



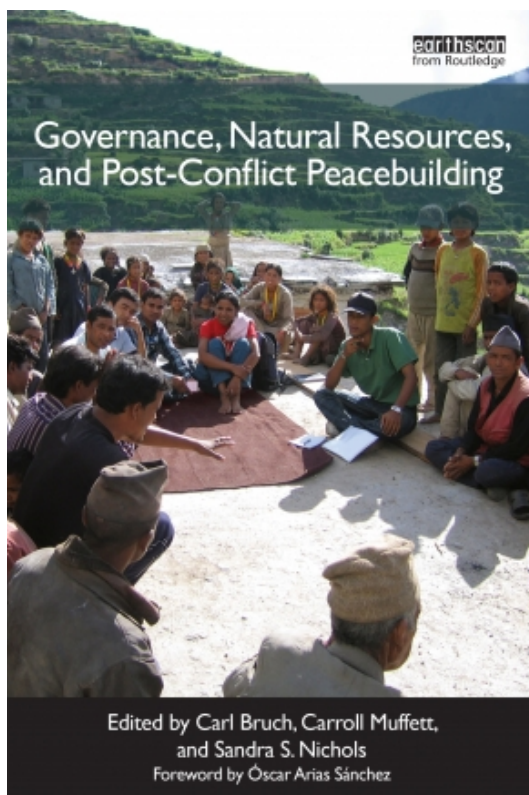
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Myanmar's Ceasefire Regime: Two Decades of Unaccountable Natural Resource Exploitation

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Myanmar's ceasefire regime: Two decades of unaccountable natural resource exploitation

Kirk Talbott, Yuki Akimoto, and Katrina Cuskelly

Myanmar's extensive borderlands, home to numerous ethnic minorities, have been the site of armed conflict between the military government and ethnic armies since the 1950s.¹ Beginning in 1989, however, during a period of intense national unrest, the government arranged a series of ceasefire agreements with major ethnic armies.² The agreements facilitated the extraction and trade of high-value natural resources, including teak, gems and minerals, and rare wildlife. By focusing on the role of the ceasefires and peace agreements in Myanmar's exploitation of its natural resources, this chapter explores Myanmar's transformation from an isolated and war-torn country into a conflict-ridden yet tightly controlled military state and regional investment hub.

In addition to providing the ethnic armies and their attendant political organizations with income for arms, supplies, social programs, and administrative needs, revenue from natural resources has greatly enriched the military regime and empowered the army (the Tatmadaw), which is now one of Asia's largest military forces (Selth 2010). Other natural resources, including natural gas and hydropower, have attracted substantial international investment and financing and played an important role in Myanmar's political development, largely by generating significant amounts of revenue that are managed by the military elite, without any accountability or oversight. Finally, the production of opium has flourished for several decades, and has become strongly linked to natural resources and commercial development across the country.

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¹ In 1989, the military dictatorship renamed Burma "Myanmar"; it also changed a number of place names within the country (for example, Rangoon became "Yangon"). While the United Nations officially recognizes Myanmar as the country's name, many nations, organizations, and individuals continue to refer to the country as "Burma" (Steinberg 2001).

² For the purposes of this chapter, a ceasefire is a cessation in armed conflict, however temporary. In Myanmar, peace agreements have included conditions designed to sustain ceasefires—and, often, the promise of profits (through natural resource extraction) for both the military regime and the ethnic army.

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Myanmar's development has also been affected by choices made beyond its borders. In 1989, in response to continuing political repression—and, in particular, by the violent suppression of popular demonstrations the previous year—the United States and the European Union began to impose a series of economic sanctions against Myanmar's military government. Many entities, including donor governments, some United Nations organizations, international nongovernmental organizations, the World Bank, and the International Monetary Fund, refrained from operating in the country (although many restarted operations in 2012 and 2013). Meanwhile, Asia-based international corporations and private, public, and state-owned enterprises (from China and Thailand in particular) have invested heavily in infrastructure and natural resource extraction in Myanmar. Finally, both China and Thailand, the nations that are most engaged in the exploitation and trade of Myanmar's natural resources, have strengthened their economic and political ties to the country.³

The military government—which, from 1988 until 1997 was known as the State Law and Order Restoration Council (SLORC), and was later renamed the State Peace and Development Council (SPDC)—and its close associates have engaged in natural resource exploitation, sometimes in conflict and at other times in cooperation with ethnic armies.⁴ Timber, gems, and other natural resources not extracted by one side are likely to be captured and exploited by the other. In many parts of the country, traditional forestry and agricultural practices have been undermined or replaced. And in the once heavily forested watersheds along the Thailand-Myanmar border and in Kachin State, in northern Myanmar, deforestation has become pronounced, creating hardships for local communities.

As a consequence of vague or unenforced social and environmental regulations, as well as other complex reasons, Myanmar's rapid gas, mineral, and hydropower development has yielded a number of negative ecological and social impacts, including large-scale human rights abuses (UNGA 2008; EarthRights International 2009b). Human development and basic economic indicators have stalled, and in some cases declined, for the majority of Burmese:⁵ among 169 countries surveyed, Myanmar ranks 149 on the UN's 2013 Human Development Index, and lags behind all its regional neighbors on most socioeconomic indicators for poverty, health, and education (UNDP 2013). Moreover, the wealth generated by the growing trade in natural resources with China and Thailand is not reaped by local communities, but by members of the military regime and their close associates (Akimoto 2006; EarthRights International 2009a, 2009b, 2010a, 2010b). Billions of dollars in revenues from natural resource extraction have enabled Myanmar's

³ China provides the regime with arms (Tin Maung Maung Than 2003).

⁴ The transition of power from the SPDC to the Union Solidarity and Development Party (USDP) was completed in March 2011, after the USDP won the 2010 elections (BBC News Asia 2012).

⁵ The word *Burmese* is used to refer to both the language and the people of Myanmar; it is also the adjectival form of Burma. The word *Burman* refers only to the members of a specific ethnic group within Myanmar.



military elite to accumulate and maintain political power and exert increasingly repressive control over Myanmar's civilians.

After the November 2010 parliamentary elections, the SPDC was officially disbanded; however, the new national parliament, which convened in January 2011, was dominated by the military: many former military rulers were elected as civilian parliamentary representatives;⁶ moreover, the commander-in-chief of the armed forces retains constitutional power to directly appoint military personnel to 25 percent of parliamentary seats (Lintner 2011a, 2011b). Systematic and widespread human rights violations continued, and U.S. and European Union sanctions remained in place as of July 2011. It remains to be seen whether the new political system will provide democratic opportunities for the formulation of new laws and policies to address issues such as environmental protection, information disclosure, and public participation.

⁶ When Myanmar's new parliament convened, it was the first time that any parliamentary body had convened in the country since 1988.

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There are promising developments. In the April 2012 by-elections, the National League for Democracy won forty-three of the forty-four contested seats (Olam 2012). With the political developments, the international community is increasingly engaging with Myanmar. The European Union lifted its sanctions in April 2013, except for the arms embargo which continues as of January 2014 (EurActiv.com 2013; European Commission 2014), and the United States has been easing sanctions (OFAC 2014).

The production of timber, minerals, opium and its derivatives, hydropower, and natural gas, along with the associated infrastructure development, will continue to play an important role in Myanmar's prospects for peace or conflict. Since November 2010, mounting tensions between ethnic forces and the military-dominated government have led to the resumption of armed conflict in some areas along the Thai and Chinese borders.

The chapter is divided into four major sections: (1) a description of Myanmar's characteristics and history, including a discussion of the rise of the modern state of Burma and then Myanmar, from independence to the present, and a description of the ceasefires and peace agreements and their immediate effects; (2) an analysis of the longer-term effects of the ceasefires and peace agreements on natural resources; (3) a discussion of Myanmar today; and (4) a brief conclusion.

CHARACTERISTICS AND HISTORY

Myanmar is blessed with an abundance of natural resources: in addition to its renowned teak forests and wildlife, the country possesses large offshore deposits of natural gas (U.S. DOS 2013), less significant amounts of oil, and extensive deposits of gemstones and minerals (Akimoto 2001). Myanmar's rivers provide the greatest potential for hydropower in the region.

Myanmar's population is highly diverse: in addition to the Burmans, who are the majority ethnic group and are concentrated in the lowlands, the nation harbors numerous distinct ethnolinguistic groups, including the Chin, Kachin, Karen, Kayah, Mon, Rakhine, Shan, and Wa. Myanmar's ethnic minorities are largely concentrated in the hills and mountains along the eastern, northern, and western borders (see figure 1).⁷ Although recent census data is unavailable, Myanmar's ethnic populations are estimated to make up 40 percent of the country's population, which is more than 50 million (Mathieson 2011).

Early history

Prior to 1824, when the British conquered Indo-Burma, as it was then known, the country vacillated between periods of relative peace and warfare with neighboring

⁷On all sides but the southern seacoast, Myanmar is surrounded by hills and mountains that rise to its national borders.

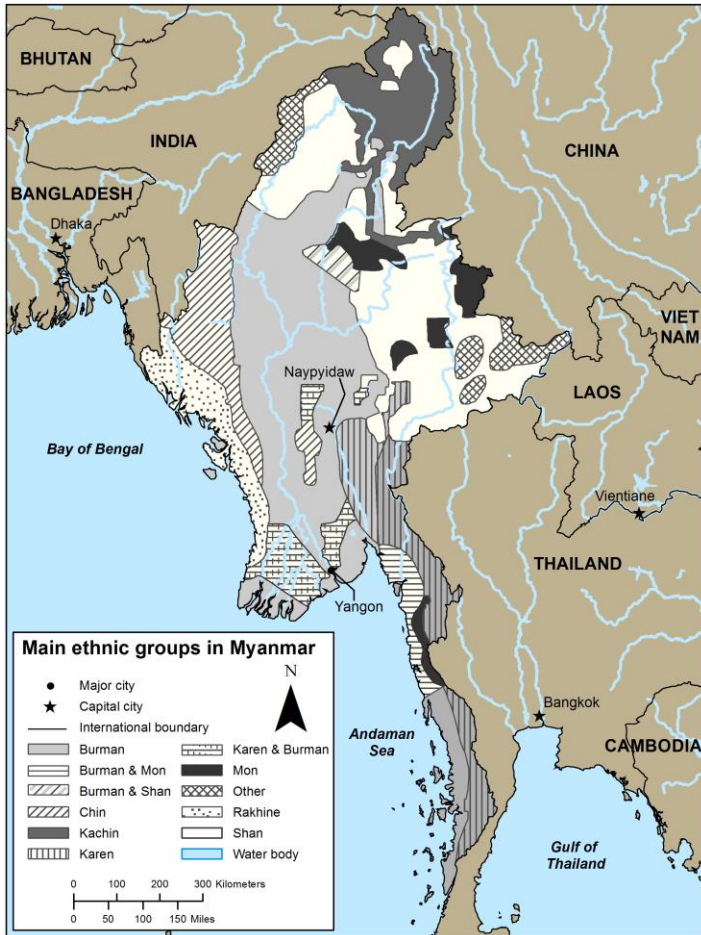


Figure 1. Distribution of main ethnic groups in Myanmar
 Source: M. J. Smith (1999).

kingdoms. During the precolonial period, there was a great deal of inequality between ethnic groups.⁸ As various empires and ethnic groups engaged in territorial expansion and political consolidation, conflict over natural resources was common.

Traditional social and agricultural practices laid the foundations for a regime of customary law throughout Myanmar, but the upland ethnic minorities and the lowland Burmans used vastly differing systems of resource allocation and

⁸ This inequity continues. For example, the ethnic peoples that populate Myanmar's western border with India's Manipur and Mizoram states and Bangladesh's Chittagong Hills have lived in relative isolation and poverty for centuries, and the Rohingya, Muslim inhabitants of western Rakhine State (formerly Arakan State), have long been ostracized—and, in recent years, denied citizenship rights (Mirante 1987).

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management (Alcorn and Oldfield 1991). In the uplands, customary rules supported sustainable, community-based natural resource management that was in keeping with centuries-old practices used across much of Southeast Asia (Lynch and Talbot 1995). Upland populations relied on subsistence swidden agriculture, which has rotational periods of seven years or more.⁹ In the lowlands of the central Irrawaddy River Basin, in contrast, communities engaged in permanent wet-rice cultivation; lowland agriculture was largely controlled and taxed by the Burman central government, which consistently attempted to bring the upland populations into its fold. Over time, tensions over agricultural practices and political control were exacerbated by other cultural and linguistic differences between lowland and upland populations, fueling the ethnic conflicts that persist today (Scott 2009).

With the arrival of the British, in 1824, the stage was set for new patterns of natural resource use and allocation. Colonial powers coveted both Burma's teak hardwood and its oil, which was extracted manually for centuries through small- to medium-scale operations in the western part of the country (Bryant, Nielson, and Tanglely 1997; M. F. Smith and Naing Htoo 2008). Starting in the 1850s, the British began to work with the Karen people, using the Karen's traditional *taungya* (shifting cultivation) crop system to exploit the teak forests and achieve organized revenue generation (Alcorn and Oldfield 1991). The Burma selection system—a rotational system that combined modern scientific tree farming with customary land use—evolved in what is now Karen State, where it succeeded in maintaining high-yield, good-quality teak with minimal negative environmental impacts. Despite the cooperation between the British and the Karen people on forestry projects, Burma experienced decades of simmering conflict and armed warfare between ethnic factions and the British colonialists.

In the early 1900s, oil deposits in what is now Magwe Division (in Central Myanmar) and Rakhine State, which had long been exploited locally, became Britain's principal source of crude oil, which it used to produce kerosene for sale in India. The Burmah Oil Company Limited, a private British firm, eventually controlled and modernized the country's entire oil sector, which became the target of several labor strikes led by domestic oil workers (M. F. Smith and Naing Htoo 2008).

During World War II, the allegiances of Burma's ethnic groups were divided: initially, Burman nationalists, who had long advocated an independent Burma, supported the Japanese, while several other ethnic groups—most notably the Karen and Kachin, who had previously served in great numbers in Britain's domestic armed forces—favored the Allies. Although the Burmans later shifted their support to the Allies, the division of loyalties reflected centuries of unease

⁹Swidden agriculture, also known as *slash and burn agriculture* and *shifting cultivation*, as traditionally practiced, allows the forest and the topsoil to regenerate before the annual planting cycle is renewed.

between the minority upland populations and the majority lowland Burmans. After the war, new ethnic militias formed, relying largely on weapons that had been left behind by Japanese and Allied forces (Lintner 2005).

The rise of the state

The move toward Burma's independence began when Aung San, the "father of independence" and Burma's greatest war hero, helped to forge an agreement that reflected his vision of a unified Burma (Weng 2009). The agreement was signed by the Chin, Kachin, and Shan ethnic groups in Shan State on February 12, 1947, at the Panglong Conference, which Aung San had organized. Although the conference brought brief hope to the country in terms of ethnic equality, a few key ethnic groups chose not to participate, and shortcomings in the new constitution (specifically with regard to ethnic interests) eventually sparked armed revolt. Aung San's party won the constituent assembly elections in April 1947—but just three months after the elections, U Saw, who had been prime minister before the war, engineered the assassination of Aung San and several members of his interim government (Walton 2008). The country officially became independent the following year.

During the 1950s, despite open rebellion against the central government on the part of the Karen and other groups, Burma built on what remained of the colonial infrastructure and began to capitalize on its rich natural resources once again, particularly in the mineral and agricultural sectors. Meanwhile, in upland areas, communities continued to practice rotational forest management based on the Burma selection system.

In 1962, after a decade of political turbulence and slow economic recovery, General Ne Win seized power and introduced the Burmese Way to Socialism, an autarkic command economy based loosely on socialist principles.¹⁰ The following year, under the Enterprise Nationalization Law, all major industries (including rice, teak, oil, and mining) were placed under government control (Holmes 1967)—a move that led to the formation of several state-owned enterprises (such as the Myanma Oil and Gas Enterprise) that still exist today.

The next stage of the country's history was characterized by decreasing foreign influence and increasing military control. To deal with ethnic armies and ethnic populations that were unsympathetic to the Burman central government, the military adopted the "four cuts" strategy, which was designed to block access to food, funds, army recruits, and intelligence. In 1974, the government promulgated a constitution that codified borders that had been set by the British, delineating seven districts in central Burma, where the Burmans were in the majority, and seven ethnic states in the upland areas; both the districts of central Burma and the ethnic states were essentially under the control of the military government

¹⁰ An autarkic economy is closed and self-sufficient; in practical terms, this means that the country does not engage in international trade.

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in Rangoon (Brunner, Talbott, and Elkin 1998).¹¹ By 1987, a combination of perverse economic policies, pervasive corruption, and militarization had led the economy into decline, and Burma joined the ranks of the UN's least-developed countries (UN CDP and UN DESA 2008).

The deterioration of the economy and the resulting loss of livelihoods eventually sparked a nationwide revolt. During a popular demonstration in Rangoon on August 8, 1988, thousands of people were killed or summarily executed by the Tatmadaw and its agents. In September, the military established the State Law and Order Restoration Council (SLORC)—a group of approximately twenty generals that the military announced would rule Burma until a new government was established through elections.¹²

During the general uprising of 1988, a border agreement between China and Burma closed off parts of China that had previously provided safe harbor for thousands of ethnic Wa rebels, precipitating the collapse of the Communist Party of Burma (CPB) and the mutiny of thousands of Wa troops that had supported the CPB. This coalition of minorities, which had fought against the central government for generations, split into four separate ethnic armies. As divisions emerged among ethnic groups that had previously cooperated, the SLORC pursued a divide-and-rule strategy.

Beginning in the late 1980s, the SLORC consolidated its power through the following means:

- *Boosting investment in natural resource exploitation.* In particular, the regime began partnering with international corporations to develop offshore natural gas deposits—an effort that would eventually yield billions of dollars (EarthRights International 2009b).
- *Substantially increasing military spending.* Both the Tatmadaw and its supply of arms grew steadily during the late 1980s, an expansion that appears to have been financed, in large part, by foreign investment in natural resources, including forestry products and gems (Global Witness 2003).¹³
- *Conducting targeted military offensives against the major armed ethnic groups.* In some cases, these offensives were designed to secure state control over geographic areas related to large-scale natural resource extraction (EarthRights International 2009b; M. F. Smith and Naing Htoo 2008).

As promised, the SLORC held national elections in 1990. The results were overwhelmingly in favor of the National League for Democracy, which was headed by Aung San Suu Kyi, Aung San's daughter, even though she had been

¹¹ Rangoon is now known as Yangon.

¹² In 1997, the SLORC was renamed the State Peace and Development Council.

¹³ Between 1988 and 2002, the Tatmadaw more than doubled in size, from 190,000 to approximately 400,000 (Global Witness 2003). As of 2010, defense accounted for 21 percent of public sector spending, versus 13 percent for health and education combined (Turnell 2010).

Table 1. Major ceasefire agreements in Myanmar, 1989–1995

<i>Date</i>	<i>Organization</i>
March 21, 1989	Myanmar National Democracy Alliance Army (an ethnic Kokang armed group)
May 9, 1989	United Wa State Army (affiliated with the Myanmar National Solidarity Party)
June 30, 1989	National Democratic Alliance Army (made up of Shan and Akha armed groups)
September 2, 1989	Shan State Army (affiliated with the Shan State Progress Party)
December 15, 1989	New Democratic Army (an ethnic Kachin armed group)
January 13, 1991	Kachin Defence Army (also referred to as the 4th Brigade of the Kachin Independence Army [KIA]; split off from the KIA until 1993, when the KIA signed a ceasefire agreement of its own)
April 11, 1991	Pa-O National Organisation
April 21, 1991	Palaung State Liberation Army
February 27, 1992	Kayan National Guard (a breakaway group of the Karen National Liberation Army)
October 1, 1993	Kachin Independence Organization/Kachin Independence Army
May 9, 1994	Karenni State Nationalities Peoples' Liberation Front
July 26, 1994	Kayan New Land Party
October 9, 1994	Shan State Nationalities Peoples' Liberation Organization
June 29, 1995	New Mon State Party

Source: Irrawaddy (2004).

placed under house arrest several months earlier.¹⁴ The SLORC refused to honor the outcome of the elections, however.

Ceasefire agreements

Between 1989 and 1995, the SLORC negotiated a series of ceasefire agreements to suspend armed conflict (see table 1).¹⁵ The first ethnic army to take part in such an agreement was the Myanmar National Democracy Alliance Army, an ethnic Kokang army based on the Myanmar-China border (*Irrawaddy* 2004); others soon followed, often under threat of violence from the Tatmadaw. Because the negotiations involved representatives of numerous ethnic groups, each with its own agenda, the result was a patchwork of agreements that varied significantly in form and content. Most of the arrangements were oral only, and even the few that were written have not been made available to the public (TNI 2009).

Although the general contents are known, the exact terms of these agreements are often unclear. By and large, the arrangements were more like ad hoc business deals than firm agreements intended to create a meaningful long-term peace: the SLORC promised ethnic armies the right to control their territories, retain

¹⁴ Aung San Suu Kyi received the Nobel Peace Prize in 1991.

¹⁵ The ceasefires have proven fragile, with violence often re-erupting. Since the series of ceasefire agreements between 1989 and 1995, there have been numerous other ceasefires. For lists of more recent ceasefire agreements, see Myanmar Peace Monitor (n.d.) and Burma Centre for Ethnic Studies Peace and Reconciliation (2012).

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their arms, and engage in natural resource exploitation. In return, ethnic army commanders agreed not to attack SLORC forces, and to break ties with other ethnic forces. The agreements also required each party to obtain consent from the other before entering its territory; delineated areas of control; specified the locations of military facilities; and specified the locations and numbers of soldiers. The demarcation of territory was important in legitimizing the ethnic forces and allowing them to engage in business ventures, including mining and logging projects, with an influx of new business partners (both foreign and domestic; the domestic partners were affiliated with the central government) (TNI 2009). One result of these new partnerships was an increase in cross-border trade: for example, between 1984 and 1994, as a result of intensive new logging projects and other enterprises, annual trade between Myanmar and Yunnan Province, in China, grew from US\$15 million to over US\$800 million (Brunner, Talbott, and Elkin 1998).

Natural resource concessions were often awarded after ceasefires had been put in place. For example, the concessions granted to the United Wa State Party and the Pa-O National Organization were awarded in the wake of ceasefires (TNI 2009). Even where concessions for logging, mining, or infrastructure development were not explicit, ethnic forces and their local supporters were given considerable freedom to exploit and profit from local natural resources.

In many of the ceasefire agreements, the central government promised development assistance for ethnic areas, little of which ever materialized (TNI 2009). One notable exception was the Border Areas Development Program, under which contested border areas—along the sites of conflict—were targeted as priorities for development. The resulting road expansions in logging and mining areas fueled a regional boom in natural resource extraction. The environmental results, however, were devastating: in Kachin State, for example, deforestation rates more than doubled in a few years (Talbott and Brown 1999), and several forests in Karen, Kayah (formerly Karenni), Mon, and Shan states, along the Thai border, were depleted (Brunner, Talbott, and Elkin 1998).

In early November 2010, partially in response to the SPDC's repeated attempts to force ethnic armies to join a border guard force that is controlled by the central government, fighting broke out along the Thailand-Myanmar border, between the Tatmadaw and a breakaway faction of the Democratic Karen Buddhist Army (*Bangkok Post* 2010; UNHCR 2010). Tens of thousands of villagers fled the area, many crossing the border into Thailand (Macan-Markar 2010; FCOB 2010). Pressure on ethnic armies to join the border guard force also contributed to ongoing fighting in parts of Shan and Kachin states, where ceasefire agreements crumbled (HRW 2010; ALTSEAN-BURMA 2011; Naing 2013; Nyein 2013; Burma News International 2013).¹⁶

¹⁶The government and several ethnic armies subsequently renewed their ceasefire agreements, but these agreements are only a temporary means of halting fighting; they do not promise reconciliation or lasting peace. Fighting continues between the Tatmadaw and the Kachin Independence Army, which is one of the few armed groups that have not agreed to a ceasefire.

ON THE FRONT LINES: NATURAL RESOURCES IN THE WAKE OF CEASEFIRES

Natural resources have played a prominent role in Myanmar's recent history, influencing the balance of power between the military government and ethnic groups. In some instances, the draw of wealth from high-value timber, minerals, and wildlife has encouraged commercial cooperation between military-affiliated businessmen and ethnic armies. In other cases, valuable local resources have sparked conflict or competition. Since 1989, the military government has shifted its development priorities in the direction of government-controlled projects, such as large-scale natural gas projects and hydropower dams, undertaken in cooperation with powerful public, private, and state-owned Asian companies eager to invest in Myanmar's natural resources.

Logging: The demise of Myanmar's forest patrimony

The timber industry has been an important revenue source for the military government and has played a strategic role in its efforts to consolidate power. Following the negotiation of ceasefires in the late 1980s and early 1990s, logging increased dramatically in Myanmar, particularly along the eastern border with Thailand. By the mid-1990s, logging had also intensified in Kachin State, largely as a result of ceasefire agreements and rapidly growing trade with China. And by the end of 2005, forest products had become Myanmar's second-most-important source of legal foreign exchange (behind natural gas sales to Thailand), accounting for 15 percent of the total (Global Witness 2005).

As can be seen in figure 2, as of 2003, China was a major market for timber from Myanmar (this trend continued in the subsequent decade). Most of the trade occurred across the land border between Kachin State and Shan State, in Myanmar, and Yunnan Province, in China. According to Chinese customs data, between 2001 and 2004, China imported 800,000 to 1,000,000 cubic meters of timber from Myanmar annually. In 2003, Global Witness estimated that 98 percent of

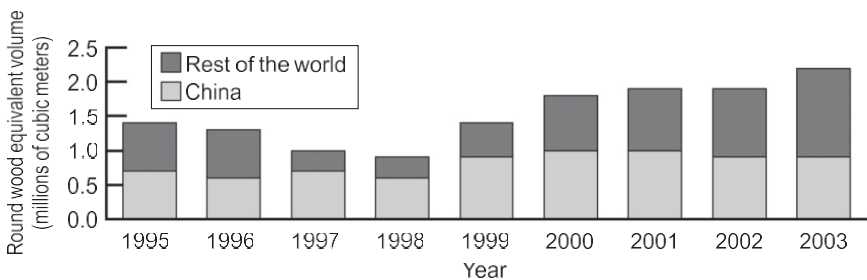


Figure 2. China's share of declared global imports of timber from Myanmar

Source: Global Witness (2005).

Note: Import data have been converted from cubic meters to round wood equivalent volumes, which makes it possible to compare different statistical measures for timber.

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the timber exported to China had been harvested, transported, or exported illegally under Myanmar's laws. Moreover, the exports occurred with the explicit knowledge of the SPDC, ethnic groups that had signed ceasefire agreements, and the Chinese government (Global Witness 2005).¹⁷

Concessions along the Thai border

Ceasefires with many of the ethnic forces along the Thai border led to the establishment of formal logging concessions. Where ethnic groups and the military government undertook joint logging enterprises, conflict diminished. Where ethnic forces retained exclusive control and administrative authority over logging within their territories, however, they were in direct competition with separate government operations being run outside those territories—which led to sporadic outbreaks of fighting, beginning in the late 1980s (Brunner, Talbott, and Elkin 1998).

Another source of conflict was that most of the first large-scale timber concessions were granted to Thai entities (Global Witness 2003), despite the fact that ethnic minorities, including the Kayah, Karen, and Mon, had not only historically controlled the timber trade along the Thai border, but had also used low-impact harvesting methods that sustained the forests and the watershed systems (Brunner, Talbott, and Elkin 1998). In a few instances where concessions were awarded to Thai companies, ethnic groups received some profits from timber extraction within their territories. In most cases, however, the concessions granted to Thai companies did not incorporate ethnic authorities or armies, which led to increased conflict with the SLORC.

The concessions granted to Thai entities also served a strategic function: the construction of logging roads enabled the military to increase its presence in areas that had previously been difficult to access, and had therefore been under the control of rebel armies (Brunner, Talbott, and Elkin 1998). At the same time, however, profits from logging enabled the Karen National Union, which had not signed a ceasefire agreement, and its armed wing, the Karen National Liberation Army, the largest ethnic army on the eastern border, to strengthen their strategic hold on Manerplaw (a village in north central Karen State) and Three Pagodas Pass (a route connecting southern Karen State to Thailand).

Logging by all parties was so intense in the 1990s that, as noted earlier, several forests along the border were nearly depleted by the end of the decade. As a result, several Thai and Chinese concessions were cancelled, and logging rates along large portions of the border declined (Global Witness 2003; EIA 2012).

¹⁷ It is also likely that much of the timber imported into China was contrary to Chinese law, as it would have lacked the required country-of-origin and quarantine documentation (Global Witness 2005).

Kachin State: The new frontier on the China border

By virtue of its remote location and mountainous topography, Kachin State was largely protected from deforestation during the 1980s and 1990s (Brunner and Talbott 2001). The ceasefire agreements signed by the military government and the Kachin Independence Organization (KIO) in the early 1990s shifted resources from fighting to timber extraction, and opened previously inaccessible forests to both government timber enterprises and KIO-controlled logging.

As in the areas along the Thai border, increased logging has been accompanied by new roads. The environmental and social costs of greater road access include heightened erosion, threats to wildlife, more intense pressure on natural resources, risks to public health, and the exacerbation of inequalities. The military regime benefits from the improved access, both economically and logistically because the roads make it easier to distribute forces. Local populations, however, suffer from the general degradation of the environment and natural resources on which their livelihoods rely, and see little or no benefit from the economic growth (Dobias and Talbott 2001).¹⁸ Deforestation is also a grave concern, given the region's high level of biodiversity, the presence of several endemic species (WCS 2010), and the importance of Kachin State's watershed for much of Myanmar. In the N'Mai River region, watershed deterioration caused by deforestation led to such severe ecological impacts downstream that in at least one case, during the late 1990s, the SPDC and KIO cooperated on what was then the largest reforestation initiative in the country (Brunner, Talbott, and Elkin 1998).

Widespread poverty and unemployment, along with increased demographic pressure from internal migration, have driven thousands into the more accessible valleys of Kachin State—which, in turn, has caused an increase in clearing and quick-rotation swidden agriculture. The populations of some towns, such as Hpakant, have swelled as a result of forced relocations, migration to jade mines, and the influx of troops. The increased military presence has led to severe human rights violations, including forced labor, rape, and murder (Forbes 2011).

Despite ongoing human rights violations and environmental harm, positive signs have emerged. In the late 1990s, the KIO initiated a significant reforestation program: over 1 million native fir seedlings were grown in village nurseries and planted along the Chinese border. The KIO also initiated negotiations with the military regime to protect the headwaters of the N'Mai River and other rivers from deforestation (Brunner, Talbott, and Elkin 1998). The regime's commitment to such protection is questionable, however, given that Chinese companies, in partnership with Myanmar's regime, are planning several hydropower dams in Kachin State; controversy surrounding these dams has been a factor in armed conflict between the Kachin Independence Army and the Tatmadaw (*Wall Street Journal Asia* 2011).

¹⁸ Road construction may also provide villagers with some benefits, such as improved access to education and medicine (Than Htike Oo 2010).

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In 2005, the SPDC banned logging in the north of the country—and in 2006, officially asked China for help in eradicating illegal logging. China subsequently closed its borders to the timber trade from Myanmar and ordered its workers out of Myanmar (Global Witness 2006). Between 2005 and 2008, timber trade across the China-Myanmar land border decreased by more than 70 percent. Illegal trade continues, but at much lower levels than previously (Global Witness 2009; Illegal Logging Portal 2013).

Wildlife trade

International demand for a wide variety of wildlife products (both live animals and items such as pelts) has led to a rapid decline in Myanmar's once-spectacular biological diversity (Kachin Development Networking Group 2010; Rerkasem, Donovan, and Talbott 1996).¹⁹ TRAFFIC (Trade Records Analysis of Flora and Fauna in Commerce) reports have documented the flow of wildlife products through Muse, in Myanmar, and into Ruili, in China (Oswell 2010). While Chinese consumers are the primary purchasers in this massive illegal trade, wildlife and wildlife products from Myanmar have also found their way to Europe and the United States (Oswell 2010).

New road networks, many of which have been built by the military government and its partners, have resulted in expanded military control of ethnic minority areas and have also created ready access to previously protected forest areas, rendering wildlife more vulnerable to hunting (Oswell 2010).²⁰ Myanmar's wildlife is hunted by local people suffering from the economic hardships brought about by years of civil war, by ethnic armies seeking to fund their activities, and by Tatmadaw soldiers and commanders. The Democratic Karen Buddhist Army, the Karen Peace Force, and the New Mon State Party have all acknowledged hunting wildlife, sometimes within protected areas in Thailand, to fund operations against the Tatmadaw (Oswell 2010).

Although Myanmar has wildlife protection laws and is party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, enforcement is weak, and most traders can pay off local authorities to ensure that shipments reach their destinations in China, Thailand, or Viet Nam. Even areas marked for conservation are not safe from poaching and deliberate destruction of habitat (Oswell 2010). The once-renowned Pindaung Wildlife Sanctuary, for example, a 200,000-hectare reserve in Kachin State, was carefully managed until the early

¹⁹ Partly because their civil wars have ended, wildlife poaching and localized deforestation are widespread in large areas of Cambodia and Viet Nam (Talbott 1998; Oswell 2010). By contrast, Myanmar's armed conflicts, rugged borders, and remoteness kept its resources relatively isolated from international commercial interests until the late 1980s.

²⁰ Often financed by Thai and Chinese traders, the roads are the same ones used to transport minerals, drugs, and both legal and illegal timber (Talbott and Brown 1999).

1960s. Since then, it has effectively been obliterated by counterinsurgency measures, including the construction of a military railway line within the sanctuary and the arrival of villagers who had been forcibly displaced from other parts of Kachin State (Brunner, Talbott, and Elkin 1998). Similarly, the Hukawng Valley Tiger Reserve, in Kachin State, is technically the largest tiger reserve in the world but has overlapped, since 2006, with the largest private land concession in Myanmar. In that year, Yuzana Company, which at the time was owned and operated by an SPDC member, was granted an agricultural concession over hundreds of thousands of hectares in the Hukawng Valley, including areas within the tiger reserve.²¹ Myanmar's authorities confiscated thousands of hectares of farmland on behalf of the company, and hundreds of households were forcibly relocated to make room for a vast cassava plantation to serve the Chinese biofuel market. Further, Yuzana is reportedly logging illicitly in the concession area and selling high-value timber on the black market (Kachin Development Networking Group 2010).

Minerals and gems

Like logging and wildlife, gems are a significant source of revenue for the military regime. According to industry estimates, Myanmar supplies more than 90 percent of the world's rubies and is the top producer of high-grade jade (HRW 2007; Chicago Council on International Affairs 2012). Official U.S. government statistics indicate that in fiscal year 2006–2007 the regime earned more than US\$300 million from the sale of rubies and jade;²² by the June 2013 gem auction, these earnings had increased to US\$2.4 billion (Palagems 2013).

Most of the jade mines are in Kachin State, and the sale of jade was the KIO's main source of income until it signed a permanent ceasefire agreement in 1994.²³ Today, the military government has a direct ownership interest in many mines. The mining of jade and gems at mines that are owned, in whole or in part, by the regime has reportedly led to land confiscation, extortion, forced labor, child labor, environmental pollution, unsafe working conditions for miners, and health problems—including the spread of HIV/AIDS, drug-resistant malaria, and tuberculosis, which are transmitted easily in mining boomtowns subject to sudden population influxes (HRW 2007).

After the ceasefire agreement between the KIO and the SLORC, the Tatmadaw rapidly expanded its presence in Kachin State and offered 18 percent of the entire state for mining concession. Mid- to large-scale gold mining by Chinese companies has triggered severe deforestation and pollution and

²¹ The reserve was set up by the military government, with cooperation from the U.S.-based Wildlife Conservation Society.

²² Tom Lantos Block Burmese JADE (Junta's Anti-Democratic Efforts) Act of 2008, Public Law 110-286, 110th Cong., July 29, 2008.

²³ The ceasefire agreement signed in October 1993 was an interim agreement.

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economically disenfranchised local Kachin miners, who had traditionally earned a living from small-scale gold mining (Kachin Development Networking Group 2007). Large-scale mining operations often entail foreign investment and state involvement; and as troops are sent in to provide security for the mining projects, the areas surrounding many such operations have become militarized. Typically, the troops relocate villages so that they can more easily monitor local populations, confiscate land, and use forced labor to support mining operations (M. F. Smith 2007; Kachin Development Networking Group 2007).

Hydropower

Myanmar's many watersheds regulate the flow of water into the Irrawaddy River, a lifeline that traverses almost the whole length of the country. The Irrawaddy, Salween, and other major river systems are crucial for agriculture, which relies heavily on irrigation, and for migration and trade.²⁴

In an effort to exploit the country's significant potential for hydropower, the military government plans to build large dams on all of Myanmar's major rivers (Akimoto 2004). Some are intended to produce electricity for domestic consumption, while others are slated to export power to neighboring countries; all will generate significant income for the government (Akimoto 2004). It remains to be seen whether the military government will open up the management of the resulting revenues to democratic oversight.

Many of the projects that are likely to be the most profitable for the government are located in regions where the Tatmadaw and ethnic armies are in active conflict. To secure these areas while foreign experts conduct preliminary studies, Myanmar's authorities have increased the number of troops—who, by their mere presence, intensify the government's control over local populations. In the areas surrounding hydroelectric projects, local villagers have been forcibly relocated and suffered adverse livelihood impacts. Because Myanmar lacks an independent judiciary and rule of law, legal recourse for local villagers is generally unavailable (UNGA 2010).

In Kachin State, the SPDC has been working with Chinese investors to build a 152-meter-high dam at Myitsone, where the N'Mai River and Mali rivers join to create the Irrawaddy. The China Power Investment Corporation, the operator of the project, ignored the environmental impact assessment it had commissioned, which found that "separate dams should be constructed in suitable sites upstream of Myitsone . . . [to reduce] impact on aquatic organisms" (BANCA 2009, 222).

Despite numerous requests from local villagers to address their concerns about the project, neither Myanmar's authorities nor the Chinese investors consulted with local residents before construction began; little or no compensation has been

²⁴Tributaries that penetrate remote valleys also support the illegal wildlife trade and the growing trade in opium and their derivatives.

provided for lost farmlands or orchards; and, by 2010, the Tatmadaw had begun forcing residents to relocate to inadequate—and in some cases deplorable—resettlement sites (Kachin News Group 2010). Moreover, the project will yield no local benefits: the electricity is destined for export to China, and the revenue will accrue to Myanmar's military government (Kachin Development Networking Group 2009). In March 2011, the KIO sent a letter to Chinese authorities in Beijing, requesting that the Myitsone Dam be cancelled and disavowing any responsibility if the project led to civil war—a prediction that was realized in early June of that year, when hostilities resumed after a seventeen-year ceasefire (Lanyaw Zawang Hra 2011). In September 2011, Myanmar's president, Thein Sein, suspended construction of the Myitsone Dam (Fuller 2011), but workers and equipment remain, and work on a road linking the dam site to the Chinese border continues (*Irrawaddy* 2012).

Along the Thai border, Chinese and Thai investors have long pursued plans to build several large dams on the Salween River, in areas that are partially controlled by ethnic forces that are opposed to the plans. In the case of the Hatgyi Dam, in Karen State, the Tatmadaw has launched offensives to secure the project site, causing thousands of new refugees to flee into Thailand (Salween Watch 2009). In Shan State, the area around the site of the Tasang Dam has seen steady militarization since the mid-1990s, which accelerated notably as plans for the dam progressed. Presumably partly in preparation for the Tasang Dam project, authorities have forcibly relocated over 300,000 ethnic people from the area. Reports from the area allege that soldiers tasked with securing the region have committed serious human rights abuses, including torture and extrajudicial killing (Salween Watch 2010; Michaels 2013). Barring a radical change in the management and behavior of the Tatmadaw, such abuse is likely to increase as the Salween dam projects proceed, and more troops arrive to provide security.

Natural gas: Pipelines and the political economy

The importance of the natural gas industry to Myanmar's political economy has rapidly increased since the turn of the twenty-first century. At the time of writing, natural gas accounted for approximately 40 percent of the nation's exports (ADB 2014). In 2013, Myanmar was the tenth largest exporter of natural gas in the world (ANN 2013).

The Yadana and Yetagun natural gas fields attracted significant foreign direct investment, which financed the construction of pipelines from each of the fields to Thailand; the Yadana and Yetagun pipelines came online in 2000 and 2001, respectively (see figure 3 for the location of the natural gas fields and pipelines). The development of the Yadana pipeline began in the 1990s, when three oil companies—Unocal Oil (United States),²⁵ Total (France), and the

²⁵ In 2005, Chevron acquired Unocal Corporation, including all of the company's assets, interests, and liabilities.



Figure 3. Oil and gas projects in Myanmar
 Sources: EarthRights International (2003, 2009b); Shwe Gas Movement (2009a).

Petroleum Authority of Thailand Exploration and Production (PTTEP)—negotiated commercial partnerships with the military government and its state-owned Myanma Oil and Gas Enterprise (MOGE). Arrangements for the Yetagun project were negotiated simultaneously; that project was led by Premier Oil (United Kingdom), Nippon Oil Exploration (Japan),²⁶ Petronas (Malaysia), and PTTEP.

Both pipelines export gas to Thailand, although some of the gas from the Yadana deposit is used domestically: one domestic pipeline runs from the offshore deposit to the former capital, Yangon, and the other (which is a branch of the Thailand-bound pipeline) runs from the town of Kanbawk, in the Tanintharyi Region, to Myainkalay, in Karen State. The Kanbawk-Myainkalay pipeline has ruptured and leaked numerous times; it has also been linked to severe human

²⁶ Since 2010, Nippon Oil Exploration has been known as JX Nippon Oil and Gas Exploration.

rights abuses committed against local villagers by Tatmadaw troops guarding the project (HURFOM 2009).²⁷

Several gas leaks have been reported in the Yadana and Yetagun pipelines to Thailand (Praiwan 2009). Moreover, both of these pipelines cut through the middle of the Kayah-Karen-Tanintharyi moist mountainous forests, which are among the most intact and biologically rich in Asia (EarthRights International 2010b). The resulting environmental impacts include increased logging and subsequent deforestation, and increased wildlife hunting (EarthRights International 2003). The development of the pipelines has also brought large numbers of soldiers and construction workers to areas where ethnic Karen, Mon, and Tavoyan villagers had traditionally fished, raised cattle, and tended rice fields, fruit orchards, and cashew trees. On the Thai side, the PTT (Petroleum Authority of Thailand) commissioned an environmental impact assessment for the Yadana pipeline that was publicly released, but no environmental impact assessments were released on the Myanmar side, and both human rights abuses and environmental damage continue as concerns about safety, gas leaks, and downstream impacts persist (EarthRights International 2010b).

There is a reasonable concern that the pipelines or company personnel could be the targets of attack by Karen or Mon armies. Thus, the Tatmadaw presence has been heavy in the region since the projects started, providing security for both staff and physical infrastructure. Militarization in the area has led to the “violent suppression of dissent, environmental destruction, forced labor and portering, forced relocations, torture, rape and summary executions” (EarthRights International 2003, 2). The population influx associated with the projects has also brought negative social impacts—including increases in prostitution and communicable diseases—to what was once an isolated area (HURFOM 2009).

Between 1998 and 2009, the Yadana project alone is estimated to have generated US\$9 billion in profits; although approximately half this amount went directly to the military government, little of the regime's share was reflected in the national budget (EarthRights International 2010b). The government currently earns approximately US\$3.7 billion each year from natural gas exports, up from US\$2 billion in 2010 (*Irrawaddy* 2013; Turnell 2010). If income from natural gas were fully recorded in the national accounts—at the market rate of 1,000 kyats to the U.S. dollar—it would make up approximately 57 percent of the national budget (EarthRights International n.d.).²⁸ Instead, the regime records revenue at a rate of 6 kyats to the U.S. dollar; as a result, large amounts of cash remain unaccounted for. In 2009, EarthRights International claimed that gas

²⁷ Instead of addressing the environmental risks associated with the leaks, the troops providing security for the pipelines have blamed the local villagers for these incidents and engaged in arrest, torture, extortion, and imposition of travel restrictions (HURFOM 2009).

²⁸ As a consequence of corruption and lack of transparency, much of the income from natural gas is not reported in the national accounts. Thus, according to the International Monetary Fund, natural gas contributed less than 1 percent of Myanmar's total revenue (EarthRights International n.d.).

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revenues were being held in private accounts in two of Singapore's largest and most long-established banks: the Overseas Chinese Banking Corporation and DBS Group (EarthRights International 2009b). Both banks have denied involvement in Myanmar's gas projects but did not explicitly address the allegation that they were holding tainted funds (Shwe 2011). The questionable financial oversight of these resources, and the concern that such corruption strengthens the military regime, prompted the U.S. Congress to pass the Tom Lantos Block Burmese JADE (Junta's Anti-Democratic Efforts) Act of 2008, which allows the Treasury Department to impose financial sanctions on Myanmar. Moreover, the sanctions affect Myanmar's standing in the international financial system and discourages foreign banks from accepting accounts from Myanmar's military leaders or their families (M. F. Smith 2011b).

In September 1997, thirteen Burmese villagers filed a lawsuit against Unocal Corporation through the U.S. courts, seeking redress for human rights abuses associated with the construction and operation of the Yadana pipeline.²⁹ In an undisclosed settlement reached in 2005, Unocal agreed to compensate the plaintiffs and provide funding for development projects that would improve living standards, health care, and education in the region (EarthRights International 2005). In an attempt to mitigate the documented human rights abuses, Total has spent over US\$30 million from 1995 through 2012 on social development programs—supporting agriculture, providing microfunding, and building schools (Total n.d. 2010).

In 2004, through a joint venture with MOGE, a consortium led by South Korea's Daewoo International Corporation began developing a group of large offshore natural gas fields, collectively known as the Shwe (which means "gold"). Located in the Bay of Bengal, off the coast of Rakhine State, the Shwe fields contain between 5.4 and 9.1 trillion cubic feet of recoverable gas (Shwe Gas Movement 2009b).³⁰ China has contracted to be the sole purchaser of gas from the Shwe deposits, which will be transported from Myanmar to Yunnan Province by means of a cross-country pipeline.

The 2,500-kilometer Shwe gas pipeline was completed in 2013, and is operational (AFP 2013). Along the gas pipeline, an oil pipeline is under construction; together, the gas and oil pipelines will create a new, trans-Myanmar energy corridor (Asia Society Task Force on U.S. Policy toward Burma/Myanmar 2010). The oil pipeline, which will transport oil from the Middle East and Africa to Yunnan Province in China, is being constructed by the China National Petroleum Corporation (CNPC). The pipelines have already been linked to abuses such as land confiscation, torture, forced labor, arbitrary detention and arrest, and violations of the rights of indigenous peoples (including the right to free, prior, and informed consent) (Shwe Gas Movement 2009a; EarthRights International

²⁹ See *Doe I v. Unocal Corp.*, 395 F.3d 932, 9th Circuit Court of Appeals (2005).

³⁰ The other members of the consortium are the state-owned Korea Gas Corporation; the state-owned China National Petroleum Corporation; the state-owned ONGC Videsh, of India; and the state-owned Gas Authority of India.

2010a, 2011; M. F. Smith 2011a). There are also concerns about environmental degradation, particularly deforestation (Shwe Gas Movement 2009a). Finally, infrastructure construction and offshore exploration have damaged or destroyed rice paddies, leading to the imposition of restrictions on fishing and undermining livelihoods (EarthRights International 2010a). Daewoo International and CNPC deny the allegations (Business & Human Rights Resource Centre 2011).

Opium and other illicit substances

Opium has historically played an important role in Myanmar's economy. Myanmar produces more opium than any other country in Southeast Asia—and, poppy cultivation grew from 43,600 hectares in 2011 to 51,000 in 2012, a 17 percent increase (Campbell 2013). Three hundred thousand households depend on opium poppy cultivation, which produces 690 tons of poppy worth US\$359 million. Myanmar now accounts for 25 percent of the world trade in opium, second behind Afghanistan (UNODC 2012). Beginning in the early 1960s, Kachin State was in open rebellion against the military government, and the KIO forces were among the largest of all the ethnic armies in Myanmar (McCartan 2010). By 1994, a ceasefire and a series of agreements on timber, opium, and other legal and illegal enterprises had sparked a period of rapid natural resource exploitation and trade, with China in particular. One consequence was an increase in drug trafficking, which was facilitated by the development of logging transport routes: hollowed-out logs have been used to transport drugs, and logging companies are used to launder drug money. At the same time, drug eradication schemes have promoted intensive logging, to provide an alternative income source for opium farmers (Global Witness 2003).

Like the wildlife trade, the drug trade is driven by poverty and insecurity. For the approximately 1.2 million people (out of a population of over 50 million) who are engaged in opium production, trade, or transport, opium poppy accounts, on average, for more than 43 percent of income (UNODC 2010). In the late 1990s, before the boom in natural gas exports, Myanmar experts believed narcotics to be Myanmar's largest source of foreign exchange (Rieffel 2010).

Along with the profits from gems and timber, the military government invests opium profits in the Union of Myanmar Economic Holdings (UMEH) (ALTSEAN-Burma 2003), which is wholly owned by military officers (including SPDC members) and the defense ministry's Directorate of Defense Procurement. The UMEH funnels funds to well-placed, high-ranking military officers and their close business associates. In addition to providing a long-term revenue source for the military, the UMEH serves as a joint venture partner for foreign investors, allowing drug revenues to be laundered through foreign-funded projects—particularly real estate, hotels, and tourism.³¹

³¹ Partly as a consequence of such activities, in 2010, Myanmar had the second-lowest ranking in the world on the Corruption Perceptions Index (TI 2010). In 2013, Myanmar was ranked 157 out of 177 countries (TI 2013).

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In a pattern that has further legitimized the drug trade, key figures in the trade have negotiated deals with the SPDC. Khun Sa, for example, an infamous drug baron and a longtime adversary of the SPDC, surrendered in 1996 and retired to the comfort of a government compound in Yangon (*Economist* 2007). He and other “rehabilitated” drug lords have engaged in a variety of legitimate business ventures with foreign investors, military officers, and members of the political elite.

The drug trade—known for negative environmental and social impacts—has provided one of the few grounds for international cooperation with the SPDC (and now the Union Solidarity and Development Party). The U.S. Drug Enforcement Administration and the United Nations Office on Drugs and Crime have worked with the military government to reduce illegal drug trade in the country (Rieffel 2010). Nevertheless, progress has been questionable (PWO 2010).

MYANMAR TODAY

While there has been little dramatic change in Myanmar’s political and economic landscape since the early 1990s, the military government has steadily consolidated its power and wealth. This process was facilitated by foreign actors: China, Thailand, and a small but powerful group of Western corporations have provided crucial foreign investment for the development of Myanmar’s burgeoning natural resource sector. Long isolated, Myanmar is now poised to become a regional investment hub for Southeast Asia. In November 2010, the military government held parliamentary elections; one week later, it released Aung San Suu Kyi from house arrest. By April 2012, she was in elected office (Welty 2013). Despite these signs of the potential for change, the Tatmadaw maintains a strong grip on Myanmar’s political economy and the use and allocation of natural resources.

Twenty years of the ceasefire regime: Power and profit

The patchwork of ceasefires and peace agreements made between 1989 and 1995 expanded both legitimate and illicit natural resource–based commercial activities. It has also had negative social and environmental consequences. Logging roads and the Yadana and Yetagun natural gas pipelines now connect Myanmar’s remote reserves and forested hinterlands to burgeoning Chinese and Thai border towns. In addition to bringing jobs and economic opportunity, the expanded infrastructure and transport corridors facilitate prostitution, drug smuggling, and other social ills. In some cases, such as the Tasang Dam, in Shan State, natural resource exploitation has been associated with forced military relocation of ethnic inhabitants. Many of the forests along the Thai border have been overexploited, and large-scale watershed degradation, resulting from deforestation, has been reported in Kachin State (Global Witness 2005).

Meanwhile, burgeoning exploitation of natural resources has failed to yield significant social or economic benefits for Myanmar’s population. Before World

War II, Burma had one of the most prosperous agricultural economies in Southeast Asia and was the world's largest producer of rice (Steinberg 2001). In 1947, when Burma began its fight for independence, its citizens were among Asia's most educated and hopeful. Today, just under 4 percent of the country's gross domestic product is spent on health care and 1.3 percent on education (Carter and Naw 2013; Oxford Burma Alliance n.d.). Much of the country lacks clean water, sanitation, primary education, and other basic services (TBBC 2010a). Myanmar has the third-highest rate of HIV/AIDS at 0.47 percent of the population, and the highest infant mortality rate among the countries in the Association of Southeast Asian Nations (ASEAN) at 37.5 deaths for every 1,000 births (UNAIDS 2013; MNPED and UNICEF 2012).

Continuing unrest has disrupted local residents' ability to manage agricultural and other natural resources, and forced hundreds of thousands of Burmese into refugee camps in bordering nations; others survive abroad, as poorly paid migrant workers (TBBC 2010a, 2010b). In 2008, Cyclone Nargis killed tens of thousands of Burmese and left many more homeless (Berger 2008), compounding human suffering in the country and further disrupting agricultural and natural resource management practices, particularly across the broad Irrawaddy delta.

Since the early 1990s, the military government has consolidated wealth and power through a divide-and-conquer strategy, employing both military and economic persuasion to pit ethnic groups against each other and break up united armed fronts along the frontiers. Sporadic outbreaks of violence, beginning in late 2010, contravened ceasefires and peace agreements and signaled Myanmar's enduring instability. In the wake of the parliamentary elections of November 2010 and rising social and political unrest throughout the country, armed conflict intensified in Karen State until early 2012, when the new government and the Karen National Union agreed to a preliminary ceasefire. Beginning in March 2011, northern Shan State and Kachin State were the sites of intense fighting.

In the realm of economic development, the Union Solidarity and Development Party (and before it, the SPDC) is focusing on lucrative international gas and hydropower contracts. The Yadana gas project, for example, has already generated several billion dollars in revenue, and has provided the bulk of Myanmar's foreign exchange since the late 1990s (EarthRights International 2010b). Ethnic groups have relatively less control over gas and hydropower than over logging, gems, and opium—due in part to the comparative accessibility of the resources which make the latter better suited to local management.

As noted earlier, because the military government uses an official exchange rate of approximately 6 kyats to the U.S. dollar, the foreign exchange revenues from natural gas development have almost no impact on the country's fiscal accounts. Economists estimate that a realistic exchange rate, based on buying power, would be approximately 1,000 kyats to the U.S. dollar (Turnell 2010). Thus, official revenues from foreign investment and exports amount to a significantly smaller sum than the purchasing power they actually represent. Under the government exchange rate, for example, revenues from gas exports are approximately

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1 percent of the national budget—but at market value, the same earnings would amount to more than double the total state receipts (Turnell 2010).

The government’s manipulation of the exchange rate has been described as “a neat accounting trick that allows Burma’s leaders to hide immense revenues from the public and the international community” and as “a mixture of gross mismanagement and the outright theft of Burma’s natural resources” (Asia Society Task Force on U.S. Policy toward Burma/Myanmar 2010, 29). Instead of being used to address the pressing development needs of Myanmar’s citizens, hard currency revenues are funneled to a select group of insiders and used to support specific projects of the regime (Asia Society Task Force on U.S. Policy toward Burma/Myanmar 2010).³²

From outcast to regional investment hub

In response to the government’s violent crackdown on the demonstrations of August 1988, many Western governments and multilateral institutions stopped providing development aid to Myanmar. Nevertheless, a few large Western corporations, such as Unocal and Total, have invested billions of dollars in the Yadana pipeline. While Western investors are required to meet certain standards for social and environmental impacts, other foreign investors—from China and Thailand, in particular—rarely adopt such standards. Thus, the social and environmental impacts of rapid natural resource development have been largely ignored, and local populations have received little or no restitution for harm. Despite continued conflict at both the national and local levels, Myanmar’s investment climate has improved, particularly in southern offshore regions, providing a possible opening not only for wider foreign investment in Myanmar’s natural resources, but also for the infusion of standards and practices designed to limit negative social and environment impacts.

Since the late 1990s, Myanmar has been subject to a series of economic sanctions imposed by the European Union and the United States.³³ And in 2000, the International Labour Organization imposed sanctions on Myanmar because of its government’s use of forced labor (Jagan 2000). Between 1990 and 2010, in response to pressure from many Western governments, international financial institutions such as the World Bank, the International Monetary Fund, and the Asian Development Bank (ADB) stopped lending to Myanmar. Due to political changes in Myanmar, these institutions have begun to prepare to fully reengage with Myanmar. The European Union sanctions have been lifted, except for the arms embargo; U.S. sanctions have been partially lifted; the International Labour

³² In April 2012, Myanmar’s central bank adopted a managed float for its currency, ending a thirty-five-year fixed exchange rate (Bloomberg 2012).

³³ Among other provisions, the Tom Lantos Block Burmese JADE (Junta’s Anti-Democratic Efforts) Act of 2008 bans the importation of certain gems from Myanmar into the United States.

Organization lifted its sanctions in June 2012 (ILO 2012); the World Bank is now fully reengaged with Myanmar (World Bank 2014); and the International Monetary Fund and the ADB have intensified engagement with Myanmar (IMF 2013; ADB 2013).

Before reengaging, the ADB, along with a range of private enterprises, has brought tens of billions of dollars of infrastructure investments to mainland Southeast Asia through its Greater Mekong Subregional (GMS) program. Even while it refrained from engaging directly with Myanmar, the ADB supported Myanmar's participation in the GMS program and facilitated bilateral or private investment for projects in Myanmar, including the section of the East-West Economic Corridor (EWEC) that passes through Myanmar (Akimoto 2009). The EWEC, a flagship of the GMS initiative, originally focused on transport, telecommunications, and energy infrastructure development, with the goal of linking important commercial nodes in the region.³⁴ The ADB is now broadening the focus of the project to include social support, particularly for the region's poor and marginalized populations, in the form of funding and technical assistance for education, health care, livelihoods, and enterprise building (ADB 2010). Along with the EWEC, other projects under the GMS program will continue to facilitate Myanmar's incorporation into the regional economy.

The United Nations Development Programme, the Food and Agriculture Organization of the United Nations, and a few other international organizations have supported water and community forestry projects in Myanmar since the 1990s, and several international humanitarian nongovernmental organizations (NGOs) have been working in Myanmar since 2008, when Cyclone Nargis hit. Although several environmental NGOs, such as the Wildlife Conservation Society, have struggled to work with communities and with low-ranking government officials, the military government often used such work to showcase "green" projects to the international community, and thereby legitimize the practices of the SPDC.³⁵

Despite sanctions and limited multilateral development assistance, Myanmar's military government has succeeded in becoming stronger through natural resource development and international investment. China is Myanmar's largest source of foreign direct investment (and imports) (Turnell 2010), but other regional investors are increasing their presence in Myanmar's natural resource sectors. Thailand, in particular, is a key investor: it is participating in the Yadana and Yetagun gas projects and is playing the lead role in the largest single foreign investment in Myanmar to date—an US\$8.6 billion deal between Italian-Thai Development PCL and the state-owned Myanmar Port and Development Company to develop

³⁴ The corridor connects Mawlamyine and Myanwaddy, in Myanmar, to southern Thailand and Laos, and will eventually reach Da Nang, on Viet Nam's coast.

³⁵ For example, the efforts of the Wildlife Conservation Society to reduce deforestation in Myanmar have been criticized for providing the SPDC—which has engaged in excessive logging—with an environmentalist cover (Tenove 2003).

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a deep-sea port and related facilities at Dawei (formerly Tavoy), and to connect the port to Thailand by road and railway (Roughneen 2010). Trade partnerships with China and Thailand will only increase as the Shwe gas project and the trans-Myanmar energy corridor progress.

Some ASEAN members, including Malaysia, Singapore, and Thailand, have invested heavily in real estate, agricultural plantations, and other natural resource development in Myanmar. Although ASEAN has been criticized for failing to address Myanmar's environmental practices and human rights violations, some member countries have become more outspoken about such issues (Beech 2008). In a reflection of both countries' experiences with post-conflict natural resource management and peacebuilding, Indonesia and the Philippines have pressed Myanmar's military government to undertake political reforms (Barber and Talbot 2003; Brown Weiss 2010). Thailand, in contrast, has had to balance its rising commercial interests against its democratic principles and growing disapproval, throughout Southeast Asia, of Myanmar's military regime.

CONCLUSION

Although instability persists in border areas, the military government's authoritarian approach to "rule of law" has been strengthened—thanks, in large part, to the ceasefires of the late 1980s and early 1990s, and the resulting exploitation of the valuable natural resources to which the agreements permitted access. Viewed from this perspective, the November 2010 elections, the release of Aung San Suu Kyi, and the 2012 by-elections can be seen as the latest chapter in the history of military control over the nation's political economy, rather than as harbingers of reform and eventual peace.

While there is no clear way forward in Myanmar, a number of observations can be made about the role of natural resources in Myanmar since the ceasefires and peace agreements.

- Natural resources have been crucial to the military government's efforts to maintain control of the entire country. By striking deals for natural resource allocation, extraction, and trade, the SLORC—and, later, the SPDC—succeeded in temporarily halting violent conflict, consolidating political rule, and strengthening its military superiority.
- Largely because of the military government's divide-and-rule campaign, natural resources have been rapidly and unsustainably exploited, in what amounts to a zero-sum game: valuable resources not extracted by one side are exploited by the other. With respect to natural resource management and other development priorities, the military government has largely ignored the voices of the National League for Democracy and civil society, which have called for the protection of human rights.
- Deals to maximize short-term profit from logging, mining for gems and minerals, opium poppy cultivation, and wildlife hunting have not only enriched

the SPDC and certain ethnic forces whose territories held valuable natural resources, but have also fueled instability: much of Myanmar's natural resource wealth has been used to purchase arms and supplies.

- Unchecked natural resource exploitation, coupled with political repression and little regard for human rights, has led to severe environmental and social impacts, which have been borne primarily by ordinary people. Among the many reported environmental effects are deforestation, pollution, and over-hunting. Gas line construction, mining, large-scale agricultural development, and hydropower projects in ethnic areas have also led to widespread human rights abuses by Tatmadaw troops, who are ostensibly present to provide security.³⁶
- Myanmar's international political isolation has shaped trends in natural resource exploitation. Western trade sanctions and international financial institutions' lack of engagement have not stopped Myanmar's neighbors, China and Thailand in particular, from continuing to pour billions of dollars into Myanmar's expanding natural resource sectors. As a result, significant infrastructure and natural resource exploitation projects—including the Shwe gas project, the oil pipeline to China, and (until it was suspended) the Myitsone Dam—have proceeded with little in the way of impact assessments or safeguards.
- Myanmar's population has scarcely benefited from the wealth generated by the country's natural resource boom. Although gross domestic product is officially rising, per capita income is estimated to be little more than US\$3 per day, making Myanmar one of the poorest nations in the world (UNdata 2014).

In sum, Myanmar has transformed itself from an isolated and war-torn country into a conflict-ridden yet tightly controlled military state and regional investment hub. The international community, including financial institutions, can respond to Myanmar's burgeoning but unchecked exploitation of its natural resources by supporting better governance and natural resource management. In addition to the need for an overhaul of natural resource management policies and practices, opportunities for regional and global cooperation may be found in community-level reforestation, wildlife conservation, ecotourism, and traditional community forestry practices. To have a positive impact, however—and to avoid being used by the military government to justify its policies and practices—approaches to engagement must be founded on a nuanced assessment of political progress and reform, and implementation must be appropriately nuanced, flexible, and principled.

³⁶ The forced relocation of ethnic groups that has been associated with several dam projects and the construction of the Yadana and Yetagun pipelines underscores the military's willingness to engage in human rights violations in the course of furthering construction goals (EarthRights International 2003; Kachin News Group 2010).

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The ceasefires bought time and a considerable reduction in armed conflict, but they have not begun to address the long-standing struggle of Myanmar's ethnic minorities. After a new constitution was approved in 2008,³⁷ the SPDC began demanding that all ethnic armies submit to its command by joining the border guard forces; when many of the ethnic armies refused to comply, renewed armed conflict erupted across large swathes of ethnic territories (UNHCR 2010; HRW 2010; ALTSEAN-Burma 2011). As the SPDC has consolidated its political and military power, the negotiating power of the ethnic groups has diminished. Also, after two decades of intense localized logging, some ethnic groups have exhausted the value of their natural patrimony, diminishing their incentive to cooperate.

Despite the 2010 parliamentary elections, the release of Aung San Suu Kyi, and the 2012 by-elections, Myanmar experts are not sanguine about the military government's incentives to cede power or seek international approval: too much money is at stake (Turnell 2010; Lintner 2011b). Nevertheless, Myanmar's leadership, while authoritarian, is not monolithic. Nor are individual military and business leaders immune to moderating influences or to pressure to adapt to a changing world. For years, repression and unsustainable natural resource use have been largely unrestrained. But some of the older generals are retiring, and younger officers are moving into leadership positions. It remains to be seen whether exposure to progressive international influences will lead any of the new guard to introduce fresh ideas about governance and natural resource management.³⁸

Although the current picture is not promising, if Myanmar could establish principles of social and environmental protection, respect for human rights, and community participation in natural resource management, new opportunities for the people and the nation would emerge. The international community could provide support for putting such principles into practice, and help stem the tide of unrestrained natural resource exploitation. Ultimately, Myanmar could establish a shared framework—involving both the government and civil society—for effective and equitable natural resource management. The nation's future hangs in the balance.

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³⁷ The 2008 constitution remains in force as of September 2014, and provided the framework for the 2010 parliamentary elections.

³⁸ Despite the government's countermeasures, cell phones, cameras, computers, and other communication technologies now provide many Burmese citizens with almost instant access to information (Mydans 2007).

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