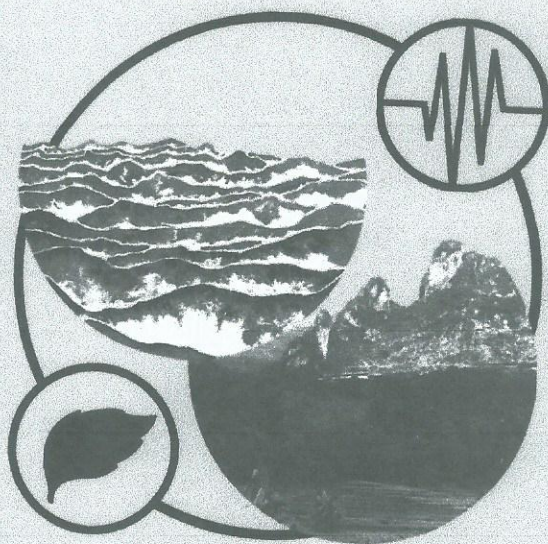


# PROGRAM BOOK

2nd International  
Conference of  
**TREPSEA**  
2016



The 2nd International Conference of  
Transdisciplinary Research of Environmental Problems  
in Southeast Asia

The Papandayan Hotel, Bandung, West Java, Indonesia  
20-22 September 2016



Fenty P.



**ADDITIONAL  
SCHEDULE AND ABSTRACTS**



**ADDITIONAL ORAL PRESENTATION  
DAY 1 - SEPTEMBER 20<sup>TH</sup>, 2016  
SESSION 2**

**MODERATOR: IDHAM A.K.**

<b>Disaster Mitigation</b>		
<b>PAPANDAYAN 1</b>		
<b>Code</b>	<b>Title</b>	<b>Author</b>
<b>Time</b>		
TRP-11042	Economic Loss Model Estimation of Scenario Based Earthquake Hazard in Bandung City, Indonesia	Irwan Meilano, Dyah Ayu R, Nuraini R. Hanifa, Endra Gunawan, Akhmad Riqqi
16.15 - 16.35		

<b>General</b>		
<b>PAPANDAYAN 4</b>		
<b>Code</b>	<b>Title</b>	<b>Author</b>
<b>Time</b>		
TRP-12040	Agricultural Land Conservation Priority Corn in District Alo Das Gorontalo	Sunarty Eraku and Yuyu Indriati Arifin
16.15 - 16.35		

<b>Measure and Improvement to Urban Environmental Problem</b>		
<b>PAPANDAYAN 5</b>		
<b>Code</b>	<b>Title</b>	<b>Author</b>
<b>Time</b>		
TRP-12041	Legal Protection to Environmental and Inhabitants from Impacts of Small-scale Gold Mining Activities in Gorontalo	Fenty U. Puluwulawa and Yuyu Indriati Arifin
16.15 - 16.35		



# Protection to Environment from Impacts of Small-scale Gold Mining Activities in Gorontalo

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## Abstract.

This study is intended to clarify that the environment plays a very important for human survival. Pollution and damage to the environment caused by human activities that go beyond the limits that can be tolerated, thus giving rise to a variety of negative impacts. There are a number of factors that cause pollution and damage to the environment. One contributing factor is the presence of mining carried out by people without permission. Mining without permission potentially damaging to the environment, the use of harmful chemicals, do not apply the rules and techniques of mining right, and the level of security and safety of workers unprotected. This further strengthens the argument that protection of the environment caused by this activity need to get serious attention from all parties to pursue a strategy and solutions to solve their problems.

*Keywords: legal protection, Environment, ASGM*

## 1. Introduction

The environment as one of the resources is a capital that must be maintained should be preserved, with the hope to be able to provide continuity for the present generation and the generations to come. The world's attention to the environment at first appeared as a reaction to the international community on a variety of environmental problems that occur, both in developed countries and in developing countries. This condition is then regarded as a problem that needs to be addressed as early as possible. In 1968 in the United States held a conference, as the initial concern for the environment that resulted in a report entitled *The Careless Technology* [1].

The next development that gives attention to the environment, through various successful global conference agreed commitment to the environment is embodied in various international declarations



such as the Stockholm Declaration, the Rio de Janeiro Declaration, the Kyoto Protocol and so forth. Various international instruments in essence give serious attention to the environmental problems of extinction and destruction.

World attention internationally to the environment demonstrates the importance of the commitment of each State to protect the environment, so that any change in the development process is not only expected to pursue short-term economic interests, but do not ignore the principles of environmental management that has been set. In Indonesia the attention to natural resources, including the environment have been set forth in the Constitution of the Republic of Indonesia which is the Constitution of 1945 Article 33 [2]. In addition to the constitution, then other arrangements related to environmental issues has been set forth in various laws and implementing regulations.

Ideally produced various laws, in the implementation stage should be able to provide protection against the existence of the environment, as well as expectations of the early formation of a legal product in question. Facts on the ground there are a number of obstacles in implementing regulations related to the environment, especially on small-scale gold mining.

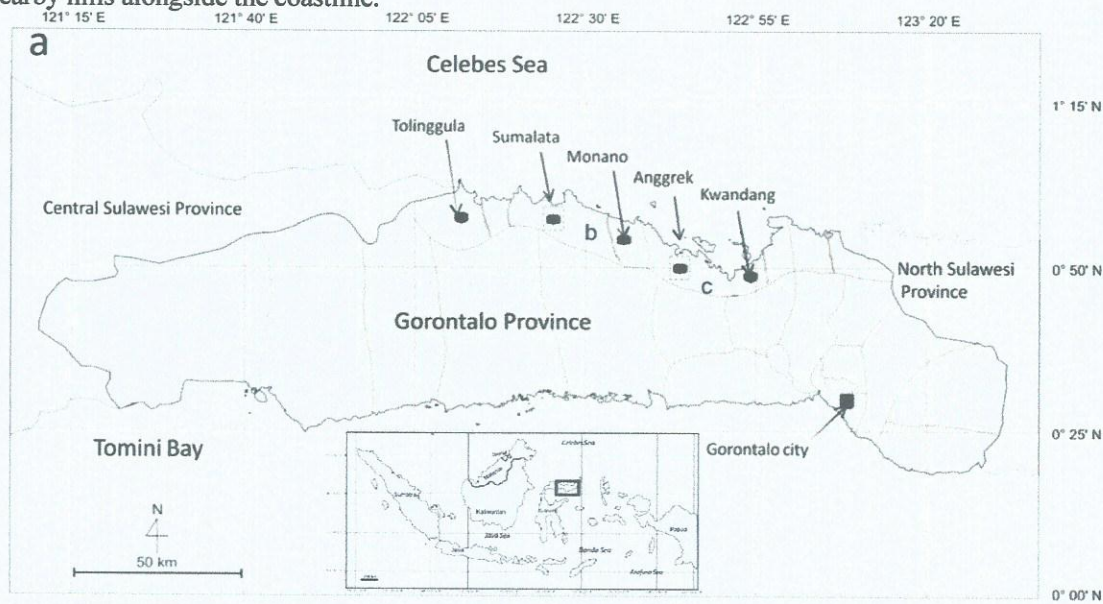
Small-scale gold mining activities, without permission which is done traditionally, have potential negative impact on the environment. Various example of negative impact on environment are: pollution, landslides, flood, etc. Human population who are living around the mining sites receives direct impact of the degradation of environmental conditions. While human living outside may receive the impacts (such as mercury contamination) through food web [3]

## 2. Data and Method

Data were obtained using direct observation, interview in the study area, and literature study.

### 2.1. Study Area

Five districts in the Gorontalo Utara Regency: Anggrek, Kwandang, Monano, Sumalata, and Tolinggula (figure 1) were visited to have direct observation on environmental conditions around ASGM location and others. Tolinggula, Sumalata, Monano, Anggrek, and Kwandang are situated on hills and mountains along the coastline of the Gorontalo Utara Regency with various steps. Inhabitants of the Gorontalo Utara Regency mainly work as farmers and fishermen. Marine fish are commonly part of their diets, along with rice, corn and vegetables, which are also produced on the nearby hills alongside the coastline.





**Figure 1.** Gorontalo Province map showing sampling locations (●) of human hair from Gorontalo Utara Regency, showing Tolinggula, Sumalata, Anggrek, Monano and Kwandang districts. Location of Gorontalo Province in Indonesian map is shown (inset)

The ASGM activities in the Sumalata and Anggrek districts are located along the Wubudu and Anggrek riverbanks, respectively. The bioaccumulation of Hg, which may occur in living organisms such as paddy rice, corn, and marine fish, become agents that spread Hg contamination through the food web of inhabitants of the Gorontalo Utara Regency. The Hg concentration in river sediments and fish will be used as background information about the Hg in the biotic and abiotic environments.

The Sumalata and Anggrek districts are locations with ASGM activities, while Kwandang, Monano, and Tolinggula are districts without mining activities. The residents of Anggrek and Sumalata are considered the ASGM miners group, while the residents of Kwandang, Monano, and Tolinggula are considered the control group.

### **3. Result and discussion**

Ideally the rule of law must be implemented consistently. There are some factors causing yet implemented provisions related to the environment on a small scale mining is well. In theory Meier Lawrence Friedman was quoted as saying by Achmad Ali mentions three elements of the legal system. Third element referred namely, legal substance, legal structure and legal culture [4].

These three components must be complementary with each other. Substance is not equipped with a structure and is not supported by the culture; it will not be implemented in line with expectations, and vice versa. Based on the interview, substantially there are a number of factors into obstacles in the implementation of legislation in the case of small scale mining, namely: First, in terms of legislation, the quantity many laws and regulations relating to the environment, and other relevant provisions, but even cause problems.

In the mining sector, the enactment of Law No. 23 of 2014 on Regional Government [5], which later enactment of Law No. 2 of 2015 [6], as an amendment to Law No. 23 of 2014 [7], the implications of granting licensing authority mineral and coal mines that had previously been regulated in Law No. 4 of 2009 on Mineral and Coal Mining (hereinafter referred minerba) [8].

Mining Law (Minerba) gives authority to local districts are districts in providing mining-related permits in accordance with the scale and area of mining. Local Government Act governing the granting of licensing authority was transferred under the authority of the provincial government. Through changes in the legislation, then the permission and supervision is the responsibility of the provincial government. If moderated, so in substance, there are two provisions of the legislation with the same degree regulate the same subject, namely the question of authority. Ideally necessary harmonization of legislation, so that the state hopes this does not happen, so the overlap of authority in licensing would not occur. Harmonization of legislation in the environmental field, is a guarantee of legal certainty for citizens on collateral for the environment is good and healthy. Conditions like these are real disharmony carries a significant impact for the community to gain access rights to good and healthy environment. In small-scale gold mining, the problems that arise have an impact on the uncontrolled increase in the number of small mines, and more difficult again in the regulatory process, due to the far distance. Secondly, in terms of structure, all the infrastructure, facilities and infrastructure as indicators that support the implementation of regulations in the implementation stage. On the small scale mining, based on interviews that, the limited number of supervisory personnel, lack of infrastructure, as well as the difficulty of access to the mine site people, become an obstacle for the apparatus to monitor patterns of small-scale gold mining. Moreover mining sites are moving complicate supervision. Third, in terms of culture. The lack of community participation in environmental cause, indicating low awareness of the importance of preserving the environment.

In the context of ASGM, economic conditions citizen miners who were below average standard, forcing residents to conduct mining activities, to justify a variety of ways. Low education level, lack of understanding of the dangers of environmental impact is significant enough to not implemented law.



In this case, generally miners have economic limitations, so people tend to conduct mining activities, irrespective of environmental preservation and sustainability of their lives even though. It is evident from the number of occupational accidents in ASGM mining continues to increase from year to year. The capital and knowledge of ASGM miners have on environmental management techniques are low even not at all. This condition is very dangerous for the environment. The impacts of ASGM mining activities are changing the quality of environment drastically, health of workers and inhabitants, as well as the risk of workplace accidents. The use of hazardous chemicals, greatly disturb the balance of the environment and health of citizens.

#### **4. Conclusions**

Stakeholders should sit together and discussed and agree on several "short term way out" that can be done : for example allowing the ASGM activities for short period of time while in the same time developing economic and improving quality of environment and health through application or implementation of the law.

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- [8] Law No. 4 of 2009 on Mineral and Coal Mining (hereinafter referred minerba).



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# CERTIFICATE OF PARTICIPATION

This is to acknowledge

**FENTY PULUHULAWA**

UNIVERSITAS NEGERI GORONTALO

**AS PRESENTER**

in the 2<sup>nd</sup> International Conference of Transdisciplinary Research on Environmental Problems in Southeast Asia (TREPSEA 2016) at Papandayan Hotel, Bandung, West Java, Indonesia, on September, 20<sup>th</sup>-22<sup>nd</sup> 2016

General Chairman,

Prof. Dr. Emmy Suparka