

Measuring the Reverse Flow of Risk: A Case Study of the Monywa Copper Project in Burma

CIFP

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Note

About CIFP

CIFP has its origins in a prototype geopolitical database developed by the Canadian Department of National Defence in 1991. The prototype project called GEOPOL covered a wide range of political, economic, social, military, and environmental indicators through the medium of a rating system. In 1997, under the guidance of Andre Ouellete, John Patterson, Tony Kellett and Paul Sutherland, the Canadian Department of Foreign Affairs and International Trade decided to adopt some elements of GEOPOL to meet the needs of policy makers, the academic community and the private sector. The CIFP project as it became known has since then operated under the guidance of principal investigator David Carment of Carleton University and has received funding from FAC, the EU, CISC, PetroCanada, IDRC and CIDA. The project represents an ongoing effort to identify and assemble statistical information conveying the key features of the political, economic, social and cultural environments of countries around the world.

The cross-national data generated through CIFP was intended to have a variety of applications in government departments, NGOs, and by users in the private sector. The data set provides at-a-glance global overviews, issue-based perspectives and country performance measures. Currently, the data set includes measures of domestic armed conflict, governance and political instability, militarisation, religious and ethnic diversity, demographic stress, economic performance, human development, environmental stress, and international linkages.

The CIFP database currently includes statistical data in the above issue areas, in the form of over one hundred performance indicators. These indicators are drawn from a variety of open sources, including the World Bank, the United Nations Development Programme, the United Nations High Commissioner for Refugees, the Stockholm International Peace Research

Institute, and the Minorities at Risk and POLITY IV data sets from the University of Maryland.

Currently, with the generous support of the Canadian International Development Agency (CIDA), CIFP has begun work on fragile states.

CIFP links with the private sector

Providing statistical data measures for over one hundred performance indicators drawn from a variety of open sources for 196 countries spanning fifteen years, CIFP is internationally known and recognised for its contributions to the early warning and conflict prevention knowledge base. In addition to its existing capacities, CIFP is also gaining notoriety in the international business community by providing business leaders with key political, economic, social and cultural information. CIFP is expanding its application and utility from a largely academic and research based network to the private sector. Referenced by multiple business web guide sites, the CIFP database provides multinational companies with the requisite background information for their enterprises. CIFP's current mission is to expand its expertise and to provide MNCs with tailored information and company specific reports based on their industry sector and physical location(s).

About the Author

Terry Bell is an MA candidate at the Norman Paterson School of International Affairs at Carleton University. Focusing on global finance and Multinational Companies (MNCs), Terry's research has examined the relationship between extractive industry MNCs and transnational civil society. Currently, he is researching the effects of ethical investment and divestment campaigns on corporate behaviour. Terry holds a BA from the University of British Columbia in International Relations and has experience working for the Government of Canada, multinational companies and non-profit organizations.

Introduction and Methodology

This report applies the template developed by Leah Berger and CIFP in *Private Sector Risk Analysis and Conflict Assessment: Measuring the Reverse Flow of Risk* (2003) to a case study of the Monywa Copper Project in Burma. The reverse flow of risk, a concept developed within Berger's paper, recognizes the negative impacts that may befall firms operating in unstable environments. It acknowledges that the operational activities of firms can impact human rights, security, conflict, resource distribution, corruption and environmental damage. The response to these impacts, whether by the local population or international civil society groups can impact a firm's operations and, in turn, its bottom-line. Therefore, it is in the interest of multinational companies (MNC) to be wary of their business practices in respect to their potential to trigger a reverse flow of risk.

Working within the framework provided in Berger's study, this report develops a case study analysis in order to evaluate whether extractive industry MNC activities can impact conflict zone activity. The format of the report includes an examination of the host country as well as the MNC's operations within that country. Conclusions about what role the MNC has on the conflict zone will be drawn from the analysis of both, leading to recommendations on how to mitigate the chances that a reverse flow of will arise.

Finally, based on the information available, best-case, worst-case and base-case scenarios will be put forth to elucidate on the findings of the study. Scenarios are useful tools in that they permit the consideration of information that is speculative or uncertain. Scenarios also allow for an analysis of the current trajectory of events.

The scenarios will refer to the opportunity for a reverse flow of risk to arise. This is an integral point, as a best-case scenario is not necessarily indicative of what is best for the peace and stability of Burma, but solely representative of what is best for the operations of the Monywa Copper Project.

The template for measuring reverse flow risk to extractive industry MNCs is divided into six issue areas; governance and political stability, militarization and security, demographic stress, economic performance, human development and environmental stress. Each category recommends a number of indicators to be used for examining both the conditions within the host state and the operations of company. The analysis of which can be used to consider how a company's operations may affect and be affected by a dispute within the associated region. Such an investigation into the operative practices of a MNC requires that the structure of the template be heavily reliant on proprietary company data. Without complete access to such data this report utilizes a number of alternate sources of information than those outlined in the template and develops a more qualitative analysis than might otherwise result. As a result of the consequent constraints, the structure of this paper divides the analysis of the country from that of the company. The micro-level indicators are then incorporated into the report under a variety of subheadings. Where quantitative data was inaccessible qualitative assessment has attempted to fill in the gaps.

The framework of analysis identifies the MNC decision to work *in, on, or around* the conflict-affected region as the vital decision in how operations will relate to the conflict. Briefly, working *in* conflict refers to developing a conflict sensitive and principled approach to business operations. The focus being on reducing conflict-related risks in order to avoid becoming affected by violence. Working *on* conflict is characterized by conscious attempts by the MNC to focus on conflict prevention, management and resolution. Working *around* conflict refers to treating the conflict as an impediment or negative externality to business that can be avoided.

This paper examines the operations of Myanmar-Ivanhoe Copper Corporation Ltd. (MICCL) in Burma, specifically at the Monywa Copper Project. MICCL has come under intense scrutiny from North American civil society groups, which view any foreign investment in Burma as financial support for a repressive regime. Many groups are also concerned over the relationship between the

Monywa Copper Project, MICCL's core operation, and forced labour as well as the forcible removal of individuals from their land. Much of the pressure has been directed towards Ivanhoe Mines Ltd., whose wholly owned subsidiary, Ivanhoe Myanmar Holdings Co., holds a 50 percent stake in MICCL. As the paper discusses, MICCL has been involved in Burma for nearly a decade and has recently experienced windfall profits from the Monywa Copper Project as a result of increases in international copper prices, expanded production and remarkably low production costs.

Executive Summary

The increasing presence of multinational companies in conflict-prone regions has become a central issue in the dialogue surrounding corporate social responsibility. For MNCs, increasing conflict negatively affects production and can result in a complete withdrawal of operations.

This paper is based on the template for reverse flow risk put forth in *Private Sector Risk Analysis and Conflict Assessment: Measuring the Reverse Flow of Risk* (2003), which outlines how corporate practices can affect and be affected by conflict. This initiative was funded by PetroCanada.

This paper puts forth a case study of Myanmar Ivanhoe Copper Company Ltd.'s (MICCL) operations in Monywa, Burma. Specifically examining the Monywa Copper Project, the paper draws upon data interlinking the operational practices of the company, the threat

of wider conflict in Burma and the stability of the Monywa region.

Despite informational constraints due to the secretive nature of the Burmese government and MICCL, a number of conclusions can be drawn about the prospect for a reverse flow of risk to arise.

Four key conclusions are drawn:

1. The Monywa Copper Project benefits greatly from its geographic and ethnic separation from the most unstable regions of Burma.
2. Developments in the ongoing conflict between the ruling SPDC and various ethnic groups have limited the threat of a return to large-scale conflict. Yet, the threat of terrorist activity targeting business activities has increased.
3. The local involvement of MICCL in the health, sanitation and medical facilities of the Mine Town area contributes to greater stability and less hostility towards the company's operations.
4. The most threatening catalyst for a reverse flow of risk to affect the Monywa Copper Project comes from environmental degradation, most notably water contamination.

It is concluded that there is little threat of a reverse flow of risk affecting MICCL's operations.

These conclusions are, however, reflective of the information available. Should allegations regarding the Monywa Copper Project's involvement with forced labour and the forcible removal of individuals from their land be verifiably proven, this assessment would change.

Figure 1: Map of Burma



★ Approximate location of the Monywa Copper Project

Section I: Burma

I. Background

Burma (Myanmar)¹ is a country of 50 million in South East Asia bordered to its west by India, to its north by China, to its east by Thailand and Laos, and to its south lay the Bay of Bengal and Andaman Sea. Formerly a British colony, the region was governed as a province of India for much of the 19th and early 20th century. Independence was achieved in 1948. General Ne Win led the country as military ruler and self-appointed president from 1962 to 1988 when student-led disturbances forced Ne Win's resignation. Burma consequently fell under direct military rule by General Saw Maung and Brigadier General Khin Nyunt, leaders of the State Law and Order Restoration Council (SLORC).² International pressure led to the country's first multiparty elections in 1990.³ The main opposition party, the National League for Democracy (NLD), led by Daw Aung San Suu Kyi, overwhelmingly won the elections, however, the ruling junta refused to hand over power. Aung San Suu Kyi was placed under house arrest from 1989 to 1995, and was again detained between 2000 to 2002. She has remained imprisoned since her arrest in May of 2003.⁴

The current military regime, retitled the State Peace and Development Council (SPDC), has repeatedly been accused of human rights abuses, such as the forcible relocation of civilians, the use of forced labour and the systematic abuse of civilians and minority groups. The country is one of the world's largest producers of heroin, which provides revenue to

rebel groups and possibly state military.⁵ Military-run enterprises maintain vital industries in the centrally planned economy, which is seen to be rife with corruption and mismanagement.⁶

Despite the innumerable factors that threaten SPDC rule, the military regime has, in various forms, ruled Burma for forty-two years.⁷ The oppressive rule of the country has exhibited exceptional durability in the face of internal ethnic pressure and external international pressure for change. The CIPF risk weighted score for the SPDC's regime durability is 2.4.⁸

II. Political Situation

The SPDC opened discussions regarding the creation of a national constitution again in early 2005. The National Convention has been referred to by the SPDC as a requisite and vital step towards democracy, although there is no shortage of skepticism on the part of international observers.⁹ The NLD has refused to attend due to the continuing retention of its leader Aung San Suu Kyi, while other parties, such as the Shan National League for Democracy, have also refused to participate. The fact that the convention continued as scheduled reflects the neglect that the SPDC holds for democratic processes. It is widely accepted that opposition groups have little means for dissent in the country and political prisoners, such as Aung San Suu Kyi, are often detained on spurious charges. As a result, Burma has consistently been ranked as one of the world's most autocratic regimes.¹⁰

¹ The name Myanmar (adopted from the local name "Myanma Naingngandaw") has been promoted by the military junta since 1989. However, the name Burma is still widely used by many government and organizations (CIA World Factbook). This paper will use Burma for clarity and consistency.

² Polity IV (2003), Country Report 2003: Myanmar (Burma), Available: <http://www.cidcm.umd.edu/inscr/polity/Mya1.htm> (accessed 10 February 2005)

³ CIA World Factbook (2005), Burma, Available: <http://www.cia.gov/cia/publications/factbook/geos/bm.html> (accessed 23 February 2005)

⁴ Ibid.

⁵ BBC World News. Country Profile: Burma, Available: http://news.bbc.co.uk/1/hi/world/asia-pacific/country_profiles/1300003.stm (accessed 10 March 2005)

⁶ Ibid.

⁷ Polity IV (2003), Country Report 2003: Myanmar (Burma), Available: <http://www.cidcm.umd.edu/inscr/polity/Mya1.htm> (accessed 10 February 2005)

⁸ See CIPF Risk Weighted Scores for Burma on pg. 22

⁹ BBC News (2005), "Burma Constitutional Talks Resume", 17 February 2004, Available: <http://news.bbc.co.uk/1/hi/world/asia-pacific/4272759.stm> (accessed March 9, 2005)

¹⁰ Polity IV (2003), Country Report 2003: Myanmar (Burma), Available: <http://www.cidcm.umd.edu/inscr/polity/Mya1.htm> (accessed 10 February 2005)

CIFP scores Burma's level of democracy at eight out of nine.¹¹

Freedom House International's 2003 report on Myanmar noted that the NLD was subject to a crackdown from the ruling junta after somewhat positive steps had been taken in 2002.¹² NLD leaders, as well as ethnic party leaders, have been jailed or pressured to resign, members' families have been harassed and party offices have been closed. Moreover, the military government maintains strict academic freedom, holding teachers responsible for the political activities of their students.¹³ Citizens' privacy is not upheld; homes are regularly searched, phone calls monitored and mail intercepted. Freedom of association and assembly is far from existent. Outdoor gatherings of more than five people are prohibited and force is regularly used to uphold such regulations.¹⁴

The judiciary in Myanmar is not independent from the governing SPDC. Individuals may be held without charge, trial or access to legal counsel for up to five years in cases of political security.

Freedom House also measures press freedom in 192 countries on an annual basis. Myanmar has consistently ranked in the bottom five countries over the past decade. The 2005 report highlights the junta's ban on speeches and penalties for statements that "undermine national stability" as commonly used tools for repressing dissent.¹⁵ According to the report, a number of journalists have been jailed after expressing dissident views. Furthermore, foreign media operate under intense scrutiny and severe penalties restrict

¹¹ See CIFP Risk Weighted Scores for Burma on pg. 22

¹² Freedom House (2004), Freedom in the World, Country and Territory Reports: Burma (Myanmar), Available: <http://www.freedomhouse.org/research/freeworld/2004/countryratings/burma.htm> (accessed March 9, 2005)

¹³ Freedom House (2004), Freedom in the World, Country and Territory Reports: Burma (Myanmar), Available: <http://www.freedomhouse.org/research/freeworld/2004/countryratings/burma.htm> (accessed March 9, 2005)

¹⁴ Ibid.

¹⁵ Freedom House (2005), Freedom of the Press 2004: A Global Survey of Media Independence, Karin Deutsch Karlekar (ed), Rowman & Littlefield Publishers, Toronto, Available: <http://www.freedomhouse.org/research/presssurvey.htm> (accessed 9 March 2004)

individuals from listening to foreign radio broadcasts.¹⁶ The government runs all broadcast media and daily newspapers, exercising censorship on other media as well. CIFP scores Burma's restrictions on civil and political rights as well as its restrictions on press freedom as nine, the most restrictive.¹⁷

III. Human Development

Burma has ratified only three core human rights treaties as identified by the United Nations Development Program's Human Development Index (HDI). Among those not ratified include the International Covenant on Civil and Political Rights (1966) and the Convention Against Torture and Other Cruel, Inhuman, Degrading Treatment or Punishment (1984).¹⁸

The HDI ranks over 170 countries and regions of the world using a composite of three separate indices; life expectancy, educational attainment and real GDP per capita. Burma's overall HDI ranking fell from 118th in the world in 2001 to 132nd in 2004.

The most recent data available reports that, on average, residents of Burma live to the age of fifty-seven years. In 2002, the literacy rate of the country was eighty-five percent and that there was seventy-seven deaths for every one thousand live births.¹⁹ In 2004, it was estimated that 72 percent of the population had access to improved water and only 64 percent had access to adequate sanitation.²⁰ The country's CIFP score for access to improved water is seven and access to sanitation, eight.²¹

What may be even more disconcerting is the level of privation experienced by internally displaced peoples (IDPs). The Thailand Burma Border Coalition reported in 2004 that over 500,000 IDPs from ethnic minority groups in

¹⁶ Ibid. p. 29.

¹⁷ See CIFP Risk Weighted Scores for Burma on pg. 22

¹⁸ United Nations Development Program (2005), *Human Development Report 2004*, Oxford Univ. Press: New York

¹⁹ United Nations Development Program (2004), *Human Development Report 2003*, Oxford Univ. Press: New York

²⁰ Ibid.

²¹ See CIFP Risk Weighted Scores for Burma on pg.

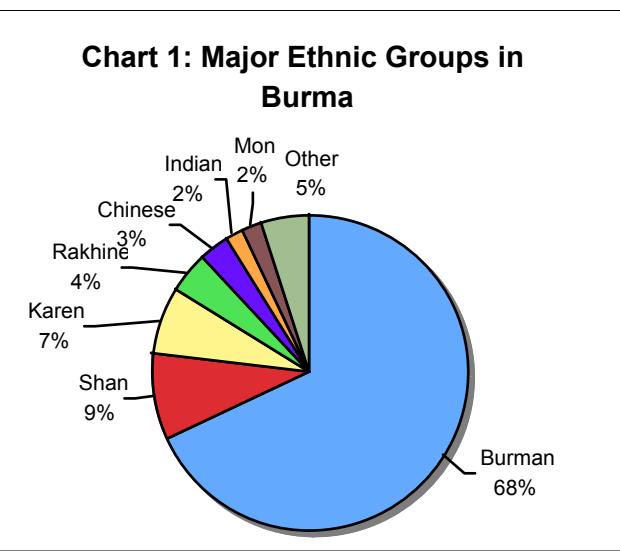
Burma were living in camps near the border area.²² Almost three-quarters of IDPs are located in what are deemed ethnic ceasefire areas, which are a result of forced relocation, flight from human rights abuses and people returning from refugee camps.²³

Surveys of these camps suggest that over half of the residents had been subjected to forced labour and arbitrary taxation in the preceding year. Over 20 percent had their movement restricted, while 14 percent had

experienced arbitrary arrest.²⁴ Moreover, one-third of IDPs relied on cross-border aid for health care, while another one-third lacked access to any sort of medical aid.²⁵ Child mortality, acute malnutrition of children and access to safe water and sanitation are among the concerns raised about the living standards in such camps.

IV. Conflict

Burma has been in a constant state of conflict since its independence from Britain in 1948. This has primarily manifested itself in ethnic separatist groups pitted against government forces. Since the mid-1990s, the number and intensity of these conflicts has noticeably declined. Large crackdowns by government forces during the 1990s and through 2004, in combination with ceasefire agreements, have led to a situation of persistent low-level conflict. Disputes that continue today are characterized by sporadic attacks on infrastructure by ethnic nationalist



movements and regular attempts by the country's military to suppress such groups.

The SPDC has a relatively capable military force with troop levels estimated to be 485,000 strong.²⁶ The Burmese military has also benefitted from Indian and Chinese authorities attempting to assert influence throughout the region. Much of the SPDC's military equipment is reportedly from Chinese sources, while India has recently become involved in cooperative military exercises with the SPDC in response to Indian insurgent groups operating near the border

with Burma.²⁷ Although a number of ceasefire arrangements were made during the counterinsurgency of the late 1990s, various rebel groups have yet to sign ceasefire agreements with the government. Among these are the Karen National Union (KNU) – and its armed wing the Karen National Liberation Army (KNLA), the Karenni National Progressive Party (KNPP), the Shan State Army-south (SSA-south), the Chin National Front (CNF), and the Arakan Liberation Army (ALP).²⁸

The Shan

The ethnic Shan minority accounts for roughly nine percent of the population of Myanmar. The Shan nationalist movement can be traced back to the 1950s when, following independence, the government would not allow the Shan state to secede.²⁹ Following the military coup in 1962, the three largest Shan organizations merged to

²² Thailand Burma Border Consortium (2004), *Internal Displacement and Vulnerability in Eastern Burma*, Wanida Press: Thailand

²³ Ibid. pg. 25

²⁴ Ibid. pg. 48

²⁵ Ibid. pg. 53

²⁶ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

²⁷ Ibid.

²⁸ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

²⁹ Uppsala Conflict Database, Myanmar (Burma): Shan, Available:

<http://www.pcr.uu.se/database/conflictSummary.php?bcID=1>

82 (accessed 10 March 2005)

form the Shan State Army (SSA). The evolution of this army, following government raids through the 1980s and a ceasefire in the 1995, resulted in the creation of the SSA-south by the mid-1990s.³⁰ The government in Rangoon refuses to negotiate with the SSA-south, claiming that the group has already surrendered.³¹ Reports have indicated that conflicts did break out between SSA-south and government forces in 2004 and that more state troops were consequently moved into the Shan state.³² The SSA-south are estimated to have a force of roughly 3,000 personnel.³³

The Karen

The most recent conflict between government troops and an ethnic separatist group has involved the Karen peoples in the East of the country. The KNU formed upon Burma's independence, demanding the establishment of an independent Karen state.³⁴ Over time, the KNU has had alliances with other ethnic insurgencies in close proximity such as the Karen, Mon and Pao. Discontent and frustration led to splits within the KNU through the 1990s. The Karen militant faction is the KNLA, which was estimated to have roughly 4,000 troops in 2003.³⁵ The conflict has led to international disputes between the Burma and Thailand as the KNU has reportedly sought refuge by crossing the eastern border into Thailand. Following the fall of the KNU headquarters in 1995 and increasingly vigilant border regulation by Thai authorities, the KNU adopted a more guerrilla-type strategy, including bomb attacks on

infrastructure such as gas pipelines.³⁶

The KNU and the government announced a 'gentleman's agreement' ceasefire on December 10, 2003. Negotiations for a formal ceasefire have been hampered since the ousting of General Khin Nyunt from leadership of the SPDC by General Than Shwe in 2004.³⁷ During 2004 government forces are said to have clashed with KNU patrols on a number of occasions.³⁸

As with the Shan, there is a high number of internally displaced Karen people as a result of the counterinsurgency.³⁹ The Thailand-Burma Border Consortium estimates that in 2004 there were over 135,000 internally displaced Karen, a rise from 129,000 in 2003.⁴⁰

The Karen

In the East of Myanmar, on the mountainous border with Thailand is the Kayeh (Karen), state. The Karen people have also sought independence since 1948. Insurgent forces from this region have mainly fought against the government by supporting other ethnic groups.⁴¹ A ceasefire signed in 1995 was renounced by the KNPP after Myanmar troops initiated a new offensive the following year. The government has refused to negotiate since, citing the 1995 agreement.⁴² Karen forces are estimated to be about 1,000 strong.⁴³

³⁶ Ibid.

³⁷ Ehna, Saw (2005), "The KNU Ceasefire 'Agreement' One Year On: Real Progress or Still Just a Mess?", Karen Unity Webpage, Available: <http://www.karen.org/> (accessed 5 April 2005)

³⁸ Ibid.

³⁹ Minorities at Risk, Minority Group Assessments: Shan, Available: <http://www.cidcm.umd.edu/inscr/mar/assessment.asp?groupID=77507> (accessed 15 April 2005)

⁴⁰ Uppsala Conflict Database, Myanmar (Burma): Shan, Available: <http://www.pcr.uu.se/database/conflictSummary.php?bcID=182> (accessed 10 March 2005)

⁴¹ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

⁴² Uppsala Conflict Database, Myanmar (Burma): Karen, Available: <http://www.pcr.uu.se/database/conflictSummary.php?bcID=181> (accessed 18 April 2005)

⁴³ Ibid.

⁴⁴ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

The Wa

Another of the many ethnic groups inside Myanmar, the Wa, have long been linked with anti-government movements. The Wa minority are mainly located on the border between China and Myanmar, placing them at the heart of the Communist Party of Burma's (CPB) operations. The CPB was traditionally supported by China, beginning in the mid-1960s.⁴⁴ Yet, by the late 1980s, the CPB began to fragment. The strongest faction to emerge was a Wa group that included over 12,000 troops and became known as the United Wa State Army (UWSA).⁴⁵ The UWSA is understood to utilize the region's drug trade as a source of revenue, which has led them into conflict with other competing ethnic groups.⁴⁶ Although a ceasefire between the government and UWSA has been signed, clashes have reportedly continued between the UWSA and Shan ethnic armies.⁴⁷ The UWSA comprises the largest armed group in Burma, other than the SPDC military, with troop levels estimated to be 20,000 strong.⁴⁸

American and Thai authorities have identified the UWSA as the largest drug-trafficking group in the world.⁴⁹ In response, the UWSA has announced intentions to eradicate drug farms in the Wa state by 2005.⁵⁰ The Wa have established a somewhat autonomous state since the signing a ceasefire accord. Government troops deployed to the

⁴⁴ Uppsala Conflict Database, Myanmar (Burma): Wa, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bclID=188> (accessed 18 April 2005)

⁴⁵ Ibid.

⁴⁶ Uppsala Conflict Database, Myanmar (Burma): Wa, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bclID=188> (accessed 18 April 2005)

⁴⁷ Minorities at Risk, Minority Group Assessments: Shan, Available:
[http://www.cidcm.umd.edu/inscr/mar/assessment.asp?group Id=77507](http://www.cidcm.umd.edu/inscr/mar/assessment.asp?groupId=77507) (accessed 15 April 2005)

⁴⁸ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

⁴⁹ Uppsala Conflict Database, Myanmar (Burma): Wa, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bclID=188> (accessed 18 April 2005)

⁵⁰ Minorities at Risk, Minority Group Assessments: Shan, Available:
<http://www.cidcm.umd.edu/inscr/mar/assessment.asp?group Id=77507> (accessed 15 April 2005)

semi-autonomous state met some resistance in 2004.⁵¹

There exist numerous other ethnic insurgent groups operating in Burma with varying strength, such as the Rohingya Solidarity Organization, the Arakan Army, the Kachin Independence Organization, the Democratic Karen Buddhist Army (DKBA) and the New Mon State Party. However, increased military superiority on the part of the government has forced many groups into ceasefires and conventional political organizations.⁵² CIPF risk weighted scores for the SPDC's total military expenditures, 11.3, and total armed forces, eleven, reflect the capacity and emphasis placed on its military.⁵³

Given the disparity of strength between ethnic insurgent groups and the military, a number of groups have resorted to attacking government targets through the use of guerrilla tactics. The MIPT Terrorism Knowledge Database records terrorist attacks throughout the world by date and target. Between 2000 and 2004, eleven terrorist incidents were recorded in Burma, two of which were targeted at businesses.⁵⁴ Many of the recent terrorist incidents have gone unclaimed, although from 1999 through 2003, the Kayin National Union was deemed responsible for three attacks on government and transport targets.⁵⁵

The decline in the recorded value of small arms imports from US\$130 million in 2001 and US\$198 million in 2002 to US\$31 million may reflect the drop in conflict intensity over the same period.⁵⁶ No recent data is available on military expenditures by the Myanmar government.

⁵¹ International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

⁵² Minorities at Risk, Minority Group Assessments: Shan, Available:

<http://www.cidcm.umd.edu/inscr/mar/assessment.asp?group Id=77507> (accessed 15 April 2005)

⁵³ See CIPF Risk Weighted Scores for Burma on pg. 22

⁵⁴ MIPT Terrorism Knowledge Database, Burma, Available:
<http://www.tkb.org/MoreCountryIncidents.jsp?countryCd=BM> (accessed 10 March 2005)

⁵⁵ MIPT Terrorism Knowledge Database, Burma, Available:
<http://www.tkb.org/MoreCountryIncidents.jsp?countryCd=BM> (accessed 10 March 2005)

⁵⁶ SIPRI (2004), *SIPRI Yearbook 2004: World Armaments and Disarmament*, Humanities Press, New York

Between 1996 and 2000 the ruling junta reportedly averaged US\$ 8.1 million per year in military expenditures.⁵⁷

V. Business Environment

The financial regulatory structure in Burma is undeveloped to say the least. International investment is significantly dissuaded not only by the lack of an impartial judiciary and unclear laws, but also the political governance of the country. Sanctions imposed by many states on imports from Burmese have also undermined the economy of the country.⁵⁸ The SPDC provides little insight into the country's economic situation. What reports are available indicate that the SPDC has generally pursued incoherent

economic policies.⁵⁹ Monetisation of the fiscal deficit through 2003 led to substantial inflation. In 2004, inflation was expected to be roughly thirty percent, down from fifty percent a year earlier.⁶⁰ No recent data is available on household income or unemployment. The most recent data estimates that the country's GDP growth rate in 2004 was 3.6% and GDP per capita to be near

US\$ 1,800.⁶¹ CIFI gives Burma's economic inequality a score of five.⁶²

Chart 2 shows Burma's inflow of foreign direct investment from 1999 through 2003 as reported by two sources: the Myanmar Investment Commission and the International Monetary Fund (IMF).⁶³ Decreasing inflows are likely a factor of the increase in government sanctions against Myanmar, the pressure induced by civil society for companies to disinvest from Myanmar and multinationals evaluating the risk of entering such an unstable environment.

The CIFI risk weighted score for Burma's trade openness is 9.⁶⁴

Sanctions on the import of Burmese products introduced by the U.S. in 2003 remain in place

and contribute to diminished demand for manufactures.⁶⁵ Bans on foreign aid funding by countries such as Japan has meant that overseas workers' remittances makeup a major flow of inward transfers. Workers' remittances are heavily dependent on Thai policy towards illegal migrant workers.⁶⁶

The 2004 Transparency International Corruption Perceptions Index gave Burma a score of 1.7 out of 10, up only slightly from 2003.⁶⁷ This can be

⁵⁷ Ibid. Military expenditures in constant US\$ (1990), data averaged from yearly totals 1996-2000.

⁵⁸ Canada imposed import sanctions in 1997, while the U.S. has a ban on imports from Burma as well as a number of financial restrictions on Burmese officials. The E.U. has a ban on the sales of arms to Myanmar as well as limits on government assistance. (US Department of State (2004), *Report on US Trade Sanctions Against Burma*, 28 April 2004, Available:

<http://www.state.gov/p/eap/rls/rpt/32106.htm> (accessed 16 March 2005)

⁵⁹ EIU (2004), Country Monitor 8 March 2004, Main Report, Accessed via Carleton University Library (26 February 2005)

⁶⁰ ibid.

⁶¹ CIA World Factbook (2004), Burma, Economy, Available: <http://www.cia.gov/cia/publications/factbook/geos/bm.html> (Accessed 9 March 2005)

⁶² See CIFI Risk Weighted Scores for Burma on pg. 22

⁶³ ICFTU Report (2005), *Doing Business with Burma*, January 2005, Available: www.icftu.org/www/PDF/Burma-ICFTUReport-January.pdf (accessed 16 March 2005)

⁶⁴ See CIFI Risk Weighted Scores for Burma on pg. 22

⁶⁵ EIU (2004), Country Monitor 8 March 2004, Main Report, Accessed via Carleton University Library (accessed 5 April 2005)

⁶⁶ Ibid.

⁶⁷ Transparency International (2005), Corruptions Perceptions Index 2004, Available:

ascribed to corruption embedded within the hierarchical structure of the SPDC's operations, as well as the prevalence of illegal economic activities (ie. drug sales and illegal sales of teak wood) and the general privation of the Burmese people.

VI. Environmental Degradation

Very little data is available on the environmental situation in Burma. Deforestation is a major concern and illegal logging is reported to be a major source of revenue for both the SPDC and rebel groups.⁶⁸ A black market for wood has flourished, fed by demand from China and Thailand. The destructive effects of rampant deforestation on local communities is most disconcerting along the northern and eastern borders.⁶⁹ The most recent data on carbon dioxide emissions indicate that Burma accounted for 9.2 million metric tones in 2000.⁷⁰ CIPP records a score of seven for Burma's rate of deforestation and an overall environmental stress score of 4.67.⁷¹

VII. The Monywa Region

The city of Monywa lays on the eastern bank of the Chindwin River 136 km northwest of Mandalay in central Burma. Situated in the Chindwin Valley, the topography and climate is ideal for agricultural production, especially paddy rice, sesame and millet. As a trade centre, Monywa is also a hub for black market products from India en route to various locations in Burma.⁷² The city, with a population of 500,000 has one hospital, an airport and a University, which had over 7,000 students in 2002.⁷³

<http://www.transparency.org/surveys/index.html#cpo>

(Accessed 9 March 2005)

⁶⁸ Global Witness, Logging and Conflict in Burma, Available: <http://www.globalwitness.org/campaigns/forests/burma/>

(Accessed 19 April 2005)

⁶⁹ Global Witness, Logging and Conflict in Burma, Available: <http://www.globalwitness.org/campaigns/forests/burma/>

(Accessed 19 April 2005)

⁷⁰ United Nations Development Program (2004), *Human Development Report 2003*, Oxford Univ. Press: New York

⁷¹ See CIPP Risk Weighted Scores for Burma on pg. 22

⁷² <http://www.monywa.org/monywa.htm>

⁷³ ibid.

Considered a trading hub, Monywa benefits from relatively strong transportation infrastructure. The Monywa airport (for government use only) is located roughly eight kilometres north of the city and trains run from Monywa to five destinations (although only two of which are passenger trains).⁷⁴ The Chindwin river also provides a means of transport south via the Irawaddy River to Rangoon. As the former centre for the now defunct BCP, military intelligence is reported to be particularly stringent in the region.⁷⁵

Section II: The Monywa Copper Project

I. Background

Myanmar-Ivanhoe Copper Company Ltd. (MICCL) is a joint venture between Ivanhoe Myanmar Holdings Ltd., a wholly owned subsidiary of Ivanhoe Mines Ltd. of Canada, and Mining Enterprise Number 1 (ME-1), an agency of the Ministry of Mines of the Union of Myanmar.⁷⁶ MICCL's main operation is the Sabtaung-Kyisitaung (S&K) Mine in central Myanmar, about fifteen kilometers west of the city of Monywa. ME-1 retains complete authority over operational decision-making for MICCL.⁷⁷

Ivanhoe Myanmar Holdings Ltd. and ME-1 initially signed a feasibility agreement to develop copper deposits in the S&K area in 1994.⁷⁸ MICCL was formed in 1996 after the discovery of positive drilling samples. The S&K mine includes three ore bodies; Sabtaung, Sabtaung South and Kyisintaung (See appendix I site plan).⁷⁹ Recovery of copper is achieved using leaching, solvent extraction and electrotinning. Production at a newly completed 25,000 tonne-

⁷⁴ <http://www.monywa.org/UTaungNyunt.htm#mya6>

⁷⁵ ibid

⁷⁶ Ivanhoe Mines, Monywa Copper Project, Background, Available: <http://www.ivanhoe-mines.com/s/MonywaCopper.asp> (Accessed 22 March 2005).

⁷⁷ Letter from R. Edward Flood, Deputy Chairman, Ivanhoe Mines Ltd. to Amnesty International Canada, June 3, 2004, Available: <http://www.amnesty.ca/business/actions/> (accessed 10 March 2005)

⁷⁸ MICCL (2004), *Safety, Health and Environment Report 2003*. Pg. 6.

⁷⁹ MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 7.

per-year SX-EW (solvent extraction and electrotwinning) plant began in 1998.⁸⁰ The project produced 31,756 tonnes of copper cathode in 2004, generating a net profit of US\$ 22.1 million. This is an increase of US\$ 20 million over net profit from 2003.⁸¹

A comprehensive development plan has been completed for a second phase project, which would reportedly increase total production to 160,000 tonnes of cathode copper per year.⁸²

The initial exploration and construction of the S&K mine construction was funded in part through Japanese investors (Marubeni Corp. and Nissho Iwai Corp.) to the tune of US\$ 90 million.⁸³ This investment is required to be repaid from copper sales before any profits are directed to the joint-venture partners. Repayment is expected to be complete by August of 2005.⁸⁴

Beginning in 2004, the royalty rate paid to the Myanmar Ministry of Mines increased from a rate of two percent of the value of copper cathode sold to four percent plus an amount equal to two percent of sales from the first five years of commercial production, amortized and payable in installments over a five year period.⁸⁵ MICCL also pays rent to the Ministry at an annual rate of US\$ 500 per square kilometer.

II. Operations & Infrastructure

The infrastructure of a country can play an influential role in the decision of an MNC to invest in or disinvest from a country. Electrical and telecommunication supply and security, as well as labour strife, are issues that garner

⁸⁰ Ibid. pg. 6

⁸¹ Ivanhoe Mines, 2004 Year-End Financial Results, Available: <http://www.ivanhoe-mines.com/s/NewsReleases.asp> (accessed 15 April 2005)

⁸² Ivanhoe Mines, Monywa Copper Project, Background, Available: <http://www.ivanhoe-mines.com/s/MonywaCopper.asp> (Accessed 22 March 2005).

⁸³ Ibid.

⁸⁴ Ivanhoe Mines Ltd. (2005), Form 40-F, US SEC, pg. 44, Available: www.ivanhoe-mines.com (accessed 19 April 2005)

⁸⁵ Ibid. pg. 39

attention from investors and management. Disruptions in electricity and telecommunications or labour unrest can be an indicator of escalating conflict or regional instability.⁸⁶

The electrotwinning stage of copper cathode production requires a steady flow of direct electrical current. The state-run mining company ME-1 appears to have established the electrical infrastructure that the Monywa Copper Project requires despite a lack of such resources in many areas of the country. According to World Bank data, in 1999, Burma's electricity use per capita measured at 62.3 kWh, less than 0.01 percent of that used in G-7 countries.⁸⁷ Nevertheless, electricity usage at the S&K mine has continually increased since 2000, measuring 348,098 GJ (gigajoules) in 2003.⁸⁸ Recent proposals to expand the Monywa Copper Project refer to inquiries made by MICCL into the potential for private development of a nearby coal or gas plant.⁸⁹

Similarly, the telecommunications infrastructure in Burma has been assessed as barely meeting minimum requirements for local and intercity service for business and government.⁹⁰ The World Bank reports that there exist only eight fixed lines and mobile telephones per 1,000 people.⁹¹ Mine Town, the area directly surrounding the S&K mine, which has a

⁸⁶ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIFI Report, pg. 29.

⁸⁷ Data calculated from World Bank 2004 Data profile for Myanmar, available:

http://devdata.worldbank.org/external/CPProfile.asp?CCOD_E=MMR&PTYPE=CP and Energy Information

Administration, World Energy Use and Carbon Dioxide Emissions: OECD and G-7 Development Trends, Available: <http://www.eia.doe.gov/emeu/cabs/carbonemiss/chapter2.html> (accessed 23 March 23 2005)

⁸⁸ MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 32.

⁸⁹ Ivanhoe Mines Ltd. (2005), Form 40-F, US SEC, pg. 47, Available: www.ivanhoe-mines.com (accessed 19 April 2005)

⁹⁰ CIA World Factbook, Burma, Available: <http://www.cia.gov/cia/publications/factbook/geos/bm.html#Trans> (accessed 23 March 2005).

⁹¹ World Bank (2004), Data profile for Myanmar, available: http://devdata.worldbank.org/external/CPProfile.asp?CCOD_E=MMR&PTYPE=CP, (accessed 23 March 2005).

population of roughly 6,000 people, has the only telephone system in the area.⁹²

Labour strikes disrupt production and may signal faltering government support. They reflect the ability of opposition groups to organize themselves and act forcefully.⁹³ Primarily due to the SPDC's overwhelmingly authority, labour strife poses little threat to the Monywa Copper Project. There are few labour rights in Burma and as a result any dissent could be expected to meet severe reaction from ME-1.

The International Labour Organization (ILO) has shown great concern over labour practices in Burma for a number of years. In early 2005, an ILO delegation cut short an official visit to the country following its inability to meet with the government's leader, General Than Shwe.⁹⁴ For the first time in its history, in 2000, the ILO invoked Article 33 of its constitution by urging ILO countries to impose sanctions against Burma.⁹⁵

This came after the Burmese government had failed to effectively address concerns over the use of forced labour. Recent improvements in dealing with forced labour has reportedly benefited the people in central Burma where individuals had previously been recruited in large numbers to work on state projects. Yet widespread concern over the use of forced labour continues along the eastern border of the country where IDPs are located in close proximity to the state military.⁹⁶ CIPP gives Burma a score of seven for its use of child labour.⁹⁷

⁹² MICCL (2004), *Health, Safety & Environment Report* 2003, pg. 19.

⁹³ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIPP Report, pg. 29.

⁹⁴ Corben, Ron (2005), ILO Delegation Cuts Short Official Visit to Burma, Voice of America, Available: <http://www.voanews.com/english/2005-02-23-voa12.cfm> (accessed 23 March 2005).

⁹⁵ Federation of Trade Unions – Burma (2004), The ILO and the People of Burma, Available: <http://www.tradeunions-burma.org/ilo/iloandburma.htm> (accessed 23 March 2005)

⁹⁶ Amnesty International (2002), *Myanmar: Forced labour, extortion, displacement and land confiscations – the rural life*, Press Release, 17 July 2002, Available: <http://web.amnesty.org/library/Index/ENGASA160062002?open&of=ENG-MMR> (accessed 23 March 2005).

⁹⁷ See CIPP Risk Weighted Scores for Burma on pg. 22

IV. Social Dimensions of the Monywa Copper Project

Ivanhoe Mines Ltd.'s investment in the Monywa Copper Project has brought no shortage of attention to the company. Many individuals and NGOs have advocated that Ivanhoe disinvest from Burma in order to starve the SPDC military junta of financial resources.⁹⁸ Concerns have also been voiced over the use of forced labour in order to construct transportation facilities and a hydroelectric plant in the Monywa region. In response, Ivanhoe Mines has stated that no forced labour was used in the mine's construction nor has it been used at the S&K mine and that the project does not use the railway or hydroelectric plant in question.⁹⁹

MICCL reported a full-time payroll of 593 local employees, 193 seconded employees and 56 ME-1 employees in 2003.¹⁰⁰ MICCL employees, therefore, make-up 25 percent of the Mine Town community and roughly 10 percent of the greater region's population.¹⁰¹ The former President of Ivanhoe Mines, Daniel Kunz, stated in 2002 that the Monywa joint-venture does not employ children and has never knowingly benefited from the use of involuntary labour.¹⁰²

⁹⁸ See the Canadian Labour Congress (CLC) and the International Federation of Chemical, Energy, Mine and General Workers Union (ICEM), Available: http://www.clc-ctc.ca/web/menu/english/en_index.htm (accessed 14 February 2005).

⁹⁹ Ivanhoe Mines Ltd. (2002), *False Claims by Labour Groups Rejected as Ivanhoe Sets the Record Straight, Again, About Its Investment in Myanmar*, Statement by Edward Flood, Deputy Chairman, Ivanhoe Mines, 26 June 2002, Available: <http://www.ivanhoemines.com/s/TruthAndLies.asp?ReportID=84144> (accessed 6 April 2005)

¹⁰⁰ MICCL (2004), *Health, Safety & Environment Report* 2003, pg. 21.

¹⁰¹ MICCL reports that Mine Town and the surrounding villages have a population near 6,000 people. Ivanhoe Mines, Monywa Copper Project, Available: <http://www.ivanhoemines.com/s/MonywaCopper.asp> (accessed 22 February 2005)

¹⁰² Ivanhoe Mines (2002), *Human Values, Jobs and Economic Investment*, Daniel Kunz, President of Ivanhoe Mines, addresses the company's investment in the Monywa Copper Project, Available: www.ivanhoemines.com/i/pdf/Monywa-PresStatement.pdf (accessed 15 March 2005).

The role that a MNC can play in the displacement of local groups can create destabilizing effects within particular regions. The SPDC is notorious for forcefully moving people from their homes, as witnessed by the more than half a million reported IDPs in Burma.¹⁰³ Activists have accused the Monywa Copper Project of resulting in the forcible removal of local inhabitants from their land.¹⁰⁴ However, to date no verifiable evidence has been produced to suggest that individuals were forcefully removed from the Mine Town area.

The involvement of local peoples in mining operations and decision-making can help to establish a positive relationship between the MNC and the local community. This can deter the mine from becoming a target should instability in the region escalate.¹⁰⁵ MICCL appears to have involved itself in the community through a variety of means. The company's workforce mainly consists of local inhabitants and it employs a liaison officer to visit and brief households in the surrounding area about the S&K mine's operations.¹⁰⁶ Although the lack of information on whether MICCL has held consultative meetings with local groups or leaders creates uncertainty, MICCL can be presumed to have established a positive perception in the community through its philanthropic work.

The establishment of MICCL resulted in the company's take-over of the Mine Town Hospital in 1999 and an upgrade of equipment.¹⁰⁷ According to MICCL, the hospital is capable of minor and major surgery, immunization and medical checks. Moreover, it engages the public in health talks, provides infant immunizations as well as nutrition promotion and hepatitis A prevention programs.¹⁰⁸ Dental services are

reportedly provided free of charge to MICCL employees and the Mine Town community.

Ivanhoe Mines' Philanthropic Program (formerly known as the Friedland Foundation) further provides a number of benefits to the Mine Town region. The program's primary directive is to upgrade community health and living standards within a five-mile radius of the S&K mine.¹⁰⁹ Twenty-six villages, with a total population of almost 25,000 people, are included in the program's target area. The Philanthropic Program targets pregnant women and children under five. In all, 3,236 individuals were provided medical care under the Program's guidance in 2003.¹¹⁰ Moreover, home and village inspections reportedly led to improvements in the availability of potable water and fly-proof latrines to stop the spread of Dengue fever.

¹⁰³ Thailand Burma Border Consortium (2004), *Internal Displacement and Vulnerability in Eastern Burma*, Wanida Press, Thailand, pg. 18.

¹⁰⁴ Moody, Roger ???

¹⁰⁵ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIFP Report, pg. 37-38.

¹⁰⁶ MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 34.

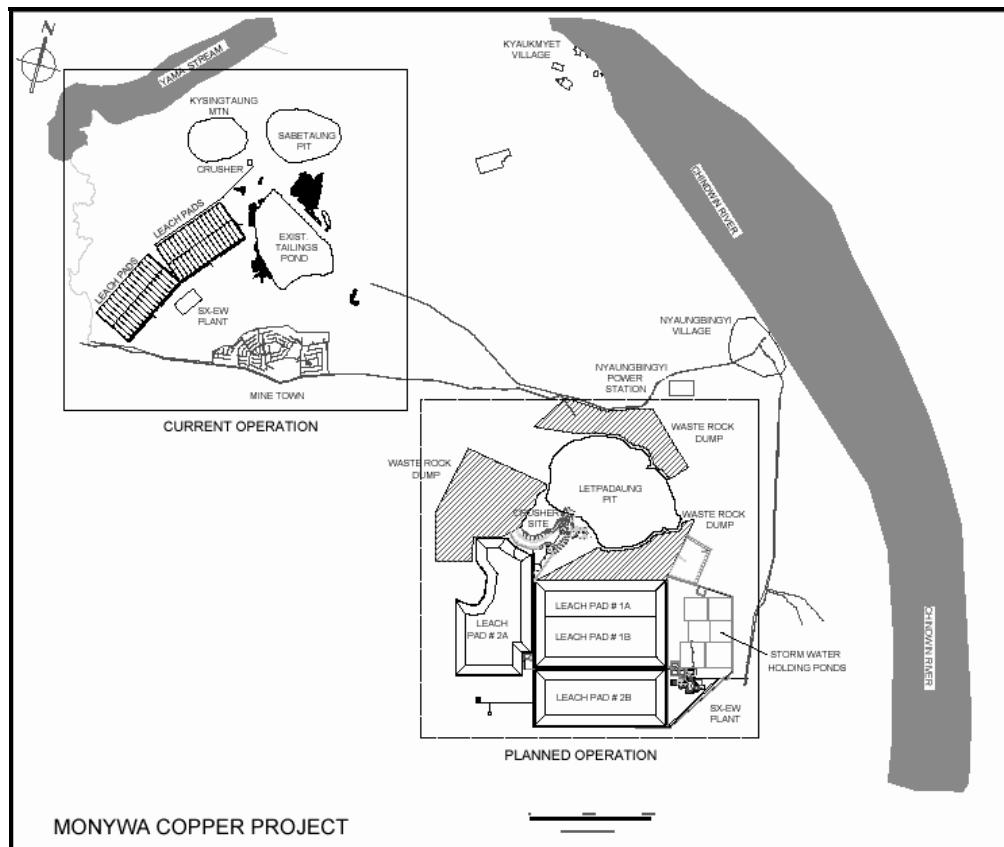
¹⁰⁷ Ibid, pg. 18.

¹⁰⁸ MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 18.

¹⁰⁹ Ibid. pg. 19.

¹¹⁰ Ibid pg. 20.

Figure 2: The Monywa Copper Project



Source: www.ivanhoe-mines.com

The allocation of resources and benefits of foreign investment can lead to the marginalization of vulnerable groups and subsequently exacerbate inequalities and conflict.¹¹¹ Many extractive industry operation have contributed to socio-economic and ethnic stratification. Inequalities can be particularly salient when perceptions of disparity are coupled with a shortage of programs to deal with such divisions.¹¹² Considering this, it cannot be understated that the MICCL's operations heavily benefit from their location in the central region of Burma, within the Sagaing Division. Relative to the eastern states, this area is ethnically homogenous and is not characterized by the

autonomy movements that the Shan, Kayin, Karen and Wa states have experienced. Nevertheless, MICCL's constructive involvement in the proximal community benefits its prospects for security.

IV. Conflict and the Monywa Copper Project

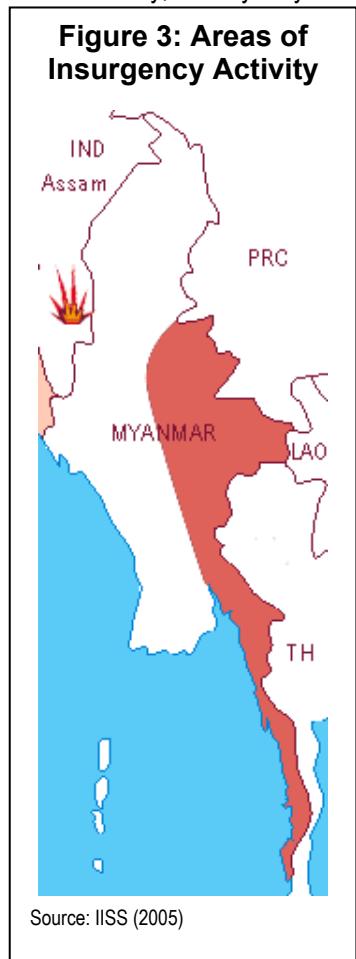
As noted above, the state of large-scale conflict in Burma can be considered in abeyance. Nevertheless, the sheer number of IDPs and small arms, in combination with long-standing disputes between the government and minority groups, contributes to the insecurity and instability in the country. Ethnic separatist groups, such as the Karen and Shan, are predominantly located along the Eastern border of the country, which Burma shares with Thailand, and along the northern border with China.

The potential remains for a return to large level conflict in Burma. Short of such an outcome,

¹¹¹ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIFI Report, pg. 44.

¹¹² Organisation for Economic Co-operation and Development (2001), *The DAC Guidelines: Helping Prevent Violent Conflict*, International Development, Paris, OECD

occasional terrorist activity targeting government infrastructure persists.¹¹³ To this point, the Monywa Copper Project has not been a target of such activities. The mine's location, in a rural area, with a low level of accessibility, and its distance from the armed separatist groups likely buffer the operation from such threats. Terrorist activity does, however, remain a legitimate business concern. There have been three terrorist incidents targeting travel terminals in Burma and two targeting businesses since 2002.¹¹⁴ Most recently, in early May of 2005, a



series of well-coordinated bomb attacks struck civilian and business targets in Rangoon.¹¹⁵

¹¹³ MIPT Terrorism Database, Burma, Available: <http://www.tkb.org/Country.jsp?countryCd=BM> (30 March 2005)

¹¹⁴ MIPT Terrorism Database, Burma, Available: <http://www.tkb.org/MoreCountryIncidents.jsp?countryCd=BM> (30 March 2005)

¹¹⁵ Zaw, Aung (2005), "Who Could be Behind Rangoon Bomb Attacks?", *The Irrawaddy*, Vol. 13 No. 4, April,

The roughly 32,000 tonnes of copper cathode produced at the Monywa Copper Project each year is shipped via Rangoon to destinations in East Asia (mainly Japan).¹¹⁶ The threat that such shipments could be delayed, cut-off or targeted by terrorist activity remains a genuine business risk. To date, no recorded attacks have targeted shipping facilities in Burma. The company has denied that the military is providing security for the Monywa Copper Project.¹¹⁷

V. Environmental Stress Caused by the Monywa Copper Project

Natural resource overexploitation and environment degradation can result in resource scarcities. The result of this can be increased demand and unequal distribution of scarce resources, which increases the likelihood of social and political instability and conflict.¹¹⁸ Moreover, environment degradation can lead to large populations movements, further exacerbating existing disorder among displaced people and fuel violent collective action.¹¹⁹

MICCL's mining operations have been questioned for the lack of environmental standards upheld.¹²⁰ The SX-EW process utilized at the S&K mine to extract copper cathode requires three stages. First, run-of-mine (ROM) ore is heap leached using an acid waste solution called raffinate. The resulting agglomerates use

Available:
<http://www.irrawaddy.org/aviewer.asp?a=4625&z=150> (14 May 2005)

¹¹⁶ Ivanhoe Mines, Monywa Fact File, Available:<<http://www.ivanhoe-mines.com/s/MonywaCopper.asp>> (30 March 2005)

¹¹⁷ Letter from R. Edward Flood, Deputy Chairman, Ivanhoe Mines Ltd. to Amnesty International Canada, June 3, 2004, Available: <http://www.amnesty.ca/business/actions/> (accessed 10 March 2005)

¹¹⁸ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIP Report, pg. 49.

¹¹⁹ Homer-Dixon, Thomas and Jessica Blitt. 1998.

Introduction: A Theoretical Overview of EcoViolence: *Links Among Environment, Population and Security*, eds. Thomas Homer-Dixon and Jessica Blitt. Lanham, Maryland: Rowman & Littlefield Publishers, Inc.

¹²⁰ Moody, Roger. 1999. Gravediggers: A Report on Mining in Burma. Report for Canada Asia Pacific Resource Network (CAPRN), September. Available:

<http://www.miningwatch.ca/documents/Grave_Diggers.pdf> (30 March 2005). See Appendix I.

dilute sulphuric acid solution to extract copper from the ore. Once pure enough, copper solutions are directed into a pregnant leach solution pond with assistance from leach cells. Next, solvent extraction of the copper from the pregnant leach solution requires an organic extractant dissolved in high-flash-point kerosene. A highly acidic electrolyte is then used to strip copper, producing an enriched electrolyte, called strong electrolyte. Finally, metallic copper is extracted from the strong electrolyte using a direct electrical current in a process called electrotinning.¹²¹ The copper cathode produced at the S&K mine is 99.99% pure.

Potentially the largest environmental threat posed by the S&K mine is the threat of contaminating the Yama Stream and Chindwin River. MICCL reports that daily monitoring is undertaken to ensure that the pond water released into the Yama Stream is safe.¹²² Collecting ponds are monitored weekly and the Chindwin River is monitored monthly. Also, thirty-seven boreholes are reported to monitor groundwater quality every two months. The mine discovered low pH and high sulfur levels as a result of monitoring programs in 2003 and consequently corrected the problems.¹²³ MICCL has received ISO 14001 certification for its S&K mining operations. ISO 14001 recognizes the implementation of an effective environmental management system.¹²⁴

Three types of waste products have previously been identified as problematic by MICCL. These include waste rock produced from operations, residue from heaps left as a byproduct of the heap-leaching process and non-process waste such as paper and plastic garbage, tires, etc.¹²⁵ The waste rock produced from operations can potentially be acid-forming due to sulfide minerals that create acid rock drainage (ARD).

¹²¹ The SX-EW process description is taken entirely from MICCL's 2003 operations report: MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 11-12.

¹²² MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 26.

¹²³ Ibid.

¹²⁴ International Standards Organization. See: www.iso.org

¹²⁵ MICCL (2004), *Health, Safety & Environment Report 2003*, pg. 30.

Over 5 million tonnes of ARD waste and 3.6 million tonnes of leached waste were produced in 2003.¹²⁶ ARD has been a notorious problem for many heap leach mines, which is often not realized until after the closure of the mine. If not properly contained, ARD can seep into nearby streams causing severe health and environmental risks.

MICCL has implemented procedures to deal with ARD, non-process waste and hazardous goods.¹²⁷ Efforts to recycle or reuse lead sludge, iron scraps, hydrocarbon and acid waste is a positive step to ensure that the environmental impact of operations does not have widespread repercussions. Without access to the mine site, the ISO 14001 certification received by MICCL in 2003, must serve as an indicator that effective environmental controls are in place. So long as operational practices and post-operational steps ensure that local water sources remain safe for residents, the environmental impact of MICCL's operations should not contribute to population displacement or resource scarcity.

VI. Corruption and Bribery Issues for MICCL

An oft-voiced complaint about the SPDC is the widespread existence of corruption and bribery within the regime. This has been most notably linked to the illicit drug market and illegal timber harvesting.¹²⁸ Corruption can help sustain bad governance, state failure and violent conflict by providing revenue sources to illegitimate or abusive authorities. Further, it can worsen poverty by distorting market incentives and displacing investment to unproductive sectors.¹²⁹

The control that the ruling junta possesses over all industries of significance, such as the extractive industries, banking and logging, and

¹²⁶ Ibid.

¹²⁷ Ibid. pg. 24.

¹²⁸ For information on drug trafficking see: Burma Project, Heroin & Drug Trade, Available: <http://www.burmaproject.org/CRISIS/index.html> (30 March 2005) and for illegal logging, see: Global Witness, Logging and Conflict in Burma, Available: <<http://www.globalwitness.org/campaigns/forests/burma/>> (30 March 2005)

¹²⁹ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIFI Report, pg. 30.

the opacity of its operations, makes evaluating the extent of corruption difficult.

The low income levels of the Burmese population means that domestic taxes provide little to no revenue for the SPDC. Instead, foreign investment is tapped as extensively as possible to provide the state with income.¹³⁰ Informal or arbitrary taxation and other forms of extortion are commonplace according to many reports.¹³¹ A 10 percent export tax is also widely stated as a source of income for the SPDC.¹³² In Ivanhoe's 2004 year-end financials, it is noted that, coinciding with higher mine revenues, increased commercial and import taxes and road maintenance charges were levied. These increased the "cash component of operations" by US\$ 1.8 million, or 16 percent over 2003.¹³³

Ivanhoe Mines Ltd.'s printed code of conduct is stated to apply to all employees of subsidiaries.¹³⁴ This document insists that employees follow home country law in regards to corrupt practices, making explicit reference to the *Corruption of Foreign Public Officials Act* (Canada) and the *Foreign Corrupt Practices Act* (United States). Furthermore, Ivanhoe discourages facilitation payments that may technically be considered legal under such legislation.¹³⁵

Of relation is a 2002 report by Transparency International which surveyed 835 international businesses on the likelihood that they would participate in bribe payments.¹³⁶ Canadian companies ranked fifth out of twenty-one

¹³⁰ ICFTU Report (2005), "Doing Business with Burma", January 2005, pg. 15. Available: <www.icftu.com> (30 March 2005)

¹³¹ Ibid. Pg. 14-16.

¹³² ICFTU Report (2005), "Doing Business with Burma", January 2005, pg. 13. Available: <www.icftu.com> (30 March 2005)

¹³³ Ivanhoe Mines Ltd (2005), *Financial Statements 2003 and 2004*, pg. 27, Available: www.ivanhoe-mines.com (accessed 15 May 2005)

¹³⁴ Ivanhoe Mines Ltd. *Code of Business Conduct and Ethics*, Available: <www.ivanhoe-mines.com> (30 March 2005).

¹³⁵ Ibid. Pg. 6.

¹³⁶ Transparency International (2002), *Bribe Payers Index*, Available: <http://www.transparency.org/surveys/index.html> (30 March 2005)

countries with a score of 8.1 out of 10 (a score of ten indicated zero propensity to pay bribes).

Without first-hand experience in MICCL's operations, it is very difficult to assess the existence of illegal taxes and facilitation payments. What is known is that Burma has a systemic corruption problem. The fact that very few of the employees in Burma are employees of Ivanhoe Myanmar Holdings Co. may suggest that such opportunities are limited. Moreover, because MICCL is a joint venture that includes 50 percent ownership and provides operating control to the state-run mining company ME-1, there may be less incentive for such activities to exist.

Section III: Reverse-Flow Risk: MICCL and the Monywa Copper Project

Companies that invest or operate in a country ruled by a military junta and internationally condemned for human rights abuses will inevitably become targeted by allegations that their activities support a repressive regime. So is the case of Ivanhoe Mines Ltd.'s investment in Burma through its subsidiary Ivanhoe Myanmar Holdings Ltd. MICCL has been operating the Monywa Copper Project since 1997, which has proved to be a very lucrative investment.¹³⁷

This report has examined the political, social and economic factors of Burma and the operational factors of MICCL that could affect and be affected by regional conflict. A template developed by CIPP for measuring reverse-flow risk was utilized that emphasizes numerous factors at the state and firm level. These indicators focus on aspects of the company's operations that may increase its chances of becoming affected by violence as well as aspects of the sub-region, which threaten stability.¹³⁸

For the most effective conclusions to be drawn, the template suggests information from a number

¹³⁷ Ivanhoe Mines Ltd (2005), Ivanhoe Mines Announces Record Copper Production and Operating Profit, 23 March 2005, Available: <http://www.ivanhoe-mines.com/s/NewsReleases> (5 April 2005)

¹³⁸ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIPP Report.

of sources be evaluated that were not available for this report. In most cases, this was due to the opaque nature of the Burmese regime, which provides little information regarding local communities and living standards. Information regarding certain aspects of MICCL's operations is also missing due to the protective nature of the company's operations. This may be attributable to the control that the state possesses over MICCL or to concerns that Ivanhoe Mines Ltd. has regarding public attention being directed at their investment in Burma. Nevertheless, the information available and provided by Ivanhoe Mines Ltd. is sufficient to draw a number of conclusions about the affects of the Monywa Copper Project on Burma's situation.

I. Geographic Impact of the Conflict

As discussed, the current state of conflict in Burma is characterized by low-scale violence. The potential for increased conflict levels between ethnic minorities and government forces does, however, remain. Foreign investors and MNCs should be wary of this and understand the fragility of the current peace. The S&K Mine has the benefit of being geographically separated from the most unstable regions of Burma. The Monywa Copper Project is notably located in a ethnically Burman region of the country. The Burmese are the ethnic majority in Burma and are not subject to many of the abuses suffered by minority groups at the hands of the state and military. Conflict in Burma, meanwhile, has been focused around the location of minority groups along the eastern border with Thailand. As a result, MICCL is categorized as *working around* the conflict. This is reflective of the distinct geographic separation between the mine and areas of instability as much as it is reflective of MICCL's treatment of the conflict as a negative externality.

II. Attitude and Policies of Government and Corruption

As a joint venture between the state-run mining company, ME-1, and Ivanhoe Myanmar Holdings Ltd. there is a direct connection between business decisions at MICCL and government policy. Claims that government forces evicted individuals from nearby villages for the expansion of the Monywa Copper Project, if substantiated,

would provide greater concern that a backlash against the mine may occur in the event of conflict escalation.

Although few details are known in regards to the relationship between ME-1 and Ivanhoe Myanmar Holdings Ltd., their eight-year joint venture may be taken to indicate a stable business relationship. State actions or policies have not discouraged Ivanhoe Mines from retaining their investment in the project. Concerns over corruption remain, however, Ivanhoe Mines Ltd.'s imposition of a Code of Conduct regarding corruption by its employees – and employees of its subsidiaries – does establish this as a potential problem. Moreover, the limited number of foreign employees at MICCL further reduces the risk that employees and the company could be targeted for illegal payments.

III. Human Rights

One of the most elusive issues to deal with is the connection between MNC operations and the actions of the host government. Many feel that any actions providing support, financial or otherwise, to a repressive regime should be condemned and immediately halted. Others argue that MNCs can play a constructive role operating within countries such as Burma in order to raise the living standard of the resident population and foster the capacity of locals to create change through greater education and self-sufficiency. While avoiding this debate, it must be recognized that MICCL's operations at the Monywa Copper Project do provide revenue for the SPDC and, therefore, the Burmese military. In fact, beginning in 2004, the royalty rate paid to the Myanmar Ministry of Mines increased from a rate of two percent of the value of copper cathode sold to four percent plus an amount equal to two percent of sales from the first five years of commercial production, amortized and payable in installments over a five year period.¹³⁹ MICCL also pays rent to the Ministry at an annual rate of US\$ 500 per square

¹³⁹ Ivanhoe Mines Ltd. (2005), Form 40-F, US SEC, pg. 39, Available: www.ivanhoe-mines.com (accessed 19 April 2005)

kilometer. These payments would have equaled roughly US\$ 2 million in 2004.¹⁴⁰

Of greater concern to this report is whether MICCL's operations encourage, or can be linked to, human rights abuses. At this point, there is no evidence directly linking MICCL to the forcible removal of individuals from their land or the use of forced labour. Nevertheless, should verifiable information arise that suggests otherwise, the potential for MICCL's operations to trigger social malcontent or regional violence would increase substantially.

IV. Demographic Stress

Demographic stress is a common thread among situations of civil strife. The involuntary displacement of individuals can result in a loss of shelter, food security, assets and income sources. Companies and governments complicit in such events can become targets of violence.¹⁴¹ Moreover, the displacement of individuals can force groups into conflict over resources; land, water or food.

Again, there is no evidence that the operations of MICCL have led to the direct displacement of local peoples, although allegations persist. The fact that the area closely surrounding Mine Town is not heavily- or over-populated further eliminates demographic stress as a major concern for triggering social discontent. This said, there is a shortage of information regarding the movement of peoples within Burma. Most data available is focused on the IDP camps on the eastern border, leaving questions as to population density pressures west of Mandalay.

V. Economic Impact of Foreign Investment

The most substantial benefit of foreign investment to the Mine Town community is the roughly 700 jobs created by the Monywa Copper Project. Indirect economic benefits from MICCL's

operations also support the local community through increased household income. Furthermore, the presence of the mine has resulted in electrical power being provided to the local community at a much higher rate than most rural areas within Burma. These positive effects contribute to stability in the region proximal to the mine and within the community reliant on the mine's operations.

What may be of concern, however, is the level of benefits from FDI accrued to the ethnically Burmese as opposed to minority groups in the country. While many Karen, Shan and other ethnic groups live in privation along the eastern border, the dominant Burmese majority is safely assumed to experience a higher standard of living. This economic stratification, based along ethnic lines, could fuel conflict or retaliatory violence targeting the Burmese community. The recent attacks in Rangoon may reflect discontent fed by ethnic stratification. The Monywa Copper Project, in a primarily ethnically Burman location, may contribute to this disparity. To become more proactive in addressing sources of potential future conflict, MICCL should consider pursuing ethnic diversity or equal opportunity among its employees and beneficiaries.

VI. Human Development

As outlined, the social and community involvement of Ivanhoe in the Mine Town community has brought a number of benefits to the local citizens and employees of the mine. A local hospital and surveillance of sanitary and water systems are two of the positive activities pursued by the Philanthropic Programs of Ivanhoe Mines. Such actions create goodwill towards the company from the local community and preserve stable concord between local groups and what may be perceived as a foreign presence.

For a thorough evaluation of the Monywa Copper Project's impact on the community, greater information would be required in regard to the labour practices at the mine. Although in a country with unemployment as prevalent as Burma, one may assume any job to be appreciated, poor labour standards can still contribute to employee disillusion and social

¹⁴⁰ Based on MICCL's reported gross revenue from copper cathode sales, reported to be US\$ 44 million. Ivanhoe Mines Ltd (2005), *Financial Statements 2003 and 2004*, pg. 58, Available: www.ivanhoe-mines.com (accessed 15 May 2005)

¹⁴¹ Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIP Report, pg. 37.

discontent. In response to accusations otherwise, Ivanhoe Mines Ltd. has unequivocally stated that it is not involved with forced labour. Similar statements have distanced the company from child labour. Concern, however, remains over employee compensation and work standards, such as hours worked and support for individuals injured on the job.

VII. Environmental Stress

The threat of mining operations having a long, wide-ranging impact on communities and populations is perhaps most evinced through the environmental footprint left by their activities. In the case of the Monywa Copper Project, sulphur contamination of nearby waterways or insufficient protection against ARD would have long-lasting and serious effects on the communities reliant on fresh water from the Yama stream and Chindwin River.

The achievement of ISO 14001 certification in 2003 reflects MICCL's implementation of an environmental management system. It is integral that the mine update this system to meet new requirements for ISO 14001 certification currently being implemented by the ISO and that MICCL continue to monitor soil and water (ground water and riverways) to ensure that operations are not contributing the degradation of local resources. Such practices will further guard against population displacement and demographic stresses that can spur conflict.

Section IV: Scenarios

I. Worst Case Scenario

Two issues are integral when examining the potential for MICCL to be affected by a reverse-flow of risk. First, should any allegations of forced displacement of people or the use of forced labour found to be true, the Monywa Copper Project markedly increases its chances of becoming a target of violent acts. Such a situation would likely not be directly involved or related with wider conflict, but reflect isolated activity instigated by social discontent for the company's practices.

Second, in the event of an environmental contamination by sulphate or ARD, local

residents may be forced to leave their homes. Of particular concern are individuals dependent on water from the Yama Stream and Chindwin River. Contamination of waterways could displace thousands of people, triggering increased competition for land and resources. This may result in increased violent conflict proximate to the Monywa Copper Project and increase the risk for MICCL to become targeted.

The potential for a reverse flow of risk, due to MICCL's operations, to lead to a return of large-scale conflict between the government and ethnic rebel groups is assessed to be low. This is primarily due to the success that the government forces have recently had in suppressing separatist forces and the geographic division between the Monywa Copper Project and regions afflicted by instability and conflict. Nevertheless, in the case of a return to widespread conflict, the Monywa Copper Project may become a target for anti-government forces as a result of it being an integral source of revenue for the SPDC.

II. Best Case Scenario

The greatest relief to the threat of reverse-flow risk affecting MICCL would be continued vigilant action to ensure that the mine's operations results in little to no environmental contamination. Increased monitoring of waterways would help to eliminate the threat of resource degradation creating population displacement. Efforts to further community benefit from the mine would also aid in eliminating risk of violent acts targeting the project. For example, involving local community leaders in decisions regarding mine practices and expansion projects would alleviate concerns over the negative impact of operations on the local population. Such steps would eliminate a great deal of threat from a reverse-flow of risk by creating regional stability and increased community appreciation of the Monywa Copper Project.

A number of destabilizing factors remain outside of the control of MICCL. Therefore, the risk of operating within Burma cannot be alleviated solely through the actions of MICCL. Yet, a best case scenario for eliminating the threat of reverse flow of risk would focus on the community impact

of the project and the environmental effects of operations.

III. Most Likely Scenario

The current trajectory of MICCL's practices, as assessed in this report and given its informational constraints, sees a low threat of reverse flow risk affecting MICCL's operations. This can be attributed to a number of factors, including the involvement of the state in the operations of the Monywa Copper Project. As a vital source of revenue for the SPDC, protection of the mine will become a priority should conflict escalate. The information available also indicates that the project has had a number of positive effects on the living standard of local individuals, mainly as a result of the activities of Ivanhoe Mines' Philanthropic Program. Also, the location of the S&K mine is provided a geographic buffer from the conflict affected regions of Burma.

Assuming none of the allegations against MICCL prove to be true, the Monywa Copper Project is not expected to experience a reverse flow of risk in the near future.

Appendix I: CIPP Risk Weighted Scores for Burma

Myanmar (Burma)	Global Rank Score	Trend Score	Volatility Score	Sum	Avg.	Weighted Avg.
History of Armed Conflict					7.20	57.60
Armed Conflicts	8.0	0.0	1.0	9.0		
# of Refugees Produced	7.6	0.0	1.0	8.6		
# of Refugees Hosted, IDPs, Others of Concern	3.0	0.0	1.0	4.0		
Governance and Political Instability					7.10	35.50
Level of Democracy	8.0	0.0	0.0	8.0		
Regime Durability	2.4	-1.0	1.0	2.4		
Restrictions on Civil and Political Rights	9.0	0.0	0.0	9.0		
Restrictions on Press Freedom	9.0	0.0	0.0	9.0		
Level of Corruption	..	..	..	..
Militarization					8.99	44.93
Total Military Expenditure (Constant 2000 US\$ millions) Φ	8.3	1.0	2.0	11.3		
Military Expenditure (% of GDP, Constant 2000 US\$) Ψ	6.0	0.0	1.0	7.0		
Imports of Maj. Conv. Weapons	6.6	0.0	2.0	8.6		
Total Armed Forces	8.0	1.0	2.0	11.0		
Total Armed Forces (per 1,000)	6.0	0.0	1.0	7.0		
Population Heterogeneity					6.33	25.33
Ethnic Diversity	6.0	single measure	single measure	6.0		
Religious Diversity	4.0	single measure	single measure	4.0		
Risk of Ethnic Rebellion (Single Measure)	9.0	single measure	single measure	9.0		
Demographic Stress					5.57	27.83
Total Population	8.0	exempt*	exempt	8.0		
Population Growth Rate (Annual %)	4.0	0.0	1.0	5.0		
Population Density (people per sq km)	5.0	exempt	exempt	5.0		
Urban Population (% of Total)	2.0	exempt	exempt	2.0		
Urban Population Growth Rate (Annual %)	5.0	0.0	2.0	7.0		
Youth Bulge (Pop. Aged 0-14 as a % of Total)	7.4	-1.0	0.0	6.4		
Economic Performance					5.94	47.52
GDP Growth Rate (Annual %)	1.5	-1.0	2.0	2.5		
GDP Per Capita (PPP, Current International \$)	..	..	..	..
Inflation [Consumer prices (annual %)]	7.2	0.0	2.0	9.2		
Official exchange rate (LCU/US\$, period avg.)	4.0	0.0	0.0	4.0		
FDI [Net inflows (% of GDP)]	..	..	..	..
Total Debt Service (% of GNI)	..	..	..	..
Trade Openness (Trade as a % of GDP)	9.0	single measure†	single measure†	9.0		
Inequality Score (GINI Coefficient)	5.0	single measure	single measure	5.0		
Foreign Aid (% of GNI)	..	..	..	..

Human Development					7.04	21.11
Access to Improved Water Source (% Tot. Pop.)	7.0	single measure	single measure	7.0		
Access to Sanitation (% Tot. Pop.)	8.0	single measure	single measure	8.0		
Life Expectancy (Years)	7.0	-1.0	0.0	6.0		
Infant Mortality Rate (per 1000 live births)	7.4	-1.0	0.0	6.4		
Maternal Mortality Rate (per 100,000 live births)	6.0	single measure	single measure	6.0		
HIV/AIDS (% of Adult Population)	7.0	0.0	1.0	8.0		
Primary School Enroll (% Relevant Age Group)	6.2	1.0	2.0	9.2		
Secondary School Enroll (% Relevant Age Group)	7.4	0.0	2.0	9.4		
Literacy rate, adult total (% of people ages 15 and above)	5.0	0.0	0.0	5.0		
Health expenditure per capita (current US\$)	4.4	-1.0	2.0	5.4		
Child Labour (% Children aged 10-14)	6.0	-1.0	2.0	7.0		
Environmental Stress					4.67	23.33
Rate of Deforestation (Percent)	7.0	single measure	single measure	7.0		
Arable Land (hectares per person)	4.0	0.0	0.0	4.0		
Freshwater Resources (cubic meters per capita)	3.0	single measure	single measure	3.0		
International Linkages					6.90	34.50
Economic Organizations Index	6.0	single measure	single measure	6.0		
Military/Security Alliances Index	9.0	single measure	single measure	9.0		
UN Organizations Index	4.0	single measure	single measure	4.0		
Multipurpose and Miscellaneous Orgs. Index	8.0	single measure	single measure	8.0		
International Disputes	5.5	1.0	1.0	7.5		
Unweighted Sum					59.73	
Unweighted Average					6.64	
Total Weighted Sum						317.66
Risk Index (Weighted Average)						6.62

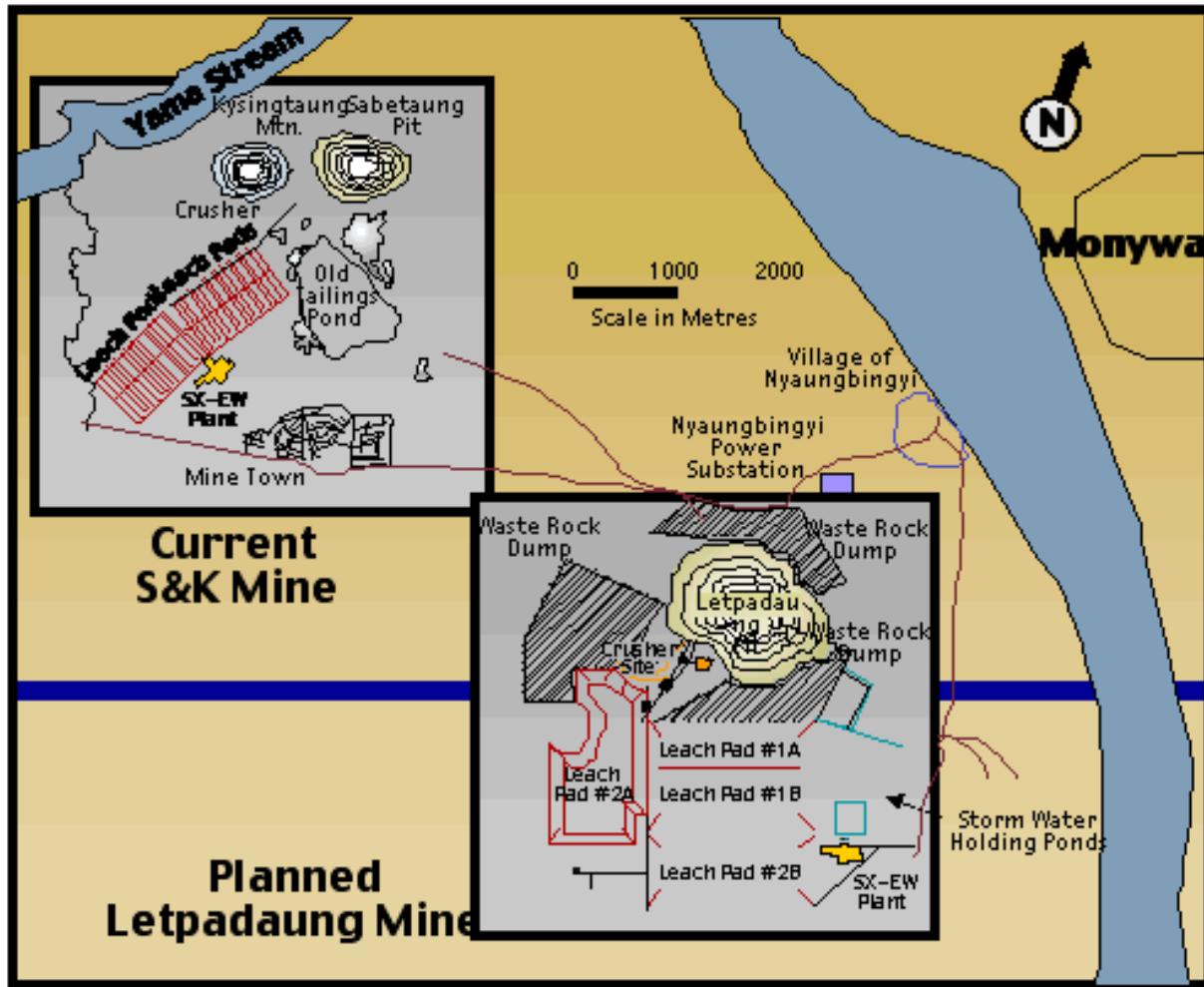
* See Notes

† See Notes

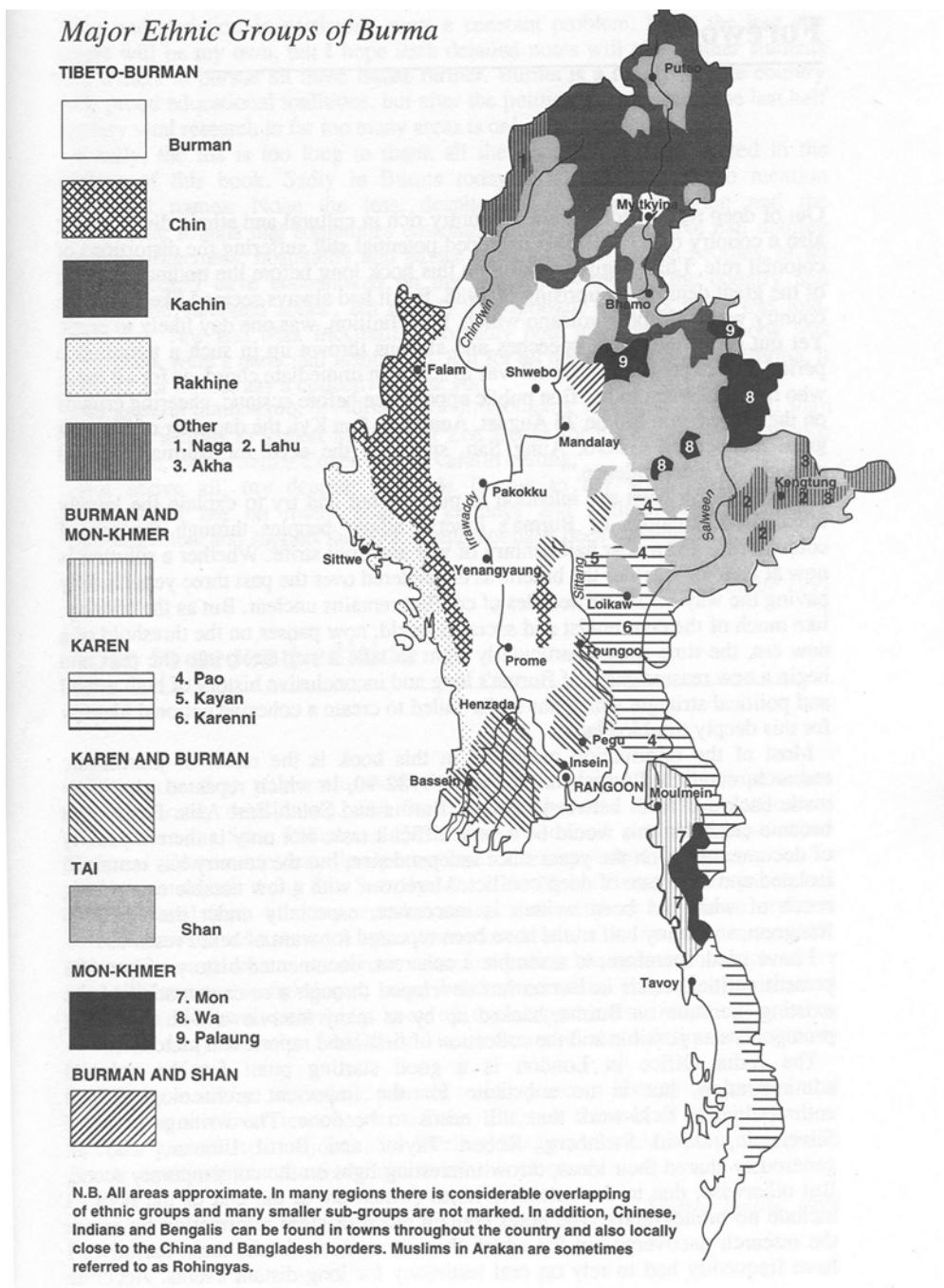
Φ See Notes

Ψ See Notes

Appendix II: The Monywa Copper Project – Site Plan



Appendix III: Ethnic Map of Burma



Source: Smith, Martin (1999), *Burma: Insurgency and the Politics of Ethnicity*, St. Martin's Press, New York

Bibliography

Amnesty International (2002), *Myanmar: Forced labour, extortion, displacement and land confiscations – the rural life*, Press Release, 17 July 2002, Available: <http://web.amnesty.org/library/Index/ENGASA160062002?open&of=ENG-MMR> (accessed 23 March 2005).

BBC News (2005), "Burma Constitutional Talks Resume", 17 February 2004, Available: <http://news.bbc.co.uk/1/hi/world/asia-pacific/4272759.stm> (accessed March 9, 2005)

BBC World News. Country Profile: Burma, Available: http://news.bbc.co.uk/1/hi/world/asia-pacific/country_profiles/1300003.stm (accessed 10 March 2005)

Berger, Leah (2002), *Private Sector Risk Analysis and Conflict Impact Assessment: Measuring the Reverse Flow of Risk*, CIP Report

Burma Project, Heroin & Drug Trade, Available: <http://www.burmaproject.org/CRISIS/index.html> (30 March 2005)

Canadian Labour Congress (CLC), Available: http://www.clc-ctc.ca/web/menu/english/en_index.htm (accessed 14 February 2005).

CIA World Factbook (2005), Burma, Available: <http://www.cia.gov/cia/publications/factbook/geos/bm.html> (accessed 23 February 2005)

Corben, Ron (2005), ILO Delegation Cuts Short Official Visit to Burma, Voice of America, Available: <http://www.voanews.com/english/2005-02-23-voa12.cfm> (accessed 23 March 2005)

Ehna, Saw (2005), "The KNU Ceasefire 'Agreement' One Year On: Real Progress or Still Just a Mess?", Karen Unity Webpage, Available: <http://www.karen.org/> (accessed 5 April 2005)

EIU (2004), Country Monitor 8 March 2004, Main Report, Accessed via Carleton University Library (26 February 2005)

Energy Information Administration (2005), World Energy Use and Carbon Dioxide Emissions: OECD and G-7 Development Trends, Available: <http://www.eia.doe.gov/emeu/cabs/carbonemiss/chapter2.html> (accessed 23 March 23 2005)

Federation of Trade Unions – Burma (2004), The ILO and the People of Burma, Available: <http://www.tradeunions-burma.org/ilo/iloandburma.htm> (accessed 23 March 2005)

Freedom House (2004), Freedom in the World, Country and Territory Reports: Burma (Myanmar), Available: <http://www.freedomhouse.org/research/freeworld/2004/countryratings/burma.htm> (accessed March 9, 2005)

Freedom House (2005), *Freedom of the Press 2004: A Global Survey of Media Independence*, Karin Deutsch Karlekar (ed), Rowman & Littlefield Publishers, Toronto, Available: <http://www.freedomhouse.org/research/presssurvey.htm> (accessed 9 March 2004)

Global Witness, Logging and Conflict in Burma, Available:
<http://www.globalwitness.org/campaigns/forests/burma/> (Accessed 19 April 2005)

Homer-Dixon, Thomas and Jessica Blitt. 1998. Introduction: A Theoretical Overview of EcoViolence: *Links Among Environment, Population and Security*, eds. Thomas Homer-Dixon and Jessica Blitt. Lanham, Maryland: Rowman & Littlefield Publishers, Inc.

ICFTU Report (2005), *Doing Business with Burma*, January 2005, Available:
www.icftu.org/www/PDF/Burma-ICFTUReport-January.pdf (accessed 16 March 2005)

International Institute for Strategic Studies (2005), Country Report: Myanmar, electronic resource (19 April 2005).

International Standards Organization. See: www.iso.org

Ivanhoe Mines Ltd. *Code of Business Conduct and Ethics*, Available: wwwivanhoe-mines.com (30 March 2005).

Ivanhoe Mines Ltd. (2002), *False Claims by Labour Groups Rejected as Ivanhoe Sets the Record Straight, Again, About Its Investment in Myanmar*, Statement by Edward Flood, Deputy Chairman, Ivanhoe Mines, 26 June 2002, Available: <http://www.ivanhoemines.com/s/TruthAndLies.asp?ReportID=84144> (accessed 6 April 2005)

Ivanhoe Mines Ltd. (2005), Form 40-F, US SEC, pg. 44, Available: www.ivanhoe-mines.com (accessed 19 April 2005)

Ivanhoe Mines (2002), *Human Values, Jobs and Economic Investment*, Daniel Kunz, President of Ivanhoe Mines, addresses the company's investment in the Monywa Copper Project, Available:
www.ivanhoemines.com/i/pdf/Monywa-PresStatement.pdf (accessed 15 March 2005).

Ivanhoe Mines Ltd (2005), Ivanhoe Mines Announces Record Copper Production and Operating Profit, 23 March 2005, Available: <http://www.ivanhoe-mines.com/s/NewsReleases> (5 April 2005)

Ivanhoe Mines (2004), Letter from R. Edward Flood, Deputy Chairman, Ivanhoe Mines Ltd. to Amnesty International Canada, June 3, 2004, Available: <http://www.amnesty.ca/business/actions/> (accessed 10 March 2005)

Ivanhoe Mines, Monywa Copper Project, Background, Available:
<http://www.ivanhoe-mines.com/s/MonywaCopper.asp> (Accessed 22 March 2005)

Ivanhoe Mines, 2004 Year-End Financial Results, Available: <http://www.ivanhoe-mines.com/s/NewsReleases.asp> (accessed 15 April 2005)

MICCL (2004), *Safety, Health and Environment Report 2003*. Pg. 6.

Minorities at Risk, Minority Group Assessments: Shan, Available:
<http://www.cidcm.umd.edu/inscr/mar/assessment.asp?groupId=77507> (accessed 15 April 2005)

MIPT Terrorism Knowledge Database, Burma, Available:
<http://www.tkb.org/MoreCountryIncidents.jsp?countryCd=BM> (accessed 10 March 2005)

- Moody, Roger. 1999. *Gravediggers: A Report on Mining in Burma*. Report for Canada Asia Pacific Resource Network (CAPRN), September. Available:
http://www.miningwatch.ca/documents/Grave_Diggers.pdf (30 March 2005)
- Organisation for Economic Co-operation and Development (2001), *The DAC Guidelines: Helping Prevent Violent Conflict*, International Development, Paris, OECD
- Polity IV (2003), Country Report 2003: Myanmar (Burma), Available:
<http://www.cidcm.umd.edu/inscr/polity/Mya1.htm> (accessed 10 February 2005)
- SIPRI (2004), *SIPRI Yearbook 2004: World Armaments and Disarmament*, Humanities Press, New York
- Smith, Martin (1999), *Burma: Insurgency and the Politics of Ethnicity*, St. Martin's Press, New York
- Thailand Burma Border Consortium (2004), *Internal Displacement and Vulnerability in Eastern Burma*, Wanida Press: Thailand
- Transparency International (2002), Bribe Payers Index, Available:
<http://www.transparency.org/surveys/index.html> (30 March 2005)
- Transparency International (2005), Corruptions Perceptions Index 2004, Available:
<http://www.transparency.org/surveys/index.html#cpi> (Accessed 9 March 2005)
- United Nations Development Program (2004), *Human Development Report 2003*, Oxford Univ. Press: New York
- United Nations Development Program (2005), *Human Development Report 2004*, Oxford Univ. Press: New York
- Uppsala Conflict Database, Myanmar (Burma): Karen, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bcID=181> (accessed 19 March 2005)
- Uppsala Conflict Database, Myanmar (Burma): Karenni, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bcID=185> (accessed 18 April 2005)
- Uppsala Conflict Database, Myanmar (Burma): Shan, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bcID=182> (accessed 10 March 2005)
- Uppsala Conflict Database, Myanmar (Burma): Wa, Available:
<http://www.pcr.uu.se/database/conflictSummary.php?bcID=188> (accessed 18 April 2005)
- US Department of State (2004), *Report on US Trade Sanctions Against Burma*, 28 April 2004, Available:
<http://www.state.gov/p/eap/rls/rpt/32106.htm> (accessed 16 March 2005)
- World Bank (2004), Data Profile: Myanmar, Available:
<http://devdata.worldbank.org/external/CPProfile.asp?CCODE=MMR&PTYPE=CP> (accessed 4 March 2005)