LEGAL RESPONSES TO THE ENVIRONMENTAL IMPACTS OF MINING *

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SCOPE

Mineral activities and operations necessarily carry with them various environmental, economic, social, and cultural impacts, which due to the nature of mining may be negative in many instances. The Philippine legal system thus provides various standards to mitigate or alleviate such impacts, in order to maintain a viable mining industry by confronting its undesirable effects. This article will focus on the environmental impacts of mining and how the current legal and policy system seeks to address them. However, the authors recognize

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that a holistic assessment of the impacts of mining must include a discussion of its other effects, such as on the rights of indigenous peoples and indigenous cultural communities (IPs/ICCs), particularly because a substantial number of mining projects in the Philippines are located on ancestral domains and tend to lead to the displacement of IPs and ICCs. The constraints of this research limit its scope to environmental law and policy, but does not discount that the social, cultural, and economic aspects of mining are also crucial points of discussion that merit attention.

INTRODUCTION

Mining law and policy began to take shape during the Spanish occupation of the Philippines. The Philippine Bill of 1902 recognized the significance of the country's minerals and natural resources, most of its provisions delving on their extraction and utilization. The 1935, 1973, and 1987 Philippine Constitutions provided for State ownership of natural resources and the State's right to their utilization and development.[1] The enactment of Republic Act No. (RA) 7942,[2] aimed to spur the development of the Philippine mining industry. The country's rich mineral reserves and resources presented big opportunities for investments and economic growth. An early challenge to the constitutionality of the Mining Act, on the ground that it created a means of granting foreign ownership over natural minerals and resources, was ultimately denied – after ten years with the Supreme Court – and the Act in its entirety were declared valid and constitutional in the landmark ruling of the Supreme Court in *La Bugal-B'laan Tribal Association, Inc. v. Ramos*.[3] The resolution of the constitutional challenge gave way to the rise of the mining industry in the Philippines, resulting in a sharp increase in foreign investments after the finality of the judgment in 2005.[4]

This recent boom in the industry gave rise to numerous potential opportunities for economic growth for the country, as well as for communities and local government units (LGUs) hosting mining projects. In addition to multinational corporations or consortiums and small-scale miners already operating, a slew of mining applications have been filed with the

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[1] 1935 CONST., art. XIII, §1; 1973 CONST., art. XIII, §§8, 9; 1987 CONST., art. XIII, §2.

[2] Otherwise known as the "PHILIPPINE MINING ACT OF 1995" (hereafter referred to as the "MINING ACT").

[3] G.R. No. 127882, 445 SCRA 1, 228, Dec. 1, 2004.

[4] G.R. No. 127882, Feb. 1, 2005.

Department of Environment and Natural Resources (DENR) over the last few years covering various mineral reserves. And like a number of their predecessors, new applications for mining operations have been prone to contest and controversy, often due to the negative environmental impacts they may have, especially those incapable of mitigation or are inestimable. Time and again, such factors have galvanized environmentalists, affected communities, and other advocates opposed to the grant of particular mining concessions.

It is an established fact that mining carries with it negative environmental impacts. Mineral exploration, extraction, and production are by nature disruptive and destructive activities, such that their undertaking must necessarily be accompanied by comprehensive measures aimed at the prevention, mitigation, and remediation of environmental impacts. Natural resource economist Germelino Bautista has identified potential resource and environmental damage that can result from each stage of mining operations:

> *Mining exploration, operation, & ore extraction*
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> Disruption, if not loss of, natural habitats
> Forest land conversion/loss
> Decline in carbon sequestration capacity
> Erosion, sedimentation
> Reduced slope stability or higher risk of landslides
> Diversion of surface or groundwater
> Reduced or erratic stream flows
> Clogged stream channels
> Potential acid rock generation
> Contamination of surface waterways
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> *Mineral production*
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> Threat to particular species or biodiversity loss
> Diversion of surface or groundwater
> Reduced stream flow or groundwater depletion

Acid rock drainage and contamination of soil and water
Surface, groundwater pollution
Reduced fish spawning area
Damage to aquatic life
Air pollution (increased dust, PM, metal gases, sulphuric acid)

Mine waste and tailings management

Contamination of streams, rivers, other water bodies from tailings release
Destruction of habitats (rivers, mangroves, sea grass, coral reefs)
Fish kills
Groundwater contamination from tailings dam seepages
Air pollution from dried tailings
Loss of particular species

Mine rehabilitation, closure or abandonment

Same as above[5]

Based on even a cursory look at these environmental harms and risks, it is clear that proper mechanisms for their mitigation and compensation must not only be established, but also rigorously implemented. This article looks at how national laws and policies on mining and the environment, attempt to address these impacts. Specifically, this article will focus on whether these laws and policies are, by themselves, sufficient for the purpose of addressing the gaps that compound the inherently complex issue of mining.

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[5] Germelino Bautista, *Economics of Philippine Mining: Rents, Price Cycles, Externalities, and Uncompensated Damages*, The Ateneo School of Government, 40-41 (2010) *available at*: http://www.asg.ateneo.edu/asogadmin/files/Economics%20of%20Philippine%20Mining.pdf (accessed on Jan. 22, 2012) (hereafter referred to as "Bautista").

LEGAL POLICY AND FRAMEWORK

A. State Ownership of Natural Resources

Article XII, Section 2 of the 1987 Constitution states that all lands of the public domain, minerals, coal, and other natural resources are owned by the State. Commonly termed the "Regalian doctrine", this rule extends not only to land but also to "all natural wealth that may be found in the bowels of the earth".[6] The constitutional policy of the State's "full control and supervision" over natural resources proceeds from the concept of *jura regalia*, as well as the recognition of the importance of the country's natural resources not only for national economic development, but also for its security and national defense.[7] This concept of State ownership has been enunciated in both the 1935 and 1973 Constitutions.

Section 2 also gives the State full control and supervision over the right to the exploration, development, and utilization of natural resources. The State may directly undertake these activities or enter into co-production, joint venture, or production-sharing agreements with Filipino citizens or corporations at least 60% Filipino-owned. It may also enter into agreements with foreign corporations involving technical or financial-assistance for large-scale projects involving minerals, petroleum, and other mineral oils.

The Mining Act likewise reiterates these Constitutional policies, thus:

> All mineral resources in public and private lands within the territory and exclusive economic zone of the Republic of the Philippines are owned by the State. It shall be the responsibility of the State to promote their rational exploration, development, utilization and conservation

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[6] Republic v. Court of Appeals, G.R. No. L-43938, 15 Apr. 1988, 160 SCRA 228 *as cited in* La Bugal-B'laan Tribal Association, Inc. v. Ramos, G.R. No. 127882, 27 Jan. 2004, 421 SCRA 148.

[7] Miner's Association of the Philippines, Inc. v. Factoran, Jr., 240 SCRA 100.

> through the combined efforts of government and the private sector in order to enhance national growth in a way that effectively safeguards the environment and protect the rights of affected communities.[8]

Section 4 speaks directly to the State's control and ownership of mineral resources, which shall be under its full control and supervision.[9] However, because the State does not always have the capacity to develop and utilize these minerals, it may undertake exploration, development, utilization, and processing on its own or by entering into mineral agreements with contractors in the form of Financial and Technical Assistance Agreements (FTAAs), Mineral Production Sharing Agreements (MPSAs), or Joint Venture Agreements (JVAs), among others.[10]

As a function of its powers of control and supervision, the State is also authorized to administer and regulate the "conservation, management, development, and proper use of the State's mineral resources," which it carries out through Department of Environment and Natural Resources (DENR).[11] DENR Administrative Order (DAO) 2010-21 and Section 6 of the Implementing Rules and Regulations (IRR) of the Mining Act likewise echo this statutory mandate. In this regard, the Mines and Geosciences Bureau (MGB) of the DENR directly undertakes administration and disposition of mineral lands and mineral resources.[12]

B. Right to a Balanced and Healthful Ecology

The 1987 Philippine Constitution enshrined the oft-cited state policy on the "right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature".[13] The Supreme Court has declared this provision self-executory, that is, capable of being enforced independent of any enabling statute.[14] Article XII, Section 3 of the 1987 Constitution reiterates the requirement that Congress take into account the "requirements of conservation, ecology, and development" when granting rights over lands of

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[8] MINING ACT, §2.

[9] Likewise embodied by Article XII, Section 2 of the 1987 Constitution.

[10] MINING ACT, §4.

[11] MINING ACT, §8.

[12] IRR of the MINING ACT, §7.

[13] CONST., art. II, §16.

[14] Oposa v. Factoran, Jr., G.R. No. 101083, 224 SCRA 792, Jul. 30, 1993.

the public domain. A new environmental provision established in the 1987 Constitution is the mandate to Congress to legislate the limits of forest lands and national parks for the purpose of conserving them, and to provide for the prohibition of logging in endangered forests and watershed areas.[15]

The right to a balanced and healthful ecology, as enshrined in Article II, Section 16 of the 1987 Constitution, has been made the basis of remedies by actual or potential victims of environmental damage. Among these is the internationally recognized case of *Oposa v. Factoran, Jr.*,[16] in which the Supreme Court, apart from declaring this right self-executory, held that such right is "no less important than any of the civil and political rights enumerated in the [Bill of Rights]."[17] The Court also introduced in this case the doctrine of "intergenerational responsibility," allowing minor parties "to sue in behalf of succeeding generations."[18]

In a more recent Supreme Court decision, *Metro Manila Development Authority v. Concerned Residents of Manila Bay*,[19] the original plaintiffs cited the right to a balanced and healthful ecology in seeking the rehabilitation and conservation of Manila Bay. Their successful petition resulted in the Court ordering thirteen national government agencies to perform a "general cleanup" of Manila Bay, and to submit a quarterly report of their activities towards the Bay's rehabilitation under a continuing mandamus.[20]

The first integrative regulatory system for the environment was established in the early 1970s during Ferdinand Marcos' presidency. The laws enacted during this period did not only deal with sector-specific environmental issues, but looked at the condition of the Philippine environment as a whole.[21]

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[15] CONST., art. XII, §4.

[16] *Supra* note 14.

[17] *Id.* at 805.

[18] *Id.* at 803.

[19] G.R. No. 171947, 574 SCRA 661, Dec. 18, 2008.

[20] For more information on the writ of continuing mandamus, see the Rules of Procedure for Environmental Cases ((A.M. No. 09-6-8-SC),) *See infra.*

[21] Merlin M. Magallona and Ben S. Malayang III,*Environmental Governance in the Philippines*, Environmental Governance in Southeast Asia, Institute of Global Environmental Strategies: Tokyo, Japan, 2-3 (2001), *available at*:

During this period, the Philippines' "most important environmental policies, *quality-wise*," were formulated.[22]

Foremost of these is Presidential Decree (PD) No. 1151, enacted in 1977, which lays down the Philippine Environmental Policy (PEP). The PEP declares that it is the country's continuing policy to:

- Create, develop, maintain, and improve conditions under which man and nature can thrive in productive and enjoyable harmony with each other;
- Fulfill the social, economic, and other requirements of present and future generations of Filipinos; and
- Ensure the attainment of an environmental quality that is conducive to a life of dignity and well-being.[23]

The PEP also recognizes the people's right to a healthy environment,[24] and is the original statute to require the preparation of an Environmental Impact Statement (EIS) for "every action, project or undertaking which significantly affects the quality of the environment".[25] In the same year as the PEP, Marcos enacted PD No. 1152, or the Philippine Environment Code. The Code instituted a comprehensive environmental protection and management program, setting policies and standards for air quality, water quality management, land use management, natural resources management and conservation, surface and ground water conservation and utilization, and waste management.[26]

The Environmental Impact Statement (EIS) required by PD No. 1151 was expanded the following year (1978) by PD No. 1586, or the Environmental Impact Statement System (EISS). The current IRR for the EISS is found in DAO 2003-30. The system authorizes the President of the

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http://site.iugaza.edu.ps/tissa/files/2010/02/Environmental_Governance_in_the_Philippines.pdf (accessed on Jan. 26, 2012) (hereafter referred to as "Magallona and Malayang").

[22] Ma. Luisa R. De Leon-Bolinao and Ricardo T. Jose, *History of the EIA in the Philippines: A Preliminary Survey*, presented at the Workshop on Environmental Impact Assessment in the Philippines: Roads Taken, Lessons Learned, Mandaluyong City, Philippines, 11 (February 11, 2005) (hereafter referred to as "De Leon-Bolinao and Jose").

[23] Pres. Dec. No. 1151, §1.

[24] Pres. Dec. No. 1151, §3.

[25] Pres. Dec. No. 1151, §4.

[26] ASEAN Law Association, Legal System in the Philippines: Environmental Law,

Philippines to proclaim certain projects or areas environmentally critical, and prohibits these projects, or operations in such areas, without the prior issuance of an Environmental Compliance Certificate (ECC) from the President or his authorized representative.[27] Environmentally critical projects and areas are currently listed under Proclamation No. 2146, Series of 1981 and Presidential Proclamation No. 803, Series of 1996.

Since the enactment of these broad environmental policies over thirty years ago, a whole gamut of environmental statutes, rules, and regulations have been put in place that deal more concretely with specific areas of natural resource protection and conservation. This paper will review those policies that have a bearing on the environmental impacts of the mining industry, aside from a more in-depth discussion of the environmental provisions of the Philippine Mining Act of 1995.

C. International Environmental Law

International agreements to which the Philippines is a party are part of the law of the land.[28] They are thus subject to implementation with the same force and effect as domestic laws, and the Philippines is bound to perform the obligations imposed by these treaties.[29] In the arena of the environment alone, Chief Justice Reynato Puno has said that the Philippines has "over 170 environmental treaties in existence".[30]

Despite its significant adverse environmental impacts, mining has been the subject of few international standards.[31] Like energy, mining is regulated by

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[27] Pres. Dec. No. 1151, §4.

[28] CONST., art. VII, §21. *See* Pharmaceutical and Health Care Association of the Philippines v. Duque, G.R. No. 173034, Oct. 9, 2007, 535 SCRA 625. *See also* Magallona and Malayang at 18.

[29] Cathal Doyle, Clive Wicks and Frank Nally, *Mining in the Philippines: Concerns and Conflicts*, Society of St. Columban 15 (2007) *available at*: http://www.envirosecurity.org/sustainability/presentations/Wicks.pdf (accessed on Jan. 22, 2012) (hereafter referred to as "Doyle, et al.").

[30] Reynato S. Puno, *Environmental Justice: Establishing A Judicious Judicial Framework*, Opening Remarks delivered at the Forum on Environmental Justice, University of Cordilleras, Baguio City, Apr. 16, 2009 *available at*: http://sc.judiciary.gov.ph/speech/04-16-09-speech.pdf.

[31] PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW (2nd ed., 2003) (hereafter referred to as "SANDS").

international law only to the extent that it is incidentally addressed by environmental impact assessments and rules that address the protection of flora and fauna, the disposal of waste, and air pollution.[32] The following international instruments, to which the Philippines has adhered, may have particular application to the mining industry:

> The *Stockholm Declaration*[33] is the product of the United Nations (UN) Conference on the Human Environment held on June 5-16, 1972. It was the first UN conference specifically to consider problems in the environment, adopting a Declaration and Action Plan.[34]
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> The *Rio Declaration*[35] is one of the outputs of the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil to elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all countries (Sands 2003). It comprises 27 principles that set out the basis on which states and people are to cooperate and further develop international law in the field of sustainable development. The Rio Declaration provides a benchmark to measure future developments, provides a basis for defining sustainable development and its application, and provides a framework for development of environmental law at the national and international level to guide decision-making.[36]
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> The *UN Framework Convention on Climate Change* (UNFCCC)[37] establishes a framework for elaborating measures to address the causes of climate change; and is an important example of the principles of

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[32] *Id.* at 665.

[33] Entitled "Declaration of the United Nations Conference on the Human Environment" dated Jun. 16, 1972 *available at*: http://www.unep.org/Documents.Multilingual/Default.Print.asp?documentid=97&articleid=1503 (accessed on Jan. 27, 2012).

[34] Patricia Birnie and Alan Boyle INTERNATIONAL LAW AND THE ENVIRONMENT __ (2nd ed., 2002) (hereafter referred to as "BIRNIE AND BOYLE").

[35] Entitled "RIO DECLARATION ON ENVIRONMENT AND DEVELOPMENT" *available at*: http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163&l=en (accessed on Jan. 27, 2012).

[36] SANDS at 54.

[37] Dated May 9, 1992 *available at*: http://unfccc.int/resource/docs/convkp/conveng.pdf (accessed on Jan. 27, 2012).

common but differentiated responsibilities and precautionary action under the Rio Declaration,[38] of the special needs and circumstances of developing countries, sustainable development, and international trade.[39]

The *Kyoto Protocol*[40] was adopted in December 1997 after it was established that States' commitments under the UNFCCC were not adequate, and is regarded as a tool for the implementation and enforcement of concrete goals in accordance with the aspirational objectives set forth in the UNFCCC.[41] The major achievement of the Protocol was the commitment of developed countries to achieve quantified emissions reduction targets within a timetable. It also proposed to allow developed countries, otherwise referred to as Annex 1 states, to meet their commitments by purchasing or acquiring credits representing greenhouse gas reductions in other countries. The Clean Development Mechanism further established a means for Annex 1 parties to gain emission reductions credits to assist them in achieving compliance with their quantified emissions limitation and reduction commitments.[42]

The UNFCCC and the Kyoto Protocol have a particular implication on mining because of the potential contribution of mineral activities to climate change. The International Council of Mining and Metals has identified climate change and the impact of greenhouse gases (GHG) "as 'the most important [environmental] issue, without a doubt' to face the mining industry" (.[43] The mining industry faces such climate-

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[38] BIRNIE AND BOYLE *supra* note 34.

[39] Peter Malanczuk, AKEHURST'S MODERN INTRODUCTION TO INTERNATIONAL LAW (1997).

[40] Dated Dec. 11, 1997 *available at:* http://unfccc.int/resource/docs/convkp/kpeng.pdf (accessed on Jan. 27, 2012).

[41] Kara K. Davis, *The United States Obligation to Lower Greenhouse Gas emissions: An American Perspective of the Kyoto Protocol*, 10 U. MIAMI INT'L & COMP. L. REV. 97, 97, (2002).

[42] SANDS at 373.

[43] Barbara Hendrickson and Marty Venalainen, *Climate Change: Risks and Opportunities for the Mining Industry*, in Emissions Trading & Climate Change Bulletin, McMillan Binch Mendelsohn LLP, Feb. 2008, 1 *available at:* http://www.mcmillan.ca/upload/publication/risksandopportunities_0208_web.pdf (accessed

related challenges as "compliance with local regulatory regimes restricting carbon emissions . supply chain risks (higher costs due to the activities of suppliers); product and technology risks (being left behind by changing technology standards); reputational risks related to sustainability concerns; physical risks to operations due to extreme weather and litigation risks". [44]

Thus, the Philippines' commitments under the UNFCCC and the Kyoto Protocol, now embodied in the Republic Act No. 9729,[45] must be considered integral components of the national policy on mining and their objectives incorporated in the environmental programs of mining contractors and permit holders.

The *Convention on Biological Diversity* (CBD)[46] aims at the conservation and sustainable use of biological diversity, the fair and equitable sharing of benefits from its use, and the regulation of biotechnology.[47] A significant provision of the CBD which relates to the mining industry is found in Article 3 on *Principle*, which calls on member States, such as the Philippines, to ensure that use and exploitation of natural resources carries with it a responsibility to ensure the protection of the environment and the preservation of biological diversity.

ENVIRONMENTAL LAWS AND POLICIES APPLICABLE TO MINING

Mining was among the first major causes of environmental degradation in the Philippines. Mineral resource exploitation began to grow in the last 50 years of Spanish occupation, and saw its boom in the form of large-scale mining during US colonial rule. Along with lumber, fishing, and other emerging industries, mining brought with it the first instances of deforestation

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on Feb. 24, 2012) *citing* Intergovernmental Panel on Climate Change, Fourth Assessment Report (2007).

[44] *Id.*

[45] Entitled "CLIMATE CHANGE ACT OF 2009". Enacted on Oct. 23, 2009.

[46] Full text of the Convention is available at: http://www.cbd.int/convention/text/ (accessed on Mar. 16, 2012).

[47] Peter Malanczuk, AKEHURST'S MODERN INTRODUCTION TO INTERNATIONAL LAW (1997).

and damage to mountains, sea resources, rivers, and other natural resources in the country.[48]

The first national policies directed at the mining industry focused on the development of mineral resources, and were devoid of any reference to environmental protection. The Philippine Bill of 1902, for example, which deals extensively with mining claims and rights, says nothing on the environment, save for a few provisions on auxiliary timber and water rights.[49] Art. XIII of the 1935 Philippine Constitution, entitled "Conservation and Utilization of Natural Resources," in fact provides nothing on conservation and only talks about the "disposition, exploitation, development, or utilization" of mineral lands, minerals, and other resources.[50] Commonwealth Act (CA) No. 137,[51] enacted in 1936, was the first Philippine statute to provide a penalty for willful mining-related pollution, albeit a reactionary measure rather than a preventive one.[52]

It was not until the Marcos' regime that the first national policies on the environment were established.[53] Article XIV of the 1973 Constitution, pertaining to national economy and patrimony, mandated the National Assembly (the then-legislative body) to consider the "conservation, ecological, and developmental requirements of the natural resources" before granting rights over lands of the public domain.[54]

It was also during Marcos' presidency that requirements regarding environmental regulation and protection were first made integral to the national policy on mining. The Presidential Decree No. (PD) 463, issued on

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[48] De Leon-Bolinao and Jose at 3. *See also* Philippine Rural Reconstruction Movement, *Large Scale Mining: Its Environmental, Social, Economic, and Cultural Impacts in the Philippines*, Community and Habitat Monograph Series 2, 40-45 (Wigberto Tañada, et al. eds.) (2005) *available at*: http://www.prrm.org/publications/gmo2/mining.pdf (accessed on Mar. 16, 2012) (hereafter referred to as "PRRM").

[49] Philippine Bill of 1902, §§ 18, 19, 50, & 51,

[50] 1935 CONST., art. XIII, §1.

[51] Entitled "AN ACT TO PROVIDE FOR THE CONSERVATION, DISPOSITION, AND DEVELOPMENT OF MINERAL LANDS AND MINERALS" This is the first Philippine Mining Act.

[52] Comm. Act No. 137, §103.

[53] De Leon-Bolinao and Jose at 11.

[54] 1973 Const., art. XIV, §11.

May 17, 1974, authorized the Director of the Bureau of Mines to inspect, among others, mineral conservation and pollution problems within a mining claim or lease.[55] The Decree also echoes the punitive provision of CA 137 against willful pollution from mine wastes and tailings, as well as establishes a general provision on conservation in mining operations.[56] It even touches on rehabilitation of the mining area to make it "suitable for habitation or agriculture",[57] although the Decree does not specify the standards or procedures for carrying this out.

The many environmental measures enacted during Marcos' protracted presidential term have been criticized as tools for political patronage. P.D. No. 463 has itself been described as a pretext that paved the way for the "reign of greed" in the mining industry during the Martial Law period.[58] However, these policies are a significant step in the development of environmental regulation in mining, because they recognized that the destructive effects of the industry had to be addressed throughout the whole process of operations and not only after damage has been done, and not only to punish willful violators.

The primary law that now governs mining is R.A. No. 7942, otherwise known as the **Philippine Mining Act of 1995**. The enactment of the law was a response to the problems of the struggling mining industry in the 70s through the early 90s, creating a more favorable climate for investments (e.g., by increasing the mode of entry options, enhanced incentives, etc.).[59] It sought to boost an industry seen as a potential driver of economic growth and development.

The Mining Act is a far cry from PD 463, the national mining policy that preceded it. Although not bereft of weaknesses and gaps, the quantity and quality of the Act's environment-related provisions shows an effort, at least on paper, to substantially address the harmful impacts of mining operations. Together with its recently-issued **Consolidated Implementing Rules and Regulations**, DENR Administrative Order (DAO) No. 2010-21, the Act provides concrete measures to address the negative environmental effects of mining from the inception of operations and even past its termination. The

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[55] Pres. Decree No. 463, §63.

[56] Pres. Decree No. 463, §81.

[57] Pres. Decree No. 463, §91.

[58] PRRM at 10.

[59] The Wallace Business Forum, Inc. *Philippine Mining: It Can Play a Positive Role*, 12-14, December 2003.

Act and IRR also require that mining activities be conducted within the purview of a comprehensive environmental plan.

A crucial point in understanding these provisions is that they must be implemented with a consideration of *all* the environmental impacts of mining operations. The application of any provision on its own, detached from a broader view of how it ties in with other measures designed to prevent, minimize, or alleviate environmental degradation that may result from mining, is akin to paying attention only to individual components of an ecosystem in danger of degradation. Attention to any one component may achieve specific positive results, but failure to consider the ecosystem as a whole will eventually lead to its collapse.

In the same vein, the requirements of the Mining Act must be taken in the context of the entire environmental legal system. Implementation of the Act alone, especially if done for mere compliance, is likely to produce other environmental problems in the long term. A narrow view of the law cannot become a foundation for sustainable mining. This is why it is important for mining practitioners, and advocates, to gain an understanding of environmental laws, particularly those directed at natural resource protection and pollution control. These are the policies that primarily address the "environmental externalities" of mining activities, and may find application at the same time as the Mining Act, or when the Act falls short of the needs of environmental protection.

What follows are the various components of environmental safeguards in mineral operations. This discussion primarily reviews the provisions of the Mining Act and its IRR. Where relevant, applicable environmental laws are discussed in conjunction with the mining law and rules.

A. General Environmental Requirements

Chapter XI of the Mining Act is dedicated to "Safety and Environmental Protection." It generally refers to safe and sanitary working conditions in mining areas, and to "waste-free and efficient mine

development".[60] It is the declared policy of the DENR that mining permits, agreements and leases be managed responsibly, so as to promote the general welfare and sustainable development objectives and responsibilities.[61] These objectives are:

- Sustainable environmental conditions *at every stage of mining operations*;
- Progressive rehabilitation of all areas and sites affected by mining operations;
- Preservation of freshwater and seawater quality and natural marine habitats;
- Prevention of air and noise pollution; and
- Respect for sustainable management practices of ICCs and other communities.[62]

1. Environmental Plans and Programs

In line with the objective of providing sustainable conditions at every stage of mining operations, mineral contractors or permittees must carry out environmental programs in conjunction with their mineral activities. The programs must also contain pre- and post-mining provisions. The programs required under the Act and IRR are the Environmental Work Program (EWP), Environmental Protection and Enhancement Program (EPEP), and Annual Environmental Protection and Enhancement Program (AEPEP).

An **Environmental Work Program** (EWP) is required in conjunction with applications for exploration permits, and mineral agreements and FTAAs with exploration activities. The plan must describe the expected acceptable impacts of exploration, and environmental protection and enhancement strategies for their management. It must also detail the permittee's proposed environmental impact control and rehabilitation activities and their costs, so that funds may be allocated for their conduct. Post-exploration rehabilitation must be provided for, together with implementation schedules, compliance guarantees, and provisions on monitoring and reporting. The EWP shall then

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[60] MINING ACT, §63.
[61] DAO No. 2010-21, §166.
[62] DAO No. 2010-21, §167. Emphasis supplied.

be submitted to the concerned Sangguniang Panlalawigan, and a bi-annual compliance report submitted to the concerned Bureau or Regional Office.[63]

On the other hand, mineral agreement or FTAA contractors and other permit holders are required to undertake an **Environmental Protection and Enhancement Program** (EPEP) throughout the development and operation of their mine or quarry. It is not meant as a substitute for, but rather a complement to, the contractor or permit holder's Environmental Compliance Certificate (ECC),[64] which shall be the basis for preparing the EPEP. The preparation, submission and approval of the Program shall be a mandatory condition in the ECC to be issued the contractor or permit holder.[65]

Containing provisions similar to an EWP, the program is designed to provide an "operational link" between the contractor or permittee's EPE commitments under the IRR, the Environmental Compliance Certificate (ECC) required by PD 1586, and the contractor's mining operation plan. The program must cover all areas that will be affected by mining development, utilization, and processing.[66]

Section 71 of the Act requires the technical and biological rehabilitation of all excavated, mined-out, tailings-covered, and disturbed areas to an environmentally-safe condition. For this purpose, the EPEP must integrate a **Final Mine Rehabilitation/ Decommissioning Plan** (FMR/DP), which addresses all mine closure scenarios such as decommissioning, rehabilitation, maintenance, and monitoring; and employee and other social costs, over a ten-year period, and provides cost estimates for its implementation.[67] Its submission and approval are a mandatory part of the ECC.[68] The Plan is subject to review and/or revision two (2) years from its approval and every two (2) years thereafter, or whenever it is warranted by changes in mining activities. The review and/or revision may be done "on the

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[63] DAO No. 2010-21, §168.
[64] DAO No. 2010-21, §169.
[65] DAO No. 2010-21, §178.
[66] DAO No. 2010-21, §169.
[67] DAO No. 2010-21, §187.
[68] DAO No. 2010-21, §187-A.

Contractor's/Permit Holder's initiative or at the request of the Director/Regional Director concerned".[69]

The EPEP shall be submitted within thirty (30) days upon the contractor's receipt of the ECC, subject to approval of the Mine Rehabilitation Fund (MRF) and Contingent Liability and Rehabilitation Fund (CLRF) Steering Committees.[70] A copy of the approved program must then be provided the concerned LGU at least thirty days prior to the intended commencement date of operation.[71] The scope and requirements of the EPEP makes it one of the key environmental provisions of the Mining Act.[72]

Lastly, the contractor or permit holder must submit an **Annual Environmental Protection and Enhancement Program** (AEPEP) to the Bureau or concerned Regional Office at least thirty days before the start of every calendar year. It shall be based on the approved EPEP and implemented during the incoming year. It shall include provisions on exploration, development, utilization, rehabilitation, regeneration, re-vegetation, reforestation, and slope stabilization of mineralized, mined-out, waste dumps, or tailings-covered areas; aquaculture, watershed development, and water conservation; and socioeconomic development.[73]

A **Multipartite Monitoring Team** (MMT) shall monitor compliance with the EPEP and AEPEP, and check the environmental performance of contractors or permittees on at least a quarterly basis.[74] The MMT is deputized by the MRF Committee, discussed below, and is composed of a representative from the MGB Regional Office, who shall head the MMT; and as members, representatives from the Department Regional Office, the EMB Regional Office, of the Contractor/Permit Holder, affected communities, affected ICCs, if any, and an environmental NGO. The MMT may seek technical assistance from the MRF Committee, to whom the MMT shall submit a report on the status or results of its monitoring activities at least five (5) working days from

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[69] DAO No. 2010-21, §187-E.

[70] DAO No. 2010-21, §169.

[71] DAO No. 2010-21, §170.

[72] The Wallace Business Forum, Inc. *Philippine Mining: It Can Play a Positive Role*, 13, December 2003.

[73] MINING ACT, §69; DAO No. 2010-21, §171.

[74] DAO No. 2010-21, §174.

the Committee's regular meetings. The CLRF Steering Committee shall be furnished a copy of the report.[75]

At the end of the life of the mine and during the implementation of the FMR/DP, the contractor or permit holder must submit a progress report of its rehabilitation activities, if applicable to its operation. The report is subject to review and evaluation by the MRF Committee.[76] Once the objectives of mine closure are achieved in accordance with the FMR/DP based on the contractor or permit holder's assessment, it shall prepare and submit a **Final Rehabilitation Report** with third party **Environmental Audit** (FRR with EA) to be pre-evaluated by the MRF Committee. If the CLRF Steering Committee approves the FRR with EA, it shall issue a Certificate of Final Relinquishment to signify approval and free the contractor or permit holder from further obligations related to the rehabilitated mine areas. However, if residual care is needed based on the Committees' review and evaluation, the contractor or permit holder shall submit a corresponding **Site Management Plan** to cover the areas that still need rehabilitation. Remaining amounts from the Final Mine Rehabilitation and Decommissioning Fund and Mining Waste and Tailings Fee payments, discussed below, shall be returned. However, the contractor or permit holder shall remain liable for any budgetary shortfall to achieve mine closure objectives and to implement the Site Management Plan.[77]

2. Environmental Funds and Fund Steering Committees

The Mining Act IRR requires the setting aside and/or creation of several funds to provide the necessary monies to prevent, mitigate, and remediate the harmful environmental effects of mineral operations. Specific funds required under the rules include the Contingent Liability and Rehabilitation Fund (CLRF), the Mine Rehabilitation Fund (MRF), and the Final Mine Rehabilitation and Decommissioning Fund. The MRF, in turn, is composed of the Monitoring Trust Fund (MTF) and Rehabilitation Cash Fund (RCF).[78]

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[75] DAO No. 2010-21, §185.
[76] DAO No. 2010-21, §187-D.
[77] DAO No. 2010-21, §187-F.
[78] DAO No. 2010-21, §181.

First of all, **ten percent (10%) of the total capital/project cost**, or other amount depending on the conditions, nature, or scale of operations, shall be allocated for the contractor or permittee's initial environment-related capital expenditures.[79] The contractor shall also allocate a minimum of approximately **three to five percent (3% - 5%) of its mining and milling costs** towards its annual environment-related expenses.[80]

The MGB is authorized to institutionalize a **Contingent Liability and Rehabilitation Fund** (CLRF), which is designed as an environmental guarantee fund mechanism "to ensure just and timely compensation for damages and progressive and sustainable rehabilitation for any adverse effect a mining operation or activity." The CLRF is composed of the MRF, Mine Waste and Tailings Fees (MWTF), and Final Mine Rehabilitation and Decommissioning Fund (FMRDF).[81] It is under the administration of the CLRF Steering Committee.[82] Section 197 of the IRR establishes an administrative fund to cover the maintenance and operational expenses of the Committee.

The **Contingent Liability and Rehabilitation Fund (CLRF) Steering Committee** has the broadest power among the committees, teams, and working groups under the Rules, with the critical duty to evaluate and approve or disapprove EPEPs and FMR/DPs. The inter-agency committee has as members the Directors of the Bureaus on Lands Management, Forest Management, Soils and Water Management, Plant Industry, and Fisheries and Aquatic Resources; and the Administrator of the National Irrigation Administration. The Directors of the MGB and EMB respectively chair and vice-chair the Committee, while the Assistant Director of MGB coordinates.[83]

The Committee is empowered to hire and consult with experts and advisors for this purpose and other technical research if necessary. It is also tasked to monitor and/or administer other funds comprising the CLRF, together with applications and awards for compensation for damages. Claims for damages are investigated and assessed with the assistance of **Regional Investigation and Assessment Teams** (RIATs).[84] Issues involving the

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[79] DAO No. 2010-21, §169.
[80] DAO No. 2010-21, §171.
[81] DAO No. 2010-21, §180.
[82] DAO No. 2010-21, §194.
[83] DAO No. 2010-21, §194.
[84] DAO No. 2010-21, §198

FMR/DP, the performance of MRF Committees, and formation of **Technical Working Groups** – which serve as technical staff of the Committee and the RIATs – are also among the Committee's responsibilities. Lastly, it implements relevant guidelines, rules, and regulations, makes policy recommendations, and prepares the necessary annual and periodic reports of activities to the DENR Secretary.[85]

While the CLRF is a system-wide fund mechanism that may be applied to various mineral areas and operations, a **Mine Rehabilitation Fund** (MRF) is established by individual contractors or permit holder as an environmental deposit, "to ensure availability of funds for the satisfactory compliance with the commitments and performance of the activities stipulated in the EPEP/AEPEP." It is deposited with a government depository bank as a trust fund, specifically to be used for physical and social rehabilitation of mining-affected areas and communities, and related research.[86]

The MRF includes a **Monitoring Trust Fund** (MTF), which shall not be less than PhP150,000.00, for the exclusive use of the monitoring program approved by the MRF Committee and carried out by the MMT. On the other hand, the **Rehabilitation Cash Fund** (RCF), which is equivalent to 10% of the amount needed to implement the EPEP, or PhP5,000,000.00, whichever is lower, shall be applied towards compliance with approved rehabilitation activities, schedules, and research. Withdrawals from the MRF shall be replenished annually to maintain the required minimum amount. At the end of the operating life of the mine, the remaining amount in the RCF shall be returned to the contractor or permit holder, and the Final Mine Rehabilitation and Decommissioning Fund shall be instated in its place, and shall be in effect until mine closure objectives have been achieved.[87]

There shall be a **Mine Rehabilitation Fund (MRF) Committee** in each Region where there are active mining operations. It shall be composed of the MGB Regional Director as Chair and Regional Executive Director as Co-chair; the EMB Regional Director, and representatives of the Autonomous

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[85] DAO No. 2010-21, §193.
[86] DAO No. 2010-21, §181.
[87] DAO No. 2010-21, §181.

Regional Government, LGU, local NGOs and community organizations, and of the contractor or permit holder, as members.[88]

The MRF Committee is tasked with initially evaluating the EPEP and the environmental, engineering, and socio-cultural impacts of projects, with authority to hire and/or consult experts if necessary. The Committee must then monitor strict compliance with the approved EPEPs and AEPEPs, while deputizing an MMT as its monitoring arm. The MMT's performance is evaluated and its assessments reported by the MRF Committee to the CLRF Steering Committee. The MRF Committee also monitors and administers the MRF and FMRDF, resolves issues on the progressive mine rehabilitation program of the contractor or permit holder, ensures that MTFs, RCFs, and FMRDFs are kept separate, with specific books of record for each contractor and permit holder, and submits an annual report to the DENR Secretary or MGB Director.[89]

A **Mine Waste and Tailings Fees Reserve Fund** shall be collected from the contractor, lessee, or permit holder semi-annually, based on its Mine Waste and Tailings (MWT) fees shall be collected semiannually from each operating Contractor/Lessee/Permit Holder based on the amounts of mine waste and mill tailings it generated for the said period. The amount of fees collected shall accrue to a MWT Reserve Fund and shall be deposited in a Government depository bank to be used for payment of compensation for damages caused by any mining operations. The MWT Reserve Fund shall also be utilized for research projects duly approved by the CLRF Steering Committee, which are deemed necessary for the promotion and furtherance of its objectives.[90]

The contractor or permittee shall set up a **Final Mine Rehabilitation and Decommissioning Fund** (FMRDF) solely for the purpose of implementing the FMR/DP, that is, "to fund all decommissioning and/or rehabilitation activities" approved therein.[91] The contractor or permittee shall ensure that the full cost of the FMR/DP is accrued before the operating life of the mine ends.[92] Annual cash provisions shall be made to the fund, which may be increased or decreased in conjunction with the review or revision of the

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[88] DAO No. 2010-21, §183.
[89] DAO No. 2010-21, §182.
[90] DAO No. 2010-21, §189.
[91] DAO No. 2010-21, §181.
[92] DAO No. 2010-21, §187-B.

FMR/DP.[93]

3. Miscellaneous Provisions

The Act requires that any applicant for a mineral agreement who has previously been engaged in the industry must "possess a satisfactory environmental track record," determined by the MGB in consultation with the Environmental Management Bureau (EMB) of the DENR.[94] For this purpose, applicants for agreements and permits under the Act must secure a Certificate of Environmental Management and Community Relations Record (CEMCRR) for past mineral resource use ventures. Applicants with no such past ventures are issued a Certificate of Exemption (COE) instead.[95]

Contractors and permit holders are required to integrate a Mine Environmental Protection and Enhancement Office (MEPEO) into its mine organizational structure. The Office is tasked with setting priorities and managing resources to implement the contractor or permittee's environmental programs.[96] The contractor or permit holder shall also conduct a regular independent audit of environmental risks affecting its operations, to develop an effective environmental management system.[97]

The Act and IRR provide various incentives to encourage and recognize the efforts of contractors and permittees towards environmental safety. Pollution control devices that they install on their lands and buildings are exempted from real property taxes and other assessments, although mine wastes and tailing fees still have to be paid.[98] Based on their yearly performance and accomplishments, deserving mineral companies may also be given a Presidential Mineral Industry Environmental Award.[99]

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[93] DAO No. 2010-21, §187-B.
[94] MINING ACT, §27.
[95] DAO No. 2010-21, §167-A.
[96] DAO No. 2010-21, §173.
[97] DAO No. 2010-21, §174.
[98] MINING ACT, §91; DAO No. 2010-21, §224.
[99] MINING ACT, §91; DAO No. 2010-21, §176.

B. "No-go" Areas

The Mining Act delimits areas open to mining operations to "all mineral resources in public or private lands, including timber or forestlands as defined in existing laws," subject to existing rights or reservations and prior agreements.[100] Section 19 enumerates areas where mining applications are disallowed, or are allowed only under certain conditions. Among the areas where mining applications are absolutely prohibited are ecologically significant or environmentally sensitive areas, to wit:

> Old growth or virgin forests, proclaimed watershed forest reserves, wilderness areas, mangrove forests, mossy forests, national parks provincial/municipal forests, parks, greenbelts, game refuge and bird sanctuaries as defined by law and in areas expressly prohibited under the National Integrated Protected Areas System (NIPAS) under Republic Act No. 7586, Department Administrative Order No. 25, series of 1992 and other laws.[101]

Mining applications are also prohibited in areas excluded by the Secretary, based on his assessment of their environmental impacts on sustainable land uses, via an ordinance delineating the area issued by the concerned Sanggunian. The Act also excludes from mining applications areas expressly prohibited by law.[102]

1. Areas "Expressly Prohibited by Law"

The reference of the Mining Act to other laws designated areas where mining applications are prohibited merits a review of these laws. What laws on natural resource protection and conservation effectively impose restrictions on mining in the country? Major statutes in this field include, but are not limited to, the National Integrated Protected Areas System (NIPAS) Act of 1992,[103] the Wildlife Resources Conservation and Protection Act,[104] the National Caves and Cave Resources Management and Protection Act,[105] and the Strategic

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[100] MINING ACT, §18; DAO No. 2010-21, §14.
[101] MINING ACT, §19; DAO No. 2010-21, §15 (a) (2).
[102] DAO No. 2010-21, §15 (a) (3) & (a) (6).
[103] Rep. Act No. 7586 enacted on Jun. 1, 1992.
[104] Rep. Act No. 9147 enacted on Jul. 30, 2001.
[105] Rep. Act No. 9072 enacted on Apr. 8, 2001.

Environmental Plan for Palawan.[106] Additionally, mineral operations are restricted in declared Environmentally Critical Areas (ECA) unless such operations have been issued an ECC.

Established in 1992, **NIPAS** is a system of classifying and administering, at the national level, outstanding remarkable areas, biologically important public lands, biogeographic zones, and related ecosystems.[107] It is specifically mentioned in the Mining Act as an area where mineral applications are prohibited. As such, it is useful to be aware of the natural resources covered by the Act and how the system works.

A protected area is established through proclamation or designation by law, presidential decree, presidential proclamation, or executive order. It may be classified either as a strict nature reserve, natural park, natural monument, wildlife sanctuary, protected landscape and seascape, resource reserve, natural biotic area, or other category established by law, convention, or international agreement.[108] Once a protected area is established as such, it is managed with the goal of enhancing biodiversity and protecting it from destructive human behavior.[109] Buffer zones are also identified around the protected area, and these shall be subject to special development control to minimize harm to the protected area.[110] NIPAS is currently under the administration of the Protected Areas and Wildlife Bureau (PAWB).[111]

Some prohibited acts within protected areas may find application in the context of mineral operations, where these are undertaken in locations sufficiently proximate to or biologically connected with these areas, to wit:

- Destroying or disturbing plants or animals or products derived therefrom without a permit from the Management Board;

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[106] Rep. Act No. 7611 enacted on Jun. 19, 1992.

[107] Rep. Act No. 7586, §2.

[108] Rep. Act No. 7586, §3.

[109] Rep. Act No. 7586, §4 (b).

[110] Rep. Act No. 7586, §4 (c).

[111] Rep. Act No. 7586, §10. *See also* The Revised Implementing Rules and Regulations of the NIPAS Act as embodied by DAO No. 2008-26.

- Dumping of any waste products detrimental to the protected area, or to the plants and animals or inhabitants therein;
- Damaging and leaving roads and trails in a damaged condition;
- Mineral locating or otherwise occupying any land;
- Constructing or maintaining any kind of structure, fence or enclosures, conducting any business enterprise without a permit; and
- Leaving in exposed or unsanitary conditions refuse or debris, or depositing in ground or in bodies of water.[112]

The **Wildlife Resources Conservation and Protection Act** is another major statute that has a bearing on the environmental impacts of mineral activities. It was enacted in 2001 with the policy of conserving "the country's wildlife resources and their habitats for sustainability".[113] Its provisions apply to all wildlife species in all areas, including those covered by NIPAS, to critical habitats, and to exotic species traded or propagated in the country.[114] Of particular import in the context of mining are the critical habitats that have been or may be established under the act. These are habitats outside protected areas where threatened species are found. They are designated by the DENR Secretary based on, among other considerations, man-made pressures and threats to the survival of wildlife species in the area.[115]

Similar to the treatment of protected areas under NIPAS, critical habitats are protected "from any form of exploitation or destruction which may be detrimental to the survival of the threatened species dependent therein." In this wise, the DENR Secretary is authorized to acquire lands or interests therein to protect the critical habitat.[116] The DENR has jurisdiction over terrestrial species and habitats, while the Department of Agriculture administers matters related to aquatic habitats and resources. In the province of Palawan, it is the Palawan Council for Sustainable Development (PCSD), formed under the **Strategic Environmental Plan for Palawan,** that has jurisdiction over wildlife species, resources, and habitats.[117]

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[112] Rep. Act No. 7586, §20.
[113] Rep. Act No. 9147, §2.
[114] Rep. Act No. 9147, §3.
[115] Rep. Act No. 9147, §25.
[116] Rep. Act No. 9147, §25.
[117] Rep. Act No. 9147, §4 *in relation with* Rep. Act No. 7611, §4.

The Act declares unlawful the willful exploitation of wildlife resources and their habitats. In specific relation to mineral activities, it is also illegal in critical habitats to:

- Dump waste products detrimental to wildlife;
- Occupy any portion of the critical habitat;
- Explore for or extract minerals;
- Burning and logging; and
- Quarrying[118]

The **National Caves and Cave Resources Management and Protection Act**, also enacted in 2001, aims to conserve, protect, and manage caves and cave resources "as part of the country's national wealth".[119] Caves refer to naturally-occurring cavities or recesses in the earth, and not to man-made excavations, such as mine tunnels.[120] Cave resources are materials or substances occurring naturally in caves, such as animals, plants, paleontological and archaeological deposits, sediments, and minerals, among others.[121] The Act distinguishes "significant caves" as those with materials or features "that have archaeological, cultural, ecological, historical or scientific value".[122]

The DENR is the lead implementing agency of the Act, in coordination with the Department of Tourism (DOT), the National Museum, the National Historical Institute and concerned LGUs. In Palawan, it is again the PCSD who has jurisdiction over local caves and cave resources.[123] Where mineral activities are undertaken in caves or affecting cave resources, it is important to note that the Act prohibits the gathering, collecting, possessing, consuming, selling, bartering or exchanging or offering for sale without authority any cave resource,[124] which necessarily includes minerals found therein.

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[118] Rep. Act No. 9147, §27.
[119] Rep. Act No. 9072, §2.
[120] Rep. Act No. 9072, §3 (a).
[121] Rep. Act No. 9072, §3 (b).
[122] Rep. Act No. 9072, §3 (f).
[123] Rep. Act No. 9072, §4.
[124] Rep. Act No. 9072, §7 (b).

Finally, **Environmentally Critical Areas** (ECA) under Presidential Proclamation (PP) No. 2146 might be off-limits to mineral operations if an ECC for such has not been issued. Under the Environmental Impact Statement System, discussed below, projects may not be undertaken in areas declared environmentally critical by the President of the Philippines or his representative, unless he issues an ECC upon satisfactory review of the project proponent's Environmental Impact Statement. ECAs include protected areas, potential tourist spots, critical habitats, areas of unique historic archeological or scientific interest, those traditionally occupied by ICCs, geohazard zones, those with critical slopes, prime agricultural lands, aquifer recharge areas, and certain water bodies, mangrove areas, and coral reefs.[125]

The environmentally critical areas identified under the Mining Act and related environmental laws are commonly referred to as "no go" areas. It is crucial to identify and set aside these areas, when the risks posed by mineral development are too high compared with the environmental or socio-cultural value of the area. Other critical areas where mining may have to be prohibited are those with high seismicity, and geohazard zones or those prone to landslides and floods.[126]

A major issue that crops up is the process involved in declaring an area "no go." The decision to make such a declaration is not only technical but also a political one. Setting aside certain areas as national parks, for example, or part of a forest reserve and therefore off-limits to mining, requires official government issuances. Because many mineral-rich areas are also environmentally valuable, the contest between economic return and the (usually) long-term benefit of preserving an area from mining is ever-present.

2. Mining in Prohibited Areas?

In *PICOP Resources, Inc. v. Base Metals Mineral Resources Corporation*,[127] the Supreme Court clarified the prohibition/allowance of mining activities in areas generally regarded as "no-go." PICOP, which held a logging concession in Agusan del Sur, opposed Base Metals' MPSA applications over areas that included a portion located within PICOP's concession area. PICOP argued

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[125] Pres. Proc. No. 2146; §1 (b). *See also* DAO No. 96-37.

[126] Alyansa Tigil Mina, *Alternative Mining Bill: In Brief*, 2009 *available at*: http://www.alyansatigilmina.net/files/AMB_in%20brief.pdf (accessed on Mar. 16, 2012).

[127] G.R. No. 163509, 510 SCRA 400, Dec. 6, 2006.

that because its concession area "is within the Agusan-Surigao-Davao Forest Reserve established under Proclamation No. 369," is part of permanent forest established under R.A. No. 3092, and "overlaps the wilderness area where mining applications are expressly prohibited under R.A. No. 7586," it was closed to mining applications under the Mining Act. The Court analyzed the "categories" on which PICOP based its claims, and ruled against PICOP on the following grounds:

> 1. ... Assuming that the area covered by Base Metals' MPSA is a government reservation, defined as proclaimed reserved lands for specific purposes other than mineral reservations, such does not necessarily preclude mining activities in the area. Sec. 15(b) of DAO 96-40 provides that *government reservations may be opened for mining applications upon prior written clearance by the government agency having jurisdiction over such reservation.*

Sec. 6 of RA 7942 also provides that *mining operations in reserved lands other than mineral reservations may be undertaken by the DENR*, subject to certain limitations.

> 2. RA 7942 does not disallow mining applications in all forest reserves but *only those proclaimed as watershed forest reserves.* There is no evidence in this case that the area covered by Base Metals' MPSA has been proclaimed as watershed forest reserves.

... Pursuant to PD 463 as amended by PD 1385, one can acquire mining rights within forest reserves, such as the Agusan-Davao-Surigao Forest Reserve, by initially applying for a permit to prospect with the Bureau of Forest and Development and subsequently for a permit to explore with the Bureau of Mines and Geosciences.

Moreover, Sec. 18 RA 7942 allows mining even in timberland or forestty [sic] subject to existing rights and reservations.

... Similarly, *Sec. 47 of PD 705 permits mining operations in forest lands which include the public forest, the permanent forest or forest reserves, and forest reservations...* [It] does not require that the consent of existing licensees be obtained but that they be notified before mining activities may be commenced inside forest concessions.

> 3. ... PICOP failed to present any evidence that the area covered by the MPSA is a protected wilderness area designated as an initial component of the NIPAS pursuant to a law, presidential decree, presidential proclamation or executive order as required by RA 7586.[128]

Invoking the policy of multiple land use "enshrined in our laws towards the end that the country's natural resources may be rationally explored, developed, utilized and conserved," the Court declared Base Metals' MPSA applications valid. While the decision makes some important clarifications regarding the prohibition of mining activities in government and forest reservations and protected areas, it may also give the impression that the protection provided by laws such as P.D. No. 705 and NIPAS are easy to overcome, or are "weaker" vis-a–vis the right to apply for or undertake mining activities in "multiple use" areas. The precedence of mining rights over policies geared towards conservation and protection must always be the result of a close scrutiny of the facts and circumstances of each case, and always subject to the precautionary principle and other environmental principles enshrined in the Constitution and laws.

C. Environmental Impact Assessment

Because of the nature of mining operations, an Environmental Compliance Certificate (ECC) is required prior to the commencement of mineral activities past the exploration stage. Resource extractive industries, including major mining and quarrying projects, are formally required to undergo an Environmental Impact Assessment (EIA) because they are considered environmentally critical projects (ECPs) under P.P. No. 2146.[129]

The components of an EIA must be present throughout the lifetime of the mining project. As discussed in the section on Environmental Plans and Funds, the requirements of the ECC is not limited to the pre-operation stage, but must be complemented by and incorporated in the EPEP. Indeed, the EIA process is designed to fill in the gaps in "environmental protection and enhancement-related actions," especially where no legal standards are in place or "where there is a lack of explicit definitions in existing laws" [130] Figure 2 contains the steps for securing an ECC for a mining project.

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[128] *Id.* at 425. Emphases supplied.

[129] *See also* DAO No. 1996-37, §1 (a) (ii) (1).

[130] DAO No. 2003-30, §1 (6).

The ECC is issued only upon a satisfactory review by the DENR Secretary or concerned Regional Executive Director of the Environmental Impact Statement (EIS) prepared by the project proponent.[131] Such issuance (or non-issuance) is based on the EIA, which contains a complete ecological profile of the proposed project. It shall also rely on procedures under the Environmental Impact Statement System (EISS) and on Sections 26 and 27 of the Local Government Code of 1991,[132] regarding the duty of national government agencies to maintain ecological balance and conduct prior consultations with LGUs, NGOs, POs, and other concerned sectors. NGOs and POs may participate in the process of ECC issuance to ensure compliance with the applicant's environmental requirements.[133] The following is a brief step-by-step of the process for securing an ECC for a mining project:

1. The proponent consults with the EMB.
2. EMB determines whether or not the proposed mine is an ECP or is located in an ECA.
    - If not situated in an ECA, the concerned DENR Regional Office facilitates the EIA.
    - If situated in an ECA, the main EMB Office facilitates the EIA.
3. EMB creates an Environmental Impact Assessment Review Committee (EIARC) to conduct a scoping exercise, including public hearings, to determine probable environmental impacts.
4. Proponent prepares and submits its EIS to the EMB. EMB is given one hundred-twenty (120) days to review the EIS, during which it can conduct more public hearings.
    - EMB may make up to two (2) written requests to the project proponent for additional information during the first ninety (90) days of the 120-day period.
    - If the project proponent cannot comply with the request for information, the EMB or Regional Office makes a decision based on the information available.

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[131] DAO No. 2010-21, §5 (a) & 5 (b).

[132] Rep. Act No. 7160 enacted on Oct. 10, 1991.

[133] MINING ACT, §70.

5. Unless *expressly* rejected by the EMB or Regional Office, the EIS is deemed approved and the ECC is issued.[134]

The EIA system for mining operations in the Philippines has been criticized for prioritizing haste over genuine participation and the quality of the EIS. Despite efforts toward "meeting the Rio Declaration requirements for public participation in environmental decision making," the desire to streamline mining application processes has resulted in the curtailment of this right.[135] Indeed, it was observed that:

> Recent Administrative Orders have weakened participation rights, including the right to information, participation in decision making and access to justice. EIA processing timeframes have been reduced, with automatic approval if they are exceeded. Requirements to provide public information have been relaxed, as has the need to provide notice of public hearings. These changes have been accompanied by relaxing of the controls in the Mining Act. Taken together, they seriously undermine the protection afforded by EIAs in the Philippines.[136]

Additionally, the "default" result of the EIA process is the grant of an ECC. That is, the EMB has to categorically deny the application or else the ECC is considered issued. This is also the result upon the EMB's failure to deny the application within the specified 120-day review period.[137] These rules may fulfill the repeated emphasis of the EISS IRR, DAO 2003-30, on streamlining the ECC application process. Unfortunately, it also puts at risk the certainty that EIAs for mining projects are undertaken with the necessary thoroughness, and a strict consideration of the precautionary principle. As a result, even though the EIS prepared by a proponent "consists of volumes and volumes of technical data that rarely convey any clear message about the

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[134] *See* DAO No. 2003-30. *See also* Allan Ingelson, et al., *Philippine Environmental Impact Assessment, Mining and Genuine Development*," 5/1 Law, Environment and Development Journal (2009), *available at* http://www.lead-journal.org/content/09001

[135] Doyle, et al. at 23.

[136] *Id. See also* DAO No. 2003-30.

[137] DAO No. 2003-30, §8.2.1.

project, or its environmental and social impacts",[138] it is issued an ECC anyway because of technicalities under the Rules.

D. Environmental "Side Effects"

Mineral operations cannot be conducted without affecting and disturbing the land, water, and air surrounding and connected to the site, as well as the various natural resources found on and in them. Mining does not only result in the extraction of minerals, but often also necessitates the use, removal, or destruction of non-mineral resources, such as freshwater, timber, and wildlife. Taking these eventualities into account, the Mining Act and related laws give contractors and permittees auxiliary rights, over timber and water for example, licensing them to undertake their exploitation along with mineral activities. The law also provides measures through which the destructive, but unavoidable, effects of mineral activities may be addressed. Payment of fees and undertaking pollution-mitigating activities are examples.

1. Auxiliary rights and duties

Section 72 of the Act states that a contractor may be granted the right to cut trees or timber within his mining area, as necessary for his mining operation, subject to forestry laws, rules, and regulations. This requires him to comply with the licensing requirements under the P.D. No. 705, otherwise known as the **Revised Forestry Code**, which provides that "No person may utilize, exploit, occupy, possess or conduct any activity within any forest and grazing land . . . unless he had been authorized to do under a license agreement, license, lease or permit".[139] If the land is already covered by existing timber rights, the Mines Regional Director shall determine the volume and manner of timber to be cut and removed, in consultation with the contractor, timber permittee, and the Forest Management Bureau (FMB). In case of disagreement, the Secretary shall make a final decision on the matter.

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[138] Meriam Bravante & William Holden, *Going Through the Motions: The Environmental Impact Assessment of Nonferrous Metals Mining Projects in the Philippines*, 22 The Pacific Review 523-547 (2009).

[139] Pres. Decree No. 705, §20.

The contractor must perform reforestation work at the area in accordance with forestry laws and rules.

The Code in turn refers to the Mining Act regarding mining activities in forest reservations, stating that they should be conducted "with due regard to protection, development and utilization of other surface resources." The Code requires notice to timber licensees and approval of the FMB Director before any location, prospecting, exploration, utilization, or exploitation of mineral resources inside forest concessions is undertaken.[140]

The Code extends it regulatory reach to the effect of mine tailings and other pollutants on the health and safety of different surface resources, and requires the employment of filtration devices so that only clean exhausts and liquids are released. It also reinforces the reforestation requirement under the Mining Act, or that surface areas in mine sites "be restored to as near as its natural configuration or as approved by the FMD director, before its abandonment by the contractor or permit holder.[141]

Mineral reservations, where no mining operations have been conducted for more than five years, are placed under forest management by the FMB. Where the operation has been terminated due to exhaustion of minerals, the reservation reverts to the category of forest land unless it is reserved for other purposes.[142] In any case, the establishment, disestablishment, or modification of the boundary of a mineral reservation shall be done by the President upon recommendation of the MGB Director, through the Secretary, and in consultation with interested communities, NGOs, and LGUs.[143]

Water rights, on the other hand, are granted contractors and permittees for use in their mineral operations, upon approval of their application as prescribed under P.D. No. 1067, otherwise known as the **Water Code**.[144] The industrial use of water in mines is among the uses that require a water permit,[145] which the National Water Resources Board (NWRB) must grant before any person may appropriate and use water.[146] In addition to a water

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[140] Pres. Decree No. 705, §47.
[141] Pres. Decree No. 705, §47.
[142] Pres. Decree No. 705, §48.
[143] DAO No. 2010-21, §9.
[144] DAO No. 2010-21, §73.
[145] Pres. Decree No. 1067, art. 10.
[146] Pres. Decree No. 1067, art. 13.

permit, a contractor or permittee must secure NWRB's permission NWRB before he may dump "tailings from mining operations and sediments from placer minings" into rivers and waterways. Said permission must come with the recommendation of the EMB.[147]

2. Pollution Control Measures

To address the pollution that is an inevitable byproduct of mineral exploitation, the Mining Act provides incentives for its proactive control, and disincentives for the failure to keep mining-related pollutants at an acceptable level. The Act provides control measures such as fees, fines, and penalties for the inevitable generation of waste in mineral operations.

For one, the Act requires the payment of a semi-annual Mine Wastes and Tailings (MWT) fee by contractors, lessees, or permittees, that accrues to the MWT Reserve Fund for the payment of damages caused by mining operations, and for research projects approved by the CLRF Steering Committee.[148] The fee shall be PhP0.05 for every metric ton (MT) of mine waste produced, and PhP0.10/MT of mill tailings generated, payable to the Bureau within forty-five (45) calendar days after the end of each semester. The amount shall be based on a sworn semi-annual report submitted to the Bureau, stating the amount of MWT produced, stored, and/or utilized, if any, and the manner of utilization.[149]

However, mining companies may avail of exemption from the payment of this fee, if their MWT were utilized in the following manner:

- Filling materials for underground mine openings;
- Filling materials for surface mine openings, that do not affect natural drainage systems;
- Filling materials for engineered tailings dams, roads and housing areas, that do not affect natural drainage systems. Operators with tailings impoundment or disposal systems

147 Pres. Decree No. 1067, art. 77.
148 DAO No. 2010-21, §§85, 189.
149 DAO No. 2010-21, §191.

found to have discharged and/or to be discharging solid fractions of tailings into areas other than the approved tailings disposal area shall pay PhP50.00/MT, *without prejudice to other penalties and liabilities under other existing laws, rules and regulations.* This additional fee shall accrue to the MWT Reserve Fund;

- Concreting and manufacture of concrete products; or
- Mine waste impounded for future use, to be utilized for its beneficial use within a period of two (2) years. For this purpose, the contractor, lessee, or permittee shall submit a two-year work program on the utilization of the materials together with the semi-annual report. Mine waste materials not utilized within the two-year period shall be charged PhP0.05/MT, and non-submission of the work program shall disqualify the contractor, lessee, or permittee from the MWT fee exemption.[150]

Mining companies may also be exempted from the MWT fee for utilizing engineered and well-maintained MWT disposal systems, with zero-discharge of materials and effluent, and/or wastewater treatment plants that consistently meet DENR standards. The Secretary may increase the prescribed MWT fee upon the Director's recommendation, "when national interest and public welfare so require".[151]

Apart from provisions on mine wastes and tailings, which is the foremost pollutant produced from mineral operations, the Mining Act and its IRR deal with the pollutive byproducts of mining activities in a more general fashion. The IRR do not deal with individual classifications of poliutants, i.e., in terms of the natural resource they affect (e.g., water, atmosphere, soils) or the kind of pollutant produced (e.g. solid waste, toxic and hazardous substances). Section 5(ca) of the IRR defines "pollution" as:

> ... any alteration of the physical, chemical and/or biological properties of any water, air and/or land resources of the Philippines; or any discharge thereto of any liquid, gaseous or solid wastes; or any production of unnecessary noise or any emission of objectionable odor, as will or is likely to create or to render such water, air and land resources harmful, detrimental or injurious to public health, safety or welfare, or

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[150] DAO No. 2010-21, §190. Emphasis supplied.

[151] DAO No. 2010-21, §190.

> which will adversely affect their utilization for domestic, commercial, industrial, agricultural, recreational or other legitimate purposes.

Requirements as regards the installation and use of anti-pollution devices for mineral, FTA, and mineral processing applications and/or permits/agreements, as well as for inclusion in the EPEP, are broadly stated, and refer to all infrastructure, machinery, equipment and/or improvements:

> ... used for impounding, treating or neutralizing, precipitating, filtering, conveying and cleansing mine industrial waste and tailings, as well as eliminating or reducing hazardous effects of solid particles, chemicals, liquids or other harmful by-products and gases emitted from any facility utilized in mining operations for their disposal.[152]

The violation of these pollution-related requirements is also treated generally.[153] To operationalize and make the application of these anti-pollution provisions more concrete, they must be considered in conjunction with the specific requirements of the contractor or permit holder's ECC and its relevant environmental plans or programs. They must also be interpreted in consideration of the objectives and policies of other pollution control statutes, which deal with individual classifications of pollutants or types of natural resources. These statutes include the Climate Change Act,[154] Clean Air Act,[155] Clean Water Act,[156] Solid Waste Management Act,[157] and Toxic Substances and Hazardous and Nuclear Wastes Control Act.[158]

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[152] DAO No. 2010-21, §5 (cb).

[153] *See* DAO No. 2010-21, §§230, 231.

[154] Rep. Act No. 9729 enacted on Oct. 23, 2009.

[155] Rep. Act No. 8749 enacted on Jun. 23, 1999.

[156] Rep. Act No. 9275 enacted on Mar. 22, 2004.

[157] Rep. Act No. 9003 enacted on Jan. 26, 2001.

[158] Rep. Act No. 6969 enacted on Oct. 26, 1990.

E. Relief for Environmental Violations

The Mining Act and IRR provide for a mechanism whereby issues and violations related to compliance with environmental requirements of mineral operations may be resolved. They also establish penalties and other forms of relief for non-compliance, ranging from the cancellation or suspension of privileges granted, to the payment of fines and imprisonment.

1. *Prohibited Acts*

The following table lists salient provisions of the Mining Act and IRR that directly or indirectly apply to environmental violations related to mineral operations, and the corresponding penalties or relief therefor.

Section	Violation	Relief/Penalty
PHILIPPINE MINING ACT OF 1995		
95	Failure of permittee or contractor to comply with any of the requirements in the Act or IRR, without a valid reason	Suspension of any permit or agreement provided under the Act
96	Violation of terms and conditions of permits or agreements	Cancellation of permit or agreement
97	Failure to pay taxes and fees due the Government for two (2) consecutive years	Cancellation of EP, MA, FTAA, and other agreements, and Re-opening of area to new applicants
98	Failure to abide by terms and conditions of tax incentive and credits	Suspension or cancellation of tax incentive and credit
99	False statements in EP, MA, and FTAA which may alter, change or affect substantially the facts set forth therein	Revocation and termination of permit or agreement

108	Violation of terms and conditions of ECC, which causes environmental damage through pollution	Imprisonment of six (6) months to six (6) years, or Fine of Fifty thousand pesos (PhP50,000.00) to Two hundred thousand pesos (P200,000.00), or Both, at discretion of the court
110	Any other violation of the Act and IRR	Fine not exceeding Five thousand pesos (PhP5,000.00)
DENR AO 2010-12		
172	Operation of mining project without an approved EPEP/revised EPEP	Penalty prescribed in penal provisions of the Act
179	Operation of mining project without an ECC, or Wilfully violation and gross neglect to abide by the terms and conditions of the ECC	Penalty prescribed in the penal provisions of the Act and other pertinent environmental laws
188	Failure to establish an MRF and FMRDF	Suspension or cancellation of mineral operations
190(c)	Tailings impoundment/disposal system found to have discharged	Payment of PhP50.00/MT,

	and/or to be discharging solid fractions of tailings into areas other than the approved tailings disposal area	without prejudice to other penalties and liabilities under other existing laws, rules and regulations
192	Non-submission of semi-annual reports on the non-generation of mine wastes and mill tailings	Disqualification from availing of MWT fee exemption, and PhP5,000.00 penalty
	Failure to pay MWT fees	Ten percent (10%) surcharge on the principal MWT Fee for every month of delay
199	Damages caused by any mining operation on: Lives and personal safety Lands, agricultural crops and forest products	Payment of compensatory damages[159] (*See* Sec. 200 on evaluating the amounts of damages)

[159] The following are qualified to apply for compensation for damages:

- Any individual, in the event of loss or damage to his/her life, personal safety or property;
- Any private owners of damaged infrastructures, forest products, marine, aquatic and inland resources;
- Any applicant or successor-in-interest for damage to private lands who holds title or any evidence of ownership;
- Any applicant or successor-in-interest for damage to alienable and disposable lands;
- Any agricultural lessors, lessees and share tenants for damage to crops; and
- Any ICC in case of damage to burial grounds and cultural resources.

Any damage caused to the property of a surface owner, occupant, or concessionaire shall be governed by the pertinent provisions of Chapter X on Surface Rights. DAO No. 2010-21, §199.

	Marine life and aquatic resources Cultural and human resources Infrastructure Re-vegetation and rehabilitation of silted farm lands and other areas devoted to agriculture and fishing	
230	Falsehood or omission of facts in the application for EP, MA, FTAA, or other permits which may alter, change or affect substantially the facts set forth therein Non-payment of taxes and fees due the Government for two (2) consecutive years Failure to perform all other obligations under the permits or agreements Violation of the terms and conditions of the Permits or Agreements, and/or Violation of existing laws, policies, and rules and regulations	Cancellation, revocation and termination of permit or agreement

231(a) (1)&(2)	Any violation of the Act, IRR, or the terms and conditions in the MA or FTAA Any material misrepresentation or false statements made to the Bureau at any time before or after the approval/conclusion of its MA or FTAA	Whole or partial cancellation or suspension of any incentive granted under the rules and regulations

2. *Institutional Mechanisms*

The Director of the relevant Mines Regional Office is empowered to inspect mines for safety and environmental compliance. He is authorized to issue orders in consultation with the EMB and/or Environmental Management and Protected Areas Services (EMPAS) of the DENR Regional Office, requiring the contractor, lessee, or permit holder "to remedy any practice connected with mining or quarrying operations, which is not in accordance with safety and anti-pollution laws and regulations."[160]

If the prohibited practice poses imminent danger to life or property, the Director may *summarily* suspend operations until the danger is abated or the contractor takes appropriate measures to address it.[161] The EMB, Pollution Adjudication Board (PAB) or EMPAS may also take remedial measures to avert actual or imminent danger posed by mining operations, and must submit a report regarding such danger to the Director or Regional Director.[162] The power of the Director to summarily suspend operations is significant because it is akin to an injunction issued by a court. Without need of a hearing or the filing of a bond as in injunction cases, it need only be demonstrated that the danger to life or property in relation to a mining activity is imminent.

The authority to hear and decide pollution cases related to mining operations is vested in the PAB. The Reorganization Act of the DENR

[160] MINING ACT, §66.
[161] MINING ACT, §77; DAO No. 2010-21, §175.
[162] DAO No. 2010-21, §175.

granted PAB "broad powers to adjudicate pollution cases in general." PAB assumed the adjudicatory functions of the National Pollution Control Commission enumerated in Sections 6(e), (f) (g), (j), (k), and (p) of PD 984, or the National Pollution Control Decree of 1976.[163]

On the other hand, disputes related to mining rights; mineral agreements, FTAAs, or permits; and those involving surface owners, occupants, claimholders, and concessionaires shall be brought before the Panel of Arbitrators within the MGB Regional Office.[164] Appeals regarding the decisions of the Panel may be filed with the Mines Adjudications Board within fifteen (15) days from the aggrieved party's receipt of notice of the decision.[165] Aside from hearing such appeals, the Board is also authorized to "enjoin any or all acts involving or arising from any case pending before it which, if not restrained forthwith, may cause grave or irreparable damage to any of the parties to the case or seriously affect social and economic stability".[166] Decisions of the Board may be reviewed through a Petition for Certiorari before the Supreme Court.[167]

3. *Remedies Under Other Environmental Laws and Rules*

The remedies for violations under the Act and IRR do not preclude the filing of cases under other environmental laws, subject of course to such limitations as mandatory arbitration, double jeopardy, or double compensation. As earlier discussed, environment and natural resource protection laws (e.g., NIPAS, Revised Forestry Code, Water Code) and pollution control laws (e.g., Clean Air Act, Clean Water Act, Solid Waste Management Act) may have specific application to the various environmental harms that may result from mineral activities. Thus, victims of mining-related environmental violations, or other concerned citizens, may seek remedies under these laws.

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[163] Exec. Order No. 192, Series of 1987, §19. *See also* Republic v. Marcopper Mining Corporation, G.R. No. 137174, 335 SCRA 386, Jul. 10, 2000.

[164] MINING ACT, §77; DAO No. 2010-21, §175. *See also* Gonzales v. Climax Mining Ltd., G.R. No. 161957, Feb. 28, 2005; Celestial Nickel Mining Exploration Corporation v. Macroasia Corporation, G.R. No. 169080, 541 SCRA 166, Dec. 19, 2007.

[165] DAO No. 2010-21, §206.

[166] MINING ACT, §79; DAO No. 2010-21, §210.

[167] DAO No. 2010-21, §211.

In particular, the Clean Air Act and Solid Waste Management Act provide additional means by which concerned citizens may seek relief for environmental violations through **"citizen suits"**, even though they may not be directly affected or damaged by the prohibited act or omission. "Any citizen" may thus file "an appropriate civil, criminal or administrative action in the proper courts" or bodies for violation of these Acts or their IRR.[168]

Both statutes also provide for the dismissal of **"Suits and Strategic Legal Actions Against Public Participation"** or SLAPPs, which are those brought against a person "to harass, vex, exert undue pressure or stifle such legal recourses of the person complaining of or enforcing the provisions" of either Act.[169] Many cases filed by large-scale mining companies against anti-mining activists have been identified as SLAPPs.[170] Persons against whom a SLAPP is filed, upon determination of the nature of the suit as such, are entitled to an award of attorney's fees and double damages aside from having the case against them dismissed.[171] These provisions are very powerful because they enable "ordinary" persons and organizations – those who may otherwise not have legal standing to sue – to do so in the general interest of the public to a healthful environment, and to be protected when from false and malicious lawsuits in doing so.

Lastly, persons may turn directly to the judiciary for relief in cases of environmental damage arising from mineral operations. The **Rules of Procedure for Environmental Cases**[172] "govern the procedure in civil, criminal and special civil actions before [Trial Courts] involving enforcement or violations of environmental and other related laws, rules and regulations" [173] The Rules introduced several concepts and remedies which tilt the balance of "environmental justice" in favor of environmental advocates and ordinary

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[168] Rep. Act No. 8749, §41; Rep. Act No. 9003, §52.

[169] *See also* ANNOTATION TO THE RULES OF PROCEDURE FOR ENVIRONMENTAL CASES 106-107.

[170] Kalikasan People's Network for the Environment and Defend Patrimony! Alliance, *Intensified Imperialist Mining, Growing People's Resistance: 2008 Mining Situation and Struggle in the Philippines*, September 2008.

[171] Rep. Act No. 8749, §43; Rep. Act No. 9003, §53.

[172] A.M. No. 09-6-8-SC effective on Apr. 29, 2010. (hereafter referred to as the "RULES FOR ENVIRONMENTAL CASES").

[173] RULES FOR ENVIRONMENTAL CASES, Rule 1, §1.

citizens. These may be utilized to address mining-related violations in conjunction with remedies under other laws, or as an alternative to such:

> The *Precautionary Principle*[174] is made applicable to the rules of evidence in environmental cases "[w]hen there is a lack of full scientific certainty in establishing a causal link between human activity and environmental effect. The constitutional right of the people to a balanced and healthful ecology shall be given the benefit of the doubt".[175] This is a unique instance where evidentiary uncertainty does not work against a litigant but instead may be invoked to "avoid or diminish" "threats of serious and irreversible damage to the environment".[176]
>
> The Rules for Environmental Cases allow the invocation of *SLAPP* as a defense in cases filed against "a person involved in the enforcement of environmental laws, protection of the environment, or assertion of environmental rights".[177] The Rules make SLAPP available as a defense in the enforcement of *any* environmental policy, law, rule, or regulation.
>
> The *Citizen Suit* provision, as formulated in the Rules for Environmental Cases, essentially lowers the standing requirements for filing environmental lawsuits. The provision allows "any Filipino citizen, in representation of others, including minors and generations yet unborn, [to] file an action to enforce rights or obligations under environmental laws".[178] It addresses the usual difficulty of fulfilling standing requirements in environmental cases, for example in showing

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[174] The precautionary principle states that when human activities may lead to threats of serious and irreversible damage to the environment that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that threat. RULES FOR ENVIRONMENTAL CASES, Rule 1, §4 (f). *See also* ANNOTATION TO THE RULES OF PROCEDURE FOR ENVIRONMENTAL CASES 104-106.

[175] RULES FOR ENVIRONMENTAL CASES, Rule 20, §1. *See also* ANNOTATION TO THE RULES OF PROCEDURE FOR ENVIRONMENTAL CASES 158-159.

[176] RULES FOR ENVIRONMENTAL CASES, Rule 1, §4 (f).

[177] RULES FOR ENVIRONMENTAL CASES, Rule 6, §2.

[178] RULES FOR ENVIRONMENTAL CASES, Rule 2, §5.

that the injury suffered by a plaintiff due to climate change is "fairly traceable to the action"[179] of a mineral contractor or permittee. The Rule on citizen suits effectively formalizes the doctrine of "intergenerational responsibility" established in the case of *Oposa v. Factoran.*[180]

The Rules for Environmental Cases institutionalize the *Writ of Continuing Mandamus*[181] first laid down by the Court in *MMDA v. Concerned Residents of Manila Bay.*[182] This provision authorizes courts to require agencies, instrumentalities, or officers of the government, who fail to fulfill their mandates under environmental laws, "to perform an act or series of acts until the judgment is fully satisfied," and to submit periodic reports to the court regarding compliance with its order.[183]

Through an *Environmental Protection Order* (EPO), plaintiffs may petition a court to direct or enjoin "any person or government agency to perform or desist from performing an act in order to protect, preserve or rehabilitate the environment".[184] In matters of "extreme urgency" where the victim is bound to "suffer grave injustice and irreparable injury," the court is authorized to issue a Temporary EPO *ex parte*, effective for 72 hours, within which it must conduct a summary hearing to determine whether or not the order may be extended.[185]

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[179] George Pring & Catherine Pring, *Specialized Environmental Courts And Tribunals: The Explosion of New Institutions to Adjudicate Environment, Climate Change, and Sustainable Development*, 2010, *available at* http://www.law.du.edu/documents/ect-study/Unitar-Yale-Article.pdf (accessed on May 12, 2011).

[180] *Supra* note 14.

[181] The concept of a continuing mandamus was borrowed from the Indian Supreme Court's judgments in the cases of *Vineet Narain v. Union of India* (1 SCC 226 [1998]) and *M.C. Mehta v. Union of India* (4 SC 463 [1987]). Under the RULES FOR ENVIRONMENTAL CASES, a continuing mandamus is defined as "a writ issued by a court in an environmental case directing any agency or instrumentality of the government or officer thereof to perform an act or series of acts decreed by final judgment which shall remain effective until judgment is fully satisfied.

[182] *Supra* note 19.

[183] RULES FOR ENVIRONMENTAL CASES, Rule 8, §7.

[184] RULES FOR ENVIRONMENTAL CASES, Rule 1, §4 (d).

[185] RULES FOR ENVIRONMENTAL CASES, Rule 2, §8.

The Rules also introduced the *Writ of Kalikasan*,[186] a special civil action brought directly to the Court of Appeals or the Supreme Court, available to persons or entities "whose constitutional right to a balanced and healthful ecology is violated, or threatened with violation by an unlawful actor omission of a public official or employee, or private individual or entity, involving environmental damage of such magnitude as to prejudice the life, health or property of inhabitants in two or more cities or provinces".[187]

The *Writ of Kalikasan* established by the Rules is particularly significant because it is applicable to cases that "transcend geographical boundaries," overcoming the limitation of trial courts only being able to hear and decide on violations within their territorial jurisdictions.[188] The Writ also provides a very generalized basis for its invocation, allowing the redress of a wide range of violations, including those resulting from mining operations. Upon grant of the writ, the issuing court may direct the respondent to cease acts or omissions resulting in environmental damage; to protect, preserve, rehabilitate or restore the environment; to monitor strict compliance with the decision and orders of the court; to make periodic reports on the execution of the final judgment; and such other reliefs related to the protection of the environment or people's environmental rights.[189]

F. Local Mining Governance

The Mining Act and its IRR ensure that local government units (LGUs) play a substantial role in regulating mining projects in their jurisdictions, and that they receive an equitable share of the proceeds from the mineral resources located therein. In keeping "with the Constitution and government policies on

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[186] The word "Kalikasan" literally means "Nature" or "Environment" in the Filipino language.

[187] RULES FOR ENVIRONMENTAL CASES, Rule 7, §1.

[188] Myrna Lim-Verano, *The Rules of Procedure for Environmental Cases: A Judicial Coping Mechanism to Meet the Challenges of the Environment in the Philippines*, Paper presented at the International Association of Women Judges 2010 10th Biennial International Conference, Seoul, South Korea, May 11-15, 2010.

[189] RULES FOR ENVIRONMENTAL CASES, Rule 7, §15.

local autonomy and empowerment," the role of LGUs is highlighted "both as beneficiaries and as active participants in mineral resources management".[190] National government agencies and government-owned or -controlled corporations (GOCCs) are required to consult with LGUs, NGOs, and concerned sectors regarding "any project or program that may cause pollution, climatic change, depletion of non-renewable resources, loss of crop land, rangeland, or forest cover, and extinction of animal or plant species"; and explain its objectives, impacts on the community in terms of ecological balance, and measures to prevent or minimize its adverse effects.[191] The project or program may not be implemented without prior consultation with the LGU and community, and prior approval of the concerned sanggunian.[192] These provisions have been integrated with the EIS provisions of the Mining Act.[193]

The specific roles of LGUs in mining projects within their jurisdiction are as follows:

- Ensure public consultation and participation;
- Approve applications for small-scale mining in coordination with Bureau/Regional Office(s);
- Receive shares from the wealth generated by mineral resources;
- Facilitate community decision-making on social acceptability of the project;
- Participate as a member of the Multipartite Monitoring Team;
- Participate as a member of the Mine Rehabilitation Fund (MRF) Committee;
- Receive social infrastructure and community development projects for the host and neighboring communities;
- Mediate between ICCs and Contractor(s) as may be requested;

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[190] Mines and Geosciences Bureau, *Highlights of the Mining Act of 1995 (RA 7942) and Its Revised Implementing Rules and Regulations*, *available at:* http://www.mgb10.com/policies/REVISED%20IRR%20OF%20MINING%20ACT%20OF%201995.pdf (accessed on November 2, 2011).

[191] LOCAL GOVERNMENT CODE, §26.

[192] LOCAL GOVERNMENT CODE, §27.

[193] For an illustration of the application of §§26 and 27 of the LOCAL GOVERNMENT CODE, please see the cases of Alvarez v. PICOP Resources, Inc., G.R. No. 162243, 508 SCRA 498, Nov. 29, 2006, Alvarez v. PICOP Resources, Inc., G.R. No. 162243, 606 SCRA 444, Dec. 3, 2009.

- Coordinate with the Department and Bureau in implementing the Act and IRR, except that in areas covered by the Southern Philippines Council for Peace and Development, Autonomous Region of Muslim Mindanao and future similar units, their appropriate offices shall coordinate with the Department and Bureau; and
- Perform other powers and functions under applicable laws, rules, and regulations.[194]

The Mining Act and the Peoples' Small-Scale Mining Act,[195] also authorize LGUs to grant mining permits to small-scale miners and quarry operators, with the attendant duty to monitor their operations.

As empowering as these roles may be, both for the LGU and its constituency, there often arises a conflict between local desires and national interests. The stories of indigenous peoples, communities, and peoples' organizations opposed to mining in their localities are manifold. Balancing the needs of its people against "external" interests and making a stand on mining – and successfully defending it – may presently be an LGU's most important role in confronting mineral operations within its jurisdiction. Interests internal to an LGU have to be balanced as well. As mineral operations often affect other rights such as timber and water, and encroach on other valuable resources that are alternative sources of livelihood, it becomes imperative for local governments to have in place strategic plans for the use and development of local resources.

As of March 2011, a number of provincial governments have implemented mining moratoria within their borders, including Romblon, Negros Occidental, South Cotabato, Albay, Capiz, Mindoro Occidental, Mindoro Oriental, Marinduque, Samar, Western Samar, Northern Samar, and Zamboanga del Norte.[196] Various mining moratoria have also been issued at

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[194] DAO No. 2010-21, §8.

[195] Rep. Act No. 7076 enacted on Jun. 27, 1991.

[196] The moratoria in South Cotabato (Provincial Environment Code, Provincial Resolution No. 84, Series of 2010) and Zamboanga el Norte ("An Ordinance Protecting and Conserving the Integrity of the Land and Water Resources in Zamboanga Del Norte," Provincial Ordinance No. ZN-11-128) specifically ban open pit mining. *See also* International Centre for Human Rights and Democratic Development, *Human Rights Impact Assessments for Foreign Investment Projects:*

the municipal level (Kalikasan-PNE 2008). More ordinances and resolutions have been or are being called for in other LGUs to prohibit or limit the undertaking of mining operations,[197] which Clemente Bautista of Kalikasan People's Network for the Environment says "reflect the growing and strengthening struggle of communities against destructive large-scale mining".[198]

DENR Secretary Ramon Paje (in his then-capacity as Presidential Adviser on mining and DENR Undersecretary) has said that local legislation on areas open to mining and on protected areas, which would include these moratoria, "should reduce local conflict and tension".[199] But the passage of these ordinances and resolutions is extremely hard-won. Advocates, citizens and local officials alike, are met with pressures from business, investors, and the national government, where the interests of preserving local resources (as well as culture, health, alternative livelihoods, etc.) and economic gain from these resources do not meet. Local communities and organizations employ various methods to voice their opposition to mining projects, from petitions, to peaceful demonstrations, to the use of more forceful means in some instances.

CONCLUSION AND RECOMMENDATION

The above survey shows that many environmental laws and policies applicable to mining are aspirational and provide a sound basis for the protection of environmental rights, while promoting mineral exploitation and development. The current legal framework certainly has many strengths, but these are often cancelled out or made ineffective by weaknesses in its implementation. Weak implementation is an indication of deeper systemic maladies, including the lack of a clear policy direction for development in

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Learning from Community Experiences in the Philippines, Tibet, the Democratic Republic of Congo, Argentina, and Peru, 2007.

[197] Cases in point are a Resolution by the Municipality of Calabanga, proposed Resolutions in Batangas province (International Land Coalition, 2011) and Nueva Vizcaya (Kalikasan-PNE 2008), a proposed Ordinance in Benguet (Sinumlag, 2010), and calls for a moratorium in Zamboanga del Sur (Nally, 2011).

[198] *See* International Centre for Human Rights and Democratic Development, *supra* note 195.

[199] Roel Landingin, *The Big Dig: Mining Rush Rakes Up Tons of Conflict*, NEWSBREAK, July/September 2008.

general, and with regard to mineral exploitation in the context of environmental sustainability.

The absence of a clear development policy manifests in the inconsistent application and enforcement of laws. There is an abundance of laws, rules, and regulations meant to provide definitive guidelines on the technical and commercial aspects of mining, as well as to address its adverse effects, but there is no way to anticipate how the relevant government agencies/actors will decide on (frequent) conflicts and overlaps among these policies. There are no indicators for government priorities, what it considers negotiable and non-negotiable, or apparent patterns in its decision-making that would enable stakeholders to strategically approach issues arising from mining activities.

The experience in Mt. Diwalwal, Compostela Valley is a concrete example of small-scale mining (SSM) gone awry due to the absence of clear policy and ineffective governance. With the definition of "small-scale mining" no longer congruent with modern technology and practice, small-scale miners are placed in a precarious position of being unable to carry on their trade under the auspices of either large-scale or small-scale regulations. This has resulted in the illegal conduct of small-scale mining, compounding the industry's reputation as more destructive, dangerous, and unsustainable than large-scale mining. In 2003, the national government had to step in and address the extreme situation in Diwalwal,[200] which had gotten out of hand and beyond the control of the local government. This "intervention" gave rise to a jurisdictional issue between the national and local governments.[201]

These clashes are a recurring and persistent problem all over the country. While under the Mining Act, large-scale mining contracts and permits are negotiated and issued at the national level, the responsibility for environmental protection and conservation is delegated to local governments under the LGC. The potential source of conflict is thus rooted in the very policies that each level of government is bound to implement. Also, it is true

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[200] Gemma Bagayaua, *Divide & Rule*, NEWSBREAK, July/September 2008, at 58, 59.

[201] Gil Viloria, Jr. *Decentralization and Artisanal and Small-Scale Gold Mining in the Philippines*, presentation at ASGM Strategic Planning Project Conclusion Workshop, Cambodia, March 22-24, 2011.

that "National policy is set by the national government but decisions at the operational level require the concurrence of the local governments".[202] However, this "concurrence" by local governments and their communities has repeatedly been ignored, circumscribed, or even achieved by coercion or unwanted influence.

There have been efforts to rectify these inconsistencies in the law over the years, with the passage of the Mining Act in 1995, the issuance of an Executive Order in 2004 to "revitalize" mining,[203] and the consolidation of all mining rules and regulations in 2010. But the focus on mining policy alone has not been sufficient to address the problems in implementation. Government and stakeholder capacities have also been found wanting, for which a broader multi-sectoral approach is necessary. Conflicting stakeholder concerns are also an outstanding matter, which, while expected, can no longer stand to be addressed unsystematically, with a "let's see" approach that exacerbates conflicts and leads to an increasing mistrust of government.

A. Making Reliable Industry Data Available and Accessible

The crucial need for data on the mining industry, whether pertaining strictly to mineral resources or the wider matter of the impacts of mining activities on the environment, communities, and the economy, is currently being "filled" by the government (mainly by MGB) and the mining industry. However, what is available is often either too technical and complex, or too simple to provide sufficient bases for decision-making. Industry data are also seldom validated by independent third parties, leaving decision-makers and stakeholders little choice but to rely on what limited information they are able to secure. As a consequence, many decisions have been made and activities and operations undertaken –even in such an environmentally and socially hazardous activity as mining – without a full understanding of their consequences, impacts, and effects. This has resulted in shifting policies, questionable and controversial decisions on the allowance of mining activities in certain areas, and in a substantial number of mining disasters and devastation of indigenous and local communities.

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202 Roel Landingin, *The Big Dig: Mining Rush Rakes Up Tons of Conflict*, NEWSBREAK, July/September 2008.

203 Exec. Order No. 270, Series of 2004 entitled "NATIONAL POLICY AGENDA ON REVITALIZING MINING IN THE PHILIPPINES"

Complete, accurate, and up-to-date data must be the basis for analysis and assessment of the mining industry in its entirety, to include scientific and technical information not only on the quantity and quality of mineral resources but more importantly, on the environmental, economic, and social impacts of mining operations. Such data, which may be developed in partnership with the private sector and strengthened by third party verification, must be made the basis of government decisions on whether or not to allow mining in certain areas, to what extent, and under what conditions. This data must also be made easily accessible to the public to ensure transparency, accountability, and full participation by stakeholders that may pave the way for increased trust in government and improved relationship between the private sector and civil society.

B. Building Institutional and Community Capacities

At the local level, most LGUs have been unable to undertake comprehensive environmental assessments, the preparation of comprehensive land use plans (CLUPs), and classification of areas into coastal or marine zones, multiple-use zones, buffer zones, or maximum protection zones, that will"[empower] local officials to make important decisions about mining projects".[204] Landingin observes that although national laws provide mechanisms by which to address conflicting claims over land and resources:

> [T]he government has not invested enough to empower the local government and communities to participate in the processes meaningfully. Neither has it put enough safeguards to ensure that the consent-giving process would not be subject to manipulation by powerful parties.[205]

Not many local governments have the capability to estimate the economic value of maintaining biodiversity of a certain tract of forest land so this could be compared with the projected benefits of mining. For example, very few cities and municipalities have CLUPs in place, much less ones that

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[204] Roel Landingin, *The Big Dig: Mining Rush Rakes Up Tons of Conflict*, NEWSBREAK, July/September 2008.

[205] *Id.*

work. As such, it is very difficult for them to strategically engage with mining project proponents because they lack the technical knowledge on which to base their decisions. The inability to produce and implement these very basic and necessary governance frameworks may stem from LGUs' lack of financial and human resources, deficiency in political will, and/or the misapprehension of the need to set priorities for development at the local level.

There is thus a dire need to strengthen the capacities of institutions, communities, and other actors affected by mining activities. However, this need is true not only at the local level but also at the level of the national government. The violation of human, socio-cultural, economic, and environmental rights of local communities and IPs/ICCs by mining companies and even government actors, *with impunity*, is a phenomenon repeatedly cited in studies of the adverse impacts of mining. This is essentially a problem in law enforcement, and not necessarily a lack in the law.

Apart from the problematic decrease in the number of skilled technical regulators within DENR,[206] the institutional "attitudes" of agencies relevant to mining also need fine-tuning. MGB, EMB, and NCIP, for example, are mandated to oversee specific areas of law: (in broad terms) mining, natural resource protection, and IP rights, respectively. Although these areas of law are necessarily interrelated when applied to mining operations, there is often a lack of coordination among the concerned agencies that reflects a misperception of the nature of mineral operations as isolated from other sectoral concerns. Jurisdictional conflicts between national and local governments are also indicative of a lack of the sense that both levels of government must undertake mining regulation in a concerted manner, regardless of "who gets what" revenue from the exploitation of mineral resources.

Lastly, but certainly not least, local communities, IPs/ICCs, and people's organizations affected by mining must themselves become empowered to effectively engage and influence industry and the government to address their rights and needs. The mining disasters of the past have prompted various groups to become active participants in mining policy formulation and implementation, although their efforts are seldom successful and many have

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[206] ... [A]gencies such as MGB lose skilled personnel to industry while being prevented from hiring more people because of limited budgets and a government-wide freeze-hiring policy . . . [T]he entire DENR is having trouble coping with the growth in industries and companies to monitor while the number of its personnel remains the same or even drops" *Id.*

become victims of abuse and violence because of their opposition to mining activities. Organizational capacities must further be strengthened along with the provision of forms of support that may not readily be available within their ranks, such as legal, financial, and technical assistance.

C. Establishing a National Mining Policy

Since 2009, "alternative mining bills" have been filed in Congress. These bills seek the repeal the Mining Act of 1995 and the integration of human rights, environmental protection, and active community involvement in a new national mining policy. House Bill (HB) 6342, or "The Philippine Mineral Resources Act of 2009," sought to introduce a mining policy "anchored on land and natural resources management and human rights-based approach".[207] The bill was re-filed in 2010. In 2011, two (2) similar bills were filed: HB 206 or the Alternative Mining Bill, which "puts communities, human rights, conservation of our mineral and natural resources, and genuine national development at the center", and HB 3763 or the Minerals Management Bill, which "wants to ensure that mineral extraction is not done at the expense of the environment and the communities".[208] It will be a useful exercise to look at these proposals closely, and honestly consider the need to review a mining law that is more than a decade old and which may no longer be responsive to the national situation and the needs of the people.

Also in response to deficient regulation of mining in the country, over the years various environmental groups, anti-mining advocates, indigenous peoples' organizations, and local communities have advocated the imposition of a moratorium on mining operations. They cite the numerous harms and risks that the extractive industry presents to such an ecologically rich and biodiverse country as the Philippines, and the fact that past environmental disasters have shown that responsible mining does not exist, at least not at this time and not in the Philippines. A mining moratorium will not only be a sure way of avoiding these harms and risks, but will also allow for the rehabilitation

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[207] Alyansa Tigil Mina, *Alternative Mining Bill: In Brief*, 2009 *available at* http://www.alyansatigilmina.net/files/AMB_in%20brief.pdf (accessed on Mar. 16, 2012).

[208] Mines and Communities, *Activists Promote More Alternative Mining Legislation in the Philippines*, May 13, 2011, available at http://www.minesandcommunities.org/article.php?a=10775 (accessed on November 11, 2011).

of mined-out areas and those damaged by tailings and other pollutants, as well as the recuperation of communities adversely affected by mining.

On the other hand, the mining industry has vehemently opposed any kind of mining moratorium, noting that despite the "sins of the past," current technology has greatly improved the safety of mining to ensure that environmental harms are avoided or minimized. Also, more central to their argument, industry actors have invoked the positive economic, and even social, impacts, both current and potential, that mining provides to the country. Some government officials recognize the mining industry's contribution to government revenues and to poverty alleviation, although they also acknowledge the need to regulate the industry to limit environmental harms and risks form mining activities.

The passage of a new mining law, the imposition of a mining moratorium, or a combination of both are all options that deserve closer inspection. Definitely, with the current state of the Philippine environment, the gaps in the law, and myriad weaknesses in implementation, administration and regulation of the mining industry cannot go on as it has in the past. Concrete action must be taken to address the negative impacts of mining and avoid further harms, especially because we have no clear picture of the extent of environmental (and social and cultural) risks that mining activities pose, but we know they are high and extremely hazardous.

At this juncture, the first crucial step to address the inconsistencies in the law and conflicts in interests is to set a well-articulated national policy on mining. An executive issuance on mining will be a much quicker response to the many urgent issues that currently plague the mining industry and affected sectors than new mining legislation. Such a policy must thus be comprehensive, consider the current mining situation as a whole, and be as forward-looking as possible, in terms of the valuation and distribution of social and economic benefits and the sustainability of the environment and natural resources.

Without a proper understanding of the negative impacts of an activity as high-risk as mining, and even of the actual economic benefits it will provide – and whether these are sufficient to forego unknown risks, a sound mining policy must provide sufficient time and opportunity for the appropriate standards, mechanisms, and capacities to be set in motion before any new mining activities are permitted, whether through the imposition of a blanket

moratorium or case-to-case prohibitions or suspensions. Moreover, the formulation of a mining policy must necessarily be a transparent and participatory process. All concerned stakeholders must be engaged in meaningful consultation before any decision is arrived at, to limit conflicts and to ensure that the policy is credible to facilitate compliance. Clear scientific and technical data must be its basis rather than the caprices, affiliations, or inclinations of any one person or group.

As of the writing of this article, President Benigno Aquino III has undertaken the formulation of a mining policy to guide his administration in decision-making, in light of the recent boom in the industry and the conflicting stakes and interests it has consistently carried with it. The process has involved consultations with members of industry, government, and civil society, and a review of what data and statistics exist on the country's mineral resources and the economic, environmental, and social impacts of mining over the years.

Based on the experiences of the past and the complex situation that the mining industry finds itself in today, an ideal policy must be well-founded, clear, and indicate a strategic approach to mining in the context of national development priorities. The "all-access" attitude towards promoting mining in the country, subject to very narrow and insufficient restrictions, must be re-examined in light of the social, economic, and environmental perils that it poses. The time for taking mining laws in isolation is past: the issuance of ECCs, MAs and FTAAs should no longer be a matter of the proponent being able to check items off a list. Rather, the grant of any right or privilege related to mineral resources must at every step consider its environmental, social, and economic impacts, in accordance with a national mining policy that does not take these matters for granted.

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