

CONTROL OF ILLEGAL MINING (PETI) IN INDONESIA: POLICY AND PROGRAM

UKAR W. SOELISTIJO

Faculty of Engineering, Bandung Islamic University – Unisba, Bandung
Retired Senior Researcher, Mineral and Coal Technology Research and Development Center, Bandung
Faculty of Mining and Petroleum Engineering, Institute Technology Bandung, Bandung

ABSTRACT

The activity program of illegal mining prevention and tackling which constitutes non-formal enterprise and employing job within the outlying regions becomes as part of the regional development program in which may include community development program as well. Community development in the sector of energy and mineral resources is the program of community empowerment including the community of illegal mining (PETI) is directed toward self-sustainability in the enterprise in lieu of the order of formal enterprise and employing job.

The management handling of illegal mining prevention and tackling program may include the components of identification of the PETI causal factors, the system of registering and mapping PETI distribution, the system of state financial loss estimation (fiscal and non-fiscal), mapping PETI players, mapping organization related to the development and supervision of PETI including its type of job and function, system of PETI prevention, tackling system of PETI impacts, systematization of the effort of PETI prevention and tackling. Successfulness indicator of PETI prevention and tackling may include the progressive and active response of PETI players and the sustainability in terms of social-economics, human and environment as well. The implementation of PETI prevention and tackling faces various challenges and opportunities which should be anticipated.

Whatever in the living circle of the people human-being is based on the philosophy of eager to live in the right track in term of law enforcement or legal. At one time, the living of PETI must be left which functions presently as temporary economic safety valve even with very high risk, while formal job has not been yet found out. Somehow, the government has moral responsibility to make the people alive by creating good quality of enterprise and job. The effort of PETI curb is expected to be able to carry out systematically, well-planned and well-directed up to the whole and entire goal is well reached for the shake of nation and state glory and prosperity.

Keywords: Illegal mining (PETI), policy, prevention and tackling program, direction/solution

INTRODUCTION

Illegal mining or PETI (the mining activity without license) is the mining enterprise which is carried out by individual, group of people, or legal enterprise, where in its operation does not own permit from the government institution in lieu of the prevailing regulation or law. Illegal mining has existed since a long time ago before the law on general mining being available. It was initiated by a traditional or an artisan mining as either the main livelihood or additional income to support the subsistence (Tim Terpadu Pusat Penanggulangan Masalah Pertambangan Tanpa Izin (PETI), 2000;

Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003; Anonymous, 2000, 2001, 2004).

The method of mining is very simple by using manual equipment such as mattock for digging sand or stone at rivers and hills. Moreover, the illegal mining spreads over the various kinds of minerals such as metallic minerals, coal etc. After the regulation exists that the mining activity requires certain procedures and the method of good mining practice, the traditional mining is still continuously taking place without paying atten-

tion to the prevailing law or regulation, or does not understand it. The central government integrated team on tackling PETI categorizes it into three levels, i.e., the first category (the old type of traditional mining), the second category (the old verse and the new verse of PETI), and the third category (PETI by using mechanical equipments and if it is necessary to clear away the area of legal mine) (Tim Terpadu Pusat Penanggulangan Masalah Pertambangan Tanpa Izin (PETI), 2000; Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusahaan Instalasi Listrik dan Pencurian Aliran Listrik, 2003). The various problems emerge caused by PETI, for instance by the condition of disharmonized enclave between the legal mine and the local community and PETI, community development, mine safety and health, loss of the state revenue, environmental disruption, etc. Those conditions become the problem of the state, it is necessary to be overcome and the systematical solution should be thoroughly pursued. By using certain procedure of solution formulated by the government, it is expected that prevention and tackling of PETI could be optimally carried out to realize:

- 1) Good mining practice in line with creating sustainable mining development (Suyartono, 2003);
- 2) Law in order, assurance of law, and conducive investment climate;
- 3) Optimization of mineral utilization concerning the marginal deposits left (Anonymous, 2010);
- 4) Reduction of negative effects of environmental impacts in line with Law No 32/2009 on Envi-

ronmental Management and Protection (Anonymous, 2009).

The efforts of PETI tackling are obviously expected as beneficial for the state, i.e.:

- 1) In the problem solution is not just in the field of mining, but as a national problem where the right of the people should be protected by the state in term of seeking income for their sustainable survival of live toward prosperous country;
- 2) The commitment of the mining community as their obligation to the state, e.g. in terms of state's revenue, environmental protection, law enforcement in line with the context of sustainable mining development in terms of effective, efficient, intensive regional development and environmentally outlook (Soelistijo, 2008).

METHODOLOGY

The mindset in the composing guide line of PETI prevention and tackling is based on the concept of sustainable development in the field of mining through regional development in which the program of community development (CD) as part of the implementation of corporate social responsibility (CSR), the creation of the harmonious relationship between the mining enterprise and the local community, job and income creation for the community, and the implementation of good mining practice (Figure 1) (Simatupang and Wahyu, 1994; Soelistijo, 2003).

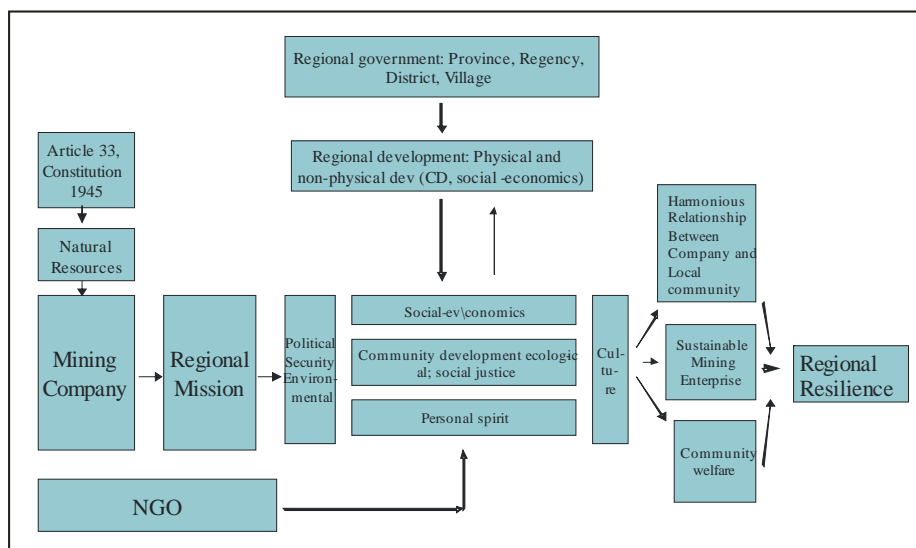


Figure 1. Mindset of regional development within the surrounding mining area

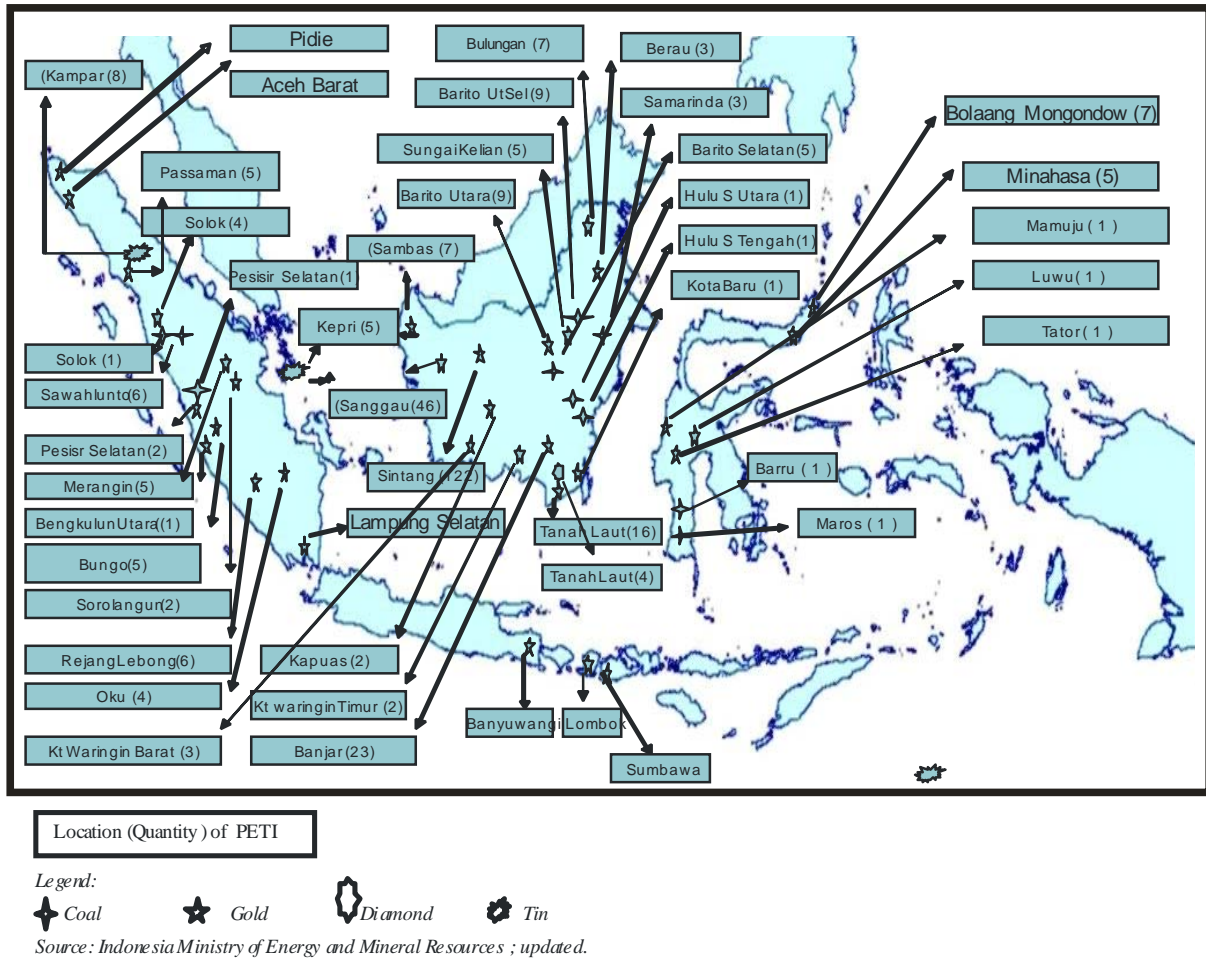


Figure 2. Map of PETI Location in Indonesia, 2000-2009

The methodology of the study is (1) the process of evaluation of the case study of PETI such as in tin mining in Singkep island, coal mining in South Kalimantan, gold mining in West and Central Kalimantan, Pongkor West Java, Sekotong in Lombok island, Banyuwangi East Java, and industrial minerals mining in the country; (2) program of PETI tackling; (3) the impact of regional resilience (pattern of PETI tackling and its indicator of successfulness). It is carried out to achieve the goal explained in the above mindset.

Methodology of estimating the loss of the state revenue due to PETI is based on the legal tariff of taxes and non-taxes of the gold, coal, tin and diamond mineral. Taxes may include direct tax (corporate tax 30% x (revenue – operating cost)) and income tax (15%) and indirect tax (value added tax 15%, and land and building tax (0.5% x 20%

selling price of taxed object). Non-tax revenue may cover dead rent/land rent (area of land x IDR 50 – 200), and royalty (the quantity of sold mineral (tons) x tariff x selling price). In this case the tariff of royalty of gold is of 3.75%, coal 3-5%, tin 3% and diamond 6.5% (Anonymous, 1998). Other methodologies also include CSR that may cover community development and net social gain that may be carried out by the related mining company to assist the illegal mining solution in the form of sub-ordinate business system e.g. as the receiver or buyer of the ex-PETI production after the process of its formalization (Soelistijo, 2008; Anonymous, 2004).

Data collection is carried out based on survey and non-survey techniques. The survey technique is conducted through the governmental institutions and related enterprises.

The location of PETI in the fields of gold, coal and tin could be seen in Figure 2. The sums of the PETI location are 713 locations available in 16 provinces and 52 regencies which are consisted of gold 643 locations, tin 13 locations, coal 56 locations, diamond 1 location spread in Sumatera, Kalimantan, Java, Sulawesi, Lombok and Sumbawa (Tim Terpadu Pusat Penanggulangan Masalah Pertambangan Tanpa Izin (PETI), 2000; Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003).

Based on the surveyed data in 1970s and 1980s, the PETI of industrial minerals are distributed in the overall big islands but are not covered in the map, where 90-95% of it are illegal.

The collected data of PETI gold (Enclosures A,B, and C) (Yunianto, et al, 2008; 2009) coal, tin and diamond may include land and location, mining techniques, mining equipments, anatomy of PETI, the quantity of labor, mineral/metal production and its value and computing the estimation of loss of state revenue in terms of taxes based on the prevailing law (direct taxes (corporate tax, income tax) and indirect taxes (land and building tax, etc) and non-taxes payment (dead rent, royalty etc.)

RESULT AND DISCUSSION

Table 1 shows the estimation of state revenue loss due to PETI. The value of the production is amounted to IDR (Rupiah) 2,835 billion per year (about US\$ 283.5 million), and the loss of the state revenue amounted to IDR 325.1 billion per year (about US\$ 3.25 million) or about 10-11 % of the value.

Based on several current data of PETI of gold in East Java, West Lombok and South-East Sulawesi (Table 2) (Yunianto et al, 2008; 2009) it is shown that:

- Banyuwangi, East Java: PETI operates in the area of around 203.3 hectares containing of about 319 grams of gold (2.3 grams per ton of ore). The workers amount to about 3,000 people. The problem areas are in the fields of environment, overlapped land use with forest, and social economic matters. It is recommended to minimize the PETI operation through preparing formal artisan or traditional or in-conventional mining region (WPR); assisting exploration study, assisting public administration such as guidance of how to obtain permit and of business management of WPR; and to carry out regional cost-benefit analysis of mining versus non-mining enterprise in the purpose of transformation possibility in the coming years;
- Sekotong District, West Lombok: Three locations of gold PETI operate in the area of PT Indo Multi Niaga that owns the legal permit area of 58,483 Ha which contains 1 – 71 grams of gold and 2 – 217 grams of silver per ton of ore). The workers amount 4000 people. The possible alternatives are to continue or to terminate the PETI. If it is not to terminate then WPR or KUD (village cooperative unit) should be developed through the guidance of public administration and carrying out the exploration of gold distribution in the area of operation;
- Bombana, South-East Sulawesi: The area of PETI spreads in the area of 198,634 Ha, containing 156,000 tons of ores with the production of gold of 1.5 – 5 grams per man per day.

Table 1. Estimation of loss of state revenue due to PETI (by 2005)

No.	Subject	Unit	Quantity	Price	Value of production	Loss of State revenue
1	Region	- Province - Regency	16 52			
2	Location of PETI	District	713			
3	Quantity of miner	Men	67,550			
4	Production: - Gold - Coal - Diamond - Others*	- Tons/year - Tons/year - Carats/ year	30 4,337,200 33,600	IDR 60,000 US# 28/ton IDR 4 million/carat TOTAL	IDR 1.8 trillion IDR 902 billion IDR 133 billion IDR 2,835 billion	IDR 188 billion IDR 121.8 billion IDR 13.3 billion IDR 315.1 billion

Table 2. PETI of gold at Banyuwangi East Java, Sekotong Lombok Island and Bombana South-East Sulawesi

Type of data			
1. A. Location B. Large of area	Banyuwangi Gunung Tumpang Pitu 203,3 Ha	West Lombok Sekotong District (3 locations) (In the area of mining permit of PT INM of 58,483 Ha)(1-71 gr Au/ton, 2-217 gr Ag/ton ore)	South -East Sulawesi Bombana 198.634 ha
2. Reserves	319 tons of gold (2,3 gr/ton ore)		156 000 ton s ore
3. Production	1,5 -5 gram Au/man /day
4. Amount of labor	3000 people	4000 people	10.000 people
5. Value of production	IDR 200.000/gram
6. Problem	Environment, overlapped land use with forest, social -economy	- Alternatives: continued or terminated: - Not to terminate.	- Many of newcomers
7. Recommendation of follow -up action	-Minimizing of PETI operation Area. -Preparing Artisan Mining Region (WPR). -Preparing exploration study. -Public administration assistance and business management of WPR. -Cost benefit analysis of mining versus non-mining enterprise.	-WPR, KUD (Village cooperative unit); -Public administration assistance. -Exploration of gold distribution.	-Integrated Team. -Quantity of workers is curtailed. -Persuasion approach.

The amount of worker is about 10,000 people, with the price of gold is IDR 200,000 per gram. The problems are too many newcomers from other regions. It is required to develop an integrated team to handle the situation of how to curtail the coming quantity of newcomers through persuasion approach.

In principle, based on the observation of the anatomy of PETI, it is indicated that the mine workers of PETI both the local and the coming labor from other areas are as just the mask of the business who live very poor and hard worker and trapped in debt with the financial backer. About 70% of the mining yield is enjoyed by the financial backer, backing supporter, and the hidden or illegal enterpriser (Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003).

PETI CAUSAL FACTORS

PETI causal factors are due to: (Tim Terpadu Pusat Penanggulangan Masalah Pertambangan Tanpa Izin (PETI), 2000; Tim Koordinasi Penanggulangan

PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003).

a. Economic aspect.

- The limited opportunity of employment and enterprising which is suitable with the level of skill of the lower income group community.
- Poverty in the various fields in the case of economy, knowledge, and skill.
- The existence of the third parties which utilize the poverty of the community for the certain purposes such as financial backer, backing supporter, and non government organization (NGO).
- The prolonged economic crisis that creates unemployment mainly the lower level of community.
- Discovery of new deposits by legal mining enterprise that also constitutes as entry factor of drawing attention of PETI players.

b. Social aspects.

- The existence of traditional miner (the local community) has been passed on from one generation to another since a long time ago.

- The inharmonious relationship between the formal mining enterprise and the local community.
- The existence of reform euphoria with wrong interpretation on reform as the unlimited freedom.

The social unrest and social jealousy then expanding into social flaming that is additionally supported by the economical and political instability besides changing the order of social and cultural life. The existence of financial backer and the related groups is only the small part as the catalyst and utilizes the opportunity of the lower community sadness.

c. Legal aspect.

- Not being cognizant of the community on the prevailing law and regulation in mining.
- The weaknesses of law and regulation in mining, among others the reflection of not taking sides of the community interest and there is no warning to the formal mining enterprise which does not utilize their authorized area as the "sleeping area" or "idle or unemployed area".
- The weaknesses of law upholder and supervision. The discipline of law upholder still has not been taking sides of the state interest and public base. A lot of findings of PETI law breaker but they got commutation of a sentence, or even exemption. In the country, controlling or supervision constitutes a very weak link of management function. Indonesia has a very large region, so many events of law breaking in many areas are not well monitored even for its completion by law.

d. Institutional aspect.

As part of the Indonesian community behavior figured out in the form of PETI enterprise could be observed based on two matters, i.e. the regulation and the institutional player. The coordination between central and regional institutions is still also very weak.

Safety and Health

Many various types of mining accidents in the PETI mines are mainly happened in the underground mines which are difficult to be avoided due to ignoring the good mining practice. Health of the miners is very neglectful, because they are tangled by debt with the financial backer and the local food stall. The social-economic condition of the miners

with uncertain income is very sadly, e.g. PETI of gold in South Kalimantan, Banyuwangi East Java, West Lombok, and of diamond in South Kalimantan.

Environmental Problem and Handling of Wastes

Through using the mining method that is not following good mining practice in addition avoiding implementation of reclamation and re-vegetation, PETI will leave the barren post-mining region. The uncontrolled negative effects such as waste of extraction using amalgamation is obviously flowing into the river and the vapor of quicksilver will be absorbed by the miner.

Unsafe Social Condition

Most of the PETI miners come from far away of locations. They live in the trap of debt for subsistent due to the uncertainty of their income or gambling with their livelihood and look experiencing social-economic unrest or unsafe livelihood.

Programs Tackling PETI

Under certain circumstances, at one side, thousands of people per location of illegal mines (PETI) up to ten thousands or millions of underemployed people over the country figure out unemployment to seek job and income. At the other sides, the government has responsibility to create job and income to those unemployed people as huge national project through certain grand policy and program strategy. Indonesia as the resourceful and large country should be able to respond this huge challenge. At the policy and program level it should be carried out cross-sector and across-region. It is understood that there is no country in the world with zero unemployment, however, it is necessary to make endeavor to create job and income in the country to reduce or to terminate illegal fields of employment such as PETI that creates many negative physical loss as well as socio-economical unrest.

In the case of tackling PETI, several programs could be carried out as follows:

System of Inventory and Mapping PETI Distribution

Several steps of inventory of PETI should be conducted:

- a. carry out survey on data collection by the Regional Office of Mining at the Regency and

Province in cooperation with the Agency of Central Statistics.

- b. compose a map of reserves and a map of distribution of PETI location and its environmental condition.
- c. access computerization at the Regency and Provincial Office of Mining on line with the Ministry of EMR Jakarta.
- d. composing the policy, program and plan of advance step of PETI handling such as process of transformation, partnership, small scale mining/artisan mining and its disclosure (the Minister of EMR Decree Number 1112K./1995).
- e. implementing guidance, management, development and supervision.

Mapping PETI Player

Based on the result of mapping PETI player, several notes could be obtained:

- a. types of mineral and its locations.
- b. the loss of the state revenue and the environmental damage.

Referring to the Central Integrated Team of the Ministry of EMR data of 2003, it is figured out that only 12% of the PETI lawsuit has been courted and judged by the court. In the process of prosecution, the apparatus is demanded not only in orientation of substance of law but also in the interest of the state vision (Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003).

The Related Institution for Guidance and Controlling PETI

Guidance and supervision are carried out by the regent/ mayor in each of their region in coordination with the related governor. Guidance may include the activity of technical assistance from upstream to downstream i.e. exploration, exploitation, transportation, and selling/trading, as law enforcement for the ex-PETI. Moreover, it is tried to close down the opportunity of possible emerging new PETI. In the stage of development and management, continuous socialization of SOP of the mining activity from the upstream (such as safety and production) up to downstream (such as environment, financial obligation etc) should be carried to all of the ex-PETI players.

The integral supervision requires cooperation between Ministry of EMR, Regional Government and

the Army and Police as has been carried out by the Central Integrated Team in handling PETI.

In Law No 4/2009 it is implied that there are three authorities in the field of supervision of the mining activity handed by the Minister of EMR, i.e.: safety and health, environment, and the related matters to the public interest, even though the law of regional autonomy has been launched. Since PETI has been transformed to ex-PETI or as formal mining enterprise, then the Ministry of EMR still owns the three field authorities of supervision.

System of Prevention of PETI Activity

System of prevention activity of PETI could be carried out, among others, through:

- a. Control and verification of mineral and coal production, marketing and beneficiation by the Ministry of EMR and the Regional Office of Mining.

The regional government should set up the reporting forms of production and marketing of coal and mineral commodity which is necessarily continuously filled out by the ex-PETI like the other legal mining enterprises, in certain period of time (three monthly, semester and annually) (The Minister of EMR decree Number 1453/2000) (Anonymous, 2000).

- b. Socialization of good mining practice. Socialization of good mining practice from upstream to downstream on safety and health, production, environment, standardization etc is necessary consistently conducted by the regional government through the program of education and training in cooperation with the related institution under the Ministry of EMR. This also may include the fields of the regional mining inspector and other technical specialist such as blasting operator, environmental and regional development supervisor, etc.
- c. More intensive coordination between Central Government, Provincial and Regency Governments, the Army and Police, and the related institutions/mining company.

As has been carried out by the central integrated team of PETI tackling, the tough and massive cooperation between regional government, Ministry of EMR, the Army and police and the related institutions (such as Ministries of Forestry, of Environment, of Small and Medium Enterprise, of Trade,

of Law and Human Right, of Domestic Affairs, etc) and the mining enterprises is structurally and functionally required in the purpose of handling guidance, management, development and supervising the activity of ex-PETI. Coordination with the Ministry of Small and Medium Enterprise is required to obtain credit facilities of investment. In the field of commerce, coordination with the Ministry of Trade is required in terms of supervising heavy equipment and quicksilver that are usually and possibly utilized by the circle of PETI business, besides supervising the export of those commodities such as gold, coal and tin that is stated by law as the supervised commodity.

It looks likely that interaction between enterprise player and the authoritative institutions should be working based on the spirit of how to reduce the PETI expansion with the cooperation of the informal leaders of the local community who are playing the very important psychological role.

System of Tackling PETI Impact

Tackling system of PETI could be conducted, among others, through:

- a. Recovery of ex-PETI environmental quality
In accordance with the Minister of EMR decree Number 1453/2000 on Technical Guidance of Executing Governmental Task in the Field of General Mining, the system of environmental tackling should be carried out based on the standard with the various governmental facilities from the initial stage. Moreover, it should be self sustainable. It means that ex-PETI should carry out the environmentally based mining development and completely on standard. They should include the cost of environmental protection in the cost of production.
- b. Consistent law enforcement
In line with the message of Law Number 4/2009, law enforcement should be completely executed as a whole. By the certainty of law, this will be the second gate, after the certainty of politics to develop investment in mining especially due to its characteristics of high risk.
- c. Guiding accessibility and facilities with the related institutions
Guiding accessibility and facilities of technical and economical assistance from the related central and regional institutions should be continuously strived for to develop ex-PETI

to be as one of the populist economic strength. Guidance may include the fields of capital, education and training, safety and health, mining inspector, environment, law etc.

- d. Doing monitoring, controlling, guidance and controlling in the fields of technological skill, law and economy.

Guidance may include: (1) directive and standard of implementation of mining enterprise management; (2) technical assistance, supervision and consultation; (3) education and training; and (4) planning, research, development, monitoring, and evaluation of doing mining enterprise in the fields of mineral and coal.

Supervision based on Law Number 4/2009 Article 141 may include items of : (1) mining techniques; (2) marketing; (3) financial; (4) beneficiation of mineral and coal; (5) conservation; (6) mining safety and health; (7) mining operational safety; (8) management of environment, reclamation, and post-mining period; (9) utilization of goods, services, technology and domestic engineering and design; (10) development of mining technique man power; (11) local community development and empowerment; (12) mastering, development and application of mining technology; (13) the other related public interest in mining enterprise activities; (14) management of mining permit; (15) quantity, types and quality of mining products. Supervision of numbers (1), (5), (7) and (11) are carried out by mining inspector in lieu of regulation.

Systematical Effort of PETI Tackling

Referred to the policy formulated by The Central Integrated Team of PETI tackling, (Tim Terpadu Pusat Penanggulangan Masalah Pertambangan Tanpa Izin (PETI), 2000; Tim Koordinasi Penanggulangan PETI, Penyalahgunaan Bahan Bakar Minyak, serta Perusakan Instalasi Listrik dan Pencurian Aliran Listrik, 2003) systematic effort of PETI prevention and tackling principally could be seen in Figure 3, in the framework of law in order and law enforcement based on the several steps of program as follows:

- a. PETI disclosure and structural transformation of PETI toward other sector enterprise and employment creation.
PETI disclosure followed up by structural transformation could be carried out with the probability of creating new field of enterprise

such as coffee plantation (in South Sumatera), resin of certain trees like pine (Banyuwangi East Java), fishery (coastal area), caw milk cooperatives unit equipped by its downstream industries (Lembang West Java). This step should be fully equipped by institutional control to guarantee its continuity.

2) Formalizing PETI

Formalism step of PETI is required to develop their professionalism as miner to be risk averter constituting task that needs implementation support of integrated guidance, management, development and supervision institutionally and sustainably under the regional government and central one. This pattern should figure out the realization of regional autonomy based on decentralization, de-concentration and assistance task. Formalism could be directed into small scale mining business or formal artisan (traditional) mining based on Law of Mineral and Coal Mining Number 4/2009.

3) Partnership

PETI could be formalized based on partnership type of enterprise cooperation between

ex-PETI and the Mining Enterprise Permit Holder. The permit holder as the mining company buys the mineral or coal produced by the ex-PETI as contractor. In this case PETI could be formalized as formal business entity such as cooperative unit or other type of corporation by the authoritative government institution.

Impact on Regional Resilience

a. The loss of state revenue

Based on the estimation result of the state revenue loss because of the unpaid tax and non-tax by PETI constitutes ignorance of PETI financial obligation that is unfair compared with the legal mining which has to pay it. Besides the loss of the state revenue is also unjust. The loss of state revenue is also as the cost of law enforcement. Both matters could not be tolerated in the sphere of life of being the member of the nation, state and community.

b. Environmental damage

The environmental damage caused by PETI activity may include the very irregular change

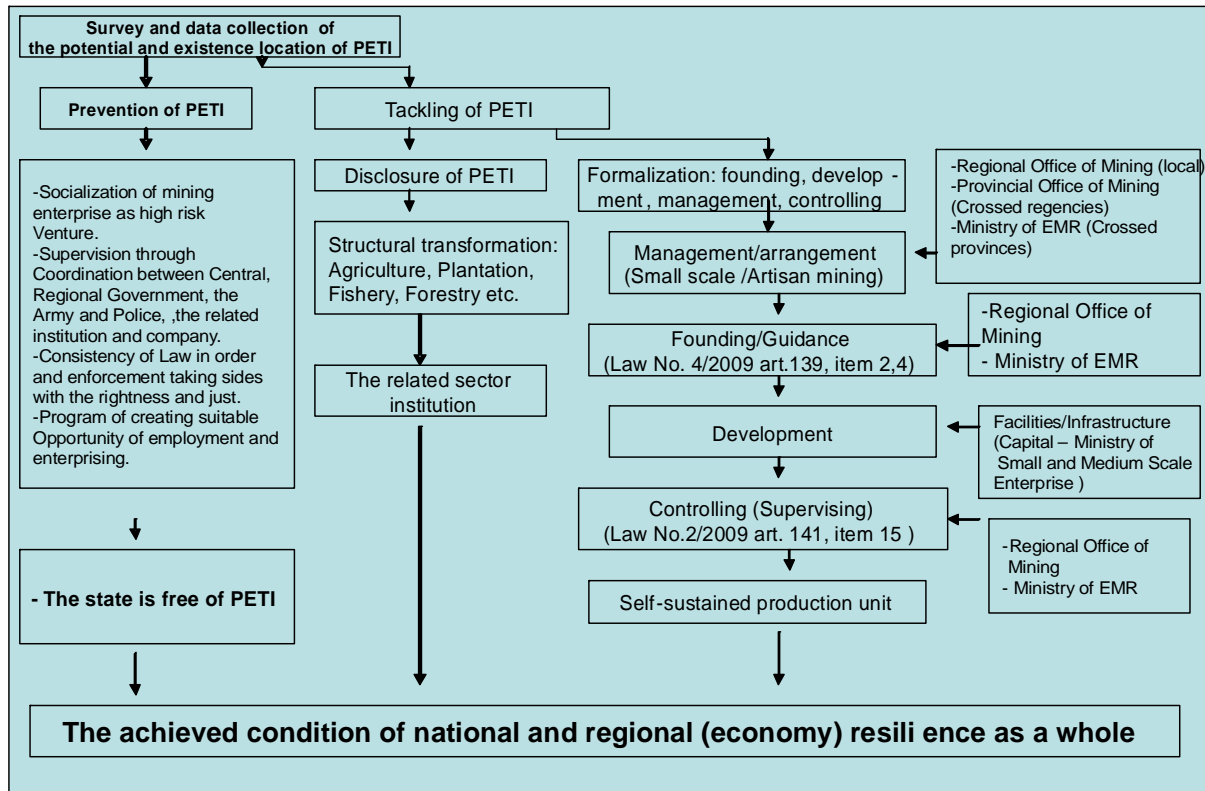


Figure 3. Systematization of the effort of PETI prevention and tackling

of the initial environment color (scene) due to the unsystematic mining method. The top soil is completely discarded during the mining operation without reclamation. This activity takes place hectare by hectare. For instance, in West Kalimantan PETI post-mining region is found out amounted to tens thousand hectares as "desert" caused by PETI activity that has been taking place tens of years. The same things are also happened in Central Kalimantan.

c. Mining accident

Mining accident is a negative point in mining safety and health. In the case of PETI, accident is mostly caused by human error and technical one, where their skill is not suitable, and the weaknesses could be overcome by using a professional mining method.

d. Un-conducive investment climate

Firstly, if PETI is permissible, then the formal enterprise is competed in term of the supplying mineral commodity. The mineral commodity produced by PETI is actually much cheaper, and then this will destroy the market. Secondly, if PETI activity exists in the area of the formal mining enterprise then it will obviously disturb the company's reserves. The above both things will make the investment climate in-conducive, and this should be straightened out by the given prevailing policy.

e. Wasting (extravagance) of mineral resources

The recovery of exploitation must be very low due to the mining method that is not based on good mining practice. Therefore a lot of mineral potentials is remained unexploited since mining up to processing and transportation activity. This thing constitutes as source of wasting of mineral resources. Conservation should be socialized, among others its criteria, scope and the efforts. (The Minister of EMR decree No. 1453/2000).

f. Unsafe social

Many negative things such social-economic unrest are found out for instance the poor mining worker and the very established financial backer, sexual insulting and other indecent matters.

g. Insulting of law

Many law insulting happened in the EMR activity from upstream to downstream such as danger and infirmity, not paying tax and non-

tax obligation, resource extravagant, environmental damage, criminals etc.

Pattern of Program Implementation of PETI Tackling

a. In the field of governmental management

Solid coordination between central and regional government should be interlaced in line with their synergic and effective task, function, authority and responsibility in terms of:

- Socialization of PETI prevention and tackling through the above-mentioned standardized system and mechanism.

- Administrative and legal measure.

If the administrative and legal measure to PETI has been taken place, then this indicates that the community has been aware of order and many choices of looking for livelihood.

- Process of implementation in accordance with the policy of PETI tackling in the case of legalization and/or structural transformation.

Process of transformation and legalization of PETI has been taken place if the development planning of small scale enterprise and national program of community empowerment capitalization has been running in better and easier prosperity achieved rather than PETI.

- Founding, management, development and supervision.

b. In the field of regional resilience

National resilience is summation of all the regional resilience that should be composed from each factor of ideology, politics, economy, social, culture, *defense* and security including economic resilience. In this case mineral and coal mining becomes one of the important power in line with its role, including ex-PETI as populist economic base. The populist economic base usually very survives to various event of crisis.

c. In the field of Indonesia incorporated

Ex-PETI as one of soul of the populist economic manifestation would clearly invest the spirit of Indonesia incorporated as integrity of various economic forces in the country at the level of small, medium and large scale to actualize economic transformation of our natural resources into social capital for the community at the utmost toward the nation prosper-

ity in lieu of the preamble of the constitution.

Indicators of Successfulness of PETI Tackling

Several indicators of successfulness (Anonymous, 2004) of PETI tackling are:

- a. Active participation of the PETI players in the implementation of government policy and direction of PETI toward the real and *useful* formal people economic power in order to gain the multiplying effects on the coming populist economic development.
- b. There would be a sustainability in the fields of:
 - the economy of the business player: the livelihood of the ex-PETI player through transformation, becoming traditional mining or small scale mining, or business partnership.
 - human-kind: as a formal economic player where they are confessed based on all of their right and responsibility.
 - social: their social status is lifted up, it means that their livelihood are not non-formal any more.
 - environment: in their new field of livelihood as the builder of environment with their right and responsibility in management and protection of environment (Anonymous, 2004).
- c. There is no PETI any longer in the country
If and only if the effort of prevention and tackling of PETI has been successful, it means that there is no PETI any longer in the country. It is indicated that formal fields of enterprise and employment has been met and law in order has been running. It is also implicitly indicated that the people has been aware of in the right track of life orderly and the government has made the people prosperous by creating many choices of enterprise and employment opportunity. This means that the gate of prosperity and welfare of the people has been well achieved.

Challenges and Opportunities

a. Challenges

- 1) Traditional miner as struggle for life
The mining method carried out by the traditional miner either as the main livelihood or side income is conducted by using simple technique ignoring good mining practice. This will negatively affects the environment and tends to destroy the nature, because it is worked

out of the right standard operating procedure. Moreover, the further effect is very wasteful of mineral resources due to the very low recovery of extraction or does not follow the basic principle of conservation. The other downstream effect is the loss of the state revenue due to not obeying of paying taxes and the other non-taxes obligation. In this case, however, it is just exactly the fact that they require guidance and control, where the government needs to release the decree of prevention and tackling of PETI as soon as possible.

2) Poverty

The poorest of the poor people where they embrace with poverty amounted to the very significant quantity and eager to struggle for life as a non-formal group like sidewalk trader. So far, PETI constitutes as safety valve in the level of lower income group economy. However, they are just formal citizen where guidance of their power and strength is actually required.

3) Limits of enterprise and employment opportunity

The root of the problem of PETI is of the limits of enterprise and employment opportunity. This matter is the government responsibility of protecting its citizen. Therefore, the problem solving of PETI becomes the nation phenomena that it should be properly solved soon.

4) The existence of financial backer and backing supporter

There are groups of financial backer who wants to enterprise by using black business in various opportunities such as illegal mining, illegal fishing, and illegal logging. Their network are available in the surrounding local sites, in the capital of city, and abroad who are working within an international network, that are very difficult tackled by law.

5) Inharmonious relationship between the mining enterpriser and the community.

The condition of such enclave status quo between several mining enterprisers and the local community creates gap and constitutes inharmonious communication in the fields of social-economic-culture. This condition has been changed by the various government policy, and the initial result has been seen through launching the program of community development (CD) as part of the corporate social responsibility (CSR).

Based on the national spirit, PETI player as part of the people or as “the children of the people”, it is a certainty that there should be a human solution of creating job and income for them. The CSR program of the mining company could be involved or inserted together with the government (Anonymous, 2004) to assist PETI player toward the solution through such as structural transformation, as sub-ordinate business with the legal large scale of mining company or stipulating as WPR. The example of CSR program of several mining companies have been successfully implemented (Table 3). (Soelistijo, 2003, 2008). They have allocated some amount of funds to accelerate community development program, where the net gain coefficient (NGC defined as the ratio between the net social gain (NSG) and the company revenue from the related mine) are between 1 – 61%. For example, NGC of PT Antam is of 4.2 – 4.6 % (nickel of Gebe and Pomalaa) and 17.5 – 22.5 % (iron sand Cilacap and Kutoarjo), PT INCO 1.3%, PT Bukit Asam 7.9 %, PT Freeport is around 1%, and PT Glosari (dolomite fertilizer) 61%. It means that the portion of their revenue has been respectively transferred to the local community welfare. Even though there is a tendency that the larger economies of scale the mining company the less

NGC has been allocated. In the future this condition should be encouraged toward the higher contribution to the weak economic player or the lower income group of the nation as a whole.

b. Opportunities

- 1) In principle, the facilities of small and medium enterprise (UKM), populace enterprise credit (KUR) and national program of community empowerment (PNPM) is a populist economy in the form of “easy” credit extension to the lower income group community. This matter encourages the spirit of entrepreneurship potential. By using this angler, their ability and strength are excavated to become enterpriser and creating employment for the family and community by networking all at once. How beautiful, the running program of awarding cash money or “fish” to the community is changed to become “angler”, so that the self confidence as the human being of the people is well developed.
- 2) Philosophy of life in legal order
In principle, philosophy of the Indonesia community who are mostly as farmer is faithful to the principle of legal order, and willing to be put in order. So, the leading behavior of the

Table 3. Example of Net Social Gain (NSG) and Net Gain Coefficient (NGC) of the several mining companies in Indonesia

Name of mining company	Location	NSG (Billion Rupiahs)	Coefficient	Year
1. PT. Inco (Nickel)	Soroako, Luwu Regency, South Sulawesi	7.15	0.0128 (1,28%)	1989
2. PT Antam (Nickel)	Gebe Island, Halmahera Regency, Maluku	4.96	0.0459 (4.59%)	1990
3. PT. Antam (Nickel)	Pomalaa, Kolaka Regency, SouthEast Sulawesi	4.46	0.0421 (4.21%)	1990
4. PT. Freeport (Copper-Gold)	Fakfak Regency, Papua	19.86	0.0083 (0.83%)	1990
5. PT. Semen Padang (Mining Departmen)	Indarung, Padang Municipality, West Sumatera	2.99	0.1757 (17.57%)	1991
6. PT. Polowijo Gosari (Dolomite fertiliser)	Gresik Regency, East Java	13.29	0.6162 (61.62%)	1996
7. PT. Antam (Gold)	Pongkor, Bogor Regency, West Java	4.36	-	1999
8. PT. Tambang Batubara Bukit Asam/PTBA (Coal)	Tanjung Enim, Muara Enim Regency	71.23	0.0431 (4.31%)	1999
		41.09	0.0322 (3.22%)	1998
		39.20	0.0322 (3.22%)	1991
		5.00	0.0794 (7.94%)	1989
9. PT. Antam (Iron sand Cilacap)	Cilacap, Central Java	3.53	0.1756 (17.56%)	1999
		4.91	0.2245 (22.46%)	2002 (2005 disclosure)

Source : Puslitbang Teknologi Mineral (PPTM)

Legend : Region is the level of province, except PTBA within the years of 1997 – 1999 the region is Muara Enim Regency and Lahat Regency

leader is required, particularly in the villages, because they have been initially contaminated by the corruption “disease”. The religion scholar and the formal leader should unify to develop the community based on their owned-basic philosophy as well.

- 3) Transnational company as the servant of the community
The “world class giant” enterprisers of transnational company in their congress in London in 1990-s, it is stated that they are “the servant of the community”. If this confession is accompanied by the motto of the public authoritative functionary, so all of them is the servant of the community and not as the owner of the state.
- 4) If the preliminary feasibility study of ADB on the proposed project of Trans-Borneo²⁴) constituting network of electricity and railways crossing the regions of Indonesia Kalimantan, Malaysia Sarawak and Sabah, and Brunei Darussalam is carried out, so the tens of thousands hectares of ex-PETI region in Kalimantan would be rehabilitated to become agricultural, industrial and settlement area. Example of this rehabilitation could be seen in the region of Cikarang-Bekasi, that since this region is initially barren caused by many traditional small tile and brick industries then they mine the clay top soil without any reclamation. Currently, this region has been developed as industrial and modern settlement estate.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

PETI is necessarily straightened up case by case and location by location through paying attention on its special characteristics. At one side it is required by the way of persuasion and prevention, on the other side by the way of repressive ones. Persuasion is carried out by the government together with informal leader of the local community. Repressive action is conducted based on law enforcement.

The curb of PETI through prevention and tackling requires “Systematic Guideline of Preventing and Tackling PETI” that contains all the factors of conceptual norm and *jurisdiction* in order to be able be implemented well and comprehensive that deals

with the basics and truth.

Recommendations

The curb of PETI could be carried out based on the following matters:

- Uniformity in vision and mission between the related governmental institutions as the important authoritative stack-holder. Both the central and the regional governments own interests ,i.e., ego-sector and ego-regionalism that could be proportionally synchronized. At the other side of stakeholders, i.e., the company and the community, the proportional governmental decision in line with each interest is required.
- The state revenue and the community welfare Basically, the mineral resource management is not only oriented on increasing the state revenue, but it should also share added value to the community welfare particularly within the region of the mining location. It is a time of changing of the paradigm of *natural* resource management from the view of just increasing the state revenue orientation toward creating the opportunity of enterprising and employment for the most of people in lieu of the message of the 1945 constitutional article 33 verse 3, that is utilized for the welfare of the people at the utmost.
- Doing comprehensive investigation on PETI For the time being, the study of PETI is just the surface of the problem. Moreover, besides the upstream such as the social-economic matters, the advanced downstream matters are necessarily required such as legalistic order and its institutions.
- The tackling of PETI is carried out based on case by case
Solution of PETI is necessarily carried out based on the social and cultural condition in each region. The effective handling of PETI, the support of all the parties in this case the regional government, the mining enterprise player, the local community through local informal leaders is absolutely required.
- Community empowerment
The community has been very critical of about their existence in terms of managing their interest and region, on the case of increasing their quality as human resource phasing their

future autonomy as well. In the case of PETI, they are aware of its illegality and they want to be a formal enterprise.

Whichever in the nation's human being way of thinking is based on the philosophy that they want to live on the order in law. At one time, living based on PETI must be left where it is just only functioned as safety valve of economy, even though with high risk, while the legal job has not yet been found out. Somehow, the government will be morally responsible for creating job and income for the people through creating good and true enterprising and employment. The guideline on preventing and tackling PETI is expected as fast as possible to implement systematically, well planned and directed up to achieve the goal as a whole and entirely for the sake of nation and people welfare.

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Enclosure A. PETI gold placer mining in East Java (Yunianto, *et al.*, 2009)



Enclosure B. PETI gold underground mining in Lombok island (Yunianto, *et al.*, 2009)



Enclosure C. Gold amalgamation mill in Lombok island (Yunianto, *et al.*, 2009)