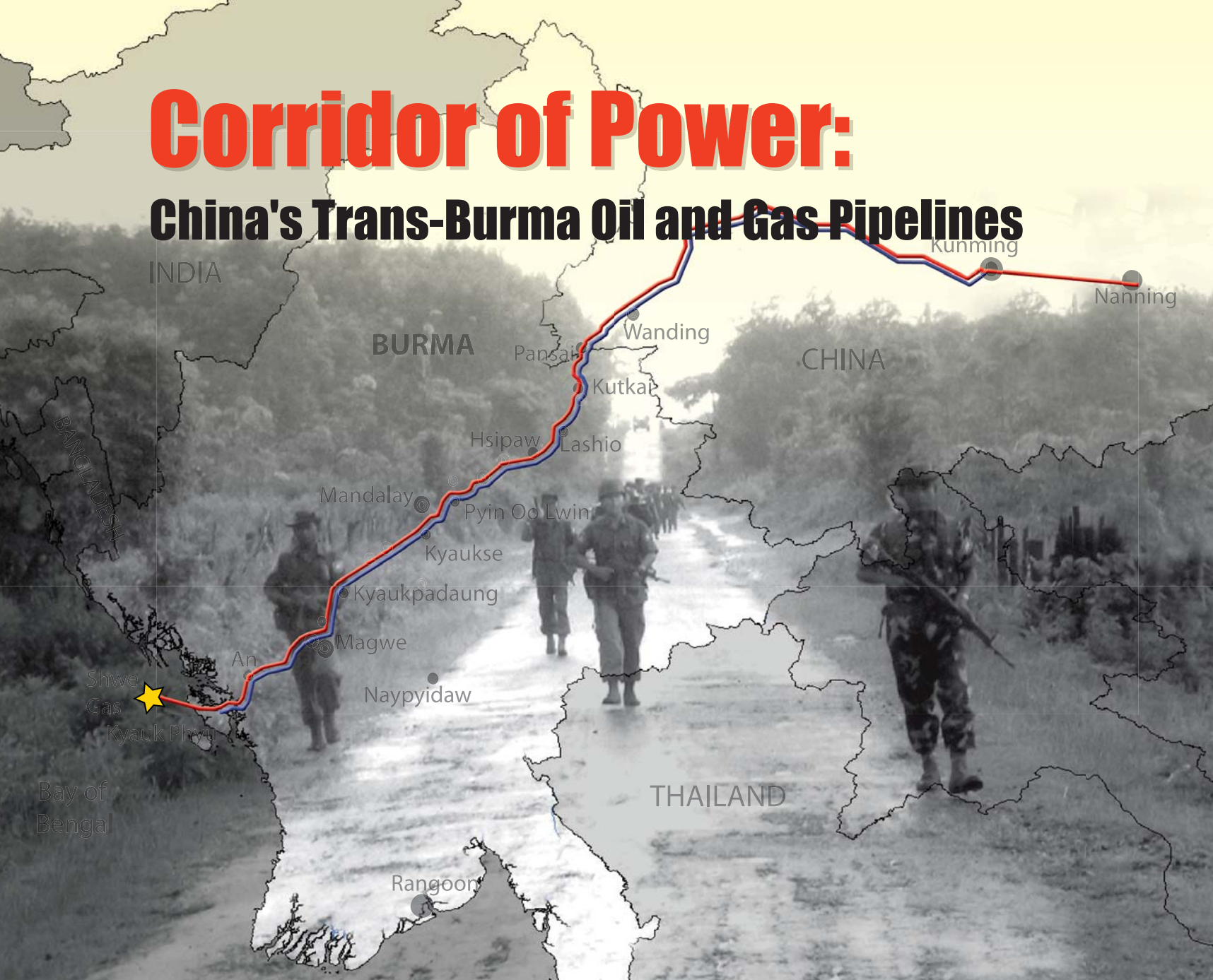


Corridor of Power:

China's Trans-Burma Oil and Gas Pipelines



INDIA

BURMA

CHINA

Kunming

Nanning

Wanding

Pansai

Kutkat

Hsipaw

Lashio

Mandalay

Pyin Oo Lwin

Kyaukse

Kyaukpadaung

Magwe

An

Naypyidaw

Shwe Gas

Kyauk Phyu

Bay of Bengal

THAILAND

Rangoon

Published in September 2009 by the Shwe Gas Movement (SGM)

The SGM is an alliance of non-governmental organizations and individuals from Burma campaigning against the Shwe Gas Project and for human rights and environmental justice. Its members include the All Arakan Students' and Youths' Congress (AASYC), Arakan Oil Watch (AOW), the Shwe Gas Movement-India, and Shwe Gas Movement-Bangladesh. Initiated by the AASYC, SGM is headquartered in Thailand, with support networks of academics, journalists, lawyers, workers and activists in Bangladesh, India, South Korea, North America as well as groups of dedicated activists in Burma.

Front cover photo: Burma Army soldiers patrolling the Kanbauk-Myaing Kalay gas pipeline in Thanbyuzayat Township of Mon State, photo by Human Rights Foundation of Monland

Back cover photo: Exploratory rig of American company Atwood Oceanics in the A-1 Block, photo by Daewoo International

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terms and acronyms

ASEAN	Association of Southeast Asian Nations
BTU	British Thermal Unit, a measurement of energy consumption
CNPC	China National Petroleum Corporation
GAIL	Gas Authority of India, Ltd
Kyat	the official currency of Burma
KOGAS	Korea Gas Corporation
MBTU	one million BTUs*
MMCFD	million cubic feet per day
MOGE	Myanmar Oil and Gas Enterprise
MOU	Memorandum of Understanding
ONGC Videsh	Oil and Natural Gas Corporation Videsh, Ltd
PSC	Production Sharing Contract
SPDC	State Peace and Development Council
tcf	trillion cubic feet

* MBTU is occasionally used as a standard unit of measurement for natural gas and provides a convenient basis for comparing the energy content of various grades of natural gas and other fuels. One cubic foot of natural gas produces approximately 1,000 BTUs, so 1,000 cubic feet of gas is comparable to 1 MBTU. MBTU is occasionally expressed as MMBTU, which is intended to represent a thousand thousand BTUs. Information from: <http://www.energyvortex.com>

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INDIA

BURMA

CHINA

BANGLADESH

Bay of Bengal

THAILAND

Shwe Gas
Kyauk Phyu

An

Magwe

Naypyidaw

Mandalay

Pyin Oo Lwin

Kyaukse

Kyaukpadaung

Hsipaw

Lashio

Pansai

Kutkai

Wanding

Kunming

Nanning

Rangoon

— Gas Pipeline
— Oil Pipeline

See www.shwe.org for more detailed map

On June 16, 2009 China's Vice-President Xi Jinping and Burma's Vice-Senior General Maung Aye signed a memorandum of understanding relating to the development, operation and management of the "Myanmar-China Crude Oil Pipeline Projects." After years of brokering deals and planning, China has cemented its place not only as the sole buyer of Burma's massive Shwe Gas reserves, but also the creator of a new trans-Burma corridor to secure shipment of its oil imports from the Middle East and Africa.

China's largest oil and gas producer – the China National Petroleum Corporation or CNPC – will build nearly 4,000 kilometers of dual oil and gas pipelines across the heartland of Burma beginning in September 2009. CNPC will also purchase offshore natural gas reserves, handing the military junta ruling Burma a conservative estimate of one billion US dollars a year over the next 30 years.

Burma ranks tenth in the world in terms of natural gas reserves yet the per capita electricity consumption is less than 5% that of neighbouring Thailand and China. Burma already receives US\$ 2.4 billion per year - nearly 50 percent of revenues from exports - from natural gas sales but spends a pittance on health and education; one reason it was ranked as the second-most corrupt country in the world in 2008. Entrenched corruption combined with energy shortages have led to social unrest in the conflict-

ridden country; unprecedented demonstrations in 2007 were sparked by a spike in fuel prices.

An estimated 13,200 soldiers are currently positioned along the pipeline route. Past experience has shown that pipeline construction and maintenance in Burma involves forced labour, forced relocation, land confiscation, and a host of abuses by soldiers deployed to the project area. A lack of transparency or assessment mechanisms leaves critical ecosystems under threat as well.

Yet it is not only the people of Burma who are facing grave risks from these projects. The corporations, governments, and financiers involved also face serious financial and security risks. A re-ignition of fighting between the regime and ceasefire armies stationed along the pipeline route; an unpredictable business environment that could arbitrarily seize property or assets; and public relations disasters as a result of complicity in human rights abuses and environmental destruction all threaten investments.

The Shwe Gas Movement is therefore calling companies and governments to **suspend** the Shwe Gas and Trans-Burma Corridor projects; shareholders, institutional investors and pension funds to **divest their holdings** in these companies; and banks to **refrain from financing** these projects unless affected peoples are protected.

OVERVIEW

Shwe Gas Project

where

Natural gas deposits in the A-1 and A-3 blocks in the Bay of Bengal off the western coast of Burma and a natural gas pipeline from Kyauk Phyu in Arakan State to Nanning in southwestern China (see map).

what¹

- **Offshore rigs** for natural gas extraction - Daewoo plans to produce “a plateau” of 500 million cubic feet per day for up to 30 years²
- Offshore rigs will pump the gas through **underwater pipes** that will enter land southwest of the town Kyauk Phyu on Ramree Island, where one **onshore gas terminal** is planned to be built.
- A 2,800 km **natural gas pipeline**, with an annual transportation capacity of 12 billion cubic meters, will transport the gas to Nanning in southwestern China

Trans-Burma Oil Corridor

where

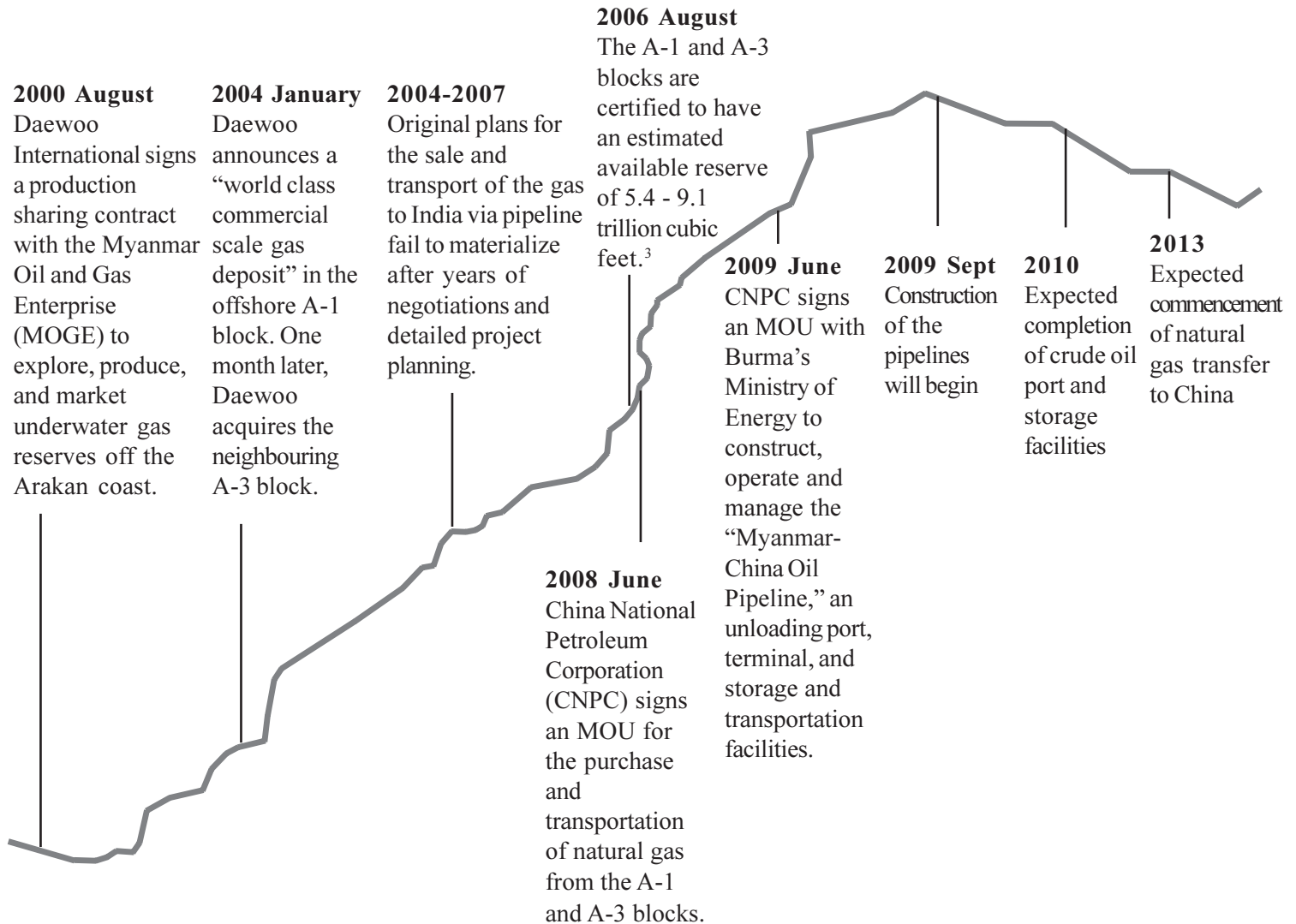
An oil pipeline will be built parallel to the natural gas pipeline across the heart of Burma from the port of Kyauk Phyu in Arakan State, through Magwe Division, Mandalay, Division and Shan State, to China’s southwestern provinces of Yunnan and Guizhou.

what

- Crude oil unloading **deep sea port and terminal** at Maday Island with a 300,000 ton deadweight capacity
- **Oil storage facilities** that include an oil tank with storage capacity of 600,000 cubic meters
- 1,100 km **oil pipeline** to Kunming with a possible extension to Chongqing with an annual transportation capacity of 22 million tons or 442,000 barrels per day



timeline of key events



who

The extractors

<i>Company</i>	<i>% of shares</i>
Daewoo International, South Korea	51%
Oil and Natural Gas Corporation, India	17%
Myanmar Oil and Gas Enterprise, Burma	15%
Korean Gas Corporation, South Korea	8.5%
Gas Authority of India Limited, India	8.5%

The buyer (exclusive rights)

China National Petroleum Company, Company should be Corporation

The distributor (in China)

PetroChina

how much

Costs to develop the gas fields and get the gas to shore: **US\$3.73 billion**.⁴

Estimated construction costs of the natural gas pipeline: **US\$1-1.95 billion**

Annual transit fee: US\$ 150 million per year for 30 years for a total of **US\$4.5 billion**⁵

Estimated revenues from the sale of the natural gas: **US\$ 29.2 billion**.* (see appendix for explanation of calculations)

* According to a sales price of US\$4 per MBTU. Some sources have reported the sales price at US\$7.72 which would bring the total revenue to US \$56 billion.

who

Construction, design, and operation of oil pipeline in Burma: CNPC*

Construction, design, and operation of other oil project components: CNPC*

Construction of oil pipeline in China: expected to be PetroChina but not confirmed



Myanmar Ambassador to the People's Republic of China U Thein Lwin and Vice-President of China National Petroleum Corporation Mr. Liao Yongyuan signing MoU.—UNGA

how much

Estimated construction costs for oil pipeline: **US\$1.5 billion**

* CNPC holds a 50.9% stake in the pipelines project with MOGE holding the remaining 49.1%

PROJECT STATUS

Shwe Gas Project Status

Military in place

Three battalions (LIB 542 and 543 and IB 34) are based within a few kilometres of the Kyauk Phyu Initial Gas Terminal. A naval base that includes nine sub-battalions is in place on the eastern side of Ramree Island; patrols from the base monitor restriction zones around the offshore rigs.

Restriction zone established, fishing industry suffers

A restriction zone has been established which prohibits fishers from coming within a 50 kilometres radius of the Shwe reserve. Fishers must also bribe military officials up

to 500,000 Kyat (US\$450) just to leave the ports. Naval officers have been commandeering local boats, requiring local boatmen to also provide petrol. Failure to comply with restrictions or demands leads to arrest, beatings, or business collapse. Military restrictions are causing hardship across the fishing industry, upon which the Arakanese people have long relied for their primary commercial enterprise and which provides a critical food source.

Construction preparations

Engineering design studies and bids for construction of infrastructure have been taking place since the beginning of 2009. South Korean Hyundai Heavy Industries and/or French-based Technip (listed on French stock exchange as Euronext Paris) are front runners to construct offshore production drilling platforms as well as the onshore gas terminal southwest of Kyauk Phyu.⁶

“Since the exploration started, we’ve had so many difficulties. We used to have a big regional fishing zone that included Sittwe, Kyauk Phyu and Sandway but now, the company men and navy have strongly restricted both Sittwe and Kyauk Phyu fishing areas. Business is plummeting and it’s causing a lot of hardship. When any kind of boat passes anywhere near the restricted area, the driver is forced to provide money and diesel for the authorities and navy. People are getting poorer and poorer.” - Local businessman



The Chinese Nan Hai 2 exploratory rig in the A-3 Block

“When authorities go to the offshore drilling sites, they expect local boats to carry them there. Most of the local fishing boats need to bribe the authorities at least 500,000 Kyat every time they leave port but if they provide this service then they pay less. If the boat owner refuses to take the military or USDA out to sea, they will likely be arrested or their business will be stopped.” – Local Trader

Trans-Burma Corridor Status

(including dual oil and gas pipelines)

Military in place

Currently forty-four infantry and light infantry battalions are positioned along the pipeline corridor. Each battalion is thought to have 250-300 soldiers, which means that at this time there are up to 13,200 soldiers positioned along the route. A naval base that includes nine sub-battalions in place on the eastern side of Ramree Island will monitor the deep sea port and oil terminal.

Sub-contracting for construction activities

The MOU signed in June 2009 designated CNPC responsible for the construction, design, and operation of oil transfer through Burma to China. In addition to CNPC’s own construction activities, international and Burmese companies are vying for sub-contracts to construct associated infrastructure. These include Asia World and IGE of Burma and Jahind Project Ltd. of India.



A fishing boat approached by a Naval patrol off the Arakan coast

Asia World is set to construct the deep sea port on Maday Island, as well as roads and other related infrastructure projects in Arakan State. Asia World was founded by drug-lord Lo Hsing Han and is managed by his son Stephen Law, who has been refused entry to the United States on suspicion of narcotics trafficking.

IGE will reportedly construct roads and other related infrastructure projects along the pipeline route. IGE Co Ltd is a Singapore-registered company owned and managed by two sons of Burma’s powerful Minister of Industry-1 Aung Thaung. Aung Thaung is considered a hardliner within the regime and is believed to have played a major role in the crackdown on monks in 2007. IGE is under European Union sanctions and Aung Thaung and his family are banned from travelling to the EU and Australia.

THE CONTEXT

Geopolitical Significance and Resource Diplomacy

The strategic position of Burma between India and China, Asia's most energy-hungry nations and the world's two fastest growing economies, and gas-reliant Thailand, the current chair of the regional Association of Southeast Asian Nations, give the Shwe Gas Project and China-Burma Oil Corridor particular geopolitical significance.

Burma ranks tenth in the world in terms of natural gas reserve and is rich in other natural resources such as timber, minerals, and gems. The military junta ruling the Burma has accordingly become very adept at "resource diplomacy," auctioning off the country's natural resources to its neighbours and powerful world players alike in exchange for revenues and political support. The Shwe Project and Trans-Burma Oil Corridor can be seen in this context.



Li Changchun of the Communist Party of China Central Committee meets with Than Shwe in 2009

China

As China's GDP grows an average of 10 percent annually, its quest for oil, gas, and other natural resources around the globe has increased to sustain its soaring economy and to meet its energy consumption. China is the world's

fastest-growing importer of oil, yet currently an estimated 80 percent of China's imported crude oil – coming mainly from the Middle East and Africa – is transported through the Malacca Straits (see map). The development of a deep sea port on Burma's western coast would provide China a new transit point for oil and gas imports and easy access to the Indian Ocean while a pipeline across Burma would reduce the Malacca voyage by 1,200 kilometres. The pipelines therefore present China with much needed natural gas supplies

while saving roughly seven days of shipping-time from its African and Middle Eastern crude oil source points.

Burma's resource diplomacy has reaped effective results with China. In January 2007, China vetoed a draft UN Security Council Resolution calling on "Myanmar's Government to cease military attacks against civilians in ethnic minority regions and begin a substantive political dialogue that would lead to a genuine democratic transition." Just three days later, a Production Sharing Contract was signed between China National Petroleum Company (CNPC) and Burma's junta, the State Peace and Development Council, for exploration, drilling and production rights in three additional blocks. Just months later, the junta announced that it was selling the entire gas finds in blocks A-1 and A-3 (the Shwe gas) to China for a below market price. This caused the consortium of Indian and South Korean companies developing the gas fields to protest. Indian media reports quoted Indian company officials as unhappy about the Chinese sale and reconsidering any further investments in Burma's gas.

India

India had considered itself the primary final purchaser of the Shwe gas and had developed plans for various transport routes, including investments in surveying pipeline and shipping options. After years of research and negotiations, however, they were suddenly cut out of the equation when the gas was sold to the Chinese.

Trans-Burma Oil Corridor as China's Energy Security



Keen to regain lost ground, India dispatched its Oil Minister to seal new contracts in additional exploration blocks in September 2007. The visit came in the midst of unprecedented and peaceful demonstrations protesting the high price of fuel in Burma. India's Minister promised an additional US\$150 million in investment to the junta despite a violent crackdown on the monks leading the demonstrations (see Social Unrest section).

Beyond oil and gas, India has invested millions of dollars into the development of the port in Sittwe, the Kaladan transit transport multi-modal project, and roads linking the two countries. India has made multi-million dollar weapons sales to Burma as well.⁷ These are all part and parcel of India's "Look East" policy, one strategy for reducing the influence of China on its neighbor and in the region. In addition investment interests and geopolitical counter-balance, India is seeking to garner Burmese assistance in cracking down on armed separatists in northeast India.

World energy projections predict that by 2030 the world's energy needs will be over 50% higher compared to 2007 and that China and India alone will account for 45% of the increase in demand.⁸ The two countries are engaged in a global competitive search for gas and oil; the struggle for the Shwe Gas is a microcosm of that struggle as Burma is currently the leading alternative supplier for the world's two fastest growing and energy-hungry economies.

Russia

Russia also has resource interests in Burma, including production contracts in three oil and gas blocks and mining interests. Russia has sold arms and military equipment to the junta and has announced plans to build a nuclear reactor in the country. Not surprisingly, Russia is opposed to "attempts to internationalize the internal situation in Myanmar" and complied with China's veto of the UN Security Council resolution in 2007.⁹

ASEAN

Thailand, the current ASEAN chair, relies on natural gas from Burma for twenty percent of its electricity supply and in 2008 was a leading investor in Burma. Singapore is also a lead investor in Burma, and Singaporean, Malaysian, and Vietnamese companies have stakes in oil and gas exploration blocks in Burma.¹⁰ Several Burmese businesses run by tycoons aligned with top military generals are also registered in Singapore. Access to resources and trade interests, along with ASEAN's traditional non-interference policy, has in the past resulted in muted criticism of Burma's junta from the regional body.

Resource diplomacy has given the junta powerful political protection in international governing fora such as the United Nations Security Council. At the same time, the revenues generated by the sale of natural resources, natural gas in particular, has allowed the junta to sustain its massive army, purchase increasingly advanced weaponry, and continue its control over the people of Burma while ignoring their social and energy needs. The sale of the Shwe Gas means three things for Burma:

1. The junta gets richer

The sale of natural gas is far and away the largest single income earner for the junta, accounting for nearly 50 percent of export revenues in 2008-09 for a total of US\$2.4 billion.¹¹ The sale of the Shwe Gas will provide the junta with an additional US\$ 970 million annually, or over 29 billion over 30 years.¹² This does not include signing bonuses and other unofficial payments that would be part of the Shwe Gas and Trans-Burma Oil Corridor deals.

The junta has not used gas revenues for the development of the country's economy or social well-being, however, instead spending lavishly to build a new capital and satisfy the personal desires of top generals (see table on next page).

No Transparency:

Revenues from the oil and gas sector have no independent oversight and are recorded in Burma's public accounts in kyat at the official exchange rate of 6 kyat to US\$1 while the market value of the kyat stands at approximately 1,200 kyat to US\$1. This massive discrepancy means that the majority of gas revenues are not recorded in Burma's official budget, leaving them available for discretionary spending and making it impossible to trace how the majority of Burma's gas earnings are being spent.¹³ This is one reason Transparency International ranked Burma the second-most corrupt government in the world in 2008.

“In Myanmar [Burma], there are rather dumb generals when it comes to the economy. How can they so mismanage the economy and reach this stage when the country has so many natural resources?”

- Lee Kuan Yew, founding Prime Minister of Singapore

Where is the money going?

For the People	For the Regime
Money government spends on health in 2007: \$ 0.7 per person per year ¹⁴	Revenues Generated by Oil and Gas in 2007: Estimated \$150 million monthly ¹⁵
Amount government spent on HIV/AIDS in 2008: \$200,000 ¹⁶	Amount government spent on building new capital as estimated by the International Monetary Fund: \$122-244 million ¹⁷ Estimated value of the gifts at the wedding of Senior General Than Shwe's daughter: \$50 million
Average salary of government teacher in Burma in 2009: \$30 per month	Estimated annual revenue from sale of Shwe gas deposit: \$970 million ¹⁸
Average income in Burma in 2008 \$1.2 per day ¹⁹	Foreign reserves in 2008: \$3.5 Billion ²⁰

“There is not enough medicine, not enough doctors and not enough hospitals. There are not enough schools, not enough teachers, and not enough support for students. Instead they are using the gas money to build their new capital city (Naypyidaw) and to buy weapons. A government should buy weapons to protect the country from danger. But in Burma the government is using weapons for killing its own people. If the companies continue this project, they will directly support the military regime. There will be no positive impact for the people of Burma.”

- U Tun Win, elected in 1990 as a Member of Parliament under the Arakan League for Democracy Party

2. The junta buys weapons

The junta has a past track record of using revenues from the sale of natural gas to purchase weapons, making the sale of the Shwe Gas all the more concerning for the people of Burma. Indeed, companies and governments involved in the Shwe Gas Project have already been selling arms to Burma.

Direct links between gas revenues and military expansion

The link between gas revenue and arms purchases is clear. The regime has been on an accelerated arms-buying spree since 2001, roughly when it received the first gas revenues from the Yadana pipeline.²¹ Examples of this include the purchase of helicopters from a Polish company after receiving a bonus of US \$15 million from Total, the French operator of the Yadana/Yetagun gas pipeline, in 2001. A Polish diplomat was quoted as saying that “the Burmese paid us with TOTAL money.” In that same year, the junta received US \$100 million from the state-owned Petroleum Authority of Thailand, the purchaser of the Yadana/Yetagun gas and then immediately purchased 10 MiG-29 fighter jets at the price of US \$140 million, using US \$40 million for a down payment on the planes.²² As the scramble for Burma’s gas heats up, sales of military equipment to the junta have also increased.

Illegal weapons deals by South Korean companies

After securing the Shwe investment in 2000, a conglomerate of South Korean companies began exporting military machinery for a weapons factory in Burma in 2002. Korean law prohibits the unauthorized export of strategic materials to Burma, but the companies, led by Daewoo International, were able to subvert the law by fabricating export documents.

In November 2007 Daewoo International President Lee Tae-yong and Daewoo’s former managing director were convicted along with 12 other high-ranking officials from South Korean companies of illegally exporting weapons technology and equipment to Burma. The defendants were given suspended jail sentences and fines of approximately US\$50,000 but not before the facility, used to construct artillery shells and other illegal weaponry, was completed.²³

THURSDAY, DECEMBER 7, 2006 PAGE 3

National

Daewoo Head Indicted Over Illegal Exports

By Greg Siskind
Los Angeles Times

A number of Korean defense equipment companies exported production facilities and technology of weapons to Myanmar in violation of the law on exports of strategic goods, the prosecution said yesterday.

Among them are big companies including Daewoo International and Doosan Infracore.

It said the seven companies violated strategic goods regulations and fabricated exporting documents to pretend they have sold normal industrial machinery to Myanmar.

Related to this, 14 high-ranking officials from the companies, including Daewoo International President Lee Tae-yong, were indicted without detention, it said.

“The companies made contracts with Myanmar to export plant facilities, machines and technology information which can be used to make various various weapons,” said a prosecutor.

They completed 90 percent of the weapon producing factories and received 90 percent of contract deposits.

Daewoo International was the core company involved in the illegal activity as it was in charge of planning the project and overseeing technical consulting.



Weapons factory in Burma illegally financed by South Korean companies

Governments involved in Shwe Gas Project sell arms

India has engaged in arms deals with Burma's junta, including increased sales of field guns, mortars, surveillance equipment, aircrafts, tanks, air-defence guns, and other equipment. India's Air Marshal S P Tyagi offered a multi-million dollar sale of military hardware to Burma's regime during a visit in November 2006. The package included helicopters, technical upgrades of Burma's Russian and Chinese-made fighter planes, and radar.²⁴ Burma's principal arms supplier, however, is China.²⁵

The purchase of weapons by the junta is particularly notable because Burma has no declared external enemy. One elected member of parliament from Arakan State aptly observed:

“A government should buy weapons to protect the country from danger. But in Burma the government is using weapons for killing its own people.”

Burma's Navy at the port in Sittwe



3. People are left in the dark

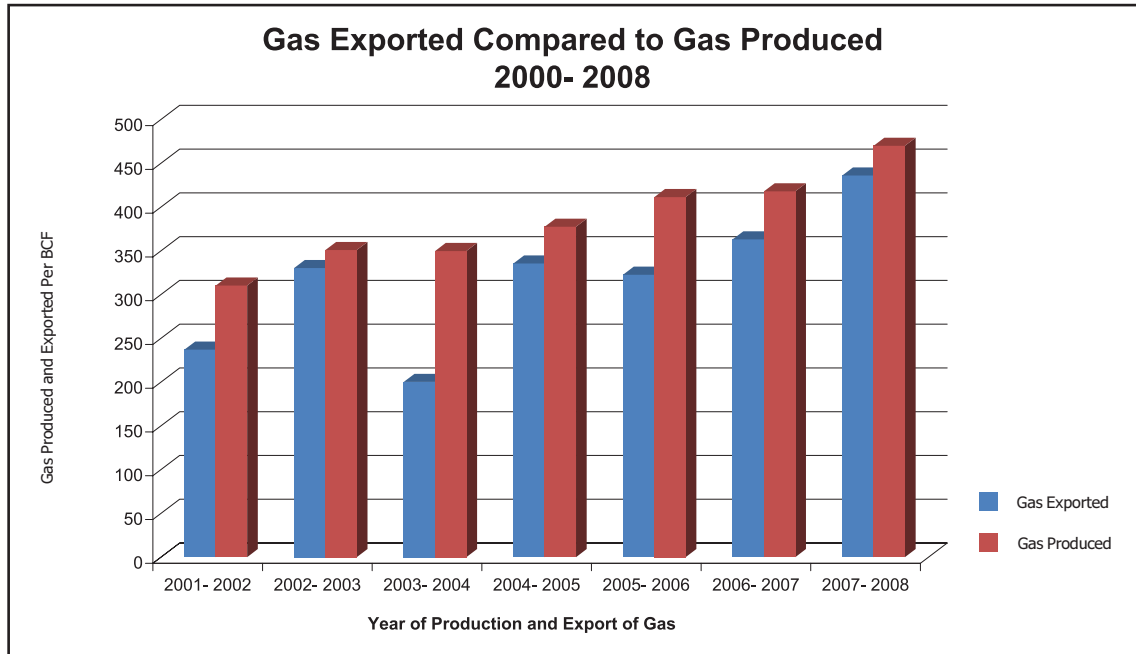
While the regime exports valuable energy resources to neighbouring countries, ordinary citizens receive neither electricity nor gas. Although Burma has some of the largest reserves of natural gas in Southeast Asia, the country faces chronic energy shortages. In late 2008 the total installed capacity of electric power in Burma was 1,719 MW, compared to nearly 30,000 MW in neighbouring Thailand.²⁶ The per capita electricity consumption in Burma is less than 5% that of neighbouring Thailand and China.²⁷ A stable supply of power is not even guaranteed in the largest city of Rangoon. Most businesses are forced to purchase large amounts of diesel to fuel generators because of the lack of stable electricity supply.

Arakan State, the source of the Shwe Gas, is not connected to the national power grid and electricity is extremely scarce. Over 90% of people in Arakan State use candles for light and firewood as their primary source of cooking fuel yet all of Shwe Gas will be piped to China.²⁸



Children in Arakan State try to do their studies by candle light

Where is the gas going?



“Although we have a lot of gas we get only two hours of electricity in Sittwe. In this situation how can we develop our industry? Without industry, how can we develop our state? Actually the gas money should go to different sectors like health, education, economy and social development. But in this project, there isn’t any plan for that. That is why we are against this Shwe gas project.” - U Aye Tha Aung, Secretary of the Committee Representing People’s Parliament (CRPP) and Secretary of the Arakan League for Democracy

SOCIAL UNREST LINKED TO ENERGY PRICES

A series of protests that began in August 2007 were sparked by the military junta's directive to remove fuel subsidies which caused the price of diesel and petrol to suddenly rise as much as 66%, and the price of compressed natural gas for buses to increase fivefold in less than a week. Daily commuters found that bus fares had doubled overnight. The protests swelled to include tens of thousands and were led by highly revered Buddhist monks. The world was shocked when a violent crackdown on the peaceful demonstrations began on

September 26 and a Japanese photojournalist was caught on film being shot at point-blank range on the street. While the official death toll remains at 13, the UN Human Rights Council's Special Rappporteur has said that independent sources reported 30 to 40 monks and 50 to 70 civilians killed; the actual number of deaths may never be known. In the aftermath of the crackdown thousands were hunted down and arrested, monks were beaten and forced out of their temples, and countless remain in hiding or have fled the country.



PROJECT RISKS

The Shwe Gas Project and the Trans-Burma Oil Corridor present very serious risks to the people of Burma. Revenues near US\$1 billion per year will flow to a regime with a well-documented track record of using gas revenues for weapons purchases, abuses against its own people, gross negligence in social spending, and entrenched corruption. Continuous energy shortages threaten healthcare, education, and the development of industry, potentially providing the spark for further violent social unrest. Human rights violations and environmental destruction along a pipeline route fifteen times longer than the country's existing natural gas pipeline to Thailand endanger the security and livelihoods of hundreds of thousands living in the corridor area. Yet as alarming as these risks are for the people of Burma, the investors, companies and governments involved in the projects also face grave risks.

Financial Risks

Corporations and governments operating in Burma face complicity in human rights abuses and environmental damage that has the ability to compromise their own social responsibility standards and domestic laws, tarnish their corporate image, and expose them to costly litigation, thus placing their investment profile in jeopardy.

There are several additional financial risks to doing business in Burma and with a junta described as a “thoroughly unreliable” business partner.²⁹ An economist studying Burma for several years analyzed these risks:

In general, international investors in Burma face an array of hurdles and obstacles in realising profit from their engagement in the country. These include a near **‘perfect storm’** of risks, including: a broad business and bureaucratic environment that is deeply corrupt; a policy-making framework that is arbitrary and ill-informed (and against which there is no appeal, oversight or accountability); a macroeconomic environment characterised by rampant inflation and high levels of poverty and instability; an exchange rate regime that imposes an implicit and unstable levy on foreign investment and trade; a currency that is useless as a store of value, and which scarcely functions as a means of exchange; an environment in which there is the near-total absence of property rights and security against arbitrary asset seizure; arbitrary and shifting burdens of taxation and duty levies; and grave doubts about the ability of foreign firms to repatriate profits, and otherwise transfer money in and out of the country. (Dr. Sean Turnell)³⁰

Corporations that are state-owned may face reduced profits, property and asset seizure, or public relations disasters, all of which will raise questions from the citizenry about the management of public funds in overseas investments.

Security Risks

The pipeline route passes through areas partly controlled by ethnic cease fire groups, including the Shan State Army-North (SSA-N), the Kachin Defence Army (KDA) and the Myanmar National Democratic Alliance Army (MNDAA). Burma's regime in early 2009 attempted to put these groups under its control by pressuring them to transform as "Border Guard Forces." Both the SSA-North and the MNDAA rejected the idea, increasing military tensions which -despite Chinese government intervention to negotiate a settlement- led to a Burmese army attack on the MNDAA headquarter on August 27. Thousands of civilians have fled and taken refuge in China. This fighting could escalate and spread across the area of the planned pipelines.

The fact that Burma does not use its own energy to satisfy local needs and develop its own industry is creating frustration and anger amongst the domestic population, as evidenced by the unprecedented demonstrations in August and September 2007. The boiling frustration of one local community in Arakan State exploded in April 2007 after the Chinese oil company CNOOC confiscated farm lands

Unreliable business partner

The decision of the regime to sell the Shwe gas to CNPC at the below-market price of US\$4 per MBTU was a blow to the Shwe consortium.³² Daewoo International was outraged and claimed that the low price would unfairly reduce profit margins for the Indo-Korean consortium. A team of legal experts and Daewoo executives was sent to challenge the decision before the Burmese officials but were unsuccessful.³³

and discharged chemicals into the local waterway. Local residents broke into and ransacked CNOOC's drilling site, destroying equipment and looting supplies.³¹ Such incidents could escalate in response to further developments in the oil and gas sector with no participation of local communities.

Re-ignition of fighting, an increase in human rights abuses (see next section), and or the negative social impacts of the projects will increase the flow of refugees to neighboring countries. The increasing gap between the military officials and the general population in Burma and the gap between Burma and its neighbors also further threatens regional stability.

"Shareholders should protect their investments against business deals that involve human rights abuses. They should encourage corporations to conduct business with appropriate standards.-Daw Khin Ohmar, Secretary, Forum for Democracy in Burma

Complicity and Human Rights Abuses Risks

The oil and gas pipelines will pass through 22 townships along a 980 km course across Burma, a journey fifteen times longer than the land portion of Burma's Yadana/Yetagun pipelines (see box). Currently forty-four infantry and light infantry battalions are positioned along this route. Each battalion has up to 300 soldiers, which means that at this time it is possible that there are up to 13,200 soldiers positioned along the route (see map).

Incidents of increased deployment of troops for infrastructure projects are well-documented in Burma. Past and present experiences show that when militarization has occurred alongside securing extractive investments in Burma, local people are subject to abuses by the Burma Army such as forced labour, sexual assault, forced relocation, and land confiscation. These abuses in turn lead to displacement and migration outflows. This pattern is true for natural gas extraction as well, as the experience of Burma's other international pipelines project, the Yadana/Yetagun, clearly demonstrates (see box).

Forced labour has already been employed for roads construction in Arakan State, adding credibility to fears that the practice could well increase with construction of the Chinese pipelines and associated infrastructure. In April 2004, soldiers arrested fishermen inside an exclusion zone around exploratory rigs in the Shwe gas fields. The

men were not aware of the restrictions as they had frequently gone fishing in that area. Regardless of this, they were beaten and thrown in jail.³⁴

Lands have also been confiscated for recent onshore oil exploration activities by the Chinese National Offshore Oil Corporation (CNOOC) in Block M, which includes Kyauk Phyu, the site of the planned oil terminal.³⁵ Local authorities pilfered the paltry compensation money that was offered. There is no reason to believe that such incidents will not happen again.

The military presence in Arakan State has forced many to live in constant fear of arrest or to flee. Individuals who have tried to inform local populations about the Shwe project or who have been critical of it have either been arrested or forced to flee.

“Soon after I became involved in awareness-raising about the Shwe Gas Project, the military, USDA (the regime's “civil society organization”), and police came to my house, my parents' house, and my mother-in-law's house. They took my wife and 11 month-old baby to the police station because I was not home. They asked my wife how I was involved in these activities and demanded that she convince me to return home so that they could interrogate me. She would not confess, so they military shut down her and her sister's shops in the market, and restricted her from travelling.” (Activist)

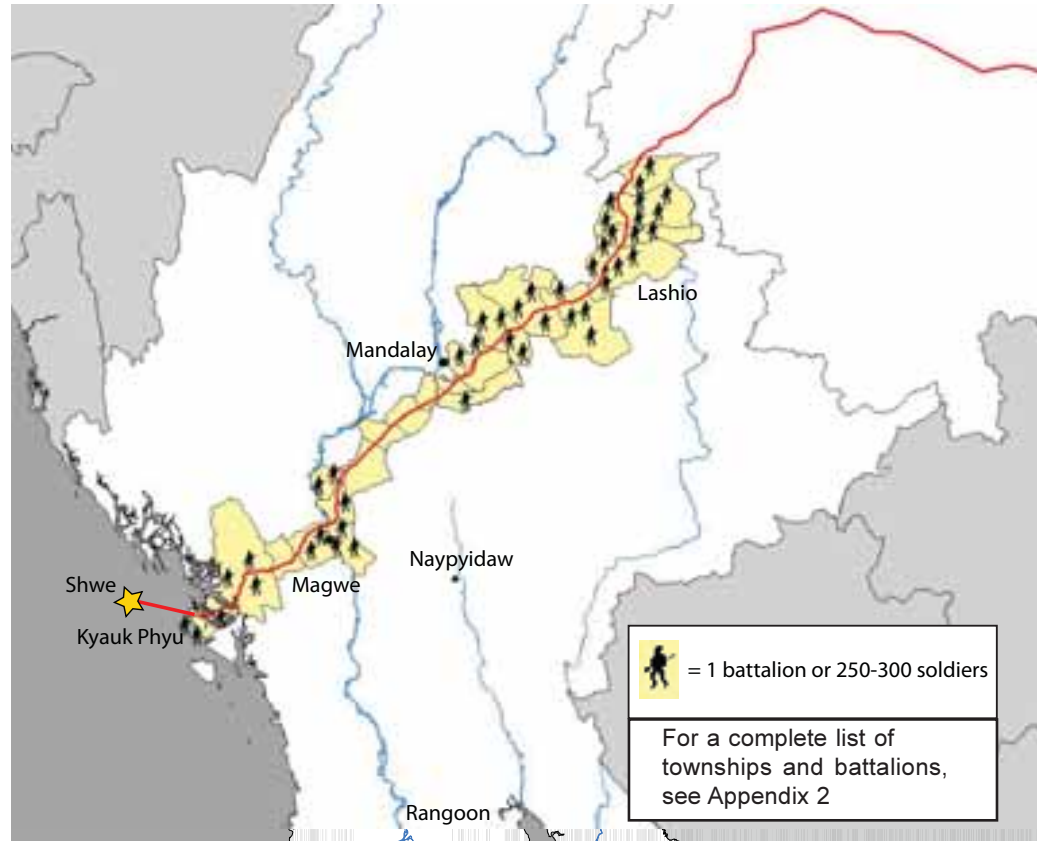
“The government will add more troops along the gas pipeline for security. According to our former experience, the military used forced labour for the Sittwe-Rangoon highway and the Kyauk Phyu-Rangoon road construction. Those that could not participate in the construction had to pay money. Rakhine people will again have to face forced labor for this gas pipeline. So I am very worried for our people.”

- U Aye Tha Aung, Secretary of the Committee Representing People’s Parliament (CRPP) and Secretary of the Arakan League for Democracy

“We are deeply concerned about the planned gas and oil pipelines from Arakan State through Shan State to China. The social and environmental impacts of this project are going to be huge, but local communities living along the pipeline route have been neither informed nor consulted.

Meanwhile the regime will get more money to build up its army and continue to rape, torture and kill women.”- Nang Charm Tong, Shan Women’s Action Network (SWAN)

Battalions currently positioned along the corridor



Experience Shows – Eastern Burma Pipelines Disaster

The development of the Yadana and Yetagun gas in eastern Burma constitute the biggest natural gas project in Burma to date, but at 60 kilometres, the pipelines to Thailand will be dwarfed by the Burma-China pipelines. Despite obvious differences with the Shwe Gas Project, Yadana/Yetagun and its spur line in Burma provide a valuable case study of a natural resource extraction project undertaken by the junta in Burma together with foreign investors. Below is a snapshot of what happened:³⁶

- **Mobilization of troops:** an area that previously had no permanent army outposts was suddenly flooded with troops, involving at least 16 battalions.
- **Forced relocation:** Villages 15 to 20 miles both north and south of the pipeline were forced to move closer to Army outposts, creating a “secure corridor” around the pipeline.
- **Forced labour:** Villagers from throughout the region, ranging from as young as 13 to over 60 years old, were forced to build and maintain military barracks, working from sunrise to sundown. The military conscripted villagers as porters, forcing them to carry heavy loads of supplies and keeping them under prison-like conditions.
- **Extortion:** The military transformed the economy along the pipeline route from self-sufficiency to a veritable lord-serf situation, forcing villagers to grow food, hand over crops, and pay for the privilege of surviving on their own lands.

The companies managing the project, Total and Unocal, have faced lawsuits in US and French courts for complicity in the above abuses. In early 2006, after years of litigation, Total and Chevron, which absorbed Unocal, separately agreed to pay multi-million dollar settlements to Burmese plaintiffs and have faced irreparable harm to their names internationally.

In November 2000, the Burma regime began construction of a 180-mile spur line from Kanbawk in Mon State to Myaing Kalay in Karen State to pipe gas from the Yadana fields to a cement factory. More than 2,400 acres of land were seized in clearing the route; villagers received little or no compensation. Villagers were forced to work as unpaid labourers on the construction of the pipeline itself, clearing timber and brush, digging and filling trenches and hauling materials. Nearly a decade after construction of the pipeline was completed, villagers continue to be forced to work maintaining the pipeline, standing sentry, and patrolling it under constant threat of violent retribution should an attack or accident occur. Since the beginning of construction process, the number of battalions has tripled along the pipeline route. Housing and supporting these troops has led to the seizure of more than 12,000 acres of land and these troops are responsible a raft of violent abuses, including torture, murder and rape.

Companies involved in the Shwe Gas Project and the Trans-Burma Oil Corridor will be complicit in any abuses associated with these projects. This will be damaging not only to the affected communities but also to the companies' reputations and investor confidence. This in turn has diplomatic implications for governments, especially if involved companies are state-owned, as in the case of China's CNPC.

Shareholders across the world are increasingly concerned about the human rights implications of investments and are pulling out of corporations that do not uphold ethical business standards (see *CNPC: First Sudan, Now Burma?*). The lawsuits brought against Total and Unocal (now Chevron) in the Yadana case are just one example of how legal actions are also being taken against corporations. The International Labour Organization has also been investigating and has condemned Burma for its usage of forced labour.

At the same time, the lack of participation by affected communities is a direct contradiction to the stated social responsibility standards of companies. The principle of consultation with affected communities is included in the domestic laws of China, South Korea, and India but does not translate to their overseas investments. Such contradictions damage corporate reputation and reflect badly on the home countries of those corporations.

CNPC: First Sudan, Now Burma?

China's CNPC – the buyer of the Shwe Gas and builder of the pipelines to China – has already faced large-scale divestment from its subsidiary PetroChina for its relations with the Sudanese government. Fidelity Investments and Berkshire Hathaway divested a combined 4 billion dollars from the company in 2007 due to the company's connection to the violence in Darfur.³⁷ CNPC's operations have provided significant revenue to the Sudanese government and oil infrastructure has been used by military. An annual assessment of corporations around the globe found CNPC as among the top ten worst in 2008.³⁸

CNPC's oil tankers in Sudan



Photo CNPC website

Destruction of Environmental Health and Biodiversity

In addition to the lack of participation, the mismanagement of Burma's economy, and human security concerns, there are significant environmental concerns with the proposed oil and gas pipelines to China.

Sea-based sources of pollution by oil spills from tanker traffic, and from oil exploration and production, threaten the healthy and largely intact ecosystem of the Arakan coast and living marine resources and habitats in the Bay of Bengal. Approximately 400 million live in the Bay's catchment area, many subsisting at or below the poverty level. The coastal and offshore waters of the region support numerous fisheries of great socio-economic importance to the countries bordering the Bay and provide for direct employment of over two million fishermen.

There are several environmental dangers involved in the commercial production and transport of natural gas including the leakage of chemicals used in the drilling process as well as potential gas blowouts. Once they reach the seabed, drilling wastes that include volatile organic compounds rob the water and bottom sediments of oxygen and as a result kill large proportions of life on the ocean floor, including shellfish beds.³⁹ Toxic brine generated in the exploration process is also often dumped on or offshore.

Endangered spoon-billed sandpipers

Arakan's coastal mangroves are part of the biologically diverse Arakan wetlands, one of the last wintering grounds of the critically endangered spoon-billed sandpipers. An international research team performing one of the first surveys of the Arakan coast in 2008 found 84 of the unique birds as well as several other globally threatened species, including Indian Skimmers and Sarus Cranes. The team noted that the coastal zones are currently largely healthy ecosystems. This all may change soon, however, as this area is slated to support an oil terminal and storage facility, central processing platform, onshore gas terminal, and the beginning of the trans-national pipelines. 442,000 barrels of oil will be off-loaded at the coastal port per day. A spokeswoman from BirdLife International noted that in order to save the spoon-billed sandpiper from extinction "we need to identify and conserve not only its breeding sites, but its migration stopover sites, and wintering grounds too."⁴⁰ This may never happen, as a critical habitat for an unknown number of species may be ruined before it has been adequately studied.

Destroying mangroves

Mangrove forests provide a vital natural protection against cyclones, storm surges, and tidal waves. The world has become painfully aware of the dangers of mangrove destruction after the 2004 Asian Tsunami and Burma's Cyclone Nargis in 2008. The Rakhine (Arakan) mangroves, a subset of the Myanmar Coastal Mangroves, are important for coastal protection in an area that frequently suffers from monsoon storms. They are also recognised for their biodiversity. The area, until recently 60,000 square acres in size, has already been devastated by the establishment of shrimp farms, harvesting of firewood, and infrastructure development for oil exploration in the onshore Block M. The pipeline construction – cutting through the mangroves – will cause further destruction and make the people of Arakan State more vulnerable to damage from cyclones and storm surges. The development of an oil terminal in Kyauk Phyu that includes oil tanker traffic and oil storage facilities also put the mangroves and local marine life and wildlife at risk if there are any spills or improper discharge of waste.



At least 146,000 died in Cyclone Nargis with thousands more missing. Mangroves provide critical protection from cyclones and storm surges.

Cutting across biodiversity heartlands

Based on the past history of the Yadana/Yetagun pipelines, the Shwe pipelines and accompanying infrastructure will require a clear corridor of approximately 50 meters. Such a corridor will effectively split forests in two sections, thereby disrupting the habitats and migratory paths of animals. This is of particular concern because the pipeline route to China cuts through several important ecoregions, including one of the 10 most vulnerable forests in the world, coastal mangroves that are critical to storm protection, and habitats of endangered species.⁴¹

Secondary effects such as the building of roads and infrastructure as well as the logging that may follow will have additional negative environmental impacts to areas adjacent to the pipelines. In addition to the biodiversity spots along the pipeline route, rigs at sea may impact marine life and coral reefs off the coast.

Global 200 Ecoregions are areas classified by the World Wide Fund for Nature (WWF)⁴² as most crucial to the conservation of global biodiversity.⁴³ The Burma-China pipelines will cut through two such regions. They are:

Naga-Manipuri-Chin Hills Moist Forests, one of the 10 most vulnerable forests in the world that has large tracts of intact forest and has yet to be properly studied, and which includes the:

Mizoram-Manipur-Kachin Rain Forests – a unique biogeographic crossroads where animals and plants from the Indian, Indo-Malayan, and Indo-Chinese regions converge.⁴⁴ The tiger and Asian elephant travel freely in these large forests.⁴⁵

Chin Hills-Arakan Yoma Montane Forests – home of the Arakan forest turtle, among the 25 most endangered turtles in the world.⁴⁶

Meghalaya Subtropical Forests – home to more than 110 mammal species, including the tiger, Asian elephant, wild dog, smooth-coated otter, and capped leaf monkey.

Northern Indochina Subtropical Forests, a crossroads of the Himalayas and tropical forests, rich in endemic bird life, which includes the Yunnan Plateau Subtropical Evergreen Forests

Without any mechanisms in place to ensure proper and environmentally-sound assessments, planning, and procedures, the project could be disastrous to areas of high value to the world's biodiversity.

A set of Chinese government guidelines that will require Chinese companies operating overseas to follow environmental standards is currently awaiting approval from the relevant authorities after being drafted by the Ministry of Environmental Protection and the Ministry of Commerce in China. According to the proposed guidelines, Chinese companies will be required to abide by international environmental treaties China has signed as well as regulations in project host countries. If China's environmental standards are higher than the host countries', Chinese investors should follow Chinese standards. China's outbound investors will also be asked to review any environmental impact their projects might have before they are started.⁴⁷

It is as yet unknown whether these guidelines will be applied to the Trans-Burma pipelines. To date, however, no environmental impact assessments of either the Shwe Gas Project or the Burma-China oil transfer have been made public.



Photo MI

The under-studied Arakan coast is under threat from offshore gas extraction and potential oil spills from oil storage facilities and oil tanker traffic



Photo tab



Local populations depend on the land, water and natural resources for farming, fishing, and raw materials necessary for everyday life. Any damage to the environment will inevitably impact livelihoods. By the same token, forced labour, extortion and land confiscation by the Burma Army that accompanies increased militarization threatens local economies and livelihoods.

CONCLUSION

In a country where an estimated two million are internally displaced and over two thousand are jailed for political beliefs, the sale of the Shwe Gas and building of the Trans-Burma corridor solidifies the ability of the military junta ruling Burma to hold the country hostage. The nearly one billion in revenue that the gas sales will bring in annually, combined with the political protection that China provides the junta in international fora are putting the people of Burma in grave danger. Yet the companies, governments, and investors involved in these projects are also vulnerable to financial losses from re-ignition of fighting along the pipeline route, public relations disasters, and costly litigation. It is not too late to stop this disaster from unfolding.



A CAMPAIGN CALL AND A VISION

Burma has no laws to protect human rights or the environment, and its army, which will clear areas and provide security for the pipelines, repeatedly acts with impunity. In order to fully protect the affected communities and environment in Burma from the disastrous impacts of the Shwe Gas and the Trans-Burma Corridor projects, we call:

*-the Daewoo International consortium, the CNPC and their host countries to **suspend the Shwe Gas and the Trans-Burma Corridor projects**;*

*-shareholders, institutional investors and pension funds to **divest their holdings** in these companies;*

*-banks to **refrain from financing** these projects*

unless the following conditions exist:

Community rights are protected

- Local people must be consulted and allowed to participate in the decision-making process around projects without fear of persecution according to the principles of “Free and Prior Informed Consent” before the projects are implemented
- Cumulative Environmental, Social and Human Rights Impact Assessments must be undertaken and published. These assessments must include genuine and confidential consultation with affected communities
- There must be mechanisms in place whereby affected people can make complaints of any abuse of power -such as human rights abuse or environmental degradation- in relation to the development project, without fear of retribution
- Adequate compensation for any relocation, land seizure, or property damage must be provided directly to the affected people

Standards of investment are met

- Project investors and implementers must follow international human rights laws, environmental treaties, OECD Guidelines, and the laws of the investors' home countries.
- All employers involved in oil and gas projects must abide by international laws in accordance with agreements of the International Labour Organization (ILO)

Transparency and accountability mechanisms are in place

- Revenue Transparency must be practiced in relation to all natural resource development projects, starting with the implementation of the Extractive Industry Transparency Initiative (EITI)
- All conventions and contracts regarding oil and gas exploration in Burma should be made public. Investors should renounce confidentiality clauses that restrict public disclosure of payment rates and reporting schedules.
- Oil and gas companies must provide key information regarding the details of oil and gas revenue going directly to the military regime, including:
 - volume of oil and gas produced and sold
 - sale price of oil and gas
 - exchange rate for transaction
 - rate of taxes, bonuses, royalties, and fees pertaining to oil and gas exploitation and transportation

The Shwe Gas Movement believes that:

- The allocation and utilization of all investment funds must be placed into the National Budget. The budget should be managed in a transparent and participatory manner, with priority sectors such as health and education financed by the majority of the revenues.
- **Without a democratic government and financial transparency, these investments will further entrench the oppressive junta ruling Burma**

WHAT YOU CAN DO

The Shwe Gas Movement believes that the only way to prevent massive new revenues lining the pockets of Burma's military generals, impending human rights abuses and environmental damage, is to halt these projects. We are all involved in one way or another, either as shareholders in companies or as citizens of countries that are involved in the projects. If we work together we have the power build a better future for Burma and the region.

1. Ask your investment fund

Ask your investment or pension fund to investigate whether it has invested in the corporations with stakes in the Shwe Gas Project or the Trans-Burma Oil Corridor and if so urge them to divest from these risky projects. Please visit at www.shwe.org

2. Participate in direct actions

The Shwe Gas Movement and its networks coordinate regular Global Days of Action. There may also be other actions arranged in your country. Contact us for details of the next action at global@shwe.org

3. Write to Corporations and Governments

Writing to corporations and governments can make a difference! Find pre-written letters that you can send by fax or post to the respective corporations and governments at www.shwe.org/action/letters/ www.shwe.org/take-action/letter-campaign

4. Spread the word

Spread the word about the projects to your friends and networks; link your website with the SGM site; write letters to the editor of your local newspapers and favourite internet sites. The more people who know what is happening, the more difficult it will be for corporations to hide.

5. Sign up for e-newsletters

The "Shwe Gas Bulletin" is produced regularly in English and Burmese languages. If you would like to receive these bulletins as pdf files through e-mail, please contact Arakan Oil Watch at arakan_ow@yahoo.com or global@shwe.org. Please state your preferred language.

To lodge concerns or ask questions at the embassy nearest you please visit:

Chinese embassies:

<http://www.fmprc.gov.cn/eng/wjb/zwjg/2490/>

<http://www.china-invitation-letter.com/chinese-embassy-contact-details-list.php>

<http://www.embassyworld.com/embassy/China/China1.html>

Burmese embassies:

http://www.ananda-travel.com/UK/myanmar_embassy_list_uk.htm

<http://www.myanmarvisa.com/mynembassylist.htm>

<http://www.embassyworld.com/embassy/Burma/Burma2.html>

<http://www.embassyworld.com/embassy/Burma/Burma2.html>

South Korean embassies:

http://www.southkoreanvisa.com/list_of_south_korean_embassys.html

http://www.embassyworld.com/embassy/South_Korea/South_Korea1.html

http://www.embassyworld.com/embassy/South_Korea/South_Korea1.html

http://www.embassyworld.com/embassy/South_Korea/South_Korea1.html

Indian embassies:

<http://meaindia.nic.in/onmouse/mission.htm>



For update news and action items please visit www.shwe.org

APPENDIX 1: COMPANY PROFILES



China National Petroleum Corporation (CNPC)

(Buyer of the Shwe Gas, Responsible for the construction, operation and management of the pipelines and oil project components)

China National Petroleum Corporation, wholly owned by the Chinese government, is China's largest oil and gas producer with oil and gas assets and interests in 27 countries. A self-declared "flagship energy enterprise of China," the company provides technical and engineering services as well as equipment. Although CNPC has corporate social responsibility standards, it has come under heavy criticism for its investments in Sudan.

PetroChina, the largest publicly-traded subsidiary of CNPC (on the stock exchanges as NYSE: PTR; HKSE: 0857; SSE: 601857) lost billions during a divestment campaign in 2007. CNPC and PetroChina have nearly complete overlap in management.

<http://www.cnpc.com.cn/eng/company/> AND <http://www.petrochina.com.cn/ptr/>



Daewoo International (South Korea)

Majority stakeholder, manager and operator of the Shwe Gas Project

Daewoo International grew out of the reorganisation of a bankrupt Daewoo Corporation in 1999. Daewoo's chairman had fled the country before he could be arrested on charges of fraud, illegal loans and smuggling - amounting to a total of US\$57 billion - but was in 2006 finally sentenced to 10 years imprisonment and fines. The South Korean government supported the emergence of the Daewoo International and provided a US\$70 million loan for the exploration stages of the Shwe Gas Project.

Daewoo International (DI) is South Korea's leading export trading company. Daewoo also supplies IT services to Burma's regime and has timber manufacturing and clothing interests in the country. In November 2007 the president of Daewoo International was convicted in a South Korean court for illegally exporting weapons technology to Burma. <http://www.daewoo.com/english/company/overview.jsp>

ONGC Videsh, Ltd./OVL (India)

20% stake in the Shwe Gas Project

ONGC Videsh Ltd./OVL is the overseas arm of the India's state-owned Oil and Natural Gas Corporation (ONGC). It has investments in other countries that have been criticised for their human rights record, including Vietnam, Indonesia, Libya, UAE, Venezuela, and Algeria. This is the company's first investment in Burma.



Gas Authority of India, Ltd. (GAIL)

10% stake in the Shwe Gas Project

The Indian government holds a 67% equity stake in GAIL, the largest gas transmission and marketing company in the country. GAIL states that “we are writing a new genetic code for ourselves to achieve all round excellence in our endeavour towards services for Nature and the People - The Ultimate Customer.”



Korean Gas Corporation (KOGAS)

10% stake in the Shwe Gas Project

KOGAS was initially fully owned by the South Korean government. Today the government is the largest stakeholder, holding 26.86%; others include Korea Electric Power Corp. (KEPCO) (24.46%), local governments (9.86%), and individual investors (38.82%). This is the company's first investment in Burma.



Myanmar Oil and Gas Enterprise (MOGE)

The state-owned oil and gas company of Burma, 15% stake in the Shwe Gas Project

The company is a sole operator of oil and gas exploration and production, as well as domestic gas transmission through a 1,900 km onshore pipeline grid.



Institutional Investors and Pension Funds

Several investment and pension funds are shareholders in the above companies, placing them at risk of financial insecurity, violation of responsible investment policies and corporate social responsibility standards, and complicity in serious rights violations. These funds include the Canadian Pension Plan, the Norwegian Pension Fund, Handelfbanken of Sweden, ABP Netherlands and the Teacher Retirement System of Texas.

Companies and governments have a responsibility to stop the project in time. If not, we have to say that abusing human rights and torturing are not only the fault of the military government but also the foreign companies, shareholders, and neighboring countries who are cooperating with the military regime for business.”

- Daw Khin Ohmar, Secretary, Forum for Democracy in Burma

APPENDIX 2: BATTALIONS AND TOWNSHIPS ALONG CORRIDOR

LIB = Light Infantry
Battalion
IB = Infantry Battalion

Pipelines will pass through
22 townships

A total of 44 Infantry and
Light Infantry battalions

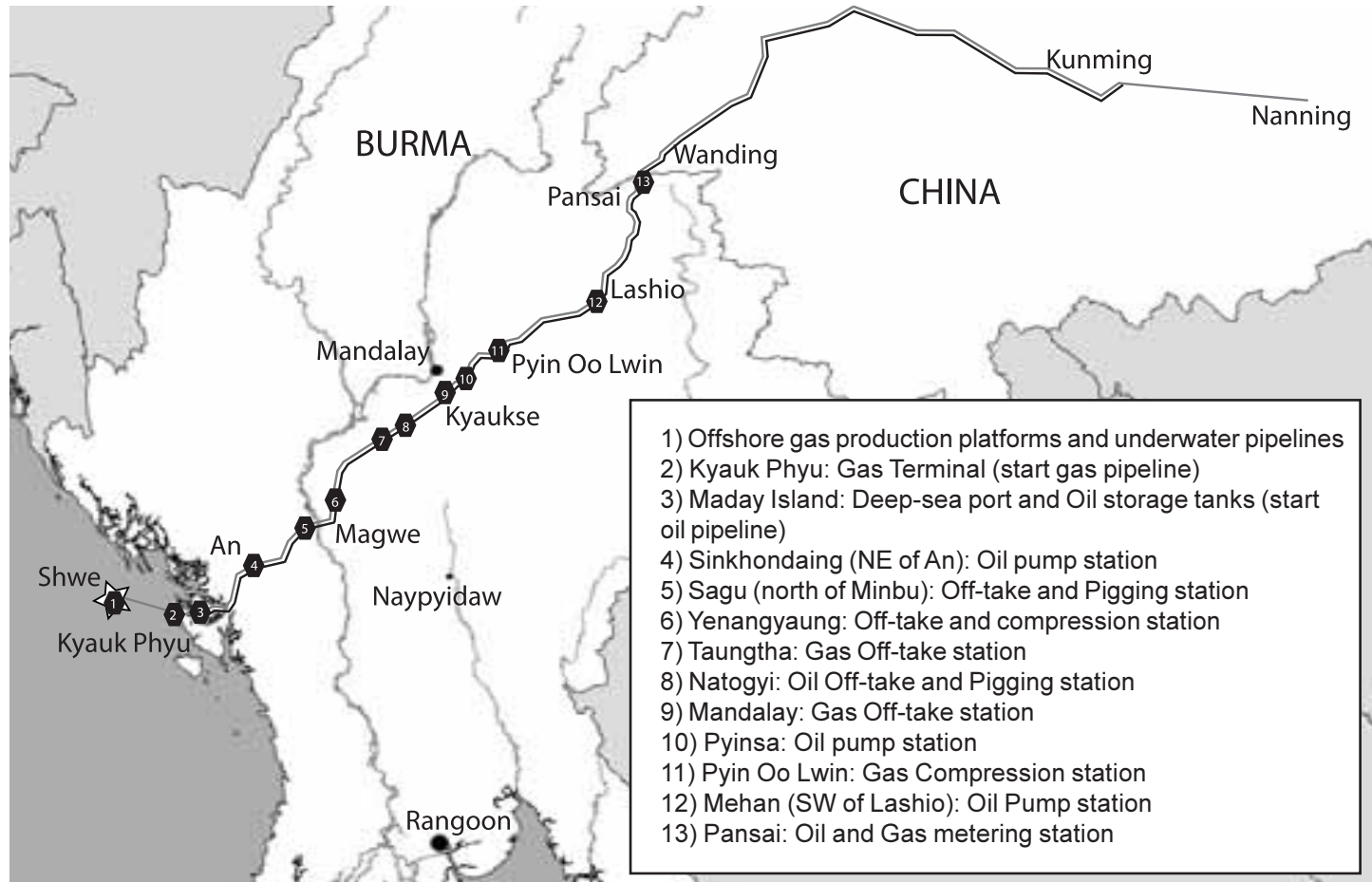
Each battalion has up to 300
soldiers for a total of up to
13,200 soldiers

Source: *Civil and Military
Administrative Echelon of
the SPDC in Burma*,
Network for Democracy
and Development, May
2007

State/Division	Township	Battalion #
Shan	Mu-Se	IB 123, IB 136
	Kutkai	IB 45, IB 241, IB 242, IB 290, LIB 567, LIB 568
	Hsenwi	IB 69 IB 240 LIB 323
	Lashio	IB 41 IB 68 IB 291 LIB 507 LIB 522
	Hsipaw	IB 23 IB 131 IB 234 LIB 503
	Kyaukme	IB 22 LIB 501 LIB 502
	Nawngkhio	LIB 17 LIB 114 LIB 115 LIB 504
Mandalay	Patheingyi	LIB 116 LIB 119
	Kyaukse	LIB 14
	Maymyo	
	Singaing	
	Tada-U	
	Natogyi	
	Taungtha	
	Kyaukpadaung	
Magwe	Chauk	IB 13 LIB 416
	Yenangyaung	IB 77
	Magwe	IB 83 LIB 301 LIB 317
	Minbu (Sagu)	IB 10 IB 88
	Ngape	
Arakan	An	LIB 371 LIB 372 LIB 373
Arakan	Kyaukpyu	IB 34 LIB 542 LIB 543

APPENDIX 3: MAP OF STATIONS ALONG CORRIDOR

CNPC will build ten stations along the pipelines route, ending in Pansai opposite Wanding in China. These stations will be manned by up to 100 staff and include operations for oil pumping and gas compression as well as pigging stations for quality control and off-take stations for de-condensation. Several stations will include large storage tanks to hold at least one day's supply to ensure a steady flow in case of breakdowns. The gas and oil pipelines are likely to be constructed simultaneously and laid parallel, approximately ten metres apart. According to an ex-engineer with Burma's state-owned oil and gas company (MOGE), the corridor for the pipelines will need to be approximately 50 metres wide.



APPENDIX 4: CALCULATION OF GAS REVENUES

Estimate of military junta's share of revenues from the sale of the Shwe Gas

Based on 30 production years, a sale price of **1MBTU/\$4**, and Available Gas reserves of 9.1tcf*
All amounts are in US Dollars and rounded to the nearest 100th

Revenues from sale of Available Gas = 37.53 billion¹

10% Royalties = 3.75 billion²

Operation and Construction Costs (Cost Gas) = 5.23 billion³

Profit Gas = 28.55 billion⁴

SPDC share of Profit Gas = 16.27 billion⁵

Consortium share of Profit Gas = 12.28 billion⁶

Discount for Domestic Gas = 246 million⁷

Consortium share – discount = 11.82 billion

MOGE share of Profit Gas as consortium member = 1.77 billion⁸

Profit Gas to non-MOGE Consortium = 10.05 billion

Taxes to SPDC on non-MOGE Consortium Profit Gas = 2.62 billion⁹

Fees for training and technology = 3 million¹⁰

Production bonuses = 6 million¹¹

SPDC revenues (w/out signing bonus) = approximately 24.66 billion

+ Pipeline Transit fee to SPDC = 4.5 billion¹²

= approximately US\$ 29.2 billion over 30 years (US\$ 970 million per year)

* These figures are taken from publicly available information. Details from the Shwe Production Sharing Contract and Memoranda of Understanding have not been made public.

Estimate of military junta's share of revenues from the sale of the Shwe Gas

Based on 30 production years, a sale price of **1MBTU/\$7.72**, and Available Gas reserves of 9.1tcf*
All amounts are in US Dollars and rounded to the nearest 100th

Revenues from sale of Available Gas = 72.43 billion¹
Royalties (10% of revenues) = 7.24 billion²
Operation and Construction Costs (Cost Gas) = 5.23 billion³
Profit Gas = 59.96 billion⁴
SPDC share of Profit Gas = 34.18 billion⁵
Consortium share of Profit Gas = 25.78 billion⁶
Discount for Domestic Gas = 516 million⁷
Consortium share – discount = 25.26 billion
MOGE share of Profit Gas as consortium member = 3.79 billion⁸
Profit Gas to non-MOGE Consortium = 21.47 billion
Taxes to SPDC on non-MOGE Consortium Profit Gas = 5.80 billion⁹
Fees for training and technology = 3 million¹⁰
Production bonuses = 6 million¹¹
SPDC revenues (w/out signing bonus) = appx 51.54 billion
+ Pipeline Transit fee to SPDC = 4.5 billion¹²

= appx. 56 billion over 30 years (US\$ 1.87 billion per year)

* These figures are taken from publicly available information. Details from the Shwe Production Sharing Contract and Memoranda of Understanding have not been made public.

Footnotes for Calculations

¹ The A-1 and A-3 blocks were certified by Gaffney Cline and Associates to have an estimated available reserve of 5.4 - 9.1 trillion cubic feet (tcf). The first calculation takes the high end of this range together with the sales price that was reported at \$4 per million BTU in 2007. “Daewoo objects to Myanmar gas price,” Hindustan Times, May 8, 2007 and “Daewoo Lawyers Visit Burma to Discuss Shwe Gas Deal,” May 8, 2007. $9.1 \text{ tcf} \times 0.001031 \times \$4 = \$37.53 \text{ billion}$. The second calculation takes the high end of this range together with the sales price that was reported at \$7.72 per million BTU in 2009. “OVL, GAIL, Daewoo to invest \$3.7bn in Myanmar fields,” The Economic Times (13 Jul. 2009). $9.1 \text{ tcf} \times 0.001031 \times \$7.72 = \$72.422 \text{ billion}$. Average conversion rate from Energy Information Agency, http://tonto.eia.doe.gov/ask/ng_faqs.asp#ng_conversions

² All available sources indicate that the junta will receive a 10% royalty on revenues from the sale of the gas. See Production Sharing Contract [Yadana] (9 Jul. 1992) at sec. 10.1 & 10.2; Production Sharing Contract [Block AD-1] (15 Jan. 2007) at sec. 10.1 & 10.2; Production Sharing Contract [Block AD-8] (15 Jan. 2007) at sec. 10.1 & 10.2; Christie, “Myanmar: Overview of Production Sharing Contracts In Oil And Gas In Myanmar” (7 Apr. 2000).

³ Based on the estimated costs to develop the gas field and get the gas to shore (3.73 billion) plus operation costs of 50 million over 30 years. Figures from a Myanmar oil industry analyst.

⁴ Available Gas – Royalties and Cost Gas = Profit Gas.

⁵ Based on the most recent info and contracts, the government take is measured according to daily production. See Production Sharing Contract [Block AD-1] (15 Jan. 2007) at sec. 9.7; Production Sharing Contract [Block AD-8] (15 Jan. 2007) at sec. 9.7. Assuming a conservative daily production of 500 million cubic feet (mcf) at a water depth of greater than 2,000 ft., the SPDC would take 55% of the first 300 mcf, and 60% of second 200 mcf. *Id.* That averages to an approximate share of 57%.

⁶ *Id.* The Consortium share would be 43%.

⁷ Available sources indicate that the SPDC generally takes an estimated 20% of the Consortium’s Profit Gas at a 10% discount. See Production Sharing Contract [Yadana] (9 Jul. 1992) at sec. 14.1; Production Sharing Contract [Block AD-1] (15 Jan. 2007) at sec. 14.1; Production Sharing Contract [Block AD-8] (15 Jan. 2007) at sec. 14.1. The above reflects the estimated loss of profits from the discount.

⁸ Based on current reports of a 15% MOGE share in the Consortium. “Myanmar signs up energy partners,” Asia Times Online (10 Jul. 2008).

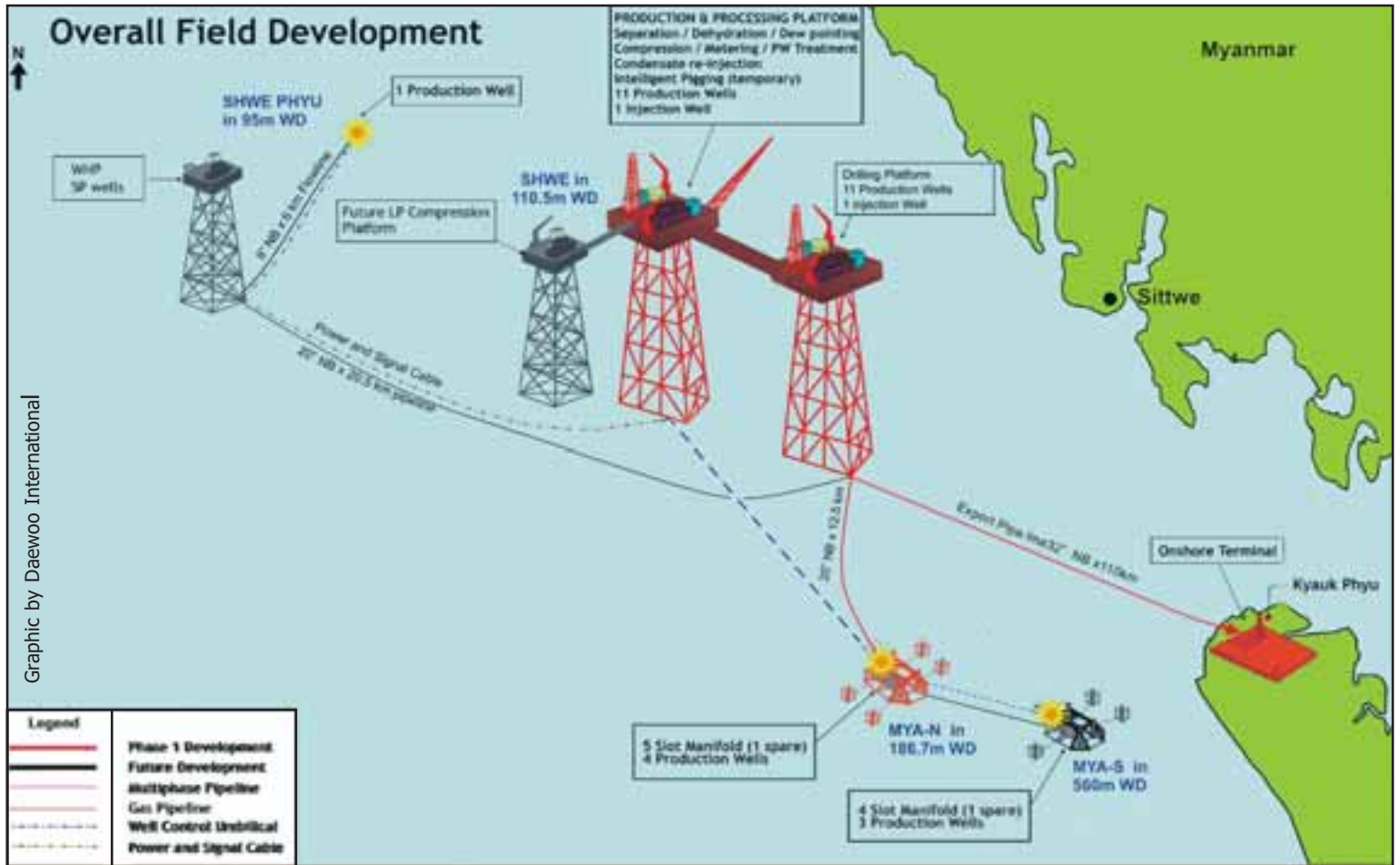
⁹ Based on available information, the tax rate on profits is 30% after a 3 year holiday. See Memorandum of Understanding [Yadana] (9 Jul. 1992) at sec. 4(c); Side Letter No. 3/23/92 (1620) to Memorandum of Understanding [Yadana] (9 Jul. 1992); Union of Myanmar Foreign Investment Law (30 Nov. 1988) at sec. 21; Commercial Tax Law (SLORC Order No. 8/90, 31 Mar. 1990) at sec. 8.

¹⁰ According to available information, the consortium generally pays 100,000 per year in training and education fees during production. See Production Sharing Contract [Yadana] (9 Jul. 1992) at sec. 15.2 & 15.3; Production Sharing Contract [Block AD-1] (15 Jan. 2007) at sec. 15.2 & 15.3; Production Sharing Contract [Block AD-8] (15 Jan. 2007) at sec. 15.2 & 15.3. $100,000/\text{year} \times 30 \text{ years} = 3 \text{ million}$.

¹¹ Based on available production bonus information and based on a conservative estimate of 500 mcf/day of production. See Production Sharing Contract [Block AD-1] (15 Jan. 2007) at sec. 11.2 & 11.3; Production Sharing Contract [Block AD-8] (15 Jan. 2007) at sec. 11.2 & 11.3.

¹² China will reportedly pay 150 million/year pipeline transit fee to the SPDC over 30 years. “Myanmar Natural Gas Going to China,” Energy Tribune (12 Jun. 2007). $150 \text{ million}/\text{year} \times 30 \text{ years} = 4.5 \text{ billion}$.

APPENDIX 5: OFF-SHORE DEVELOPMENT FOR SHWE GAS PROJECT



ENDNOTES

¹ Information is based primarily on a series of articles that were published at the time of the June 2009 Memorandum of Understanding between CNPC and the Burma's Ministry of Energy. However the MOU itself has not been made public.

² "Trading companies accelerate overseas resources exploration," Korea Herald, May 20, 2009 at http://www.koreaherald.co.kr/NEWKHSITE/data/html_dir/2009/05/20/200905200072.asp

³ The A-1 and A-3 blocks were certified by Gaffney Cline and Associates (GCA) to have an estimated available reserve of 5.4 - 9.1 trillion cubic feet (tcf). Daewoo International has since stated that 4.5 - 7.7 tcf of the gas may be commercially viable. "Daewoo Verifies Myanmar Gas Find," Daewoo International, August 22, 2007.

⁴ US\$2.79 billion in the three gas fields in blocks A-1 and A-3 and another US\$936.26 million in laying an under-sea pipeline to take the gas to the shore. "Daewoo-OVL consortium to invest \$3.7 bn in Myanmar," Business Standard, Press Trust of India, July 13, 2009 at <http://www.business-standard.com/india/news/daewoo-ovl-consortium-to-invest-37-bn-in-myanmar/67542/on>

⁵ "Myanmar Natural Gas Going to China," Energy Tribune, June 12, 2007.

⁶ Daewoo International called for tenders to submit Front-end engineering and design (FEED) studies on offshore production drilling platforms and the onshore gas terminal southwest of Kyauk Phyu by April and stated that contracts would be awarded by mid-2009. South Korean Hyundai Heavy Industries and Samsung Heavy Industries as well as French-based Technip and Doris Engineering have all been engaged in the surveys <http://www.energycurrent.com/index.php?id=2&storyid=11159>

⁷ In addition to the Shwe Gas, the Indian oil company Essar has been conducting exploratory drilling in Arakan State since December 2008, following a recent discovery of oil reserves in northern Sittwe Township.

⁸ *World Energy Outlook: China and India Insights, Executive Summary*, International Energy Agency, 2007.

⁹ "Moscow hopes for an unbiased trial of Suu Kyi," Itar-Tass (Russia), June 21, 2009.

¹⁰ It is interesting to note that within ASEAN, Vietnam, Malaysia, and Indonesia are all large producers of oil/gas but don't have strong standards that include social and environmental safeguards.

¹¹ "Myanmar strengthens Co-op with foreign countries on energy," Xinhua, July 28, 2009

¹² See Appendix 4 for detailed explanation of calculations.

¹³ *Burma's Economy 2008: Current Situation and Prospects for Reform*, Sean Turnell, May 2008. Recorded at the official rate, Burma's gas earnings for 2006/07 of \$US1.25 billion amounted to a mere 0.6 per cent of budget receipts.

¹⁴ Myanmar Department of Health website for 2007 expenditure on health per person per year of 849 Kyat (using 1 USD= 1200 Kyat)

¹⁵ Estimates run as high as US\$500 million and do not include the cost of moving thousands of civil servants from the old capital of Rangoon.

¹⁶ *A Preventable Fate: The failure of ART scale-up in Myanmar*, Medecins Sans Frontieres, November 2008.

¹⁷ <http://www.hrw.org/en/news/2009/04/30/burma-one-year-after-cyclone-repression-continues>

- ¹⁸ See Appendix 4 for explanation of calculations.
- ¹⁹ Economist Intelligence Unit (EIU) estimated the GDP per capita at US\$435 per year in 2008
- ²⁰ <http://www.hrw.org/en/news/2009/04/30/burma-one-year-after-cyclone-repression-continues>
- ²¹ “Gas and Regime Preservation,” Bruce Hawke, article in *The Irrawaddy*, November 2004.
- ²² See *Supply and Command*, Shwe Gas Movement, 2006.
- ²³ “14 South Koreans convicted of exporting weapons tech to Myanmar,” Associated Press, November 15, 2007.
- ²⁴ “India, Myanmar Set to Increase Military, Energy Co-operation,” India Defence, December 30, 2006, at www.india-defence.com/reports-2772
- ²⁵ “A Growing Tatmadaw,” article in *The Irrawaddy*, March 2006. Burma’s junta has acquired new weapons systems from numerous other countries, including Russia, Singapore, Pakistan, North Korea, Ukraine and Israel.
- ²⁶ Country Report on Progress of Power Development Plans and Transmission Interconnection Projects, Government of Myanmar, November 2008, accessed at <http://burmariversnetwork.org/images/stories/burmaenergy/countryreport.pdf> and http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=TH
- ²⁷ http://www.nationmaster.com/red/graph/ene_ele_con_percap-energy-electricity-consumption-per-capita&b_printable=1
- ²⁸ Figures published in *The New Light of Myanmar*, February 2006.
- ²⁹ *Energy Security in Asia: China, India, Oil and Peace*, a report to the Norwegian Ministry of Foreign Affairs, April 2006.
- ³⁰ Analysis by Dr. Sean Turnell
- ³¹ *Blocking Freedom: A Case Study of China’s Oil and Gas Investment in Burma*, Arakan Oil Watch, 2008.
- ³² “Daewoo objects to Myanmar gas price,” Hindustan Times, May 8, 2007.
- ³³ “Daewoo Lawyers Visit Burma to Discuss Shwe Gas Deal,” May 8, 2007 at http://www.irrawaddy.org/article.php?art_id=7135
- ³⁴ *Supply and Command*, Shwe Gas Movement, 2006.
- ³⁵ See *Blocking Freedom: A Case Study of China’s Oil and Gas Investment in Burma*, Arakan Oil Watch, 2008.
- ³⁶ Extensive research of these two cases can be found at *Total Denial Continues*, EarthRights International, 2001 and *Laid Waste*, Human Rights Foundation of Monland, 2009.
- ³⁷ <http://globalinvestmentwatch.com/wp-content/uploads/2008/03/petrochina-letter-on-sudan-and-burma-from-afl-cio-and-florida.pdf>
- ³⁸ “The System Implodes: The 10 Worst Corporations of 2008,” Multinational Monitor, November 2008 at <http://www.multinationalmonitor.org/mm2008/112008/weissman.html>
- ³⁹ *Natural Gas: Bridging Fuel or Roadblock to Clean Energy?*, a Greenpeace report, 1993.
- ⁴⁰ “Wintering Spoon-billed Sandpipers found in Myanmar,” BirdLife International, February 14, 2008.
- ⁴¹ <http://www.ecoworld.org/trees/articles/articles2.cfm?TID=243>

⁴² When it was founded in 1961, WWF stood for the “World Wildlife Fund.” As WWF expanded its work to conserve the environment as a whole, rather than focusing on selected species in isolation, the legal name became “World Wide Fund For Nature.”

⁴³ http://en.wikipedia.org/wiki/List_of_the_Global_200

⁴⁴ www.nationalgeographic.com/wildworld/profiles/terrestrial/im/im0131.html

⁴⁵ Ibid.

⁴⁶ According to the “Top 25 Turtles on Death Row,” a list compiled by the Turtle Conservation Fund, 2003.

⁴⁷ “Green rules eye Chinese firms abroad,” China Daily, May 29, 2009.



China is planning to build oil and natural gas pipelines across the heartland of Burma, opening up a new corridor of access to the Indian Ocean and oil imports from the Middle East and Africa. The China National Petroleum Corporation – famous for its operations in Sudan – will also purchase Burma's massive natural gas reserves off the Arakan coast. The reserves are called "Shwe," which means "gold" in Burmese. That is exactly what the gas is worth to the military junta ruling Burma: not only in terms of the political protection it provides to keep the regime in power, but also in terms of the hard cash its sale will provide. This book unveils the pipeline route, what the projects mean for Burma, and the risks the corporations, governments, and financiers face by going ahead with these disastrous projects.