

KALIMANTAN, INDONESIA: MACROECONOMIC POLICY CHANGE AND THE ENVIRONMENTAL IMPACTS OF THE MINING SECTOR¹

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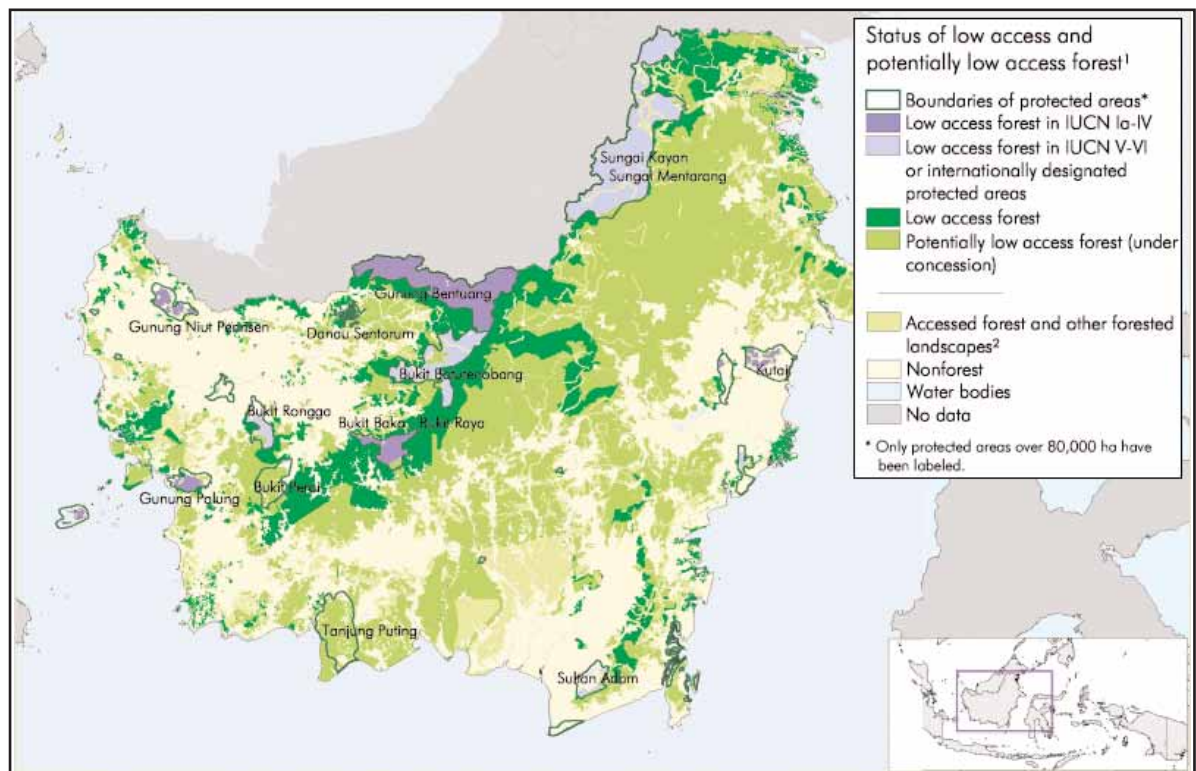
In the years since the Asian Financial Crisis of 1997, Indonesia has successfully regained macroeconomic stability but economic growth remains below 4%. Poverty and corruption likewise remain a challenge. Currently, over 110 million people (53% of the population) live on less than \$2 a day and remain vulnerable to falling back into severe poverty (World Bank 2004). World Bank and IMF structural reforms following the crisis consisted of fiscal and administrative decentralization, trade and investment liberalization, and privatization. The objective of Bank adjustment lending was to rebuild investor confidence and restore economic growth in Indonesia while shielding the poor. The structural reforms to promote investment, coupled with decentralization, led regional governments to rely heavily on natural resource extraction. Many of these reforms have either directly or indirectly promoted growth of the mining sector, which is seen as crucial to

economic growth. However, there have been only limited resources to promote sustainability.

This study focuses on the development policies laid out in the World Bank Country Assistance Strategy (CAS) for 2004-2007 and the proposed measures specific to the mining sector. Based on a review of past experiences, the study analyzes the probable social and environmental impacts for the Kalimantan region of Indonesia.

Vulnerabilities

The Kalimantan region of Indonesia comprises approximately two-thirds of Borneo Island and consists of four provinces: East, Central, South and West Kalimantan. The region is well known for its tropical forests, rich natural resources and wealth of biodiversity. Three of WWF's Global 200 Priority Ecoregions – the Borneo Lowland Montane Forests, Greater Sundas Mangroves,



Extent and distribution of protected areas, Kalimantan Forest Watch Indonesia/ Global Forest Watch, 2002.
The State of the Forest: Indonesia. Bogor, Indonesia: Forest Watch Indonesia, and Washington DC: Global Forest Watch.

¹ The Indonesia case study has been conducted as a desk study. The information printed here is from publicly available documents. Further research and more detailed information would require in-country consultations and on-site interviews. The material presented here follows up on an earlier report, The World Bank Extractive Industries Review: The Role of Structural Reform Programs towards Sustainable Development Outcomes prepared by Heike Mainhardt-Gibbs for WWF-MPO (2003).

and Sundaland Rivers and Swamps – are located in Kalimantan (WWF 2000). Kalimantan exemplifies the interaction between poverty, environment, and the mining sector in a vulnerable region. While this study focuses on the mining sector's impacts, the vulnerabilities-based methodology can likewise be applied to other sectors in Kalimantan or other regions of Indonesia.

Places

Indonesia possesses the most extensive forest reserves in Asia, with 144 million hectares of tropical rain forest representing 10% of the world's total. These forests are home to more than 20,000 plant species and 17% of the world's bird species. These resources are under threat as a result of rapid deforestation. Over the past 12 years, the average annual deforestation rate reached at least 1.5 million hectares (ADB-CEA). Some 75% of Indonesia's poor live in rural areas and probably half of these are affected by what happens inside state forest lands. Indonesia faces a challenge of staggering proportions over the coming years in managing its forest resources. The country will need to deal with issues including legal and illegal over-exploitation and clearing of natural forests; regularization of misclassified land uses and forest state boundaries; heavy subsidies, over-capacity and indebtedness of the wood-processing sector; and institutional reform in response to the increasing emphasis placed on decentralization and good governance.

Forest protection, biodiversity conservation, and prevention of devastating floods in Indonesia depend heavily on the protected forests and conservation area system. Indonesian protected forests are few but comprise sites of rich biodiversity with abundant endemic flora and fauna species. Kalimantan's forests are famous as the home of the orangutan. Forests in the region are threatened by expanding economic activities, namely forest conversion for oil palm plantations, agricultural activities, illegal logging and mining. Over the past 12 years, 44% of the region's forests have been degraded (WALHI 2003a). At current rates, Kalimantan's forests are expected to disappear by 2010 (Wulandary 2001).

The mining sector is currently encroaching on 11.4 million hectares of forest in Indonesia, including 8.68 million hectares of protected forests (out of 31.9 million ha) and 2.8 million hectares of conservation areas (WALHI 2003b). While data specific to Kalimantan is unavailable, given known unexploited mineral deposits and the fact that one national park's boundaries have already been redrawn for open pit mines, it can be

assumed that there will be a direct impact on Kalimantan's forests.

People

The population of Kalimantan is diverse, including the indigenous Dayaks as well as people of Malay, Chinese and Javanese descent. Data for 1999 indicate that the poverty rate in West Kalimantan was 26.2% percent; Central Kalimantan 15.1%; South Kalimantan 14.4%; and East Kalimantan 20.2%. Open unemployment levels were between 3.9% and 7.7%, while employment in the informal sector was between 66.4% and 78.1%.

The forests serve as the homelands of indigenous communities. Indigenous land is communally owned and local *adat* (customary law) institutions govern individual's rights of use. Traditional peoples depend on natural resources. For example, in East Kalimantan the Muly Dayak hunt birds and game, cultivate mountain rice, fruit, honey, rattan, and coffee, and catch river fish. Small-scale gold mining is part of the traditional way of life and *adat* governs gold-panning activities, practiced using simple equipment made from natural materials collected in the surrounding forests. There have been some successes in sustainable community-based ecosystem management programs promoted in Indonesia. In West Kalimantan, for example, the Dayak cultivate traditional rubber tree gardens and the Dayak Bentian of East Kalimantan cultivate traditional rattan gardens (Down to Earth 2001).

The major threats to the Dayak livelihoods include the conversion of rattan gardens to palm oil plantations; logging; and mining – most of which takes place with little or no consultation of the local communities. Although the Indonesian constitution prescribes that traditional law should be respected, development projects and programs have taken precedence (AFN1998). Indigenous mining rights are not recognized by the Indonesian authorities who favor large-scale commercial exploitation over small-scale mining (Down to Earth 2001).

Past Policies and Impacts

The mining sector generates a considerable share of Indonesian GDP and export earnings. As a result the economic crisis combined with legal uncertainties, illegal mining, and political instability, investment fell from US\$ 1.3 billion in 1999 to only US\$ 360 million by 2002 (INNA 2003). Nonetheless, the mining sector still represented 13% of GDP and 19% of total exports, with gold being the largest revenue earner (World Bank 2004) and coal exploitation expected to expand significantly. Indonesia has considerable mineral deposits

with potential for further investment and development, particularly in Kalimantan where mining represents a large share of provincial GDP. Available data for 2001 show mining and quarrying represented 22% of GDP for South Kalimantan and 31% for East Kalimantan. Measures designed to increase investment will therefore have a significant direct and indirect impacts in Kalimantan.

In response to the fall in investment, Indonesia aggressively promoted the sector in order to restore foreign investment and generate both foreign exchange and tax revenues. In addition to this direct promotion, macroeconomic policies designed to increase investment overall provided incentives for the mining sector. These national policies are creating growth and investment in mining.

The World Bank's involvement was to facilitate investment by providing assistance in the formulation of the Mining Law and associated regulations in order to lower the risks associated with mining investment during the post-crisis period. While the Mining Law is still in draft form, several measures are currently being put into regulations to govern the sector. These measures are based on the advice of the World Bank and the Policy Review Task Force (that included the World Bank).² One particularly controversial measure promoted by the World Bank during the drafting period, which the GoI has since begun to implement, is the removal of impediments to new mining projects. This includes relaxing restrictions on mineral exploration and extraction in officially protected forests and small islands. The Bank states that it has encouraged such a measure because the "prohibited areas include a number of potentially rich mining prospects" (World Bank 2001b). The implications and initial effects of this recommendation are discussed in the social and environmental impact sections that follow.

Environmental Impacts

Growth in the mining sector has already led to deforestation, incursion into protected forests, loss of biodiversity, and water pollution.

Mining in Protected Forests: In May 2004, President Megawati Soekarnoputri signed a presidential decree to allow 13 mining companies to resume activities in protected forest areas (out of 22 requesting authorization to resume operations). The Presidential decree gives mining priority over all other land uses and

permits open-pit mining operations in protected forests by companies that had contracts prior to the introduction of the 1999 Forestry Law (Xinhua 2004). The 13 companies are expected to generate \$379.81 million in tax and non-tax revenue annually and absorb 47,269 local employees (Xinhua 2004).

The decree was important from a political perspective because it shows that Indonesia is committed to honoring contracts. However, recent examples of the law's implementation illustrate the costs to environmentally sensitive areas. These include: 1) the redrawing of the Kutai National Park boundaries as a result of coal discoveries in East Kalimantan in order to develop the site; and 2) in 2000, the provincial-level forestry service of South Sulawesi granted 14 mining exploitation permits in a geologically unique area that has protected forest status (World Bank 2001a). According to the Indonesian Mining Association, 33% of the area potentially available for mining in Kalimantan is covered by protected forest (US Embassy, Jakarta1). It should be noted that nationally the mining industry already has a vast area under leases, covering 66.89 million ha, an amount equal to 35% of Indonesia's land area (WALHI 2003b). According to data gathered by the Indonesian Department of Forestry in 2001, there were already at least 19 mining companies with a total of over 200,000 ha operating in protected forest areas³.

Damage from Mining Practices: Environmental damage caused by mining is not presently subject to penalties in Indonesia because the country has yet to develop criteria for evaluating the damages. Mining in Indonesia has caused considerable on-site environmental problems associated with submarine tailing disposal systems, acid rock drainage, illegal mining, and mercury contamination. Offsite impacts include erosion, water contamination, and toxic waste, as well as the facilitation of illegal logging. Company attempts at revegetation often fail, and even the best revegetation programs cannot replace lost biodiversity (Kalmirah 2003).

Illegal Mining: Mining sites draw considerable numbers of illegal miners. At one point, more than 60,000 illegal miners were thought to be prospecting for coal, gold, tin and other minerals across Indonesia (Burell 2003). Illegal mining is tolerated both by the mining companies and the government because it provides a source of income for the local population, many of who feel they are entitled to the land. These miners do not follow existing environmental regulations (Coal Week International 2001), and their environ-

² According to the U.S. Geological Survey, the proposed new mining law was retreated from the Secretary Office for further review. The Government planned to submit it to the House in 2005.

³ In July 2004, the Ministry of Energy and Mineral Resources publicly admitted that 158 companies were seeking permission for opencast mining in protected forest areas (Kalmirah 2003).

mental impact is considerable. The Indonesian Coal Mining Association estimates that between 1999 and 2001 at least US\$300 million worth of environmental damage was caused by illegal mining activities (Coal Week International 2001).

An environment official warned that Kalimantan is an “ecological time-bomb” as a result of illegal gold-mining activities (Laksamana 2003). A considerable amount of illegal mining takes place on the Talawaan concession in Central Kalimantan, which belongs to an Australian company. These miners are reportedly dumping 160 kilograms of mercury into the Talawaan River Basin each month, which is a tributary of Central Kalimantan’s immense Kahayan River. Hazardous concentrations of mercury have been recorded in the area’s soil, groundwater, surface water and river sediments, and dangerous levels have also been recorded in plankton, mollusks, fish, ducks and plant life (Laksamana 2003).

Social Impacts

The mining sector in Kalimantan is run mainly run by large multinational corporations, sometimes partnered with domestic firms. The sector contributes little in the way of employment. Moreover, there are no legal provisions for distribution of revenue at the local level, so communities do not benefit from the taxes and royalties provided by the companies. This situation leads to social conflict (Tadjoeddin 2003), which is compounded by the environmental damage, loss of resources, and incursion onto traditional lands.

The majority of the people affected by mining in Kalimantan are minority indigenous communities with traditional land rights (Atkinson 1996). Problems began with policies under the Soeharto regime that forced villagers to give their land to mining companies without proper compensation. Land problems associated with mining have been escalating in complexity for the last three years and have been a prime source of conflict in rural areas (MMSD 2002). Specific problems include: repressive local authorities, inadequate compensation, and the loss of cultural values associated with the loss of land. Villagers continue to demand compensation and are creating problems for international companies, some of which have frozen or abandoned mining investments as a result (Guerin 2003). It is predicted that land disputes will escalate unless solutions are found (MMSD 2002).

Recently, the legislative council (DPRD) of East Kalimantan requested that the central government revoke coal-mining permits in protected forests for fear

that these large-scale operations would encourage illegal mining, logging and other destructive activities (MiningIndo 2004a). In South Kalimantan, the DPRD asked for the rejection of Placer Dome’s plans to mine in the Meratus Mountain forest because it encroaches on the Dayak and Samihim sources of water, sacred sites, and livelihoods (Kalmirah 2003). Nevertheless, the central government has continued to pressure the local governments to accept these incursions (MiningIndo 2004a).

Small-scale mining is seen by many as a more equitable form of resource exploitation, where benefits could accrue directly to the community, and the community could take responsibility for environmental impacts. Formalizing and regulating the sector could prevent damage caused by illegal mining and contribute to poverty alleviation. However, the government has been inconsistent in allocating permits for artisanal and small-scale mining. Small domestic entities do not have the resources to lobby the government for the necessary licenses (MiningIndo 2004b). On the other hand, there has been little progress in cracking down on illegal mining because of the poverty and unemployment levels.

Current World Bank-Supported Development Policies

Current World Bank supported development policies, as stated in the Country Assistance Strategy for 2004-2007, continue to support the mining sector by reinforcing past structural changes, some of which directly target the sector. In addition to policies supported by the CAS, the Mining Department of the World Bank considers Indonesia a strategic source of low-sulfur, low-ash coal for Asian and European markets, and is currently considering several investments in the Indonesian coal sector. The Department also plans to explore the issues related to artisanal mining and provide longer-term policy reform support for the mining framework. While the CAS does discuss the issues of forest resource management and acknowledges that a large percentage of the poor are affected by deforestation, there is no immediate action planned on the part of the World Bank.

The current World Bank-supported development policies will promote additional investment in the mining sector while providing little in the way of social and environmental safeguards for its development. The following section describes potential impacts, positive and negative.

Macroeconomic Policies

Reform of *fiscal policy*, notably decreasing tax arrears and increasing tax revenue, could require increasing taxes on certain productive sectors. Should this require additional taxes on resource extraction, the outcome for the environment could be positive. However, existing contracts for mining companies and laws governing the sector limit the ability of the GoI to significantly change the demand for extractive industries.

Strengthening and diversifying the *financial sector* while improving access to microfinance could have positive social and environmental outcomes. Micro-credits allow the poor access to credit that would allow for local development of mining services, value-added artisanal products, or non-mining activities around mine sites. However, it is important to note that successful development of micro-finance would require decentralization, education, information, and access.

The main objectives for the *private sector* include streamlining business approval, improving corporate governance, and clarifying functions of central and local governments towards private sector development. These objectives could have a strong impact on investment in the mining sector. It is important to monitor what impact these reforms, particularly streamlining of approvals, would have on the environmental impact assessment process as it applies to mines. Improvements in corporate governance will have a positive outcome provided that the regulations include complete disclosure of mining practices and environmental impact studies and reduce corruption. Proposed technical assistance from the World Bank includes a "Good Environmental Governance" project. This project could improve the government's environmental monitoring of the private sector at the local level.

Sectoral Policies

Infrastructure policies are aimed at improving the transportation, electricity and oil sectors. On-going and proposed lending policies include regional transport and strategic road infrastructure, among others. This could increase access to vulnerable ecosystems and increase poaching, illegal logging and other environmentally destructive practices if developed without strategic environmental planning.

Poverty reduction strategies focus on land-rights policies and legislation. Objectives and proposed projects include land titling for specific areas; improved access to infrastructure; land management; and catchment protection projects. Land reforms encourage long-term sustainable resource management. However, conflicts resulting from past policies still need to be resolved in order to prevent future social unrest.

Further work in *decentralization* focuses on good governance, transparency in tax and customs collection, and a participatory approach to development planning. For these objectives to be successfully met, it would be crucial for an environmental component to be included in development planning and good governance.

The *mining sector* is expected to be targeted by the IFC, MIGA and the World Bank Mining department. Mining investments will therefore increase. With current practices, the outcome of this type of growth is expected to be negative. While the World Bank and the GoI have acknowledged the importance of forests for the rural poor, there is no specific mention in any policy objective or platform as to the threats that arise from mining in protected forests and other sources. These issues need to be directly addressed and companies or governments targeted as appropriate if the objective is to be met.

Recommendations

Past reforms have contributed significantly to macro-economic stability, which has helped to boost investment. However, current and planned policy reforms will further contribute to the expansion of the mining sector in Kalimantan while doing little to develop the policies and institutions needed to ensure that growth is equitable and environmentally sustainable.

Strategic environmental assessments should be carried out to evaluate the mining sector and its impacts, and to plan for mining sector development. Mining development should be:

- 1) limited to areas where it can be sustainably managed
 - preventing illegal mining
 - transparent government and EIA processes
 - laws and institutions sufficiently developed for monitoring and enforcement
- 2) does not affect protected forests or other vulnerable ecosystems
 - this includes the mine itself, roads to and from the mine, and chemicals/processes used in extracting different types of minerals.
- 3) developed in such a way that it contributes to the alleviation of poverty.

Land-use policies (local and national) need to be put in place that respect protected areas and indigenous areas. A mechanism will be needed to compensate mining companies for lost concessions and local peoples for lost lands. Conflicts in existing regulations need to be eliminated and enforcement of environmental regulations—including laws on forestry, illegal mining, and water pollution—need to be improved. Environmental objectives should include measures specific to forest conversion, mining, and agriculture.

Poverty-reduction objectives should recognize the dependence of the poor on natural resources, and take this reliance into account in all sectoral development policies. There is a need for more recognition, protection, and support for community-based natural resource management. Small-scale mining needs to become a more formalized sector. In doing so, the sector can be regulated and illegal mining discouraged.

Monitoring of the mining sector needs to be conducted at the local, national and regional level. Indonesia has made considerable progress in prosecuting foreign companies for damage to the environment and it is hoped that the government will continue to enforce existing regulations. Large multinational companies (and their home countries) play a major role in establishing best practices and regulations for the mining sector and can use their resources to ensure that mining is carried out in a socially and environmentally sustainable manner.

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