Network (in English), 31 Jan. 1999, in 'Pakistan: growing world confidence on Pakistan's economy viewed', in FBIS-NES-99-032, 1 Feb 1999; and 'After getting the loan?' (editorial), *Karachi Jasarat*, 23 Jan. 1999, p. 4 (in Urdu), in FBIS-NES-99-027, 27 Jan. 1999. See also chapter 12, section II in this volume.

[70] See appendix 7D in this volume.

State	Currency	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Americas											
Central America											
Belize	th. dollars	8 711	9 538	9 466	10 584	12 261	15 799	16 106	15 932	18 790	..
Costa Rica[11]	m. colones	1 870	1 973	2 310	2 651	3 449	4 424	7 901	12 485	14 379	..
El Salvador	m. colones	926	975	1 011	975	888	829	849	843	850	..
Guatemala	m. quetzals	368	502	661	785	869	1 008	(837)	(817)	(880)	(798)
Honduras	m. lempiras	247	276	252	280	263	(385)	445	530	548	..
Nicaragua[12]	m. gold córdobas	[0.2]	[32.2]	211	211	224	232	242	269	260	..
Panama	m. balboas	101	74.1	80.1	86.7	94.6	98.7	96.8	101	..	..
North America											
Canada[13]	m. dollars	12 854	13 473	12 830	13 111	13 293	13 008	12 457	11 511	10 801	10 044
Mexico	m. new pesos	1 964	2 665	3 661	4 530	5 445	7 554	7 860	11 034	13 281	14 220
USA[13]	m. dollars	304 085	306 170	280 292	305 141	297 637	288 059	278 856	271 417	276 324	269 763
South America											
Argentina[14]	m. pesos	[53.6]	[877]	[2 555]	[3 280]	[3 830]	4 021	4 361	4 136	4 016	3 962
Bolivia	m. bolivianos	225	357	440	473	537	569	612	682	760	..
Brazil[14]	th./m. reais	(6.8)	(142)	(448)	7 018	188	4 108	10 008	9 994	(15 919)	(15 654)
Chile	b. pesos	[180]	[220]	[280]	330	370	408	492	514	583	481
Colombia	b. pesos	211	281	347	470	588	982	1 318	2 040	..	..
Ecuador	b. sucres	102	156	273	532	841	982	893	1 260	..	..
Guyana[15]	m. dollars	..	142	227	453	562	759	801	780	[1 000]	..
Paraguay	m./b. guaranies	57 340	79 883	137	154	167	[202]	[240]	[266]	..	..
Peru[12]	m. new soles	[2.0]	130	480	1 001	(1 390)	(1 778)	[1 878]	[2 000]	..	..
Uruguay	m. pesos	114	233	363	813	974	2 083	1 816	2 228	2 638	..
Venezuela	m. bolivares	(32 404)	(45 379)	45 269	54 994	94 995	110 940	196 841	240 576	473 388	..
Asia											
Central Asia											
Kazakhstan[16]	b. tenge	..	..	..	..	[0.3]	[3.8]	[10.8]	[15.0]	[17.2]	[20.0]
Kyrgyzstan[16]	m. soms	..	..	..	..	[38.3]	[105]	[237]	[291]	[425]	..
Tajikistan[16]	m. roubles	..	..	..	[2.6]	[243]	[347]	[713]	[3 977]	[7 240]	..
Turkmenistan[16]	b. manats	..	..	..	..	..	[1.5]	[15.1]	[158]	[440]	[613]
Uzbekistan[16]	m. soms	..	..	..	[11.7]	[164]	[991]	[3 355]	[6 900]	..	..
East Asia											
Brunei[17]	m. dollars	363	419	424	410	378	400	405	420	[435]	..
Cambodia	b. riels	..	..	..	..	[165]	[302]	302	298	305	(410)
China, P. R.[18]	b. yuan	[43.9]	[49.2]	[53.7]	[69.2]	[73.1]	[87.2]	[105]	[124]	[139]	[156]
Indonesia	b. rupiahs	2 648	3 156	3 512	4 066	4 281	5 135	5 652	6 734	9 401	9 740
Japan	b. yen	4 043	4 130	4 329	4 510	4 618	4 673	4 714	4 815	4 917	4 932
Korea, North	b. won	(4.1)	(4.3)	(4.5)	(4.6)	(4.7)	(4.8)	..	..	..	..
Korea, South	b. won	5 921	6 665	7 892	8 709	9 040	10 057	11 125	12 533	13 160	(13 800)
Laos	b. kip	..	..	..	..	..	..	87.6	..	..	..
Malaysia	m. ringgits	2 761	3 043	4 323	4 500	4 951	5 565	6 121	6 091	6 183	[5 700]
Mongolia	m. tugriks	850	592	888	1 184	4 795	7 017	9 339	11 663	..	..
Myanmar	m. kyats	3 689	5 160	5 924	8 366	12 695	16 742	22 283	27 667	..	..
Philippines	m. pesos	15 907	14 707	15 898	17 462	21 132	24 401	30 510	32 269	[39 920]	[50 890]
Singapore	m. dollars	2 751	3 266	3 495	3 799	4 010	4 273	5 206	5 782	6 618	[7 161]
Taiwan	b. dollars	188	211	227	239	253	255	261	277	288	298
Thailand	m. baht	44 831	48 846	55 502	64 961	73 708	78 300	88 983	93 959	97 783	98 461
Viet Nam	b. dong	2 047	3 319	4 292	3 730	3 168	4 730	..	..	..	..
South Asia											
Afghanistan	m. afghanis	..	..	..	..	..	..	..	..	..	..
Bangladesh	m. taka	11 450	11 965	13 980	16 095	17 290	18 080	19 110	21 376	24 327	[24 926]
India	b. rupees	140	151	160	171	206	228	260	288	345	399
Nepal	m. rupees	834	988	1 114	1 320	1 607	1 801	1 939	2 064	2 274	2 526
Pakistan	m. rupees	50 961	58 122	69 683	81 604	90 610	97 001	108 459	124 875	133 407	139 380
Sri Lanka	m. rupees	4 073	6 736	10 317	12 876	15 413	19 415	35 186	38 117	37 062	(44 000)

State	1989	1990	1991	1992	1993	1994	1995	1996	1997
El Salvador	2.9	2.7	2.4	2.0	1.5	1.2	1.0	0.9	0.9
Guatemala	1.6	1.5	1.4	1.5	1.4	1.4	(1.0)	(0.9)	(0.8)
Honduras	2.4	2.2	1.5	1.5	1.2	(1.3)	1.2	1.1	0.9
Nicaragua[12]	[6.5]	[2.1]	2.8	2.3	2.0	1.9	1.7	1.6	1.4
Panama	2.1	1.4	1.4	1.3	1.3	1.3	1.2	1.2	..
North America									
Canada[13]	2.0	2.0	1.9	1.9	1.9	1.7	1.6	1.4	1.3
Mexico	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4
USA[13]	5.6	5.3	4.7	4.9	4.5	4.2	3.8	3.5	3.4
South America									
Argentina[14]	[1.7]	[1.3]	[1.4]	[1.4]	[1.5]	1.4	1.6	1.4	1.2
Bolivia	1.8	2.3	2.3	2.1	2.2	2.1	1.9	1.9	1.9
Brazil[14]	(1.7)	(1.3)	(0.7)	1.1	1.3	1.2	1.5	1.3	(1.8)
Chile	[2.4]	[2.4]	[2.3]	2.2	2.1	1.9	1.9	1.8	1.8
Colombia	1.4	1.4	1.3	1.4	1.3	1.7	1.8	2.3	..
Ecuador	2.0	1.9	2.2	2.7	3.1	2.7	1.9	2.1	..
Guyana[15]	..	0.9	0.6	1.0	1.0	1.0	0.9	0.8	[0.9]
Paraguay	1.2	1.2	1.6	1.6	1.4	[1.4]	[1.4]	[1.4]	..
Peru[12]	[1.9]	2.0	1.5	1.9	(1.7)	(1.6)	[1.4]	[1.3]	..
Uruguay	2.4	2.4	1.8	2.3	1.8	2.5	1.6	1.5	1.4
Venezuela	(2.2)	(2.0)	1.5	1.3	1.7	1.3	1.4	0.8	1.1
Asia									
Central Asia									
Kazakhstan[16]	..	..	..	..	[1.0]	[0.9]	[1.1]	[1.1]	[1.0]
Kyrgyzstan[16]	..	..	..	..	[0.7]	[0.9]	[1.5]	[1.3]	[1.4]
Tajikistan[16]	..	..	..	[0.4]	[3.9]	[2.0]	[1.1]	[1.3]	[1.4]
Turkmenistan[16]	..	..	..	..	..	[1.1]	[1.4]	[2.1]	[4.6]
Uzbekistan[16]	..	..	..	..	[3.2]	[1.5]	[1.1]	[1.2]	..
East Asia									
Brunei[17]	..	..	6.4	6.2	5.7	6.0	5.7	5.6	..
Cambodia	..	..	..	..	[3.0]	[4.9]	4.2	3.6	3.3
China, P. R.[18]	[2.6]	[2.7]	[2.5]	[2.7]	[2.1]	[1.9]	[1.8]	[1.8]	[1.8]
Indonesia	1.6	1.6	1.4	1.4	1.3	1.3	1.2	1.3	1.5
Japan	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0
Korea, North	..	..	..	..	..	..	..	..	..
Korea, South	4.0	3.7	3.7	3.6	3.4	3.3	3.2	3.2	3.1
Laos	..	..	..	..	..	..	6.2	..	..
Malaysia	2.7	2.6	3.3	3.0	3.0	2.9	2.8	2.4	2.2
Mongolia	7.9	5.7	4.7	2.5	2.9	2.5	2.2	2.2	..
Myanmar	3.0	3.4	3.2	3.4	3.5	3.5	3.7	3.5	..
Philippines	1.7	1.4	1.3	1.3	1.4	1.4	1.6	1.5	[1.6]
Singapore	4.6	4.8	4.6	4.7	4.3	3.9	4.3	4.4	4.6
Taiwan	4.8	4.9	4.7	4.5	4.3	4.0	3.8	3.7	3.5
Thailand	2.4	2.2	2.2	2.3	2.3	2.2	2.1	2.0	2.0
Viet Nam	..	8.7	6.1	3.4	2.3	2.8	..	..	..
South Asia									
Afghanistan	..	..	..	..	..	..	..	..	..
Bangladesh	1.6	1.4	1.5	1.7	1.7	1.5	1.5	1.5	1.5
India	3.1	2.8	2.6	2.4	2.5	2.4	2.3	2.3	2.4
Nepal	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	..
Pakistan	6.6	6.8	6.8	6.7	6.8	6.2	5.8	5.8	5.3
Sri Lanka	1.6	2.1	2.8	3.0	3.1	3.4	5.3	5.0	4.2
Europe									
Albania	..	..	..	4.4	3.1	2.3	2.2	1.6	1.4
Armenia[16]	..	..	..	..	2.1	..	4.1	3.3	3.8
Austria	1.1	1.0	0.9	1.0	1.0	0.9	0.9	0.9	0.9
Azerbaijan[16]	..	..	..	3.3	5.0	4.6	2.3	2.2	2.3
Belarus[16]	..	..	..	1.6	1.8	2.0	1.4	1.2	1.4

11. Transfers of major conventional weapons

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I. Introduction

Since annual variations in global transfers of major conventional weapons are often the result of a few large deliveries and tend to overemphasize peaks and troughs, a better understanding of the main trends can be achieved by studying average values over several years.[1] The SIPRI arms transfers project identifies such trends using the SIPRI trend indicator.[2]

The five-year moving average curve in figure 11.1 reflects three distinct phases since 1984: (*a*) the last years of the cold war (1984–88) during which the level of arms transfers was relatively high; (*b*) a transitional period of steep decline between 1989 and 1994; and (*c*) from 1995 to the present day when the level of arms transfers has been fairly stable and much lower than in the late 1980s. The level in 1998 ($21.9 billion at constant 1990 prices) was not much higher than that in 1994 ($20 billion), the lowest level since 1970.[3]

Section II of this chapter surveys the dominant trends among the major suppliers and recipients of major conventional weapons and presents some of the developments in arms transfers policy in 1998. The global reduction in arms transfers in 1998 is primarily the result of procurement decisions made several years ago, rather than an effect of the financial crisis which began in Asia in 1997. There were only minor changes in the ranking of the top major suppliers in 1994–98 compared with 1993–97. On the recipient side, Asia and the Middle East showed reductions in their imports of 27 and 18 per cent respectively, that is, much smaller than the reductions of around 50 per cent in the Americas and Africa. Western Europe was the only region with an increase in imports between 1997 and 1998.

Greece and Turkey are both major arms recipients and both are pursuing military modernization programmes. The decision by Cyprus to acquire a

[1] Five-year moving averages are calculated as a more stable measure of the trend in arms transfers than the often erratic year-to-year figures.

[2] The SIPRI data on arms transfers refer to actual deliveries of major conventional weapons. To permit comparison between the data on such deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value*. The SIPRI values are therefore only an indicator of the volume of international arms transfers and not of the actual financial values of such transfers. Thus they are not comparable to economic statistics such as gross domestic product or export/import figures. The method used in calculating the trend-indicator value is described in appendix 11C. A more extensive description of the methodology used, including a list of sources, is available on the SIPRI Internet website URL <http://www.sipri.se/projects/armstrade/atmethods.html>.

[3] The figures for years before 1998 differ from those given in previous SIPRI Yearbooks. The SIPRI database on arms transfers is constantly updated as new data become available, and the trend-indicator values are revised each year. For this reason it is advisable for readers who require time-series data for periods before the years covered in this Yearbook to contact SIPRI.

Table 11.1. The 31 leading suppliers of major conventional weapons, 1994–98

The list includes countries/non-state actors with aggregate exports of $100 million or more for 1994–98. The countries are ranked according to the 1994–98 aggregate exports. Figures are trend-indicator values expressed in US $m. at constant (1990) prices.

Suppliers and rank								
1994–98		1993–97[a]	1994	1995	1996	1997	1998	1994–98
1	USA	1	9 844	9 580	9 712	12 404	12 342	53 882
2	Russia	2	1 155	3 271	3 602	2 956	1 276	12 260
3	France	5	756	806	1 924	3 284	3 815	10 585
4	UK	3	1 494	1 708	1 800	3 238	673	8 913
5	Germany	4	2 637	1 425	1 399	686	1 064	7 211
6	China	6	731	849	751	338	157	2 826
7	Netherlands	7	495	378	414	551	506	2 344
8	Italy	8	306	330	366	442	298	1 742
9	Ukraine	10	189	192	195	516	449	1 541
10	Canada	9	365	436	239	137	217	1 394
11	Spain	11	275	111	99	637	221	1 343
12	Israel	12	115	206	257	292	147	1 017
13	Czech Rep.	13	378	188	132	30	16	744
14	Belarus	14	8	24	129	516	16	693
15	Belgium	16	20	296	144	89	51	600
16	Sweden	17	63	180	155	51	136	585
17	Moldova	15	165	–	–	392	–	557
18	Poland	20	131	184	65	20	1	401
19	Australia	19	24	22	15	318	3	382
20	Switzerland	18	70	75	122	62	35	364
21	Norway	21	186	54	9	56	2	307
22	Denmark	22	230	–	3	–	–	233
23	Slovakia	23	28	85	48	44	–	205
24	Uzbekistan	63	–	–	–	–	170	170
25	Brazil	25	38	40	28	28	–	134
26	Singapore	31	11	2	–	75	41	129
27	Korea, North	24	48	48	22	–	–	118
28	Indonesia	33	25	38	–	–	52	115
29	Qatar	26	51	15	–	44	–	110
30	Korea, South	29	8	25	20	27	30	110
31	Greece	35	–	–	30	52	18	100
	Others[b]		226	298	303	131	209	1 167
	Total		20 073	20 861	21 984	27 416	21 944	112 278

[a] The rank order for suppliers in 1993–97 differs from that published in the *SIPRI Yearbook 1998* (p. 294) because of the subsequent revision of figures for these years.

[b] Includes at least 34 countries (some identified imports from unidentified suppliers) with aggregate 1994–98 exports of less than $100 million.

Note: The SIPRI data on arms transfers refer to actual deliveries of major conventional weapons. To permit comparison between the data on such deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value*. The SIPRI values are therefore only an indicator of the volume of international arms transfers and not of the actual financial values of such transfers. Thus they are not comparable to economic statistics such as gross domestic product or export/import figures. Figures may not add up because of rounding.

Source: SIPRI arms transfers database.

the development costs has been paid for by India.[7]

Investments in future military technology also constitute a problem for countries with a traditionally strong defence industry such as China, the Czech Republic, Poland and Slovakia. All these suppliers show unstable or decreasing trends in their levels of arms transfers over the past five years (table 11.1).[8] Despite its mainly increasing export trend in the past five years, Ukraine will face the same problem. Suppliers which cannot sustain and invest in new military technologies will find it difficult to remain on the market.

The recipients of major conventional weapons

Since 1995 *Asia* has had the largest regional share of global arms imports, accounting for over 40 per cent (see appendix 11A, table 11A.1). In 1998 countries in *North-East Asia*—primarily Japan, South Korea and Taiwan—received 74 per cent of Asian imports. Taiwan passed Saudi Arabia as the number one recipient for the past five-year period (table 11.3). The relatively high levels of imports in North-East Asia were in contrast to greatly reduced import levels between 1997 and 1998 mainly in *South-East Asia*, for example, in Malaysia and Thailand (over 90 per cent), and Indonesia (over 50 per cent). In these and some other countries the financial crisis may explain part of the reductions.[9] However, although South-East Asia's global share dropped from 10 to 6 per cent between 1997 and 1998, the reduction is not significant in global terms. This puts into question suggestions that the crisis may have profound consequences on the global trend. *South Asia's* global share of arms imports fell from 7 to 5 per cent between 1997 and 1998. This reflects a drop in India's imports by more than 60 per cent. However, existing Indian orders indicate that this decline will only be temporary (see appendix 11B). Despite its ambition to increase self-reliance in arms procurement to 70 per cent by 2005,[10] India is likely to remain dependent on foreign support for complete systems and critical technologies for the foreseeable future.

At the same time military tensions remain in Asia. Continued anxiety over existing or possible nuclear programmes in India, Pakistan and North Korea may stimulate demands for delivery systems such as missiles and combat aircraft, which in turn could influence procurement decisions for counter-systems in other countries. This was illustrated by debates in Japan, South Korea and

[7] Arnett, E., 'Military research and development', *SIPRI Yearbook 1998* (note 6), p. 272.

[8] Russia and France may be willing to strengthen political–military relations with China in order to secure a military market but also to counterbalance the position of the USA. 'France and India contemplate strategic alliance', *Defence Systems Daily*, Global Intelligence Update, 15 Jan. 1999, URL <http://defence-data.com/current/page3588.htm>; and 'China–Russia relations at the turn of the century', *Beijing Review*, 14–20 Dec. 1998, pp. 6–8.

[9] Simon, S. W., *The Economic Crisis and ASEAN States' Security* (Strategic Studies Institute, US Army War College: Carlisle, Pa., Oct. 1998).

[10] 'India reviews indigenous defence production', *Defence Systems Daily*, 11 Dec. 1998, URL <http://defence-data.com/current/page3403.htm>; and Singh, R. P., 'India', ed. R. P. Singh, SIPRI, *Arms Procurement Decision Making*, vol. 1 (Oxford University Press: Oxford, 1998), p. 49.

Table 11.2. The leading recipients of major conventional weapons from the six major suppliers, 1994–98

The list includes countries/non-state actors with aggregate imports of $500 million or more for 1994–98 from at least one of the major suppliers. Figures are trend-indicator values expressed in US $m. at constant (1990) prices.

Recipients	Suppliers							
	USA	Russia	France	UK	Germany	China	Others	Total
Africa	233	653	320	52	10	109	871	2 248
Asia	19 520	7 487	5 878	2 327	1 917	2 009	5 177	44 315
China	–	2 116	110	10	–	..	356	2 592
India	–	2 745	95	223	224	–	862	4 149
Indonesia	6	–	35	510	1 115	–	47	1 713
Japan	3 965	–	–	66	10	–	52	4 093
Kazakhstan	–	547	–	–	–	–	–	547
Korea, South	4 098	196	170	1	540	–	166	5 171
Malaysia	532	695	40	992	–	–	376	2 635
Myanmar	–	86	–	–	–	604	–	690
Pakistan	371	86	140	355	–	528	1 136	2 616
Singapore	1 022	35	95	20	–	–	593	1 765
Taiwan	8 098	–	5 154	–	–	–	59	13 311
Thailand	1 277	–	40	8	22	746	1 039	3 132
Viet Nam	–	724	–	–	–	–	63	787
Others	151	257	–	142	6	131	428	1 115
Americas	1 801	499	342	1 816	649	–	3 953	9 060
Brazil	192	12	64	848	256	–	224	1 596
Canada	553	–	72	76	39	–	152	892
USA	..	–	30	779	4	–	1 707	2 520
Others	1 056	487	176	113	350	–	1 870	4 052
Europe	14 167	2 458	1 540	699	4 488	19	3 312	26 683
Germany	860	–	27	–	..	–	99	986
Greece	2 371	542	53	36	1 138	–	614	4 754
Finland	1 580	225	80	45	77	–	18	2 025
Italy	694	–	5	368	48	–	–	1 115
Spain	1 541	–	185	40	150	–	198	2 114
Sweden	34	–	42	–	618	–	34	728
Switzerland	1 255	–	–	5	–	–	–	1 260
Turkey	3 459	147	420	70	2 018	–	501	6 615
Others	2 372	1 544	728	135	439	19	1 848	7 085
Middle East	17 631	1 165	2 493	4 012	19	690	2 714	28 724
Egypt	5 287	148	–	–	10	–	437	5 882
Iran	–	271	–	–	–	578	327	1 176
Israel	2 391	–	39	–	–	–	–	2 430
Kuwait	1 834	198	214	706	–	–	55	3 007
Oman	53	–	131	634	–	–	80	898
Qatar	–	–	686	307	–	–	36	1 029
Saudi Arabia	6 867	–	36	2 016	–	–	829	9 748
UAE	425	539	1 369	348	4	–	582	3 267
Others	774	9	18	–	5	112	368	1 286
Oceania	531	–	11	5	90	–	564	1 201
UN[a]	–	–	–	–	37	–	11	48
Total	53 883	12 263	10 584	8 911	7 210	2 827	16 602	112 278

[a] The UN is included as a non-state actor and not as a combination of all member states.

Note: The SIPRI data on arms transfers refer to actual deliveries of major conventional weapons. To permit comparison between the data on such deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value*. The SIPRI values are therefore only an indicator of the volume of international arms transfers and not of the actual financial values of such transfers. Thus they are not comparable to economic statistics such as gross domestic product or export/import figures. Figures may not add up because of rounding.

Source: SIPRI arms transfers database.

Taiwan about ballistic missile defence systems in reaction to North Korean and Chinese ballistic missile tests.[11] Reports that China has modernized its missile arsenal which is targeted at Taiwan may further stimulate arms procurement in the region.[12]

Europe accounted for approximately 28 per cent of global arms imports in 1998. Countries in Western Europe accounted for 98 per cent of the European share. With the exception of Turkey and Greece, which are discussed in section III, few countries placed major import orders. No decisions were taken in 1998 to go ahead with previously discussed major procurement orders in Central and East European countries, mainly because of a lack of funds. The Czech Republic, Hungary and Poland were anticipating NATO membership in 1999 and the possible consequences with regard to harmonization of their arms inventories.

Since 1994, the *Middle East* has held roughly the same average share of the global market as Europe. In 1998 its share was 24 per cent. While Saudi Arabia lost its leading position to Taiwan on the list of importers in 1994–98, the UAE and Israel moved up and Egypt retained its fourth position. All these recipients showed reduced levels of imports in 1998 with the exception of Israel, which recorded an enormous increase compared with 1997. This is mainly the result of the delivery of 16 F-15I fighter aircraft from the USA.

Africa and Latin America together account for less than 4 per cent of global arms imports. *Africa's* share is less than 1 per cent.[13] In 1998 Sub-Saharan Africa accounted for virtually all arms imports to Africa. During 1998 orders for major weapons were placed by both Eritrea and Ethiopia, including those for advanced combat aircraft (MiG-29s and Su-27s). South Africa also made some major arms procurement decisions but these are not likely to have an effect on Africa's ranking in the foreseeable future.[14] There has been no

[11] Elizabeth Becker claims that the sensitivities are so acute that the US Administration has twice delayed sending Congress a classified report on a proposed missile system to defend Japan, South Korea, and Taiwan and the US troops stationed in the region. Becker, E., 'Missile defense: US weighs risk to Chinese ties', *International Herald Tribune*, 23–24 Jan. 1999, p. 2.

[12] 'Pentagon denies that China increased missiles aimed at Taiwan', *International Herald Tribune*, 13–14 Feb. 1999, p. 3.

[13] For an account of arms transfers to African countries in conflict see Wezeman and Wezeman (note 6), pp. 302–305.

[14] South Africa's planned acquisitions will be spread out over several years between 2002 and 2014. 'Acquisition timescales set', *Jane's Defence Weekly*, 16 Dec. 1998, p. 15; and 'South Africa announces $5.8 billion arms procurement deal', *Defence Systems Daily*, Defence & Aerospace News, 19 Nov. 1998, URL <http://defence-data.com/current/page3271.htm>.

Table 11.3. The 72 leading recipients of major conventional weapons, 1994–98

The list includes countries/non-state actors with aggregate imports of $100 million or more for 1994–98. The countries are ranked according to the 1994–98 aggregate imports. Figures are trend-indicator values expressed in US $m. at constant (1990) prices.

Recipients and rank order								
1994–98		1993–97[a]	1994	1995	1996	1997	1998	1994–98
1	Taiwan	2	731	1 162	1 451	5 311	4 656	13 311
2	Saudi Arabia	1	1 298	1 249	1 961	3 292	1 948	9 748
3	Turkey	3	1 386	1 327	1 132	1 394	1 376	6 615
4	Egypt	4	1 926	1 645	940	931	440	5 882
5	Korea, South	5	642	1 553	1 589	731	656	5 171
6	Greece	7	1 172	943	241	832	1 566	4 754
7	India	8	497	932	988	1 266	466	4 149
8	Japan	6	678	948	624	662	1 181	4 093
9	UAE	11	629	442	600	840	756	3 267
10	Thailand	12	758	628	555	1 128	63	3 132
11	Kuwait	10	49	974	1 338	418	228	3 007
12	Malaysia	15	453	1 143	200	780	59	2 635
13	Pakistan	14	683	242	552	614	525	2 616
14	China	9	112	427	1 115	834	104	2 592
15	USA	13	711	459	431	696	223	2 520
16	Israel	20	796	229	73	46	1 285	2 429
17	Spain	18	646	395	441	230	402	2 114
18	Finland	19	196	162	581	439	647	2 025
19	Singapore	26	187	232	538	123	685	1 765
20	Indonesia	21	600	359	547	141	66	1 713
21	Brazil	23	236	236	491	437	196	1 596
22	Switzerland	31	114	106	199	400	441	1 260
23	Chile	25	151	537	223	194	103	1 208
24	Iran	16	348	243	537	24	24	1 176
25	Italy	24	131	187	241	552	4	1 115
26	Qatar	36	14	15	58	553	389	1 029
27	Germany	17	596	130	110	18	132	986
28	Oman	30	201	175	347	158	17	898
29	Canada	27	432	177	164	86	33	892
30	Peru	29	142	97	182	469	–	890
31	UK	44	38	93	216	88	362	797
32	Viet Nam	37	–	277	246	96	168	787
33	Australia	28	302	71	149	24	189	735
34	Mexico	40	65	65	63	230	306	729
35	Sweden	35	252	84	47	258	87	728
36	Norway	34	57	102	200	186	170	715
37	Netherlands	38	140	47	187	99	242	715
38	Myanmar	32	–	223	93	243	131	690
39	Kazakhstan	39	–	162	219	166	–	547
40	Algeria	41	161	332	5	29	–	527
41	Argentina	47	148	85	44	98	110	485
42	Armenia	45	310	51	106	–	–	467
43	Portugal	33	431	15	3	14	–	463
44	Denmark	49	66	129	53	74	141	463
45	Austria	54	56	37	14	169	177	453

Recipients and rank order								
1994–98		1993–97	1994	1995	1996	1997	1998	1994–98
46	France	55	3	41	30	160	210	444
47	Colombia	50	39	87	39	160	119	444
48	New Zealand	46	16	4	18	349	17	404
49	Morocco	43	129	40	89	143	–	401
50	Cyprus	48	61	29	177	110	18	395
51	Bahrain	51	14	26	225	74	9	348
52	Jordan	64	–	24	43	104	164	335
53	Hungary	22	4	67	125	72	58	326
54	Sri Lanka	50	56	60	158	42	40	356
55	Slovakia	41	35	252	35	–	–	322
56	Poland	58	6	154	114	–	–	274
57	Philippines	56	109	32	30	54	47	272
58	Bangladesh	57	89	126	4	24	–	243
59	Yemen/ Southern rebels[b]	62	196	–	–	–	–	196
60	Angola	63	96	1	10	3	84	194
61	Croatia	60	57	86	2	37	–	182
62	Tunisia	64	21	58	60	40	1	180
63	Belgium	59	64	28	2	34	34	162
64	Bulgaria	65	1	–	51	77	16	145
66	Yemen	67	–	142	–	–	–	142
67	Syria	53	63	43	21	–	–	127
68	Lebanon	66	13	59	27	6	17	122
69	Eritrea	75	16	1	30	48	27	122
70	Romania	73	43	1	35	12	20	111
71	Cambodia	72	64	–	34	6	4	108
72	South Africa	68	19	38	51	20	–	128
	Others[c]		334	342	398	512	241	1 827
	Total		20 073	20 861	21 984	27 416	21 944	112 278

[a] The rank order for recipients in 1993–97 differs from that published in the *SIPRI Yearbook 1998* (pp. 300–301) because of the subsequent revision of figures for these years.

[b] Southern rebels refers to those forces in Yemen which, in 1994, tried to re-establish an independent South Yemen.

[c] Includes 65 countries and 6 non-state actors (the UN, the Palestinian Autonomous Authority and 4 rebel groups) with aggregate 1994–98 imports of less than $100 million.

Note: The SIPRI data on arms transfers refer to actual deliveries of major conventional weapons. To permit comparison between the data on such deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value*. The SIPRI values are therefore only an indicator of the volume of international arms transfers and not of the actual financial values of such transfers. Thus they are not comparable to economic statistics such as gross domestic product or export/import figures. Figures may not add up because of rounding.

Source: SIPRI arms transfers database.

regional arms 'surge' in *Latin America* after the 1997 relaxation of President Jimmy Carter's restrictive US export policy. Of the deliveries made in 1998, most were of surplus *matériel* and orders for new arms remained few. In late 1998 Peru decided to suspend military orders following a peace agreement in

Recipient/ supplier (S) or licenser (L)	No. ordered	Weapon designation	Weapon description	Year of order/ licence	Year(s) of deliveries	No. delivered/ produced	Comments
	2	Sea Giraffe-150	Surveillance radar	1991	1997	1	For 2 MEKO-200ANZ Type (Te Kaha Class) frigates
USA	26	F-16A Fighting Falcon	FGA aircraft	1998		..	Incl 13 F-16B fighter/trainer version; deal worth $200 m; 10 lease with option to buy; 2 more F-16B for spares only
	4	SH-2F Seasprite	ASW helicopter	1997	1997–98	4	Ex-US Navy; for use until delivery of SH-2G version and then probably for spares only
	4	SH-2G Super Seasprite	ASW helicopter	1997		..	For Navy; deal worth $185 m (offsets 36%); option on 2 more; US export designation SH-2G(NZ)
	3	Super King Air-200	Light transport ac	(1998)	1998	3	Second-hand; operated by civilian company for training and transport
	2	127mm/54 Mk-45	Naval gun	(1989)	1997	(1)	For 2 MEKO-200ANZ Type (Te Kaha Class) frigates
	2	AN/SPS-49	Surveillance radar	(1993)	1997	1	For 2 MEKO-200ANZ Type (Te Kaha Class) frigates
	2	Mk-41	ShAM system	1992	1997	1	For 2 MEKO-200ANZ Type (Te Kaha Class) frigates
	(24)	RIM-7P Seasparrow	ShAM	(1991)	1997	(12)	For 2 MEKO-200ANZ Type (Te Kaha Class) frigates
Norway							
S: France	7 200	Eryx	Anti-tank missile	1993	1995–98	(7 200)	Deal worth $115 m incl 424 launchers; option on more (offsets incl production of components)
Germany	9	Leopard-1/BL	ABL	1995	1998	(5)	Ex-FRG Army Leopard-1 tanks modified to ABL before delivery
Sweden	104	CV-9030	IFV	1994	1996–98	(32)	Deal worth $241 m (offsets $184 m); option on more
	12	Arthur	Tracking radar	1997		..	Deal worth $85 m
UK	5	AWS-9	Surveillance radar	1994	1997–98	(5)	Deal worth $29 m; incl 4 for refit of 4 Oslo Class frigates and 1 for training
USA	12	M-270 MLRS 227mm	MRL	1995	1997–98	12	Deal worth $199 m incl 360 rockets and practice rockets
	24	AN/TPQ-36A Firefinder	Artillery radar	1994	1995–98	(24)	For Norwegian Advanced Surface-to-Air Missile System (NASAMS)
	..	AIM-120A AMRAAM	SAM	1994	1995–97	210	Deal worth $106 m; for NASAMS
	..	AGM-114A Hellfire	Anti-tank missile	1996	1996	(4)	For coast defence; deal worth $36 m (offsets 100%); assembled in Sweden; Norwegian designation N-HSDS
	500	AIM-120A AMRAAM	Air-to-air missile	1996	1998	(100)	For F-16A/B-MLU FGA aircraft; deal worth $150 m
	..	BGM-71F TOW-2A	Anti-tank missile	1996		..	Deal worth $46 m (offsets 100%)
Oman							
S: France	51	VBL	Recce vehicle	1996	1997–98	51	
UK	1	Jaguar-S	FGA aircraft	1994	1998	1	Ex-UK Air Force; refurbished before delivery
	20	Challenger-2	Main battle tank	1997		..	Deal worth $172 m
	80	Piranha 8x8	APC	1994	1995–98	(80)	Deal worth $138 m; incl ARV, APC/CP, 81mm APC/mortar carrier, ambulance and artillery observation versions; option on 46 more
Pakistan							
S: Belarus	(1 920)	AT-11 Sniper/9M119	Anti-tank missile	1996	1997–98	(1 400)	For 320 T-80UD tanks
China	..	K-8 Karakorum-8	Jet trainer aircraft	1987	1994	6	Incl some assembled in Pakistan; some components produced in Pakistan; status of planned licensed production uncertain
	4	Type-347G	Fire control radar	(1996)	1997	(1)	For 4 Jalalat-2 Class FAC; for use with Type-76A 37mm guns
	4	C-801/802 ShShMS	ShShM system	(1996)	1997	(1)	For 4 Jalalat-2 Class FAC
	(32)	C-802/CSS-N-8 Saccade	ShShM	(1996)	1997	8	For 4 Jalalat-2 Class FAC
France	6	Mirage-3D	Fighter/trainer ac	1996	1998	6	Ex-French Air Force; refurbished before delivery; 'Blue Flash-6' programme worth $120 m incl 34 Mirage-5 FGA aircraft
	34	Mirage-5	FGA aircraft	1996	1998	2	Ex-French Air Force; refurbished before delivery; 'Blue Flash-6' programme worth $120 m incl 6 Mirage-3D fighter/trainer aircraft
	2	Agosta-90B Type	Submarine	1994		..	Incl 1 assembled in Pakistan; deal worth $750 m incl 1 licensed production; deal also incl additional $200 m modernization of Karachi Shipyard to build submarines

Recipient/ supplier (S) or licenser (L)	No. ordered	Weapon designation	Weapon description	Year of order/ licence	Year(s) of deliveries	No. delivered/ produced	Comments
	(60)	SM-39 Exocet	SuShM	1994		..	Deal worth $100 m; for 3 Agosta-90B Type submarines
Netherlands	(4)	DA-08	Surveillance radar	1994	1997–98	(4)	For refit of 4 Tariq (Amazon) Class frigates
Sweden	..	RBS-70	Portable SAM	(1985)	1988–98	(160)	Assembled in Pakistan
Ukraine	320	T-80UD	Main battle tank	1996	1997–98	215	Deal worth $550 m; incl 50 taken from Ukrainian Army inventory
L: China	..	Hongjian-8	Anti-tank missile	1989	1990–98	(1 300)	Pakistani designation Baktar Shikan
	..	QW-1 Vanguard	Portable SAM	(1993)	1994–98	(375)	Pakistani designation Anza-2
France	1	Agosta-90B Type	Submarine	1994		..	Deal worth $750 m incl 2 delivered direct
	1	Eridan Class	MCM ship	1992	1998	1	Pakistani designation Munsif Class
Sweden	..	Supporter	Trainer aircraft	1974	1981–98	(137)	Pakistani designation Mushshak; for Army and Air Force; more produced for export
USA	755	M-113A2	APC	1989	1991–98	(725)	Assembled in Pakistan from kits delivered between 1989 and 1991
Paraguay							
S: Taiwan	12	F-5E Tiger-2	FGA aircraft	1997	1998	12	Ex-Taiwanese Air Force; incl 2 F-5F trainer version; gift
Peru							
S: Russia	3	MiG-29S Fulcrum-C	FGA aircraft	1998		..	Deal worth $117.4 m incl spare parts and support for 18 MiG-29s delivered from Belarus
Philippines							
S: Australia	3	Transfield-56m Type	Patrol craft	1997		..	For Coast Guard; partly financed by Australia
Korea, South	10	F-5A Freedom Fighter	FGA aircraft	(1997)	1998	10	Ex-South Korean Air Force; gift
USA	2	C-130B Hercules	Transport aircraft	(1995)	1998	2	Ex-US Air Force; refurbished before delivery; EDA aid
	5	Cessna-172/T-41	Trainer/light ac	(1997)	1998	5	Second-hand

Portugal							
S: UK	21	L-119 105mm	Towed gun	1997		..	
USA	20	F-16A Fighting Falcon	FGA aircraft	1998		..	Ex-US Air Force; refurbished before delivery; incl 4 F-16B trainer version; 5 more delivered for spares only; 'Peace Atlantis-2' programme worth $268 m
Qatar							
S: France	12	Mirage-2000-5	FGA aircraft	1994	1997–98	(9)	Deal worth $1.25 b; French export designation Mirage-2000-5EDA; incl 3 Mirage-2000DDA trainer version
	..	Apache-A	ASM	1994		..	For Mirage-2000-5 FGA aircraft
	(144)	MICA-EM	Air-to-air missile	1994	1997–98	(108)	Deal worth $280 m incl R-550 missiles; for 12 Mirage 2000-5 FGA aircraft
	(144)	R-550 Magic-2	Air-to-air missile	1994	1997–98	(108)	Deal worth $280 m incl MICA-EM missiles; for 12 Mirage 2000-5 FGA aircraft
	10	AMX-30B	Main battle tank	(1997)	1998	10	Ex-French Army; gift
UK	4	Piranha 8x8	APC	1996	1997–98	4	Incl 2 APC/CP and 2 ARV version; option on more
	36	Piranha 8x8 AGV-90	Armoured car	1996	1998	(24)	Option on more
	..	Starburst	Portable SAM	1996	1998	(50)	
Romania							
S: France	(200)	R-550 Magic-2	Air-to-air missile	1996		..	For MiG-21, MiG-23 and MiG-29 fighter aircraft; may incl assembly or licensed production in Romania
Germany	(36)	Gepard	AAV(G)	(1997)		..	Ex-FRG Army; refurbished before delivery; gift worth DM80 m; 7 more for spares only
Israel	(960)	NT-D Spike	Anti-tank missile	(1998)		..	For 24 modified SA-330 (IAR-330) helicopters; designation uncertain
	(1 000)	Python-3	Air-to-air missile	(1997)	1998	(20)	For 110 MiG-21 fighter aircraft modified to MiG-21 Lancer and for IAR-99 trainer aircraft
USA	5	AN/FPS-117	Surveillance radar	1995	1998	(3)	Deal worth $82 m
Saudi Arabia							
S: Canada	1 117	Piranha/LAV-25	IFV	1990	1994–98	(874)	Deal worth $700 m; incl 111 LAV-TOW tank destroyers, 130 LAV-90 armoured cars, 73 LAV-120

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1998

Foreword, Highlights, Charts, Statistical Notes

Essay:
Small Arms and Light Weapons

Country Rankings by Variable

Tables of Military and Economic Variables
for 172 Countries, 1987-1997

TABLE I. Military Expenditures, Armed Forces, GNP, Central Government Expenditures and Population, 1987-1997 — continued

YEAR	MILITARY EXPENDITURES (ME) Million dollars Current	MILITARY EXPENDITURES (ME) Million dollars Constant 1997	ARMED FORCES Thousands	GROSS NATIONAL PRODUCT (GNP) Million dollars Current	GROSS NATIONAL PRODUCT (GNP) Million dollars Constant 1997	CENTRAL GOVERNMENT EXPENDITURES (CGE) Million dollars Constant 1997	PEOPLE Millions	ME/GNP %	ME/CGE %	ME PER CAPITA Constant 1997 Dollars	ARMED FORCES PER 1000 PEOPLE Soldiers	GNP PER CAPITA Constant 1997 Dollars
Norway												
1987	2660	3480	38	86100	113000	48200	4.2	3.1	7.2	830	9.1	26900
1988	2670	3370	40	88100	111000	48700	4.2	3.0	6.9	801	9.5	26400
1989	2810	3420	43	92000	112000	48900	4.2	3.1	7.0	809	10.2	26500
1990	2950	3460	51	97300	114000	50200	4.2	3.0	6.9	814	12.0	26900
1991	2990	3380	41	103000	117000	54800	4.3	2.9	6.2	794	9.6	27500
1992	3400	3770	36	110000	122000	59300	4.3	3.1	6.4	880	8.4	28600
1993	3260	3520	32	116000	126000	58300	4.3	2.8	6.0	816	7.4	29100
1994	3550	3760	33	126000	133000	57100	4.3	2.8	6.6	867	7.6	30800
1995	3260	3370	38	134000	139000	56100	4.4	2.4	6.0	774	8.7	31900
1996	3270	3320	38	145000	147000	54600	4.4	2.3	6.1	759	8.7	33600
1997	3250	3250	33	152000	152000	67700 E	4.4	2.1	4.8	739	7.5	34600
Oman						E						
1987	1550	2020	27	7230	9440	4670	1.6	21.4	43.4	1290	17.1	5990
1988	1350	1710	27	6550	8280	4520	1.6	20.6	37.7	1050	16.3	5070
1989	1550	1890	29	7350	8950	4570	1.7	21.1	41.4	1120	17.2	5290
1990	1900	2230	32	9450	11100	4930	1.8	20.1	45.2	1270	18.3	6320
1991	1670	1890	29	9090	10300	4620	1.8	18.4	41.0	1030	15.7	5580
1992	2010	2230	35	9820	10900	5550	1.9	20.5	40.2	1160	18.3	5680
1993	1910	2060	35	9570	10300	5300	2.0	20.0	38.9	1040	17.6	5190
1994	2020	2130	35	9360	9900	5230	2.1	21.5	40.8	1040	17.0	4810
1995	2010	2080	36	10500	10900	5300	2.1	19.1	39.2	976	16.9	5120
1996	1910	1940	38	6490	6600	4950	2.2	29.3	39.1	878	17.2	2990
1997	1820	1820	38	6950	6950	4980	2.3	26.1	36.4	795	16.6	3040
Pakistan												
1987	2220	2900	481	27400	35700	9910	104.9	8.1	29.3	28	4.6	341
1988	2320	2940	481	31100	39300	10100	107.8	7.5	29.2	27	4.5	365
1989	2400	2930	520	34100	41500	11500	110.8	7.1	25.4	26	4.7	374
1990	2810	3290	550	37100	43500	11300	113.9	7.6	29.1	29	4.8	382
1991	2880	3260	565	40800	46200	11900	116.9	7.1	27.5	28	4.8	395
1992	3350	3710	580	45300	50300	13300	118.9	7.4	27.9	20	3.1	266
1993	3330	3600	580	47600	51400	13900	120.9	7.0	25.9	30	4.8	425
1994	3470	3670	580	50600	53600	13800	123.7	6.8	26.5	30	4.7	433
1995	3310	3430	580	54200	56100	13600	126.4	6.1	25.3	27	4.6	444
1996	3440	3500	580	58200	59200	14800	129.3	5.9	23.7	27	4.5	458
1997	3380	3380	610	59200	59200	14000	132.2	5.7	24.2	26	4.6	448
Panama												
1987	92	120	12	5140	6710	2060	2.3	1.8	5.9	53	5.4	2980
1988	95	120	11	4420	5580	1540	2.3	2.2	7.8	52	4.8	2430
1989	100	121	14	4510	5490	1450	2.3	2.2	8.4	52	6.0	2340
1990	74	87	11	5080	5950	1430	2.4	1.5	6.1	36	4.6	2490
1991	82	93	12	5650	6400	1660	2.4	1.4	5.6	38	4.9	2630
1992	80	89	11	6250	6930	1570	2.5	1.3	5.7	36	4.4	2800
1993	95	103	11	6870	7420	1830	2.5	1.4	5.6	41	4.4	2940
1994	99	105	11	7260	7680	1950	2.6	1.4	5.4	41	4.3	2990
1995	96	100	12	7540	7810	1900	2.6	1.3	5.2	38	4.6	2990
1996	101	103	12	7930	8060	2240	2.7	1.3	4.6	39	4.5	3040
1997	114	114	12	8400	8400	2400 E	2.7	1.4	4.8	42	4.5	3120

TABLE II. Arms Transfer Deliveries and Total Trade, 1987-1997
By Region, Organization, and Country — continued

YEAR	ARMS IMPORTS [a] Million dollars Current	ARMS IMPORTS [a] Million dollars Constant 1997	ARMS EXPORTS [a] Million dollars Current	ARMS EXPORTS [a] Million dollars Constant 1997	TOTAL IMPORTS [b] Million dollars Current	TOTAL IMPORTS [b] Million dollars Constant 1997	TOTAL EXPORTS [b] Million dollars Current	TOTAL EXPORTS [b] Million dollars Constant 1997	ARMS [c] IMPORTS / TOTAL IMPORTS %	ARMS [c] EXPORTS / TOTAL EXPORTS %
Norway										
1987	420	549	40	52	22640	29580	21490	28080	1.9	0.2
1988	500	632	30	38	23220	29350	22440	28360	2.2	.1
1989	450	548	50	61	23670	28800	27060	32930	1.9	.2
1990	490	574	20	23	27230	31890	34050	39870	1.8	.1
1991	410	464	80	91	25570	28970	34110	38630	1.6	.2
1992	430	477	40	44	25900	28720	35180	39000	1.7	.1
1993	220	238	50	54	23960	25870	31850	34390	.9	.2
1994	180	190	50	53	27310	28880	34690	36690	.7	.1
1995	200	207	20	21	32970	34140	41990	43480	.6	0
1996	290	295	20	20	35610	36210	49640	50470	.8	0
1997	250	250	10	10	35710	35710	48540	48540	.7	0
Oman										
1987	120	157	0	0	1822	2381	3198	4178	6.6	0.0
1988	30	38	0	0	2202	2783	2625	3318	1.4	0
1989	60	73	0	0	2254	2743	4068	4951	2.7	0
1990	10	12	0	0	2681	3140	5501	6443	.4	0
1991	50	57	0	0	3194	3618	4865	5511	1.6	0
1992	10	11	0	0	3769	4178	5425	6014	.3	0
1993	130	140	0	0	4115	4443	5370	5798	3.2	0
1994	290	307	0	0	3915	4140	5545	5864	7.4	0
1995	430	445	0	0	4248	4399	5962	6173	10.1	0
1996	370	376	0	0	4578	4654	7339	.7461	8.1	0
1997	160	160	0	0	5026	5026	7630	7630	3.2	0
Pakistan										
1987	350	457	5	7	5822	7607	4172	5451	6.0	0.1
1988	490	619	20	25	6590	8329	4522	5716	7.4	.4
1989	550	669	30	37	7143	8693	4709	5731	7.7	.6
1990	1200	1405	40	47	7388	8652	5589	6545	16.2	.7
1991	550	623	90	102	8453	9575	6528	7394	6.5	1.4
1992	625	693	30	33	9394	10410	7317	8112	6.7	.4
1993	625	675	5	5	9516	10270	6688	7221	6.6	.1
1994	330	349	10	11	8904	9417	7378	7803	3.7	.1
1995	550	570	20	21	11480	11890	8005	8289	4.8	.2
1996	270	275	0	0	12150	12350	9336	9492	2.2	0
1997	600	600	0	0	11610	11610	8731	8731	5.2	0
Panama										
1987	20	26	0	0	1306	1706	358	468	1.5	0.0
1988	10	13	0	0	751	949	307	388	1.3	0
1989	10	12	0	0	986	1200	318	387	1.0	0
1990	10	12	0	0	1539	1802	340	398	.6	0
1991	10	11	0	0	1695	1920	358	406	.6	0
1992	10	11	10	11	2024	2244	502	557	.5	2.0
1993	10	11	5	5	2188	2362	553	597	.5	.9
1994	10	11	0	0	2404	2542	583	617	.4	0
1995	10	10	0	0	2511	2600	625	647	.4	0
1996	10	10	0	0	2780	2826	674E	685E	.4	0
1997	10	10	0	0	3002	3002	723	723	.3	0

TABLE III. Value of Arms Transfer Deliveries, Cumulative 1995-1997 By Major Supplier and Recipient Country — continued

(In Millions of Current Dollars)

RECIPIENT \ SUPPLIER	TOTAL [a]	UNITED STATES [b]	UNITED KINGDOM	FRANCE	RUSSIA	GERMANY	CHINA	OTHER NATO	MIDDLE EAST	OTHER EASTERN EUROPE	OTHER WESTERN EUROPE	OTHER EAST ASIA	OTHERS
MIDDLE EAST — Continued													
Saudi Arabia#	31,320[d]	13,700	11,900	2,300	0	0	0	1,000	0	0	2,200	0	190
Syria	220	0	0	0	0	0	0	0	60	110	0	10	10
United Arab Emir.#	3,795	800	260	2,200	200	0	0	210	0	90	0	0	30
Yemen	335	5	0	0	0	0	110	5	5	190	0	0	0
Undistributed by Country	X	X	15	90	310	45	20	X	X	X	X	X	X
EAST ASIA	35,460	21,145	1,605	4,280	3,640	1,195	620	1,505	570	170	40	185	505
Brunei	115	60	0	0	0	0	0	0	0	0	10	30	10
Burma	495	0	0	0	0	0	460	0	0	0	0	5	0
Cambodia	155	5	0	0	0	0	30	0	80	10	0	20	10
China													
— Mainland	2,920	120	0	0	2,200	0	X	0	320	150	0	0	110
— Taiwan@	12,455	8,100	0	4,200	0	0	0	50	0	0	0	60	30
Indonesia#	2,065	230	1,300	0	0	70	0	90	10	0	0	30	300
Japan@	6,810	6,800	0	0	0	0	0	0	0	0	0	0	0
Korea, North	150	10	0	0	130	0	0	0	0	10	0	0	0
Korea, South@	4,235	2,900	60	0	370	900	0	0	0	0	0	0	0
Laos	10	0	0	0	0	0	0	0	0	0	0	0	0
Malaysia	1,740	400	160	0	550	0	0	550	0	0	0	30	30
Mongolia	0	0	0	0	0	0	0	0	0	0	0	0	0
Philippines	435	370	60	0	0	0	0	0	0	0	0	0	0
Singapore@	1,255	950	0	0	0	0	0	90	160	0	10	0	0
Thailand	2,285	1,200	0	0	0	200	110	725	0	0	20	0	10
Vietnam	335	0	0	0	320	0	0	0	0	0	0	10	5
Undistributed by Country	X	X	25	80	70	25	50	X	X	X	X	X	X
SOUTH ASIA	3,290	500	35	390	780	5	470	55	150	440	45	120	300
Afghanistan	80	0	0	0	0	0	0	5	0	50	0	5	0
Bangladesh	140	20	0	0	0	0	70	0	0	30	0	0	0
Bhutan	0	0	0	0	0	0	0	0	0	0	0	0	0
India	1,310	120	0	0	700	0	0	10	120	120	5	0	230
Nepal	0	0	0	0	0	0	0	0	0	0	0	0	0
Pakistan	1,425	330	0	390	0	0	210	40	0	190	40	110	40
Sri Lanka	335	30	0	0	0	0	180	0	30	50	0	5	30
Undistributed by Country	X	X	35	0	80	5	10	X	X	X	X	X	X
EUROPE:													
EASTERN EUROPE	2,750	690	150	70	640	100	5	220	500	170	65	50	90
Albania	45	40	0	0	0	0	0	0	0	0	0	0	0
Belarus	0	0	0	0	0	0	0	0	0	0	0	0	0
Bosnia & Herzegovina	480	200	0	0	0	0	0	30	220	0	0	30	0
Bulgaria	170	5	0	0	150	0	0	0	0	5	0	0	0
Croatia	260	10	0	0	80	0	0	30	70	0	30	10	30
Czech Republic@	290	110	0	0	0	0	0	40	0	20	0	10	50

TABLE IV. Value of Arms Transfer Deliveries and Agreements, 1987-1997 By Supplier and Recipient Region — continued

(In Billions of Current Dollars)

SUPPLIER / RECIPIENT	WORLD [a]	UNITED STATES [b]	UNITED KINGDOM	FRANCE	RUSSIA / SOVIET [c] UNION	GERMANY	CHINA	OTHER NATO	MIDDLE EAST	OTHER EASTERN EUROPE	OTHER WESTERN EUROPE	OTHER EAST ASIA	OTHERS
DELIVERIES - Continued													
ASIA — Continued													
— SOUTH ASIA													
1987	4.8	0.2	0.1	0.4	3.0	0.2	0.1	0.1	—	0.1	0.5	—	0
1988	6.5	.3	—	—	5.3	—	.2	.1	—	.1	.5	—	—
1989	7.5	.3	.2	0	6.1	—	.3	—	—	.1	.4	.1	0
1990	6.5	1.1	.1	—	5.0	—	.1	—	0	.1	0	—	—
1991	3.6	.4	0	—	2.7	.1	.2	—	0	.1	—	—	—
1992	1.3	.2	0	.1	.5	.1	.3	—	—	—	—	—	—
1993	1.1	.1	—	—	.4	—	.5	—	0	—	0	0	—
1994	.7	.1	.1	.1	.2	0	.2	.1	0	—	—	—	—
1995	1.3	.1	—	.3	.4	0	.2	—	0	.1	—	—	.1
1996	.8	.1	0	—	.2	0	.1	—	.1	.1	0	.1	—
1997	1.2	.3	0	—	.2	0	.2	—	—	.2	—	—	.2
Total	35.2	3.3	.5	1.1	23.9	.4	2.4	.3	.2	.9	1.4	.3	.4
AFRICA, ALL													
1987	7.0	0.2	0.1	0.2	4.8	—	0.1	0.5	0.3	0.5	—	.1	0.1
1988	6.5	.2	.1	.1	4.2	—	.1	.3	.3	.5	0	.4	.4
1989	4.9	.2	—	.2	3.3	—	.1	.2	.4	.4	0	.1	.1
1990	3.0	.3	—	.1	1.6	—	.2	.3	.2	.1	0	.1	.1
1991	1.7	.2	.1	.1	.6	—	.1	.1	.3	.1	0	—	.1
1992	1.0	.2	.1	.1	—	—	.1	—	.3	.1	0	0	—
1993	1.0	.1	—	.2	.1	—	—	.1	.3	—	0	0	.1
1994	1.6	.2	—	.1	.5	—	.1	.1	.4	.1	—	—	.1
1995	1.0	.1	—	.1	.2	0	—	—	.2	.1	—	—	—
1996	1.1	.2	.1	.1	.2	0	.1	.1	—	.2	.1	0	—
1997	1.2	.2	—	.1	.1	0	.2	.1	—	.3	0	0	.2
Total	30.0	2.1	.7	1.4	15.8	.1	1.1	1.8	2.7	2.3	.2	.8	1.2
— NORTH AFRICA													
1987	1.8	0.1	0	—	1.0	0	—	0.3	0	0.3	0	—	0
1988	2.0	.1	0	—	1.0	0	—	.2	—	.4	0	.3	0
1989	1.8	.1	0	—	1.4	—	—	.1	0	.3	0	.1	0
1990	1.0	.1	0	—	.6	0	—	.2	0	—	0	0	0
1991	.6	.1	—	—	.5	—	—	—	0	—	0	0	—
1992	.2	.1	0	—	0	—	—	—	0	—	0	0	0
1993	.1	.1	—	—	—	0	0	—	0	0	0	0	0
1994	.3	.1	0	0	.1	0	—	—	—	—	0	—	0
1995	.3	.1	—	—	.1	0	0	—	0	.1	0	0	—
1996	.3	.1	0	.1	.1	0	—	—	—	.1	0	0	—
1997	.7	.1	0	.1	.1	0	.1	—	—	.2	0	0	—
Total	9.3	1.0	0	.4	4.9	0	.2	.8	0	1.5	0	.4	.1

TABLE V. Number of Major Weapons Delivered to Regions and Groups, By Supplier and Weapon Type, Cumulative by Period — continued

WEAPON TYPE / SUPPLIER [a] / PERIOD	TOTAL	SOVIET UNION / RUSSIA [b]	OTHER WARSAW PACT	UNITED STATES	UNITED KINGDOM	FRANCE	GERMANY	OTHER NATO	CHINA	OTHER DEVELOPED	OTHER DEVELOPING
SOUTH ASIA											
LAND ARMAMENTS											
Tanks 1986-88	1310	1180	0	0	0	0	0	0	130	0	0
1989-91	1920	1630	40	0	0	0	0	0	250	0	0
1992-94	550	110	0	0	0	0	0	0	260	0	180
1995-97	190	0	30	0	0	0	0	0	50	0	110
Artillery, Field and Anti-Air [c] 1986-88	1835	1390	0	55	0	0	0	20	0	370	0
1989-91	2135	1610	100	105	0	0	0	0	130	190	0
1992-94	410	170	0	0	0	0	0	0	200	0	40
1995-97	332	220	0	12	0	0	0	0	80	0	20
Armored Personnel Carriers and Armored Cars 1986-88	2640	2520	40	0	0	0	0	0	70	10	0
1989-91	3500	3360	10	110	0	0	0	0	20	0	0
1992-94	220	100	0	0	20	0	0	0	0	0	100
1995-97	210	0	80	0	0	0	0	20	80	0	30
NAVAL CRAFT											
Major Surface Combatants [d] 1986-88	18	13	2	0	3	0	0	0	0	0	0
1989-91	15	9	0	0	0	0	0	0	1	5	0
1992-94	12	2	0	0	8	0	0	0	0	2	0
1995-97	6	1	0	0	3	0	0	0	2	0	0
Other Surface Combatants [e] 1986-88	30	0	0	0	5	0	0	0	11	14	0
1989-91	27	4	0	4	0	0	0	6	9	4	0
1992-94	7	0	0	2	1	1	0	0	0	0	3
1995-97	14	0	0	3	0	1	0	0	5	5	0
Missile Attack Boats 1986-88	4	0	0	0	0	0	0	0	4	0	0
1989-91	0	0	0	0	0	0	0	0	0	0	0
1992-94	2	0	0	0	0	0	0	0	2	0	0
1995-97	0	0	0	0	0	0	0	0	0	0	0
Submarines 1986-88	11	5	0	0	0	0	2	4	0	0	0
1989-91	5	4	0	0	0	0	1	0	0	0	0
1992-94	1	0	0	0	0	0	1	0	0	0	0
1995-97	0	0	0	0	0	0	0	0	0	0	0
AIRCRAFT											
Combat Aircraft, Supersonic 1986-88	200	120	0	0	10	30	0	0	40	0	0
1989-91	330	120	0	0	0	0	0	0	110	40	60
1992-94	50	0	0	0	0	0	0	0	30	0	20
1995-97	50	20	0	0	0	0	0	0	0	10	20
Combat Aircraft, Subsonic 1986-88	30	30	0	0	0	0	0	0	0	0	0
1989-91	20	0	0	0	20	0	0	0	0	0	0
1992-94	0	0	0	0	0	0	0	0	0	0	0
1995-97	0	0	0	0	0	0	0	0	0	0	0
Other Aircraft [f] 1986-88	120	100	0	0	0	0	0	10	10	0	0
1989-91	120	70	0	0	0	0	0	10	30	10	0
1992-94	40	10	0	0	0	0	0	0	30	0	0
1995-97	45	10	10	15	0	0	0	0	0	0	10
Helicopters 1986-88	160	150	0	0	0	10	0	0	0	0	0
1989-91	150	140	0	0	10	0	0	0	0	0	0
1992-94	30	20	0	0	0	10	0	0	0	0	0
1995-97	80	40	0	0	0	0	0	0	10	0	30
MISSILES											
Surface-to-Air 1986-88	2370	1890	0	0	0	0	0	0	150	330	0
1989-91	3451	3040	300	101	0	0	0	0	10	0	0
1992-94	340	340	0	0	0	0	0	0	0	0	0
1995-97	1040	50	0	0	0	780	0	0	170	40	0
Surface-to-Surface 1986-88	0	0	0	0	0	0	0	0	0	0	0
1989-91	1660	1660	0	0	0	0	0	0	0	0	0
1992-94	30	0	0	0	0	0	0	0	30	0	0
1995-97	10	0	0	0	0	0	0	0	0	0	10
Anti-Ship 1986-88	256	200	0	16	20	20	0	0	0	0	0
1989-91	186	170	0	16	0	0	0	0	0	0	0
1992-94	0	0	0	0	0	0	0	0	0	0	0
1995-97	90	70	0	0	0	0	0	0	20	0	0

Annual Report on Military Expenditures, 1999

Submitted to the Committee on Appropriations of the U.S. Senate and the Committee on Appropriations of the U.S. House of Representatives by the Department of State on July 27, 2000, in accordance with section 511(b) of the Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1993

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(Please note that the classified annex to this report is not included in this public release.)

The U.S. is engaged in helping the Nigerian military to become a professional force that is accountable to elected, civilian government. Further study will be needed to determine whether reducing overall military spending would further these objectives. The U.S. is encouraging greater transparency and accountability in decision-making, including military audits; one of the objectives is more economical military budgets.

COUNTRY EFFORTS TO REDUCE MILITARY SPENDING, BOTH UNILATERALLY AND MULTILATERALLY:

Nigeria is yet to formulate a longer term policy on spending.

HAS THE COUNTRY PROVIDED ACCURATE MILITARY SPENDING DATA TO RELEVANT INTERNATIONAL ORGANIZATIONS AND ARMS TRANSFER DATA TO THE UN REGISTER OF CONVENTIONAL ARMS?

No information.

HAS THE COUNTRY PARTICIPATED IN REGIONAL TALKS TO REDUCE MILITARY SPENDING?

No such talks have taken place.

ASSESSMENT OF MILITARY BUDGET ACCURACY

IS THE MILITARY BUDGET ACCURATE AND COMPLETE?

The FY 2000 budget is greatly improved, and is based on civilian oversight and the evolution of improving budgeting processes. Prior budgets had been opaque and incomplete.

TO WHAT DEGREE IS THE MILITARY BUDGET TRANSPARENT?

The budget in FY 2000 was approved and developed by an elected, civilian President and National Assembly. This year's budget appears to be fairly transparent and a vast improvement over previous years.

PAKISTAN

MILITARY SPENDING

REPORTING PERIOD: January 1 to December 31, 1999.

AMOUNT:

The "defense" line item in the 1999-2000 budget was USD 2.76 billion or RS 142 billion.

[NOTE: USD 1 equals RS 51.5]

PERCENTAGE OF GDP: 4.5 percent.

PERCENTAGE OF BUDGET: 26 percent.

TRENDS IN REAL TERMS:

Official military expenditures showed nominal increases from FY 95/96 through FY 97/98. Although the nominal 97/98 figure was 3.1 percent higher than the previous year, with inflation at 7.8 percent, the military budget suffered a 4.7 percent real decrease. FY 98/99 was scheduled for a substantial increase of RS. 145 billion, but fiscal constraints held spending to RS. 128 billion, a 2.5 percent nominal decrease. Inflation of 5.7 percent brought this to an 8.2 percent real decrease. The budget for FY 99/00 at RS. 142 billion represents an 11 percent nominal increase over 98/99 expenditures, reduced by 4.0 percent inflation to a 7.0 percent real increase. The latter growth figure is distorted because it is relative to the unusually low base of 98/99. We expect this to change, however, since the current government has discovered reporting errors that, when adjusted, will raise 98/99 expenditure figures. Taken as a whole, the military budget appears to be stagnant and reportedly will be expected to cover certain troop costs formerly paid by the Ministry of the Interior. We expect the budget to continue to be subject to downward pressure because of a shortage of hard currency and increasing foreign payments problems.

ROLE OF THE ARMED FORCES

SIZE OF THE ARMED FORCES:

The Pakistani armed forces comprise approximately 610,000 uniformed personnel (550,000 army; 40,000 air force; 20,000 navy). Paramilitary forces are not included in this number. Pakistan has also been an active participant in peacekeeping operations across the globe. Most recently, Pakistan sent about 800 troops to participate in peacekeeping operations in East Timor.

COMMENTS ON ITS POLITICAL ROLE:

Chief of Army Staff Pervez Musharraf replaced popularly elected Prime Minister Nawaz Sharif in a bloodless coup on October 12, 1999. Parliament was suspended, and the Constitution was replaced by a "Provisional Constitutional Order." General Musharraf is now "Chief Executive" of Pakistan, with full executive powers. Musharraf has appointed a civilian cabinet, but the military maintains an "oversight" role over the functioning of the bureaucracy, and retired military officers occupy a number of senior government positions. The GOP has yet to announce a date for a return to representative government.

CAN CIVILIAN AUTHORITIES APPOINT AND REMOVE MILITARY OFFICERS?

Information not available.

REDUCING MILITARY SPENDING

FEASIBILITY OF REDUCING MILITARY SPENDING:

The Government recognizes that military spending comes at the expense of development priorities. However, long-term tensions with India make dramatic decreases in military spending unlikely absent some substantial change in Pakistan's relationship with India.

U.S. EFFORTS TO ENCOURAGE REDUCED MILITARY SPENDING:

Information not available.

COUNTRY EFFORTS TO REDUCE MILITARY SPENDING:

Since coming to power, General Musharraf announced a "voluntary" cut of RS. 7 billion in the 1999-2000 defense budget of RS. 142 billion. However, we have no documentation to indicate the new military budget is RS. 135 billion.

HAS THE COUNTRY PROVIDED ACCURATE MILITARY SPENDING DATA TO RELEVANT INTERNATIONAL ORGANIZATIONS AND ARMS TRANSFER DATA TO THE UN REGISTER OF CONVENTIONAL ARMS?

Unknown.

HAS THE COUNTRY PARTICIPATED IN REGIONAL TALKS TO REDUCE MILITARY SPENDING?

During 98/99 Secretary-level talks on confidence building measures, Pakistan suggested mutual defense constraints. No agreement was reached.

ASSESSMENT OF MILITARY BUDGET ACCURACY

IS THE MILITARY BUDGET ACCURATE AND COMPLETE?

The GOP's public budget documents disclose a total amount of defense expenditure, and the proportional defense share of total federal budget expenditure, but do not disclose subsidiary "defense services" information, which is classified as national security information.

TO WHAT DEGREE IS THE MILITARY BUDGET TRANSPARENT?

Despite the fact that the regime is now led by the military, there continues to be civilian oversight of the defense budget at three separate points. The Auditor General, the (civilian) Military Accountant General, and Finance Ministry advisors within the Defense Ministry all examine military budgets. The Public Accounts Committee also reviews audited reports of expenditures. This affords a substantial degree of transparency.

PERU

MILITARY SPENDING

REPORTING PERIOD: January 1 to December 31, 1999.

AMOUNT:

USD 1.2 billion or 4,058,000,000 Soles (figures do not include significant off-budget expenditures).

[NOTE: 1999 average exchange rate 3.38 Soles to 1 USD]

PERCENTAGE OF GDP: 1.9 percent

[NOTE: Off-budget expenditures not included]

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