



UNIVERSITAS MUHAMMADIYAH MATARAM

STATUS INSTITUSI TERAKREDITASI B

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Mataram Nusa Tenggara Barat

Nomor : /II.3.AU/A/VII/2019
Lampiran : -
Perihal : **Undangan Pembukaan**

Mataram, 8 Dzulqaidah 1440
11 Juli 2019

Kepada Yth.

Di –
Tempat

Dengan hormat,

Sehubungan dengan akan diselenggarakannya *The 2019 International Conference on Mining and Environmental Technology (ICMET): Good Mining Practices and Its Application* oleh Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM) Universitas Muhammadiyah Mataram bekerjasama dengan Ikatan Ahli Geologi (IAGI) Nusa Tenggara, maka kami mohon perkenan menghadiri acara pembukaan yang insya Allah akan dilaksanakan pada:

Hari/ Tanggal : Senin, 15 Juli 2019
Waktu : 08.30 WITA
Tempat : Hotel Lombok Raya, Mataram

Ada lima Pembicara kunci yang telah bersedia untuk hadir yaitu Prof.Dr.Ir. Irwandi Arif, M.Sc (Institut Teknologi Bandung, Indonesia), Dr. Datu Buyung Agusdinata (Arizona State University, Amerika Serikat), Dr. Irdika Mansur.,M.For.Sc (SEAMEO BIOTROP, Indonesia), Dr. Sue Vink (The University of Queensland, Australia), dan Prof. Chew Tin Lee (Universiti Teknologi Malaysia, Malaysia). Seluruh tulisan yang diterima (*accepted*) dan dipresentasikan (*presented*) akan dipublikasikan melalui IOP Conference series: Earth and Environmental Science (EES) dan terindeks di SCOPUS.

Demikian kami sampaikan, atas perhatian dan kerjasama Bapak/Ibu kami ucapkan terima kasih.

Hormat kami,

Dr. Harry Jawan Johari, S.Hut., M.Si
NIDN 0810017901





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Mataram Nusa Tenggara Barat

Nomor : /II.3.AU/A/VII/2019
Lampiran : -
Perihal : Undangan Gala Dinner

Mataram, 8 Dzulqaidah 1440
11 Juli 2019

Kepada Yth.

Di –
Tempat

Dengan hormat,

Sehubungan dengan diselenggarakannya *The 2019 International Conference on Mining and Environmental Technology (ICMET): Good Mining Practices and Its Application* oleh Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM) Universitas Muhammadiyah Mataram bekerjasama dengan Ikatan Ahli Geologi (IAGI) Nusa Tenggara, maka kami bermaksud mengadakan Gala Diner dengan para pembicara seminar yang insya Allah akan dilaksanakan pada:

Hari/ Tanggal : Senin, 15 Juli 2019
Waktu : 19.30 WITA
Tempat : Aula Lt. 1 Gedung Rektorat Universitas Muhammadiyah Mataram

Kegiatan ini akan dihadiri oleh pembicara kunci yang berasal dari Australia, Malaysia, Amerika dan Indonesia serta presenter yang mewakili berbagai perusahaan dan universitas di Indonesia

Demikian kami sampaikan, atas perhatian dan kerjasama Bapak/Ibu kami ucapkan terima kasih.

Hormat kami,



Dr. Hary Irawan Johari, S.Hut., M.Si
NIDN-0810017901



The 2019 INTERNATIONAL CONFERENCE ON MINING AND ENVIRONMENTAL TECHNOLOGY (ICMET)
Mataram, 15-17 July 2019

(Day 1)

Venue	Selaparang Ballroom		
07.30-08.30	Registration		
08.30-09.00	Performing Art: Gendang Beleg and Welcoming Dance		
09.00-09.10	Welcoming Speech by The Chairman - Joni Safaat Adiansyah, Ph.D		
09.10-09.20	Speech by Rector of Universitas Muhammadiyah Mataram, Drs. H. Arsyad Abdul Gani, M.Pd		
09.20-09.30	Opening Speech by Governor of West Nusa Tenggara, Dr. H. Zulkieflimansyah, SE.,M.Sc		
09.30-10.00	Coffee Break		
10.00-10.30	Keynote Speaker 1: Prof. Irwandi, Institut Teknologi Bandung Development on Geotechnics in Indonesia		
10.30-11.00	Keynote Speaker 2: A/Prof. Sue Vink, The University of Queensland New Dimensions In Mine Water Management: How Measurement, Modelling And Recognition Of A Shared Resource Are Influencing Mine Water Management And Regulation		
11.00-11.30	Keynote Speaker 3: Dr. Irdika Mansur, M.For.Sc Source of Organic Matters to Support Mine Rehabilitation in Indonesia		
11.30-12.00	QA Session		
	Moderator: Joni Safaat Adiansyah, Ph.D (UMMAT)		
12.00-13.30	Break		
13.30-14.00	Keynote Speaker 4: Prof. Chew Tin Lee Closing The Loop for Food Waste: From Sustainable Waste Management to Soil Management and Quality Crop Production		
14.00-14.30	Keynote Speaker 5: Dr. Datu Buyung Agusdinata Sustainable Mining of Renewable Energy: Assessment of Socio-Environmental Impacts		
14.30-15.00	QA Session		
	Moderator: Kusnadi, M.Sc (IAGI)		
Parallel Session			
Venue	Ruang Gili Meno Mining Operation	Ruang Selaparang Environmental Strategy	Ruang Sangkareang Mining and Society
Moderator	Radjali Amin, Ph.D/IAGI	Jorina Waworuntu, Ph.D/UMMAT	Khatib Syarbini, ST.,M.Eng.IPM/ AMNT/IAGI

15.00-15.15	<p>Rippability Assesment using Seismic, Graphic and Grading method at Samarinda Sandstone Mines</p> <p><i>Ashabul Kahfi, Ferlien, Daud M S, Tommy T and Shalaho</i></p>	<p>Hydrometallurgical High Pressure Acid Leach, a new technology in Indonesia</p> <p><i>Tonny H Gultom</i></p>	<p>Kampoeng Reklamasi: A Case Study of other Designation Reclamation Type of An Ex-Tin Mine in Bangka Island, Indonesia</p> <p><i>Ahmad Syauqi, Jajat Sudrajat and Nur Anbiyak, Benny Hutahaeen, R. Rahendra Adnis</i></p>
15.15-15.30	<p>Characteristic of Pro Delta Enviroment on Coal Seam PAF and NAF, Warukin Formation, South Kalimantan</p> <p><i>Idham Abdullah, Andyono Broto Santoso and Reynaldo Novian Adiputra</i></p>	<p>The impact of tailings flow on the abundance of deep sea meiofauna in Sumbawa waters</p> <p><i>Susetiono, Yunia Witasari, Windy Prayogo, Muhamad Salamudin Yusuf and Jorina Waworuntu</i></p>	<p>Danau Seran, a Pit Lake in ex-Mining Area as an Opportunity for Sustainable Tourism</p> <p><i>Hanny Maria Caesarina and Fariz Primadi Hirsan</i></p>
15.30-15.45	<p>The Decreasing of The Ash Coal and Sulphur Contents Of Sawahlunto Sub Bituminous Coal By "Minyak Jelatah"</p> <p><i>Heri Prabowo, Ilep Prengki</i></p>	<p>An Application of Taguchi Experiment Design Methods on Optimization of Mortar Mixture Composition with Silica Fume As Partial Substitute For Cement</p> <p><i>Gagassage Nanaluh De Side, Ni Nyoman Kencanawati and Hariyadi</i></p>	<p>Optimizing the unused surface mined lands as an alternative for tourism destination: The case of Lombok Island</p> <p><i>Erry Agustriani, Juraedah Dwi Anggraeni and Meliawati Ang</i></p>
15.45-16.00	<p>Application of Adaptive Neuro-Fuzzy Inference System (ANFIS) for Slope and Pillar Stability Assessment</p> <p><i>Syamsul Hidayat, Alpiana and Diah Rahmawati</i></p>	<p>Air Dispersion Modelling For Emission Mitigation of Power Plant Technology</p> <p><i>Bernaded Oka Anggarani, Prasetyo Adi Wibowo and Faris Aditama</i></p>	<p>The Impact Of The Former Mining Land Change Into The Tourism Area Of Socio-Economic Conditions</p> <p><i>Agus Kurniawan, Febrita Susanti and Sri Rahmi Yunianti</i></p>
16.00-16.30	Coffee Break		
16.30-16.45	<p>The Process of Tin Ore Separation of Gangue Minerals and Optimalization of Processing of Rare Earth Mineral (Monazite) As a By-Product of Tin Mining in East Belitung Regency</p>	<p>Riverine biota as environmental indicators of artisanal small-scale and large-scale gold mining impacts on riverine ecosystems in Brong Ahafo Region, Ghana</p>	<p>Good Mining Practices Toward a Good Mine Management: a Case of Mining Business Permit Issuance</p>

	<i>Reynaldo Novian Adiputra, Friska Agustin, Asti Sulastris, Chalid Idham Abdullah, Ivan Nugraha, Rian Andriansyah and Mulyono Hadiprayitno</i>	<i>Karunia Fajarrini Macdonald</i>	<i>Oheokh Haris, Tatiek Sridjatmiati and Joni Safaat Adiansyah</i>
16.45-17.00	Hydrogeology Estimation Using Geoelectric Survey in Sekotong, Lombok Barat <i>Aiun Hayatu Rabinah, Kusrini Kusrini and Juraedah Dwi Anggraeni</i>	Mercury Contamination in Groundwater from Artisanal and Small Scale Gold Mining Activities: A Case study in Southern Lombok Coast, West Nusa Tenggara Province <i>Harry Irawan Johari, Diah Rahmawati and Hidayati</i>	Improving The Understanding Of Mining Licensing Owners for Paying The Reclamation Insurance Fund in NTB Province <i>Juraedah Dwi Anggraeni, Erry Agustriani, Yusuf Palimbong and Yuniar Pratiwi</i>
17.00-18.30	Break		
18.30-19.00	Transporting all participants to UMMAT for Gala Dinner Bus will be prepared and parking at the Hotel Lombok Raya		
19.00-21.00	GALA DINNER		
21.00-21.30	Transporting all participants to The Hotel		

(Day 2)

Venue	Selaparang Ballroom		
07.30-08.30	Registration		
Parallel Session			
Venue	Ruang Gili Meno Mining Operation	Ruang Selaparang Environmental Strategy	Ruang Sangkareang Mining and Society
Moderator	Radjali Amin, Ph.D/IAGI	Joni Safaat Adiansyah, Ph.D/UMMAT	Khatib Syarbini, ST.,M.Eng.IPM/ AMNT/IAGI
08.30-08.45	Quantitative Mapping of Limestone Reserve Using Cross Section Method in Mangkung Village, Western Praya, West Nusa Tenggara	Overview of Remediation Technology for Mercury-Contaminated Sediment in Sekotong Sub District Lombok Indonesia	The Impact of Mining Activities Toward Behavioral Change of Social Aspects at Mine Circle Area Hidayati, Rima Rahmaniah,

	<i>Alpiana, Muhammad Ilham, Irwan Irwan and Bedy Matrani</i>	<i>Diah Rahmawati and Joni Safaat Adiansyah</i>	<i>Muhammad Fauzi Bafadal, Muhammad Hudri and Irwandi</i>
08.45-09.00	<p>Interpretation of the Surface Structure on Artisanal Mining Areas with Geoelectric Resistivity Method of Schlumberger Configuration in Sekotong, West Lombok</p> <p><i>Meidi Arisalwadi, Erry Agustriani, Juraedah Dwi Anggraeni, Yusuf Palimbong and Kusnadi Kusnadi</i></p>	<p>Green Growth for Achieving Education and Technology in the Mining Industry</p> <p><i>Etika Ariyani</i></p>	<p>The role of the Federal Trade Commission for Supervision of Mining Business Companies on the Internet</p> <p><i>Abdul Sakban, Andi Kasmawati, Heri Tahir and Sahrul Sahrul</i></p>
09.00-09.15	<p>The Gold Mining Exploration using Geoelectrical Method in Mt. Suge, Sekotong Region, West Lombok</p> <p><i>Irwan and Ilham</i></p>	<p>Environmental Feasibility of Settlements in the Mining Circle Area</p> <p><i>Ima Rahmawati Sushanti, Laylan Jauhari and Ivan Adiel Abednego</i></p>	<p>Development of Subjects Specific Pedagogy For Build the Student Environmental Awareness Character in Mining Areas</p> <p><i>Nanang Rahman</i></p>
09.15-09.30	<p>Analysis of Accuracy Parameters of ANN Back Propagation Algorithm Through Training and Testing Hydroclimatology Data Based on GUI Matlab</p> <p><i>Syahrudin, Dewi Pramita, Toto Nusantara and Subanji Subanji</i></p>	<p>Suitability analysis of non-metal mineral and rock mining sites with spatial patterns based on Central Lombok Regency spatial planning</p> <p><i>Sri Apriani Puji Lestari Baiq Harly Widayanti Yusril Ihza Mahendra</i></p>	<p>Analysis of Community Understanding on the Risk of Class C Mining for The Community Environment at Karang Sidemen Village North Batukliang District Central Lombok</p> <p><i>Agus Herianto, Nurin Rochayati, Ibrahim, Mas'ad and Mahsup</i></p>
09.30-09.45	Coffee Break		
09.45-10.00	<p>Seismic risk for Sumbawa Island based on seismicity and peak ground acceleration</p>	<p>Carbon footprint comparison of three different mine tailing managements using a life cycle assessment approach</p>	<p>Community Understanding and Attitude Levels on The Implementation of Illegal Sand Mining in The Induk Beach Lombok</p>

	<i>Catur Bejo Santoso and Didi S Agustawijaya</i>	<i>Joni Safaat Adiansyah</i>	<i>Nurin Rochayati, Harry Irawan Johari, Ibrahim, Mahsup and Agus Herianto</i>
10.00-10.15	Influence of the earthquake force directions on building construction in Lombok Island: a case study of Pandanduri dam in East Lombok <i>Ferry Afrizal and Didi S. Agustawijaya</i>	The Analysis of Correlation Between Regime's River Coefficient and Runoff Coefficient: A Case Study of Sidutan and Reak <i>Satia Cahya Noviadi and Ayu Rizki</i>	Identification Of Supporting Factors Of Tourist Village Development In The People Area Of Sekotong District Ministry <i>Dedy Iswanto and Ramayanto Ramayanto</i>
10.15-10.30	The Application of Industrial Hygiene for Improving Working Environment at Owned State Electrical Company Mataram City <i>Lukman, Intan Dwi Hastuti, Asbah, Iskandar, Arsyad Abd Gani</i>	The Effect Of Amalgamation process Locationon Mercury Content At Deep-Well Water In The Pelangan Village, Sekotong, Lombok <i>Muhammad Puspaedi Putra, Erry Agustrian and Juraedah Dwi Anggraeni</i>	A Case Study of Community Empowerment Patterns Through Village Owned Enterprises Strategy In The Gold Mining Area West Sumbawa, Indonesia <i>Ibrahim Ibrahim, Mintasrihardi Mintasrihardi, Kamaluddin Kamaluddin and Mas'Ad Mas'Ad</i>
10.30-11.30	Break		
11.30-12.15	CLOSING Best Paper Award Best Presenter Award Pre-Conference Agenda Arrangement: Lombok Tour & LCA Introduction		
12.15-13.30	Lunch and Break		
13.30-17.00	Post Conference #1 Introduction on Life Cycle Assessment <i>Joni Safaat Adiansyah., P.Hd</i>		

(DAY 3)

LOMBOK TOUR

Trip to Kuta Beach, Batu Payung Beach, Sade Traditional Village, Sukarara Traditional Village and Mayura Tample



INTERNATIONAL
CONFERENCE ON
MINING &
ENVIRONMENTAL
TECHNOLOGY



CERTIFICATE

THIS IS TO CERTIFY THAT

Agus Herianto

Appointed as a **Presenter**
has presented a paper entitled

**Analysis of Community Understanding on the Risk of Class C Mining for The Community Environment
at Karang Sidemen Village North Batukliang District Central Lombok**

at the 2019 International Conference on Mining & Environmental Technology (ICMET 2019)

Organized by LPPM UMMAT and IAGI Nusra
Mataram, Indonesia July, 15th - 17th 2019



Joni Safaat Adiansyah, Ph.D
Organizing Committee Chairman

Supported by : **IOP** Publishing



INDONESIAN
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NETWORK



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MINERAL





CERTIFICATE

THIS IS TO CERTIFY THAT

AGUS HERIANTO, M.Pd

Appointed as **Committee**

at the **2019 International Conference on Mining & Environmental Technology (ICMET 2019)**

Organized by LPPM UMMAT and IAGI Nusra
Mataram, Indonesia July, 15th - 17th 2019



Joni Safaat Adiansyah, Ph.D
Organizing Committee Chairman

PAPER • OPEN ACCESS

Analysis of community understanding on the dangers of quarry mining to the environment: a case study of community forest at Karang Sidemen Village North Batukliang District, Central Lombok

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Abstract submission due: April 9

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Analysis of community understanding on the dangers of quarry mining to the environment: a case study of community forest at Karang Sidemen Village North Batukliang District, Central Lombok

A Herianto^{1*}, Ibrahim², Mahsup³, N Rochayati⁴ and Mas'ad⁵

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Abstract. Mining material of quarry (class-C) as one of the activities that utilize natural resources should be able to bring good impacts to the community economy, but with the understanding of the community that is still said to be low. Some factors such as economic impetus, ignorance aspect, personal interests, political elements, the usage, the quarry brings more negative impact. This is due to the fact that there are no clear rules and no boundaries in operating the mining process. Reclamation is very difficult to do. The purpose of this research is to explain to the community of the dangers posed by quarry to the environment of the community forest at Karang Sidemen Village North Batukliang District, Central Lombok. This research uses qualitative method of research and uses three methods of data collection, namely observation method, interviews, and documentation conducted in the village. This research uses four stages of data analysis, namely data collection, data reduction, display or presentation, and data verification. The results show that the understanding of the people about the dangers of class-C mining to the environment of the community forest in the village of Karang Sidemen is still low, due to low education level and based on economic drive factor.

1. Introduction

Natural resources are one of the necessary capital of development. Therefore, another essential money, its utilization, should pay attention to the factors of demographics, socio-cultural, geography, geology, topography, flora, and fauna, all of which are environmental factors. Meanwhile, man is instrumental in the environment and affects the environment [1]. To fulfill the needs of his life, both clothing, food, and board. It is not refutable that human needs are increasingly diverse, one of which is the need for a board/shelter. The increasing number of population is an essential factor in increasing housing needs. To meet the needs of the larger land people in various ways try to expand the area, one of which is by mining.



The mining industry is one of the reliable sectors of the Indonesian Government to bring in foreign exchange [2].

The Government issued a Government Regulations in lieu of Laws (PERPU) No. 1 of 2004 on the change in LawNo. 41 of 1999 On Forestry. The new rules provide legal legitimacy for the Government to grant permits to national and multinational companies to conduct open mining in protected forests. President Megawati Soekarnoputri signed the Government Regulations in lieu of Laws (PERPU) on March 11, 2004. The management of mining in one area can provide community welfare, especially in the mining area itself. But what happened precisely; the mining area was trapped in the natural resource curse and Dutch disease [3]. Sustainable development advocates argue that this concept provides a context for thorough sustainability where the sophisticated thinking of green development is challenging to materialize. To realize sustainable development in Central Lombok District is required integrated planning, involving all related services in the management of environmental and natural resources [4].

Although theoretically, Indonesia becomes a potential country as the investment destination country, in practice, often some problems cause legal uncertainty. For example the legal certainty of mining investment field [5]. Although mining activities are regulated in the law, however, environmental problems still occur, this is due to the digging of non-metallic minerals (sand, gravel, timber soils) unrestrained. As an example in Karang Sidemen village, Batukliang North District, Central Lombok District that not all mining quarries have a regional mining permit (SIPD). Quarry issue in the Karang Sidemen village is a complex one as it involves many people, both people from the town itself and the outsider who have the advantage of the quarry existence of the quarry. Local Regulation No. 11 the year 2003 on the requirements of quarry mining business of the village of Karang Sidemen states that the mining business could only be done if they have obtained the local Mining Permit (SIPD). The Governor issued the permit after receiving recommendations from the mayor or regent as well as other government agencies related to land rights and environmental disorders.

The instantaneous profit received by the people of Sidemen today is not worth compared to the cost spent on conservation. Sidemen village in the next 15-25 years may no longer be a clean water supply area for some parts of Central Lombok as it may be dry and barren due to damaged plantations, and badly impacted agricultural regions that influence the sustainability of the ecosystem in it. Even today, the quarry mining has also penetrated the fertile areas of productive farming using heavy equipment in the area. Therefore, this study seeks the community level of understanding on the dangerous of mining quarry activity.

2. Method

The qualitative research method is called a new approach and post-positivist method based on the philosophy of post-positivity theory [6][7][8]. In this research, the authors use qualitative methods because the data obtained in the field is descriptive data. The design used is a review of the problem of the current sign, in which case the authors will undertake a study relating to the analysis of the community understanding about the dangers of quarry for public forest area at Karang Sidemen Village, Batukliang district north of central Lombok District.

In this study, the subject of the research is a respondent and determined by using a purposive sampling. The respondents are divided into two categories, namely key respondent and ordinary respondent. The key respondent is the community of Karang Sidemen Village, who live close to the mining area while the ordinary respondent is the head of the village of Karang Sidemen, Batukliang District north of central Lombok regency. The data and analysis flow are presented in Figure 1.

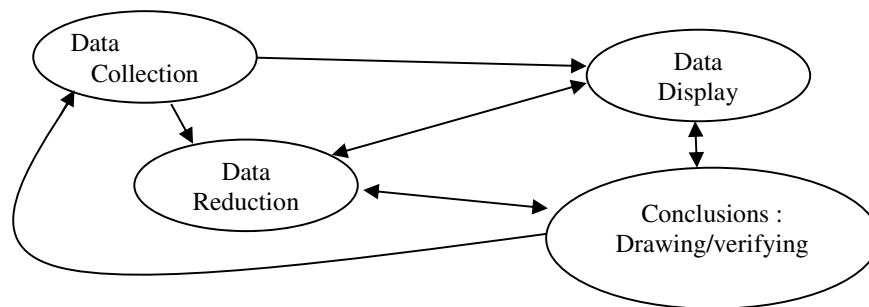


Figure 1. Components of interactive model data analysis

3. Result and Discussion

3.1 Community understanding on quarry excavations in Karang Sidemen Village

The community around the mine site in Karang Sidemen Village generally stated that they are not familiar with the quarry mining term, of which the excavation consisting of sand, stone, gravel, and a pile. They only know that they dig sands, pebbles, gravels, and soil and try to make income for themselves. The people in Karang Sidemen Village and those who live around the quarry (sand, stone, gravel, and pile) excavation sites have never heard of the term even though they do the excavation every single day.

This situation is understandable if viewed from the education level of the miners. Most of them only completed basic school level. Out of 41 miners, 23 graduated from basic school, 9 of them graduated from junior high school, 6 dropped out of school, and 3 has never attended education of any levels. Due to this situation, it is difficult for them to identify any excavated materials whether they belong to class A, B or C. However, when asked about the elements contained in the excavated materials, they were able to answer correctly and adequately.

The level of understanding of the community around the quarry mining area in Karang Sidemen Village regarding quarry/group-C excavations consisting of rock, sand, gravel, and the soil is still basic. This condition was triggered by the low level of education of the miners. Based on an interview with one of the miners it was revealed that the main purpose of the quarry excavation is Karang Sidemen Village is economic impetus. The income made from the excavation is inadequate for work that is quite substantial. The income earned by the miners depend on the number of dump trucks that come to their location to buy mining products in the form of pebbles, sand, or soil. The price given for each dump truck is IDR. 200,000 where IDR. 80,000 of the total amount is deposited to the landowner, and the remaining is divided among members who are mining. This means that the net income earned by each miner depends on the number of dump trucks that come to buy material and the number of miners involve in the job.

Based on the explanation above, it can be concluded that the primary purpose of quarry excavation in Karang Sidemen Village is purely motivated by economic factors. The average communities around the edge of the forest do not have permanent jobs other than farmers, gardeners, and livestock farmers who cannot generate sufficient income every day to meet their daily needs. Apart from the very minimal income, quarry mining is the only livelihood available (highly dependent on the number of dump trucks that come to buy materials and the number of miners in one mining location). However, there seems to be no other choices for the local community, given the low quality of human resources.

3.2 The understanding Karang Sidemen people on quarry excavation procedures which are safe and pose no harm to the community forest area.

The observation activities carried out have revealed that the mining operation in Karang Sidemen village can be categorized into two types include traditionally operated mining and mining by using heavy equipment. The mining activities are carried out by miners from both inside and outside Karang Sidemen village with a land lease system. Miners from outside of the village are more dominantly using heavy

equipment in carrying out their operations. Meanwhile, miners from Karang Sidemen mostly use traditional methods and tools.

The interviews with the miners regarding how to conduct excellent mining have revealed that the miners cannot explain it well due to the fact that they averagely mine without clear procedures. The head of Karang Sidemen Village revealed that the miners carried out the mining activities without guidance; they only excavated the mining areas to which they were entitled to. The miners would excavate the materials until it was close to residential area. When this information was confirmed, the miners admitted that they were digging up to the limit of their land, whether or not the boundary of their land was a building, it was not a serious matter to consider. Another thing that also appears at the mine site is that the exploitation site is located in a residential area and leaves a hole that is quite dangerous especially during the rainy season. The former quarry is covered with rain, so it leaves no mark, vulnerable to children who play around the mine site and pedestrians who are unaware of the hole's existence.

The presence of this mining area leaves many problems from damage to infrastructure (village roads) to village security issues. The results show that in general the community still do not understand well the appropriate procedure to mine a quarry, which is consisting of sand, stone, gravel and embankment soils, that are safe and do not damage the environment. Mining behavior demonstrated by the miners is divided into two categories, namely traditional behavior where the mining activities are carried out using simple tools or in manual manner, and modern behavior where mining activities are carried out using heavy equipment. The people, both miners and landowners, who use heavy equipment have stopped their activities and abandoned the mine site. This condition has affected the landscape of the environment as no reclamation process carried out by the miners, landowners, and surrounding communities, one example revealed by [9].

3.3 The Understanding of Karang Sidemen community on the dangers of quarry excavations in the community forest area

This study found that the community's understanding of the dangers of quarry excavations consisting of sand, stone, gravel, and soil is still low due to low educational background. It can even be said that the people of Karang Sidemen Village are not concerned that much about the dangers posed by the excavation. The land used as a mining site was originally a plain field with towering trees, namely community forest land. The area is a fertile area at the foot of the southern part of Mount Rinjani. Based on its natural potentials, this area was designated by the government of West Nusa Tenggara Province as the Rinjani geopark area. By the Central Lombok Regional Government, it was designated as an area whose development focus was directed towards the agro-business sector.

The environmental conditions change very dramatically and indicate significant damage to the environment. Water pollution occurs due to the activities of miners who flush mining materials waste and discharge the wastewater back into the existing water channels. The quarry excavation leaves many holes in the area which are quite dangerous for the surrounding population, especially children (especially in the rainy season), as they may cause accidents. The former excavation slums also have the potential to spread diseases. On the other hand, the formation of the earth's surface will also change, which may lead to the occurrence of landslides. This research shows that the people of Karang Sidemen Village are only concerned about their personal interests without thinking about the impact of what they are doing to the society, the environment and the survival of living things in the future. Even though the potential of the area and the natural resources they have is very abundant that they can support the community's economy and fulfill their needs, the quarry excavation is not the only livelihood available for them to make ends meet.

4 Conclusion

Based on the problem background and discussion, it can be concluded that the level of understanding of the Karang Sidemen community associated with quarry/group-C excavation in the community forest area

is still low. Many aspects contributing to it such as economic impetus, points of ignorance, personal interests, political elements, and the dominant feature is the low level of education of the miners. It is known that the primary purpose of the quarry excavation in Karang Sidemen Village is due to economic impetus. Mining behavior demonstrated by the miners is divided into two categories, namely traditional behavior where mining activities are carried out using simple tools or in manual manner and modern behavior where mining activities are carried out using heavy equipment. The community living around the mine site can be divided into three categories, namely those who agree to (pro) the mining, those who disagree (contra) and those who do not understand the mining activities in Karang Sidemen Village.

The community's behavior towards the environment and the procedures they applied to conduct exploration indicate that in general, the community still do not understand how to mine quarry materials properly that are safe and do not damage the environment. This condition triggers bad environment because there is no reclamation process carried out by local governments, miners, or the surrounding community.

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