



LEGAL PROPOSALS FOR IMPROVING EIA PROCEDURES OF  
MYANMAR FOR GEMSTONE MINES: A CASE STUDY OF  
HPAKHANT JADE MINE

BY

SAI LAO KORN KHUR

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF BUSINESS LAWS (ENGLISH PROGRAM)  
FACULTY OF LAW  
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## ABSTRACT

The Environmental Impact Assessment (EIA) is a mechanism that is used to identify, evaluate, predict and protect the environment, ecology, biodiversity, human well-beings, socio-economic, cultures, etc., ensuring all the projects that are going to proceed or construct are implemented responsibly, achieving the sustainable development, minimizing and avoiding the adverse impacts by taking the preventive and precautionary measures in implementation of all proposed projects.

To protect the above discussed matters, Myanmar has also enacted EIA law called Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar. However, it has a significant legal loophole in applying on the gemstone mines that are in operating in the same region which lead to the generation of other legal issues. Due to this legal loophole, the EIA under EIAP 2015 could not effectively identify, evaluate, predict the potential adverse impacts and protect the environment, socio-economic, people, cultures, and ecology, etc., of gemstone mines that are in the same region. By looking into Hpakhant Jade Mine from two perspectives, the perspective from the ground condition in Hpakhant, and the legal perspective, it can be concluded that the current EIAP 2015 has a problem. From practical perspective in Hpakhant Jade Mine, 32,000 acres of mines are operated next to the villages; landslides of jade mines are frequent causing hundreds to deaths; damaging houses and some houses are posed to risks of damage; the heavy vehicles transporting wastes of mines by utilizing the local roads passing through villages causing ground crack

damaging houses and causing air pollution; and the undisciplined discharges of wasted slid into a river which is a major water source causing water pollution. Besides, there are other social problems arisen directly or indirectly from jade mines, the illegal prostitution, the widespread of drugs and the increasing rate of drug users, and the child labors.

By looking from the legal perspective, the current Environmental Impact Assessment Procedures (EIAP) 2015 allows the jade mines to conduct Initial Environmental Examination (IEE) which merely covers in the small scope and it could identify, predict the potential adverse impacts and protect the social and environmental matters.

Thus, in order to effectively mitigate and minimize the adverse impacts and protect the social and environmental matters in the sector of jade mine operations, the EIAP of Myanmar should be revised to explicitly authorize to conduct EIA for the open-pit mines that could cause significant harms to ecosystems, air and water qualities, forest, human well-beings, and socio-economic.

**Keywords:** Environmental Impact Assessment (EIA), Environmental Impact Assessment (EIA) of Myanmar, Jade Mines in Myanmar, Hpakhant Jade Mine

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## LIST OF ABBREVIATIONS

<b>Symbols/Abbreviations</b>	<b>Terms</b>
CSOs	Civil Society Organizations
EMP	Environmental Management Plan
ECC	Environmental Compliance Certificate
ECD	Environmental Conservation Department
EIA	Environmental Impact Assessment
EIAP	Environmental Impact Assessment Procedures
ECL	Environmental Conversation Law
ECR	Environmental Conversation Rules
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
IEE	Initial Environmental Examination
MML	Myanmar Mining Law
MGL	Myanmar Gemstone Law
MONREC	Ministry of Natural Resources and Environmental Conservation
MECF	Ministry of Environmental Conservation and Forestry
NGOs	Non-Government Organizations
PAPs	People Affected Persons
PPP	Policy, Plan and Programme
SPDC	State Peace and Development Council
SEA	Strategic Environmental Assessment
TOR	Terms of Reference
UNEP	United Nations Environmental Programme
UNCED	United Nations Conference on Environment and Development Conference
UNGA	United Nations General Assembly

## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of the Study and Issue

The environment is the source of life for all living things. As human beings, we all rely on oxygen, which is actually provided by trees to meet the oxygen needs of our bodies. Similarly, all the other living things also rely on the environment to preserve their lives. That is the reason why it is important to preserve the balance of the ecosystem. As human beings evolve to the status of the modernization and industrialization era, we are even more trying in every possible way to utilize all the resources available from the environment. Due to the significant environmental degradation that directly and indirectly affects our lives, we, the people, are also trying in every possible way to minimize and protect the environment. If we look back into the history of environmental protection, one of the remarkable successes of human beings is the Rio Declaration 1992. From then on, we, the international communities, tried to adopt sustainable development: the balance between environmental protection, economic growth and social inclusion.<sup>1</sup> Nowadays, to be able to achieve the sustainable development goals, the application of Environmental Impact Assessment (EIA) is used because EIA assessment is a tool that could be used to identify and predict the potential impacts on social and environment.

The Environmental Impact Assessment (EIA) is “an essential tool for promoting sustainable development, protecting the environment, and ensuring that development projects are implemented responsibly.”<sup>2</sup> It is a process that is commonly described by scholars as a full impact assessment of a proposed project or a planned activity that could potentially generate consequential effects on the

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<sup>1</sup> Sustainable Development Commission, ‘What is Sustainable Development’ <<https://www.sd-commission.org.uk/pages/what-is-sustainable-development.html>> accessed 5 June 2025

<sup>2</sup> Suchandra Mukherjee, ‘What Are the Stages of Environmental Impact Assessment’ (Corpbiz, 28 March 2023) <<https://corpbiz.io/learning/what-are-the-stages-of-environmental-impact-assessment/#:~:text=The%20stages%20of%20environmental%20impact%20assessment%20involve%20screening%2C%20scoping%2C%20preparing,to%20each%20of%20these%20stages.>>> accessed 17 September 2023

environment, ecology, biodiversity, water, air and vegetation etc.<sup>3</sup> It is a useful mechanism that has been used to identify, predict and evaluate the environmental, cultural, human well-being, socioeconomic and other impacts of the project therein that will likely to generate the adverse effects to the aforesaid matters and define the mitigation actions to decrease the adverse impacts or to eliminate the potential risks but also to provide positive contributions to the aforesaid matters as well.<sup>4</sup> It takes into account of the potential consequences of the aforesaid matters in the whole stages such as the “planning, design, decision-making and implementation stages”<sup>5</sup> of that proposed or planned project.

Furthermore, Environmental Impact Assessment (EIA) can be seen as an information-gathering activity as well because it provides the essential information such as the risks, impacts and mitigation actions of the whole project lifecycle from the initial stage to the closure stage to the relevant decision-makers in order for them to be able to fully inform when approving a project.<sup>6</sup> The application of EIA is conducted in a wide variety of sectors such as mining, building of infrastructures, tourism, manufacturing, agriculture, and other large scales projects etc.

Under the jurisdiction of Myanmar, there is an Environmental Impact Assessment Law called “Environmental Impact Assessment Procedures (EIAP) 2015”. It is a mandatory regulation applying to all the proposed development projects especially those proposed projects that could generate significant adverse impacts to the environment.

The current Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar has one significant legal loophole in applying to the proposed gemstone mines that are located in the same region consequence to the generation of another legal issue – the violation of environmental procedural rights. Additionally, EIAP 2015 also has another legal loophole – the legal ambiguous in the stage of determination

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<sup>3</sup> International Institute for Sustainable Development, ‘EIA: What, Why and When’ (IISD, 23 October 2020) <<https://www.iisd.org/learning/eia/eia-essentials/what-why-when/>> accessed 17 September 2023

<sup>4</sup> Angus Morrison-Saunders and Jos Arts, *Assessing Impact: Handbook of EIA and SEA Follow-Up* (1<sup>st</sup> edn, Earthscan, 2004) 1

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

the type of imposed assessment onto the gemstone mines by the relevant authorities where it could lead to the potential bias or corruption in their decision-making.

Generally, the gemstone mines are open-pit mines. The usual operations of these mines usually involve the use of explosive materials that could cause harms and release intoxicating substances to the environment<sup>7</sup>. Additionally, the heavy vehicles are used in excavating through the into the ground on a large scale, destroying soil quality, generating soil erosion, contaminating the soil and water, damaging the soil structure, and disrupting the microbial communities. This would lead to a long-term impact on soil fertility and the well-being of the ecosystem.<sup>8</sup> To these types of proposed mines that are located in the same region, it should impose Environmental Impact Assessment (EIA). In contrast, it imposes an Initial Environmental Examination (IEE).

According to EIAP 2015, all the mining of ferrous, non-ferrous metal, precious metal ore, and precious stones that are below 50 acres in areas or below 100,000 tons of production per year required to be conducted with IEE, and the mining areas that are 50 acres and above, or 100,000 tons of productions and above must be conducted with EIA.<sup>9</sup>

The relevant authorities will determine which environmental assessment – EIA or IEE to impose on the proposed gemstone mines.<sup>10</sup> If those mines are not protected areas,<sup>11</sup> the relevant authority will impose IEE as the assessment to be conducted. The criteria used in the determination of the imposed assessment based on the measurement of weights and area seem to be appropriate and systematic. However, when they are imposing on to the proposed gemstone mines where they are permitted to 5 acres in maximum,<sup>12</sup> this leads to all these gemstone mines to conduct with IEE. There are no problems if these mines are below 50 acres as stipulates in

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<sup>7</sup> Tracey Temple, Melissa Ladyman, and Roly Evans, 'Guide to Explosive Ordnance Pollution of The Environment', (GICHD 2021) 8-15

<sup>8</sup> Shamsunahar Setu, and Vladimir Strezov, 'Impacts of Non-Ferrous Metal Mining on Soil Heavy Metal Pollution and Risk Assessment' (2019) ELSEVIER 1

<sup>9</sup> Environmental Impact Assessment Procedure 2015, Annex 1, No. 135

<sup>10</sup> EIAP 2015, Annex 1, No. 135

<sup>11</sup> EIAP 2015, S25 and S28.

<sup>12</sup> EIAP 2015, S2(O)

EIAP 2015.<sup>13</sup> However, there would be problems if the combination of these mines are more than 50 acres and are located in the same region because these could generate severe harms to the environment.

Currently, EIAP 2015 fails to consider the gemstone mines that are below 50 acres and operating next to each other forming into a mega mine. This is happening in Hapkhant Jade Mine where the total of all mines is up to 32,000 acres.<sup>14</sup> According to EIAP 2015, some gemstone mines among 32,000 acres are permitted to operate with IEE instead of EIA. This could lead to the limitation of accessible information, insufficient prediction of impacts, and ineffective mitigation measures. Moreover, from the perspective of people participation in EIA procedures, due the limitation of accessible information, this will affect people's opinions, suggestions and decisions as the received insufficient information through IEE would influence on them, and this would generate the environmental injustice for the people.

To demonstrate clearly how a mega mine is formed, it is required to discuss the governing laws of mining. Under the jurisdiction of Myanmar, the mining laws are categorized into two separate laws; (1) The Myanmar Mining Law (MML) 1994, and (2) Myanmar Gemstone Law (MGL) 2019. MML 1994 governs all the mining of minerals such as “metallic mineral, raw material of industrial minerals and stones obtained from the earth by mining or by other operations. Minerals excavated from the sea, rivers, stream, lakes and soil under water are also included in this term.”<sup>15</sup> On the other hand, MGL 2019 governs all the gemstone mines such as “ruby, sapphire, jade diamond, spinel, peridot, chrysoberyl, tourmaline, danburite, aquamarine, zircon, topaz, phenakite, garnet, moonstone, iolite, apatite, epidote, lapis-lazuli, diopside, amber, fluor spar, nephrite, or stones of gems quality of the quartz group.”<sup>16</sup>

Under MGL 2019, it categorizes the mining sizes into three categories: medium-scale mine where its quota areas are permitted no more than 5 acres<sup>17</sup>; small-scale mine<sup>18</sup> where its quota areas are no more than 3 acres; and artisanal mine, where its

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<sup>13</sup> Ibid.

<sup>14</sup> Natural Resources Governance Institute, ‘Myanmar Jade from Mine to Market’ (2016) 7

<sup>15</sup> Law Amending the Myanmar Mining Law 2015, S2 (b)

<sup>16</sup> Myanmar Gemstones Law 2019, S2 (1)

<sup>17</sup> EIAP 2015, S 2(0)

<sup>18</sup> EIAP 2015, S2 (P)

quota area is no more than 1 acre.<sup>19</sup> Thus, based on the EIAP 2015, all the gemstone mines in Hpakhant are subjected to IEE assessment. Thus, it fails to consider the mining areas as a whole when imposing the type of assessment on to those proposed gemstone mine.

Hpakhant Jade Mine is in the northern part of Myanmar, Kachin State. It is a location producing one of the most valuable and fine jades in the world. IN 2014, the revenues generated was 31 billion USD that was equivalent to 45% of the overall Gross Domestic Product (GDP) of Myanmar. From 2005 to 2014, there were 122.8 billion USD of revenues generated from jade mining.<sup>20</sup> According to the accessible report, there were 32,000 acres of jade mines were permitted to operate in Hpakhant Jade Mine in 2015-16 fiscal year.<sup>21</sup> These mines are still active today and they are located and operated in the area of Hpakhant Township where there are 331,708 of local residents (excluding migrants)<sup>22</sup> living there. Due to the mining operations operating close to where people are living, they generate several environmental and social impacts such as air, water and noise pollutions, dangerous surrounding and unsafe environment, child labor and drug problem, and others, etc.<sup>23</sup> Besides, the landslides are frequent around the mines causing hundreds of deaths every year, destroying houses,<sup>24</sup> and posing the resident's houses that live close to jade mines at risk of being destroyed in landslide during raining season.

The current EIAP 2015 of Myanmar could not effectively tackle the problem where there is the same type of gemstone mines proposed to operate or operated in the same region because it only considers based on each area of mine, or the

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<sup>19</sup> EIAP 2015, S2 (Q)

<sup>20</sup> Global Witness, 'Jade: Myanmar's Biggest Secret' (2015) 23

<sup>21</sup> Ibid.

<sup>22</sup> Coffey and Valentis, 'Hpakhant/Lonkin Gems Tract – Artisanal and Small-Scale Mining Environmental Management Plan' (MGJA 2019) 37

<sup>23</sup> Andrew Nachemson and Eaint Thiri Thu and China Dialogue, 'Danger and Desperation in Myanmar' Jade Mines' Eco-Business (Singapore, 30 November 2020). <<https://www.eco-business.com/news/danger-and-desperation-in-myanmars-jade-mines/>> accessed 5 July 2025

<sup>24</sup> Mizzima, 'Deadly Landslide at Hapkhant Jade Mine Claims at least 11 Lives, Dozens Missing' Mizzima News, (Myanmar, 14 January 2025) <<https://eng.mizzima.com/2025/01/14/18240>> accessed 5 July 2025

production of each mine and imposes the type of assessment. Regarding the area of mine, the maximum permissible is 5 acres. Regarding the production amount, only when the mining is operated, there could be able to know the actual production but the impact assessment should be conducted first before the mine can actually operate. Thus, all the gemstone mines are subjected to IEE unilaterally if they are not within the protected areas. When these mines situated in one area are covering bigger areas in combination, they could generate severe impacts that the IEE assessment could not be able to cover and predict. These could lead to ineffective mitigation measures and environmental management plans. Besides, the rights to information of the people will be violated as they are not able to access the information they are entitled to receive and could mislead them in public consultation.

In Hpakhant, by allowing these gemstone mines formed into a mega mine up to 32,000 acres are granted with IEE assessment, the current EIAP 2015 is one of the sources that contributes in the environmental degradation such as deforestation, water and air pollutions, unbalance ecosystem; social problems such as lack of security, lack of quality of life, escalation of drugs and the increasing population of drug users due to its available easily in the mining areas; and human rights violations such as force relocation, child labor, force to leave behind the properties of the people.

## **1.2 Hypothesis**

The current Environmental Impact Assessment Procedures (EIAP) 2015 does not have the mechanism to handle the open-pit mines that are operated in the same region effectively that lead to severe environmental degradation and social problem. A case study of Hpakhant Jade Mine will be able to provide how EIAP 2015 regulate those open-pit mines that are operated in the same region. This legal loophole led to more severe adverse consequences to the environment, and the people who are living close to those jade mines in Hpakhant. Environmental Impact Assessment Procedures (EIAP) 2015 also has an ambiguous section relating to the decision-making which type of assessments shall be imposed on the gemstone mines. Additionally, this also generate consequences affecting the procedural rights of the people as well. Thus, this research paper will answer whether the current EIAP 2015 is sufficient to

government the gemstone mining and protect the environment and socio-economic of the people, or it requires to amend to strengthen its effectiveness governing the gemstone mining that have potential to generate severe impacts.

### **1.3 Objective of Study**

- 1.3.1 To investigate the concept of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) in the international context and the legal framework of Environmental Protection and Environmental Impact Assessment Procedure (EIAP) 2015 of Myanmar.
- 1.3.2 To examine and analyze laws and legal loopholes concerning IEE and EIA regarding the size of gemstone mining in Myanmar.
- 1.3.3 To investigate the legal issue of Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar relating to the Gemstone Mines that are located and operated in the same region, and Hpakhant Jade Mine.
- 1.3.4 To suggest the practical solutions for the amendment of EIAP 2015 of Myanmar.

### **1.4 Scope of Study**

The scope of study of this paper will focus on the general concept of Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) of the international law context, the domestic legal frameworks of environmental protection and Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar. As this research paper focuses on the gemstone mines, it will cover several provisions of MGL 2019 concerning the medium-scale and small-scale mines. Moreover, for the to demonstrate the legal issues of EIAP 2015 effectively, this research paper will examine Hpakhant Jade Mine as a case study.

### **1.5 Research Methodology**

This research paper will be carried out with the doctrinal research method where as it will be carried out through the literature review of EIA, analyzing and interpreting of the existing legal materials such as laws, and the applications of IEE,

EIA in in the international context. The materials for conducting this paper will cover book, articles, thesis, journals, online news, scholarly opinions, reports of the organizations, the domestic laws of Myanmar and International laws. The attained facts and information will be used to analyze and demonstrate the legal issue of EIAP 2015 of Myanmar and the potential solutions for the amendment.

### **1.6. Expected Result**

This research paper aims to provide general useful information relating to the concept of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) in the international law context, the procedural rights in the international law context, the domestic legal framework of environmental protection and Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar and a case study of Hpakhant Jade Mine. From the case study, it expects to provide the loopholes of EIAP 2015 in handling the mines that are operated in the same region, the latter legal ambiguous of determination of imposed assessments either EIA or IEE by the relevant authorities decide which type of assessments would be imposed on the mines those are in the same region and how these generate the consequences affecting the procedural rights of the people. Significantly, this research paper expects to provide legal solutions for these problems and improve the Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar

## CHAPTER 2

### REVIEW ON THE CONCEPT OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) AND IMPACTS OF JADE MINING OPERATIONS IN HPAKHANT

The environment is known as the visible and non-visible matters in the surroundings that could generate effects on the living things and is constituted of natural or man-made. Before, people defined the environment from the physical aspects such as land, air, water and biotic communities only. However, due to the development of research and technological advancement, human beings define the environment with a wider range and covering the fields of the social, economic and political aspects. There are three components of the environment (i) the physical component, (ii) the biological components and (iii) the social components.<sup>25</sup>

Everywhere on the planet, all species live together and depend on one another. Every living thing, including human beings, are involved in these complex networks of interdependent relationships, which are called ecosystems. Prof. E. O Wilson said that all species, including human beings on this planet are living and interdepend with each other, forming into various ecosystems with different and complex networks of relationships. Through the processes of the cycle of ecosystems, they clean polluted water into drinkable water, purify the polluted air, maintain the balance of weather and regulate the climate, generate the recycling processes for food sources for living things.<sup>26</sup>

We, as human beings rely on substances available from the environment for instance, such as oxygen by absorbing into the bloodstream for the correct functioning of human body's organs, and tissues; food supplies by consuming to preserve lives; other tangible and intangible substances relied for human's well-being; and utilization them for developments in every sector, i.e., infrastructure development, technological development, and economic development, etc. Besides, though there

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<sup>25</sup> Saleha Jamal, 'Concepts and Components of Environment' <<https://ebooks.inflibnet.ac.in/geop08/chapter/chapter-1/>> accessed 28 May 2022

<sup>26</sup> European Commission, 'Why Do We Need to Protect Biodiversity?' <[https://ec.europa.eu/environment/nature/biodiversity/intro/index\\_en.htm](https://ec.europa.eu/environment/nature/biodiversity/intro/index_en.htm)> accessed 28 May 2022

are some natural resources can be renewable and regenerated but, however, there are other natural resources that could be exhausted. Thus, in the utilization of natural resources, there must be a proceeding with care to sustain the environment in carrying out any development proceedings. It is very much significant to preserve the balance of the ecosystem.

As human beings evolve heading to the direction of more advanced modernization and industrialization era, we are even more trying in every possible way to utilize all the resources available from the environment. These lead to significant environmental degradation, which directly and indirectly affects our lives. We are also trying in every possible way to minimize and protect the environment.

The destruction of the ecosystems could lead to a shortage of food and water due to the destroyed supply chains, climate change, frequent natural disasters such as droughts, earthquakes, increasing flood rate, loss of biodiversity, high rate of pollution leading to health problems and increased global temperature. Results from the destroyed ecosystem also affect human beings. That is why the application of the environment becomes a big concern both in the international and domestic contexts. Therefore, it is significant to protect the environment in order to keep us human beings safe.

The environmental destruction could generate adverse impacts that could harm people. By looking at this issue, it can be seen that there is a significant relationship between the environment and human beings and the significant role of the environment for the survival of human beings. If we look back into the history of environmental protection at international context, the environmental issue was raised and recognized as one of the major issues by the international communities in the 1972 of United Nations Conference on the Human Environment in Stockholm. This convention highlighted the significant of environment for human beings,<sup>27</sup> and came up with the “Stockholm Declaration and Action Plan for the Human Environment,” laid-downed 17 Principles stating how the environmental protection and the improvement of human environment was the major issue to protect the interest of people well-being and economic development of all countries in the world.

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<sup>27</sup> United Nation, ‘United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm’ <<https://www.un.org/en/conferences/environment/stockholm1972>> accessed 21 March 2025

Additionally, it marked that it was the duty of all governments to carry out the environmental protection and environmental improvement. From this conference, though there was no application of Environmental Impact Assessment (EIA) in the discussion but however, there was the implicit support of the idea of the assessment of Environmental impacts from the 26 Principles from the Stockholm Declaration and in its Action Plan.<sup>28</sup>

Then, after 20 years from Stockholm Conference 1972 in Sweden, the United Nations Conference on Environment and Development (UNCED) was held with the attendants such as the Political Leaders, Diplomats, Representatives of Non-Governmental Organizations (NGOs) and Media, and Scientists from 179 countries in Rio de Janeiro, Brazil in 1992. In that conference, with the purpose of reaffirmation of Stockholm Declaration 1972, a set of principles was adopted as the guidelines for the future development. “The Rio Declaration states that the only way to have long-term economic progress is to link it with environmental protection.”<sup>29</sup> In the Conference, it highlighted the relationship between the environmental, social and economic factors, and these factors are intertwined or interdependent on each other and evolved together. In order one of the factors to be able to succeed, it requires the other two factors to be sustainable over time.<sup>30</sup> Therefore, the principle of sustainable development was adopted in the conference.

Sustainable development is the principle laid down to seek the balance between the environmental, social and economic dimensions of development in the longer term and it is a global perspective. It considers the consequences of the current period activities that could generate impacts to human welfare in the future and recognizes the role of civil society to achieve viable solutions.<sup>31</sup> According to United

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<sup>28</sup> UN Doc A/CONF.48/14/Rev.1

<sup>29</sup> Culturerights, “Rio Declaration on Environment and Development 1992”, <<https://culturalrights.net/en/documentos.php?c=18&p=195#:~:text=The%20Declaration%20adopted%20a%20set,to%20safeguard%20the%20common%20environment.>> accessed 27 November 2023

<sup>30</sup> United Nations, ‘United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992’ <<https://www.un.org/en/conferences/environment/rio1992>> accessed 27 November 2023

<sup>31</sup> Anmol Sahu, ‘OECD Work on: Sustainable Development’ (2011) 1(1) SCRIBD <<https://www.scribd.com/document/413523379/47445613>> accessed 27 November 2023

Nations General Assembly (UNGA) Resolution 70/1 of 2015 relating to sustainable development, there are total of (17) goals: “ensure healthy lives and promote well-being for all at all ages, take urgent action to combat climate change and its impacts, protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss, and others.”<sup>32</sup>

It is now clear that the environment and human rights are significantly reliant on each other. The environmental degradation could generate adverse impacts to human beings, the quality of life and produce harmful risks which could threaten to human beings for their enjoyment of their rights such as the rights to life, housing, health, property, social and cultural rights.<sup>33</sup> In order for human to fully enjoy their rights, the safe environment, fresh air, clean and water, healthy ecosystems are required. On the other hand, the destruction of the environment is otherwise potentially could generate harms to human beings and this is a violation of human rights.<sup>34</sup> Therefore, the domestic laws of a country which directly apply and govern to it citizens must ensures the safety, clean, healthy environment and sustainability whereas on the other hand also protecting the rights of the people. Due to its significant context, the application of human rights has been seriously considered in developing the environmental regulations to protect human rights internationally and domestically. That is why, we try to adopt sustainable development: the balance between environmental protection, economic growth and social inclusion. Nowadays, to be able to achieve the sustainable development goals, the application of Environmental Impact Assessment (EIA) is used because EIA assessment is a tool that could be used to identify and predict the potential impacts of social and environment.

The Environmental Impact Assessment (EIA) is “an essential tool for promoting sustainable development, protecting the environment, and ensuring that

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<sup>32</sup> Department of Economic and Social Affairs, ‘Transforming Our World: the 2030 Agenda for Sustainable Development’ (UN, 25 September 2015) < <https://sdgs.un.org/2030agenda>> accessed 27 November 2023

<sup>33</sup> Ibid.

<sup>34</sup> Ibid.

development projects are implemented responsibly.”<sup>35</sup> It is a process that is commonly described by scholars as a full impact assessment of a proposed project or a planned activity that could potentially generate consequent effects on the environment, ecology, biodiversity, water, air and vegetation, etc.<sup>36</sup> It is a useful mechanism that has been used to identify, predict and evaluate the environmental, cultural, human well-being, socioeconomic and other impacts of the project therein that will likely to generate the adverse effects to the aforesaid matters and define the mitigation actions to decrease the adverse impacts or to eliminate the potential risks but also to provide positive contributions to the aforesaid matters as well.<sup>37</sup> It takes into account of the potential consequences of the aforesaid matters in the whole stages such as the “planning, design, decision-making and implementation stages”<sup>38</sup> of the proposed or planned project.

Furthermore, Environmental Impact Assessment (EIA) can be seen as an information-gathering activity as well because it provides the essential information such as the risks, impacts and mitigation actions of the whole project lifecycle from the initial stage to the closure stage to the relevant decision-makers for them to be able to be fully informed when approving a project. The application of EIA is conducted in a wide variety of sectors such as mining, building of infrastructures, tourism, manufacturing, agriculture, and other large-scale projects etc.<sup>39</sup>

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<sup>35</sup> Suchandra Mukherjee, ‘What Are the Stages of Environmental Impact Assessment’, (Corpbiz, 28 March 2023) <[<sup>36</sup> International Institute for Sustainable Development, ‘EIA: What, Why and When’ \(IISD, 23 October 2020\) <<https://www.iisd.org/learning/eia/eia-essentials/what-why-when/>> accessed 17 September 2023](https://corpbiz.io/learning/what-are-the-stages-of-environmental-impact-assessment/#:~:text=The%20stages%20of%20environmental%20impact%20assessment%20involve%20screening%2C%20scoping%2C%20preparing,to%20each%20of%20these%20stages.></a> accessed 17 September 2023</p></div><div data-bbox=)

<sup>37</sup> Angus Morrison-Saunders and Jos Arts, *Assessing Impact: Handbook of EIA and SEA Follow-Up* (1<sup>st</sup> edn, Earthscan, 2004) 1

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

## 2.1 Environmental Impact Assessment (EIA)

The Environmental Impact Assessment (EIA) is “an essential tool for promoting sustainable development, protecting the environment, and ensuring that development projects are implemented with responsibly.”<sup>40</sup> It is a process that is commonly described by scholars as a full impact assessment of a proposed project or an economic development activity that could potentially generate consequent effects onto the environment, ecology, biodiversity, water, air and vegetation etc.<sup>41</sup> It is a useful mechanism that has been used to identify, evaluate and predict the environmental, cultural, human well-being, socioeconomic and other impacts of the project therein that will likely to generate the adverse effects to the aforesaid matters and define the mitigation actions to decrease the adverse impacts or to eliminate the potential risks but also to provide positive contributions to the aforesaid matters as well.<sup>42</sup> It takes into account of the potential consequences of the aforesaid matters in the whole stages such as the “planning, design, decision-making and implementation stages”<sup>43</sup> of the proposed or planned project.

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<sup>42</sup> Jos Arts, Angus Morrison-Saunders, *Assessing Impact: Handbook of EIA and SEA Follow-Up* (First published by Earthscan in the UK and USA in 2004) 1

<sup>43</sup> Ibid.

mining, building of infrastructures, tourism, manufacturing, agriculture, and other large scales projects etc.<sup>44</sup>

## 2.2 The Linkage Between Prevention Principle And Environmental Impact Assessment (EIA) In Environmental Protection

Prevention principle under the context of the environment is a principle that allows the prevention actions to be taken proactively to prevent environmental degradation, to minimize environmental risks, and to prevent long-term costs from an early stage.<sup>45</sup> It is a principle embodying the concept of idea that, instead of taking actions after environmental destruction has occurred, it is better to prevent it by considering preventive actions prior ahead before proceeding with any actions that would cause harm to the environment. Usually, this principle is applied in consideration of environmental policy for the purpose of avoiding or minimizing environmental degradation. This principle prioritizes environmental protection before harm occurred. Another incentive for applying the prevention principle in environmental protection is because of its cost-effectiveness, as it prevents the occurrence of harm to the environment.

This prevention principle was domestically rooted in Germany and Sweden back in the late 20<sup>th</sup> Century. Later on, it was recognized in the international environmental context and adopted in 1972 Stockholm Conference. From the Conference, there were 26 Principles laid down, and among them, there are several principles which based on the idea of Prevention Principle. For example, in Principle 2, it provides that the natural resources of the earth must be well managed, planned and protected for the benefit of all human beings both of the present and future generations. In Principle 5, the use of non-renewable resources of the earth must be well employed without affecting future generations. Additionally, the governments of all states are responsible for the implementation of policies to prevent pollution, safeguard the environment, protect the natural resources from exhaustion and

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<sup>44</sup> Ibid.

<sup>45</sup> European Environment Agency, 'Prevention Principle' <<https://www.eea.europa.eu/help/glossary/eea-glossary/prevention-principle#:~:text=This%20principle%20allows%20action%20to,reaching%20as%20the%20precautionary%20principle.>> accessed 4 February 2025

prevent transboundary environmental adverse impacts or pollution.<sup>46</sup> Moreover, the Action Plan derived from this Conference, it laid down the framework for environmental action, such as Environmental Assessment, Environmental Management, and the Supporting Measures to protect the environment globally.<sup>47</sup>

Rio Declaration 1992, the subsequent Declaration of United Nations Conference on Human Environment stipulates that the state must enact the effective environmental legislation to balance the development growth and exploitation of natural resources without excessively harming the environment,<sup>48</sup> and the states must ensure that all the proposed activities that will cause significantly harms to the environment, there must undertake the Environmental Impact Assessment.<sup>49</sup> These mean that the EIA itself is a preventive instrument composing of the prevention principle to protect the environment.

### **2.3 The Linkage Between Precautionary Principle And Environmental Impact Assessment (EIA) In Environmental Protection**

Similar to the prevention principle, the precautionary principle was developed and utilized in Germany and Sweden before it was adopted internationally in the 1972 Stockholm Conference. Later, it was reaffirmed in the Rio Declaration 1992.<sup>50</sup> This is one of the fundamental concepts of environmental law, providing guidance for making decisions in circumstances and situations in which that could not be able to provide sufficient evidences by scientific prediction or scientific uncertainties of potential environmental harms and risks. This principle will guide the authorities or the stakeholders to consider for taking the preventive measures and preventive actions in case there are of sufficient evidence to avoid serious adverse impacts to

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<sup>46</sup> UN Doc A/CONF.48/14/Rev.1 principle 5

<sup>47</sup> Ibid.

<sup>48</sup> A/ConF.151/26 (Vol. I) Principle 11

<sup>49</sup> A/ConF.151/26 (Vol. I) Principle 17

<sup>50</sup> Jose Felix Pinto-Bazurco, 'The Precautionary Principle' (IISD, 23 October 2020) <<https://www.iisd.org/articles/deep-dive/precautionary-principle>> accessed 5 February 2025

the environment scientifically.<sup>51</sup> This emphasizes the significant role of scientific measurement and prediction in environmental protection.

When looking into the application of Environmental Impact Assessment (EIA), there are screening stage – consideration on the proposed projects required to conduct EIA or not depending on the potential adverse impact that are likely to occur; scoping stage – identifying the key potential risks and environmental harms of both certain and uncertain impacts; impact assessment and mitigation (impact management) stage – evaluating the potential impacts and applying precautionary measure to prevent the underestimated risks or potential harms to the environment, and mitigating by proposing the measure to reduce, or avoid those harms, and come up with alternative solutions to reduce impacts; decision making and monitoring stages – the government authorities evaluate the EIA report and may decline the permission to carry out the proposed projects in case there are insufficient data to ensure the safety of environment. Additionally, the relevant authorities will monitor closely whether the projects are carried out in compliance with laws, regulations, mitigation measures, environmental management plan.<sup>52</sup> These stages of EIA are based on the guidance of the precautionary principle.

#### **2.4 The Integration of Prevention and Precautionary Principles in the Context of Environmental Impact Assessment**

The prevention principle provides the guidance to take preventive measures to avoid the anticipated environmental degradations, risks, and harms before such damages occur. This principle usually deals with foreseeable risks or potential damages. For example, the waste transportation heavy vehicles carrying the extracted wastes from mines are prohibited from using the road that passes through city and villages. This is a preventive measurement because it is foreseeable that if those heavy vehicles with a hundred tons of extracted wastes are allowed to use the road passing through city and villages, there would definitely air pollutions, noise pollution, damaging the road and accidental risks from those heavy vehicles, etc. On the other

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<sup>51</sup> A/ConF.151/26 (Vol. I) Principle 15

<sup>52</sup> Barry Sadler and Mary McCabe, “Environmental Impact Assessment: Training Resource Manual”, (UNEP, 2<sup>nd</sup> edn, 2002) 113-115

hand, the precautionary principle lays down the guidance to take the precautionary measures for the potential adverse effects with scientific uncertainty such as mitigation and compensations for the negative effects impacting on the environment and society even though there are still doubts about the possible occurrence of damages and risks.<sup>53</sup> For instance, there is an open-pit mine operated and there is Acid Mine Drainage. Due to the climate factors, the rain falls onto the exposed rocks containing sulfuric acid flows into the rivers, and sinks into the groundwater. In this kind of scenario, it would be difficult to make the prediction of the exact rate and extent of Acid Mine Drainage as there are various geological and climate factors. The Berkeley Pit Mine in Montana, United States is a good example. Even after several years of the closure of the mine, the contaminated water is still causing harm to the birds and health problems to the residents surrounding the Berkeley Pit.<sup>54</sup>

In Environmental Impact Assessment (EIA) processes, both Prevention and Precautionary Principles are applied in EIA because there are some foreseeable risks and potential damages of the proposed projects. On the other hand, there are also potential adverse impacts that could not be identified by the scientific tools. In this scenario, the precautionary actions must be carried out in conducting of EIA. That is why there are Terms of Reference (TOR), Public Consultations, Prediction of Potential Impacts, Mitigation measures and Environmental Management Plan (EMP) in EIA processes that will be carried out based on the Prevention and Precautionary Principles.

## 2.5 Stages of Environmental Impact Assessment (EIA) Processes

According to the EIA handbook from United Nations Environmental Program, there are 8 stages in EIA process such as the (1) screening, (2) scoping, (3) impact

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<sup>53</sup> ClientEarth Communications, 'What are Environmental Principle' (CE, 12 March 2019) <<https://www.clientearth.org/latest/latest-updates/stories/what-are-environmental-principles/>> accessed 27 November 2023

<sup>54</sup> Deitabase, 'Mitigating the Toxic Remnants of the Berkely Pit Mine' (University of Michigan, 28 May 2024) <<https://limos.engin.umich.edu/deitabase/2024/05/28/berkeley-pit-mine/>> accessed 15 February 2025

assessment and analysis (4) mitigation and impact management, (5) EIA report, (6) reviewing EIA report, (7) decision-making (8) post-decision monitoring.

#### (1) Screening Stage

The screening stage is the first stage that determines whether the proposed projects or particular projects are subjected to conduct EIA, and it the one of the most critical stages. The purpose of this stage is to identify which proposed projects need to conduct EIA and which do not. As it involves a preliminary determination, it requires a certain level of basic information about the proposed projects such as type, the locations and the environmental setting around the projects, and the potential effects that are likely to occur. Depending on the aforesaid information, some projects will be screened out of the scope to conduct the EIA process if they have no or few impacts. Usually, the major proposed projects are required to conduct EIA process because they are considered to induce greater adverse effects to the environment, air and water quality, safety and health of the people, quality of the livelihood of the local community, protected area such as culture heritage, species including endangered species, ecosystem, and biodiversity.<sup>55</sup>

Screening stage lay-downs the important factors for the scoping stage such as the key impacts to be studied and the terms of reference (TOR - sets of guidelines covering scope, methodology and key issues to be addressed issued by the relevant authority for EIA's study)<sup>56</sup> of an EIA.

Regarding how the decisions are made which projects required to conduct EIA or which are not, there are two approaches:

- *“Prescriptive or standardized approach* – the proposed projects subject to or exempt from EIA are defined or listed in legislation and regulations, and

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<sup>55</sup> Ibid.

<sup>56</sup> Saurab Babu, 'Environmental Impact Assessment: Term of Reference' (ECO-INTELLIGENT, 24 September 2016) <<https://eco-intelligent.com/2016/09/24/environmental-impact-assessment-terms-of-reference/#:~:text=A%20TOR%20is%20drawn%20up,aspects%20of%20the%20project%20differently.>> accessed 17 September 2023

- *discretionary or customized approach* – the proposed projects are screened by an individual or case-by-case basis using indicative guidance.”<sup>57</sup>

It can be concluded that the first approach is mandatory by law or regulations to conduct EIA or not, and the second approach is decided by the relevant authority through information of the proposed projects received. After screening through one of the aforesaid approaches, there are several possible outcomes for the proposed projects such as;

- “No study of EIA is required;
- A comprehensive EIA study is required; or
- Further study is necessary to determine the level of EIA required (often called an initial environmental examination [IEE])<sup>58</sup>

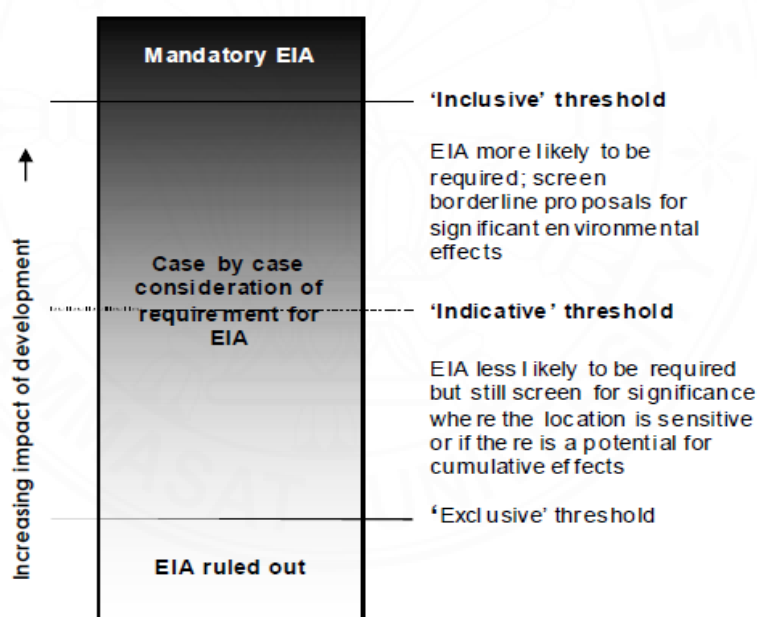


Figure 1: A Framework for Screening

Barry Sadler and Mary McCabe, A Framework of Screening “Environmental Impact Assessment: Training Resource Manual”, (UNEP, 2<sup>nd</sup> edn, 2002) 139

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

## (2) Scoping Stage

Scoping is an important stage in the process of EIA where it identifies and analyzes the important issues that would be covered in the EIA study while it also eliminates those insignificant issues. The purpose of this stage is to analyze and identify the significant issues, necessary information for decision-making, the potential effects and factors required to study in detail, and set up time and space boundaries for EIA study.

After the determination which proposed, projects are subjected to conduct EIA process during screening stage, the issues such as environmental and social impacts, biodiversity, ecosystem and other significant matters including their cumulative effects that shall be included in the study will be identified and decided in this stage.<sup>59</sup>

Regarding the requirements and procedures, different countries may differ from each other. However, in many jurisdictions, they include public involvement in this stage. People who are likely to be affected by the proposed projects directly or who are interested in those projects will have the right to participate in the stage.

There are several public involvement methods that can be used to conduct scoping: “(i) notification/invitation for public comment and written submission, (ii) Consultation with the various stakeholders, (iii) public and community meeting, and (iv) issues workshops and facilitated discussion.”<sup>60</sup>

Public involvement here will be a helpful mechanism for the assurance that there are no overlooked significant issues for the preparation of TOR and in the conduct of EIA study.<sup>61</sup>

## (3) Impact Assessment and Analysis Stage

After the all the issues relating to the proposed projects have been identified and determined which issues would be subjected to EIA study in the scoping stage, the assessment on that projects will be conducted and evaluated in detail such as

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<sup>59</sup> International institute for Sustainable Development, ‘EIA: 7 steps’ <<https://www.iisd.org/learning/eia/eia-7-steps/step-2-scoping/>> accessed 18 September 2023

<sup>60</sup> Barry Sadler and Mary McCabe, “Environmental Impact Assessment: Training Resource Manual”, (UNEP, 2<sup>nd</sup> edn, 2002) 232

<sup>61</sup> Ibid.

the environmental and social impacts that could be occurred<sup>62</sup> to assure that all the direct and indirect cumulative effects will not be overlooked.

The characteristics of the environmental impacts could be varied depending on the type of the proposed projects. Thus, according to Barry Sadler and Mary McCabe mentioned in the EIA handbook, sets of factors such as the effects onto the nature, magnitude of the effects, the location and extent of effects, timing (construction period or decommissioning), duration of the projects, the reversible or irreversible of the impacts, uncertainty of prediction and the significant of the proposed projects in consideration of the impact prediction and decision-making.<sup>63</sup>

Regarding the social impacts, there are four main types of social impacts, such as;

- Demographic impacts: changes occur to the population, an increase or decrease of migration rate, high demand for housing or healthcare services, etc.
- socio-psychological impacts: changes occur such as sense of security, well-being of the people and life's quality, etc.
- community impacts: changes occur to relationships of the people in the society, organization and social structure etc.
- culture impacts: changes occur to the value system, traditions and customs (e.g.: religion, language, fashion or dress).<sup>64</sup>

The assessment of social impacts will cover the aforesaid categories. Usually, the assessment is conducted by specialists. They gather the baseline information of the current environmental and social conditions and others and predict the potential effects such as by comparing before and after such proposed projects are implemented.<sup>65</sup> For example, the assessment includes “qualitative descriptions such as measuring high, medium and low impacts and quantitative descriptions, such as

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<sup>62</sup> International Institute for Sustainable Development, ‘Step 3: Impact Assessment and Mitigation’ <<https://www.iisd.org/learning/eia/eia-7-steps/step-3-impact-assessment-and-mitigation/>> accessed 18 September 2023

<sup>63</sup> ibid

<sup>64</sup> Ibid.

<sup>65</sup> Ibid.

indicating the cubic meter of water withdrawn, sewage produced, and pollutants released.”<sup>66</sup>

#### (4) Mitigation and Impact Management Stage

Mitigation is an EIA process aiming to prevent the potential adverse effects from happening and to ensure that such adverse effects fall within the range of an acceptable level. The objectives of mitigation are to look for better alternatives to reduce the adverse effects, to minimize, avoid or remedy the adverse effects from the projects, to enhance the proposed projects that generate more benefits to the environment and society and to make sure the adverse effects are at an acceptable degree.<sup>67</sup>

Based on the predicted adverse effects that are likely to occur, the mitigation plans for the proposed projects will be determined. The mitigation plans will be implemented through care in the impact management processes in order to ensure that the mitigation plans or measures are well-implemented, and to monitor the effectiveness of such measures.<sup>68</sup>

#### (5) EIA Report

After having the mitigation and impact management plan, the EIA report will be produced by the project proponents. The report shall include all the project components, project description, the result of impact assessments on the environment and social, the proposed mitigation measures, the impacts management plan (Environment and Social impacts) and the post-decision monitoring plan. Apart from the aforesaid matters, the results of public consultations and their inputs must be included in the reports as well. All the information gathered from the previous stages is analyzed and combined into a comprehensive report in compliance with the

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<sup>66</sup> Ibid.

<sup>67</sup> Lauren Tinker, Dick Cobb, Alan Bond & Mat Cashmore, ‘Impact Mitigation in Environmental Impact assessment: paper promises or the basis of Consent Conditions?’ (2005) 23 IAPA 265

<sup>68</sup> Ibid.

stipulations the Term of Reference (TOR) produced by the relevant authority for guidelines for the EIA study.<sup>69</sup>

According to Tuija Hilding-Rydevik's research report, an EIA is considered to be an effective one if (i) the collected information is contributed and helpful to decision-making, and (ii) the predictions of impact management are accurate and effective.<sup>70</sup> Therefore, in order to be a qualified EIA report, it must achieve the aforesaid criteria.

Moreover, reporting EIA is a process of conveying the significant results of the assessments, including the proposed mitigation measures for the decision-making. Therefore, a report should be completed, clear factors and easy to understand.

#### (6) Reviewing EIA Report

After the EIA reports are done writing in the previous stages, it will be the stage of reviewing such reports. As this is the pre-decision review for decision-making whether to grant the permissions to conduct the proposed projects, this stage is considered 'quality control and assurance' under the EIA procedures. Therefore, it is a requirement to make sure all the stakeholders – relevant government agencies or committees, public consultation and others, by the jurisdiction of such EIA reports are subjected to, must be able to access the EIA reports of the proposed projects.<sup>71</sup>

Different jurisdictions may have different elements on how to review the EIA report and arrangements. However, the common elements are – the EIA reports must address the TOR guidelines issued by the relevant authority, be adequate necessary information of all proposed project components, impacts and proposed mitigation measures, such information must be correct and technically sound, cover the views of the affected parties and opinions of the interested persons, and significantly, such EIA reports must be presented clearly and understandable to the public and decision-makers.<sup>72</sup>

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<sup>69</sup> International Institute of Sustainable Development, 'Step 5: The EIA Report' <<https://www.iisd.org/learning/eia/eia-7-steps/step-5-the-eia-report/>> accessed 18 September 2023

<sup>70</sup> Tuija Hilding-Rydevik, 'Environmental Assessment – Effectiveness, Quality and Success' (2006) RG 77

<sup>71</sup> Ibid

<sup>72</sup> Ibid.

Tuija Hilding-Rydevik also mentioned that to create fairness in EIA process, all the stakeholders must have “equal opportunity to influence the decision before it is made and people directly affected by projects must have equal access to compensation”.<sup>73</sup> That is why the review of EIA report stage includes not only the relevant authority but also other government agencies, affected parties and other people who are interested in EIA reports of the proposed projects.

#### (7) Decision-Making Stage

This stage is the stage that decides whether the proposed projects will be granted the permission or a license to implement or not. The relevant authority will weigh the costs, benefits and make trading-offs based on several considerations<sup>74</sup> such as environmental and social impacts, the mitigation measures, the environmental management plan, and public opinions and suggestions received during the public consultations.<sup>75</sup> On the other hand, the proposed projects are usually concerned with the economic development of the country.

UNEP suggests that the decision-makers should consider the sustainable commitments in Rio Declaration on Environment and Development, 1992, exercise the precautionary principle in addressing the impacts of the proposed projects, should adopt a participatory approach and more open approach into decision-making.

After carefully considering based on several factors in EIA reports, the relevant authority will decide whether to approve the proposed projects. For those projects that do not qualify will be approved and asked to redesign for resubmission again. For those projects that qualify will be approved and granting the permission for the implementation of such proposed projects.

#### (8) Post-Decision Monitoring and Follow-up Stage

Those approved projects through EIA process are subject to follow-up during their implementation or operation of the projects. The relevant authority will monitor

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<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

<sup>75</sup> International Institute of Sustainable Development, ‘Step 7: Reviewing and Licensing’, <<https://www.iisd.org/learning/eia/eia-7-steps/step-6-review-and-licensing/>> accessed 18 September 2023

the ongoing process by collecting data and analyzing those data to determine whether such implementations or operations are complying with the terms such in the approved EIA reports. The objectives of this stage are to:

- make sure that the implemented r operational of the approved projects are satisfied;
- be able to handle and manage when there are unforeseen changes and unanticipated impact occurrences;
- scrutinize that the impacts occur within the permitted limits or the predicted scope;
- make sure that the projects are implemented with good practice to maximize the environmental and social benefits; and
- get more experience for improving EIA process and practice.<sup>76</sup>

In conclusion, EIA process is a process of gathering of information through the impact assessments from various categories such as environment and social, people and predicting the potential effects, create mitigation measures and environmental management plan for the decision-maker to be able know all the necessary information before making the decisions for the approval of the projects. It is a tool that promotes sustainable development, used to protect society and the environment, and ensure that development projects are conducted with care. Thus, EIA process is one application of a precautionary principle. Moreover, there is the element of public involvement in the process of EIA. From the perspective of human rights, EIA process provides the procedural right to the people who are affected by the projects or the people who are interested in the EIA process to be able to participate and provide their views. Thus, EIA process is also the application exercising the participatory approach.

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<sup>76</sup> Ibid.

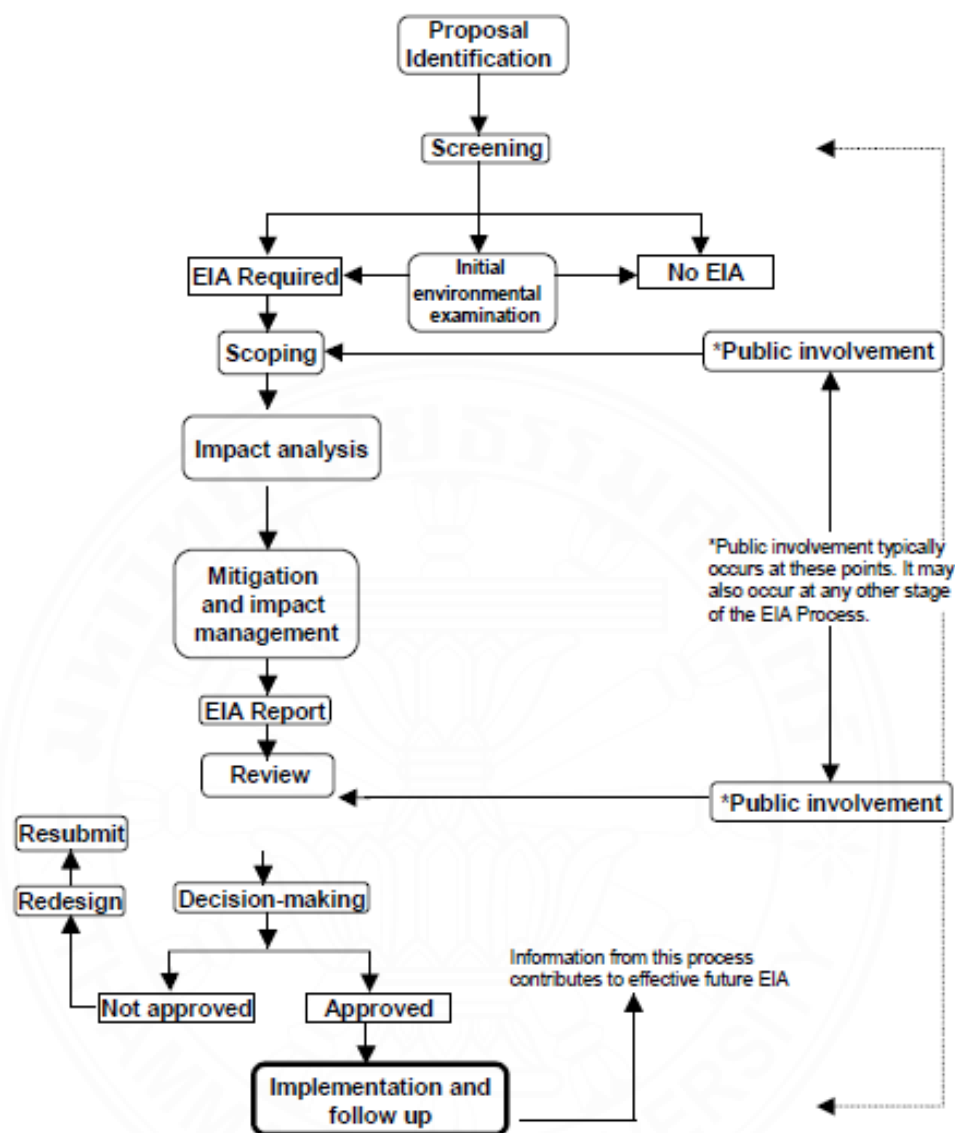


Figure 2: EIA Framework

Barry Sadler and Mary McCabe, A Framework of Screening “Environmental Impact Assessment: Training Resource Manual”, (UNEP, 2<sup>nd</sup> edn, 2002)

## 2.6 Initial Environmental Examination (IEE)

The Initial Environmental Examination (IEE) is a preliminary assessment of EIA as discussed in the screening stage of EIA previously. It is an instrument assessing the potential impacts of a proposed project or development activity. “It is carried out to determine whether the impacts of a proposed project are significant or not, and should thus entail all the possible environmental impacts and the intensity of such

impacts.”<sup>77</sup> Usually, the proposed projects that generate fewer adverse effects are deemed to conduct the IEE process. Depending on the seriousness of the potential impacts, some proposed projects will get approval to implement the projects with the IEE process. However, even though IEE has been carried out, some proposed projects will still be subjected to conduct further EIA based on the degree of consequences of the implemented projects will likely produce.<sup>78</sup> This means that IEE is an important mechanism in determining the potential impacts warrant conducting EIA are necessary. IF the conduct of EIA is not necessary or needed, then the report of IEE will be considered as the final environmental assessment report for the proposed projects.<sup>79</sup> Thus, it can be concluded that IEE is a small-scale impact assessment with low cost compared with EIA and is also an initial impact assessment for EIA process.

The purpose or objectives of IEE is to gather and provide the information of the “environmental setting of the project area, identify impact of the project activities merely on bio-physical, socio-economic, and cultural environment of the project, recommend site specific environmental mitigation measure, and prepare of the project, recommend site specific environmental mitigation measures, and prepare an environmental management plan,”<sup>80</sup> and addresses the concern of the local community In carrying out the assessment of IEE, it can be used the existing and available data for the assessment. It is not required to assess into detail of each issue like EIA. That is why IEE is considered to be a low-cost assessment.

Depending on the jurisdiction, the EIA systems are different. In some jurisdictions, depending on the type, size, number of productions per specific periods, the laws already decide what applications of impact assessments between EIA and IEE must be carried out. For those proposed projects that could not be distinguished

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<sup>77</sup> Anjalee Udawatta and Lakshitha Edrisinghe, ‘The IEE Process: Overcoming Shortcomings & Effective Implementation’ (Justice for Nature, August 3, 2021) <<https://efl.lk/the-ieee-process-overcoming-shortcomings-effective-implementation/>> accessed 19 September 2023

<sup>78</sup> Id.

<sup>79</sup> GCL International, ‘Initial Environmental Examination’, <<https://www.gcl.uk/environment/initial-environmental-examination-ieee/>> accessed 19 September 2023

<sup>80</sup> Department of Finance of Meghalaya, ‘IND: Supporting Human Capital Development in Meghalaya’ (GM, 2013) 2

what type of assessment it must be conducted during the screening stage, the application of IEE will be conducted first. Then, based on the result of the IEE report, the relevant authorities will determine whether to warrant EIA process or recognize as the final impact assessment of the proposed projects.

## 2.7 Comparison between EIA and IEE Processes

By comparing the EIA and IEE processes, EIA process is required to assess into deeper of each issue such as the environmental impacts – the nature (forests, mountains, rivers, biodiversity, ecosystem, air and water quality and others), magnitude of the effects, the location and extent of effects, timing (construction period or decommissioning), duration of the projects, the reversible or irreversible of the impacts, uncertainty of prediction and the significant of the proposed projects, the social impacts - demographic impact, socio-psychological impacts, community impacts, culture impacts.<sup>81</sup> Based on the result of the assessment of the aforesaid impacts, the mitigation measures and environmental management plan (EMP) must also be well prepared to minimize those impacts. Due to the scope of study of EIA process covering wider areas, takes a longer time to investigate the potential impacts and more precise into the details of each category of scope, the result of the mitigation measures and Environmental Management (EMP) will be more comprehensive and effective than IEE process.<sup>82</sup>

Additionally, through EIA process, people who would be directly affected by the proposed projects or the interested parties could be able to access to the comprehensive information of the impacts and the mitigation plans of such projects. According to the information they received, they could effectively be able to participate, provide opinions, suggestions and object the projects if they were exposed to high risks of various categories.

On the other hand, IEE process is a small scale assessment where it can be used the existing data, and go into the field to collect baseline data for assessing “the environmental setting of the project area, identify impact of the project activities

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<sup>81</sup> Ibid.

<sup>82</sup> Mehreen Khan AND Muhammad Nwawz Ghaudhry, ‘Environmental Impact Assessment Review’ (2021) ELSEVIER 1

merely on bio-physical, socio-economic, and cultural environment of the project, recommend site specific environmental mitigation measure, and prepare of the project, recommend site specific environmental mitigation measures, and prepare an environmental management plan.”<sup>83</sup> As it is not conducted into depth like EIA process, there will be consequences to the limitation of accessible information of the potential impacts and relatively to the insufficient or unqualified mitigation measures and the environmental management plans (EMP). Moreover, limitation on the accessibility of information will influence the outcomes of the results from the public consultations as well, which could lead to the conflicts between the interested parties regarding the proposed projects. That is why it is required to conduct IEE first for those projects that could not predict their consequences and the potential impacts.

## **2.8 The Aspect of Procedural Rights in the International Context and Environmental Impact Assessment (EIA)**

In environmental law context, apart from the substantive rights, there is another type of rights called procedural rights that empower the communities as a whole or individuals to have the right to access to environmental information, right to access to public participation in environmental activities, and right to access to justice in case of violation of environmental law causing harms to the concerned citizens.<sup>84</sup> In the international environmental law context of procedural rights, they are stipulated in the Rio Declaration 1992 laid down the fundamental principle of procedural rights<sup>85</sup> serving as the guidance to implementation of national laws, international covenants, and Aarhus Convention 1998, a legally binding document to all ratified states that was entered into force on October 30, 2001<sup>86</sup> ensuring that there are transparency and accountability in the governance of environment at the national and international level.

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<sup>83</sup> Ibid.

<sup>84</sup> Lejla Zilic, ‘Procedural Human Rights in Environmental Cases – Principles Established in The Practice of The European Court of Human Rights’ (2020) RG 53

<sup>85</sup> UNGA UN Doc A/CONF.151/26/Rev.1, (Vol. I) Principle 10

<sup>86</sup> UNTS 447, 38 ILM 517 (1998)

The principle 10 of the Rio Declaration serves as the fundamental guidance for the states to adopt the procedural rights into their environmental protection law.<sup>87</sup> That is why, many countries have adopted the concept of procedural rights in their Environmental Impact Assessment law or Procedures. The procedural rights are the right to access to environmental information allowing the citizens to be informed regarding the information of any projects that would cause harms to the environment and them directly or indirectly, and incentivizes them to participate in the decision-making and policies-making processes to protect their human environment; the right to access to public participation allow the people to participate and voicing out their opinions and recommendations in addressing the environmental problems and environmental policies-making of the governments meet the need of the communities; and the right to access to justice is the rights that grant the people the ability to enforce their rights to make the concerning government authorities and polluters accountable for the environmental degradations or harms.<sup>88</sup>

Aarhus Convention 1998 was a subsequent treaty of Rio Declaration 1992. It was developed by referencing Principle 10 of Rio Declaration 1992 and developed into a legally binding document for all the ratified member states. It lays down the mandatory for the member states to preserve, protect and ensure the sustainable and environmentally friendly development. It recognizes the right to enjoy a healthy environment and the duty to protect the environment. Thus, the member states must recognize and legally allow their citizens as individuals or organizations to have the right to access to information, participate in decision-making and seek justice concerning the environmental matters.

In the development of Environmental Impact Assessment (EIA) law or procedures, the Rio Declaration 1992 serves as the soft law guiding the member states to develop their own domestic EIA law with the procedural rights – right to access of

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<sup>87</sup> Gururaj Devarhubli and Alaukik Shrivastav, 'The advancement of Environmental Procedural Rights in India: an analysis of Issues, problem and Prospects' (2024) 10 GSS 1

<sup>88</sup> United Nations Environmental Program, 'Principle 10' <<https://www.unep.org/civil-society-engagement/partnerships/principle-10>> accessed 18 February 2025

information, the right to participate in public consultation and in decision-making, and the right to access to justice relating to environmental issues.<sup>89</sup>

### **2.8.1 Right to Access to Information Under International Law Context and in EIA/IEE Processes**

In Article 19 of United Declaration of Human Rights, it stipulates that “everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.”<sup>90</sup> From this article, it is clear that everyone has the right to access to information especially that information that are concerning to them or that will directly have influence on them.

Being able to access to the information concerning to the public authority, other relevant institutions, any development project especially those could generate consequences and any other documents of the related of any concern, people can use such received information as an essential tool to check and balance with the related stakeholders concerned, measure the transparency status, demand for the accountability, and significantly fight for the corruption as this is common among the countries in the world. More importantly, the right to information could generate the benefits not only in protecting the rights of the people but also could protect in other fields such as environment, budget expenses, procedural protocols, and others etc.<sup>91</sup> Additionally, when the citizens can access to the information and data, it equips the citizens the sufficient amount of information to monitor and evaluate the public authority in the exercise of power. Having access to the information also empowers the citizens to fight against the injustice.<sup>92</sup>

Under the application Environmental Impact Assessment (EIA), there is an element of the right to access to information and it is one of the fundamental

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<sup>89</sup> Marcos A. Orellana, Typology of Instruments of Public Environmental International Law (ECLAC, 2014) 7-9

<sup>90</sup> UN Doc Res 217 A(III) art 19

<sup>91</sup> Transparency International, ‘Right to Information’ <<https://www.transparency.org/en/our-priorities/right-to-information>> accessed 28 May 2022

<sup>92</sup> Transparency International, ‘Right to Information’ <<https://www.transparency.org/en/news/right-to-information-knowledge-is-power>> accessed 28 May 2022

procedural rights in EIA processes.<sup>93</sup> Only by being able to access to information, the concerned citizens could be able to know the subject matters, the procedures, and the consequences of the effects of the proposed projects. Without being able to attain the information, they may not be able to know the actual consequent adverse impacts and it will mislead their decision-making on the projects.

In developing EIA law or procedures, the government authorities must ensure there is an element of right to access to information in the EIA processes. It is the duty of the concerned government authorities to make the environmental information available to the public.<sup>94</sup> That is why, when there is a proposed project, the government must disclose the information to the public and allow the citizens as individuals or organizations to ask for information relating to the proposed project.

However, depending on the type of impact assessments the proposed projects they are subjected to, there will be a certain level of limitation in receiving information. For example, a proposed project is subject to EIA where it requires to conduct the assessment in a wider range covering bigger scope, various categories, utilizing of scientific tools to test and predict the potential adverse impacts which will affect to the environment and society, more precise mitigation measures and more potential effective of Environmental Management Plan (EMP) etc. As the assessment is conducted with EIA, the available information would be more effective and generate more benefits to the people. On the other hand, if the impact assessment is carried out with Initial Environmental Examination (IEE), the accessible information will be limited as it is conducted with a smaller scope range and scientific tools compared with EIA. Thus, the available information of the proposed project would be different.

### **2.8.2 Right to Participate in Decision-Making in International Environmental Law Context and Environmental Impact Assessment (EIA)**

Participation means there is a close involvement of people in cultural, social, economic and political processes that have the influence upon their lives.<sup>95</sup> According

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<sup>93</sup> Ibid.

<sup>94</sup> UNTS 447, 38 ILM 517 (1998) Art 5

<sup>95</sup> United Nations Development Programme, Human Development Report Cm 0-19-5084578 (Oxford University Press 1993) 21

to the democratic norms, people's participation is one of the fundamental components of democracy. From the environmental protection perspective, allowing the people to participate closely with environmental protection activities, it ensures the inclusiveness, the transparency and the accountability of all stakeholders who are involved the proposed projects.<sup>96</sup> Besides, people having the rights to participate in the proposed projects that would likely to generate harms to them is a proactive way to protect themselves as well. That is why the principle 10 of Rio Declaration mandated that each individual person has the right to participate in the environmental protection.

In the Environmental Impact Assessment (EIA) Law, the governments must ensure their citizens especially those who are potentially affected by the proposed development projects to be able to participate, voicing out their opinions and suggestions. That is why there are the public participation in the EIA processes usually in the scoping stages, public consultation stage and decision-making stage.<sup>97</sup>

### **2.8.3 Right to Access to Justice Under the Context of Environmental Matter**

The concept of access to justice is that the states must guarantee and allow all their citizens to seek the court for justice or other alternative dispute resolutions for the remedies in case there are the actual violations of the individual rights. Thus, it is the right that empowers the people to enforce their rights that are being violated.<sup>98</sup> From the aspect of environmental protection, the right to access to justice paves the way for the people to challenge the decisions made by the government authorities that are not in compliance with the national environmental laws, or fail to assess the social and ecological impacts that pose dangers and harms to the people.<sup>99</sup>

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<sup>96</sup> The Access Initiative (TAI), 'Handbook for Public Participation in Environmental Impact Assessment (TAI, 2014) 1-5

<sup>97</sup> UNTS 447, 38 ILM 517 (1998) Art 6

<sup>98</sup> Luca Brocca, 'Access to Justice in Environmental Matters', (2022) JA 1-3

<sup>99</sup> Julia Eriksen, Phil Michaels legal Scholar, "Our Rights to Challenge Bad Environmental Decisions at Risk", (FEP, 12 December 2019) <<https://policy.friendsoftheearth.uk/insight/our-rights-challenge-bad-environmental-decisions-risk>> accessed 15 April 2025

Additionally, when the other procedural right of an individual such as his right to access to information is denied, ignored, withheld or inadequately answered by the government when he requests the environmental information, he can exercise his right to access to justice at the court to enforce his right to access information.<sup>100</sup> Moreover, when there is an EIA report of a proposed project which has been approved unlawfully, these rights can enhance the ability of all individuals to appeal, and demand for stricter mitigation measures for the benefit in environmental protection.<sup>101</sup>

## 2.9 Review on the Environmental and Social Impacts of Mining Operations in Hpakhant

Hpakhant Jade Mine is in the northern part of Myanmar, Kachin State. It produces one of the most valuable and fine jades in the world. There were 31 billion USD of revenues generated in 2014 and they were equivalent to 45% of the overall official Gross Domestic Product (GDP) of Myanmar. From 2005 to 2014, the entire revenues generated from jade mines were up to 122.8 billion USD.<sup>102</sup> According to the accessible report, there were 32,000 acres of jade mines were permitted by the the Ministry of Natural Resources and Environmental Conservation (MONREC) in Hpakhant in 2015-16 fiscal year of Myanmar,<sup>103</sup> and continue to operate until today. These mines are located and operated close to the villages and town where there are 331,708 of the local residents<sup>104</sup> live there. Due to the mines operating close to where people are living, the local residents are suffering from adverse effects of jade mining. They are surrounded by open-pit mines exposing them to dangerous surroundings, air, water and noise pollutions, and others, etc.<sup>105</sup>

As all the mines in Hpakhant Jade Mine are open-pit mines, their operations generate several environmental degradations and consequently generate harmful effects to the local residents directly or indirectly. Due to gemstone mining operations,

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<sup>100</sup> UNTS 447, 38 ILM 517 (1998) Art 9 (1)

<sup>101</sup> Ibid.

<sup>102</sup> Global Witness, 'Jade: Myanmar's Biggest Secret' (2015) 23

<sup>103</sup> Natural Resources Governance Institute, "Myanmar Jade from Mine to Market" (2016)

<sup>104</sup> Ibid.

<sup>105</sup> Ibid.

forests are destroyed, the hundred-foot-high mountains are turning into 1000-foot-deep valleys,<sup>106</sup> and some valleys are turning into mountains. Additionally, the clean Uyu River previously before the jade mining that pass through Hpakhant Township is now full of soil erosion in the river, and the freshwater oysters that the local people could harvest regularly before are extinct. According to a 32-year-old Kachin woman (Hpakhant Township), she said that “many bright yellow trucks traverse the terrain and wheel loaders scoop out earth in a daily search for jade. Mining waste is improperly disposed of or towers in mounds hundreds of feet high. Sources of water and fisheries in Hpakant, the jade-rich area where her village is located, are polluted. Outside town, mountains are torn apart. Open pits are fenced with galvanized iron sheets.”<sup>107</sup>

The landslides in the jade mining are also frequent which put the people’s houses at risks of being destroyed by the landslide in their surrounding living environment.<sup>108</sup>

As the mines in Hpakhant Jade Mine are operated in the area of Hpakhant Township where the total population of 331,708 people according to the 2014 census of Myanmar<sup>109</sup>. These people are facing many social risks due to the emergence of the social problems implicitly resulted from the consequences jade mining. Nowadays in the jade mining area, the illegal prostitution rate, child labor rate, crime rate and drug user rate are increasing daily<sup>110</sup> due to the lack of economic opportunities outside the jade mining sector. These increasing rates also highlight the potential risks to the human rights violations.

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<sup>106</sup> Sarah Gambles, ‘Landslide at a Jade Mine in Myanmar Kills at Least 32 People’ Deseret News (Salt Lake City, 17 August 2023) <<https://www.deseret.com/2023/8/16/23834984/myanmar-jade-landslide-kills-miners-migrants>> accessed 28 November 2023

<sup>107</sup> Openjadedata, ‘Irreparable Damage: The Environmental Impacts of Jade Mining’ <[https://openjadedata.org/stories/jade\\_and\\_environment.html](https://openjadedata.org/stories/jade_and_environment.html)> assessed 28 November 2023

<sup>108</sup> Emily Fishbein and Aung Myat Lamung, ‘How A beloved Gemstone Become a Symbol of Environmental Tragedy in Myanmar’ <<https://www.npr.org/sections/goatsandsoda/2020/09/29/915604532/how-a-beloved-gemstone-became-a-symbol-of-environmental-tragedy-in-myanmar>> accessed 5 March 2022

<sup>109</sup> Ibid.

<sup>110</sup> Natural Resources Governance Institute, ‘Myanmar’s Jade: From Mine to Market’ (2018) 7

Lahtaw Ah Li, 22 years old, was a migrant worker working in Hpakhant jade mine since he was 14. He told a news agency that “the drug is for sale everywhere around the mine sites, and it’s cheap to buy.”<sup>111</sup> The availability of drugs may easily lead to an increasing number of drug users. Currently, the increasing number of migrant miners from all different parts of Myanmar migrated to Hpakhant Township in the hope of finding fortune from jade mines and it is estimated that 300,000 people had migrated in February 2019.<sup>112</sup> Therefore, the residents and the migrant workers in total number of 631,708 people are at risk of facing the potential of using drugs especially young people. Naung Latt, a member of the region’s Anti-Drug Action Group in Myanmar said that “all young persons are drug victims now. Most of the state school students above grade six are using drugs and some are injecting themselves.”<sup>113</sup> Some people even contracted Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome (HIV) from using the same syringe.<sup>114</sup>

Another problem resulted from jade mining is the landslides and they occur frequently. The landslides of jade mining in Hpakhant had claimed 162 lives<sup>115</sup> in July

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<sup>111</sup> Steve Sandford, ‘Drug Addiction Rises in Myanmar’s Kachin State’ Voice of America, (Washington DC, 26 November 2019) <[https://www.voanews.com/a/east-asia-pacific\\_drug-addiction-rises-myanmars-kachin-state/6178886.html](https://www.voanews.com/a/east-asia-pacific_drug-addiction-rises-myanmars-kachin-state/6178886.html)> accessed 3 March 2022

<sup>112</sup> Peter Yeung and Zaw Moe Htet in Hpakhant, ‘Lethal Landslips and Drug Addiction: Myanmar’s Toxic Jade Trade’ The Guardian (London, 25 February 2019) <<https://www.theguardian.com/global-development/2019/feb/25/deadly-landslides-drug-addiction-myanmar-toxic-jade-trade>> accessed 3 March 2022

<sup>113</sup> Reuter, ‘Instead of Jade, Myanmar’s Gem Scavengers Find Heroin and Destitution’ <<https://www.reuters.com/article/us-myanmar-china-jade-heroin-idUSKBN0TY1M420151215>> accessed 3 March 2022

<sup>114</sup> *ibid.*

<sup>115</sup> Aye Win Myint, ‘Instead of Jade, Myanmar’s Gem Scavengers Find Heroin and Destitution’ Reuters (London: 15 December 2015) <[http://timesofindia.indiatimes.com/articleshow/76761765.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://timesofindia.indiatimes.com/articleshow/76761765.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)> accessed 3 March 2022

2020; more than 70 people missing<sup>116</sup> due to landslide in December 2021; there were 17 deaths <sup>117</sup> in March, 2022; 32 announced dead caused by landslide on August 16, 2023;<sup>118</sup> 32 deaths, 70 people missing in landslides in January 2024;<sup>119</sup> and 12 confirmed deaths and dozens reported missing from mudslide from jade mines in January 2025.<sup>120</sup>

Additionally, the landslides of jade mining also destroyed several houses, and some houses are also at facing the potential risks due the ground cracking caused by jade mining and the enormous mining vehicles passing through the residential houses when those vehicles transport the solid wastes from mining. Due to the dangerous environment and security risks which could cause probable harms to them and their children, the local residents in total of 39 households were relocated to shelters at their relative houses and some were sheltered at the public hall in the town.<sup>121</sup> There are many similar circumstances of forced relocations like this by the processes of operational mining in Hpakhant Township. These are the direct consequences of jade mining and indirectly force them to relocate.

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<sup>116</sup> Reuters, 'Dozens Feared Death After Landslide at Jade Mine in Myanmar' (New York, 22 December 2021) <<https://www.nytimes.com/2021/12/22/world/asia/myanmar-landslide-jade-mine.html>> accessed 3 March 2022

<sup>117</sup> The ASEAN Post, 'The 17 Feared Dead in Myanmar Jade Mine Landslide' (Kuala Lumpur, 2 March 2022) <<https://theaseanpost.com/environment/2022/mar/02/17-feared-dead-myanmar-jade-mine-landslide>> accessed 3 March 2022

<sup>118</sup> Su Chay, Sophie Joeng and Kathleen Magramo, 'At Least 32 Dead After Landslide at Myanmar Jade Mine' CNN (Atlanta, 16 August, 2023) <<https://edition.cnn.com/2023/08/16/asia/myanmar-jade-mine-landslide-deaths-intl-hnk/index.html>> assessed 28 November 2023

<sup>119</sup> The Nation, 'Up to 32 Dead in Myanmar Jade Mine Collapse, Search Suspended' (Bangkok, 17 January 2025) <<https://www.nationthailand.com/blogs/news/asean/40045284>> accessed 24 May, 2025

<sup>120</sup> RFA Burmese, 'Dozens Missing in Mudslide at Myanmar Jade Mine' Radio Free Asia (Washington, D.C., 13 January 2025) <<https://www.rfa.org/burmese/news/moveing-houres-in-hpakant-07102020055013.html>> accessed 24 May 2025

<sup>121</sup> RFA Burmese, Residents Are Relocating Due to Fear of Landslide in Hpakhant, Radio Free Asia, (Washington, D.C., 2 August 2022) <<https://www.rfa.org/burmese/news/moveing-houres-in-hpakant-07102020055013.html>> accessed 3 March 2022

The situations in the jade mines create the dangerous environment for the people and children, and putting the lives of at risks which is actually the violation of their rights to life,<sup>122</sup> home<sup>123</sup> and property,<sup>124</sup> endangering the rights to survive and development,<sup>125</sup> by damaging the children's living environment,<sup>126</sup> the abuse of the children's social security<sup>127</sup> and rights to housing of the children<sup>128</sup> and other rights according to the international human rights. Besides, this is also the violation of the rights to life and freedom granted to them by the Section 353 the 2008 Constitution of Myanmar,<sup>129</sup> Forcing people directly or indirectly through the processes of mining operations to relocate and make them leaving their properties behind is the breaches of the rights guarantee by the Section 356 of Constitution, the movable and immovable properties of the citizens that they are acquired legally<sup>130</sup> and, their privacy, security of home and properties must be protected by the Union according to the constitution of Myanmar.<sup>131</sup>

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<sup>122</sup> A/RES/217(III) art 3

<sup>123</sup> A/RES/217(III) art 12

<sup>124</sup> A/RES/217(III) art 17

<sup>125</sup> Convention on the Rights of The Child 1989, Art (6), "Every child has the right to survive. The state must do all it can to make sure children survive and develop to the full extent possible".

<sup>126</sup> 1577 UNTS 3 art 24

<sup>127</sup> 1577 UNTS 3 art 26

<sup>128</sup> 1577 UNTS 3 art 27

<sup>129</sup> 2008 Constitution, S 353, "Nothing shall, except in accord with existing laws, be detrimental to the life and personal freedom of any person".

<sup>130</sup> 2008 Constitution, S 356, "the Union shall protect according to law movable and immovable properties of very citizen that are lawfully acquired".

<sup>131</sup> 2008 Constitution, S 357, "the Union shall protect the privacy and security of home, property, correspondence and other communications of citizens under the law subject to the provisions of this Constitution".

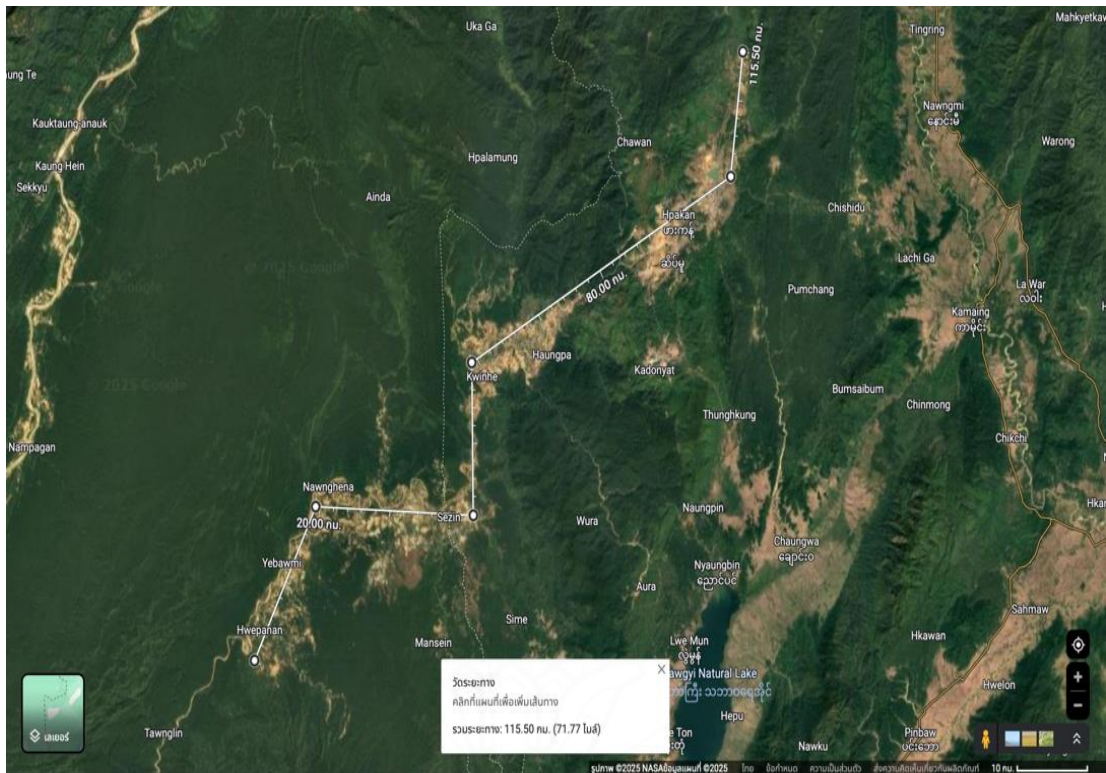


Figure 3: The Map with the Approximate Length of 115.5 km of Jade Mines in the Same Region  
 Google Map, 'The Map with Approximate Length of 115.5 km of Jade Mines in the Same Region'  
[https://www.google.ca/maps/@25.4021205,95.9456469,118666m/  
 data=!3m1!1e3?entry=ttu&g\\_ep=EgoyMDI1MDcwOS4wKXMDSoASAFQAw%3D%3D](https://www.google.ca/maps/@25.4021205,95.9456469,118666m/data=!3m1!1e3?entry=ttu&g_ep=EgoyMDI1MDcwOS4wKXMDSoASAFQAw%3D%3D)

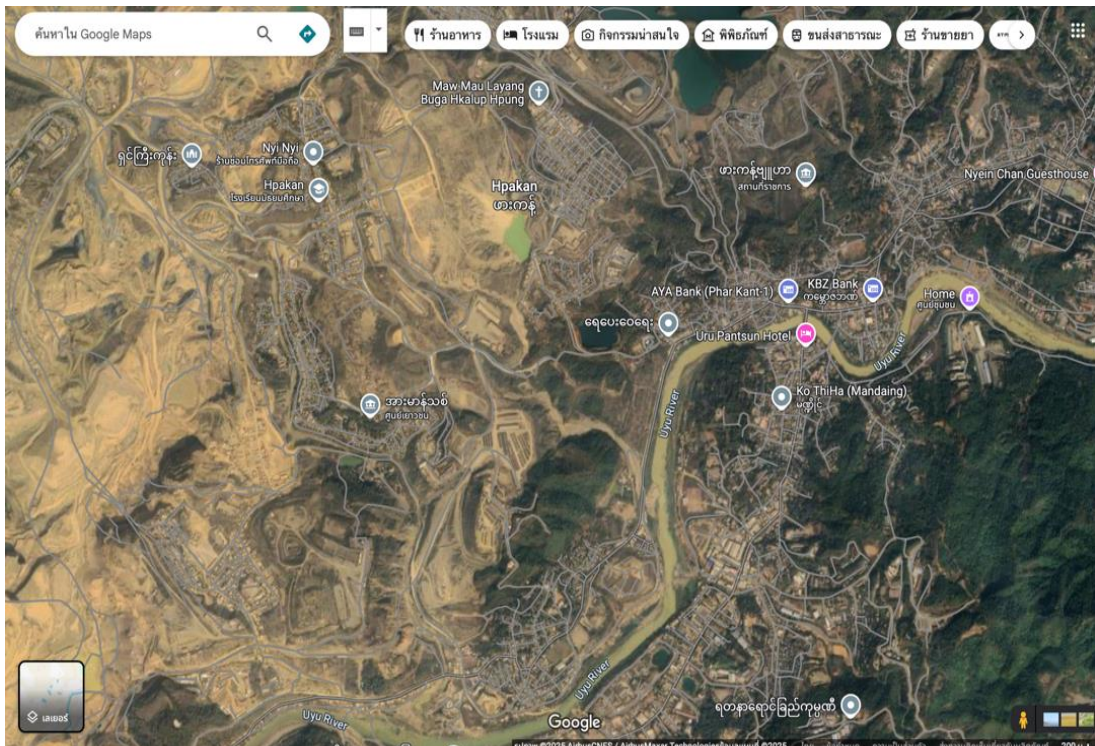


Figure 4: Jade Mining Operations in Close Proximity to Resident Villages and the Polluted Uyu River

Google Map, 'Jade Mining Operations in Close Proximity to Resident Villages and the Polluted Uyu River' <[https://www.google.ca/maps/@25.6076432,96.2901691,3911m/data=!3m1!1e3?entry=ttu&g\\_ep=EgoyMDI1MDcwOS4wIKXMDSoASAFQAw%3D%3D](https://www.google.ca/maps/@25.6076432,96.2901691,3911m/data=!3m1!1e3?entry=ttu&g_ep=EgoyMDI1MDcwOS4wIKXMDSoASAFQAw%3D%3D)>

## CHAPTER 3

### LEGAL FRAMEWORK OF MINING AND ENVIRONMENTAL IMPACT ASSESSMENT REGARDING GEMSTONE MINES IN MYANMAR

#### 3.1 Legal Framework for Environmental Conservation of Myanmar

The economic development of Myanmar is heavily reliant on the exploitation of natural resources<sup>132</sup> such as oil, gas, jades, gold, platinum, copper and coal etc. Usually, these natural resource mining operations generate severe harms to the environment. To mitigate and conserve the environment, Myanmar had enacted Environmental Conservation Law (ECL) in 2012 with the objectives of enabling the integration of environmental conservation with the sustainable development process, conserving natural and cultural heritage, creating a clean and healthy environment, recovering and protecting ecosystem, promoting the cooperation between domestic and international communities for environmental conservation, and enabling the cooperation between the governmental departments, organization and individual for the conservation of the environment. Moreover, in ECL of Myanmar, it includes the environmental protection by raising public awareness and cooperation through education. Significantly, 2008 constitution of Myanmar, Environmental Conservation Law 2012, Environmental Conservation Rules (ECR) 2014 and Environmental Impact Assessment (EIAP) 2015 are the applicable laws to the conservation of environment.

##### 3.1.1 Environmental Protection under the 2008 Constitution of Myanmar

A constitution is a supreme law of a country where defines and lay-downs the fundamental principles, structures of the countries, duties and power of the institutions, rights and freedoms of the people, principles, laws, and regulations, etc.<sup>133</sup> Similarly, the 2008 constitution of Myanmar is a highest legal document shaping the

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<sup>132</sup> World Bank Group, 'Environmental Impact Assessment System Diagnostic' WBR (2019)

<sup>133</sup>The Legal School, 'Difference Between Constitution and Constitutional Law', <<https://thelegalschool.in/blog/difference-between-constitution-and-constitutional-law>> accessed 3 March 2022

county by laying down the legal foundations, fundamental principles, laws, regulations including the environmental protection. According to the constitution, every citizen has the duty to help the Union in protecting the environment and public properties.<sup>134</sup> This means every citizen including the authorities and the normal citizens are responsible to protect the environment, public properties, and has the rights to act or speak for the interest of environmental protection. The section 390 is one of the fundamental environmental law providing the foundations to establish the Environmental Conservation Law (ECL) 2012, Environmental Conservation Rules (ECR) 2014, and Environmental Impact Assessment Procedures (EIAP) 2015.

### **3.1.2 Environmental Conservation Law (ECL) 2012 and the Legal Framework of Environmental Impact Assessment Procedures (EIAP) 2015**

According to section 390 (a) and (b) of the 2008 constitution of Myanmar, the Environmental Conservation Law (ECL) 2012, a major environmental law was enacted with detail sections - to protect the environment and to achieve the sustainable development. According to this law, the Ministry of Natural Resources and Environmental Conservation (MONREC) is mainly responsible for environmental conservations by enacting environmental regulations, issuing the criteria of the environmental quality standards, forming a comprehensive monitoring system of the waste disposal managements in all development projects, co-ordination between the governmental departments, international organizations, non-government organizations (NGOs), or individual, the management of urban environment, the conservation of natural resources and culture heritages, the processes of prior permission for business, work-site or factory, work-shop which could potential generating adverse impacts, prohibitions, offences, penalties and including the enactment of Environmental Impact Assessment Procedure.<sup>135</sup>

Based on Environmental Conservation Law (ECL) 2012, the Environmental Conservation Rules (ECR) 2014,<sup>136</sup> and the Environmental Impact Assessment (EIAP) 2015 was promulgated by the Ministry of Natural Resources and Environmental

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<sup>134</sup> 2008 Constitution, S390, (2) and (4)

<sup>135</sup> ECL 2012, S3-S34

<sup>136</sup> ECL 2012, S42 (a) "In implementing the provisions contained in this Law: The Ministry may issue necessary rules, regulations and by-laws with the approval of the Union Government".

Conservation (MONREC).<sup>137</sup> ECL 2012 is a framework of law providing the platforms for the coordination between departments, individuals, non-government organization and international institution.

### **3.1.3 Environmental Conservation Rules (ECR) 2014 of Myanmar and Legal Framework of Environmental Impact Assessment Procedures (EIAP) 2015**

Environmental Conservation Rules (ECR) 2014 is the detail guidelines of the provisions in ECL 2012. These Rules stipulates detail outline guidance such as the integration of environmental conservation towards the sustainable development, the responsibilities of MONREC – promulgating the relevant environmental regulations and guidelines, conserving the natural resources and cultural heritages, developing the environmental monitoring system, setup waste management system.<sup>138</sup> The promulgation of Environmental Impact Assessment law must be in compliances with provisions, criteria, and principles stipulated in ECL 2012 and ECR 2015 because they are the fundamental environmental conservation laws of Myanmar.

### **3.1.4 Environmental Impact Assessment Procedures 2015 (EIAP) of Myanmar**

As mentioned in the previous paragraph, EIAP 2015 was issued by MONREC in 2015 according to the sections in ECL 2012 and ECR 2014. This EIAP 2015 will govern all the projects such as “commercial, economic, agricultural, social, academic, scientific, political or other projects, activity, program, business, service or undertaking, whether regarded individually or in the aggregate, the performance of which requires any approval or is licensed, restricted, or otherwise regulated to any extent by any part of the Union Government and which may have an Adverse Impact.”<sup>139</sup>

Regarding the impact assessment of the aforesaid projects, there are two types of impact assessments and they are IEE and EIA processes. Under this EIAP, it uses both

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<sup>137</sup> ECL 2012, S7(m)

<sup>138</sup> World Bank Group, ‘Environmental Impact Assessment System Diagnostic’ WBR (2019) 1-4

<sup>139</sup> EIAP 2015, S 2

- “Prescriptive or standardized approach – the proposed projects subject to or exempt from EIA are defined or listed in legislation and regulations and;
- Discretionary or customized approach – the proposed projects are screened by an individual or case-by-case basis using indicative guidance.”<sup>140</sup>

However, the main approach is the *prescriptive or standardized approach*. Depending on the size, area, and amount of weight production per specific periods, those types of projects will be subjected to either IEE or EIA. For example, the extraction of precious stones in an area of below 50 acres or amount of weight of gemstones production below 50,000 tons per year will be subjected to IEE process. In the contrary, such similar extraction but the area is more than 50 acres or with a weight gemstones production above 50,000 ton per year, it will be subjected to conduct EIA.<sup>141</sup>

Regarding the discretionary or customized approach, the Ministry of Natural Resources and Environmental Conservation (MONREC) has the power to make the decision whether the proposed projects required Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE), or be exempted from any impact assessment if such proposed projects are considered as the special circumstances by MONREC.<sup>142</sup> However, there is no definition defined in the EIAP 2015 regarding what the special circumstances. It means that MONREC can impose or change the type of impact assessment from IEE to EIA, EIA to IEE or no need to conduct any of them to the proposed projects depending on the reason of special circumstances.

#### **3.1.4.1 The Environmental Impact Assessment (EIA) under Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar**

Similar to the procedures and methods of EIA handbook of United Nation Environmental Programme (UNEP) but with different vocabularies, there are (1) screening, (2) scoping, (3) EIA investigation, (4) EIA report, (6) Submission of EIA report,

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<sup>140</sup> EIAP 2015, S 26

<sup>141</sup> EIAP 2015, Annex 1, no.135

<sup>142</sup> EIAP 2015, S26

(7) Review and Approval Process for EIA Report, and (8) Monitoring. Regarding the person to conduct the EIA investigation and reporting, EIAP 2015 of Myanmar stipulates that the EIA investigation and reporting must be carried-out by third parties that have legally been registered as require by the law of Myanmar.<sup>143</sup>

(1) Screening

The project proponent requires to submit the proposed project proposal to Ministry of Natural Resources and Environmental Conservation (MONREC) for prior permission first for screening before getting the actual permission to conduct the operations.<sup>144</sup> For example, if the project proposal is to conduct a gemstone mining operation, he may have to apply with the required documents and the information of jade mine to MONREC. Then, the ministry will refer those documents to Environmental Conservation Department (ECD) for the determination of environmental assessment. Then, ECD will decide which type of assessment process will have to be conducted.<sup>145</sup> ECD will make a determination in accordance with the lists of projects in Annex 1, taking into account of the protected area under section 25 of the Environmental Impact Assessment Procedures (EIAP) 2015, and other factors such as public health and safety, protection of water resources and others in section 28 of EIAP. Then, it will submit those documents with its recommendations to MONREC. After the review from MONREC, those documents with the determinations of which type of assessment the project proponent has to conduct will be sent to ECD. Within 15 days of receiving of those proposal documents from MONREC, ECD must inform the project proponent in writing by what type of assessment the project is subjected to. If the aforesaid project is subjected to EIA process, it requires conducting EIA according to EIAP 2015.<sup>146</sup>

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<sup>143</sup> EIAP 2015, S45

<sup>144</sup> EIAP 2015, S3

<sup>145</sup> EIAP 2015, S23 (b)

<sup>146</sup> EIAP 2015, S29

## (2) Scoping

The project proponent is responsible for the scoping and preparation of the Terms of Reference (TOR) for the Environmental Impact Assessment (EIA) report.”<sup>147</sup> It must covers: (i) the study area and its influences with the project phases, the relevant stakeholders, (ii) health, social and environmental impacts, (iii) consultation (public, related authorities and project owner), (iv) saving time by enabling an effective impact assessment process to avoid heavy costs and delays, (v) identifying the communities which could suffer the adverse impacts and other stakeholders who might interest in that proposed project.<sup>148</sup> Moreover, public consultation through meetings must be carried by the project proponents and disclose all relevant information through his website, local media, and posting signboards at the project site where the public could see it.<sup>149</sup> Then, terms of reference (TOR) must be prepared by the project proponent by complying with the applicable guidelines from Ministry of Natural Resources and Environmental Conservation (MONREC) for EIA investigation stage,<sup>150</sup> and the Terms of Reference (TOR) will be reviewed by Environmental Conservation Department (ECD).<sup>151</sup>

## (3) EIA Investigation

The EIA investigations stage must address all the terms in TOR<sup>152</sup> including the considerations on the affected people or potential affected people and communities, the use of land and resources along with all living things, physical, social, economic, culture elements, natural views<sup>153</sup> and such Residual Impacts ( the remaining effects of the projects after the mitigation measure are implemented) from carrying out the projects that are considered by Ministry of Natural Resources and Environmental Conservation (MONREC) as the acceptable degree.<sup>154</sup> Additionally, the investigations

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<sup>147</sup> EIAP 2015, S48

<sup>148</sup> EIAP 2015, S49

<sup>149</sup> EIAP 2015, S50

<sup>150</sup> EIAP 2015, S52

<sup>151</sup> EIAP 2015, S53

<sup>152</sup> EIAP 2015, S55

<sup>153</sup> EIAP 2015, S56

<sup>154</sup> EIAP 2015, S57

of EIA require including the scientific laboratory analysis, technical studies with engineering and designs and calculations, and it must also consider the alternatives such as Residual Impacts alternative and mitigation measures.<sup>155</sup> Significantly, the investigations conducted by the proposed proponent must comply with the domestic and international standards adopted by Myanmar.<sup>156</sup> Besides, as part of this investigation stage, all the information related to the proposed project must be disclosed to the public timely as well.<sup>157</sup> The consultation meeting must be held at national (the capital of Myanmar), state, and regional levels with the Project Affected Persons (PAPs), Government Authorities, Civil Society Organizations (CSOs), and field visits for inspection by the relevant departments and MONREC.<sup>158</sup>

#### (4) EIA Report Preparation

For the EIA report, Environmental Impact Assessment Procedures (EIAP) 2015 stipulates the outlines in details of the requirements for an EIA report preparation including the (i) introduction (project proponent, environmental and social experts), (ii) the applicable laws and policies of Myanmar that are applying to the EIA report, (iii) project description, (iv) description of the surrounding environment (study limit, methodology and objectives, physical, biological and public health and other components), (v) impact assessment and mitigation Measures, (vi) Cumulative Impact Assessment, (vii) Environmental Management Plan (EMP), and (viii) Public Consultation and Disclosure.<sup>159</sup>

#### (5) Submission of EIA Report

The EIA report with all the attained results through EIA investigations and the recommendations collected through public consultations must be submitted to the Environmental Conservation Department (ECD) (Department of Environment Conservation) after the completion of the investigation process. Besides, it must also

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<sup>155</sup> EIAP 2015, S58

<sup>156</sup> EIAP 2015, S59

<sup>157</sup> EIAP 2015, S60, S61

<sup>158</sup> Ibid.

<sup>159</sup> EIAP 2015, S63

disclose the report to the public within 15 days after submitting it to the authorized department. On the other hand, ECD must provide it to the public as well.<sup>160</sup>

#### (6) Review and Approval for EIA Report

ECD shall submit the EIA reports to the EIA Report Review Body. The body is formed by the Ministry<sup>161</sup> to analyze EIA reports and provide suggestions. Further, the suggestions and comments given by the Civil Society Organizations (CSOs), Project Affected Persons (PAPs) and governmental organizations will be welcome by ECD as well. At this stage, the public consultation meeting will also be arranged by ECD at the national level (capital of Myanmar) and state level in order to decide the approval of the proposed project. If the proposed projects get the approval and permissions are granted, the Environmental Compliance Certificate (ECC) will be handed out to the project proponent.<sup>162</sup> In case of rejection, the project proponent can make an appeal for MONREC to reconsider. However, only in a case where MONREC makes an unjustified decision or MONREC does not comply with the procedures in making the decision. The project proponent can submit the appeal with such evidences to the ministry for reconsideration again within 30 days after the announcement of the unsuccessful proposal.<sup>163</sup>

#### (7) Monitoring

It is the responsibility of the project proponent to monitor with comprehensive self-monitoring the whole processes from the pre-construction to the post-closure of the project and comply with the applicable laws, rules, Environmental Impact Assessment (EIAP) 2015, applicable standards, and Environmental Management Plan (EMP).<sup>164</sup> Besides, if he has breached any obligations, EMP, and performance failure that he must comply, he is required to notify Ministry of Natural Resources and Environmental Conservation (MONREC) with writing within 24 hours for urgent issues

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<sup>160</sup> EIAP 2015, S64 – S66

<sup>161</sup> ECR, S58

<sup>162</sup> EIAP 2015, S67-70

<sup>163</sup> EIAP 2015, S71 (a)

<sup>164</sup> EIAP 2015, S106

and 7 days for normal issues after becoming aware of such incidents.<sup>165</sup> Moreover, the project proponent is required to submit the monitoring reports frequently in every six months to MONREC as well.<sup>166</sup> Continuously, he must also publish the monitoring report of to make it publicly available too.<sup>167</sup> Apart from self-monitoring, the relevant official will also conduct monitoring and inspections concerning with the activities of the projects.<sup>168</sup>

#### **3.1.4.2 Initial Environmental Examination under Environmental Impact Assessment (EIAP) 2015 of Myanmar**

There are the stages such as (1) Screening, (2) IEE investigations, (3) IEE Report, (4) Submission of IEE Report, (5) Review and Approval of IEE Report, (6) Monitoring under EIAP of Myanmar.

##### (1) Screening

The project proponent who will undertake the IEE process must inform Environmental Conservation Department (ECD) with the identity of the project proponent and/or organization, including the person who conduct IEE by writing.<sup>169</sup> Similar to what is discussed in screening stage of EIA process the relevant authority will determine type of process to be conducted through the list of projects in Annex (1) and consult with sections 25 and 28 of EIAP. After that, the relevant authority will confirm the result of the application to conduct IEE within 7 days.<sup>170</sup>

##### (2) IEE Investigations

As soon as the commencement of IEE or start the process of IEE, the project proponent must “disclose relevant information about the proposed Project to the public and civil society through the Project or Project Proponent’s website(s) and local media, including utilizing the prominent posting of legible sign boards at the Project site which are visible to the public, and comply with technical guidelines

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<sup>165</sup> EIAP 2015, S107

<sup>166</sup> EIAP 2015, S109

<sup>167</sup> EIAP 2015, S110

<sup>168</sup> EIAP 2015, S110

<sup>169</sup> EIAP 2015, S32

<sup>170</sup> EIAP 2015, S32

issued by the Ministry.”<sup>171</sup> The IEE experts hired by the project proponent will conduct the assessments covering according to the IEE report requirement.<sup>172</sup>

Additionally, he must arrange the public consultation meeting with PAPs, local community, civil society, and community-based organizations based on the advices given by the relevant authority. He is also required to provide the explanation through media, interviews and press conferences.<sup>173</sup>

### (3) IEE Report

The requirements for an IEE type project report are that the project proponent is required to fulfil these requirements:<sup>174</sup>

- Project descriptions: size, installations, technology, infrastructure, production processes, use of materials and resources, generation of waste, emissions, disturbances and maps from satellite;
- Description of the surrounding environmental and social conditions with maps;
- Identification and assessment of the potential environmental impacts;
- Results of the public consultations.
- The environmental protection measures of the Project;
- Environmental Management Plan (EMP);
- And the budget required for implementing of Environmental Management Plan (EMP).<sup>175</sup>

### (4) Submission of IEE Report

after investigating all the requirements set for IEE type project along with public consultation, and done preparing the IEE report, the project proponent must submit the report in both digital and hard paper form to Environmental Conservation Department (ECD), and also need to publish it that report through the website,

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<sup>171</sup> EIAP 2015, S34 (a)

<sup>172</sup> EIAP 2015, S36 (a, b, c, d, e, f, g, h, i, j)

<sup>173</sup> EIAP 2015, S34 (b)

<sup>174</sup> EIAP 2015, S25

<sup>175</sup> EIAP 2015, S36

newspapers, domestic media, library, public halls within 15 days after submitting it ECD.<sup>176</sup>

(5) Review and approval stage for IEE

ECD has also need to disclose the project report to the public through Ministry of Natural Resources and Environmental Conservation (MONREC), ECD websites or appropriate media, and welcome the recommendations from all parties such as civil society, government organization and project affected people (PAPs). Moreover, the project proponent must arrange and conduct public consultations at the local level where the project is located and collect suggestions data submitting along with the IEE report to as directed by MONREC.<sup>177</sup> After the completion of reviewing the IEE report, MONREC would approve the IEE report and issue an Environmental Compliance Certificate (ECC).<sup>178</sup>

### 3.2 Myanmar Gemstone Law 2019, Quota of Area and Period of Mining

Under the jurisdiction of Myanmar, there are two laws governing all the mining activities. The first one is Myanmar Mining Law (MML) 1994, and the second one is Myanmar Gemstone Law (MGL) 2019. MML 1994 is the law that governs all the mining of minerals such as “metallic minerals, raw materials of industrial minerals and stones (that are not identified as gemstones) obtained from the earth by mining or by other operations. Minerals excavated from the sea, rivers, stream, lakes and soil under water are also included in this term.”<sup>179</sup> On the other hand, MGL 2019 is governing all the gemstone mining such as “ruby, sapphire, jade diamond, spinel, peridot, chrysoberyl, tourmaline, danburite, aquamarine, zircon, topaz, phenakite, garnet, moonstone, iolite, apatite, epidote, lapis-lazuli, diopside, amber, fluorspar, nephrite, or stones of gems quality of the quartz group.”<sup>180</sup>

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<sup>176</sup> EIAP 2015, S37

<sup>177</sup> EIAP 2015, S39

<sup>178</sup> EIAP 2015, S40

<sup>179</sup> The Law Amending the Myanmar Mining Law 2015, S2 (b)

<sup>180</sup> Myanmar Gemstones Law 2019, S2 (1)

Under Myanmar Gemstone Law 2019, there are three types of mining permitted – the medium scale, small scale and artisanal mining. Before the amendment, there were large-scale mining.

- **Medium-scale mining:** the permitted area is 5 acres and the period of permission is three years. This type of mine uses heavy machineries and explosive materials for gemstone extraction.<sup>181</sup> Once the period of permission is up, the licensees of the medium-scale mining can apply for another three-year term for one time.<sup>182</sup> It means that one licensee of the medium-scale mining can operate the mining up to six years. After six years, the mine will be available for the new proposal again.
- **Small-scale mining:** this type of is allowed to be conducted inside or outside of the gemstone areas announced by Ministry of Natural Resources and Environmental Conservation (MONREC). The permitted area is 3 acres and the period is two years. It can be used heavy machineries and explosive materials for gemstone extractions.<sup>183</sup> For this small-scale mining, it can also be applied for the extension of the period of operation again for another 2-year term.<sup>184</sup>
- **Artisanal mining:** this type of mining is allowed with below one acre and the period is one year.<sup>185</sup> This type of mining is different from the aforesaid types of mining. It does not extract the gemstones using heavy machine nor explosive matters.

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<sup>181</sup> MGL2019, S2 (o)

<sup>182</sup> MGL2019, S15 (b)

<sup>183</sup> MGL2019, S2 (p)

<sup>184</sup> MGL2019, S18 (c)

<sup>185</sup> MGL2019, S18(e)

CHAPTER 4  
 PROBLEM AND ANALYSES ON ENVIRONMENTAL IMPACT  
 ASSESSMENT PROCEDURES 2015 OF MYANMAR IN  
 THE GEMSTONE MINE SECTOR: A CASE STUDY OF  
 HPAKHANT JADE MINE

4.1 Legal Issue of EIAP 2015 Dealing with Gemstone Mines Located in the Same Region

Environmental Impact Assessment Procedures (EIAP) 2015 mandated that gemstone mines that are below 50 acres or a production below 100,000 tons of gemstones per year to conduct of Initial Environmental Examination (IEE). In contrast, those mines that are 50 acres and above, or the production above 100,000 tons per year are subjected to EIA.<sup>186</sup> By linking this to Myanmar Gemstones Law (MGL) 2019 where the maximum mining areas permitted are 5 acres. This means that all the gemstone mines are subjected to IEE according to EIAP 2015 as all of them are below 50 acres.<sup>187</sup>

However, there are other two sections that the relevant authorities have to consider when deciding on what type of impact assessment will be imposed onto the mining proposals and they are;

*“(i) a forest conservation area (including biodiversity reserved area); (ii) a public forest; (iii) a park (including marine parks,”<sup>188</sup> and*

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<sup>186</sup> Environmental Impact Assessment Procedure, Annex 1, No. 135

<sup>187</sup> Ibid.

<sup>188</sup> EIAP 2015, S25

*“(i) a forest conservation area (including biodiversity reserved area); (ii) a public forest; (iii) a park (including marine parks); (iv) a mangrove swamp; (v) any other sensitive coastal area; (vi) a wildlife sanctuary; (vii) a scientific reserve; (viii) a nature reserve; (ix) a geophysical significant reserve; (x) any other nature reserve nominated by the Minister; (xi) a protected cultural heritage area; and (xii) a protected archeological area or area of historical significance*

*“(i) the interest of public health and safety; (ii) the lifespan of the Project; (iii) protection of cultural and religious norms, and historical and religious heritage.”<sup>189</sup>*

Based on the No. 135 of Annex 1 of EIAP 2015, all the medium-scale, small-scale mines will be subjected to IEE assessment, and due to the factors to be considered in section 25 of EIAP, all medium and small-scale mines will also be subjected to conduct EIA as well.

From a legal ground perspective, the current EIAP 2015 allows the gemstone mines to be conducted IEE unilaterally unless it falls within the scope of section 25 of EIAP 2015. By looking from the practical ground perspective in gemstone mining, according to International Growth Center, it implies that there are mines that have been imposed to conduct IEE and EIA processes.<sup>190</sup> These two legal and practical factors indicate that there are some gemstone mines that are granted to operate with IEE assessment.

Allowing the gemstone mines to conduct IEE only seems to have no significant adverse impacts if there are one or two of medium-scale mines. For example, 20 medium-scale mines will cover 100 acres of mining areas permitted by Ministry of Natural Resources and Environmental Conservation (MONREC) with half of them subject to IEE, and another subject to EIA. If these mines are in the same region, what degree of significant adverse impacts would they generate to the environment such as land, forest, air and water, ecosystem, biodiversity, and social impacts such as culture, security, health, quality of life, increasing rate of drug problem, illegal prostitution, and others.<sup>191</sup> There is still a question that “will the combinations of the results of impact assessments of EIA and IEE be able to predict the over all of potential impacts of the entire mining areas effectively; will the mitigation measures, and environmental management plans be effectively cover all the entire areas; and

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<sup>189</sup> EIAP 2015, S28

*“(i)the interest of public health and safety; (ii) the lifespan of the Project; (iii) protection of cultural and religious norms, and historical and religious heritage;<sup>189</sup> (iv) protection of water resources (lakes, reservoirs, rivers, groundwater aquifers) that serve or may in the future serve as primary sources of public drinking water; (iv) population density and others.”*

<sup>190</sup>Min Zar Ni Lin, Francesco Loiacono, and others, ‘Artisanal Jade Mining in Myanmar: Livelihood Challenges and Opportunities’ (F-53424, MYA-1, International Growth Center, March 2019) 9

<sup>191</sup> Ibid.

will the people be able to receive the sufficient and comprehensive information of all potential effects?” Based on the IEE regulations in EIAP 2015, it is not sufficient to cover or achieve all these.

Theoretically, it can be assured that the accumulation of IEE and EIA reports from different mining proponents will not be able to provide sufficient information of all the potential impacts of all mines that are in the same region forming into a mega mine. Although the EIA is the comprehensive impact assessments using scientific methods, technological tools, and other various methods to assess the environmental and social impacts into detail of each category according to the scope by complying with Term of Reference (TOR), the results of each EIA report would be different and will not be able to cover the potential impacts of the mining areas as a whole since from the start of the process, the scope of study of each mine is based on the individual mining areas.

Besides, in that same region, some mines are conducted IEE through the investigation of each limited mining area, and each mine conducts the assessments based on the description of the surrounding environmental setting and social conditions with map, consulting with the public, merely identify and assessing the potential environmental impacts<sup>192</sup> Then, the results of impact predictions, the mitigation measures and Environmental management Plans (EMP) will cover their own limited area.

Thus, the results of impact assessments, the predictions of impacts, the mitigation measures, and EMPs of these mines conducted through both EIA and IEE processes cannot correctly represent or indicate that these remedies are the best resolutions for those 100 gemstone areas that are in the same region. Suppose the 50 percent of or half of mines that are subjected to EIA are able to produce EIA results perfectly, they still could not be able to cover the potential impacts of the other 50 percent of areas where they are subjected to IEE.

This scenario is actually happened in Hpakhant Jade Mine where the total of all jade mines is up to 32,000 acres in one region where some mines are granted permission to mining operation with IEE and others with EIA. Each mine is granted through either EIA or IEE assessment in which each assessment is focused on each

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<sup>192</sup> Ibid.

own limited area. The outcomes of the assessments would cover its own mining areas. They will not be able to cover all the cumulative impacts of all mines as a whole. Relatively, the mitigation measures and environmental management plans will only cover their own limited areas. Therefore, the current EIAP 2015 could not tackle and solve the problem mining that are in the same region to deter the cumulative environmental and social impacts.

#### **4.2 Problem of EIAP 2015 Upon Imposing IEE Assessment over EIA in Hpakhant Jade**

IEE process is just a small-scale impact assessment process with low cost and usually imposes to those proposed projects that generate insignificant adverse effects. Yet the procedures in conducting IEE seem similar to EIA but the scope of study is limited to the environmental setting of the project area, identifying the environment and social impacts of the proposed project, producing the mitigation measures and Environmental Management Plan (EMP) through the results of predictions of impacts.

For EIA process, it is required to assess into deeper of each issue such as the environmental impacts – the nature (forests, mountains, rivers, biodiversity, ecosystem, air and water quality and others), magnitude of the effects, the location and extent of effects, timing (construction period or decommissioning), duration of the projects, the reversible or irreversible of the impacts, uncertainty of prediction and the significant of the proposed projects, the social impacts - demographic impact, socio-psychological impacts, community impacts, culture impacts.<sup>193</sup> Based on the result of the assessment of the aforesaid impacts, the mitigation measures and environmental management plan (EMP) must also be well prepared to minimize those impacts. Due to the scope of study of EIA processes covering wider areas, taking a longer time to investigate the potential impacts and more precise into detail of each category of scope, the results of mitigation measures, and EMP will be more comprehensive and effective than IEE assessment.

When looking into the regulations of IEE in EIAP 2015, it merely requires conducting the assessment covering the project descriptions, description of the

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<sup>193</sup> Ibid.

surrounding environmental and social conditions together with maps, the mere impacts on society and environment. The mitigation measures and Environmental Management Plan (EMP) produced through this small-scale impact assessment may likely be able to cover efficiently all the consequences and produce mitigation measures if the mine itself is just one project in the area. However, this one jade mine is part of the 32,000-acre mega mines. For instance, 80 percent of mining areas are conducted EIA, and another 20 percent which represents 6,400 acres proceeded IEE, the combination of IEE all the remedies for the environmental and social impacts will not be able to comprehensively cover all the adverse impacts as they are conducted through small scale assessment with limitation of scope, tools and low-cost. Even the remedies from the left 80 percent mines conducted EIA process will not be able to cover the impacts produced by 20 percent mines.

When looking into Hpakhant Jade Mine, there are many environmental degradations such as lands, mountains, soil erosion to river (destroying water and food sources), flooding, deforestation, air pollution, ecosystem, and biodiversity. Moreover, there are also many social impacts such as a lack of quality of life, a lack of security, increasing rates of illegal prostitution, child labor, robbery cases, and drug users are increasing daily.<sup>194</sup> Many young people are at risk of being exposed to drugs even more easily. The increasing rate of illegal prostitution and consumption of drugs by injecting with syringes highlights the potential spreading of Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome (HIV).

Furthermore, the increasing rate of child labor, the frequent landslides claiming hundreds of people's lives every year, directly or indirectly forcing people to relocate and leave their properties behind, putting people including children into a dangerous surrounding environment and others. These factors highlight the human right condition in Hpakhant Jade Mine.

Though it cannot be concluded that all of these environmental, social impacts and human rights violations are contributed by those mines that conducted IEE process. There would definitely be able to minimize more of the consequences as all the 32,000 acres of mines are located in the same region, generating the significant amount of various adverse effects to the society, environment and human rights.

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<sup>194</sup> Natural Resources Governance Institute, 'Myanmar's Jade: From Mine to Market'

Therefore, the legal issue of EIAP 2015 is part of the contributions to the current environmental, social situations and human rights status in Hpakhant Jade Mine.

Therefore, the current EIAP 2015 should be amended to impose EIA process to all open-pit jade mines that are situated in the same region. The reason for proposing the small scale to conduct EIA processes is that although they are small and medium-scale jade open-pit mines, the methods of extraction are using the heavy machines. The accumulation of all and all impacts generated would be enormous.

#### **4.3 Problem of EIAP 2015 Concerning With Right to Access to Information from the Aspect of Hpakhant Jade Mine**

The right to Information is a mandatory element of EIA under the Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar. Both in IEE and EIA processes, the elements of disclosure of information mining projects and the public consultation are included. Roughly, it can be seen that it meets the requirement and the standard of right to information set in the international environmental law and complies with the right to information implied in the 2008 Constitution of Myanmar.<sup>195</sup> However, in practice, when applies the current EIAP 2015 of Myanmar onto the Hpakhant jade mines where the combination of all mines made into 32,000 acres located in the same region, they are required to conducted IEE assessment only that could lead to the insufficient information derived from investigations generated through the IEE processes comparing with EIA processes.

Under EIA processes, the assessments are carried out comprehensively in wider range covering bigger scopes, various categories and utilizing scientific tools to and predict the environmental impact – the biodiversity, ecosystem, air, water, forest, etc., the social impacts – demographic impact, socio-psychological impacts, community impacts, culture impacts, etc., the reversible or irreversible impacts, the magnitude of the effects, the location and extent of effects, the prediction of uncertainty.<sup>196</sup> As the assessment is carried out wider scope, deeper in all categories over a longer period, the assessment result would be comprehensive and beneficial

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<sup>195</sup> 2008 Constitution of Myanmar, S4

<sup>196</sup> Ibid.

in carrying out the mitigation measures, and the environmental management plan (EMP).

Additionally, through EIA processes, people who would be directly affected by the proposed projects or the interested parties could be able to access the comprehensive information on the impacts and the mitigation plans of such projects. According to the information they received, they could effectively be able to participate, provide opinions, suggestions and object to the projects if they could access to the comprehensive information of all high risks of various categories concerning the jade mines.

Unlike EIA processes, IEE is conducted the assessment in smaller scope where it uses the existing data, collect baseline data in the field, assess the surrounding environment of the proposed projects, identifying the impacts on the socio-economic, bio-physical, and culture environment, recommend the mitigation measures, and environmental management plan (EMP).<sup>197</sup>

As it is conducted merely in the surrounding area of the proposed jade mines, there will be consequences to the limitation of accessible information of the potential impacts to the environmental and social impacts which would lead to the ineffective mitigation measures, and environmental management plans (EMP). Moreover, the limitation of accessible information will influence the public opinions and mislead their decision-making.

The areas of mines in Hpakhant jade mines are 32,000 acres in total. If it allows each mine to conduct an IEE assessment only, it would hardly be able to provide the information of all adverse impacts on the people.

Currently, it could be assumed that there are many loopholes in conducting the impact assessment. That is why there are many jade mines permitted that are operated close to the villages and lots of houses have been destroyed, grounds are cracking due to enormous mining vehicles passing through villages and township, and put them at risks in the jade mine's landslides,<sup>198</sup> and hundreds of people have been killed in landslides over the past few years. Besides, there are many social problems such as drugs, illegal prostitution, child labor, and robberies, and the rates are

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<sup>197</sup> Ibid.

<sup>198</sup> Ibid.

increasing daily.<sup>199</sup> These increasing rates also highlight the risks of human rights violations. These are the social perspective views.

From the environmental perspective, as all the mines in Hpakhant Jade Mine are open-pit mines, their operations of lead to much environmental destruction and consequently generate harmful effects to the residents directly or indirectly. From gemstone mining operations, there are large areas of forests that are destroyed, and the hundred-foot-high mountains are turning into 1000-foot-deep valleys<sup>200</sup>. Additionally, the clean Uyu River, the sole major fresh river serving as the water source to the approximately 631,708 people passing through Hpakhant Township, is now full of soil erosion.

By looking into these factors, it can be assumed that allowing each jade mine (5 acres for medium-scale and 3 acres for small-scale mines) to conduct IEE is not sufficient to provide the information of the potential adverse impacts, risks, the mitigation and environmental management plan to the public especially the people who are living in Hpakhant. Therefore, all the medium, small-scale jade mines in Hpakhant jade mine shall be entitled to conduct EIA to deliver comprehensive information of the consequences mining operations to the people.

#### **4.4 Legal Barrier in Pursuing Justice Against the Wrongdoers under Environmental Conservation Law**

Environmental Conservation Law (ECL) 2012 is the mother law of all laws relating to environmental protection. The Environmental Conservation Rules (ECR) 2014 – a law that stipulates all the detailed procedures of ECL, and the Environmental Impact Assessment Procedures (EIAP) 2015 – a law governs all the project proposals that are potentially generating harms, are the sub-laws of Environmental Conservation Law (ECL) 2012.

Under ECL 2012, there is a section restricting people or the injured parties from pursuing justice against the wrongdoers. It stipulates that “In prosecuting an

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<sup>199</sup> Ibid.

<sup>200</sup> Sarah Gambles, ‘Landslide at a Jade Mine in Myanmar Kills at Least 32 People’, Deseret News (Salt Lake City, 17 August 2023) <<https://www.deseret.com/2023/8/16/23834984/myanmar-jade-landslide-kills-miners-migrants>> accessed 28 November 2023

offender under this Law, prior sanction of the military shall be obtained,”<sup>201</sup> meaning that it is required to ask for permission from Ministry of Natural Resources and Environmental Conservation (MONREC) first. Then, the injured party or the people can sue the wrongdoers; otherwise, they cannot sue them without permission from MONREC.

Environmental Impact Assessment Procedures (EIAP) 2015 is enacted by this law<sup>202</sup>, meaning that if the people or injured parties plan to sue against the wrongdoers in pursuit of justice under EIAP 2015, they must request permission from MONREC as well. For example, in a scenario where the mount waste sliding into the river, if the local residents who are rely on the river for their water source would to sue the mining proponent or ask for remedies based on Environmental Conservation Law (ECL) 2012, Environmental Conservation Rules (ECR) 2014, or EIAP 2015 through justice system for damaging their water source, they must file the request of prior sanction to MONREC because the mining operator disposes his wastes at the location according to the EIA report when he asks for prior permission, and he is operating according to the regulations.

In another example scenario, in a case where a resident house is sliding into the open-pit mine during the raining season in Hpakhant Jade Mine, if the injured person would like to sue or seek remedies through court, he still requires ask for permission because the mining proponent operates the mining in the area permitted.

Even in a scenario where the mining proponent fails to abide by the EIAP 2015 and disposes of the mining wastes irresponsibly, anyone who would like to sue seek remedies, or confiscate the permitted mining operation license, he will need prior permission from Ministry of Natural of Natural Resources and Environmental Conservation (MONREC).

Additionally, there are no detailed procedures enacted in Environmental Conservation Rules (ECR) 2014 on how to file the document, and what documents are needed to apply for permission as well. Usually, in Myanmar, the Rules are written in detailed procedures after the parliament enacted the laws. Then, the relevant ministries will be responsible for writing the detailed procedures of the laws.<sup>203</sup>

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<sup>201</sup> ECL 2012, S 35

<sup>202</sup> ECL 2015, S7 (m)

<sup>203</sup> 2008 Constitution of Myanmar, S97 (a)

However, under Environmental Conservation Rules (ECR) 2014, there are no sections written relating to the procedures, the place to apply, the required documents, and the period. This even adds more burden on the injured parties who face the problems from mining operations.

Having a section like this under Environmental Conservation Law (ECL) 2015 restricts and adds more burden on the people or the injured parties from accessing the right to justice. It set a barrier for people to access environmental justice. This makes the environmental justice conditional on the government discretion. This is against the constitutional rights of citizens, where the constitution awards every citizen the duty to assist the country in environmental conservation<sup>204</sup> and protection and preservation of public properties<sup>205</sup>. The citizens should be able to take action for the benefits of environmental protection and public property such as water sources, forests, ecosystems, and others etc. From the international law context perspective, section 35 of Environmental Conservation Law (ECL) 2015 is not in compliance with the Rio Declaration 1992, Principle 10, where it serves as a soft law guiding the right to access to justice, where Myanmar participated during the recognition of it.<sup>206</sup>

Additionally, this legal requirement of asking for prior permission from the Ministry of Natural Resources and Environmental Conservation (MONREC) first before suing or prosecuting the wrongdoers makes the environmental justice conditional to the government's discretion. This poses risks to environmental justice under the jurisdiction of Myanmar. Moreover, it could also lead to the exposure of Bias in decision-making, whether to allow or not in pursuing environmental justice.

Another consequence of this section is that there would be a delay in upholding environmental justice for the people. The delay may also lead to the severe environmental harms or causing irreversible damages in the case where people would like to file the case at the court to stop mining operators from harming the environment because there are no detail procedures in Environmental Conservation Rules (ECR) 2014 stipulating that during the filing period of asking permission from Ministry of Natural Resources and Environmental Conservation (MONREC), the mining operators must stop the operation.

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<sup>204</sup> 2008 Constitution, S390, (b)

<sup>205</sup> 2008 Constitution, S390, (d)

<sup>206</sup> Ibid.

#### 4.5 The Risk of Corruption in Determining the Imposed Impact Assessments onto Gemstone Mines

In applying to conduct the impact assessment for the attainment of gemstone mining permission, the proponents must file MONREC with all the required documents concerning the mining projects.<sup>207</sup> Then, it will refer all those documents to the Environmental Conservation Department (ECD) for the determination of which type of impact assessment shall be entitled to proceed.<sup>208</sup> After evaluating all the documents and factors in sections 24 and 28, the department (ECD) will decide the type of impact assessment and send it back to Ministry of Natural Resources and Environmental Conservation (MONREC).

During these processes, there could be the potential for corruption at two stages – when the Environmental Conservation Department (ECD) authority decides the type of impact assessment and when MONREC decides the type of assessment.

Myanmar is a country that has been ruled by the military for over half a century until 2010 when the country started moving on the path of democracy. After it had been on the democratic road for 10 years, the military took over the country with force again on February 1, 2021 up until now. Due to the long period in power, the Myanmar military “maintains murky links to the jade industry through subsidiaries and front companies, and has a vested interest in maintaining the status quo, which is lucrative for the top generals, especially Myanmar Economic Holdings Limited (MEHL) company.<sup>209</sup> Additionally, according to Justice for Myanmar, the military regime also issues or outsources the mining licenses to cronies such as the financial institutions Kan Baw Za (KBZ) Bank and others.

Due to the influence of any stakeholders, organizations, or institutions, there could be the potential for diversion of decision-making in the stage where Environmental Conservation Department (ECD) authorities decide which impact assessment to impose before handing the documents to MONREC. Similarly, the

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<sup>207</sup> EIAP 2015, S 23(a)

<sup>208</sup> EIAP 2015, S 23(b)

<sup>209</sup> Justice for Myanmar, ‘Military-Controlled Jade Mining Industry Behind Landslide’ (6 July 2020) <<https://www.justiceformyanmar.org/stories/military-controlled-jade-mining-industry-behind-landslide>> 29 November 2023

ministry has a close connection with the military regime or any cronies. There could be the possibility of bias or corruption in decision-making. To prevent such circumstances from happening in the aforesaid two stages of decision-making for the type of impact assessment process, the current EIAP should be amended and precisely enacted with a clear provision that all the gemstone mines situated in the same region are subjected to the EIA process. This would prevent and minimize some degree of the adverse impacts as the Hpakhant Jade Mine faces in the other areas of gemstone mining.



## CHAPTER 5

### CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

The Environmental Impact Assessment Procedures (EIA) 2015 of Myanmar is one of the most important mechanisms used in mitigation and prevent the potential adverse effects when there are the development projects to be implemented. However, EIAP 2015 has one significant legal loophole in dealing with the mines that are in the same region. The legal loophole can be seen when looking into Hpakhant Jade Mine.

Hpakhant Jade Mine is one of the biggest mines producing jade in the world. It alone generated 31 billion USD in 2014, which is 45 percent of the overall gross domestic product (GDP) of Myanmar. The total areas of all jade mines are 32,000 acres, and hundreds of companies operate in its area. The jade mines are closely operated next to villages and Hpakhant Town. There are around 600,000 (including migrants) people residing in Hpakhant township. The jade mines are permitted to operate the open-pit mines even though they are close to the villages and town. Due to the mines operating close to where people are living, they pose various lives at risks and security, dangerous surroundings and environment, water and air pollutions, and health and social problems to the people. Many houses were destroyed in landslides, and houses are at risk of being destroyed by landslides. Besides, due to the heavy vehicles transporting the waste passing the villages, the roads are destroyed, and the foundations of many houses are cracked and at risk of falling. Frequently, the landslides claim hundreds of lives every year during the rainy season. The sole major river, called the Uyu River, is now polluted with soil erosion due to the mismanagement and the waste from jade mines to be abandoned next to the river. When the rain hits the waste mountains, they slide into the river. These wastes might have chemical compounds or hazardous materials that could generate toxins. When they slide down into the river, they will pollute the water and damage the water source for all living things that rely on it along the river.

Moreover, there are many social problems, such as the drug user rate, illegal prostitution rate, child labor rate, and crime rate are increasing daily and are directly

or indirectly resulting from the consequences of the operation of jade mines. Drug consumption and illegal prostitution pose the potential risks of spreading HIV/AIDS.

These problems in Hpakhant Jade Mine could be minimized, prevented and protected more effectively with the application of Environmental Impact Assessment (EIA) when comparing with Initial Environmental Examination (IEE). However, the current Environmental Impact Assessment Procedures (EIAP) 2015 allows the jade mines, especially jade mines in Hpakhant, to conduct IEE because all the gemstone mines that are 50 acres or below are required to conduct IEE, and those that are above 50 acres are required to conduct EIA. When looking into the Myanmar Gemstone Law, the medium-scale mines are quota at 5 acres, and 3 acres for small-scale mines. There are no large-scale gemstone mines. Thus, based on the EIAP 2015, it could be concluded that there are jade mines in Hpakhant that are permitted through the assessment of IEE.

To a Maga open-pit mine like Hpakhant jade mine where there are many mines in the same region; where it has many severe social and environmental impacts, and operate closely with villages and town, EIAP 2015 legally allows and grants permission to operate the mines with IEE assessment is like exacerbated the adverse impacts.

Moreover, for open-pit mines like Hpakhant Jade Mine, imposing with EIA type of assessment would still not be enough because EIA is assessment that focuses on its own specific project area. But in practice, there are many mines and project proponents. Thus, each of their EIA could only focus on each of their mines. These will not be able to investigate the cumulative impacts of all mines that are in the same region. This is the legal loophole of Environmental Impact Assessment Procedures (EIAP) 2015.

Another consequence of imposing IEE instead of EIA to some mines in Hpakhant Jade Mine where there are 32,000 acres of jade mines is that the local residents, individuals or organizations who are interested in the jade mines will not be able to receive information of the potential adverse impacts, risks, the mitigation and environmental management plan to the public especially the people who are living in Hpakhant. Based on the received information, people will analyze and provide their opinions and recommendations. In reality in Hpakhant Jade Mine, they do not receive the sufficient information of the potential adverse impacts, the mitigation measures and others are not effective as well.

Another legal issue is that there is a legal barrier set-up in Environmental Conservation Law (ECL) 2012 at the section 35 where it mandated to everyone who would like to prosecute the offenders or environmental polluters, the prior sanction from Ministry of Natural Resources and Environmental Conservation (MONREC). This restricts people to access to environmental justice.

Finally, under Environmental Impact Assessment Procedures (EIAP) 2015, there is a legal ambiguous where there could be the potential corruption or bias during the process of determination what type of assessment would be imposed on to the mining. There is still a problem on how to ensure that there will be no corruption or bias in their decision-makings and how to confirm that the relevant the relevant authorities will determine according to the suggestions and recommendations provided by the non-government organizations, and individuals. These factors show that there should be another legal mechanism required under EIAP 2015 to deter corruption and bias, check and balance to the relevant authorities enhancing environmental transparency and accountability, and uphold environmental justice.

## **5.2 Recommendation**

There are three major problems concerning the Environmental Impact Assessment Procedures (EIAP) 2015 of Myanmar that are required to be solved, and they are as follows.

### **5.2.1 Recommendation for Mining Operations in the Same Region**

The current EIAP 2015 imposes the assessment either EIA or IEE onto gemstone mines, but it does not consider the cumulative impacts of all mines as a whole. These lead to the incomplete assessment outcomes as they are investigated by focusing on each fragment of mine. These will not be able to identify, evaluate and predict the cumulative impacts of the entire mines. The Hpakhant jade mine is an excellent example as proof.

For effective ruling and governing the mining projects that are in the same region, Myanmar should amend the law to adopt the concept of Strategic Environmental Assessment (SEA). SEA is a systematic, analytical, and participatory

approach that evaluates all the interlinkages or interconnections of the environmental and socio-economic considerations, integrating all of these environmental and socio-economic considerations into policies, plans, programs (PPPs) and projects. It is a mechanism to unveil the impacts and let the stakeholders at all levels receive adequate information and understand the linkages of all environmental, social and economic factors. Unlike Environmental Impact Assessment (EIA) where it focuses on identifying, evaluating and predicting the social and environmental impacts of a specific mine, SEA analyzes the overall projects and responds to all of the potential impacts by integrating all the environmental considerations, and socio-economic aspects into the strategic decision-making at all stages and tiers from national, regional and local level. It is a complement assessment considering broader coverage of all the aspects and all tiers of development co-operation. It is a “higher decision-making level” for the assurance that all aspects and sustainability are integrated early in planning.

The concept SEA is used in many countries such as Russia, Canada, China, Thailand, etc. In the international law context, the “European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment” and the “SEA protocol to the Espoo Convention (United Nations Economic Commission for Europe)”.

Because of its considerations are covering the overall aspects of all development projects, Strategic Environmental Assessment (SEA) can help in reducing the long-term environmental harms, prevent the irreversible damages from occurring, implement the policy integrations with sustainable development, protection of environmental and social impacts from early stage, identifying all the risks in the early stages, saving costs, and social equity.

In practice, SEA is not a substitute assessment of EIA. It is an integral part of EIA in a comprehensive environmental assessment toolbox. It can assist in speeding up the EIA procedures by providing streamlining of their scopes and costs. This would ensure that all the proposed development projects that are already subjected to environmental scrutiny are set within the policy framework.

It is a complement assessment that could handle the cumulative environmental and social impacts when there are multiple projects operated in the same region, interacting over time, causing severe harm and damages SEA can

effectively assess these impacts because it evaluates the overall aspects such as the policies, plans and programs (PPPs) instead of a single project like EIA.

For Hpakhant Jade Mine, there are 32,000 acres of mining operated by hundreds of mining companies in the same region where there are mines that are permitted to operate mining through Initial Environmental Examination (IEE) and some are Environmental Impact Assessment (EIA). Significantly, these mines are operated close to villages and town. Neither the IEE nor EIA assessments could investigate and predict the interlinkage adverse impacts, and come up with the environmental mitigation measures and mitigation plans covering the whole aspects of impact on the environmental and socio-economic impacts. That is why there are many incidents such as landslides and causing hundreds of deaths every year, the mismanagement of mount waste from mining extraction sliding into the sole water source, Uyu River, causing a shortage of water, child labor, illegal prostitution, and drug issues. To deter these problems, SEA is the most suitable mechanism.

Currently, Myanmar has not enacted regulations to legally enforce and impose the Strategic Environmental Assessment (SEA) in Myanmar. It should adopt SEA into its jurisdiction for the better protection of the environment, social and economic matters in Hpakahnt Jade Mine, and the future projects that are planned to be implemented and operated in the same region.

After the adoption of SEA, it can be applied to Hpakhant Jade Mine because the longest period of permission is three years for medium-scale, and two years for small-scale mines. For the fairness and justifications, as these jade mines have already incurred the assessment costs, taxes, and other costs for the mining operations. After the period of permissions ends, the relevant authority, Ministry of Natural Resources and Environmental Conservation (MONREC), should pause the session for granting the mining operations and begin imposing SEA on the Hpakhant Jade Mine. The assessment can be conducted based on the actual circumstantial ground settings in Hpakhant and consider all the environmental, social, and economic aspects, and the cumulative impacts of the implementations of mining and other policies, plans and programs (PPPs) at the higher level. After that, Hpakhant Jade Mine can be permitted to operate again according to new regulations based on the SEA outcomes. After that, the Hpakhant Jade Mine can be permitted according to regulations based on the SEA outcomes. Based on the outcomes of the SEA, the regulations on the permissible

mining areas, the period of mining operation, the types of assessments (EIA or IEE) for the specific mining, and other categories are imposed by the SEA outcomes. This will generate the justification for the small-scale and medium-scale mines.

If the outcome of the SEA of Hpakhant Jade is comprehensive enough, covering the details of all aspects, the latter assessment, whether EIA or IEE could reference SEA outcomes and implement them. This could save time in EIA or IEE assessments, save costs, and be more effective in each specific mining assessment. Regarding the costs for the conduct of SEA for Hpakhant Jade Mine, the relevant authorities could remunerate them from the mining proponents during the procedures of granting prior permission for jade mining operations.

With the solution of adopting SEA into the environmental protection law under the jurisdiction of Myanmar, it could resolve and reduce the environmental and social problems occurring in today's Hpakhant Jade Mine. Moreover, for future projects, for example, the multiple dams on the Salween River, SEA could mitigate the cumulative impacts of them and impose suitable regulations on them for the efficacy in the protection of environment and socio-economic benefits of the country.

### **5.2.2 Recommendation for the Problem of Right to Access to Information in Hpakhant Jade Mine**

According to the current EIAP 2015, it grants the jade mines the permission to operate with the assessment of the Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA). These two types of assessments only focus on each mine. The scopes of investigations of these assessments do not cover the entire 32,000 acres of jade mines. Thus, the result of IEE or EIA reports will not be able to provide essential information to the people, or the non-government organizations. This will influence the public opinions and their decision-makings.

Regarding this problem, the Strategic Environmental Assessment (SEA) could resolve this problem as well. Therefore, this is the additional reason why Myanmar should adopt SEA into law under its jurisdiction.

### **5.2.3 Recommendation for the Legal Barrier in Pursuing Justice Against the Wrongdoers**

Section 35 of Environmental Conservation Law (ECL) 2012 mandates to anyone who would like to sue or prosecute the offenders the prior permission from Ministry of Natural Resources and Environmental Conservation (MONREC). This does not comply with the international environmental law – Principle 10 of the Rio Declaration 1992. Additionally, this section puts the environmental justice condition to the governmental discretion. This could lead to government bias in making decisions about whether to allow the wrongdoer to be prosecuted or not. There would also be a delay in upholding environmental justice or taking urgent action to avoid the consecutive harms during the period of waiting for permission. This also seems to oppress the people by putting the barrier or burden more to deter people from pursuing environmental justice or to exercise the duty of citizen enforcement to protect the environment and public properties as provided by 390 Constitution of Myanmar.

This section 35 of Environmental Conservation Law (ECL) 2015 should be repeal to uphold the environmental justice, to protect the environment, to reduce the risk of governmental bias in environmental protection, to be able to take the urgent action in case where it requires the immediate response to prevent environmental damages when the wrongdoers or the polluters cause the damages.

### **5.2.4 Recommendation for Potential Bias or Corruption in the Stage of Determining of Type of Impose Assessment**

The corruption or bias in the stage of determining which type of assessment, EIA or IEE, shall be subjected to conducted for the jade mine. According to the current EIAP 2015, section 23 (b), the Environmental Conservation Department (ECD) has to decide which type of assessment shall be conducted. After that, the documents will be sent to the Ministry of Natural Resources and Environmental Conservation (MONREC). Then, MONREC will evaluate again and determine which assessment must be proceeded. There is a potential risk of corruption or bias in determining, as Myanmar reported with a high rate of corruption. Therefore, to avoid such risk of corruption and to prevent such corruption from happening in decision-making which type of impact assessment shall be entitled to conduct, there should be the law

promulgate to establish the role of Non-Governmental Organizations (NGOs) in Environmental Impact Assessment Procedures (EIAP) 2015 especially in post-EIA era because the current EIAP 2015 allows NGOs to access the information of the project proposal by imposing the project proponents to publish their project information from the beginning until EIA reports are being approved, and participate in public consultations at regional and national levels. However, the role of NGOs is limited in the post-EIA report approval era.

The EIAP 2015 of Myanmar should be amended to adopt the establishment of the role of NGOs and allow them to challenge the decisions of the authorities in litigation procedures and administrative appeals (requesting for review the assessment reports, suspension, or reversal of approved EIA and permission granted projects) in cases where;

- there is unlawful decision-making when deciding the type of imposed assessment (EIA or IEE), and in approving the EIA reports;
- there is a lack of proper public consultation.
- The project proponents fail to disclose the EIA reports to the public and
- there are severe environmental harms without proper care, causing to the environment and society
- there are violations of environmental rights and constitutional rights.

Additionally, the law should allow non-governmental organizations (NGOs) to monitor compliance with EIA conditions in the post-EIA approved era and allow them to report the violations to the relevant authority as well. Amending EIAP 2015 to strengthen the role of NGOs in the post-EIA approved era could ensure environmental accountability from all stakeholders, detect violations early before severe adverse impacts, reduce corruption or bias, strengthen environmental transparency, and share the burdens of the relevant authorities in monitoring the compliance of EIA conditions.

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