MINING AND CLIMATE CHANGE: REVISITING THE ALTERNATIVE MINERALS MANAGEMENT BILL IN THE AGE OF CLIMATE CRISIS*

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ABSTRACT

A decade since it was first proposed in Congress, the Alternative Minerals Management Bill is a bold re-envisioning of the Philippine mining industry by giving highest priority to the protection and enhancement of the right to human dignity, the reduction of inequalities, and the equitable diffusion of wealth and political power for the common good. However, as we experience climate impacts far worse and much sooner than climate models predicted, a revisiting of the bill is warranted. In the age of climate crisis, it is critical that the bill reflects our country's extreme climate vulnerability, the climate gap among our people, and the intrinsic tendency of the mining industry to exacerbate this vulnerability and gap. Most importantly, the bill must be anchored in relevant developments in the climate discourse, especially in climate adaptation and just transition, all the while maintaining its relevance and integrity as the long overdue sustainable alternative to the current minerals management framework.

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I. AN ALTERNATIVE MINERALS MANAGEMENT FRAMEWORK

The Alternative Minerals Management Bill (the "AMMB" or the "bill") was once again proposed for enactment in both the House of Representatives and the Senate at the start of the 18th Congress of the Philippines.[1] Since its first proposal a decade ago,[2] the bill has been refiled in Congress eleven times[3] and has yet to be passed. It has had minimal revisions.

The AMMB is a progressive bill that was drafted in consultation with local government units and mining-affected communities, and in consideration of the well-documented and unprecedented devastating impacts of mining to their health and environment, and to other basic sectors.[4] The result of this consultative process is a bill that boldly re-envisions the Philippine mining industry.

Due to the lack of provisions requiring the formulation of a national development or industrialization plan and regulating mineral exports, the Philippine Mining Act of 1995 (or the "Mining Act")[5] has cultivated the current export-oriented and profit-driven minerals management framework. Currently, minerals may be extracted regardless of domestic needs, provided that an exploration permit or a mineral agreement is granted.[6] These minerals may also be exported and processed elsewhere, provided only that a Mineral

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[1] S. No. 353, 18th Cong., 1st Sess. [hereinafter, "SB353"] (2019). An Act to Regulate the Rational Exploration, Development and Utilization of Mineral Resources, and to Ensure the Equitable Sharing of Benefits for the State, Indigenous Peoples and Local Communities, and for Other Purposes; H. No. 112, 18th Cong., 1st Sess. [hereinafter "HB112"] (2019). An Act to Regulate the Rational Exploration, Development and Utilization of Mineral Resources, and to Ensure the Equitable Sharing of Benefits for the State, Indigenous Peoples and Local Communities, and for Other Purposes.

[2] Then known as the "Philippine Mineral Resources Act of 2009." H. No. 206, 15th Cong., 1st Sess. (2009). An Act to Regulate the Rational Exploration, Development and Utilization of Mineral Resources, and to Ensure the Equitable Sharing of Benefits for the State, Indigenous Peoples and Local Communities, and for Other Purposes.

[3] *See also* H. No. 3763, 15th Cong., 1st Sess. (2010); H. No. 984, 16th Cong., 1st Sess. (2013); H. No. 2486, 16th Cong., 1st Sess. (2013); H. No. 54, 17th Cong., 1st Sess. (2016); H. No. 113, 17th Cong., 1st Sess. (2016); H. No. 2633, 17th Cong., 1st Sess. (2016); S. No. 3126, 15th Cong., 2nd Sess. (2012); S. No. 1069, 17th Cong., 1st Sess. (2016); S. No. 1191, 17th Cong., 1st Sess. (2016).

[4] H. No. 984, 16th Cong., 1st Sess. [hereinafter, "HB984"] (2013). An Act to Regulate the Rational Exploration, Development and Utilization of Mineral Resources, and to Ensure the Equitable Sharing of Benefits for the State, Indigenous Peoples and Local Communities, and for Other Purposes, Explanatory Note.

[5] Rep. Act No. 7942 [hereinafter, "Philippine Mining Act"] (1995). An Act Instituting a New System of Mineral Resources Exploration, Development, Utilization and Conservation.

[6] §§ 20-32.

Ore Export Permit is secured.[7] Thus, in the past decade, the mining industry has contributed a measly annual average of 0.7-1% to the Gross Domestic Product and 0.6% of total employment.[8] Meanwhile, majority of mineral production in the Philippines went to foreign industries, reaching up to 97% in 2014, according to IBON Foundation.[9]

As an alternative, the AMMB aims to develop a self-reliant and independent national economy pursued through domestic needs-based development.[10] It mandates mineral management planning that would prioritize the development of mineral resources needed for national development[11] and that should be aligned with the National Industrialization Program.[12] Towards this end, the Bill declares as a policy the encouragement of the establishment of manufacturing plants.[13] It further specifically considers the existence of downstream industries for the mineral resources in mining areas,[14] and the intent to develop downstream industries in the pre-screening of mining proposals.[15] In this manner, it ensures that the country will not only profit from locally extracted mineral ores, but will also contribute to its development and industrialization.

While the Philippine Mining Act declares "rational" large-scale mining as a policy,[16] the AMMB proposes one that is also equitable.[17] It gives the highest priority to the protection and enhancement of the right of all the people to human dignity, the reduction of inequalities, and the equitable diffusion of wealth and political power for the common good.[18] It does so by, first and foremost, allocating revenue shares to the local governments and communities who bear the brunt of the destruction and harm caused by these mining projects.[19]

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[7] DENR-MGB, *Procedures Manual: Issuance of Ore Transport Permit (OTP)/Mineral Ore Export Permit (MOEP),* DENR-MGB WEBSITE, *available at* http://www.mgbr13.ph/wp-content/uploads/2018/09/PROCEDURES-MANUAL-MMD-ISSUANCE-OF-OTP-MOEP.pdf

[8] SB353, Explanatory Note.

[9] IBON, *Local mining contributes to foreign industries but leaves PH with little benefit*, IBON, Sept. 17, 2015, *available at* https://www.ibon.org/local-mining-contributes-to-foreign-industries-but-leaves-ph-with-little-benefit

[10] SB353, §§ 2(j), 4(a).

[11] § 19.

[12] § 3.

[13] § 3.

[14] § 43.

[15] § 51.

[16] Philippine Mining Act, § 2.

[17] SB353, § 3.

[18] § 2(*l*).

[19] §§ 100, 102-103.

Aside from the marginal excise tax of 2% of gross output at the time of removal for metallic minerals and non-metallic minerals and quarry resources and other taxes and fees,[20] the AMMB allocates a share equivalent to 10% of the gross revenues from mining operations to the national government,[21] and a share of the net revenues from mining operations to the concerned local government, which shall be determined based on the latter's classification, vulnerability, and Human Development Index.[22] This would significantly increase the concerned local governments' measly share in the national total revenue collection from mining. In 2017, the Philippine Extractive Industries Transparency Initiative reported that local governments received PHP 1.159 billion only from the national government's PHP 39.097 billion total revenue collection from mining.[23]

As for mining-affected communities, 10% of the gross revenues shall also be paid as royalty to the indigenous cultural communities or indigenous peoples in case of mining operations within ancestral domains. Community development programs shall not be considered as royalty payment.[24] Additionally, several funds were created for their use and support.[25]

Most significantly, the AMMB empowers these communities in three notable ways:

1. By requiring free, prior, and informed consent from all affected communities prior to each stage of the mining operations,[26] and suspending operations when the legality or validity of this consent is questioned;[27]

2. By giving affected communities and sectoral and non-governmental organizations the opportunity to participate in the approval or rejection of mining permits, and monitoring mining operations, through the creation of a multi-sectoral mineral management council;[28] and

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[20] Philippine Mining Act, § 84.

[21] SB353, § 99.

[22] § 103.

[23] PHILIPPINE EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE, FORGING NEW FRONTIERS: THE FIFTH PH-EITI REPORT (FY 2017) 76 (2018).

[24] SB353, § 100.

[25] §§ 101, 102, 104 & 116.

[26] § 63.

[27] § 33.

[28] §§ 40-42.

3. By imposing harsh penalties as high as PHP 2 million to PHP 5 million and imprisonment as long as 10 to 14 years for vitiation of consent of indigenous cultural communities or indigenous peoples and human rights violations, respectively.[29]

Finally, the AMMB provides more stringent environmental safeguards that would prevent, or at the very least mitigate, the harmful impacts of mining operations. It expands the scope of no-go zones for mining, adding 18 more areas to the Mining Act's conservative list of five.[30] Under the AMMB, no-go zones for mining[31] include no-mining zones declared by the local government, densely populated areas, especially residential areas, head waters of watershed areas, areas with potential for acid mine drainage,[32] critical watershed,[33] critical habitat,[34] climate disaster-prone areas, geo-hazard areas, and small island ecosystems, among others.

The bill expressly prohibits open-pit mining,[35] which results in permanent and irreversible damage to the environment, and submarine tailings disposal,[36] which are prohibited in several other jurisdictions.[37] It also has a specific chapter on environmental protection, which includes the declaration of important environmental principles, such as the precautionary

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[29] §§ 155-156.

[30] Philippine Mining Act, § 19.

[31] SB353, § 43.

[32] § 20(b). As defined in this section, an acid mine drainage is "the dissolution, mobilization and transportation of toxic metals from rocks resulting from the chemical reaction of the acid generating minerals in rock and waste materials having high permeability to both air and rainfall and other water inflows when land is opened up for mining and initiates the chemical reaction, resulting to a perpetual machine of acid generation".

[33] § 20(o). As defined in this section, critical watershed is "a drainage area of a river system, lake or water reservoir supporting existing and proposed hydroelectric power, domestic water supply, geothermal power and irrigation works, which needs immediate rehabilitation and protection to minimize soil erosion, improve water yield and prevent possible flooding. The term shall also include areas which are traditional human settlements, land-uses, or sea-uses which are representative of a culture/cultures, or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change".

[34] § 20(p). As defined in this section, critical habitat is a "place or environment where species or subspecies naturally occur or has naturally established its population that are crucial to the survival of a species and essential for its conservation".

[35] § 20(qq). As defined in this section, open-pit mining is "extracting metal ores and minerals that lie near the surface by removing the overlying material and breaking and loading the ore. Also known as open-cast mining and open-cut mining".

[36] § 60.

[37] *See Mining in Central America: a complex reality,* THE ECONOMIST, May 16, 2019, *available at* http://country.eiu.com/article.aspx?articleid=1918006175&Country=Honduras &topic=Economy; Bernhard Dold, *Submarine Tailings Disposal (STD)–A Review*, 4 MINERALS 642 (2014).

and polluter pays principles, the execution of environmental insurances, the establishment of a calamity and human rights protection fund, mandatory progressive rehabilitation, and many other safeguards.[38]

II. CLIMATE CRISIS AND THE AMMB

While the AMMB has been pending in Congress in the past decade, the Philippines was ranked as the fifth most vulnerable country to the impacts of climate change.[39] As we experience super typhoon after super typhoon, and more severe floods and droughts, we do not need climate scientists to tell us that climate impacts are happening far worse and much sooner than climate models predicted.

However, we need assistance, both financial and technical, in conducting a climate impact and vulnerability assessment to enhance our capacity for climate adaptation and resilience. The mining industry plays a critical role in this discussion as it is a destructive industry that will inevitably impact the country's climate adaptation and, conversely, climate vulnerability.

In this context, it is important to ensure that the bill is anchored on relevant developments in the climate discourse, all the while keeping its relevance and integrity as the long overdue sustainable alternative to the current minerals management framework. Thus, revisiting the bill is warranted in the age of climate crisis.

A. The Age of Climate Crisis

In October 2018, the Intergovernmental Panel on Climate Change ("IPCC") released its *Special Report on Global Warming of 1.5°C* ("SR15"),[40] which discussed climate change, its projected impacts and associated risks, and the emission pathways and system transitions that we can pursue consistent with a 1.5°C or a 2°C warming. The seminal report showed that

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[38] SB353, § 108-133.

[39] David Eckstein, Marie-Lena Hufils & Maik Winges, *Global Climate Risk Index 2019: Who Suffers Most from Extreme Weather Events? Weather-related Loss Events in 2017 and 1998 to 2017*, at 8, 2018, *available at* https://germanwatch.org/sites/germanwatch.org/files/Global%20Climate%20Risk%20Index%202019_2.pdf

[40] IPCC, *2018: Summary for Policymakers, in* GLOBAL WARMING OF 1.5°C. AN IPCC SPECIAL REPORT ON THE IMPACTS OF GLOBAL WARMING OF 1.5°C ABOVE PRE-INDUSTRIAL LEVELS AND RELATED GLOBAL GREENHOUSE GAS EMISSION PATHWAYS, IN THE CONTEXT OF STRENGTHENING THE GLOBAL RESPONSE TO THE THREAT OF CLIMATE CHANGE, SUSTAINABLE DEVELOPMENT, AND EFFORTS TO ERADICATE POVERTY 17 (Valerie Masson-Delmotte et al. eds., 2019).

climate impacts are happening much sooner and far worse than climate models expected, and that half a degree Celsius will cause a grave difference to a warming world. Most importantly, it signaled that we are no longer facing climate change, but rather, a climate crisis.[41]

According to the report, we have only until 2030 to transition our energy, land, urban, infrastructure, and industrial systems—*a transition that is unprecedented in scale, though not necessarily in speed.*[42] Should we meet the best case scenario of limiting global warming to 1.5°C by the end of the century, 13.8% of the global population will still be exposed to extreme heat at least once every five years,[43] sea level will rise by 0.26 to 0.77 meter,[44] and 70-90% of coral reef coverage will decline,[45] among many other devastating impacts.[46]

Prior to the release of the report, 15-year old climate activist Greta Thunberg started a school strike to call for stronger climate action. As her calls resounded to thousands of other youths concerned about their future, a global movement of youths demanding climate action rapidly formed and called themselves the Fridays for Future Movement.[47] In the United Nations Climate Change's 24th Conference of Parties that immediately followed the SR15's publication, Thunberg, joined by hundreds of other youths, demanded that climate change be treated as what it is: a crisis.[48]

More and more governments, civil society organizations, and affected communities have emphasized the urgency and gravity of the climate crisis. Today, 1,501 governments, national and sub-national, have declared a climate

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[41] *See also* Stephen Leahy, *Climate change impacts worse than expected, global report warns*, NATIONAL GEOGRAPHIC, Oct. 7, 2018, *available at* https://www.nationalgeographic.com/environment/2018/10/ipcc-report-climate-change-impacts-forests-emissions

[42] IPCC, *supra* note 40, at 17.

[43] Ove Hoegh-Guldberg, et al., *2018: Impacts of 1.5°C Global Warming on Natural and Human Systems*, *in* GLOBAL WARMING OF 1.5°C. AN IPCC SPECIAL REPORT ON THE IMPACTS OF GLOBAL WARMING OF 1.5°C ABOVE PRE-INDUSTRIAL LEVELS AND RELATED GLOBAL GREENHOUSE GAS EMISSION PATHWAYS, IN THE CONTEXT OF STRENGTHENING THE GLOBAL RESPONSE TO THE THREAT OF CLIMATE CHANGE, SUSTAINABLE DEVELOPMENT, AND EFFORTS TO ERADICATE POVERTY 191 (Valerie Masson-Delmotte et al. eds., 2019).

[44] IPCC, *supra* note 40, at 7.

[45] *Id.* at 8.

[46] *Id.*

[47] Liam Gould, *How Greta Thunberg's climate strikes become a global movement in a year*, REUTERS, Aug. 20, 2019, *available at* https://www.reuters.com/article/us-global-climate-thunberg/how-greta-thunbergs-climate-strikes-became-a-global-movement-in-a-year-idUSKCN1VA001

[48] Speech by Greta Thunberg, 2018 United Nations Climate Change Conference, Katowice, Dec. 12, 2018, *available at* https://www.fridaysforfuture.org/greta-speeches#greta_speech_dec12_2018

emergency,[49] including Bacolod City Council,[50] Tolosa Municipal Council,[51] and Cebu City Council.[52] Moreover, over 1,328 climate change cases have been initiated since the 1990s, majority of which were filed in the past decade.[53]

B. Locating Climate Adaptation

The AMMB was first proposed a decade ago, years ahead of the SR15, the Fridays for Future movement, and most of climate change litigation. Senator Risa Hontiveros' version of the bill, which is now pending in the Senate, mentions "climate change" merely four times. The first three times were in the explanatory note, where it was stressed that the Philippines is among the top five most vulnerable countries to the impacts of climate change. Consequently, climate-induced extreme weather events aggravate the impacts of mining-related disasters on the ecosystem and communities. Thus, it is critical to ensure that mining is climate-sensitive by factoring climate impacts on the industry and Filipino communities.[54] This was translated into the text of the bill by establishing climate disaster-prone areas as no-go zones for mining.[55]

The bill makes a critical connection between the mining industry and climate change that is obvious but often overlooked—climate disasters exacerbate mining disasters. We can only imagine how much worse the 1996 Marcopper mining disaster[56] could have been if it was accompanied by a super

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[49] *Climate Emergency Declarations in 1,501 jurisdictions and local governments cover 820 million citizens*, CLIMATE EMERGENCY DECLARATION, June 1, 2020, *available at* https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens

[50] Bacolod City Council Res. No. 640, s. of 2019 (July 17, 2019). Resolution Endorsing the Declaration of a Climate Emergency and Requesting for Regional Collaboration on an Immediate Just Transition and Emergency Mobilization Effort to Restore a Safe Climate.

[51] Tolosa Municipal Council Res. No. 08-64-2019 (Aug. 5, 2019). Endorsing the Declaration of a Climate Emergency and Requesting for Regional Collaboration on an Immediate Just Transition and Emergency Mobilization Effort to Restore a Safe Climate.

[52] *City Council declares climate emergency*, SUNSTAR CEBU, Oct. 16, 2019, *available at* https://www.sunstar.com.ph/article/1827946/Cebu/Local-News/City-Council-declares-climate-emergency

[53] Joana Setzer & Rebecca Brynes, Global Trends in Climate Change Litigation: 2019 Snapshot, at 3, July 2019, *available at* http://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2019/07/GRI_Global-trends-in-climate-change-litigation-2019-snapshot-2.pdf

[54] SB353, Explanatory Note.

[55] § 43.

[56] *See Remembering the Marcopper mine disaster,* ABS-CBN NEWS, Apr. 13, 2016, *available at* https://www.youtube.com/watch?v=VTkdmXYDh4s; Gwen de la Cruz, *Look Back: The*

typhoon that could have resulted in landslides, flooding, and even a ruptured dam. The toxic mine wastes could have not only spilled into the Boac River but also pillaged tillable lands, adversely affecting the health of hundreds of more residents.

However important this provision, the bill still features limited language on climate change, or climate adaptation at the very least, since the bill does not govern the extraction of fossil fuels and has minimal relation to climate mitigation.

First, it mentions climate change only in the context of climate disasters.[57] Climate impacts, such as extreme weather events, floods, droughts, decline in crop and fish yields, sea-level rise, and loss of biodiversity, encompass more than just climate disasters. It is important to consider all climate impacts since most of these are already being experienced in the Philippines.[58]

Second, it must be recognized that, inasmuch as climate disasters exacerbate mining disasters, the reverse is also true. In general, mining exacerbates climate impacts and vulnerabilities. Mining is intrinsically a destructive industry requiring the clearing of forests, opening of mountains or stripping of overburdens, disturbance of ecosystems and habitats, and displacement of livelihoods. When subjected to these operations, the benefits obtained from ecosystems are significantly reduced, e.g. retention of excess water, recharging aquifers, prevention of extreme water run-offs and soil erosion, and natural protection from typhoons. Thus, if a community is already experiencing climate impacts such as stronger typhoons, climate-induced drought, decline in crop and fish yields, and loss of biodiversity, the entry of mining operations in the area will inevitably worsen these impacts.

Lastly, the bill does not use a post-extractive lens, where the post-operational treatment of mining and disturbed areas are accompanied by the enhancement of climate adaptation and resilience. This ensures that affected communities that are vulnerable due to significantly less ecosystem services and barriers are capable of managing climate impacts and vulnerabilities.

1996 Marcopper mining disaster, RAPPLER, Mar. 24, 2017, *available at* https://www.rappler.com/move-ph/issues/disasters/165051-look-back-1996-marcopper-mining-disaster; Nikko Dizon, *The Marcopper disaster: A tragedy that continues in people's veins*, ABS-CBN NEWS, Apr. 4, 2019, *available at* https://news.abs-cbn.com/spotlight/04/04/19/the-marcopper-disaster-a-tragedy-that-continues-in-peoples-veins

[57] *Id.*

[58] PAGASA, *Climate Change in the Philippines,* PAGASA WEBSITE, *available at* http://bagong.pagasa.dost.gov.ph/information/climate-change-in-the-philippines

C. Assessing the Just Transition Framework

The concept of just transition has likewise had critical developments in the past decade. It was first introduced after World War II when there was an ongoing transition from a wartime to a peacetime economy. The transition brought about threats of mass unemployment and economic dislocation of millions of veterans and members of the wartime labor force. Workers fought for a just transition, where displaced workers who are transitioning together with the economy are provided financial support and opportunity for higher education.[59]

As many countries begin to decarbonize, it became evident that the transition to a net-zero carbon society will have major implications for the economy as well as to jobs and livelihoods. The transition cannot be limited to discussions of technologies and solutions, GHG emissions, and pathways. Coal mines are closing down, coal-fired power plants are decommissioning, and, consequently, workers are being displaced. Coal miners who have only known how to mine as a living are suddenly without jobs, and without the necessary skills or training to qualify for other jobs. The same is expected to happen to workers in other industries being phased out. Thus, the concept of just transition re-emerged.[60]

At the root of the just transition framework is the protection and fulfillment of the rights of the workers. It ensures that the climate crisis will not result in economic displacement; and rather, it would drive the creation of green jobs with better working conditions and living wages for workers.

Even beyond protecting worker's rights, the just transition framework is being used to ground the net-zero carbon transition in other human rights and in social justice. In addressing the climate crisis, just transition also seizes the opportunity to address many other injustices in society. As a concrete

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[59] CENTER FOR ENERGY, ECOLOGY, AND DEVELOPMENT, JUST TRANSITION IN THE PHILIPPINES 11 (2018), *available at* https://ceedphilippines.com/wp-content/uploads/2020/05/CEED-Just-Transition-in-the-Philippines-Full-Study.pdf

[60] *See* International Labor Office, *Just Transition towards Environmentally Sustainable Economies and Societies for All: ILO ACTRAV Policy Brief*, ILO WEBSITE, *available at* https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_647648.pdf; Just Transition Centre, Just Transition in Action: Union Experiences and lessons from Canada, Germany, New Zealand, Norway, Nigeria and Spain (2019), *available at* https://www.ituc-csi.org/IMG/pdf/191120_-_just_transition_case_studies.pdf

example, proponents of gender just transition also promote gender equality through fair pay and equal opportunities for women in new green jobs.[61]

As for the Philippines, the imperative for just transition was made binding to it when it became a State Party to the Paris Agreement. In the Agreement's preamble, it reads:

> *Taking into account* the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities[.][62]

In responding to the imperatives of just transition, the Philippines must consider the mining industry because of the critical intersections between mining and climate change. Additionally, mining operations may be using electricity generated by fossil fuel power plants and thus, emit harmful GHG emissions. Fossil fuel extraction, although governed by laws other than the Mining Act,[63] must also be examined since coal mining provides fuel for coal-fired power plants, and oil and gas extraction for diesel and natural gas power plants. Moreover, oil and gas extraction emits methane—the second largest cause of global warming.[64]

The AMMB already adopts a just transition framework. At the onset, it is declared that judicious stewardship of mineral resources shall comply with the principles of job security, adequate wages, benefits, and safe working conditions.[65] Moreover, prior to any mining operation, the mining company is required to submit an Environmental and Social Impact Assessment and Mitigation Plan ("ESIAMP"). The ESIAMP should include plans for the

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[61] *See* Women Engage for a Common Future, *Gender Just Climate Solutions* (2019), *available at* https://www.wecf.org/wp-content/uploads/2019/12/GJCS-2019-eng.pdf

[62] Adoption of the Paris Agreement [hereinafter, "Paris Agreement"] pmbl., U.N. Doc. FCCC/CP/2015/L.9/REV.1 (Dec. 12, 2015). (Emphasis in the original.)

[63] Pres. Dec. No. 87 [hereinafter, "Oil Exploration and Development Act of 1972"] (1972). Amending Presidential Decree No. 8 issued on October 2, 1972, and Promulgating an Amended Act to Promote the Discovery and Production of Indigenous Petroleum and Appropriate Funds Therefor; Pres. Dec. No. 1857 (1983). An Act Granting New Incentives to Petroleum Service Contractors, and for this Purpose amending Certain Sections of Presidential Decree Numbered Eighty-Seven, as amended, otherwise known as "The Oil Exploration And Development Act Of 1972."; Pres. Dec. No. 972 [hereinafter, "Coal Development Act of 1976"] (1976). Promulgating an Act to Promote an Accelerated Exploration, Development, Exploitation, Production and Utilization of Coal.

[64] Christophe McGlade, K.C. Michaels & Tim Gould, *Global methane emissions from oil and gas*, IEA, Mar. 31, 2020, *available at* https://www.iea.org/articles/global-methane-emissions-from-oil-and-gas.

[65] SB353, § 4(h).

relocation and return of displaced population, and provisions for alternative livelihood and socioeconomic development.[66]

The bill's just transition framework is most evident in its transitory provisions. In Section 163, all existing mining permits, licenses, and agreements are deemed canceled. However, the mine workers and their families that may be displaced shall receive livelihood support and job placements to be facilitated by appropriate agencies. In the succeeding section, the bill mandates the review of the current mineral land classification to determine the best livelihood and economic option for the said area.

These provisions, however, leave much to be improved. For instance, the Department of Labor and Employment (DOLE), which is the appropriate government body to facilitate the transition of displaced mine workers and families, does not have any existing guidelines for just transition. Since the International Labor Organization ("ILO") partnered with the DOLE for the pilot application of its policy guidelines on just transition in 2016, the DOLE has in fact chosen the mining industry to become the beneficiary of ILO's Just Transition Project.[67] Nevertheless, until today, no guidelines or any official documents have been issued on this matter.[68]

Finally, as regards the ESIAMP, the requirement for "provisions for alternative livelihood and socioeconomic development" is too vague to assume that it includes a holistic just transition program. Providing alternative livelihood and socioeconomic development does not ensure that affected workers are identified, provided with training or re-training for new jobs or livelihoods, better working conditions, and paid a living wage. Moreover, it does not ensure economic diversification within the affected community.

III. RECOMMENDATIONS TO THE AMMB

To address the gaps and limitations of the current AMMB, we recommend to, first and foremost, include the country's commitment to the Paris Agreement as part of the declaration of policies, with specific emphasis on climate adaptation and just transition. It is also critical to integrate a 1.5°C pathway in the development of the National Industrialization Program.[69]

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[66] § 52.

[67] Samuel Medenilla, *'Greener' local mining industry up ahead, says DOLE,* MANILA BULLETIN, Sept. 29, 2017.

[68] CEED inquired the Central Office of DOLE about the progress of the application of the ILO's just transition project in the mining industry.

[69] SB353, § 3.

Most importantly, in the pre-screening of mining proposals, the climate vulnerabilities and gaps of affected communities should be considered. Finally, the capacity of the affected community for climate adaptation and the effective implementation of a just transition to green economy models should be enhanced and prioritized in progressive rehabilitation.

A. Declaration of Paris-aligned Policies

The bill outlines a comprehensive declaration of policies, emphasizing the dignity and the rights of the people,[70] "promoting social justice in all phases of national development"[71] and maintaining the autonomy of local governments.[72] To anchor it in the age of climate crisis, the first step is to review the declaration of policies and determine whether they are aligned with the country's commitment to the Paris Agreement.

By ratifying the Paris Agreement, the country committed to respond to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. Based on the principle of common but differentiated responsibilities and in the light of different national circumstances, the country's response includes:

> (a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
>
> (b) Increasing the ability to adapt to the adverse impacts of climate change and fostering climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production; and
>
> (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.[73]

In light of these responses, it is recommended that the following Paris-aligned policies be included in the AMMB:[74]

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[70] § 2(a), (d-e) & (g-h).
[71] § 2(f).
[72] § 2(k).
[73] Paris Agreement, art. 2.
[74] Pmbl.

1. Promote social justice and climate justice in all phases of national development, which is consistent with a 1.5°C pathway towards net-zero carbon emissions by 2050 or sooner

Beyond promoting social justice in all phases of national development,[75] climate justice should also be promoted. National development can no longer be fueled by fossil fuels, but rather by clean and affordable renewable energy technologies, preferably distributed resources or microgrids. Our development pathway should balance an industry's contributions to the economy and to the country's commitments to climate mitigation. In the context of the mining industry, this means that mining companies' energy use should rely on renewable energy. Moreover, the extent of the forest cover that a mining company will clear should be considered prior to operations, in view of the important role of forests as natural carbon sinks.

It also bears stressing that, although our commitment states two temperature goals, well below 2°C and 1.5°C above pre-industrial levels, the Philippines played a critical role in negotiating for the inclusion of the 1.5°C temperature goal, especially due to our extreme climate vulnerability.[76] Thus, if mining is considered an important industry to our development, then it should also be aligned with a 1.5°C pathway that has net-zero carbon emissions by 2050 or sooner.

2. Protect the integrity of all ecosystems towards increasing the ability of the people to adapt to the adverse impacts of climate change

The AMMB should adopt a policy mandating industries to increase our climate resilience by protecting the integrity of our ecosystems, in light of worsening climate conditions. Ecosystems provide a myriad of services, including retaining excess rainwater, preventing run-offs and landslides, and providing natural barriers to typhoons. Part and parcel to this policy is to urge

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[75] SB353, § 2(f).

[76] *See* Renee Lewis, *Limiting global warming at 1.5C is a human rights issue, Philippines says,* AL JAZEERA, Dec. 8, 2015, *available at* http://america.aljazeera.com/articles/2015/12/8/limiting-warming-to-15-c-a-human-rights-issue.html; Kristine Angeli Sabillo, *PH at COP21: 'We are the face of vulnerability'*, INQUIRER.NET, Dec. 9, 2015, *available at* https://globalnation.inquirer.net/133596/ph-at-cop21-we-are-the-face-of-vulnerability; Anna Valmero & Shaira Panela, *Climate vulnerable nations push for 1.5 C goal in Paris,* PHILIPPINE ENVIRONEWS, Dec. 8, 2015, *available at* http://environews.ph/climate-change/climate-vulnerable-nations-push-for-1-5c-goal-in-paris

industries to take a proactive approach, especially as regards enhancing the climate resilience and adaptive capacity of affected communities.

Mining operations cause opening of mountains, stripping of overburdens, loss of biodiversity, loss of habitat, and consequently, loss of important ecosystem services. Loss of land subsequently affects agriculture and food and water security.

However, the impacts of the mining industry are not merely limited to its operational phase, but rather persist upon decommissioning or abandonment. Upon abandonment, a large parcel of land will be left bare and unable to provide ecosystem services for its host communities. In this regard, the recovery of the land is the bare minimum responsibility of the industry. It should also endeavor to restore the ecosystem services of the affected area.

3. Promote just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities

The generation of jobs is a critical aspect of the mining industry that drives host communities to support it in the first place. It is not novel to hear stories of farmers and fisherfolk becoming miners once mining operations commence in their areas. Unfortunately, in the Philippines, it is also common to hear of the decline in crop and fish yields among those who remained as farmers and fisherfolk upon the commencement of mining operations in a host mining community.[77] Worse, this creates a division in the community, between the miners and the non-miners such as farmers and fisherfolk. This is the usual irony of the mining industry's job generation—it provides jobs during its operation, but deprives jobs and livelihoods for farmers, fisherfolks, and others who rely on a healthy ecosystem after its operations.

Adopting the principles of just transition ensures that the mining company aids and facilitates the transition of workers and affected communities to alternate livelihoods during and after its operations. At the core of this principle is maintaining ecological integrity and balance.

4. Promote climate-smart and judicious stewardship of mineral resources

The efficiency, use of technology, and optimization of the mining industry may be augmented with smart solutions to reduce the industry's

[77] *See* Center for Energy, Ecology, and Development, *supra* note 59.

overall impacts. Smart mining is a concept that introduces various innovations that make for a more efficient industry. These innovations may refer to power usage, equipment, machine optimization, and system management, which will result in fewer resources, less emissions, and reduced overall impacts to host communities and resident ecosystems.[78]

An example of smart mining is the use of renewable energy such as wind and solar, which will reduce reliance on diesel, oil, and other fossil fuels. Highly efficient sorting machines for minerals are another example. Efficient ore sorting improves the identification of crushed ore and the rest of the materials. These will significantly reduce the amount of resources wasted during operations.[79]

To better implement plans and anticipate scenarios, the mining industry must also practice optimized data collection and system monitoring on natural resources and emissions.[80] Monitoring resource consumption and emissions can prevent excessive exploitation and the negative implications of mining to the host communities and the ecosystem. The data can be used to create projections and models that can show immediate and long-term impacts of the mining operation. These data can then be used to update preventive and mitigating plans to result in the least adverse environmental impacts. Monitoring agencies will have access to more accurate and updated information. Monitoring agencies and mining companies can then provide host communities with vital data that reflect the mining operations' impacts to the communities' environment and way of life.

Mining should not only be smart, but rather climate-smart. One of the concrete implications of the global transition to a net-zero carbon economy and society to the mining industry is the rise in demand for certain minerals required by renewable energy technologies such as aluminum, cobalt, copper, iron ore, lead, and lithium among many others.[81] Inherent in the judicious stewardship of mineral resources is ensuring that extraction of minerals for the transition is climate-smart. Climate-smart mining supports the sustainable extraction and processing of minerals and metals to secure

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[78] Natural Resources Canada, Smart Solutions for Smart Mines (Apr. 2019), *available at* https://www.visualcapitalist.com/wp-content/uploads/2019/04/smart-mining-infographic-large.html

[79] *Id.*

[80] *Id.*

[81] WORLD BANK GROUP, THE GROWING ROLE OF MINERALS AND METALS FOR A LOW CARBON FUTURE 18-25 (2017), *available at* http://documents.worldbank.org/curated/en/207371500386458722/pdf/117581-WP-P159838-PUBLIC-ClimateSmartMiningJuly.pdf

supply for clean energy technologies while minimizing the climate and material footprint throughout the value chain.[82]

B. Industrialization Complemented by a 1.5°C Pathway

The AMMB requires the formulation of a "National Industrialization Program" pursuant to the principles of agricultural modernization, development of industrial and manufacturing industries, and rational, sustainable, and equitable development of the national economy."[83] An evident gap in this program is the absence of the principle of climate justice, specifically the concept of common but differentiated responsibilities.

In the United Nations Framework Convention on Climate Change, State Parties noted the climate consensus that developed countries, that industrialized through the burning of fossil fuels have historically contributed the most to man-made carbon emissions, which have in turn caused climate change.[84] However, due to the global nature of climate change, State Parties have agreed to cooperate in accordance with their common but differentiated responsibilities, respective capabilities, and social and economic conditions.[85]

In other words, while developed countries have a bigger responsibility to address the climate crisis because of their large historical greenhouse gas contributions, we also acknowledge our responsibility to pursue a net-zero carbon development path with the assistance of developing countries. Thus, beyond rational, sustainable, and equitable development, the National Industrialization Program referred to in Section 3 of the AMMB should also be anchored on the principle of climate justice.

This can be done by simply stating that the formulation of our National Industrialization Program should be complemented by our National Climate Change Action Plan ("NCCAP").[86] Although the NCCAP needs to be revisited and updated in light of the IPCC's SR15 and other recent advances in climate change research, it will still contribute to an

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[82] *Climate-Smart Mining: Minerals for Climate Action,* THE WORLD BANK, *available at* https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action

[83] SB353, § 3.

[84] United Nations Framework Convention on Climate Change [hereinafter, "UNFCCC"] ¶¶ 2-3, May 9, 1992, 1771 U.N.T.S. 10.

[85] ¶ 6.

[86] CLIMATE CHANGE COMMISSION, NATIONAL CLIMATE CHANGE ACTION PLAN 2011-2028 (2011), *available at* http://climate.emb.gov.ph/wp-content/uploads/2016/06/NCCAP-1.pdf

industrialization program that envisions a climate-resilient Philippines with healthy and thriving communities and ecosystems, and climate-smart industries and services that have adapted to the new climate normal.

A National Industrialization Program pursuant to the principle of climate justice and complemented by the NCCAP should result in concrete changes in the mining industry, specifically with regard to energy consumption, resource utilization, emissions, and inclusive development. Renewable energy will be used in lieu of greenhouse gas emitting fossil fuels, which will promote energy security and reduce emissions. Efficient systems will address excessive exploitation and wasted resources. Stringent measures to prevent and mitigate environmental impacts will lead to productivity and improvement of environmental services. Inclusive development will strengthen host communities' climate resiliency and adaptive capacity. In post-operation, the mining industry must implement proper rehabilitation and provide support in securing alternative livelihoods for transitioning workers and communities.

C. Pre-screening of Climate Vulnerabilities and Gaps

More than a decade ago, the IPCC already stated that poor communities can be especially vulnerable to climate change, due to the fact that they tend to have limited adaptive capacities and are more dependent on climate-sensitive resources such as local water and food supplies.[87] In its latest assessment report ("AR5"), the IPCC confirmed this finding after conducting a comprehensive review of the dynamic interactions among climate change, poverty, and livelihoods.[88]

According to AR5, "specific livelihoods and poverty alone do not necessarily make people vulnerable to weather events and climate [change.]"[89] However, poverty and persistent inequality are the most salient of the conditions that shape climate-related vulnerability. The pertinent discussion of the report reads:

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[87] IPCC, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY. CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 12 (Martin Parry, Osvaldo Canziani, Jean Palutikof, Paul van der Linden & Clair Hanson eds., 2007).

[88] Lennart Olsson et al., *Livelihoods and poverty, in* CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY. PART A: GLOBAL AND SECTORAL ASPECTS. CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 793-832 (Christopher Field et al. eds., 2014).

[89] *Id.* at 802.

> [Poverty and persistent inequality] affect livelihood options and trajectories, and create conditions in which people have few assets to liquidate in times of hardship or crisis. People who are poor and marginalized usually have the least buffer to face even modest climate hazards and suffer most from successive events with little time for recovery. They are the first to experience asset erosion, poverty traps, and barriers and limits to adaptation. [...] [C]limate change is an additional burden to people in poverty, and it will force poor people from transient into chronic poverty and create new poor.[90]

In other words, the socially- and economically-disadvantaged and the marginalized are disproportionately affected by the impacts of climate change and extreme events.[91] Some studies have referred to this disproportionate impact of climate change as the "climate gap."[92] On this note, the IPCC's SR15 makes a compelling argument for pursuing a 1.5°C pathway. Limiting global warming to 1.5°C, compared to the 2°C benchmark, could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred millions by 2050.[93]

In relation to the mining industry and the AMMB, these discussions raise an important point—*some Filipinos, specifically the socially- and economically-disadvantaged, are more climate-vulnerable than others.* It is thus recommended that those who are already climate-vulnerable should no longer be further exposed to mining operations, which can further increase their vulnerabilities. This can be done by revising Section 43 of the bill.

Section 43 sets the criteria for determining whether an area is open for mining or not, which includes potential environmental impacts, potential cultural impacts, potential health impacts, carrying capacity, the ecological profile of the area, among others.[94] This list should include the pre-screening of climate vulnerabilities and gaps, wherein it will first be determined whether a community has poverty incidences and unemployment rates higher than the national average, and whether majority of the population belongs to marginalized sectors.

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[90] *Id.* at 802-803. (Citations and parenthetical notes omitted.)

[91] *Id.*

[92] *See* Rachel Morello-Frosch, Manuel Pastor, James Sadd & Seth Shonkoff, The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap, *available at* https://dornsife.usc.edu/assets/sites/242/docs/ClimateGapReport_full_report_web.pdf

[93] *See* IPCC, *supra* note 40, at 11, B.5.1.

[94] SB353, § 43.

Section 43 also enumerates a long list of no-go zones for mining such as critical watersheds, critical habitats, small island ecosystems, and climate disaster-prone areas to name a few. [95] Instead of declaring climate disaster-prone areas as a no-go zone, it should use the more general term "climate-vulnerable areas." Climate change is often associated with rapid onset extreme weather or climate events such as typhoons or cyclones that lead to disaster, and thus, are referred to as climate-related or climate disasters.[96] However, climate change also manifests in slow onset events such as sea level rise, increasing temperatures, glacial retreat and related impacts, ocean acidification, salinization, land and forest degradation, loss of biodiversity, and desertification.[97] In some instances, rapid onset and slow onset impacts may be interconnected, such as in the case of a drought. A drought is a rapid onset event, but is closely linked to slow onset incremental climactic change.[98]

By declaring climate-vulnerable areas as no-go zones, the bill will protect not only communities who are frequently affected by typhoons, but also communities who experience other climate impacts. For example, a community already suffering from drought will be recognized as climate-vulnerable. Water-intensive mining operations that can exacerbate water scarcity will be prohibited in their area.

Another way of protecting the most climate-vulnerable is to provide for economic safety nets which could cushion the adverse impact of these climate-related disasters and impacts. An example of this is climate risk insurance, which is "a vital instrument within a comprehensive climate risk management system, spanning a continuum of prevention, risk reduction, risk retention and risk transfer such as insurance schemes."[99] This provides "security against the loss of assets, livelihoods and even lives in the post-disaster period; ensuring reliable and dignified post-disaster relief; setting incentives for prevention; providing certainty for weather-affected public and

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[95] § 43.

[96] *See* IPCC, MANAGING THE RISKS OF EXTREME EVENTS AND DISASTERS TO ADVANCE CLIMATE CHANGE ADAPTATION. A SPECIAL REPORT OF WORKING GROUPS I AND II OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 582 (Christopher Field et al. eds., 2012).

[97] *See* Slow onset events: Technical paper, U.N. Doc. FCCC/TP/2012/7 (Nov. 26, 2012), *available at* https://unfccc.int/resource/docs/2012/tp/07.pdf

[98] *Id.* at 7.

[99] Deutsche Gesellschaft für Internationale Zusammernarbeit (GIZ) GmbH, Climate Risk Insurance for Strengthening Climate Resilience of Poor People in Vulnerable Countries: A Background Paper on Challenges, Ambitions, and Perspectives, *at* 2, May 2015, *available at* https://www.giz.de/de/downloads/giz-2016-en-climate_risk.pdf

private investments, and easing disaster-related poverty and spurring economic development."[100]

Section 115 of the AMMB already mentions environmental insurance, wherein contractors and mineral processing permit holders are obliged to execute an insurance contract as an environmental assurance for each source of pollution or disaster.[101] Instead of limiting it to environmental damage, this could be expanded to include climate insurance. This will allow for the diversification of climate risks among people and across time, reduction of climate impacts, and conversely, enhanced climate adaptation and timely recovery.

D. Rehabilitation for Climate Resilience

Although the AMMB places significant focus on rehabilitation, it did not consider the enhancement of climate resilience or adaptive capacity of host communities.[102] In the formulation and actual implementation of a rehabilitation plan and the use of the mine rehabilitation fund, mining companies should not only restore affected areas to their previous condition, but should also improve these areas' climate resiliency in light of projections of worsening climate impacts.

Moreover, the scope of the Calamity and Human Rights Protection Fund under Section 116[103] should be expanded to include not only responses to calamities, natural disasters, and human rights violations,[104] but also other climate impacts, in order to strengthen climate protection. These impacts, especially when vulnerable groups are affected, require immediate attention and should be prioritized by the fund.

According to the Philippine Atmospheric, Geophysical and Astronomical Services Administration, climate impacts that are already being experienced and may intensify exponentially in the Philippines include warmer mean temperatures, more frequent extreme hot days and extreme rainfall, dry seasons becoming dryer, wet seasons becoming wetter, increased droughts and floods, and more severe typhoons.[105] To reflect this change, the fund

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[100] *Id.*

[101] SB353, § 115.

[102] § 118.

[103] § 116.

[104] § 116 includes militarization, displacement, and forcible evacuation in any part of the country in relation to mining activities.

[105] *See* PAGASA, *supra* note 58.

should also be renamed as the "Calamity, Climate and Human Rights Protection Fund."

E. Just Transition to Green Economy Models

The AMMB can be further strengthened by adding a section on just transition to a green economy. In 2017, the Department of Environment and Natural Resources (DENR), under the leadership of then-Secretary Gina Lopez, issued DENR Administrative Order No. 2017-08.[106] The Order seeks to operationalize the transition of DENR development and rehabilitation programs and projects into Green Economy Models (or "GEMs") anchored on the principles of social justice and ecosystems integrity.[107] A green economy is defined as "low-carbon and resource-efficient, and results in the generation of green jobs and in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities."[108]

GEMs will result in the generation of green jobs because they are rooted in community enterprises, where local households are the focal members and players in engaging in various economic activities that will accelerate the rehabilitation of degraded ecosystems and promote the protection of the environment.[109] In essence, communities that are most affected by an environmentally destructive project will be the DENR's primary partners in rehabilitating the degraded area and in subsequently protecting it.

Prior to the establishment of a community enterprise, the DENR is required to host a focus group discussion with a social entrepreneur and local households with the objective of identifying a sure market potential for a certain product, the distribution of costs and benefits, the desired enterprise of the community, and, ultimately, empowering the local community. Once these are determined, the DENR will enter into an Agreement with the participating member households towards the effective implementation of the community enterprise.[110]

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[106] DENR Adm. Order No. 2017-08 (2017). Guidelines in Operating the Transition of the DENR's Programs and Projects Into Green Economy Models.

[107] § 1.

[108] § 2.1.

[109] §§ 1.1-1.3.

[110] § 5.

Despite the inclusion of mining rehabilitation in the scope of activities covered in the Order,[111] the incorporation of the concept of GEMs into the AMMB is still recommended for several reasons. *First*, it will provide longevity to this policy as it cannot be simply repealed by another DENR Administrative Order.

Second, this will ensure that affected communities will participate in the rehabilitation of their degraded area. Under the AMMB, rehabilitation only refers to the obligations of the mining company to technically and biologically rehabilitate mine-degraded areas, formulate a rehabilitation work plan, and establish a rehabilitation fund, and the penalties for failure to fulfill these obligations.[112] Although it is important that mining companies lead and pay for the rehabilitation of mine-degraded areas, affected communities should also participate in this process since they will either suffer or benefit the most from its results.

Finally, the establishment of GEMs will ensure that community members, including those whose livelihoods may have been affected by the mining operations and previous employees of the mining company, will have sustainable jobs even after closure of mining operations. Moreover, it will create green jobs that will contribute to the further rehabilitation and protection of the mine-degraded areas.

IV. CONCLUSION

While the Alternative Minerals Management Bill remains a bold re-envisioning of the Philippine mining industry, it will fall short of its objectives if it fails to respond to arguably the greatest challenge of our time: the climate crisis. It cannot seek to emphasize human dignity and the rights of the people, promote social justice, and reduce inequalities in the mining industry, if it does not consider and address the additional burdens of the climate crisis.

The climate crisis will affect all Filipinos, but its impacts will be disproportionately worse for the socially and economically disadvantaged who have limited adaptive capacity. As the IPCC reports that climate change will force people from transient to chronic poverty and create new poor,[113] the additional harmful impacts of the mining industry can only increase climate vulnerabilities and gaps. Thus, in the age of climate crisis, an alternative

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[111] § 3.6

[112] SB353, § 118.

[113] Olsson et al., *supra* note 88, at 802-803.

minerals management framework should mitigate the mining industry's contributions to the changing climate, while avoiding the exacerbation of climate vulnerabilities and widening of climate gaps.

Towards this end, we recommend, first and foremost, that the AMMB be anchored in Paris-aligned policies. The National Industrialization Program and the Mineral Management Plan that will provide the framework for the industry should also be formulated to complement a 1.5°C Pathway. To further protect affected communities, more stringent regulations that mandate the pre-screening of climate vulnerabilities and gaps and the rehabilitation of mining areas towards stronger climate resiliency should be adopted. Finally, the AMMB should expound on a more concrete just transition policy that will empower communities as primary partners in the rehabilitation and protection of decommissioned or abandoned mining areas.

We hope that this revisiting of the bill will initiate important discussions on the intersections of mining and climate change towards aiding Congress in its deliberations and enactment of a mining law which will put front and center the rights and interests of the people while responding to the climate crisis. Most importantly, we hope that this will enrich the alternative minerals management framework that many mining-affected communities and civil society organizations have long envisioned and demanded.

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