

# **Vietnam People's Army: Development and Modernization**

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**Research Monograph**



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This monograph is divided into seven parts: history, defence and security challenges, defence and military organization, defence budget/expenditure, defence procurement, development and modernization, and future plans.

## 1. History

The Vietnam People's Army (VPA) was founded on 22 December 1944 with a strength of only thirty-four personnel. Over the next four decades the VPA grew in numerical size to rank among the largest armies of the world. In the sixty-four years since it was founded, the VPA has been in combat more than half of this time. First came an eight-year war against the French (1946-54), which culminated in the victory at Dien Bien Phu. Then, after a momentary respite, in 1959 the Vietnam Communist Party (VCP) resumed armed struggle to reunify Vietnam. This precipitated the Vietnam War and the reunification of Vietnam (1965-75). Once again, after a brief respite, armed conflict resumed when the neighbouring Khmer Rouge regime began attacks across the border into Vietnam in 1977. In 1978, Vietnam invaded and occupied Cambodia. China retaliated by launching a month long assault on Vietnam's northern border provinces (February–March 1979). China then kept the frontier in a constant state of tension for an additional eight years. Vietnam's occupation of Cambodia ended in September 1989 when it unilaterally withdrew its forces; but a final peace settlement was not reached until 1991.

Decades of warfare transformed the Vietnam People's Army from a small band of armed guerrillas to the world's fifth largest military force. In 1987, when the VPA reached its peak strength of 1.26 million regulars, only the Soviet Union, China, the United States and India had larger regular standing armies. To this number must be added two and a half million reserves, a Border Defence Force of 60,000 and various paramilitary groups totaling another one and a half million. In sum, in the 1980s Vietnam's military establishment numbered well over five million.

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<sup>1</sup>This paper is based on the author's extensive library of research materials on the Vietnamese military. In 2007, the author was contracted by Jane's to update the entries on Vietnam's Armed Forces for Jane's Sentinel Risk Assessments/Jane's Sentinel Security Assessment. These assessments were published in August 2007 and are listed in the bibliography. This paper is an update of these sources.

The growth of the VPA has also brought with it changes in organizational structure as a basically infantry force, supported by heavy artillery, has branched out to develop a number of highly specialized commands ranging from armour, engineers, marines and transport to air defence, chemical corps, sappers and signals. Vietnam's naval and air forces are also included as commands within the VPA, and they too have grown in size and technological sophistication thanks to the provision of aid from the Soviet Union.

In 1986, Vietnam embarked on a domestic program of renovation or *doi moi*. The changes ushered in by this process have had a profound impact on the Vietnamese economy and, to a lesser extent, the political system. Less well known are policy changes adopted at the same time which led Vietnam to withdraw its military forces from Laos and Cambodia and, most significantly, to reduce the size of its standing army by demobilizing 600,000 personnel (Thayer 2000). Vietnam also re-wrote its national security doctrine and adopted a more defensive orientation, which it termed 'people's war and all-people's national defence'. Table 1 sets out the estimated size of the various components of the Vietnamese armed forces.

Table 1 Vietnam People's Armed Forces

Army:	412,000
Navy:	13,000
Naval Infantry:	27,000
Air Defence-Air Force:	30,000
Border Defence Corps:	40,000
People's Armed Security Forces:	100,000
Reserves:	5,000,000
Source: International Institute of Strategic Studies, <i>The Military Balance 2009</i> , 415-417 and <i>The Military Balance 2008</i> , 408-410.	

## 2. Defence and Security Challenges

The Vietnam People's Armed Forces (*Luc Luong Vu Trang Nhan Dan Viet Nam*) comprises four main elements: Vietnam People's Army, Militia and Self-Defence Force, Maritime Police, and People's Public Security Force.

According to Article 45 of the 1992 state Constitution, the duty of the People's Armed Forces is 'to stand ready to fight to safeguard national independence and sovereignty, the country's unity and territorial integrity, national security and social order, to safeguard the socialist regime and the fruits of the revolution, and to join the entire people in national construction'.

All men and women with specialist skills, become eligible for compulsory military service at the age of 18. Nearly a million men reach military age each year. Due to a massive reduction in the size of Vietnam's regular army, Vietnam has few problems in meeting its general manpower requirements. But recruitment of qualified individuals into the officer corps has proven more difficult due to competition from the civilian economy. In July 2005, Vietnam amended its Military Service Law to reduce the length of compulsory service from two years to eighteen months, and lower the age of eligibility for military service from the 18-27 year range to 18-25 years. Individuals aged 26-27 were shunted into the reserves. For persons holding technical qualifications and for those who were serving in the navy, their term of service was reduced from three to two years.

Vietnam's 2004 Defence White Paper<sup>2</sup> identifies two strategic roles for the VPA: 'building and consolidating a strong all-people's national defence, and, together with other components of the armed forces, taking part in the consolidation of the great national unity to guard against all plots to sow division among religions and nationalities, maintaining firmly the political stability, security and social order, protecting the peaceful life and labour achievements of the people, and building the country pursuant to the goal of making the "people rich, country strong and society civilized, democratic and equitable"' (Socialist Republic of Vietnam, 2004).

The 2004 Defence White Paper provided this assessment of Vietnam's security environment: 'in the Asia-Pacific region, there exist such factors that may cause instability [sic] and latent dangers of armed conflicts as border and territorial disputes bequeathed by history, violent activities of various groups of terrorists and secessionists'.<sup>3</sup> The White Paper also identifies the following defence and security challenges faced by Vietnam: 'Vietnam is facing the threat of schemes and ploys by external hostile elements in collusion with internal reactionaries to interfere in Vietnam's internal affairs and to cause socio-political instability [sic] in Vietnam. The unsettled problems relating to the disputes on border, land and maritime territories, especially the conflicting claims on sovereignty over the East Sea [South China Sea], together with other non-traditional security issues such as illegal drug trafficking and transportation of weapons, piracy, transnational organized crimes, terrorism, illegal immigration and migration, and degeneration of ecological environment, etc., are also security concerns of Vietnam'.

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<sup>2</sup>For a comparison of Chinese and Vietnamese White Papers see O'Dowd and Stern, 2005.

<sup>3</sup>The reference to 'terrorists' refers to the activities of overseas Vietnamese anti-communist pro-democracy groups, while the reference to 'secessionists' refers to unrest in the Central Highlands by members of the Dega ethnic minority.

Finally, the 2004 Defence White Paper states that the tasks of the armed forces are 'to maintain combat readiness for safeguarding the socialist homeland and marking a contribution to the cause of national construction'. The latter task consists of assisting with socio-economic development, poverty reduction and natural disaster response and mitigation. Army units dedicated to national construction are assigned to sixteen economic-defence zones located along Vietnam's land borders or on features in the South China Sea.

As Vietnam's strategic environment has become more complex due to the rise of China and the modernisation of the People's Liberation Army, as well as the modernisation of capabilities among regional powers, greater emphasis has been placed on Vietnam's capabilities to protect its offshore territorial claims and economic interests in the Gulf of Tonkin and South China Sea. Efforts to meet these air and naval-based requirements are clearly evident, though financial constraints and other priorities mean that Vietnam's force modernisation efforts have been quite modest.

The military doctrine of 'people's war and all people's national defence' is rooted in Vietnam's own centuries-long military traditions combined with doctrine acquired in Chinese and Soviet military academies as well as the experience gained by Vietnamese commanders in wartime. 'All people's national defence' combines guerrilla warfare and main force strategy and tactics. In the 1970s, Vietnam developed a doctrine of mobile warfare based on corps-sized formations. Vietnam's 1979 border war with China, however, required Vietnam to develop a doctrine for territorial defence, while Vietnam's decade long occupation of Cambodia required the VPA to develop a counter-insurgency doctrine. Vietnam's maritime territorial disputes with China in the Gulf of Tonkin and South China Sea requires a more comprehensive joint-services approach but there is little evidence that Vietnam has developed an effective joint services doctrine.

### 3. Defence and Military Organization

The VPA is the largest service comprising the People's Armed Forces, reflecting its historical role in the major conflicts that have defined Vietnam's struggle to gain independence from France, oppose U.S. intervention, and defend national sovereignty against against the Khmer Rouge regime and China. The army is not organized as a separate command, but by military region, combined arms army corps, and arms (artillery, engineer, signal corps, chemical defence, armour, commando and other units directly under the Ministry of National Defence).

Vietnam is a communist one-party state. As is typical of such states, it maintains a dual chain of command. At the formal or constitutional level, the president of the Socialist Republic of Vietnam is *ex officio* head of the National Defence and Security Council (NDSC) and commander-in-chief of the armed

forces. Members of the National Defence and Security Council are nominated by the President and approved by the National Assembly. Table 2 sets out the composition of the NDSC.

Table 2 National Defence and Security Council

Chairman	President Nguyen Minh Triet
Deputy Chairman	Prime Minister Nguyen Tan Dung
Minister of National Defence	General Phung Quang Thanh
Minister of Foreign Affairs	Deputy Prime Minister Pham Gia Khiem
Minister of Public Security	General Le Hong Anh

The second chain of command reflects the VCP's dominant role in society. The party controls the armed forces through the Central Military Party Committee (CMPC, *Dang uy Quan su Trung Uong*) headed by the party Secretary-General (see Table 3). The first or permanent deputy secretary is the Minister of National Defence who has always been a member of the party's Political Bureau (or Politburo). According to party statutes the other members of the CMPC are members of the Central Committee who have responsibility for military matters.

Table 3 Central Military Party Committee

Secretary	Nong Duc Manh, Secretary General Vietnam Communist Party
Deputy Secretary	General Phung Quang Thanh, Minister of National Defence

In everyday affairs, the VPA is subordinate to and takes its direction from the Vietnam Communist Party's Central Military Party Committee, and the Minister of National Defence in particular. The NDSC rarely meets and its main concerns have been with legislation in the National Assembly that affects the armed forces.

Vietnam is divided geographically into nine military regions including the Hanoi Capital Region. The army main forces are grouped into fourteen corps headquarters. The VPA is organised into main forces, local forces and militia and self-defence forces. The main forces come under the overall command of the General Staff, while the local and reserve forces come under the control of military commands at regional, province and municipal levels and district/provincial town/city levels. The paramilitary Border Guard Force has a separate chain of command.

#### 4. Defence Budget/Expenditure

Vietnam's defence budget is a state secret. In a rare public comment on this subject, Vietnam's 2004 White Paper claimed that Vietnam spent only 2.5 per cent of its GDP on national defence. This is an improbably low figure. The defence budget covers all branches of the Vietnam People's Armed Forces including the Vietnam People's Army, Militia and Self-Defence Force, Maritime Police and People's Public Security Force.

Table 4 below sets out estimates by the International Institute of Strategic Studies (IISS) and Australia's Defence Intelligence Organisation (DIO).

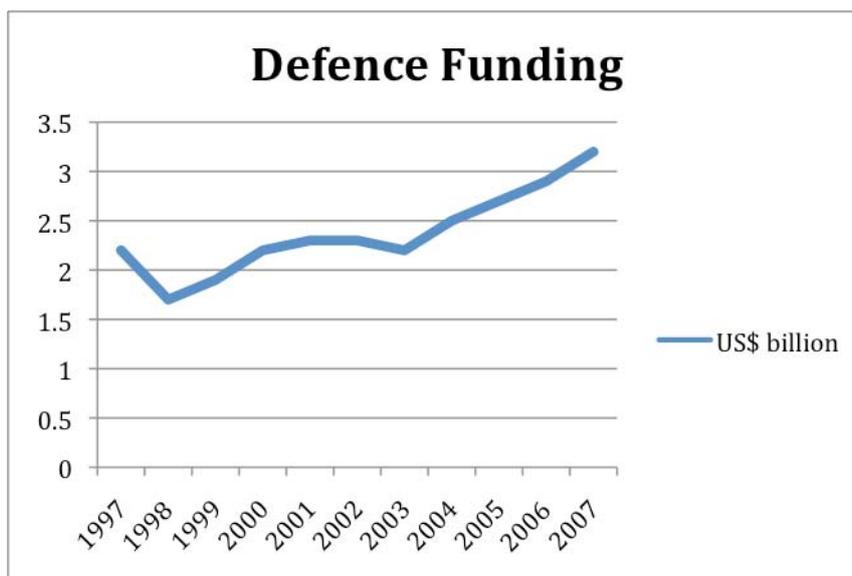
Table 4 Vietnam's Defence Expenditure, 2000-2007 (U.S. billion)

Year	2000	2001	2002	2003	2004	2005	2006	2007
IISS	2.3	2.2	2.4	2.9	2.8	3.2	3.4	3.7
DIO	2.2	2.3	2.3	2.2	2.5	2.7	2.9	3.2

Table 5 Vietnam's Defence Expenditures 2007 (U.S. dollars)

Defence expenditure (billion):	3.70
Per cent of GDP:	5.24
Per head of population:	43.47
Per member of the armed forces:	8,198
Figures in U.S. dollars	
Source: International Institute of Strategic Studies, <i>The Military Balance 2009</i> , 415 and <i>The Military Balance 2008</i> , 408.	

Chart 1 Vietnam's Defence Funding, 1997-2007



Source: Defence Intelligence Organisation (2007).

Estimates provided by the IISS and DIO, while varying from year to year, are in agreement on the general trend. Vietnam's defence expenditure in real U.S. dollars doubled from 1998 to 2007.

The 2004 White Paper states, 'The State budget, still limited as it stands, has set aside an appropriate part for national defence in general and for the development of the national defence industry in particular with a view to ensuring essential equipment for the armed forces'. As in China, however, it is likely that some expenditure on defence and related activities, such as research and development and procurement, are included in other areas of the national budget.

In May 2008, Vietnam's deputy finance minister, Tran Xuan Ha, announced that due to rising oil prices and high inflation rates, Vietnam would adopt a tight policy on fiscal management and curb government expenditures. Defence analysts concluded that this would likely affect military procurements in the short term (Grevatt 2008f). The impact of the global financial crisis and the slowdown in Vietnam's economic growth will further constrain defence procurements.

## 5. Defence Procurement

Throughout the Vietnam War (1965-1975) and Cambodian Conflict (1979-1989), Vietnam was dependent on the Soviet Union for major military weapons systems. The collapse of the Soviet Union in 1991 brought an abrupt end to favourable 'friendship prices' and since then Vietnam has been required to pay for military equipment in hard currency or barter arrangements.

Vietnam made the political decision to give economic development top priority and has authorised only modest increases in defence spending. Vietnam has therefore not embarked on a broad-based defence procurement and military modernisation programme. Towards the end of the 1990s the Vietnamese government announced a series of planned acquisitions of modern platforms and systems. Vietnam slowly built up a modest naval and maritime air capacity to monitor its territorial waters, continental shelf and Exclusive Economic Zones (Thayer 1997a).

Almost all major defence procurement programmes either underway or planned reflect this priority. For example, Vietnam purchased a handful of modern fighter aircraft and naval vessels. Vietnam has sought to develop its national defence industry capacity, with an initial priority on maritime capabilities, in partnership with former communist allies and India.

In 1994, Vietnam and the Russian Federation concluded a major arms sale contract, firmed up defence cooperation in a major agreement signed in October 1998, and declared a 'strategic partnership' in 2003. The 1998 agreement provided a framework for continuing and future Russian defence sales and support to Vietnam. The defence relationship was further strengthened during the February/March 2001 visit of Russian President Vladimir Putin to Vietnam. During his stay, the two sides agreed to 'strengthen their co-operation in military supplies to meet Vietnam's security demands'. As recently as September 2008, Russia's Defence Minister described Vietnam 'as Russia's strategic partner in Southeast Asia'.<sup>4</sup>

The Russian Federation remains Vietnam's main source of sophisticated military equipment, a relationship that is unlikely change in the short term. In September 2008, for example, the Russian Defence Minister Anatoly Serdyukov met with Vietnam's visiting Defence Minister Phung Quang Thanh and declared that the Russian Federation was ready 'to provide Vietnamese armed forces with arms and military hardware [and] to upgrade the existing Vietnamese armaments'.<sup>5</sup> Russian media reports at that time were upbeat about the possibilities of new arms contract agreements for jet aircraft, air defence systems (including long-range radar), naval ships (missile patrol boats and corvettes) and equipment, and assistance for a major modernization of Vietnam's armour corps. Speculation on possible Russian arms sales to Vietnam was renewed in October 2008 when it was announced that Vietnam's president, Nguyen Minh Triet, would make an official visit to Moscow. During his visit Triet stated that Vietnam was interested in expanding military technical cooperation with Russia. The volume of purchases from

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<sup>4</sup>Voice of Vietnam, Hanoi, September 28, 2008.

<sup>5</sup>Itar-Tass, Moscow, September 23, 2008.

Russia are likely to remain quite modest, however, given Vietnam's budgetary constraints. Also, Vietnam has moved to develop a wider and more diversified procurement network for Soviet-compatible equipment from India, the Ukraine, the Czech Republic and Poland.

Vietnam and India have been political allies since the end of the colonial era. India's emerging role in the region after the Cold War has reinforced the commonality of interests between the two countries and resulted in an enhancement of their defence relationship. India has considerable experience with maintaining and producing Soviet manufactured equipment and is well-positioned to assist Vietnam in maintaining, upgrading and modernising its Soviet-era platforms and other military equipment.

*Army procurement.* Vietnam has been in the market for armoured personnel carriers (APCs) and main battle tanks (MBTs). In April 2001, it was reported that Vietnam had commenced a modest domestic overhaul of about fifty M113 APCs. The upgrade was carried out by military factory Z-751 in Ho Chi Minh City utilising spare parts obtained through commercial sources and weapons stocks captured at the conclusion of the Vietnam War. Vietnam's earlier attempt to enlist the services of Singapore Automotive Engineering (now the ST Kinetics division of ST Engineering) had to be abandoned due to the U.S. embargo against Vietnam that was in place at the time. The APCs are slated to be deployed with a southern-based armoured division. Russian plans to sell T-80 tanks to Vietnam collapsed because of a cash shortage in Vietnam.

In 2006, Israel reported to the UN Register of Conventional Arms (UNROCA) that it had sold two light armoured vehicles (LAV) to Vietnam. Israel Military Industries is currently undertaking a pilot program in Vietnam to upgrade its T-55 main battle tanks with a view to winning a contract to upgrade Vietnam's entire stock of 850 T-54/55 MBTs. The Israeli program includes upgrading armour, installation of night vision, and an improved fire control system (reportedly manufactured in Poland).

In May 2002, Vietnam and the Ukraine reached agreement on military-technical cooperation up to 2005. Under the terms of this memorandum the Ukraine will provide major assistance to Vietnam to upgrade its armour and artillery forces, arms co-production and repairing, upgrading and supply of all types of unspecified equipment and weapons.

In February 2005, it was reported that the Finnish Defence Forces were considering offloading a fleet of up to 70 Soviet-era T-54 and T-55 MBTs to Vietnam. In early March 2005 it was also reported that Poland might supply Vietnam with 150 second hand T-72 MBTs together with training assistance, basic maintenance equipment and ammunition. These potential sales have not yet been registered with UNROCA (see Table 6).

*Air Force procurement.* Financial constraints have severely limited Vietnam's ability to purchase large numbers of top of the line multi-role fighters and fighter-ground attack aircraft. For example, between 1994 and 2004, Vietnam acquired a total of 12 modern Sukhoi jet fighters from Russia. These included: 7 Su-27SK Flanker B single-seaters, 3 Su-27UBK Flanker C two-seat trainers and 2 Su-30Ks.<sup>6</sup> Between 1996 and 1998, Russia upgraded thirty-two single-seat Su-22M4 and two twin-seat Su-22UM3 ground attack aircraft. In September-October 2008, following successive visits by Vietnam's Minister of National Defence and state president, there was intense speculation in the Russian press that Vietnam was in the market for up to twenty Su-30 aircraft and possibly MiG-29 fighters. It was later revealed that in January 2009 Vietnam placed an order for eight Su-30MK2 fighters from Rosoboronexport for delivery in 2010-2011.<sup>7</sup>

In late 1999, it was reported that the Russian state armaments authority, Rosooboruzheniye, had entered into discussions to upgrade Vietnam's inventory of Su-27s and Su-30s so that they could operate the Vypel R-177 (AA-12) beyond visual range air-to-air missile, the Kh-31 (AS-17) anti-ship missile and the Vypel Kh-29 (AS-14) and Kh-59M (AS-18) air-to-surface missiles.

In March 2000, India and Vietnam signed a major Defence Cooperation Agreement (DCA) which included provision for overhauling Vietnam's fleet of MiG-21 aircraft and training assistance for Vietnamese fighter pilots and technicians. In March 2005, Vietnam's Chief of the General Staff visited India to discuss further Indian assistance in overhauling MiG fighters. And in October 2006, India supplied Vietnam with a number of spare parts for its MiG-21 combat aircraft.

In 2004, Vietnam reportedly acquired from four to ten Su-22M4 ground attack fighters from the Czech Republic including spare parts and ammunition. Vietnam then reached a deal with the Ukraine to upgrade a number of these aircraft so they could serve as platforms for anti-ship missiles. Reports in March 2005 indicated that Vietnam was in the market for a further eight to ten fighter aircraft, with the Su-27 or Su-30MK the preferred choice. However, insufficient funding led Vietnam to purchase 40 second-hand Sukhoi Su-22M4 fighter bombers from Poland's Profus Management instead.<sup>8</sup>

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<sup>6</sup>Robert Karniol, 'Slow advance for Viet army revamp', *The Straits Times*, February 9, 2009, reports that Vietnam placed an initial order for four Su-30MKKs in 2003

<sup>7</sup>ITAR-TASS news agency, Moscow, in Russian 1326 gmt, August 19, 2009. The fighters are to be built at the Komsomolsk-na-Amur aircraft factory.

<sup>8</sup>According to Australia's Defence Intelligence Organisation, Vietnam has 'purchased 40 second-hand Su-22 attack aircraft'; DIO, *Defence Economic Trends in the Asia-Pacific 2007*, 22.

In its annual reports to UNROCA, Vietnam has acknowledged the receipt of only twelve combat aircraft during the period 1992-2006. This may indicate it has not yet taken delivery of the aircraft mentioned above because they are being upgraded overseas. However, during this same period, the Ukraine reported the delivery of six MiG-21 UMs (1996), ten L-39s (2002 and 2003)<sup>9</sup> and three Su-22 combat aircraft (2005) to Vietnam. In 2005, the Czech Republic reported the sale of only five SU-22 UM3 combat aircraft to Vietnam. None of these acquisitions was listed by Vietnam in its annual reports to UNROCA (see Table 6 below).

*Air Defence procurement.* According to Edward O'Dowd, '[t]he Vietnamese air defenses, particularly around the Red River Delta, were, in the 1970s, among the best in the world' (O'Dowd 2007:68). Vietnam's air defence system began to degrade after the collapse of the Soviet Union in 1991 and in the following years became outdated. It appears that Vietnam only began to address this problem a decade later.

Annual reports to the UN's Register of Conventional Arms provide little detailed information (see Table 6). For example, the Russian Federation's reports for 2000 and 2004 merely state that it sold '8 missiles and missile launchers' and '20 missiles and missile launchers' to Vietnam, respectively. The type of missile is unspecified and could refer either to air-to-air missiles or surface-to-air missiles.

In May 2002, Vietnam and the Ukraine signed an agreement on military-technical cooperation up to 2005. Under the terms of this agreement the Ukraine agreed to provide assistance to Vietnam to upgrade its air defence, including radar, communications and surface-to-air missiles. But the Ukraine did not report any missile sales to Vietnam in its annual reports to UNROCA for this period. In 2008 Vietnam reportedly acquired four Kolchuga passive sensor systems from the Ukraine capable of identifying and tracking land, sea and air threats.<sup>10</sup>

In August 2003, Russia agreed to supply Vietnam with two batteries of S-300PMU1 surface-to-air missile systems in a contract valued at U.S. \$200 million. In 2005, Vietnam reported to UNROCA that it had imported twelve

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<sup>9</sup>In 1980, Vietnam acquired the first of twenty-four Aero Vodochody L-39C jet trainers from Czechoslovakia. But due to attrition over the years this number declined to eighteen by 2007. In mid-2008 Vietnam acquired four second-hand L-39s from the Czech Republic and ten new Yak-52 basic trainers from Rumania to replace inventory in its aging air training division.

<sup>10</sup>The Kolchuga is classified as an electronic support measure. It can simultaneously triangulate the position of up to thirty-two targets on land, sea and air. It has an extended range and is less vulnerable to attack due to its passive operation. Each unit costs U.S. \$27 million. See: Robert Karniol, 'Slow advance for Viet army revamp', *The Straits Times*, February 9, 2009.

missile launchers and sixty-two S-300 missiles but did not specify the seller. The Russian Federation's report to UNROCA for that year failed to list this sale. But defence industry sources confirmed that one S-300PMU1 battery of twelve missile launchers and sixty-two missiles was delivered in August 2005. The S-300 is regarded as one of the world's most effective all-altitude regional air defence systems.

Table 6 Reports to United Nations Register of Conventional Arms,  
1992-2006\*

<b>Year</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
Exports Reported to Vietnam	nil	nil	nil	6 combat aircraft <sup>1</sup>  14 R-27R1 (470-1) missiles and missile launchers <sup>2</sup>	6 Mig-21 UM trainers <sup>2</sup>	2 combat aircraft <sup>1</sup>
Imports Reported by Vietnam	No report submitted	No report submitted	nil	1 Su-27 UBK and 5 Su-27 SK combat aircraft <sup>5</sup>	nil	2 Su-27 combat aircraft <sup>5</sup>
<b>Year</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Exports Reported to Vietnam	nil	nil	8 missiles and missile launchers <sup>1</sup>	nil	4 L-39 combat aircraft <sup>2</sup>	6 L-39 combat aircraft <sup>2</sup>
Imports Reported by Vietnam	nil	nil	nil	nil	nil	nil

Table 6 continued

Year	2004	2005	2006	2007 <sup>6</sup>	2008 <sup>7</sup>	2009 <sup>7</sup>
Exports Reported to Vietnam	4 combat aircraft, and 20 missiles and missile launchers <sup>1</sup>	3 Su-22 combat aircraft <sup>2</sup>  5 Su-22 UM3 combat aircraft <sup>3</sup>	5 Su-22 combat aircraft <sup>2</sup>  2 Light Armoured Vehicles <sup>4</sup>			
Imports Reported by Vietnam	4 combat aircraft, and 20 missiles and missile launchers <sup>8</sup>	12 missile launchers and 62 S-300 missiles <sup>5</sup>	nil			

\*The UN Register of Conventional Arms (1992-2006) records data provided by countries that export and import weapons in seven general categories: battle tanks, armoured combat vehicles, large caliber artillery systems, combat aircraft, attack helicopters and missiles and missile launchers (see: <http://disarmament.un.org/cab/register.html>). States are not required to provide specific details of weapons systems.

The above table was constructed from data in the annual reports filed by Belarus, Bulgaria, Czech Republic, Finland, Hungary, India, Israel, Republic of Korea, Poland, Singapore, Serbia (2006 only), Serbia and Montenegro (2002-04), Slovakia, the Ukraine, and Vietnam for the period 1992-2006.

Notes:

<sup>1</sup>Report by the Russian Federation.

<sup>2</sup>Report by the Ukraine. The R-27R1 (AA-10A Alamo-A) is a Soviet-era air-to-air missile.

<sup>3</sup>Report by the Czech Republic.

<sup>4</sup>Report by Israel.

<sup>5</sup>Imported from the Russian Federation.

<sup>6</sup>These reports have not yet been made publicly available.

<sup>7</sup>Reports not yet filed.

<sup>8</sup>Vietnam's Report did not identify the exporting country.

*Navy procurement.* Vietnam is clearly seeking to improve its capacity to monitor its territorial waters and Exclusive Economic Zone, project naval power into the South China Sea and develop anti-submarine warfare (ASW) capabilities. Vietnam's navy currently has plans to construct up to twenty 'blue water' naval vessels and modernize its Hong Ha and Ba Son shipyards. Vietnam is also carrying out a naval modernization program to replace 'older and dilapidated' boats and ships through purchase or domestic production by 2010. This program is aimed at providing 'strategic boats and ships for the

army' under a plan approved by the Government and Ministry of National Defence.<sup>11</sup>

Vietnam seeks to protect its key offshore oil and gas claims, counter the power projection capabilities of regional states and meet the potential threat posed by the growing number of conventional submarines operated by China and other regional states. Vietnam's limited naval procurements appeared aimed at developing modest anti-shipping, anti-submarine warfare and mine counter-measure capabilities.

Between 1996-1999, Vietnam received four modified Tarantul 2-type corvettes from Russia. The ships were armed with twin launchers for the SS-N-2D Styx anti-ship missile, Igla surface-to-air missiles (SAMs), and additional guns.

In 1997, Vietnam acquired two Yugo-class midget submarines from North Korea which it subsequently refitted.<sup>12</sup> Under the terms of the March 2000 DCA between India and Vietnam, the Indian Navy agreed to provide training to Vietnamese naval personnel including submariners. In October 2002, Vietnam officially asked India to provide submarine training. It remains unclear whether this involves a new programme or is linked to the acquisition of the Yugo class submarines. Whichever is the case, the acquisition of Yugo-class subs may represent the first phase in implementing Vietnam's long-standing interest in developing an undersea-warfare capability.<sup>13</sup>

As recently as 2008, Vietnam was reportedly in the market for second-hand submarines from Serbia.<sup>14</sup> This opportunity arose when Serbia and Montenegro split in 2006, leaving Serbia without a coastline. Vietnam explored the possibility of acquiring three full-sized submarines and three midgets, all non-operational. Apparently Serbia off loaded its fleet to Egypt.

Under the terms of the March 2000 Defence Cooperation Agreement, the Indian Navy also agreed to repair, upgrade and build fast patrol craft for the Vietnamese navy. In June 2005, the Indian Navy transported 150 tons of spares to Vietnam for its Petya frigates and Osa-II fast attack missile craft. In December 2007, during the visit to Hanoi by India's Defence Minister, A. K. Anthony, India agreed to supply Vietnam with five thousand essential spares for its Petya-class anti-submarine ships in order to make them operational.

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<sup>11</sup>'New boats equipped for transport units', *Quan Doi Nhan Dan*, February 18, 2009, internet edition.

<sup>12</sup>Some sources report that the mini-sub's are Sang-O class.

<sup>13</sup>Vietnam had previously expressed an interest in obtaining two or three Kilo-class conventional submarines from the Soviet Union before its collapse.

<sup>14</sup>Robert Karniol, 'Slow advance for Viet army revamp', *The Straits Times*, February 9, 2009.

Defence Minister Anthony was accompanied by a delegation that included senior navy officers.

As noted above, in May 2002, Vietnam and the Ukraine reached agreement on military-technical cooperation up to 2005. Under the terms of this agreement the Ukraine provided assistance to Vietnam to upgrade and modernise its naval force under plans drawn up by Ukrainian defence specialists. These plans called for substantial Ukrainian involvement across a number of areas including the renovation of the Ba Son dockyard in Ho Chi Minh City; developing naval test facilities; arms co-production; and repairing, upgrading and supply of all types of unspecified equipment and weapons.

In March 2004, Vietnam signed an agreement for two Tarantul V (Project 1241.8) corvettes armed with SS-N-25 (Kh 35 Uran) missiles.<sup>15</sup> They were delivered in late 2007. In 2005, Vietnam expressed interest in acquiring a package of four Gornik-class (Tarantul 1) Polish corvettes, two of which had recently been decommissioned. But Polish plans to pay off the other two corvettes at a later date proved to be a sticking point in further negotiations. Vietnam then reached agreement in December 2006 with Rosoboronexport (Russian Defence Exports) for the purchase of two Gepard-class (Project 11661) guided missile frigates. This deal was estimated at U.S. \$300 million. The construction of both frigates commenced in 2007 with delivery expected in March 2010 for the first frigate and 2011 for the second.

In early 2008 Vietnam and Russia signed a contract for the delivery of several ship-building kits and related weapons systems for domestic assembly in Vietnam's Hong Ha shipyard. Reportedly the kits contain a mix of vessels for the navy and coast guard. The contract was valued at U.S. \$670 million. Robert Karniol reports that the 2008 deal with Russia may have followed the earlier cancellation of Vietnam's contract with the Ukraine (mentioned above), due to differences over performance.<sup>16</sup> The Ukraine contract provided for twenty 400-tonne patrol vessels but only six were built.

#### *Strategic Forces.*

Sometime, presumably in the 1980s, Vietnam took possession of a small quantity of Russian-manufactured SS-1 Scud B surface-to-surface missiles (with a range of 300 km range with a payload of 985 kg payload). Vietnam's drive to modernize its military forces and develop a credible deterrent to the PLA led it into a series of agreements with North Korea. In May 1994, a Vietnamese military delegation visited Pyongyang for preliminary

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<sup>15</sup>The modified Tarantul V is sometimes referred to as Molnya; in Vietnam it is called Ho-A Class.

<sup>16</sup>Robert Karniol, 'Slow advance for Viet army revamp', *The Straits Times*, February 9, 2008.

discussions on the possibility of North Korean arms sales to Vietnam. The following month, Defense Minister Doan Khue led a high-ranking military delegation to Pyongyang for an official visit at the invitation of Marshal O Chin-u, Minister of the DPRK's Peoples Armed Forces. In November 1994, Vice Marshal Choe Kwang, a member of the Politburo of the Korean Workers' Party and Acting Minister of Armed Forces and Chief of Staff of the Korean People's Army, led a military delegation on a return visit as guest of Defence Minister, Gen. Doan Khue.<sup>17</sup> Immediately after the visit a diplomatic source in Beijing disclosed that Vietnam and North Korea had 'struck a deal on barter trade under which North Korea supplies Vietnam with weapons parts and ammunition while the latter ships rice to North Korea.'<sup>18</sup>

In December 1996, Vietnam's Deputy Minister of Defense, General Nguyen Thoi Bung, visited North Korea and signed a defense deal worth U.S. \$100 million. Payment was in barter terms for Vietnamese rice. The sale of short-range Scud ballistic missiles was reportedly discussed at this time. In April 1999 it was reported that Vietnam had acquired a quantity of North Korean Scud C surface-to-surface missiles (SSMs). The Scud C can carry a payload of 770 kg 550 km. In February 2009 it was reported that Hanoi and Pyongyang were currently discussing North Korean assistance in upgrading Vietnam's stock of Scud SSMs'.<sup>19</sup>

*Other procurements.* Given Vietnam's long extended coastline its security forces have a requirement for maritime surveillance and search and rescue capabilities. In December 2002, Russia's Almaz Central Marine Design Bureau delivered two Type 14310 Svetlyak-class inshore patrol boats for use by the Coast Guard. In 2006, Vietnam ordered another four Svetlyak-class patrol craft.

In October 2003, Vietnam's Ministry of National Defence and Profus Management, a Polish foreign trade company, signed a contract for the purchase of two new Polskie Zaklady Lotnicze (PZL) M28 Skytruck short take off and landing aircraft. Two Skytrucks were delivered in January 2005 and were configured for transport and passengers with provision for medical evacuation equipment. Vietnam also considered acquiring eight more Przemyslowy Instytut Telekomunik-aji (PIT) MSC-400 maritime surveillance systems with PIT ASR-400 radars and PIT CCS-400 on board command and

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<sup>17</sup>Vietnam News Agency, Hanoi, November 18 and 19, 1994. The DPRK military attache, Senior Lt. Col. Song Yon-sop was present.

<sup>18</sup>Jiji Press, Beijing, *Mainichi Shimbun* [Tokyo] (morning edition), November 26, 1994, p. 7 and Yonhap News Agency, Seoul, 26 November 1994.

<sup>19</sup>Robert Karniol, 'Slow advance for Viet army revamp', *The Straits Times*, February 9, 2008.

control modules, and entered into discussions with Profus Management on the terms for purchasing data links and ground control stations.

Vietnam dropped plans to purchase ten additional M28 Skytrucks configured to perform maritime surveillance and border control missions after the crash of one its PZL M28s. Vietnam turned to Swedish Space Corporation in mid-2008 and signed a deal to acquire three Spanish EADS-CASA C212 Series 400 maritime control aircraft equipped with MSS 6000 side looking radar. The cost was estimated at € 30 million.

In February 2005, it was reported that Vietnam had purchased four PZL Swidnik W-3RM Anakonda maritime search and rescue helicopters due for delivery in late 2007. The Anakonda will be equipped with Wescam forward looking infra red turrets. Vietnam is also negotiating for the purchase of four additional PZL helicopters configured for VIP transport.

## 6. Development and Modernisation

Vietnam does not have a modern national defence industry and its capacity is generally limited to small arms production.<sup>20</sup> Vietnam has sought assistance from abroad. For example, Vietnam has long-standing arrangements with the Czech Republic to manufacture Grad multiple tube-launched rockets. The March 2000 India-Vietnam Defence Cooperation Agreement includes a provision for Indian assistance to Vietnam in setting up defence industry to manufacture small and medium weapons and other ordnance products. In May 2002, Vietnam and the Ukraine reached agreement on a significant program of military-technical cooperation up to 2005, including assistance from the Ukraine in developing naval test facilities and arms co-production. Vietnam reportedly also entered into arrangements with Belgium and China for the domestic production of small arms and ammunition. More significantly, Vietnam has entered into co-production arrangements with Russia to assemble KBO 2000 corvettes and BPS-500 missile patrol boats.

Vietnam has a very modest but developing capacity in commercial ship construction. In October 2006, the Dung Quat Shipbuilding Industry Company signed a contract with the American Bureau of Shipping to build three oil tankers in Vietnam. The first tanker is to have a capacity of 104,000 deadweight tonnes and is expected to be completed by mid-2008. The following month, Vietnam announced the launch of the largest made-in-Vietnam rescue boat at the Danang military port. The boat was built by Plant Z124, Song Thu Company, Defence Industry General Department, in eighteen

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<sup>20</sup>In 2001 arms dealers acting as middlemen arranged the sale of Vietnamese-produced 60mm and 80mm smoothbore mortar bombs to Myanmar. A high proportion of the 82mm mortar bombs were defective.

months utilising technology transferred by the Damen Corporation in the Netherlands.<sup>21</sup>

Vietnam's national defence industry, however, is capable of assembling navy patrol boats from kits, production of light aircraft, shipyard repairs, depot-level reverse engineering of aircraft spares and minor overhauling of its M113 Armoured Personnel Carriers (APCs). Vietnam has assembled two BPS 500 (Project 12418) missile corvettes from a kit provided by a Russian supplier. Between June 2003 and September 2005, Vietnam manufactured three A-41 (VNS-11) three-seat amphibious aircraft for use in search and rescue and forestry patrols.<sup>22</sup> However, more ambitious plans to build a Russian-designed Project 2100 corvette have been abandoned because the task is currently beyond local technical capabilities. Likewise, a proposal discussed in 2003 to establish a regional Sukhoi maintenance centre in Vietnam appears still born.

In 2005-2008, high-level Vietnamese delegations discussed potential national defence industry cooperation with industry representatives in Australia, Belarus<sup>23</sup>, Brunei, Bulgaria<sup>24</sup>, China<sup>25</sup>, Hungary, India<sup>26</sup>, Indonesia, Italy<sup>27</sup>,

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<sup>21</sup>Robert Karniol, 'Vietnam's defence industry stutters along', *The Straits Times*, July 14, 2008 reports that Vietnam plans to build two 2,500-tonne search and rescue ships.

<sup>22</sup>One of the planes was observed painted with military markings.

<sup>23</sup>The VPA Chief of General Staff, General Nguyen Khac Vien, visited Belarus from 21-23 June 2007 where he held discussions with Minister of Defence, Colonel General Leonid Maltsev, and the First Deputy Defence Minister, Lt. Gen. Sergei Gurulev. In January 2008, the First Vice President of the Belarus State Defence Industry Committee visited Hanoi for talks with Defence Minister General Phung Quang Thanh.

<sup>24</sup>In October 2007, the Bulgarian Defence Minister visited Vietnam to discuss, *inter alia*, cooperation in military technology. In November 2008, the Bulgarian Chief of the General Staff visited Hanoi and discussed continued cooperation in military logistics with his Vietnamese counterpart.

<sup>25</sup>In January 2008, Vietnam's Deputy Minister of Defence Nguyen Huy Hieu, went to China and held discussions with members of the Defence Ministry's Committee of Science, Technology and Industry.

<sup>26</sup>In December 2007, India's Defence Minister, A. K. Anthony, visited Hanoi. The two sides agreed to set up a Joint Working Group to facilitate the signing of a Memorandum of Understanding on defence cooperation. Defence Minister Anthony and his delegation also visited defence industries in Ho Chi Minh City. In February 2008, Admiral Sureesh Mehta, Chief of the Navy Staff Committee, visited Hanoi where he met with Deputy Defence Minister Senior Lt. Gen. Nguyen Khac Vien, and inspected the Hong Ha Shipbuilding Company. That same month, Lt. Gen. Truong Quang Khanh, head of the General Department of Defence Industry, attended DEFEXPO-2008 in New Delhi.

<sup>27</sup>In December 2007, Lt. Gen. Gianni Botondi, Italy's Secretary General for Defence and National Armaments, made an official visit to Vietnam to discuss the structure of national

the Republic of Korea<sup>28</sup>, Malaysia,<sup>29</sup> Russian Federation<sup>30</sup>, South Africa<sup>31</sup>, Switzerland<sup>32</sup> and Thailand<sup>33</sup>. In November 2005, Vietnam and Brunei signed a MOU on defence cooperation that made provision for the exchange of military science and technology. Malaysia and Vietnam signed a defence MOU in August 2008 that included provisions for national defence industry collaboration. In September 2008, Defence Minister Phung Quang Thanh paid an official visit to Russia that featured discussions with the Federal Service for Military-Technical Cooperation, Rosoboronexport, and defence enterprises in Moscow (MIG aircraft manufacturer) and St. Petersburg (Rubin Central Design Bureau for Marine Engineering and Admiralty Shipyards).

Vietnam has an extremely modest research and development capability. But as Vietnam's 2004 Defence White Paper makes clear, Vietnam is taking steps to rectify this situation. According to the White Paper, 'various programmes of research and development, and application of military technology, together with the establishment of the Vietnamese defence industry are meeting more and more satisfactorily the demands of the armed forces for repairing, improving, and producing weapons and technical equipment'.

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defence industry. Italy and Vietnam agreed to set up a working group to promote bilateral cooperation.

<sup>28</sup>In January 2008, Vietnam's naval commander, Vice Admiral Nguyen Van Hien, made a rare five-day overseas visit to Seoul to discuss expanding ties between the two navies. Admiral Hien met and had discussions with the South Korean Chief of Naval Operations, Admiral Song Young-moo. The two admirals discussed the enhancement of cooperation in the defence industry sector.

<sup>29</sup>Zulkifli Abd Rahman, 'Malaysia to hold talks with Vietnam on defence', *The Star*, August 14, 2008 and Bernama, 'Malaysia, Vietnam Sign Military Cooperation', August 14, 2008. Cooperation by national defence industries includes evaluation of equipment.

<sup>30</sup>Vietnam and Russia have long cooperated in this area. In December 2007, Russia and Vietnam convened the annual meeting of the Inter-government Committee for Military Technical Cooperation. The Russian delegation was led by the director of its Federal Service for Military and Technical Cooperation.

<sup>31</sup>South Africa and Vietnam exchanged visits by their respective defence ministers in 2005 and 2006. During the latter visit an MOU on defence cooperation was signed.

<sup>32</sup>In May 2008, Deputy Minister of Defence, Senior Lt. Gen. Nguyen Huy Hieu, paid a working visit to Switzerland for discussions with the Chief of the Federal Department of Defence, Civil Protection and Sports on boosting defence cooperation. General Hieu also visited several Swiss enterprises that have the technological expertise to mitigate the effects of Agent Orange.

<sup>33</sup>In February 2009, the Thai and Vietnamese Chiefs of Defence Force agreed to continue cooperation in 'logistical experience exchanges within the framework of "Vietnam-Thailand cooperation in the 21<sup>st</sup> century" and the framework of defence cooperation between ASEAN member countries.

The White Paper continues, 'The Vietnamese defence industry, a component of national industry, is being developed in the direction of mainly self-reliance but at the same time, various forms of associate and co-operative relations with friendly countries are being broadened so as to acquire advanced technologies with a view to bringing the Vietnamese defence industry to a higher level of development'.

Significantly, the VPA's Technology General Department is undertaking efforts to improve its capacities 'in the research, development and application of new technologies, especially the information technology in the training and education of technical cadre with a view to meeting the demands of conducting a people's war to safeguard the homeland in hi-tech conditions'.

Vietnam has sought offset agreements involving technology transfers in several of its arms procurement deals. In February 2002, the Russian defence enterprise LOMO announced that it was negotiating a contract with Vietnam to assist in the transfer of technology so Vietnam could produce the Igla low altitude surface-to-air missile (SA-18 Grouse). In September 2005, Ministry of National Defence officials held discussions in Hanoi with Israel Military Industries for the transfer of cargo shell technology to Vietnam for the local manufacture of artillery and mortar shell casings containing smaller bomblets. Russia and Vietnam have an agreement that licenses the production of missile launchers. In November 2006, it was reported that Russia and Vietnam were drawing up an agreement on technical assistance in the production of Yakhont ship-to-ship missiles.

The Military Institute of Technology carries out science and technology projects at the direction of the Ministry of National Defence. In 2005-2006, the Institute completed 50 research and development projects, five of which had national-level status. The Institute consists of 36 laboratories, workshops and classrooms. The VPA also conducts research to support the country's socio-economic development. Military Depot K882, Department of Military Materials, Technology General Department, for example, focuses its research on increasing agricultural production through improving poor soils and animal husbandry.

In recent years, Vietnam has advanced its defence cooperation relations with foreign countries by conducting joint research programs in the area of military medicine. In 1987, Vietnam and the Soviet Union signed an inter-governmental agreement setting up the Vietnam-Russia Joint Tropical Centre. The Ministry of National Defence represents Vietnam on the joint coordination committee. The Tropical Centre conducts practical research on ecological security, 'healing the wounds of war', and trains scientific personnel.

Vietnam has also reached agreements on cooperation in military medicine with Australia (2000), Belgium (2003), Germany (2004) and New Zealand (2008). In March 2000, for example, Vietnam and Australia signed a Memorandum of Understanding to undertake a collaborative program in anti-malarial research. Officers from the Australian Army Malaria Institute conducted fieldwork and exchange programs with their counterparts at the Army Medical Institute in Hanoi. The MOU has been extended to cover research up to 2010. In August 2008, New Zealand and Vietnam agreed to 'boost cooperation in... military medicine'.

Vietnam has also expanded international defence cooperation to include environmental issues, mitigation of natural disasters and search and rescue. Vietnam's MOU with Belgium (November 2003), for example, includes provision for cooperation in military science research and environmental protection. Agreement was reached between the chiefs of defence forces of New Zealand and Vietnam in August 2008 'boost cooperation in... rescue operations and flight safety'. Two months later Singapore's Chief of Army held discussions in Hanoi with the VPA Deputy Chief of General Staff on 'sharing experiences on coping with natural disasters and epidemic prevention'. In February 2009, the chiefs of the Thai and Vietnamese defence forces agreed to continue cooperation in search and rescue and joint marine patrols.

## 7. Future Plans

This section highlights future developments in five major areas: divestiture of military-owned commercial enterprises; enhanced military professionalism; international defence cooperation; arms procurements and technology transfers; and peacekeeping.

*Divestiture of commercial enterprises.* In January 2007, the Central Committee of the Vietnam Communist Party adopted a resolution at its fourth plenum directing the army, police and regime-sponsored mass organisations to divest themselves of all commercial enterprises that they currently owned and operated. The divestiture program was scheduled to conclude in 2012.<sup>34</sup>

The VPA presently runs 140 enterprises and hold shares in another twenty companies. The army's commercial enterprises are engaged in an incredibly diverse range of money-making activities from coffee production, coal mining, garment manufacture, stock broking, telecommunications to health services (Thayer 2000b and 2003b). In 2006, military-run firms earned U.S. \$2

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<sup>34</sup>'Decree on reorganization of defence businesses', *Quan Doi Nhan Dan*, December 19, 2007; Xinhua dispatch from Hanoi, December 19, 2007; Tuyet Nhung, 'Vietnam's army to hand over business enterprises', *Thanh Nien News*, December 20, 2007; and 'Military enterprises await restructuring', *Viet Nam News* reproduced in VietNamNet Bridge, April 4, 2008.

billion in revenue, or approximately three percent of Vietnam's GDP. Divestiture of these enterprises is an extremely sensitive issue because the VPA is slated to lose an important source of income.

In 2008, the global economic crisis 'had a great impact on army businesses' a conference to review the activities of army enterprises was held. Nevertheless the army-run Viettel Corporation and the Vietnam Service Flight Company both reported profits.<sup>35</sup> The VPA's Defence Industry General Department also reported that despite facing 'numerous economic difficulties and negative impacts during the year' it had 'surpassed all of 2008's set plans'.<sup>36</sup> According to a report in the army's newspaper 'factories and plants under the General Department, in 2008, proactively sought out orders and contracts, extending both domestic and international markets in order to maintain a stable production schedule and pay raises for its workers'.<sup>37</sup>

*Military professionalism.* Military service is viewed by the Vietnam's conservative leadership as a rite of passage. However, the absence of a credible external threat, membership in ASEAN, the demands of the economy, and a young population that has little connection and probably less interest in the country's revolutionary past, has challenged the rationale of the citizen-soldier. Many young men seek to avoid conscription through prolonging higher education and other strategies often only available to the elite and professional classes, leaving military service to the rural and urban poor and those without skills or influence.

In December 1999, Vietnam adopted the Law on Military Officers which took effect on April 1, 2000. The new law sets educational requirements for entry into the officer corps, and age and time in rank requirements for promotion. After April 2000, all VPA officers must hold a university degree or its equivalent. Regimental and divisional officers are required to earn postgraduate degrees in specialised fields. In sum, the 1999 Law on Military Officers sets out a clear career path for promotion within each service. Officers who fail to meet the selection criteria for promotion to the next rank within the designated time period will be retired. The new law also sets a limit of 150 general officers, previously there was no official retirement age for general officers. In March 2009, the National Assembly discussed a draft Law on Militiamen and Self-Defence Forces that covered their roles, functions and

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<sup>35</sup>'Army businesses grew in 2008 despite economic difficulties', *Quan Doi Nhan Dan*, February 19, 2009, internet edition.

<sup>36</sup>'GGDI heading for higher objectives despite difficulties', *Quan Doi Nhan Dan*, February 11, 2009, internet edition.

<sup>37</sup>'GGDI heading for higher objectives despite difficulties', *Quan Doi Nhan Dan*, February 11, 2009, internet edition.

tasks in peacetime. The law included a draft provision that militia and self-defence forces be compulsory in any enterprise that employed fifty or more workers.<sup>38</sup>

Vietnam has also become more amenable to dispatching its officers abroad for professional military education and training both to traditional allies and new partners. In February 1999, defence relations between Australia and Vietnam were formalised by the exchange of defence attaches. Since then Australia has provided Vietnam with an expanded range of education and training opportunities under its Defence Cooperation Program (DCP). The DCP includes funding for long-term professional development courses at the Australian Defence College, twelve defence scholarships for higher studies in Australia, short courses at other defence institutions, Mobile Training Team visits to Vietnam, and individual training in Australia such as the annual Defence Management Seminar.

In April 2005, Australia's Defence Minister, Robert Hill, visited Vietnam and pledged to fund expanded training for Vietnamese military officers and national defence students. In the first seven years of the DCP over 200 Vietnamese defence officials studied in Australia. In March 2007, during the course of a visit to Canberra by Deputy Minister of National Defence Lt. Gen. Nguyen Huy Hieu, Australia and Vietnam agreed to intensify bilateral military cooperation.

Vietnam has entered into other officer training schemes particularly with countries that were once part of the former Soviet Union. In May 2002, the Ukraine and Vietnam agreed to conduct mid-level officer exchanges. In July 2008 Vietnam and Belarus signed a Memorandum of Understanding that included training cooperation between the two armies. Later that year Vietnam's defence minister visited the Military Academy in Minsk. In September 2008, the Defence Minister of the Russian Federation announced an increase in scholarships to train Vietnamese military personnel in its military and civilian academies, training schools and defence institutions such as the Defence Ministry's repair plants.

Vietnam has also developed cooperation in military education and training with new partners. In 2005, Austria agreed to fund the development of vocational schools linked to Vietnam's Ministry of National Defence. This program was extended in 2009. The cost of Austrian assistance was valued at €15 million. In August 2008, Malaysia and Vietnam included a provision for joint military training in their defence cooperation MOU. Malaysia has already trained 70 VPA officers. The MOU provides for Malaysia to open various courses to military personnel from Vietnam, specifically naval

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<sup>38</sup>'Lawmakers debate laws on self-defence forces', VietNamNet Bridge, March 25, 2009.

officers. Vietnam and Indonesia agreed to boost cooperation in personnel training as a result of discussion held in August 2008. Singapore and Vietnam signed a MOU on defence cooperation in October 2008 that included a provision for training.

China and Vietnam have moved gradually to cooperate in personnel training. The issue was raised in April 2006 during a visit to Hanoi by China's Defence Minister. In August 2006, Vietnam's Minister of National Defence called for an intensification of 'their efforts in nurturing and training each others' high level military personnel', in a meeting with China's new Defence Attache. In October 2006, a high-level delegation from the VPA's Political General Department visited Beijing to further discussions on personnel training in military schools, including China's National Defence University. In November 2008, the heads of their respective General Political Departments agreed to 'boost training cooperation'. Cooperation in personnel training featured prominently in discussions between the VPA and PLA Chiefs of the General Staff who exchanged visits in December 2008 and March 2009 respectively.

Under the terms of Australia's Defence Cooperation Program with Vietnam, Australia provides funding for the 'train the trainer' program for Vietnamese English language military instructors, Assistance in English language instruction is also provided by the New Zealand Defence Force. In October 2007, the Bulgarian Defence Minister visited Vietnam and discussed, *inter alia*, military cooperation in language training with his counterpart.

In November 2007, India and Vietnam agreed to step up cooperation in training of junior level officers. The following month, during the course of a visit to Hanoi by India's Defence Minister, his Vietnamese counterpart sought Indian assistance in training of defence personnel<sup>39</sup> and expansion of training cooperation. A Vietnamese officer attended the three-month 5<sup>th</sup> Executive Development Course hosted by Brunei's Ministry of Defence in the second quarter of 2008.<sup>40</sup>

Vietnam has long-standing cooperation arrangements with Laos and Cambodia to provide military education and training. In February 2009, it was revealed that more than 4,000 Royal Cambodian Armed Forces (RCAF) personnel had received training in Vietnam. A protocol on defence cooperation signed at this time made provision for advanced training for up to 500 RCAF officers in Vietnam annually. Also that same month, the Lao and Vietnamese defence ministers signed a protocol on cooperation between their defence ministries under which Vietnam agreed 'to extend further assistance

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<sup>39</sup>At the time of Anthony's visit, 49 VPA officers had attended various army and navy courses in India and a further 64 attended English language instruction.

<sup>40</sup>James Kon, 'Regional allies fortify military ties', *Borneo Bulletin*, June 7, 2008.

in training to Lao army officers and construct a number of infrastructure facilities and welfare projects in Laos’.

Not only has Vietnam increased the numbers of officers going abroad for professional military education and training, but in 2008 Vietnam inaugurated its own three-month International Officers Course for foreign military officers at the National Defence Academy.<sup>41</sup>

*International Defence Cooperation.* The international diplomatic role of the Vietnamese armed forces has greatly altered since the end of the Cold War. Vietnam has expanded its defence relations beyond the former Soviet Union, Warsaw bloc and traditional allies China, North Korea, Laos, Cuba, India and Yugoslavia, to nearly forty countries spanning the Asia-Pacific, Australasia, Europe, North America, the Middle East, South America and Africa.<sup>42</sup> Vietnam regularly engages in defence security/policy dialogues with Australia, China, India, Japan, and, most recently, Singapore and the United States.<sup>43</sup>

Vietnam is likely to intensify trends in defence cooperation already evident by moving beyond the exchange of high-level delegations to more practical cooperation. For example, in 2007, in a major development, India and Vietnam declared the establishment of a ‘strategic partnership’ during the visit by Prime Minister Nguyen Tan Dung. In November 2007, India and Vietnam held their third security dialogue in New Delhi where it was decided to conduct a security dialogue annually, to share expertise on issues of common concern such as maritime security, border management and counter insurgency, training in UN peacekeeping operations, and to invite Vietnamese observers to attend Indian military exercises. India and Vietnam held their fourth security dialogue in October 2008.

In December 2007, during the course of a visit to Hanoi by India’s Defence Minister, his Vietnamese counterpart sought Indian assistance, *inter alia*, in enhancing the exchanges of delegations, an increase in the frequency of goodwill visits by naval ships, application of information technology and e-technology, and technical support for the Vietnamese navy.

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<sup>41</sup>Roger Mitton, ‘Vietnam’s Secretive Military Opens Up: Defence Academy to Hold Training for Outsiders on Viet Operations’, *The Straits Times*, December 18, 2007 and ‘Training course for foreign military officers concludes’, Vietnam News Agency Bulletin, June 3, 2008.

<sup>42</sup>In Africa Vietnam has exchanged high-level military delegations with Algeria, Angola, Rwanda, South Africa and Sudan.

<sup>43</sup>The first strategic dialogue was held in October 2008 and addressed political, security, defence and humanitarian cooperation issues. Both sides were led by civilian officials, Deputy Foreign Minister Pham Binh Minh represented Vietnam while the United States was represented by Assistant Secretary of State for Political-Military Affairs, Mark Kimmitt.

In March 2008, Singapore's Air Force Chief, Maj. Gen. Ng Chee Khern, visited Hanoi to discuss on-going cooperation in search and rescue missions, human resource development and language training. The following month, the Chief of Singapore's Defence Force, Desmond Kuek, visited Hanoi where he held discussions with the VPA Chief of the General Staff, Lt. Gen. Nguyen Khac Nghien. Agreement was reached to focus defence cooperation on training, medical corps and humanitarian aid. On a more modest level, Vietnam and Poland agreed in November 2008 too cooperate 'in research into the history of conflicts and museum operations'.

In October 2008, Vietnam and China issued a joint declaration establishing a 'comprehensive strategic partnership'. Defence cooperation was taken to a higher level with the exchange visits of Nguyen Khac Vien, Deputy Minister of National Defence and VPA Chief of Staff (December 2008) and Chen Bingde, member of China's Central Military Commission and PLA Chief of the General Staff (March 2009). In the course of these visits the two sides agreed to step up 'cooperation in the research and transfer of military technologies, the training of staff, organizing search and rescue missions, disarming [land] mines and conducting joint sea patrols'.

In 2008-09 Vietnam began to explore military cooperation to mitigate the effects of natural disasters. This topic was raised in discussions between the VPA and PLA Chiefs of the General Staff. It was also raised in talks between Vietnam and Cuba in the course of a high-level visit by a military delegation led by Vietnam's Deputy Minister of National Defence and the head of Cuba's Civil Defence. Cuba offered to assist Vietnam 'in building the civil defence force and training rescue and natural disaster prevention work'.

In a new development, in August 2008, Vietnam sent a delegation from its Central Military Court to South Africa for discussions on the role of military courts.

In addition to China, Vietnam also conducts joint naval patrols with Thailand, and Cambodia and is planning joint patrols with Indonesia and Malaysia.<sup>44</sup> In July 2008, the Vietnamese navy participated in its first ever exchange four with a foreign navy when its ships visited Thailand's Sattahiip military port.<sup>45</sup> A month later Vietnam announced that it would dispatch two naval ships for a goodwill visit to Malaysia. Discussions are also underway to set up a hot line to facilitate naval cooperation especially to deal with illegal fishing.

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<sup>44</sup>Malaysia and Vietnam plan coordinated patrols in areas where Vietnamese fishermen have been fishing illegally in Malaysian waters.

<sup>45</sup>Vietnam News Agency, 'Vietnamese, Thai navies hold joint patrol', VietNamNet Bridge, July 5, 2008.

It is possible that Vietnam's navy will participate in joint exercises with foreign navies in the near future.<sup>46</sup> Vice Admiral Doug Crowder, the Commander of the U.S. Navy's 7<sup>th</sup> Fleet, proposed joint exercises during the course of his visit to Vietnam in June 2008. The Admiral also noted that Vietnam sent five officers to Singapore at the invitation of the United States to observe bilateral naval exercises.<sup>47</sup> Senior U.S. officials routinely describe bilateral relations as encompassing 'an emerging military-to-military relationship'.<sup>48</sup>

Vietnam has also extended its international defence diplomacy to include multilateral activities under the auspices of the ASEAN Regional Forum and ASEAN itself. In May 2005, for example, Vietnam's Deputy Defence Minister, Lieut. General Phan Trung Kien, attended the 2<sup>nd</sup> ARF Security Policy Conference held in Vientiane. In October that same year, Vietnam hosted the 9<sup>th</sup> meeting of the ARF Heads of Defence Universities, Colleges and Institutes. Vietnam attended the first ASEAN Defence Ministers Meeting (ADMM-1) in May 2006 and has attended all subsequent meetings.<sup>49</sup> Vietnam also hosted the 16<sup>th</sup> ASEAN Armies Rifle Meet and 7<sup>th</sup> ASEAN Chiefs of Armies Multilateral Meeting (ACAMM-7), in November and December respectively. Vietnam now regularly participates in the ACAMM process.<sup>50</sup> In July-August 2008, Vietnam attended the 6<sup>th</sup> ASEAN Chiefs of Defence Informal Meeting in Bangkok.

Vietnam has also participated in other multilateral defence activities such as the annual Thai-U.S. Cobra Gold Exercises in Thailand and the 1<sup>st</sup> Asia Pacific Intelligence Chiefs Conference co-hosted by Malaysia and the United States in Kuala Lumpur in September 2007. Vietnam quietly sent a defence observer to a meeting of the Proliferation Security Initiative held in New Zealand in March 2007; and senior officials now regularly attend the annual meeting of the Shangri-La Dialogue in Singapore.

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<sup>46</sup>Vietnam's Maritime Police have participated in less sensitive search and rescue exercises with Indian, Japanese and U.S. coast guards.

<sup>47</sup>Al Pessin, 'Vietnam Considers Navy Exercises with U.S., as Hospital Ship Visits', Voice of America, June 27, 2008.

<sup>48</sup>John D. Negroponte, Deputy Secretary of State, Remarks at the Brookings Institution, Washington, D.C., July 28, 2008 and Scot A. Marciel, Ambassador for ASEAN and Deputy Assistant Secretary for East Asian and Pacific Affairs, Remarks to Center for Strategic and International Studies, Washington, D.C., September 25, 2008.

<sup>49</sup>In February 2009, for example, its Defence Minister General Phung Quang Thanh attended the ADMM-3 in Pattaya, Thailand.

<sup>50</sup>'ASEAN armies move forward closer cooperation', *Quan Doi Nhan Dan*, December 12, 2008, internet edition..

*Arms procurements and technology transfers.* Vietnam's future defence spending priorities can be expected to reflect its principal economic and strategic interests as well as budgetary constraints. Over the medium term Vietnamese national security priorities will almost certainly focus on defending the country's territorial claims in the South China Sea and Gulf of Tonkin, including off shore oil exploration platforms.

Despite financial constraints, Vietnam remains in the market for newer or upgraded models of combat aircraft,<sup>51</sup> main battle tanks and heavy artillery, military helicopters, air defence missiles, guided-missile fast attack craft, conventional submarines, anti-submarine warfare, electronic warfare and C<sup>3</sup>I systems, and possibly aerial refueling capability. Future arms sales are likely to include India's multi-role advanced light helicopter, warships, submarines, multiple rocket launchers for the army, and long- and medium-range ground-to-air and anti-ship and air-defence missiles. Vietnam will continue to rely on Russia, the Ukraine and India for spare parts and assistance in upgrading its Soviet-era equipment.

Since 1993, Vietnam has been very active in scouting out the possibilities of arms procurements and technology transfers through co-production. Senior defence officials have led high-level delegations to Europe, Israel, East Asia, South Africa and Brazil to explore the arms market and to upgrade their knowledge of current developments in military technology.

Joint ventures between Vietnamese defence companies and overseas counterparts for the production of weapons and military equipment are a distinct possibility in the medium term. In May 2002, for example, the Ukraine and Vietnam agreed to explore the possibility of arms co-production, while in 2008 Belarus raised the possibility of cooperation in the 'military-technical area' in discussions between the two defence ministers. As noted in the previous section, in late 2008/early 2009, Vietnam and China discussed stepping up cooperation in the research and transfer of military technologies. More recently, it has been revealed that Vietnam and Hungary held discussions on the transfer of technology to enable Vietnam to produce a variant of the Russian SA-18 man-portable surface-to-air missile. Earlier Vietnam had acquired several kits for local assembly from Hungary.<sup>52</sup>

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<sup>51</sup>According to Australia's Defence Intelligence Organisation, Vietnam is pursuing 'a major combat aircraft project, which is expected to result in the acquisition of a variant of the Su-30'; DIO, *Defence Economic Trends in the Asia-Pacific 2007*, 22. In August 2009, Russian defence industry sources revealed that in January 2009 Vietnam placed an order for eight Su-30MKs fighters for delivery in 2010-2011.

<sup>52</sup>Robert Karniol, 'Vietnam's Defence Industry Stutters Along', *The Straits Times*, July 14, 2008.

In Europe, countries like Bulgaria, Finland<sup>53</sup>, Poland, Serbia, and Slovenia have expressed interest in disposing of outdated Soviet-era equipment. Other European states are likely to promote the sale of surplus equipment. Cost factors have severely inhibited Vietnam. Both the United Kingdom and France reportedly have sought niche markets for defence-related sales. Israel has been at the forefront of efforts to sell electronic warfare and communications equipment as well as technology transfer agreements. Singapore could provide light weapons and logistical systems. South Korea has offered assistance in refurbishing M113 APCs and could assist in naval modernisation. In August 2008, a military delegation to Cuba led by Lieut. General Phan Trung Kien, Deputy Minister of National Defence, discussed 'weapons maintenance' with his counterpart.

As a result of improved political relations between the U.S. and Vietnam, in late 2006 President George W. Bush directed that restrictions on the sale of non-lethal defence articles and services to Vietnam under the Foreign Assistance Act of 1961 and the Arms Export Control Act be lifted. In April 2007, the State Department amended the International Traffic in Arms Regulations to enable 'on a case-by-case basis licenses, other approvals, exports or imports of non-lethal defence articles and defence services destined for or originating in Vietnam'. United States policy on arms sales currently prohibits the sale of lethal items, non-lethal crowd control defence articles and night vision devices to Vietnam.

In January 2007, the fourth plenum of the Vietnam Communist Party's Central Committee adopted a resolution mandating the development of a comprehensive national 'Maritime Strategy Towards the Year 2020' to fully integrate the economic development of coastal areas with the exploitation of marine resources in territorial waters with national defence and security.

Vietnam currently has plans to assemble eight Tarantul V (Molnya) missile frigates domestically. And Vietnam also plans to construct two Gepard-class guided missile frigates in Ho Chi Minh City with components to be provided by Rosoboronexport. Vietnam is believed to be negotiating with Russia for the purchase of an additional six Tarantul-3 corvettes to be armed with the SS-N-22 Sunburn missile.<sup>54</sup> In April 2009, Russian defence industry sources revealed that Vietnam was close to signing a contract with Rosoboronexport for the purchase of six Prokect 636 Kilo class diesel powered submarines valued at U.S. \$300 million each. The submarines are expected to be equipped with

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<sup>53</sup>In February 2005 it was reported that Finland's Defence Forces were considering selling spare parts for the Mi-8 medium lift helicopters to Vietnam. Senior Lt. Gen. Nguyen Van Hieu, deputy minister of national defence, paid a working visit to Finland in late May 2008.

<sup>54</sup>China's Sovremenny'-class destroyers are armed with these missiles.

new heavyweight torpedoes and possibly the Novator Club-S (SS-N-26) cruise missiles. All together the Kilo submarine package is valued at U.S. \$3 billion.<sup>55</sup> In sum, priority is now being accorded to maritime issues and this will lead to an expanded role for the navy including its continued modernization.

*Peacekeeping.* Vietnamese officials have publicly indicated that Vietnam currently is making preparations to contribute to UN-endorsed peacekeeping missions in the future. Vietnamese officials have held discussions with the UN's Department of Peacekeeping Operations. A handful of military officers have attended training courses in Australia and the United Kingdom and an observer group was reportedly sent to Haiti.

In March 2007, Lt. Gen. Nguyen Huy Hieu, Deputy Minister of National Defence, visited Wellington where he expressed an interest in receiving New Zealand's assistance in developing Vietnam's capabilities in peace-keeping. The Chief of the New Zealand Defence Force visited Hanoi in August 2008 and discussed with his counterpart how 'both countries might work together as Viet Nam considers future involvement in United Nations peace operations'.<sup>56</sup> In September 2007, Singapore's Defence Minister, Teo Chee Hean, visited Hanoi for talks with his counterpart General Phung Quang Thanh which covered Singapore's experiences in peacekeeping.

In November 2007, India and Vietnam held their third security dialogue in New Delhi. The two sides agreed to share expertise on issues of common concern, *inter alia*, training in UN peacekeeping operations. The following month, India agreed to dispatch a four-member army team to Vietnam to conduct training on UN peacekeeping operations during the first half of 2008.

In 2008, Vietnam expanded its discussions on UN peacekeeping with a widening circle of countries. In May, Canadian officials visited Hanoi to discuss, *inter alia*, Vietnam's capacity to contribute forces to UN peacekeeping operations.<sup>57</sup> In November, in separate visits, both the Polish Defence Minister and Bulgarian Chief of General Staff discussed their country's experiences in international peacekeeping with their Vietnamese counterparts.

Vietnam's ambitions to play a more proactive international role as a non-permanent member of the UN Security Council are very likely to lead to some

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<sup>55</sup>*Kommersant*, April 27, 2009; AFP, April 27, 2009; RIA Novosti, April 27, 2008; Interfax-AVN, April 27, 2009; Vedomosti, April 27, 2009; and *The Saint Petersburg Times*, April 28, 2009;

<sup>56</sup>'Letter from the Ambassador', New Zealand Embassy Hanoi, August 26, 2008.

<sup>57</sup>Voice of Vietnam, May 13, 2008 and *Tuoi Tre*, May 14, 2008, 2.

form of modest contribution to international peacekeeping and to take the form of military medical or mine clearance teams.

## Appendix 1

Estimates of Vietnam's National Defence Expenditure Funded by the Central Government Budget, 1984–96 (all figures in U.S.\$ billion)

Year	GDP*	Defence Expenditure %**	Defence Budget
1984	10.2–18.1	7.8	.796–1.41
1985	10.2–19.4	12.0	1.22–2.33
1986	10.4–20.4	7.9	.822–1.61
1987	10.8–20.8	6.6	.713–1.37
1988	11.5–22.0	7.5	.863–1.65
1989	12.4–23.6	8.3	1.03–1.96
1990	13.0–24.7	6.6	.858–1.63
1991	13.4–25.4	6.6	.884–1.68
1992	14.5–27.5	7.5	1.09–1.82
1993	15.5–29.5	8.4	1.30–2.48
1994	19.1	4.7	1.00
1995	21.3	4.3	1.10
1996	23.5	4.0	.950

\*The lower order GDP figures were calculated on the basis of an IMF estimate that Vietnam's GDP stood at U.S.\$13.4 billion in 1991 to which the following annual GDP growth rates have been applied: 5.9% (1988), 7.1% (1989), 4.5% (1990), 3.0% (1991) 8.1% (1992) and 7.3% (1993). Lower range GDP figures for 1984-87 and higher range GDP figures have been taken from the IISS Military Balance with NMP figures converted to GDP. GDP figures for 1994-96 were taken from the relevant issues of the IISS, *The Military Balance*.

\*\*Defence Expenditure as a percentage of GDP. World Bank, *Vietnam Economic Report* (1990), pp. 22–23 and 141. The figures for defence expenditure for 1990–93 are the author's estimates. The figures for defence expenditure do not include Soviet supplies of petroleum and lubricants, local contributions, the contributions of military-run production enterprises and units, and pensions for veterans. The figures for 1994-96 were calculated from data in the relevant issues of IISS, *The Military Balance*.

Sources: The Economist Intelligence Unit, *Indochina: Vietnam, Laos, Cambodia Country Report*, no. 1 (1993), p. 16; Humphrey Hawksley, Hanoi, *The Times* (London), 17 April 1989; Murray Hiebert, 'Corps Business', *Far Eastern Economic Review*, 23 December 1993, 40-41; International Institute for Strategic Studies, *The Military Balance*, 1987/88, 175; International Institute for

Strategic Studies, *The Military Balance*, 1988/89, 180; International Institute for Strategic Studies, *The Military Balance*, 1989/90, 178; International Institute for Strategic Studies, *The Military Balance* 1991/92, 183; International Institute for Strategic Studies, *The Military Balance* 1992/93, 164; International Institute for Strategic Studies, *The Military Balance* 1996/97; International Institute for Strategic Studies, *The Military Balance* 1997/98; International Institute for Strategic Studies, *The Military Balance* 1998/99; International Monetary Fund, *Viet Nam — Recent Economic Developments* (5 December 1991); Börje Ljunggren, ed., *The Challenge of Reform in Indochina* (Cambridge: Harvard Institute for International Development, 1993), 385. Gwen Robinson, 'Ta-ta Cambodia, good morning to a quieter Vietnam', *The Canberra Times*, 30 September 1989; J. Andre Sauvageot, 'Vietnam, Defence Expenditure and Threat Perception: Defending Communist Indochina', in *Defence Spending in Southeast Asia* edited by Chin Kin Wah (Singapore: Institute of Southeast Asian Studies, 1987), 281–304; Barry Wain, 'Hanoi Congress Set to Continue Reform', *Asian Wall Street Journal*, 20 June 1991; and World Bank, *Vietnam Economic Report* (1990).

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