

BURMA'S WMD PROGRAMME AND MILITARY COOPERATION BETWEEN BURMA AND THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

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1. EXECUTIVE SUMMARY

The resumption of diplomatic ties between Burma and the Democratic People's Republic of Korea (DPRK), or North Korea, in April 2007 came after more than a decade of quiet cooperation, including the transfer of weapons to Burma from North Korea. Relations were severed when, in October 1983, North Korean agents detonated a bomb in Burma's then

capital Rangoon, killing 18 high-ranking South Korean officials, who were on a visit to the country, as well as three Burma citizens.

Contacts between Burma and North Korea were resumed in 1993 with a series of secret meetings between diplomats from both countries in Thailand's capital Bangkok. In June 1999, the Director of Procurement of the Burmese Armed Forces visited Pyongyang, followed by another secret trip in November 2000. In July 2003, a group of technicians from North Korea was seen at the Monkey Point naval base in Rangoon, and aircraft from North Korea's national airline Air Koryo were observed landing at military airfields in central Burma.

Confirmed arms trade between North Korea and Burma was until recently limited to conventional weapons and technology transfers, including a major purchase of 130mm Type 59 field guns in 1999. It was also confirmed that North Korean tunnelling experts arrived in June 2006 at Burma's new capital Naypyitaw, where the country's military government is reported to have built an extensive underground bunker complex.

However, in November 2008, a high-level Burmese delegation led by Gen. Shwe Mann, number three in Burma's military hierarchy, visited North Korea where they were taken to see defence industries and radar stations — and expressed interest in buying radar systems and surface-to-air missiles as well as more artillery from Pyongyang. In addition there have been unexplained visits by freighters from North Korea to Burmese ports in recent years, raising suspicions of potentially more sophisticated arms deliveries.

This could include North Korean assistance to Burma's fledgling nuclear programme, or, more likely, deliveries of missiles or missile components.

Military cooperation between North Korea and Burma should be seen in the context of both countries being labelled by the US administration as part of an "Axis of Evil", as in the case of North Korea, or an "outpost of tyranny", which Secretary of State Condoleezza Rice called Burma in January 2005. Burma's military government fears becoming the target for US intervention, a notion it shares with North Korea. Hence, that perceived threat has drawn Burma and North Korea closer together in recent years.

One of the main reasons why US Secretary of State Hillary Clinton paid a visit to Burma in early December 2011 was because of US concerns over the country's WMD programmes — and links with North Korea. In return for promises (which many would argue were empty promises) not to develop such weapons, the US agreed, in principle, to stop blocking Burma's access to international financial institutions and to restore full diplomatic relations between the two countries.

2. HISTORY OF BURMA-NORTH KOREAN RELATIONS

In the years following Burma's independence from Britain in 1948, the country had no relations with North Korea. On the contrary, the then democratically elected government headed by U Nu endorsed in July 1950 the UN Security Council's declaration branding North Korea the aggressor in the war on the Korean peninsula. Limited trade with both Koreas began in

the late 1950s, and independent Burma's first prime minister, U Nu, declared in a speech to the parliament in 1957: "So far as Korea is concerned, the unfortunate division of the country poses for us the same problem that Vietnam does. Consequently, we do not recognize the Government of either North or South Korea as the *de jure* government of Korea but this has not prevented us from having economic and cultural contacts with them".¹

Both North and South Korea maintained unofficial "consulates" in the then capital Rangoon as long as U Nu was in power. Following his ouster in a military *coup d'etat* in March 1962, formal diplomatic relations were established with both Koreas. Both North Korea and the Republic of Korea (South) opened embassies in Rangoon, but, according to Australian Burma scholar Andrew Selth, "Rangoon's relations with Pyongyang tended to be warmer than those with Seoul".² At that time, Burma was ruled by the Burma Socialist Programme Party, the BSPP, led by Gen. Ne Win, who had seized power in 1962. Burma and North Korea both referred to their "common anti-imperialist and anti-colonial struggle"³

In 1966, four years after the military takeover, the official News Agency Burma (NAB) signed an exchange agreement with the Korean Central News Agency (KCNA), which was permitted to employ a local Burma citizen as its correspondent in Rangoon. In 1977, Gen. Ne Win paid an official visit to Pyongyang, and North Korea became the first communist-ruled country to establish fraternal links with the BSPP. Subsequently, in 1980, a BSPP delegation attended the 6th Congress of the Korean Workers' Party in Pyongyang.

Under an economic agreement negotiated during Gen. Ne Win's 1977 visit, North Korea helped Burma to build and operate a tin smelter, a glass-manufacturing plant, a hydroelectric plant and a synthetic textiles plant.⁴ North Korea also provided Burma with industrial products, including machinery, tools, cement and chemicals. In return, Burma exported cotton, rubber, wood, rice and minerals to North Korea. There is no evidence of arms transfers, or other military cooperation during this time.

Burma's eagerness to maintain friendly relations with North Korea in the 1970s and early 1980s could have been prompted by Pyongyang's then policy to support revolutionary movements all over the world, and Burma was at that time facing a serious communist insurgency. Burma did not want to have North Korea as an enemy. It was enough that the People's Republic of China — North Korea's closest ally — lent generous support to the insurgent Communist Party of Burma (CPB) in the 1960s and 1970s. However, Chinese support for the CPB dwindled after the death of Mao Zedong in 1976 and the return to power of Deng Xiaoping, who abandoned the policy of exporting revolution to the rest of Asia. North Korea may have had fraternal relations with the CPB (copies of the *Pyongyang Times* were available at the CPB headquarters at Panghsang, near the Chinese border, until the communist insurgency collapsed in 1989⁵), but there are no credible reports of North Korean weapons ending up in the hands of the Burmese communists.

3. THE 1983 RANGOON BOMBING

Relations between North Korea and Burma changed dramatically when, on October 9, 1983, North Korean agents detonated a powerful bomb in Rangoon, killing 21 people. The target was actually South Korean president Chun Doo Hwan, but he arrived late to the venue, and thus was not hurt.

However, Burma may not have been the only choice as site for the planned assassination. According to US North Korea expert Joseph S. Bermudez, “sometime during mid-1983, the Liaison Department (of the Korean Workers’ Party) conceived a plan to assassinate ROK (Republic of Korea) President Chun Doo Hwan during his October six-nation tour of Australia, Brunei, Burma, India, New Zealand, and Sri Lanka. Due to logistical and political considerations, possible sites for such an attempt were limited to Burma and Sri Lanka. Strongly influencing the North Korean decision was the conviction that the blame for the assassination attempt in either of these two countries could be easily placed upon domestic insurgents”.⁶

Also according to Bermudez, arrangements were made to insert a “Direct Action”, or assassination, team into both Sri Lanka and Burma using the North Korean cargo ship *Tong Gon Ae Guk-ho*. If the Rangoon team were unable to carry out the assassination in Burma, the Sri Lanka team would make an attempt when Chun Doo Hwan arrived there. The Burma team consisted of three agents: the commander, Major Zin Mo, and two demolition specialists, Captain Kim Chi O and Captain Kang Min Chul.

On September 17, 1983, the *Tong Gon Ae Guk-ho* arrived at Rangoon’s port with a cargo of construction material, which did not arouse any suspicion because North Korea was at the time engaged in several construction

projects in Burma. Five days later, the three agents entered Rangoon disguised as crew members. They were received by a female North Korean citizen, most likely someone from the Liaison Department, who took them to the home of the North Korean counsellor in Rangoon. There, they were given explosives and remote control devices.

On September 24, the *Tong Gon Ae Guk-ho* left Rangoon's port, so as to "minimize the possibility of being connected with the assassination and to deliver the Sri Lanka team".⁷ The involvement of the North Korean embassy in Rangoon is noteworthy, as it shows that Pyongyang was prepared to jeopardize relations with Burma over the assassination.

On October 9, President Chun Doo Hwan and his entourage were scheduled to visit the "Aung San Martyrs' Mausoleum", which had been erected in honor of Burma's independence hero, Aung San, who had been assassinated in 1947. The North Korean agents managed to plant three bombs at the site, and then left. According to Bermudez, "each bomb was approximately 25 cm long and consisted of a charge of plastic explosive embedded with steel balls and an electronic detonating device powered by Hitachi batteries".⁸

The devices were detonated by remote control at 10.25am. The explosion was massive; it was felt 3 kilometres away, but missed the main intended target, President Chun Doo Hwan. Following the explosion, Burmese security authorities initiated a massive manhunt to capture the assassins. Major Zin Mo was arrested after being spotted swimming across a creek in east Rangoon. He lost one eye and an arm when he detonated a grenade in an attempt to commit suicide. Two days later, the two demolition specialists,

Captains Kang Min Chul and Kim Chi O, were discovered hiding along a river bank. A firefight broke out and Captain Kim Chi O was killed. Captain Kang Min Chul was captured alive.

On November 4, the Burmese authorities announced that North Korea was behind the explosion and ordered its Rangoon embassy closed and all diplomats out of the country within 48 hours. Two days later, twelve North Korean diplomats and eight dependents were escorted to Rangoon's airport, and deported. They left Burma aboard an Air Koryo TU-154 airliner, which had come to pick them up. All economic and commercial ties between North Korea and Burma were also terminated.

The trial of the two North Korean agents was swift, and, on December 10, both of them were sentenced to death. The badly injured Major Zin Mo was executed by hanging in Rangoon's Insein Prison on April 6, 1985. But the death sentence against Kang Min Chul was never carried out; it is widely believed that his life was spared because he cooperated with the investigation. Later, he came inadvertently to play an important role in the eventual resumption of diplomatic ties between North Korea and Burma.

4. BURMA'S ARMS PROCUREMENT PROGRAMME

In August-September 1988, a nation-wide uprising for democracy swept across Burma. Millions of people marched in Rangoon and elsewhere against the military-controlled BSPP regime and for a reintroduction of the parliamentary democracy that the country had enjoyed prior to the 1962

coup. The uprising was brutally crushed as the military opened fire on the demonstrators. The actual death toll will probably never be known, but it was most likely in the thousands. The armed forces took direct control over the country on September 18, and formed a junta called the State Law and Order Restoration Council, or SLORC.

The Rangoon massacre was severely criticized by the international community, particularly the Western democracies and Japan. The new Burma government became the target of a range of diplomatic and economic sanctions. The People's Republic of China, however, stepped in to rescue the beleaguered regime in Rangoon. All Chinese support for the CPB ceased in the early 1980s, and, in March-April 1989, the hilltribe rank-and-file rose in mutiny against the ageing, Burma Maoist leadership and drove them into exile in China, where those who are still alive remain.⁹

The demise of the CPB, and its replacement by several ethnic armies (the main one being the United Wa State Army, UWSA), which entered into peace agreements with the SLORC, opened the door for cross-border trade between China and Burma. Burma's strategic importance to China was also not lost on observers. By late 1991, Chinese experts were assisting in a series of infrastructure projects to spruce up Burma's poorly maintained roads and railways. Chinese military advisers arrived in the same year, the first foreign military personnel to be stationed in Burma since the Australians had a contingent there to train the Burmese army in the 1950s. Burma was, in effect, becoming a Chinese client state. Ironically, what the insurgent CPB had failed to achieve for the Chinese on the battlefield was accomplished by shrewd diplomacy and trade.

Following the crushing of the 1988 uprising, the Burmese army embarked on a major expansion and modernisation plan of the country's military. The regime's survival depended on the loyalty of its soldiers, and it was deemed important to keep them satisfied. A stronger military would also be able to crush any future uprisings, and for that it needed more modern equipment. Prior to 1988, the three services of Burma's armed forces totalled approximately 186,000 men. By mid-1992 the combined strength had risen to 270,000. By mid-1995 it was over 300,000. The final goal, according to statements at the time by SLORC Chairman, Gen. Saw Maung, is "a 500,000-strong, well-equipped military machine."¹⁰

China soon became the main supplier of all kinds of military hardware to Burma. The total value of these arms deliveries to Burma in the 1990s is not known, but intelligence sources estimate it to be between US\$ 1 and 2 billion, most of it acquired on extremely generous terms. Military hardware thus delivered by China in a little more than a decade includes 80 Type 69II medium battle tanks, more than a hundred Type 63 light tanks, 250 Type 85 armored personnel carriers, multiple launch rocket systems, howitzers, anti-aircraft guns, HN-5 surface-to-air missiles, mortars, assault rifles, recoilless guns, rocket-propelled grenade launchers, JLP-50 and JLG-43 air Defence radars, heavy trucks, Chengdu F-7M Airguard jet fighters, FT-7 and FT-6 jet trainers, A-5C/M ground attack aircraft, SACY-8D transport aircraft, Hainan class patrol boats, Houxin-class guided missile fast attack craft, minesweepers and small gunboats. In 2000, China delivered 12 Karakoram-8 trainers/ground attack aircraft, which are produced in a joint

venture with Pakistan. Pakistan, for its part, has also sold munitions to Burma, including 120mm mortar bombs and machine-gun ammunition.¹¹

While one of the reasons why China has decided to arm Burma may be to provide a military umbrella to protect new trade routes from China's landlocked, southwestern provinces through potentially volatile territory down to the Burmese heartland, some analysts view the support in a more long-term perspective. Access, even indirectly, to the Indian Ocean would give China a strategic advantage in the region. The Strait of Malacca is, for instance, a key transit point for the bulk of China's — and also Japan's — West Asian oil imports.

But it is India, not Japan, that has reacted the strongest to China's high-profile presence in Burma. Of particular concern has been the Chinese role in the upgrading of Burma's naval facilities — including at least four electronic listening posts along the Bay of Bengal and the Andaman Sea: Man-aung on an island off the coast of the western Arakan, or Rakhine, State; Hainggyi Island in the Irrawaddy delta, Zadetkyi (St Matthew) Island just north of the entrance to the Malacca Strait; and probably also the strategically important Coco Island just north of India's Andaman Islands. Chinese technicians have also been spotted at the naval bases at Monkey Point near Rangoon, and the Kyaikkami facility south of the port city of Moulmein.¹²

Although China's presence in the Bay of Bengal has been limited to instructors and technicians who were deployed there on a temporary basis, the fact that the new radar equipment is Chinese-made — and, at least

initially, was most likely also operated in part by Chinese technicians — may have enabled Beijing’s intelligence agencies to monitor this sensitive maritime region. China and Burma have signed several agreements under which they have pledged to share intelligence that could be of use to both countries.

In June 1998, India’s then Defence minister George Fernandes caused great uproar when he accused Beijing of helping Burma install surveillance and communications equipment on islands in the Bay of Bengal. Burma denied the accusations, while China’s foreign ministry expressed “utmost grief and resentment” over the minister’s comments. New Delhi however, had good reason to be concerned. In August 1994, the Indian coast guard caught three boats “fishing” close to the site of a major Indian naval base in the Andamans. The trawlers were flying the Burma flag, but the crew of 55 was Chinese. There was no fishing equipment on board — only radio communication and depth-sounding equipment. The crew was released at the intervention of the Chinese embassy in New Delhi.¹³

In March 1997, the China News Agency in Beijing reported that a Sino-Burmese expert group had “conducted a study on the possibility of land and water transport, via Yunnan and into the Irrawaddy valley in Burma”.¹⁴ On May 5 that same year, the official *Xinhua* news agency reported that Beijing and the Burma government had reached an agreement on developing this route. *Xinhua* said this route would be 5800 kilometres shorter than the older route of access to open waters which linked the Yunnanese capital Kunming and the nearest port on China’s east coast, Shanghai.

But there were also signs in Burma of unease with the heavy dependence on China for military hardware and technologies. In the 1990s, Burma began to diversify its sources of supply, while still buying some munitions from China. Because of EU and the US embargoes, Burma had to look for weapons from countries, which are outside Western control regimes such as Russia, Serbia, Ukraine — and North Korea. In recent years, Burma has purchased 50 T-72 tanks from Ukraine, which is also reported to have signed a contract with Burma in 2003 to supply 1000 units of BTR-U armoured personnel carriers over the next 10 years (10 units were reportedly supplied in 2003).

To further strengthen its tank regiments, Burma has purchased more than 200 T-69II, T-59D, T-80 and T-85 main battle tanks from China in addition to the T-63s already acquired. Helicopters have been purchased from Poland (before Poland joined the EU) and Russia, as well as at least 10 Russian-made MiG-29 air-superiority fighters.¹⁵

Burma has also acquired SOKO G-4 Galeb ground-attack aircraft from Serbia, and assorted light weapons bought via middlemen in Singapore. And, in late 1998, Burma was reported to have bought between 12 and 16 130mm M-46 (Type 59) field guns from North Korea. According to Australian Burma expert Andrew Selth: “While based on a 1950s Russian design, these weapons were battle tested and reliable. They significantly increased Burma’s long range artillery capabilities, which were then very weak”.¹⁶ The North Korean-made field guns have a range of 27 kilometres.

5. THE RESUMPTION OF TIES AND TRADE BETWEEN BURMA AND NORTH KOREA

For about a decade, there were no exchanges of any kind between Burma and North Korea. But attention was drawn to the relationship between the two countries when, on January 4, 1996, the Burmese embassy in Bangkok officially invited North Korea's *charge d'affaires*, Pang Song Hae (later the North Korean ambassador to Australia) to Burma's independence day celebrations at a hotel in the Thai capital. The Japanese daily *Yomiuri Shimbun* published a news report on the event on January 14, quoting former North Korean ambassador to Thailand, Ri Do Sop (later North Korea's consul-general in Hong Kong) as saying that, "our [Burma-North Korea] communications have been going on for some time and the atmosphere was very friendly".¹⁷

In fact, Ri Do Sop was instructed by Pyongyang during his tenure in Bangkok in the early 1990s to contact the then Burmese ambassador to Thailand, U Tin Winn, to negotiate the repatriation of Captain Kang Min Chul, who was in Rangoon's Insein Jail. Several meetings between the two ambassadors took place in Bangkok in 1993 and 1994, but it is unclear why the North Korean authorities wanted him back.¹⁸ Having cooperated with the Burmese investigation into the 1983 Rangoon bombing, he was considered a traitor. It is quite possible that the North Korean authorities wanted to punish him, but he was never repatriated to North Korea. According to witnesses who met Captain Kang Min Chul in Insein, he had no desire to go back to North Korea. While still incarcerated in Rangoon, he reportedly died of liver cancer on May 18, 2008.¹⁹

But, as informal relations between North Korea and Burma were re-established, Burma began to express interest in North Korean-produced military hardware. The Burmese army was already familiar with similar, Chinese designs, but the North Korean versions were cheaper. Unlike China, North Korea was reportedly also willing to accept barter deals, and the Burmese government was strapped for cash. It was also suggested at the time that China had played an important behind-the-scenes role in bringing North Korea and Burma together.²⁰

Following the delivery of the 130mm field guns — the first trade transaction between North Korea and Burma since 1983 — the Director of Procurement of the Burmese Armed Forces paid an unofficial visit to Pyongyang in June 1999. A Burmese government delegation made another secret visit to North Korea in November 2000 for talks with high-ranking officials of North Korea's People's Armed Forces Ministry.²¹

This was followed by a visit to Rangoon from June 20-22, 2001 of a high-ranking North Korean delegation, led by then Vice Foreign Minister Pak Gil Yon.²² According to the *Korea Times* of July 10, 2001, the visit was “to discuss cooperation in the Defence industry with Burma's Deputy Defence Minister Khin Maung Win”.

Pak Gil Yon (or Park Kil-yon) became North Korea's ambassador to Canada in 2002, and, on May 13, 2005, he met with Joseph DeTrani, a special envoy of the United States, to discuss North Korea's return to “six-party talks” in

Beijing on North Korea's nuclear proliferation, so he is evidently a very important person in the North Korean hierarchy.

In early 2002, Burma expressed interest in buying one or two small submarines from North Korea, either the Yugo class midget submarine, or the Sang-O class mini submarine. Rangoon opted for one Sang-O class submarine, but was forced to abandon the deal in late 2002.²³ The cost of the submarine and lack of expertise to handle such a vessel might have caused the Burmese authorities to change their mind. It is, however, possible that Burma is still interested in acquiring submarines from North Korea, and that a deal will be reached within the next few years. The Yugo class midget submarine is a 23-metre long diesel electric boat which displaces 70 tonnes when submerged. The Sang-O class mini submarine, which North Korea has already sold to Vietnam, displaces 360 tonnes submerged, and could be built for either attack or reconnaissance.

Nevertheless, on July 10, 2003 I reported in the Hong Kong-based magazine the *Far Eastern Economic Review* that, "between 15 and 20 North Korean technicians have been spotted at the Monkey Point naval base near Rangoon and at a Defence Ministry guest house in the northern suburb of the (then) capital."²⁴ It was believed that the North Korean technicians could have been helping the Burma navy equip some of its vessels with surface-to-surface missiles. Monkey Point is the base for the Burmese navy's six *Houxin* guided missile patrol boats, which were purchased from China in the mid-1990s. Each of them is armed with four C-801 Eagle Strike anti-ship cruise missiles, which are also made in China. Another possibility is that the North Korean technicians were installing some type of surface-to-surface

missiles on the Burma navy's four new *Myanmar* class coastal patrol boats, which were manufactured locally.²⁵

At about the same time, it was reported that Burma had expressed interest in acquiring a number of Hwasong (Scud-type) short-range ballistic missiles from North Korea. A secret meeting to discuss the deal was reportedly held in Rangoon in August 2003, followed by a second meeting in Phuket, Thailand, in October. It is, however, uncertain whether a deal was reached at that time.²⁶

The next sighting of North Korean technicians in Burma was in November 2003, when representatives of North Korea's Daesong Economic Group — an enterprise under the Korean Workers' Party's Bureau 39, which is charged with earning foreign currency for Pyongyang — arrived in Rangoon. At about the same time, Rangoon-based Asian diplomats said that North Korean technicians had been spotted unloading "large crates and heavy construction equipment" from trains at Myothit in Magwe (Magway) Division, the closest station to the central Burma town of Natmawk, near where the Burmese government reportedly planned to build a nuclear-research reactor, and north of Minhla, also in Magwe Division, where two secret Defence factories are located, including a new facility, *ka pa sa* 10, the construction of which began in 1993 (see below).²⁷

This led to speculation about possible North Korean involvement in Burma's fledgling nuclear programme, although those suggestions were never confirmed. It is also possible that North Korean technicians at Myothit were unloading equipment for underground storage facilities that the Burmese

army at the time was building on the northern fringes of the Pegu Yoma mountain range in central Burma, or for the newly-built *ka pa sa* 10 near Minhla.

In March 2004, then U.S. Deputy Secretary of State Matthew Daley said that the United States had “reason to believe” that North Korea offered to sell surface-to-surface missiles to Burma, but that Burma’s officials claimed the offer had not been taken up. In spite of Burma’s denials, Daley asserted that the two countries already possessed a “significant military and trade relationship”.²⁸

In June 2006, Asian intelligence agencies intercepted a message from Burma’s new administrative capital, Naypyitaw, confirming the arrival of a group of North Korean tunnelling experts at the site. Naypyitaw is in the foothills of Burma’s eastern mountains, and it has long been suspected by Rangoon-based diplomats that the most sensitive military installations in the new capital, which was established in late 2005, would be relocated underground.

Burma’s apparent but completely unjustified fear of a pre-emptive US invasion, or of being the target of US air strikes — fears which it shares with North Korea — was seen as a major motivation behind the ruling junta’s decision to move the capital from the coastal area to what they perceive to be a safer location further inland. One key component of the growing strategic ties between Burma and North Korea appears to be the latter’s expertise in tunnelling. Pyongyang is known to have dug extensive tunnels

under the demarcation line with South Korea as part of contingency invasion plans.²⁹

In August 2006, the Chiang Mai-based exiled Burma magazine *The Irrawaddy* claimed that it had obtained documents from “sources close to Burma’s military” which indicated that, with help from Chinese and North Korean technicians and engineers, Burma was upgrading radar stations in southern Burma near Kawthaung (Victoria Point) “to monitor joint naval exercises held by US and Thai forces”.³⁰

With military cooperation between North Korea and Burma reaching such levels, it was hardly surprising that the two countries eventually decided to re-establish diplomatic relations. It was long believed that Burma wanted the North Koreans to admit to and apologize for the 1983 Rangoon bombing before diplomatic relations could be restored, but it is evident that other considerations were seen as more important. There were also suggestions that China was instrumental in helping Burma and North Korea to reconcile.

On April 26, 2007, the new North Korean Vice Foreign Minister Kim Yong Il signed an agreement with his Burmese counterpart Kyaw Thu in the old capital Rangoon to restore diplomatic relations. The Korean Central News Agency (KCNA) reported on the event:

“Joint Communiqué on Reestablishment of Diplomatic Relations between DPRK and Union of Myanmar Released

Pyongyang, April 26 (KCNA) -- A Joint communiqué on the reestablishment of diplomatic relations between the DPRK and the Union of Myanmar was released in Rangoon on April 26. According to the joint communiqué, the government of the Democratic People's Republic of Korea and the government of the Union of Myanmar, desirous of developing friendly relations and bilateral cooperation between the two countries and peoples, based on the principles of respect for each other's sovereignty, non-interference in their internal affairs, and equality and mutual benefit, as well as the norms of international law and the objectives and principles of the United Nations Charter, have agreed to reestablish the diplomatic relations at the ambassadorial level in accordance with the provisions of the Vienna Convention on Diplomatic Relations of April 18, 1961. The governments of the DPRK and the Union of Myanmar expressed their assurances that the reestablishment of diplomatic relations responds to the national interests of both countries and will consolidate the strengthening of international peace and cooperation."³¹

At the time, a noted South Korean scholar of the North, Baek Hak Soon, told the Singapore daily *Straits Times*: "Both sides can support each other in the midst of heavy international pressure — Pyongyang for its nuclear arms programme and Rangoon for its human-rights abuses...Despite their lack of bargaining leverage, Burma might also be keen to learn more about North Korea's 'know-how' in standing up to the US".³² Significantly, China also lauded the restoration of diplomatic ties between Burma and North Korea. The *Straits Times* quoted Chinese foreign ministry spokesman Liu Jianchao as saying that, "North Korea and Burma are both friendly neighbours of China. We welcome the improvement of their bilateral ties".

On August 2, 2007, Burma appointed its ambassador to China, Thein Lwin, to serve concurrently as ambassador to North Korea. On August 18, three North Korean diplomats — a minister, counsellor and first secretary — arrived in Burma from Singapore to open an embassy. They stayed at a serviced department in Rangoon, but were reported to be looking for a new embassy site in the former capital. Asked if North Korea would open an embassy at the new administrative capital of Naypyitaw, a Burmese foreign ministry spokesman told the *Associated Press* that since other embassies had not yet moved to Naypyitaw, North Korea “will open its embassy in Rangoon”.³³

The resumption of diplomatic ties “will be closely observed by the US”, a US State Department official, Tom Casey, said on April 27, 2007.³⁴ A major concern was possible North Korean involvement in Burma’s nascent nuclear programme. In November 2010, the UN Security Council made public a report stating that North Korea was linked to covert shipments of banned nuclear technology and missiles to Iran, Syria, and Burma. The report went on to state that in Burma suspicious nuclear activities were linked to Namchongang Trading, a state-owned North Korean company that previously was known to have been involved in nuclear activities in Iran and Syria, and the arrests in Japan of three people who accused of trying to illegally export a magnetometer to Burma through Malaysia:

“Magnetometers can be used to produce ring magnets, a key element in centrifuges that are the basis of nuclear arms programmes in Iran and Pakistan. That transfer was linked to a North Korean company involved in ‘illicit procurement’ for nuclear and military programs,” the report said.³⁵

In 2009, Namchongang and its director, Yun Ho-jin, were formally sanctioned by the United Nations for its proliferation activities, and, according to a German Customs Bureau report, the company, uses its offices in Beijing and Shenyang in China to place orders for the equipment, which is critical in building centrifuges needed to enrich uranium.³⁶ The arrival of Namchongang Trading in Burma set off alarm bells in many Western capitals, and many sceptics began to take the reports of Burma's nuclear ambitions seriously.

In September 2007, Burma's Vice Foreign Minister, Kyaw Thu, paid a 5-day visit to Pyongyang, the first official visit by a member of the Burmese government in years. The KCNA issued a number of news bulletins about the visit:

“Cooperation between DPRK and Myanmar Foreign Ministries

Pyongyang, September 14 (KCNA) — An agreement on cooperation between the foreign ministries of the DPRK and Myanmar was inked here on Friday. Present at the signing ceremony from the DPRK side were Vice-Minister of Foreign Affairs Kim Yong Il and officials concerned and from the opposite side were members of the delegation of the Foreign Ministry of Myanmar led by Vice-Minister U Kyaw Thu. Kim Yong Il and U Kyaw Thu signed the agreement.”³⁷ (“U” is a Burmese honorific)

“Kim Yong Nam Meets Delegation of Myanmar

Pyongyang, September 17 (KCNA) — Kim Yong Nam, president of the Presidium of the DPRK Supreme People’s Assembly, met and had a friendly talk with the delegation of the Foreign Ministry of Myanmar led by Vice-Minister U Kyaw Thu at the Mansudae Assembly Hall on Monday.”³⁸

“Gift to Kim Jong Il from Foreign Ministry Delegation of Myanmar

Pyongyang, September 17 (KCNA) — General Secretary Kim Jong Il was presented with a gift by the delegation of the Foreign Ministry of Myanmar on a visit to the DPRK. It was conveyed to Kim Yong Nam, president of the Presidium of the DPRK Supreme People’s Assembly, Monday by Vice-Minister of Foreign Affairs U Kyaw Thu who is heading the delegation.”³⁹

“FM of DPRK Meets Delegation of Myanmar

Pyongyang, September 17 (KCNA) — Foreign Minister of the DPRK Pak Ui Chun met and had a talk with the delegation of the Foreign Ministry of Myanmar led by Vice-Minister U Kyaw Thu at the Mansudae Assembly Hall on Monday.”⁴⁰

It is evident that Kyaw Thu met a number of important people in Pyongyang, including the *de facto* head of state, Kim Yong Nam, but it unclear what the “agreement on cooperation” said, or what was discussed. It is, however, unlikely that a Vice Foreign Minister would have discussed possible nuclear cooperation, or even arms procurement.

In late 2008, a detailed report complete with pictures from a visit to

Pyongyang in November of that year by Gen. Thura Shwe Mann, Joint Chief of Staff of the Burmese Armed Forces (and now speaker of the Lower House of the Burmese Parliament) and considered number three in the ruling military junta, was leaked to the country's exile community by Burmese military sources. It showed Shwe Mann's party inspecting air defence systems and missile factories and the signing of an agreement between the two countries. The leakage has been interpreted by intelligence analysts as a sign of disaffection within Burmese military ranks over these new ties with what many consider a rogue state.

Furthermore, the leakage of those documents (including shots of North Korean air bases and radar installations taken surreptitiously through the window of the car in which the Burmese were travelling) must have infuriated the security-conscious North Koreans. To what extent this will affect Burmese-North Korean relations is uncertain, but the North Koreans will most probably think twice before inviting another Burmese delegation to Pyongyang, and to tour its defence industries and military installations.⁴¹

However, it seems that official, bilateral relations between Burma and North Korea have remained cordial, as these recent KCNA dispatches show:

“August 1, 2010

Myanmar PM Hails Development of Relations with DPRK

Pyongyang, August 1 (KCNA) — Thein Sein, prime minister of Myanmar, met and had a talk at the governmental building on July 30 with the DPRK delegation headed by Foreign Minister Pak Ui Chun on a visit to his country. Thein Sein noted with high appreciation that the Korean people have made

big strides in strengthening of the military capability and economic construction under the wise leadership of Kim Jong Il. The prime minister wished the Korean people greater successes in their drive to open the gate to a thriving nation in 2012 marking the centenary of birth of President Kim Il Sung. The government of Myanmar will continue to strive for strengthening and development of the friendly and cooperative relations between the two countries, he said.”⁴²

It is not clear, however, what was discussed when Prime Minister Thein Sein received the North Korean delegation in July 2010. Following the November 7, 2010 election, Thein Sein became the President of Burma.

Other recent exchanges between Burma and North Korea include:

“June 20, 2010

Kim Jong Il Lauded by Finland and Myanmar’s Figures

Pyongyang, June 20 (KCNA) — Statements were released by figures of Finland and Myanmar on the occasion of the 46th anniversary of General Secretary Kim Jong Il’s start of work at the Central Committee of the Workers’ Party of Korea. The director of the ‘Kominform’ Company of Finland in a statement on June 9 said that Kim Jong Il has fully displayed his traits as the great leader of the Party and people with his outstanding political caliber and the love for the people while working in the C.C., the WPK. He praised Kim Jong Il as the great elder statesman who strengthened and developed the WPK into an invincible revolutionary party. Kim Jong Il, supreme commander of the Korean People’s Army, made sure that the army has creditably discharged its mission as the driving force of socialist

construction and defender of the country and the nation, he said, adding that the Songun policy is the most original and successful political mode in the world political history. U Than Tun, deputy director general of the Union of Myanmar Economic Holdings Limited, in a statement on June 13 noted that the works of Kim Jong Il serve as great immortal programmes which guarantee the sure victory of the popular masses' cause of independence as they give scientific solution to the theoretical and practical issues arising in improving and strengthening the party building and activities as required by the developing historical circumstances and the times. The WPK has led to victory the Korean people in the struggle to bring about a new turn in accomplishing the cause of Korea's reunification and dynamically shaped the destiny and future of the country and the nation under the seasoned and tested leadership of Kim Jong Il, he noted".⁴³

The Union of Myanmar Economic Holdings Ltd (UMEH) is one of two major industrial conglomerates controlled by the Burmese military, the other is the Myanmar Economic Corporation (MEC). These two companies dominate key economic sectors and only the military is allowed to own shares in UMEH, which, in turn, is subordinate to the Burmese military's Department of Procurement. According to the leaked 1995-96 annual report of UMEH, two of its main objectives are "to support military personnel and their families" and "to try and become the main logistics and support organisation for the military by gradually establishing industries".⁴⁴

According to the Burma Campaign UK: "The UMEH has current investments in banking, tourism, import and export of foodstuffs, gems and jade mining and sales, construction materials, leasing of fishing boats, real

estate, and general retail. The UMEH has also been managing the armed forces' pension funds, giving it a ready source of financing. By 1999 the UMEH had established nearly 50 joint ventures with foreign firms."⁴⁵

North Korean-made 122 mm multiple rocket launchers and radar systems have also been delivered to Burma, as the Democratic Voice of Burma, DVB (a Norway-based broadcasting station run by Burmese exiles) reported on June 24, 2010:

“An army source close to the Northern Regional Military Command told DVB that missile launchers, including North Korean-made 122mm Multiple Launch Rocket Systems vehicles, have been moved into place at the Moe Hnyin base in Kachin state. The base is operated by Rocket Battalion 603, and lies around 80 miles southwest of the Kachin state capital, Myitkyina, and equidistant between the Chinese and Indian border. Munitions, including trucks mounted with radar systems known as Fire Control Vehicles, were reportedly delivered from Rangoon over the course of several month's prior to the opening of the base in May. Another radar base known as Duwun (Pole Star) has been opened on a hill close to Moe Hnyin. Two Russian technicians arrived at the base in early May via Myitkyina for a final installation and inspection of the equipment, the source said. It is the fourth such base to be opened in Burma this year; two others are operational in Shan state's Nawnghkio and Kengtung districts, while one was recently opened close to Mandalay division's Kyaukpadaung town.”⁴⁶

This was the second reported arrival of North Korean-made, truck-mounted multiple rocket-launchers in Burma. The first occurred as early as in 2008.

In April of that year, Japan's public broadcaster NHK reported that North Korea had been selling multiple rocket launchers to Burma with a range of about 65 kilometres. The report said that "full-scale" exports of the weapons had been handled by an unnamed Singapore trading company.⁴⁷

6. BURMA'S WMD PROGRAMME

Burma's interest in nuclear power dates back to 1956, when the Union of Burma Atomic Energy Centre, UBAEC, was formed as a department under the Union of Burma Applied Research Institute (UBARI) in Rangoon. UBAEC was headed by Hla Nyunt, a student of Hideki Yukawa, a Japanese theoretical physicist who in 1949 became the first Japanese to win the Nobel Prize for Physics. Yukawa's research was entirely for peaceful purposes as he, in 1955, had joined ten other leading scientists and intellectuals in signing the Russell-Einstein Manifesto, calling for nuclear disarmament. Burma's nuclear research was also for scientific purposes and not related to its Defence industries.

According to *The Irrawaddy*: "UBAEC recruited young and talented physicians and sent them to the US and Britain for further studies. At least six were trained in 1956 at the Argonne National Laboratory, one of the US Department of Energy's largest research centres. Burma was well advanced in those days to develop a nuclear project, compared to neighbouring countries. In the early 1960s, a site for a nuclear research reactor was designated near the Hlaing Campus in Rangoon".⁴⁸

Burma's nuclear research came to a halt when the military seized power in 1962. Hla Nyunt, a member of the old elite, was not trusted by the new military powerholders led by Gen. Ne Win. Then, in February 2001, Burma's new junta, the State Peace and Development Council (SPDC, which replaced the SLORC in 1997) decided to revitalise the country's nuclear programme. In that month, Russia's Atomic Energy Ministry announced plans to build a 10-megawatt nuclear research reactor in central Burma.

In July, Burma's then foreign minister, Win Aung, accompanied by the country's ministers of defence, energy, industry and railroads, travelled to Moscow to finalize the deal. The groundbreaking ceremony for the nuclear facility was scheduled to take place at a secret location near the town of Magwe in January 2002.⁴⁹

Earlier in 2001, Burma had established a Department of Atomic Energy in Rangoon, which was believed to be the brainchild of Burma's Minister of Science and Technology, U Thaug, a graduate of Burma's Defence Services Academy in Maymyo (Pyin Oo Lwin) and a former ambassador to the United States, while a US-trained nuclear scientist, Thein Po Saw, has been identified as a leading advocate for nuclear technology in Burma.

Thein Po Saw was one of the science students who was sent to the United States in the 1950s and later headed the physics department at the Defence Services Academy. He already in 1995 urged the Burmese government to join the Regional Cooperative Agreement for Research, Development and Training in Nuclear Science and Technology in Asia and the Pacific (RCA),

an entity under the auspices of the International Atomic Energy Agency, IAEA, in which governments “undertake, in co-operation with each other and with the IAEA to promote and co-ordinate co-operative research, development (R&D) and training projects in nuclear science and technology through their appropriate national institutions”.⁵⁰

In December 1995, Burma also signed the Treaty on the Southeast Asia Nuclear Weapon-Free Zone, the so-called Bangkok Treaty, which includes a reaffirmation by the ten signatory states of the obligations assumed under the Non-Proliferation Treaty. It also contains a ban on the development, manufacture, possession, control, stationing or transport, testing or use of nuclear weapons.⁵¹

U Thaug’s Ministry of Science and Technology was established in October 1996, five years before the Department of Atomic Energy. At a press conference in Rangoon January 21, 2002, Vice-Chief of Military Intelligence Maj.-Gen. Kyaw Win said: “The ministry has been carrying out tasks for peaceful use of nuclear power that started since 40 years ago. In finding new ways, we have come to know that a nuclear reactor is needed for availability of radioisotopes for promotion of research works and nurturing of youth scientists and engineers. Taking into account of these situations, feasibility studies have been made for construction of a nuclear research reactor. We have received a proposal from the Russian Federation. Burma has followed systematic procedures on this issue according to international obligations... Burma’s consideration of building a nuclear research reactor is based on the peaceful purposes getting modern technologies needed for the country, availability of radioisotopes being used peacefully, training technicians and

performing feasibility study for generation of electricity from nuclear power".⁵²

While Burma suffers from a chronic power shortage, it was not clear why it would need such a research reactor, which is used not for power generation but mainly for medical purposes. Radioisotopes allow physicians to image the brain, bones, liver, spleen, kidney, lung and thyroid, and to study the flow of blood, clearly technology that appears to be much too advanced for Burma's very basic health services.

However, observers noted that the Russian-made nuclear research reactor that the Burmese authorities was interested in acquiring was somewhat similar to the 5 MW research reactor that the then Soviet Union installed at Yongbyon in North Korea in 1965, from which the North Koreans much later were able to extract plutonium for a nuclear device. It is not inconceivable that Burma's military leaders had noticed that North Korea was able to stand up to the US mainly because it had a nuclear programme. In any event, Burma does not now have the means or expertise to develop nuclear devices for military use, and it would take the country decades to develop such a capability.

Then, in April 2007, only days after the restoration of diplomatic ties between Burma and North Korea, a North Korean freighter, the *Kang Nam I*, docked at Thilawa port, 30 kilometres south of Rangoon. Burma officials claimed that the ship had to seek shelter from a storm. But two local Burmese reporters working for a Japanese news agency were turned back and briefly detained when they went to the port to investigate, indicating that

there could have been other, more secret reasons for the arrival of the *Kang Nam I* in a Burma port.

According to *The Irrawaddy*: “It wasn’t the first time a North Korean ship reported running into trouble in Burmese waters — by a strange coincidence, the 2,900-ton North Korean cargo vessel *M V Bong Hoafan* (alternative spelling: *Bonghwasan*) sought shelter from a storm and anchored at a Burmese port last November. The Burmese government reported that an on-board inspection had ‘found no suspicious material or military equipment.’ But journalists and embassies in Rangoon remained sceptical.”⁵³ The South Korean news agency reported that “a North Korean ship under US surveillance was believed to have unloaded self-propelled artillery at a Burma port”.⁵⁴

The *Associated Press* reported on May 23, 2007 about the mysterious arrivals of North Korean ships in Burmese ports:

“Junta Says N Korean Ship Harbored to Take Shelter from Storm

A North Korean ship that docked near Rangoon was in distress and taking shelter from a storm, and inspections by Burma authorities found no suspicious cargo on board, Burma’s Foreign Ministry said Wednesday. In a statement sent to foreign embassies Wednesday, the ministry said a storm caused the North Korean cargo ship *Kang Nam I*, which was sailing in Burma territorial waters, to develop engine trouble in one of its engines and have inadequate supplies of food and water. It was allowed to dock Sunday at Thilawa port, 30 kilometres south of Rangoon, for humanitarian reasons

to make repairs and take on supplies, the statement said. Burma permitted another North Korean cargo ship, the *MV Bong Hoafan*, to anchor at a port last November under similar circumstances and also announced then that it had conducted an inspection and ‘found no suspicious material or military equipment’ on board. Following North Korea’s nuclear test last October, the UN Security Council unanimously approved sanctions that included inspections of North Korean ships. The incident involving the *MV Bong Hoafan* grabbed attention because of suspicions that North Korea supplies weapons and weapons technology to Burma. Both countries are pariah states, shunned by much of the international community, and North Korea has a record of exporting missiles and other weapons to countries that might not otherwise be able to obtain such armaments. Foreign diplomats were similarly curious about the *Kang Nam I*. ‘Burma port authorities of the Ministry of Transport made necessary inspections on board and did not find any suspicious cargo or military equipment aboard the ship,’ said the Foreign Ministry statement, a copy of which was obtained by *The Associated Press*. It said the ship left port in Burma with its captain and 18 crewmembers on Wednesday morning. Burma and North Korea, two of Asia’s most authoritarian countries, signed an agreement last month to resume diplomatic ties. Ties were severed in 1983 after a bombing carried out by North Korean spies seeking to assassinate South Korea’s then-president, Chun Doo Hwan, during a visit to Rangoon”.⁵⁵

The exact nature of Burma’s nuclear programme remains a mystery. After the 2001 agreement with Russia, nothing more happened until May 15, 2007, when Russia’s atomic energy agency, Rosatom, announced that it had agreed to build a 10-megawatt nuclear research reactor in Burma. The deal,

which revived plans which for unknown reasons — but most likely because Burma lacked the necessary funds for the project — were stalled in 2001, was seen as a first real step towards assisting Burma in developing a nuclear energy program.⁵⁶

Rosatom states that the nuclear reactor would use low-enriched uranium, not plutonium, and that 300-350 students from Burma would be trained in Russian institutes in related technology.⁵⁷ According to other reports, about 1,000-2,000 Burma nationals, most of whom are military personnel, have already been trained in Russia under the initial, 2001 agreement. Since then, about 500 have returned to Burma with bachelor or master's degrees. Some of them are known to have studied nuclear technology.⁵⁸

The signatories of the agreement that was reached in Moscow on May 15, 2007 were U Thaung and the head of Rosatom, Sergey Kiriyyenko. According to Rosatom's press release: "The sides have agreed to cooperate on the establishment of a center for nuclear studies in the territory of Burma (the general contractor will be Atomstroyexport). The centre will comprise a 10MW light water reactor working on 20 per cent-enriched uranium-235, an activation analysis laboratory, a medical isotope production laboratory, silicon doping system, nuclear waste treatment and burial facilities. The centre will be controlled by IAEA."⁵⁹

But, intriguingly, the Vienna-based IAEA said on May 17, 2007 that Burma had not reported plans to build a nuclear reactor to the agency despite claims from Moscow that the facility would be overseen by the nuclear watchdog.⁶⁰ Burma is a signatory to the Non-Proliferation Treaty and has a safeguard

agreement with the IAEA that would require the country to allow inspections of its nuclear facilities.

In recent years, there have been supposedly related reports of North Korean interest in Burma's uranium deposits. According to one report from Burmese exiles in Thailand, uranium for the concentrate yellowcake are supposed to have been found near Indawgyi Lake in Burma's northernmost Kachin State. According to another, similar report, mining experts from North Korea have been spotted near Inle Lake in Shan State, also looking for uranium. These reports remain unconfirmed, but a Burma government website has identified uranium ore deposits at the following five locations: Magway (Magwe), Taungdwingyi (south of Bagan), Kyaukphygon (Mogok), Kyauksin (near Mergui, or Myeik), and Paongpyin (Mogok).⁶¹

According to the same Burma government website:

“Studies are ongoing on ways and means to utilise nuclear sources for application and at the same time advantages and disadvantages of nuclear energy and also cause and effect experienced by developing countries on implementation and utilisation of nuclear energy in various fields will be compared and analysis made.

It is planned to make following parallel studies with the aim to study the nuclear energy source for peaceful purpose within the country and will be limited to and focused on social, economic and education aspects.

(a) Study of the development of radioactive ore known to exist in the country;

(b) Building in house capability on nuclear energy to assist in energy sector long term planning.

Interested parties from inside the country and abroad are welcomed for possible cooperation and assistance in both technology and financing on the future development and utilisation of nuclear energy.”

However, Russian, not North Korean, companies are known to have been prospecting for uranium in northern and central Burma. Russia’s state-run oil company Zarubezneft is also involved in oil and gas exploration in Burma, possibly as a concession to Russia for supplying the nuclear reactor. Other Russian companies involved in exploration in Burma include Tyazhpromexport and a company from the autonomous Russian republic Kalmykia.

Kalmykia is a Buddhist republic in European Russia, and the Russian website *Kommersant* reported on March 20, 2007:

“Kalmykia Wins Burma’s Crude, Gas Tender on Religious Fellowship

Russia’s republic Kalmykia won the tender to develop a big oil and gas field in Burma. It will get over 50 percent in the project implemented in partnership with Burma-run MOGE. More likely than not, exactly this undertaking has drawn Basic Element President Oleg Deripaska to

Kalmykia. But the source say the republic has picked out VTB and JP Morgan as alternative investors already. Burma's MOGE sealed a Product Sharing Agreement (PSA) with Singapore's Silver Wave Energy Ltd and Silver Wave Sputnik Petroleum PTE Ltd, the media of Burma reported. The document provides for exploration and production of crude oil and gas from the B-2 mainland block of Burma. Of interest is that in addition to the chiefs of MOGE and Silver Wave Energy, the agreement was signed by Kalmykia's Energy, Oil and Gas Minister Boris Chedyrov.

As it turned out, Silver Wave Sputnik Petroleum was acting on behalf of Kalmykia in that tender and Kalmykia's Deputy Energy Minister Timur Bambuev is on that company's Board of Directors. Bambuev was once a sales director at Kalmneft, which is now under bankruptcy administration.

The 50/50 owners of Silver Wave Sputnik Petroleum are Silver Wave Energy and the British Virgin Islands-incorporated Sputnik Petroleum Ltd. Though no information about Sputnik Petroleum Ltd is available so far, its Russia's equivalent, OOO Sputnik Petroleum, was incorporated in November 2006 in Tatarstan for the purpose of crude oil and gas production. Its CEO is Mr Bambuev, of course.

Kalmykia's Kalmneftegaz which is independent of Kalmneft will be a management company in the project, said Kalmykia's President Kirsan Ilyumzhinov, adding that the project has been elaborated and its budget amounts to 'a few hundred million dollars'. Kalmykia will participate 'both by direct financing and by the personnel and equipment.' Two boring rigs have been supplied to Burma already, according to Ilyumzhinov".⁶²

Russia's involvement in Burma's energy sector, oil and gas as well as uranium and nuclear power, is well documented, but North Korea's is not. It is also highly unlikely that North Korea would be involved in prospecting for uranium in Burma as it has its own uranium mines in Pakchon and Pyongsan. But there seems to be no doubt that North Korea is secretly supplying Burma with military equipment, which may or may not include nuclear components and/or technology, as the recent arrivals of North Korean ships in Burma indicate. Few observers believe the claim that the ships had to seek shelter from "storms"; no untoward weather conditions were reported in the Andaman Sea at the time of the arrival of those ships. But no source is yet not able to confirm exactly what cargo was unloaded from those ships.

Suspect transports by air through Burma have also been noted. In August 2008 India's aviation authorities withdrew previous permission for a North Korean plane to overfly Indian airspace on its way to Iran just before it could take off from Mandalay in northern Burma, where it had made a stopover. At the time, the Indian media reported that the plane, an IL-62, was "part of the country's Air Koryo fleet and was on "non-scheduled-operations, possibly a Government charter."⁶³ It is not known what the Air Koryo plane was carrying, but it was not passengers. The plane, which had flown over China to Burma, then took off back into Chinese airspace and on towards an unknown destination.

Then, in June 2010, the television network al-Jazeera showed its documentary about Burma's nuclear ambitions, produced by the Norway-

based DVB. The outside world is still divided over what to believe, and how to sort fact from fiction. There is, however, a general consensus that the report, in essence, was accurate. Burma is experimenting with nuclear research, it wants to possess a nuclear deterrent, and the country's military is trying to produce its own Scud-type missiles, based on North Korean designs.

The main (but not the only) source for the DVB's documentary is Sai Thein Win, a major in the Burmese army who defected to the West earlier this year. He had been providing the DVB with information for a couple of years before he decided to defect. His personal and professional background was outlined by the Shan Herald Agency for News (S.H.A.N.; a Chiang Mai-based Shan newsgroup), June 8, 2010:

“Nuclear defector's hometown swarmed with junta agents
Tuesday, 08 June 2010 15:35 Hseng Khio Fah

Many official looking strangers have been turning up in Shan State North's Kyaukme Township, hometown of Burma Army missile expert Maj Sai Thein Win, the latest exposé of the Burma ruling military junta's nuclear ambitions recently, according to local sources. Several officers were deployed to the town as soon as the news of the junta's nuclear programme was disclosed and released by the exile media and international media last week. The town and the house of Sai Thein Win have been under watch by the security since, said a local resident who wishes to remain in anonymous.

No one was reported to have been arrested in his hometown up to date. But all the family members of Sai Thein Win were summoned by the officers for interrogation, a source told SHAN. ‘They did not ask much. They just asked his mom whether or not he [Sai Thein Win] was still in contact with the family,’ he said. Sai is the youngest of four siblings. ‘He was a brilliant student,’ a friend remembers. Sai finished his high school in 1993 with distinction in two subjects. He then continued his studies at the Defence Service Technological Academy (DSTA). He served in the army for 15 years, and was promoted to the rank of major. Furthermore, he was a deputy commander of a military factory at Myaing which was built to support the nuclear regiment near Thabeikkyin north of Mandalay, where, he claims, the regime is trying to build a nuclear weapon. He had specialised in rocket engines after five years of study in Russia”.⁶⁴

Sai Thein Win is not known to have been a member of an affiliate of any opposition or pro-democracy group in Burma before becoming a source for the DVB. But a factor that influenced his decision to do so could be that he is an ethnic Shan, and, therefore, somewhat of an outsider in the military, which is heavily dominated by ethnic Burmans. Is it also perhaps worth noting that he comes from Kyaukme, a town in northern Shan State which is located between Hsipaw and Nawngkhio.

Traditionally, Hsipaw has been a stronghold of the Shan national movement, both underground (the Shan State Army), and above ground (the Shan Nationalities League for Democracy (SNLD), which came second after Aung San Suu Kyi’s National League for Democracy (NLD) in the 1990 election. The SNLD was closely allied with the NLD and its chairman, Khun

Htun Oo, now in prison, is a native of Hsipaw. Like the NLD, the SNLD did not take part in the November 2010 election.

Nawngkhio is the base for the Shan State Army-North (SSA-N), a rebel army that entered into a ceasefire agreement with the government on September 2, 1989. The SSA-N should not be confused with the Shan State Army-South, which is led by Col. Yawt Seik and still is fighting the government. However, the two factions of the SSA cooperate clandestinely.

Although there is no evidence to suggest that Sai Thein Win has ever been associated with the SNLD or the SSA-N, it is plausible to assume that he must have been affected by events in and around his hometown, and, as an ethnic Shan, possibly been subjected to discrimination by his fellow, Burman officers. He says that he used to watch DVB on his computer, and, when he once saw an aerial picture (probably Google Earth) of a factory in Myaing, west of Mandalay, where he was working, he decided to contact the DVB and show what was inside that building.

Sai Thein Win has been interviewed at length by Robert Kelley, a veteran US nuclear scientist, and other international arms experts. They have also scrutinized his material, and the overall impression is that he is honest and sincere. In addition, the DVB has used several other sources, including an army colonel who had managed to leave the county and was staying in Singapore. Some time late last year, however, all contacts with him were lost. The present whereabouts of that army colonel are unknown.

The Burmese authorities have tried to belittle Sai Thein Win, claiming that he was “only a captain”, although his military ID clearly shows that he was indeed a major and a commander of the Myaing factory.⁶⁵ The raids in Kyaukme after the airing of the DVB documentary also show how seriously the ruling military views Sai Thein Win’s testimony. On the other hand, according to S.H.A.N., Sai Thein Win has become a local hero since he went public with his revelations:

“The news of Sai Thein Win and the nuclear weapons were so popular among the public now. Everyone talks about him and admires him. But some people are also shocked to learn about the military’s nuclear projects,” said another source. Among the security officers who visited Kyaukme, one was also reported to have said that he also admired Sai’s courage and his ‘well done exposé.’ A Burma watcher in Thailand commented that it was obvious that even the junta’s own army officers were not satisfied with the situation as the country’s income is spent mostly for the nuclear project than on other welfare projects such as public healthcare and education. According to the London-based International Institute for Strategic Studies’ report released in 2007, Burma spent 0.4 percent of its national budget on healthcare and 0.5 percent on education while almost 30 percent was spent on military”.⁶⁶

If correct, that would reflect the same reason as to why Sai Thein Win decided to defect: he says privately that Burma’s experiments with nuclear technology and missiles amount to little more than a disgraceful waste of money. Burma, a poor country, should be spending its meagre resources on health and education, he and others argue. Moreover, the cooperation with North Korea is damaging to the country’s international reputation. For

instance, US senator Jim Webb, a staunch advocate of engagement with Burma's ruling generals, was forced to cancel his visit to the country when al-Jazeera aired the DVB report.

The DVB documentary is not the first to allege that Burma is trying to develop a nuclear device for military use. On August 2, 2009, the *Bangkok Post's* "Spectrum" section carried a cover story titled "Burma's Nuclear Bomb Alive and Ticking".⁶⁷ Written by Desmond Ball, an Australian academic and recognised expert on signals intelligence, and Philip Thornton, an Australian journalist based in Thailand, the article — and its two sidebars — was based more on hearsay than first-hand testimonies. Two sources, a former accountant with a major Burmese corporation and a former lieutenant, provided information for the article, but their conclusions are rather dubious: "According to all the milestones identified by the defectors, Burma's nuclear programme is on schedule".

Kelley's assessment is that Burma nuclear programme is "unprofessional" and "quite primitive," which, in turn, is reported to have angered Burma's junta leader, Gen. Than Shwe: "According to military sources in Naypyitaw, quoted by *The Irrawaddy*, Than Shwe's vented his anger after he read that report — and assumed he had been lied to by officials such as U Thaung, the minister of Science and Technology. U Thaung had asserted that Burma's nuclear goal was close to fruition, a claim that Kelley dismissed categorically."⁶⁸

The DVB report is new and unique in two respects:

1. For the first time, there are witnesses with first-hand experiences of Burma's programmes to develop Weapons of Mass Destruction. Although Sai Thein Win was primarily a missile expert, his knowledge and experience differ considerably from previous witnesses and sources. His revelations are also supported by Aung Lynn Htut, a former intelligence officer attached to the Burmese embassy in Washington who defected in 2004 (after the ouster of intelligence chief Lt.-Gen. Khin Nyunt). He says that Gen. Than Shwe, soon after he came to power in 1992, "thought that if we followed the North Korean example we would not need to take into account America or even need to care about China. In other words, when they have nuclear energy and weapons other countries...won't dare touch Burma." The tunnels and bunkers — some of which are large enough to accommodate hundreds of soldiers — should be seen in the same light, Aung Lynn Htut argues: "It is for their own safety that the government has invested heavily into those tunnel projects".⁶⁹

2. For the first time, international weapons' experts have had the opportunity to scrutinise material brought out of the country by army defectors. Kelley is a former Los Alamos weapons scientist, who was a director with the International Atomic Energy Agency, IAEA, from 1992 to 1993, and again from 2001 to 2005. Based in Vienna, he conducted weapons inspections in Libya, Iraq, and South Africa, and compliance inspections in Egypt, Turkey, South Korea, Taiwan, Syria, Tanzania, Pakistan, India, and Congo, among others. Kelley concludes after a careful study of material produced by Sai Thein Win and some other defectors: "Our assessment of multiple sources is that Burma is really developing nuclear technology, that it has built

specialized equipment and facilities, and it has issued orders to cadre to build a program.”⁷⁰

Kelley wrote in a special report to *The Nation* (Bangkok) on June 22, 2010: “Although Burma’s pursuit of nuclear weapons has long been rumoured, the documentary contains new information from a recent defector who provided DVB with photographs, documents and a view from inside the secretive military that should finally put to rest any doubt about Burma’s nuclear ambition. The evidence includes chemical processing equipment for converting uranium compounds into forms for enrichment, reactors and bombs. Taken altogether in Burma’s covert programme, they have but one use — nuclear weapons. Prior to the airing of the documentary, the DVB invited a team of international experts, including individuals with experience in military tunnelling, missiles, nuclear proliferation, and weapons inspections protocol to review its information and assess its conclusions. The evidence was so consistent — from satellite images to blueprints, colour photographs, insider accounts and detailed budgets — and so copious that I agreed to appear in the documentary to offer my advice concerning Burma’s nuclear ambitions”.⁷¹

So far, sceptics have not been able to conclusively refute any of the data that Sai Thein Win has presented, or Kelley’s conclusions. One of those sceptics, Australian Burma scholar Andrew Selth, presented his views in a commentary in *The Interpreter*, a Lowy Institute for International Policy website, on June 7, 2010. But he was not able to provide any more serious criticism of the documentary than this assessment:

“They rely heavily on the data provided by one mid-ranking officer whose access, while good, was nevertheless limited. In the written report, there are some notable gaps. In places, the language is quite loose and the analysis shallow. The technical issues raised have yet to be verified by other experts. Inevitably, there is a host of unanswered questions”.⁷²

It is worth noting that Selth wrote a paper in 2007, “Burma and Nuclear Proliferation: Policies and Perceptions,” in which he stated that “it is highly unlikely that Burma currently has any intention of acquiring nuclear weapons, from North Korea and anywhere else”. Burma, Selth stated, is “firmly opposed to the manufacture, storage and use of nuclear weapons” and “perceptions (to the contrary) have no factual basis, but they have been encouraged by unsubstantiated rumours, inaccurate and often alarmist news reports, and some questionable strategic analysis. There is probably also an element of deliberate misinformation, designed to fuel concerns that Burma has become a proliferation risk”.⁷³

The report has not convinced Selth and other sceptics that they were wrong, but it has at least prompted them to modify their scepticism and, at least, give the report the benefit of the doubt (“a host of unanswered questions”).

The rather muted official responses to the documentary from Burma as well as North Korea indicate that both countries have secrets, which they want to hide. Significantly, in a meeting from September 27-29, 2010, Burma’s Chief of Military Affairs Security Maj-Gen Kyaw Swe has warned his staff about leaking military documents and has ordered tighter surveillance within military offices and government ministries. In January this year, a special

court in Burma sentenced to death a retired army officer, ex-Maj Win Naing Kyaw, and his associate Thura Kyaw, a staffer at the Ministry of Foreign Affairs, after they were found guilty of leaking documents about secret Burma-North Korean talks.⁷⁴

But, significantly, army defector Sai Thein Win says he saw North Koreans at the country's Defence Industries before he left for Moscow, but, when he returned to Burma, he only saw North Koreans at the (the Defence Services Science and Technology Research Center (DSSTRC) giving a lecture on fire control. Sai Thein Win states that he never saw North Koreans or came across North Korean information at either of the two factories in the nuclear and missile programmes where we worked during his tenure there from 2005 to 2010.

More recent reports from Burma indicate that its nuclear programme is real but more complex than initially thought. According to sources inside the country, there is a "civilian" wing (the Ministry of Science and Technology) and a military wing, the DSSTRC, which is headquartered at Pyin Oo Lwin and in charge of the nuclear facility at Thabeikkyin. The two institutions reportedly fell out in 2007, and it was then that the DSSTRC took over the facility at Thabeikkyin from the Ministry of Science and Technology. There seems to be little or no coordination of the respective activities of the ministry and the DSSTRC.

Most observers would still dismiss Burma's nuclear programme as a pipedream, unlikely to materialise within the foreseeable future, or ever. However, Burma's programme to develop Scud-type missiles should be

taken more seriously. According to exclusive information I have received, one of two major Burmese munitions factories located near the small town of Minhla on the west bank of the Irrawaddy River, south of Minbu in Magway Division, and it is involved in the production of sophisticated Scud-type missiles. North Korean experts are reportedly assisting Burma's own military technicians in the top-secret project.⁷⁵

Known as *ka pa sa*, shorthand for the Burmese-language initials of the Directorate of Defence Industries, the country's weapons factories have for decades produced basic armaments for the military. But *ka pa sa 2* and *10* near Minhla are now churning out more advanced weapons, including Scud-type missiles, than the country has to date. These are more difficult to detect from the air because they are located partly underground.

A Scud-armed Burma would place its capabilities a significant notch above its Southeast Asian neighbours, which do not possess such long-range missiles. The revelations could spark a regional arms race, prompting neighbouring countries such as Thailand to develop or procure their own missile arsenal.

The existence of the two factories was outlined in an August 27, 2004 United States embassy cable from Rangoon, which was made public by WikiLeaks late last year. One of the US Embassy's sources claimed that North Korean workers were assembling surface-to-air missiles at "a military site in Magway Division" where a "concrete-reinforced underground facility" was also under construction. The source told the embassy that "he had seen a large barge carrying a reinforced steel bar of a diameter that

suggested a project larger than a factory.”

It is now clear that the site referred to in the embassy cable is *ka pa sa 10*, situated near Konegyi village in Minhla township. Construction of the site began in 1993, but has only recently been completed. The site reportedly covers 6,000 acres (2,428 hectares) and, according to a source who used to work at the facility, the aim is to produce surface-to-air, surface-to-surface and air-to-air missiles. The North Koreans working at the site reportedly first entered Burma discreetly by road from China. They were met at the border and then brought to Minhla by officers from Burma’s Defence Production Directorate, known as *ka ka htone*, according to the source.

On the Burmese side, between 600 and 900 army technicians and other military personnel are currently based at *ka pa sa 10*. Initially Russian and Chinese technicians also took part in the facility’s construction, but they appear to have since left and been replaced with North Korean experts.

Ka pa sa 2 controls no less than 100,000 acres of land near Malun village, which is also based in Minhla township. According to the source, the somewhat older factory employs 900 engineers and other military personnel and produces 60mm, 81mm and 120mm mortars and 105mm artillery pieces.

The complex also includes a huge firing range where heavy weapons, including artillery and rockets, are tested. According to the source, Singapore, as a small island country which does not have enough space for

such testing, paid for the construction of the firing range. Weapons are also brought from Singapore and tested at the site.

On October 4, 2010, the English-language weekly *Myanmar Times* reported that Burmese authorities had inaugurated on September 19 a “25.4-mile section, or approximately 40 kilometres, of railroad between Minhla in Bago (Pegu) Region and Minbu in Magwe Region”. Construction of the new section, “which is part of the ongoing Kyangin-Pakokku Railroad Project along the western bank of the Ayeyarwady (Irrawaddy) River”, started in April 2007, according to the same news report.

The infrastructure project's opening was presided over by then Prime Minister, now President Thein Sein, underscoring the apparent importance of the short rail link. According to the *Myanmar Times*, Thein Sein also stated that the railroad would enable “the people to have easy access to various regions of the nation”.

The problem with the report is that Minhla in Bago (Pegu) Region is located several miles to the east of the Irrawaddy, and nearly 200 miles or, more than 300 kilometres, south of Minbu. Deliberate or otherwise, the reports confused the location of two towns that share the same name. A 40-kilometre railroad between “upper” Minhla on the western bank — the only stretch of railroad on that side of the river — and Minbu could only serve one major purpose: to transport heavy goods relevant to producing Scud-type missiles or supplying a nuclear programme to and from Minbu, a major port on the Irrawaddy River.

So far, however, there are no reports to suggest that Minhla's two *ka pa sa* facilities are involved in Burma's nascent, clandestine and highly debatable nuclear programme. As noted, nuclear research is reportedly carried out at Myaing to the north of Pakokku, which is also in Magwe (or Magway) Division but far from the Minhla facilities. Still, North Korean involvement in *ka pa sa 2* may be cause for international concern — even for Burma's traditional military partner, China. Following the massive shipments in the 1990s and early 2000s, it appears that Chinese deliveries of military equipment have waned significantly. However, in November 2007, immediately after the crackdown on a widespread protest movement led by Buddhist monks, China supplied Burma with howitzers and bomb-detection equipment.

According to a February 18, 2011, report by the US Congressional Research Service (CRS), China followed that up with a delivery of 450 military trucks in December 2007. In January 2008, China sent another 500 military trucks to Burma and in August that same year supplied an additional 3,500 military trucks with spare parts. In 2009, China delivered another five large military trucks and in March last year sent an additional 400 military use vehicles.

That bilateral cooperation was reaffirmed in September 2010 when Burmese junta leader General Than Shwe travelled to China, ostensibly to update the authorities in Beijing on his country's upcoming elections, which were held in November. During the visit, Than Shwe also inspected Huawei Technologies, which CRS says has supplied Burma's military with communications equipment. At the end of last year, Burma's air force agreed to buy 50 K-8 jet trainers from China; CRS speculates that some of the

assembly work for the order will be done in Burma.

While China remains a major player in the still ongoing expansion of Burma's military forces, it is no longer Burma's main military partner. The regime in Naypyitaw is increasingly turning to North Korea for assistance in clandestine military research and the production of more sophisticated weapons, which seems to be at the top of the junta's list of strategic priorities. As the newly exposed North Korean-staffed facilities indicate, Burma's generals are angling to diversify their sources of hardware and know-how.

7. RECENT DEVELOPMENTS

With the Middle East and North Africa in turmoil, North Korea risks losing some of its oldest and most trusted customers for military hardware. Pyongyang has over the years sold missiles and missile technology to Egypt, Libya, Yemen, the United Arab Emirates, Syria and Iran, representing an important source of export earnings for the reclusive regime. The growing uncertainty among those trade partners could explain why North Korea is now cementing ties with a client much closer to home: military-run Burma. The widely publicized *MV Kang Nam I* affair, and the previously reported arrival of the *MV Bong Hoafan*, were not isolated incidents. Shipping records from Burma show that North Korean ships have been docking regularly at Thilawa and Rangoon ports for almost a decade. Even the ill-fated *Kang Nam I* had docked in Burma long before the 2007 and another incident in June 2009, when the US Navy intercepted the ship in

international waters and forced it to return to North Korea. *The Kang Nam 1* made its first voyage to Burma in February 2002, carrying what was declared as “general cargo”, according to the shipping records.⁷⁶

North Korean shipments are almost invariably specified as “general goods” and sometimes “concrete”, but both in and outgoing cargo is usually handled by Burma’s Ministry of Heavy Industry 2, which supervises the country’s Defence industries, the armed forces' Directorate of Procurement, and the military’s own holding company, the Union of Myanmar Economic Holdings (UMEH).

When the *MV Bochon*, another North Korean ship, arrived at Thilawa in October 2002, the Burmese military’s high command sent a document marked “top secret” to the port authorities, requesting them to clear the entire docking area for “security reasons”. They were also advised, according to the shipping records, that some “important cargo” would be offloaded within 36 hours.⁷⁷

When the *MV Chong Gen* approached Thilawa on April 12, 2010, it asked for permission to fly a Burmese flag instead of its North Korean one, according to the shipping records. The captain also requested a Burmese SMC card (smart media card) for a mobile phone, along with coastal charts. These were odd requests for a ship that was officially carrying 2,900 tons of cement and 2,105 tons of “general goods” from the North Korean port of Nampo.

Some requests made by North Korean ships travelling to Burma have often

been outright bizarre. *MV Du Man Gang* appears to be one of the most regular North Korean visitors at Thilawa. On one of its many trips to Burma, in July 2009 it asked for 150 crates of Burmese brandy. In March 2010, when another North Korean ship, the *MV Kan Baek San*, arrived in Burma, the North Korean ambassador asked for an unspecified quantity of Burmese vodka to be sent to the ship, according to the shipping records.

The involvement of North Korean diplomats in these shipments is otherwise more convoluted. In September 2009, the *MV Sam Il Po* docked at a smaller terminal in Rangoon and both the North Korean ambassador Kim Sok Chol and Defence attaché Kim Kwang Chol were present to inspect the cargo along with Lt Col Thein Toe from the Burmese military. The unspecified cargo was received by UMEH, which in return supplied 1,500 tons of rice which was taken back to North Korea.

That was not the only incident when North Korean freighters returned with Burma rice. The *MV So Hung* arrived in November 2008 with 295 tons of material for the Ministry of Defence and left with 500 tons of rice. When the *MV Du Man Gang* docked in July 2009 it left with not only brandy but also 8,000 tons of rice. In June 2010, the *MV An San* arrived with 7,022 tons of what was alleged to be “concrete” and left in July with 7,000 tons of rice.

All this seems to confirm what diplomatic observers have long suspected: that Burma and North Korea, two countries with limited access to bank and other international financial trade facilities, are engaged in barter trade. Burma’s ruling generals want more weapons but often don't have the foreign funds handy to pay for them — or at least they don't want such transactions

to show up in their bank records. North Korea, meanwhile, is starved for food and likewise lacks the finances to pay for imports.

When money is involved in North Korea-Burma trade, transactions are always done in cash and thus untraceable. Like all other ships, North Korean ones have to pay port fees in Burma. The *MV Du Man Gang*, for instance, asked to pay US\$30,994 in cash rather than make a bank transfer. Other ships have made similar requests which have led to speculation about the kind of currency the North Koreans, notorious for counterfeiting US dollars, may be using.

Large quantities of counterfeit US notes have recently shown up in areas around Burma. In July and August 2009, a customer tried to change U \$10,000 in fake notes at the State Bank of India's main office in Imphal, Manipur. The fake bills were all of the US\$100 denomination and of excellent quality, according to sources. It was the first such incident in Manipur. Although it is not clear whether the bogus notes were printed in North Korea, Imphal is located just over 100 kilometres from Moreh, an Indian town opposite Burma's Tamu where a virtually unregulated border trade is booming.

Trade between North Korea and Burma is also apparently being done through front companies. In June 2010, the North Korean freighter *MV Ryu Gong* arrived with 12,838 tons of what was also described as "cement". While the shipment was handled by the Ministry of Heavy Industry 2, the stated recipient was a little-known company known as *Shwe Me*, or "black gold" in Burma.

Port documents show that the company has nearly a million US dollars in assets but what it actually intended to do with all that cement is unclear. Just as puzzling is the involvement of Singapore-based shipping companies, which handle most of the logistics and operate under innocuous sounding names including words like “maritime” and “services”. One of the companies has a distinct Korean name but is actually based in Singapore.

Port records point to a brisk trade between North Korea and Burma, all of which is handled by Burma’s military rather than civilian-owned private companies. As stated above, when, in August 2010, then Prime Minister and now President Thein Sein received a delegation from Pyongyang, the official Korea Central News Agency, reported that he had said that, “the government of Myanmar will continue to strive for strengthening and development of the friendly and cooperative relations between the two countries”.

With those intentions publicly well-stated, Burma may well be on its way in overtaking Egypt, Libya and other traditional military trading partners in the Middle East and North Africa as North Korea’s main market for its military hardware.

North Korean ships have continued to arrive in Burmese ports. The last recorded attempt to ship WMD-related equipment from North Korea to Burma took place in May-June 2011, several months after Thein Sein became president and government officials claimed that there was no WMD cooperation with North Korea. The BBC reported:

“US warship intercepted and halted a North Korean vessel that was bound for Burma and was suspected of carrying missile technology, US media report. The *USS McCampbell* caught up with the cargo vessel on May 26, the *New York Times* quoted US officials as saying. The destroyer approached the *M/V Light* and asked to board, but the North Koreans refused. The ship turned round and returned home a few days later. *Associated Press* said the White House confirmed the substance of the story. The *M/V Light* was intercepted south of Shanghai. The Americans attempted to board on four occasions, according to the *New York Times*, but the navy did not force its way on to the cargo ship after permission was refused. A few days later the *M/V Light* stopped and then turned back to its homeport, tracked by US surveillance planes and satellites. The *New York Times* said there had been several days of pressure from the US and some Asian nations. Gary Samore, special assistant to President Barack Obama on weapons of mass destruction, told South Korean media that the ship may have been bound for Burma carrying small arms or missile-related items.”⁷⁸

8. CONCLUSION

In conclusion, there seems to be little doubt that Burma has embarked on a programme to develop Weapons of Mass Destruction. However, given the country’s lack of technological expertise and limited infrastructure, it may be little more than a grand scheme that will never produce the desired results. The pursuit of nuclear weapons is far beyond the current financial and technological capacity of Burma’s regime. According to experts, Burmese nuclear techniques are outdated and ineffective. However, the missile

program should be taken more seriously, and there is no doubt that North Korea is assisting Burma in these endeavours.

North Korea is also known to have sold various kinds of weapons to Burma and provided construction engineers with expertise in tunnelling as well as systems. Burma and North Korea share a similar mindset in regards to relations with the outside world, especially the United States. But rather than making Burma more secure and cash-strapped North Korea richer, the fact that the two sides have established strategic and military ties will likely lead to further international condemnation of both regimes.

Furthermore, Burma is a member of the Association of Southeast Asian Nations, Asean, and fellow members such as Thailand, Singapore and Malaysia are not likely to accept passively any sort of North Korean military presence in their region. South Korea has also become one of Burma's leading trade partners and a major investor, and closer military cooperation with North Korea could risk antagonising the flourishing commercial relationship with South Korea. By forging an alliance with North Korea, the leaders of Burma may in fact be encouraging the very development they fear the most: active outside intervention in what they consider to be their "internal affairs".

APPENDIX: BURMA'S DEFENCE INDUSTRIES (*ka pa sa*)

The Directorate of Defence Industries (DDI) is the major department controlling the factories producing military weaponry for Army, Navy and

Air Force of Burma's Armed Forces (the *tatmadaw*). It has been in existence since the 1950s but, in the past, manufactured mainly small arms and ammunition for these weapons. Among them were the G-2, G-3, and G-4, rifles, the standard weapons used well into the 1980s. The G-series of automatic weapons and other armaments were produced in collaboration with the German company Fritz Werner Co. For the company's own version of its activities, see <http://www.fritz-werner.com/histor.htm>

In recent years, the structure of the DDI has changed dramatically. Today, it is producing not only small arms but also heavy weapons and shells for heavy artillery. Moreover, it is attempting to develop surface-to-surface missiles and surface-to-air missiles, and it is also engaged in nuclear-related research.

DDI headquartered at the new capital Naypyitaw. The Chief Officer of Defence Industries is a lieutenant general with a brigadier as his deputy. The DDI has two main branches, Administration and Production. The current Chief Officer is Lt. Gen. Tin Aye and his deputy is Brig. Thein Htay who replaced Brig. Khin Maung Win. There are more than 20 factories under the control of DDI producing all sorts of arms and ammunition for the *tatmadaw*. These and related facilities are as follows:

1. **Defence Industries Inventory Unit (*ka hta pa*)** is situated on Inya Lake Hotel Road, Rangoon, opposite Inya Lake Hotel. Its area is about fifty acres. 200 soldiers are stationed at this unit. It is

- responsible for the purchase and distribution of raw materials and finished products needed in Defence factories.
2. **Defence Industries Training School** is situated in Pyingyi village, Padaung Township, Pegu Division. It covers an area of about 700 acres and over 400 soldiers are stationed there, most of them studying. It teaches basic mechanical skills and technology to workers at all the Defence factories.
 3. **DI-1 (*ka pa sa 1*)** is located in the same compound as DI Inventory Unit in front of Inya Lake Hotel. It has more than 600 soldiers who are engaged in the final production of the Myanmar Army's (MA) new series of automatic weapons MA-1, MA-2, MA-3 and MA-4 (these weapons are otherwise produced by DI-11, see below.)
 4. **DI-2 (*ka pa sa 2*)** is situated north of Malun village, Upper Minhla Township, Magway Region. More than 900 soldier-workers are stationed in this area which covers 100,000 acres. There is also a 100-mile long test-firing range built by Singapore. Arms purchase from Singapore were tested here besides monthly and yearly testing of arms and ammo manufactured by Burma's own DI factories. DI-2 produces 120mm, 105mm, 81mm, 60mm mortars/artillery pieces, and MA-5 weapons.
 5. **DI-3 (*ka pa sa 3*)** is at Sinte Sakhon, Padaung Township, Bago Region. It has an area of over 3000 acres and with 900 soldier-workers stationed there. DI-3 manufactures 120mm, 60mm, 105mm and 81mm shells. Its current productivity is roundabout 40,000 shells of each of those kinds per month.

6. **DI-4 (*ka pa sa 4*)** is located on Kaba Aye Pagoda Road in Yangon on an area of about 100 acres where more than 400 soldiers are working. Their cury is to repair machinery of all Defence factories, fix any equipment that it could not repair by contacting foreign suppliers for spareparts and knowhow.
7. **DI-5 (*ka pa sa 5*)** is situated near Kamyaing village, Padaung Township, Bago Region. It covers 3000 acres with over 700 soldiers. It produces two kinds of explosives: propellants and high explosives.
8. **DI-6 (*ka pa sa 6*)** is situated at Nyaung Chay Htauk village in Padaung Township, Bago Region. It covers 3000 acres and over 900 soldiers work there. The factory produces bullet casings for small arms and copper sheets. The steel plant used for arms manufacture was built by Chinese technicians.
9. **DI-7 (*ka pa sa 7*)** is located near Kyawswa Fertilizer Plant in Pyay (Prome) Township, Bago Region. It covers an area of 3000 acres with over 400 soldiers working there and guarding the facility. Their duty is to manufacture and repair of naval mines, depth charges and armored cars. Part of the facility is located underground.
10. **DI-8 (*ka pa sa 8*)** is located near Sin Paung Wea town, Magway Region. It has as area of more than 4000 acres of land and employs over 300 soldier-workers producing parts for tanks and armored vehicles.
11. **DI-9 (*ka pa sa 9*)** is situated near Kyaukphoo village, Padaung Township, Bago Region. It has as area of more than 4000 acres of land and employs over 600 soldiers who manufacture ammunition for MA-1, MA-2, MA-3, MA-4 and MA-5 rifles.

12. **DI-10 (*ka pa sa 10*)** is near Konegyi village, Upper Minhla Township, Magway Region. More than 600 soldiers are working on a 6000-acre wide area. The factory was built in 1993 to produce missile, surface-to-air missiles, air-to-air missiles and rockets. Technicians from South Korea, North Korea, China and Russia contributed to the construction of this facility. Equipment for the factory was ordered from South Korea, China and Russia. The construction of the factory and the installment of machinery were finished in 2003-2004. Part of this facility is located underground, and North Korean tunnelling experts are reported to have assisted the Burmese army in building these. North Korean technicians are also reportedly taking part in the production of missiles and missile components. This is believed to be the main site for missile R&D in Burma.
13. **DI-11 (*ka pa sa 11*)** is located near Leinmaw Chan village, Taikkyi Township, Bago Region. It has an area of over 5000 acres where over 1000 soldiers are working. Construction of the factory began in early 1993 with machinery purchased from South Korean Daewoo Co., and it was completed in 1995-96. The factory produces small arms such as MA-1, MA-2, MA-3 and MA-4. DI-11 is the government's most reliable factory when it comes to the production of small arms.
14. **DI-12 (*ka pa sa 12*)** is located three miles (five kilometres) south of Sakhangyi and Padaukpin villages in Thayet Township, Magway Region. Construction began in 1996 and has a manpower capacity of 1445 soldier-workers but currently has only 400 soldiers at the facility. It produces 120mm, 105mm, 81mm and 60mm shells. Its area covers 16000 acres and is divided into two portions run assistance from two. In the first portion, South Korean Daewoo Co. helps produce shell

body and tail fins while the second portion was for manufacture of inner fuses and high explosives using Czech machinery (which was supplied before the Czech Republic joined NATO and the EU and then terminated all military cooperation with Burma). Because the machinery at this facility used modern electronic controllers, it can produce more weapons than DI-3.

15. **DI-13 (*ka pa sa 13*)** is located near Letpan village, Sin Paung Wea Township, Magway Region. It covers more than 8000 acres and its more than 400 soldier-workers manufacture depth charges and parts for artillery pieces. It is associated with DI-2.
16. **DI-14 (*ka pa sa 14*)** is situated in Nga-pe, Magwe Region. It covers an area of more than 10,000 acres and 400 soldiers are stationed there. Its production is related to that of DI-9, and the intention is that it shall produce small arms ammunition. However, due to lack of funds, the facility is not yet operational. It is also planned to produce Katyusha-type multiple rocket launchers. These will most likely be based on North Korean versions of the original Soviet weapon. North Korea is one of the countries that make its own Katyusha-type multiple rocket launchers. North Korea is known to have supplied the Hizbollah forces in Lebanon with such rockets (via Iran and Syria).
17. **DI-15 (*ka pa sa 15*)** is located near Myothit, Taungdwingyi Township, Magway Region. It covers an area of more than 10,000 acres and will house 400 soldiers/workers once it has been finished. It is believed to still be under construction.

18. **DI-16 (*ka pa sa 16*)** is adjacent to DI-6 (see above). Its area is over 10,000 acres and more than 700 soldiers are producing gunpowder or explosives.
19. **DI-17 (*ka pa sa 17*)** will be located near Dabala Shwe Pandaw village, Aunglan Township, Thayet, Magway Region. No construction has begun but it will encompass over 20,000 acres and will produce rockets, possibly with North Korean assistance.
20. Locations have yet been chosen for planned **DI-18** and **DI-19**
21. **DI-20 (*ka pa sa 20*)** is a new facility at in Sidoktaya, Magway Region, a secluded and sparsely populated area. 100,000 acres of land have been cleared and construction of the huge facility, which includes helicopter landing pads, is almost completed. Its reported aim is to produce nuclear weapons, although this programme is not believed to have moved beyond the research stage. Officers graduated from the Defence Services Technology Academy (DSAT) at Pyin-oo-lwin, who were sent to Russia where they studied nuclear technology, are stationed here along with at least 400 soldiers. A huge hydroelectric power station (with a dam and a reservoir) has been built nearby (**Topographic map reference:** Burma 1:250,000: Series U542, U.S. Army Map: NF 46-15: Myohaung, Monechaung dam near Sidoktaya [20° 27' N, 94° 15' E], grid square reference: 11\8, 23\4 <http://www.lib.utexas.edu/maps/ams/burma/txu-oclc-6924198-nf46-15.jpg> The Google Earth exposure of the dam area shows the extensive clearing that took place before the dam barrier was built.
22. **DI-25 (*ka pa sa 25*)** is situated in Laungshay, Magway Region. It is meant to produce missiles or rockets.

(locations of DIs 21, 22, 23 and 24 are not known)

The expansion of Burma's arms Defence industries, including mega-projects, begun after Gen. Than Shwe became Commander-in-Chief in 1992 and later Supreme Commander. The first priority was to make medium- and long-range missile: surface-to-surface, surface-to-air and, air-to-air.

Designers from DI-4 were ordered to make blueprints and submit detailed plans, and the project was approved in early 1993. After this, the military began to search for sites where the factories could be built, and experts from foreign countries, and foreign institutions and suppliers, were contacted. This outside assistance, the construction, purchase and installation of equipment began. Technicians were called from South Korea, North Korea, China and Russia. Machinery for the factories was imported from South Korea, China and Russia. The first new factory was completed in 2003-2004 and production commenced.

South Korean technicians from South Korea's Daewoo Co. were called to build some of the plants while North Korean technicians were employed for other tasks at various locations. The regime made sure to keep the South and North Koreans apart from each other. At that time, Burma and North Korea had not yet resumed formal diplomatic relations but were having secret contacts. North Korean technicians were "smuggled" through China and across the Sino-Burmese border at Jiegao-Muse. Recruitment of technicians and labour, import of machinery and billing were done in secret through proxy companies. One of these alleged proxies was a company called **Soe**

Min Htike Co. According to one Burmese website (January 19, 2011), the government got in touch secretly with North Korea experts before 2007, and used Soe Min Htike for contacts with North Korea. Soe Min Htike Company was reportedly made responsible for sending North Korea experts to Burma, buying equipment and raw materials for factory, and as a conduit for payments for the equipment and the services of the North Koreans.

(<http://photayokeking.org/hot-news/109-19-january-hot-article>)

Payments were made through intricate and convoluted ways and methods, so that only the top leadership would know what was being done. Payments were made possible because of revenues from the sale of gas to neighbouring countries, mainly Thailand. These revenues do not enter state coffers but are placed into accounts opened in some foreign countries (mainly, it is believed, in Singapore). These accounts are managed by trusted officers in Union of Myanmar Economic Holdings Ltd. (UMEHL) and Myanmar Economic Corporation (MEC), which, in turn, is run by DI chief, Lt. Gen. Tin Aye.

The first phase of the government's arms expansion scheme and related mega-projects includes not only the production of basic, SCUD-type missiles (based on North Korean designs), but also the purchase of more advanced missiles from abroad.

The second phase of the government's arms expansion scheme and related mega-projects is to possess nuclear weapons. This seems like complete madness as Burma has neither the funds nor the capacity to produce such weapons. But the doctrine is based on studying the North Korean example;

North Korea has managed to “fend off” any planned, real or imagined, foreign interventions because it possesses nuclear weapons. “Nuclear blackmail” has also been used to get food aid and fuel. Burma is now following a similar strategy in dealing with the outside world; US Secretary of State Hillary Clinton’s visit to Burma in December 2011 was a direct outcome of this — not US concerns about democracy and human rights.

Ends

¹ Quoted in Andrew Selth, *Burma's North Korean Gambit: A Challenge to Regional Security?* Strategic and Defence Studies Centre, Canberra Papers on Strategy and Defence No 154. Canberra: The Australian National University, 2004, p. 4.

² Ibid. p.5.

³ B.K. Gills, *Korea versus Korea: A Case of Contested Legitimacy*, London: Routledge, 1996, p. 101. Also quoted in Selth, op. cit., p. 5.

⁴ Shim Jae Hoon, "Patience Rewarded", *Far Eastern Economic Review*, 17 November 1983.

⁵ I visited Panghsang in 1986-87.

⁶ Joseph S. Bermudez, *Terrorism: the North Korean Connection*, New York and London: Crane Russak, the Taylor and Francis Group, 1990, p. 139.

⁷ Ibid., p. 140.

⁸ Bermudez, op. cit., p. 140.

⁹ For an account of the 1989 CPB mutiny, see Bertil Lintner, *The Rise and Fall of the Communist Party of Burma*, Ithaca, New York: Cornell University Southeast Asia Program, 1990.

¹⁰ Bertil Lintner, "Regional Rivals Leading Burma Astray", *Jane's Defence Weekly*, June 15, 1991.

¹¹ Andrew Selth, *Burma's Arms Procurement Programme*, Canberra: Australian National University, Strategic and Defence Studies Centre, Working Paper No. 289, 1995; Bertil Lintner, "The Islamabad Link", *India Today*, September 30, 1990; and Bertil Lintner, "Myanmar's Chinese Connection", *International Defence Review*, November 1994.

¹² Bertil Lintner, "Arms for Eyes", *Far Eastern Economic Review*, December 16, 1993; and Bertil Lintner, "Burma Road", *Far Eastern Economic Review*, November 6, 1997.

¹³ <http://www.subcontinent.com/sapra/bulletin/96jan/si960101.html> ("Intensification of Chinese activity in the Andaman Sea can also be seen from the success of the Indian Coast Guard in August 1994, when it apprehended three Chinese trawlers, flying the Myanmar flag, in Indian waters off Narcondam island. Aboard the trawlers were several detailed charts clearly identifying hydrographic details of the waters around the Andaman islands. The trawlers were believed to have been heading towards the Great Coco island") and Andrew Selth, *Chinese Military Bases in Burma: The Explosion of a Myth*, Brisbane: Griffith Asia Institute, Griffith University, p. 16. Although Selth questions reports on "Chinese bases" in Burma, he does not dispute that the incident in August 1994 really happened.

¹⁴ www.burmalibrary.org/docs4/China-Burma_Chronology.pdf and Bertil Lintner, “China and South Asia’s East”, *Himal* magazine, October 2002.

¹⁵ Clifford McCoy, “Burma’s losing military strategy”, *Asia Times Online*, October 7, 2006.

¹⁶ Selth, *Burma’s North Korea Gambit*, p. 19.

¹⁷ See also Bertil Lintner, “Clouded Alliance: North Korea’s and Myanmar’s Covert Ties”, *Jane’s Intelligence Review*, September 2009.

¹⁸ Details about those meetings were passed to me by intelligence sources in Bangkok in 1993 and 1994.

¹⁹ http://www.healthcare.reachinformation.com/Rangoon_bombing.aspx (this link also contains a complete list of victims of the 1983 bombing).

²⁰ “Burma-North Korea/Arms”, *Voice of America*, Washington, August 4, 1998.

²¹ “N. Korea, Burma explore military cooperation”, *Kyodo*, Seoul, July 3, 2007.

²² “NK, Burma Increase Military Cooperation”, *Korean Information Service*, July 3, 2001.

²³ Selth, *Burma’s North Korea Gambit*, p. 21.

²⁴ This was the first report in the international media about the arrival of North Korean technicians in Burma.

²⁵ Selth, *op cit.*, p. 19.

²⁶ *Ibid.*, p. 21.

²⁷ Bertil Lintner and Shawn Crispin, “Dangerous Bedfellows”. *Far Eastern Economic Review*, November 20, 2003.

²⁸ see <http://www.wisconsinproject.org/countries/nkorea/missileupdate2005.html>

²⁹ Bertil Lintner, “Burma and North Korea share a tunnel vision”, *Asia Times Online*, July 19, 2006.

³⁰ <http://www.burmanet.org/news/2006/08/01/irrawaddy-burma%E2%80%99s-north-korea-connection-aung-zaw/>

³¹ Available at <http://www.kcna.co.jp/item/2007/200704/news04/27.htm#1>

³² “Restored ties will benefit Burma and N. Korea”, *Straits Times*, April 30, 2007.

³³ “North Korean diplomats arrive in Burma to open embassy”, *Associated Press* [Rangoon], August 18, 2007.

- ³⁴ Lalit K. Jha, “Renewed Burma-N Korea relations Draws US Attention”, *Irrawaddy* [online edition], April 27, 2007.
- ³⁵ “North Korea linked to covert missile, nuke trade,” *The Washington Times*, November 10, 2010. <http://www.washingtontimes.com/news/2010/nov/10/n-korea-linked-to-covert-missile-nuke-trade/>
- ³⁶ http://webcache.googleusercontent.com/search?q=cache:6dOE4Y_-JJAJ:www.nkeconwatch.com/category/dprk-organizations/companies/namchongang-trading-corporation/+namchongang+Burma&cd=9&hl=en&ct=clnk
- ³⁷ <http://www.kcna.co.jp/item/2007/200709/news09/15.htm>
- ³⁸ <http://www.kcna.co.jp/item/2007/200709/news09/18.htm>
- ³⁹ <http://www.kcna.co.jp/item/2007/200709/news09/18.htm>
- ⁴⁰ <http://www.kcna.co.jp/item/2007/200709/news09/18.htm>
- ⁴¹ The report, including the pictures, is in my possession. An English translation of the report is available at <http://www.dvb.no/burmas-nuclear-ambitions/burmas-nuclear-ambitions-military-docs/military-docs/9279>
- ⁴² <http://www.kcna.co.jp/item/2010/201008/news01/20100708-04ee.html>
- ⁴³ <http://www.kcna.co.jp/item/2010/201006/news20/20100620-03ee.html>
- ⁴⁴ www.irrawaddy.org/com/2003/com31.html
- ⁴⁵ http://www.burmacampaign.org.uk/reports/targeted_sanctions.htm#f
- ⁴⁶ <http://www.dvb.no/news/n-korea-missiles-at-burma-base/10425>
- ⁴⁷ <http://nkmonitor.wordpress.com/>
- ⁴⁸ Aung Zaw, “Burma Plays the Nuclear Card”. *Irrawaddy*, July 2007.
- ⁴⁹ Bertil Lintner, “Burma Joins the Nuclear Club”. *Far Eastern Economic Review*, December 27, 2001.
- ⁵⁰ http://www.rcaro.org/board/view.php?board=rca_aboutrea&no=2
- ⁵¹ *1995 United Nations Disarmament Yearbook*, New York: United Nations, p. 254.
- ⁵² <http://www.Burma.gov.mm/press/Press2002/jan/jan21press.html>
- ⁵³ “Burma plays nuclear card”, *Irrawaddy*, July 2007
- ⁵⁴ “Burma, N. Korea sign pact to restore diplomatic relations”, *Kyodo* [Rangoon], April 26, 2007.

- ⁵⁵ http://irrawaddymedia.com/article.php?art_id=7259&Submit=Submit
- ⁵⁶ “Russia to build nuclear reactor for Burma”, *Financial Times*, May 15, 2007.
- ⁵⁷ “Myanmar Signs deal With Rosatom to Build Nuclear Research reactor,”. *WMD Insights*, June 2007, at http://www.wmdinsights.com/i16/i16_ea2_myanmarsigns.htm
- ⁵⁸ The United Kingdom Parliament, “Burma”, answer from Dr Howells to Mr Clifton-Brown, *Hansard*, July 10, 2006.
- ⁵⁹ http://www.rosatom.ru/en/news/4674_15.05.2007
- ⁶⁰ <http://english.dvb.no/news.php?id=107>
- ⁶¹ http://www.energy.gov.mm/Nuclear_1_2.htm
- ⁶² http://www.kommersant.com/p751325/r_500/tender_gas_oil/
- ⁶³ “India doesn’t let North Korean plane overfly to Iran,” *Indian Express*, August 8, 2008. <http://www.indianexpress.com/news/india-doesnt-let-north-korea-plane-overfly/346218/>
- ⁶⁴ http://www.shanland.org/index.php?option=com_content&view=article&id=3057:nuclear-defectors-hometown-swarmed-with-junta-agents&catid=86:war&Itemid=284
- ⁶⁵ A copy of a letter that promotes Sai Thein Win as a major and a commander of the Myaing Factory is available at <http://www.dvb.no/burmas-nuclear-ambitions/burmas-nuclear-ambitions-nuclear/sai-thein-win/9291>
- ⁶⁶ http://www.shanland.org/index.php?option=com_content&view=article&id=3057:nuclear-defectors-hometown-swarmed-with-junta-agents&catid=86:war&Itemid=284
- ⁶⁷ <http://www.bangkokpost.com/news/investigation/21362/burma-s-nuclear-bomb-alive-and-ticking>
- ⁶⁸ http://www.irrawaddy.org/article.php?art_id=18842
- ⁶⁹ http://www.irrawaddy.org/article.php?art_id=18929
- ⁷⁰ <http://www.dvb.no/burmas-nuclear-ambitions/burmas-nuclear-ambitions-nuclear/expert-analysis/9297>
- ⁷¹ <http://www.burmanet.org/news/2010/06/22/nation-thailand-burmas-nuclear-ambition-is-apparently-real-and-alarming-%E2%80%93-robert-kelly/>
- ⁷² <http://www.lowyinterpreter.org/post/2010/06/07/Does-Burma-have-a-WMD-program.aspx>

⁷³ This and other papers from Griffith University's Asia Institute are available at <http://www.griffith.edu.au/business/griffith-asia-institute/publications/regional-outlook>

⁷⁴ http://www.irrawaddy.org/article.php?art_id=19603

⁷⁵ See Bertil Lintner, "Myanmar and North Korea in Missile Nexus", *Asia Times Online*, March 2, 2011, at http://www.atimes.com/atimes/Southeast_Asia/MC02Ae01.html

⁷⁶ See Bertil Lintner, "Fog Lifts on Myanmar-North Korea Barter", *Asia Times Online*, March 4, 2011, at http://www.atimes.com/atimes/Southeast_Asia/MC04Ae01.html

⁷⁷ This and other original documents from the port authorities in Rangoon and Thilawa are in my possession.

⁷⁸ <http://www.bbc.co.uk/news/world-asia-pacific-13747912>