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LESTARI
Multi Media Machine

FINAL REPORT

Community Awareness on Hazards on Health Risk of Mercury and Cyanide and Improved Techniques for Gold Recovery

Reference: EG/GLO/01/G34

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"If I use mercury in processing the gold, surely I won't let my children play by the 'trommel'. But since I don't, I just let them." (A gold miner at Cendana block)

CHAPTER I. EXECUTIVE SUMMARY

A final report on the Community Awareness on Hazards on Health Risk of Mercury and Cyanide and Improved Techniques for Gold Recovery in North Sulawesi Indonesia, by Lestari Foundation cooperated with UNIDO. The 8 month program began in June 2006 and concluded in April 2007, at Tanoyan village, Sub-district of Lolayan, District of Bolaang Mongondow, North Sulawesi, Indonesia.

The main goal is to arouse the awareness of health risks associated with exposure to mercury and cyanide by providing access to information and technology for better gold recovery and reducing mercury contamination and or loss to to North Sulawesi communities in general and particularly the miners.

The specific purpose is the creation of necessary conditions that enable miners and stakeholders to improve the local community quality of life through increasing miners' income, reducing mercury exposure and reducing local collateral and environment contamination in North Sulawesi.

A. Objectives

1. Media coverage on hazards and health risk of mercury and cyanide issues increases, and is more fact-based, gender-aware, and balanced between perspectives and opinions.
2. Increase in partner's capacity (local government, health care facilities, and mining communities) to become more visible, articulate and capable to enhance public awareness and participation in supporting adaptation to a more efficient (mercury free) cyanide technology.
3. Increase knowledge and awareness of hazards and health risk of mercury and cyanide on human and environment by the general public.
4. Increased miners' income as a result of improved mining and gold extraction.

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In order to accomplish the above mentioned result, the main activities conducted in this project were:

1. Developing awareness campaign programs and material (i.e. implementation of the "Multimedia Machine (M3)" approach in North Sulawesi) that covers health issues associated with mercury and cyanide.
2. Building and developing mining communication network and shared learning.
3. Developing supply and access to appropriate materials and equipment to improve gold recovery and reduced mercury contamination.
4. Develop a portfolio of village-level awareness and education programs of Talawaan-Tatelu and Lanud that discuss important practices to improve gold recovery and reduce mercury usage and/or loss.

B. Accomplishment

In carrying out the program, Lestari has run a number of technical and non technical activities. This achievement is something to contemplate upon in making decisions in the future for programs of decreasing the use of mercury.

Accomplishment in the field level, sub-district level and even provincial level in short are:

- Improvements on the capacity of the Lestari staff, Government's Institutions, (Technicians from Mining and Energy Bureau) and local communities (Local technician at Tanoyan) for future sustainable programs.
- Through M3 method Lestari has practiced the innovative approach in the information, communication and education in using strategic program awareness of the hazard of the mercurial use and decreasing the use of mercury in mining. Reaching out and educating approach had been successful
- The formation of trained groups. Priority had been given to 8 entrepreneurs. Even though out of 8 groups did not participate actively because the location is not representative enough to install the Sluice Box.
- Although gold extraction technology using Sluice box instead of mercury has been introduced and practiced repeatedly in front of the miners and nine entrepreneurs at Tanoyan, yet this method has not been adopted by miners. Retort had also been introduced. Yet it is interesting to know that entrepreneurs at Bubongayon who are mostly Tanoyan Villagers had

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adopted the technology. Their number has increased too. One of the miners said Sluice box method was introduced to him at UNIDO workshop in February 2006, at Kotamobagu. Jokingly a miner said that they will borrow Lestari's carpet for a try-out at their location. The communities are more convinced now.

C. Lesson learned

After having implemented a number of activities Lestari has noted down lessons learned as follows:

- **Policy support.**

  Without policy support the effort of reducing the use of mercury in gold processing will be hard to do. Adequate financial support in the APBD-Anggaran Pembiayaan dan Belanja Daerah (Regional Revenue and Expenditure Budget) turns to be very important so that the related bureau like Mining and Energy Bureau, Industrial Bureau and Health could play their role at the maximum.

- **Survey and monitoring the use of mercury**.

  There is no uniform data on how much mercury distributed or being used in the public mining whereas these data is very important in order to set the activity plan or intervention to discourage or to eradicate the use of mercury in public mining.

- **Technical skills**.

  One of the important elements in changing the attitude of using mercury is the new skill in implementing the model or technology of gold processing that will lessen or even eradicate the use of mercury in gold processing. This knowledge and skill will be the main asset in changing the pattern or custom of using mercury in gold process.

- **Cyanide, Sluice Box, retort social marketing –**

  The alternative to lessen or eradicate mercurial use in gold process has to be done continuously by the miners' community. In conducting the 'social marketing' or the gold processing model with less or mercury free it is necessary to inform them about the analysis of economic level of the model or the alternative compared to the use of pure mercury. Without the 'economic benefit' offer it is hard for the miner to replace the gold process using mercury that has been mastered and practice for a long time.

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- **Human resources empowerment.**

  The increase of the capacity of program administrator, local communities was the main activity target in order to increase sustainable independency in the future.

- **Planning and coordination**

  Individual or a prominent person in the community or target group, local government and community based organizations should be involved as 'collaborative partners' from the early planning of the program to ease the program field execution of the program.

- **Partnership and collaboration**

  Understanding and clear picture of the mechanism of collaboration, expected roles and responsibility of the collaborative partners are very important and should be formulated from the beginning to enable to organize a clear, precise working table that will support the success of the program and the harmony among parties involved.

D. Recommendation

The eight months program implementation has provided valuable lessons to Lestari, Local Government, and the community in Tanoyan Village, sub-district of Lolayan. The following recommendations could be the milestones for the same program in the future:

- Local initiative should be the base of correct response and the sustainable effort to minimize the use of mercury in the public mining. The empowerment of local NGO will rectify the effectiveness of the program, to increase the opportunity to build collaboration with the government and donor foundations and to bring the human resources to be effective.
- The program of reducing the mercury usage in mines in future should empowers the organizational or institutional capacity based on the community or target community that they will able to develop initiative and execute the program by themselves and by collaborating with the NGO and local government.
- Important role of the legislative in the future will proactively able to develop and to set policies that will promote the strategy of reducing the mercury step by step and to support researches in order to find and to develop environment friendly gold processing technology.
- The foundation for partnership and collaboration between the NGO and Government Institution should be built by collaboration between them. Yet the ability to work as a team has to be reinforced by communication and exchanging information through briefings,

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intensive dialogues and discussion. Therefore it is important to develop the mechanism of improving the correlate partnership between the NGO and the Government Institution.

- At the moment the use of mercury is still dominant to evaluate the gold content of the quarry dug by the miners. Therefore the KUD as the small scale mining controller should in the future be pushed to increase the ability and to develop the laboratory in order to render service in evaluating the cold content without using mercury (metallurgy).

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CHAPTER II. PREFACE

Indonesia a rich country in mineral quarries and one of those is gold. Traditional gold mining is an old tradition carried out by the people in many parts of Indonesia. At the moment there are more than 500.000 people involved in traditional gold mining activities. In the last few years gold mining has been in the main discourse, discussion and arbitrary related with the legal issues, environment pollution, area conversion, decrease of water absorption, compensation and conflict between the mining companies and the small scale mining.

The small scale mining is considered to be imparting negative impacts due to the usage of mercury and the furnace in gold extraction. This is due to the lack of awareness of the hazard of mercurial pollution, the knowledge and skills, and their readiness to adopt the technology are still very low

North Sulawesi is well-known as a place where public mining are plenty. In 2006 Surya Madani NGO estimated there were more than 10.000 people involved in the gold mining activities. Gold mining area in North Sulawesi are distributed evenly, almost covered the whole region. The mode used is pit mining. It could be 100 meter depth dug with simple equipments. The gold contained stones are called 'primary deposit', which is different to the deposit found in Kalimantan or Borneo which is 'alluvial deposit', to which the miners has to work hard as if putting their life into it.

The total number people involved in mining activities is enormous and most are still using mercury in their gold processing. Hence the risk of mercurial contamination is high. Therefore the condition at North Sulawesi is not safe. According to North Sulawesi Regional Environment Control Agency (Bapedalda: Badan Pengendalian Dampak Lingkungan Hidup Daerah) the mercurial contamination has poisoned a number of seawater territory and rivers in North Sulawesi since 1990 (Kompas Daily, December 2nd, 2004). This is in line with data from IMA (Indonesia Mining 7 Association). North Sulawesi BAPEDALDA, (Regional Environment Control Agency) said that the contamination is from the tailing of small scale mining in various places that mostly located close to the rivers. It is estimated that 40% of the mercury used by the

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gold miners are disposed into the rivers, flowed into the sea when the trommels are washed and during the amalgam purification process.

For instance, one trommel needs 1 doze of mercury for one run which is about 2-4 hours. Out of this process at least 10 grams turned to waste. One unit usually has about 10 trommels. If there are 150 units of trommels operating the total trommels will be about 1500 trommels. If one trommel disposes 10 grams of mercury, then there will 15 thousand grams of mercury or 15 kg mercury waste thrown in one run. Sometimes a trommel is run twice a day and if it so, the total of mercury thrown is 30 kg per day.

Bolaang Mongondow District, a region of North Sulawesi that has many legal or illegal small scale mining. In this district a gold mine run by PT Avocet with a work contract, 3 small scale minings at Lanud (Nomontang Village Credit Union), Tanoyan (Perintis Village Credit Union), Monsi (Lancar Rejeki Village Credit Union) and 4 other public mining areas, Mintuk, Monsi, Lanud and Tobongon. The illegal minings are spread in various places. One of the biggest is at the Bogani Nani Wartabone National Garden (Dumoga) where about 5000 people are involved.

Generally the miners use mercury in gold processing. Cyanide was introduced in the year 2000. This technology was pioneered by a Philippine company. The first installation of cyanide gold process was at Talawaan-Tatelu, North Minahasa District. It is then adopted by Tanoyan Villagers of Bolaang Mongondow and in 2005 more scale mining followed.
Based on the report of PT. Perusahaan Perdagangan Indonesia, a company that is permitted to distribute the cyanide to Bolaang Mongondow Industrial and Trade Bureau, 50 tons of cyanide is delivered every other months. Yet data of the buyers has not been collected by the bureau. Cyanide I is also used by fishermen to catch fish.
Surya Madani, an active Bolaang Mongondow NGO specialized in socio-economy field estimated that there are 500 units of trommels (one unit or cluster could consists of 4 to six trommels) at Tanoyan, 500 units, Lanud 500, Tobongon 750, and Dumoga 1850.

There are actually many more mining locations at Bolaang Mongondow district. The total mining using mercury is still uncertain due to the changes that come in times. But it is clear that

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the need and usage of mercury for gold processing is very high. If every trommel uses 0.8 to 1 kg of mercury, then the total mercury used is enormous.

Although the total mercury used is fantastic, the miners do not protect themselves from the hazard of exposures to mercury like keeping the amalgam purification away from public and have a good washing after work.

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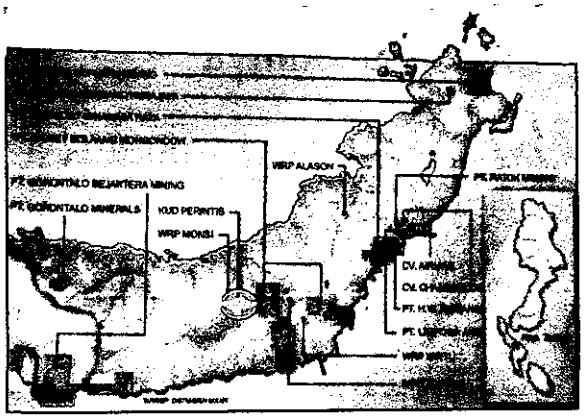
CHAPTER III. AREA PROGRAM

In the first place this project was planned to be executed at Lanud, District of Bolaang Mongondow and Talawaan Tatelu, at North Minahasa District. But since Talawaan-Tatelu is illegal mining area and the shortness of the program and the provided access, finally this program was executed at Tanoyan, Sub-district of Lolayan, District of Bolaang Mongondow.



Tanoyan village is located on the Southwest of Kotamobagu about 20 km away, the capital of Bolaang Mongondow and could be reached by public transportation. The mining here began in 1987 where most of the Tanoyan villagers were farmers then turned to be miners, Till now many of them still carry double profession. They will plant rice when planting season comes. While waiting for the harvest they would climb Tanoyan hills and work as ore diggers. The equipment used is very simply, crowbar, hammer, betel and wooden plank to keep the soil from sliding into the pit. But actually mining activities started long before because in 1983 a number of Tanoyan villagers had been mining at Lanud, about 2 hours drive from Tanoyan.

At the moment the mines at Tanoyan are legal. They secured the legality permit from the Bolmong Mining and Energy Bureau through District Chief and they are set as small scale mining under the supervision of Koperasi Unit Desa Perintis (Village Credit Union). The locations that are included in these Koperasi Unit Desa (Village Credit Unions) are:

- Madopolak,
- Talong
- Rape
- Jalur Tujuh
- Cendana
- Lingkobungon Atas (and Lingkobungon Dalam)

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- Talang
- Rape
- Jalur Tujuh
- Cendana
- Lingkobungon Atas (and Lingkobungon Dalam)

Generally the miners at Tanoyan has the mine n their own property. But not all property owners are businessmen that has trommels or drums for gold processing. Some sell the ores to the trommol owners, or renting other people's trommels. PT Ikan Mas Abadi that has 3 installations of cyanide is renting their gold processing facilities. The charge of one processing is Rp. 10 Million. Payment transaction is done after the gold is processed.

Tanoyan Villagers are actually familiar with cyanide gold processing technology since 2005. There are about 24 drums of cyanide and yet most of the people are still depending on mercury, At Tanoyan alone there are 500 trommels. If in one month each trommel processes 500 sacks of ores they will get more or less 1,5 ounce. If all the trommels are put into operation, there will be about 750 ounce or 7,5 kg of gold. The gold is sold to the gold shop in Kotamobagu. The price is about Rp. 125-145/gram. Not only the gold shops purchase the gold but sometimes they provided capital like mercury, lime, sacks and even lending money. In this case the price of gold that will be collected by the miners is set by the gold shop who gave the capital.

The gold yield is not always the same every month, so how much gold could be collected from Tanoyan is hard to predict. Even the Koperasi Unit Desa, (Village Credit Union) as the stake holders could not give us a sure answer. The retribution yield from the mining is also variable. If a trommel owner operated for one full month the retribution would be Rp. 2 million, and 1,5 million will go to District Government, and 500 for the Koperasi Unit Desa, (Village Credit Union) Perintis as stakeholders. If it does not the trommel owner has to report to Koperasi Unit Desa Perintis, (Village Credit Union).

From the varied situation above, it is clear that the related institution is not attentive enough and did not give any training and control over the public mining. Therefore the tales of small scale mining are mostly covered with various problems like health and environment, whereas by legally determine the gold mine locations, it could be a vault where environment friendly mining policy could be reinforced, by making them to practicing low or no mercury technology in gold processing. It will them lead the community to be able to stand on their own for their welfare. Small Scale mining could be trained and practiced as sustainable livelihood and it contributes tremendous support to the local and regional economy.

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Based on these facts, the target group that has been appointed to be the main target for this activity are the Tanoyan Community, the miners, the businessmen and the community in general. The target of the project are government institutions, civilian organization includes NGOs, private sectors, the media and North Sulawesi communities in general. Outreach, discussion and demonstration, try-outs on the gold processing technology will be conducted for target group at Tanoyan. In the meantime publication and media campaign will be conducted at Kotamobagu, and Manado to enable this program to reach out to all communities in North Sulawesi.

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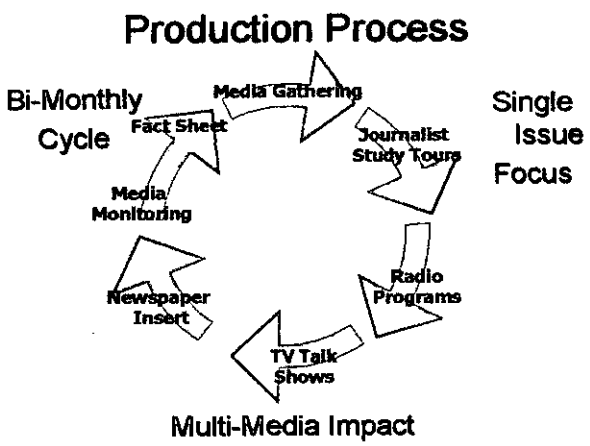
CHAPTER IV. PROGRAM ACTIVITIES

A. Multimedia Machine.

A narrowcasting campaign focusing on the target group with high risk of mercury contamination or community in general was prepared by Lestari. This campaign method is called M3 or Multi Media Machine.

Through this method the community's knowledge about mercury problem, cyanide process and how to lessen health risk due to exposure to mercury will increase that the community, policy setters and related groups would participate in finding solution to the problem. This purpose could be achieved by campaigning through various media in the community. The use of the media has been recognized by the community and that will help to increase the information addressed to received by the target groups and would have ample time to understand and remember.



Multimedia, aside from cost effective, it provides two-ways communication where information exchanges is possible in a responsible interactive communication discussing the issue of local community specifically on the use of mercury and its impact. The campaign cycle starts with project issue, fact sheet, radio program, TV program, Journalist Trip, Media gathering and Newspaper insert or Koran Lestari.

By implementing this program hopefully there would be increased of media coverage on the environment problem related to the issue or the health impact of mercury and cyanide, and that coverage in turn will encourage the community, the media itself to be more attentive to the issue, and to encourage the government to respond, and to educated the media personnel to be attentive and to keep watch on the issue in the future.

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1. Fact Sheet.

Fact sheet created twice entitled:

1. "Health Issues at Bolaang Mongondow Gold mines", in September 2006
2. "Seeking Solution, Environment Friendly Gold Mines." In December 2006

100 sheets were printed for each fact-sheet. More than 20 were distributed to the reporters as preceding information and for reference for their questions in the journalist trip or media gathering to enable them to present well focused correctly directed questions toward the issue and as input to their news to be broadcasted. Whereas for other participants, either the government officials or NGO the fact-sheet gives preceding and important picture of the issue discussed.

2. Journalist Trip

Journalist trip activity was conducted twice. First trip was on September 13-17, 2006 by visiting Tanoyan Village, at Lolayan sub-district, district of Bolaang Mongondow the chosen location for the campaign program that involves 8 journalists, 7 male and 1 female *(see attachment)*. In this trip the reporters were exposed to a real gold processing in a small scale mine.

The second trip was on December 15-16, 2006, by visiting Kotamobagu the capital city of Bolaang Mongondow district that involves 8 male journalist and 1 female. *(see attachment).* The activity was focused at the government institution, like Bapedalda (Regional Environmental Impact Control Agency). This agency decided on the process and mechanism of securing mining permit. Next the Trade and Industry Bureau that processes the trading of mercury and cyanide. Discussions and interviews with Seryanto, Lestari's technician who is also a staff of Bolaang Mongondow Mining and Energy Bureau, Urip Detu to find out the development of mining at Tanoyan.

Journalist trip and media gathering conducted in September and December 2006 has generated four articles published in newspaper *(see attachment)*

3. Media Gathering

Media gathering to intensify public awareness was organized in a round table discussion. In this gathering all stakeholders and policy setters, journalist, community groups for a dialogue and clarification of facts found in the field. First media gathering was in September 20, 2006 at

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Lembah Bening Restaurant , Kotamobagu. The gathering was attended by related government institutions personnel, miners group, printed and electronic media personnel, and NGO of Bolaang Mongondow. Topic of discussion was 'how to reduce the amount of mercury used in small scale gold mine, and the effort of shifting to pure cyanide process. In the discussion it was clearly indicated that gold mine has the highest prospect to be the main livelihood that the small scale mining has spread so far as far as Bogani Nani Wartabone National Park that is rich in gold deposit.

The second media gathering that took place in December was a visit to related government institutions like Mining and Energy, Trading and Industry, Bapedalda, (Regional Environmental Impact Control Agency) bureaus at Bolaang Mongondow. It was in this media gathering that the Head of Bolaang Mongondow Trading and Industrial Bureau asserted that he would accelerate the control of mercury and cyanide trading that is included in the Poisonous and Hazardous Materials List. The trading and Industrial Bureau will also press PT PPI (the official distributor of poisonous and hazardous material include mercury and cyanide) to submit a monthly report on the amount of mercury and cyanide distributed at Bolaang Mongondow, while Bapedalda (Regional Environmental Impact Control Agency) will follow up Lestari's effort by socializing the information to the miners.

From the two media gatherings we could conclude that the campaign could encourage the awareness and the effort of related bureaus to be more attentive to the hazardous impact of mercury.

4. Radio Talkshow

Two editions Radiotalkshow took place in September and December 2006. The first was broadcasted by Government Broadcasting Company of Kotamobagu (RSPD FM). The themes discussed were:

- Health at Small Scale Gold mines at Bolaang Mongondow (Healthy Generation, Mercury Free).
- Mercury and Health
- Mercury and Small Scale Mining's.

The resource persons for this radiotalkshow was invited from Mining and Energy Bureau, Trading and Industry, District Government, BPLH (Living Environment Management Agency)

and Bapedalda (Regional Environmental Impact Control Agency), Miners' community and NGO includes Lestari *(see attachment)*. There was no direct response from the listeners. According to the Management of the Radio Company the issues discussed were complex that the listeners tend to react passively and just monitor the development of the discussion.

The second Radiotalkshow held in Desember at Radio Montini FM in Manado, the capital city of North Sulawesi together with RSPD Radio of Kotamobagu. The themes discussed were:

- Mercury and Small Scale Mining
- What lies behind scarcity of mercury
- The process of securing small scale mining permit.

The resource persons for this radio-talk-show were invited from Bolaang Mongondow's related government institutions, those are Mining and Energy, Health, Trading and Industry, Living Environment Management Agency, Academicians, Miners' community and NGOs includes Lestari (*see attachment*). In this dialogue the explicit action of the local government is needed to decide the borders in which mining area is permitted and which area is not permitted for mining operation. It was also discovered that the small scale mining still uses mercury even though the cyanide processing technology has been introduced.

The entire radio program "Suara Lestari (The voice of Lestari)" was broadcasted 4 times at Kotamobagu RSPD FM Radio and 3 times at Montini FM Radio in Manado. The theme discussed in the entire broadcasting affected the community and policy setters. A number of resource persons said that this is a new and hot issue in public that needs to be socialized continuously. Yet there were problem in the documenting process that only 3 out of 4 radiotalkshow of RSPD Radio were documented, and only 1 out of three at Montini Fm Radio Manado. It was all due to technical equipment problem of the radio company.

5. TV Program

a. (TV-Talk-shows Interactive)

The first program, TV talk show interactive is called "Dego-Dego Lestari". It consists of three sections with one hour duration. It covers brief preceding information of the issue to be discussed for the listeners. Next is dialogue with the resource persons presented and last is the telephone interactive with the watchers. The first edition of this program was broadcasted by Totabuan TV of Kotamobagu in September 2006 with the topic: "Gold mines in Bolaang

Mongondow, Valuable Assets that needs to be controlled". In this broadcasting resource persons from related institutions (Mining & Energy, Health, Trading and Industry, Regional Environmental Impact Control Agency, Miners' group, and NGOs *(see attachment)*. There were 4 interactive callers focusing on the hazardous mercury content tailing management by the government and the process securing permit for a small scale mining that meets the health standard requirements. The inquiries showed public apprehension against the hazard of mercury and cyanide content tailings. They want the government to distinctly handle this matter. The officers of related institutions also expressed their intentions to uphold the policies specifically those that are related to the distribution of mercury and tailing management system.

Just as the radio program in December, the TV campaign held in Kotamobagu, Bolaang Mongondow was also broadcasted in Manado by Manado TV station. The theme was: **"Seeking direction to environment friendly small scale gold mines"**. The resource persons present at Totabuan TV station were also from the related government bureaus plus local Lestari Technician, and Tanoyan Villagers. There were two telephone calls from the listeners whose inquiries were about the effort to lessen the hazard of mercury and cyanide, permit process and government's action in handling the hazards of small scale mining, either legal or illegal and government distinct action in handling poisonous and hazardous materials specifically mercury.
Resource persons presented at Manado TV station were Staff from North Sulawesi Mining and Energy, Miners' group, and Lestari Public Health Officers (*see attachment*). Four callers with inquiries hardly any different to the callers of Totabuan TV show. Victor Malonda the deputy Head of Mining and Energy Bureau disclosed that so far there is no distinct restriction for mercury usage. The entire program is in line with the consultants' study and with the technical related institution like Bapedalda (Regional Environmental Impact Control Agency).

The desire to learn more about the sluice box and the retort in the effort of reducing mercury usage in the small scale gold mines was expressed by government officers, who attended the dialogue,
This broadcasting attracted TV watchers' attention. There were a number of interactive phone calls responding to the program. Not only the TV watchers were involved in the dialogue, or simply asking questions but they were giving suggestions as well. They were critical about the

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government's policy related to the mining and the distribution of poisonous and hazardous materials, which is mercury and cyanide.

b. Mini Documentary Movie

The second product of the TV program was a mini documentary move called "Jendela Lestari", (Lestari's window). It contains a comprehensive coverage with 15 minutes duration, a little longer than the one broadcasted in September at Totabuan TV station, Kotamobagu, Bolaang Mongondow. It discloses health problem at Bolaang Mongondow gold mines with the titles\: "Healthy Generation, Mercury Free". The December Mini Documentary broadcasted by Manado TV station, the title was "What is behind the scarcity of Mercury?" It pictures that no matter how high the price and how scarce it is, mercury is always present at the small scale mining.

6. Lestari Bulletin, (Inserted in Manado Post Daily)

Koran Lestari is a bulletin inserted in Manado Post Daily, the biggest daily newspaper company in North Sulawesi Province.

The newspaper's daily print-out is about 32,000 copies. With 8 readers per copy, it is estimated that our campaign reaches 245,000 readers, or 12% of North Sulawesi population. The most recent survey by AC Nielsen stated that 80% out of 100% of newspaper readers in North Sulawesi Province read Manado Post. The issuance of the last 'Lestari Bulletin' was a conclusion of our monthly campaign that consists of Journalist trips, Media gathering, Radio and TV programs and a review of the entire activities.

Lestari Bulletin is a vessel in which all the stakeholders could convey information to the public in a fair and balance proportion, it also gives the miners a place to express their opinions through **'The Villagers'** (Orang Kampung) column. The first edition was issued in October 2nd, 2006 with the headline: **"The rust behind the glitter of Bolaang Mongondow Gold".** This edition contains three articles:

1. **"Standardization of Mining is a must".** By Ir. James Paulus MSc. Head of Pharmaceutical Toxicology Laboratory of Marine Science School, University of Sam Ratulangi, Manado.

2. **"Gold, its charms and how to get it",** by Imelda Hutabarat from Mineral Technology Training Center, Department of Energy and Mineral Resources.
3. **"Don't play-down with Mercury and Cyanide".** By Okta Lintong, Seawater Pollution Observer.

Along with the articles, a profile of Mr. Muhammad Iqbal Delapanga, a trommel and two drums owner at Tanoyan, was also presented there with the title "**More Devoted to Cyanide**".

Mr. Muhammad Iqbal Delapanga has been practicing hard in the last two years on how to use Cyanide in order to be more effective in capturing gold. Aside from that he is also active in helping a number of entrepreneurs in developing this cyanide process.

The '**Jelajah**' (explore) column presents the facts about potentials, mining locations, and the immense threat or fantastic total of pollution risk due to mercury. Still at the same column you'll find a comparison of poisonous power of cyanide to mercury that we received from Rini Sulaiman of UNIDO.

In the second edition dated December 28, 2006, the headline was: **"Mining and Pollution, Leading mercury to zero point".** It presents the steps and inclination of the community in the process of reducing mercury by shifting to cyanide technology process and its problems, and the other alternative which is a simpler technology, practical, and cheap, the sluice box and retort.

There were three articles generated by three contributors in this edition, they are:

1. "**Give Complete Understanding on Cyanide Technology"** by Drs. Herlin Tangkuman, a lecturer at Mathematics and Natural Science School, of Sam Ratulangi University.
2. **"Shifted to Cyanide Process but Why Mercurial Pollution Still Exist?** By Rini Sulaiman from UNIDO.
3. **"Mining, Between Political and Pragmatic Option"** by Frans E. Kurniawan, from Montini Radio Research and Training section.

Along with the articles, a profile of Mr. Suharto Mokobombang, a trommel owner from Tanoyan, who is convinced that the sluice box and retort is environment friendly and could capture gold without using lots of mercury. He has worked hard and had several try-outs with the sluice box and retort. In the **'Jelajah'** (explore) column the sluice box and retort process and the cyanide are presented in pictures. It presents also the economical comparison between the use of cyanide and mercury and the economical difference in using sluice box.

Lestari Bulletin is sent to all Lestari's partners like local and international NGO, government institutions, private sectors in many parts of Indonesia. Total exemplar reaches 250 per month or per edition.

7. Recapitulation of the main result of Multi Media Machine (M3).

The entire activities in this campaign has actively involving at least 19 journalists from :

- Tribun Sulut Daily Newspaper
- Komentar Manado Daily Newspaper
- Swara Kita Daily Newspaper
- Metro Manado Daily Newspaper
- Smart FM Radio, Manado
- Cosmo Female Radio, Manado
- Montini FM Radio, Manado
- Pacific TV, Manado.
- 5 Dimensi TV, Tomohon.

Media involved as partner in publication are:

- Local Government FM Radio of Kotamobagu
- Totabuan TV, Kotamobagu
- Montini FM Radio, Manado
- Government TV station at Manado-Gorontalo.

Recapitulation of the media campaign products in September and December 2006

Distributed Factsheet		200
Newspaper Insert (Lestari Bulletin)		50.500 exemplars
Issue Follow up by journalists		4
Radio Broadcasting		7
Radio Participation	Resource Persons	17
	Interactive callers	-
TV talk show interactives		3

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TV Participation	Resource persons	11
	Interactive callers (Phone)	10
Mini documentary		2
Media Gathering participants		39

B. Mining Communication Network and Shared Learning

Mining activities involved many parties and interest. Therefore involving various parties to develop an environment friendly mining business is very important. The effort to build up communication and shared learning has become the key element in this program in general that the entire program has been carried out well.

1. Trained group.

The purpose of organizing the trained group is that this group could be the motor in implementing the technologies that is about to be introduced. One of those is the Sluice Box technology. The trained group consists of 8 chosen entrepreneurs based on their desire expressed during the early socialization, even though in the end not everyone in the trained group meets the requirements to be in the trained group. The eight businessmen were Zainal Ansik (Talong), Rano (Talong), Iqbal Delapanga (Lingobungon), Muhammad Anwar (Lingkobungon), Jamal Mokobombang (Talong), Suharto Mokobombang (Talong), Arsyad Mokobombang (Talong) and Dahlan Manggo (Rappe). These businessmen provided the ore or 'block' for the try-out. Three kinds of ores were focused at the try-out; those are from Talong, Lingkobungon and Rappe.

2. Promotion of low mercury gold processing technology.

The promotion of gold processing technology with low or mercury free was conducted directly and indirectly. Direct demonstration were attended by commoners and related government officials, while indirect demonstration was carried out through media publication, interactive talk-show, broadcasted news, posters, brochures and leaflets.

Try-outs and demonstration of sluice box and retort were conducted from September 2006 to early February 2007. Try-outs were conducted in front of mine owners and miners and commoners in general. The result of a set of intensive try-outs from December 2006 to early February 2007 is as follows: (Please see attachment, a study reported by Seriyanto)

- The optimum time consumed for a trommel process is 2 hours.
- The best carpet used is the nomad carpet.
- The best slanting position is 10 to 15 degrees
- The dimension of the sluice box affects the yield of the gold, the longer the sluice box, the more gold could be captured.
- The flow of water or sludge entering the sluice box has great effect on the gold captured. The faster the flow the less gold could be captured.

3. Regular meeting with all parties.

Two conferences were held. First was held at Bapedalda (Regional Environmental impact Control Agency) hall on September 12, 2006. The second conference was held at the Village hall.

The first conference was attended by about 50 persons, 35 males and 12 females that represent the government institutions, (Environmental impact Control Agency, Mining and Energy, Health, Trading and Industry Bureaus) prominent figures of the communities, miners, entrepreneurs, Credit Union, NGOs, Local media, housewives from various parts of Bolaang Mongondow. The questions asked were mostly due to the curiosity about the mercury and cyanide process that is said to be hazardous, and wanting to know if there is any available technology that could be a solution to the problem that is affordable and profitable for the miners.

The second meeting was held on October 14, 2006, with a presentation to the Bolaang Mongondow Government Officials (District secretary, the Second Assistant, Head of the economical section, a staff of the Mining and Energy bureau, a staff of Trading and Industry bureau, and a staff from the Regional Environmental Impact Control Agency (Bapedalda). Follow-ups of these meetings were also conducted through out the campaign by visiting the Head of the related institutions for an in-depth discussion on their role in this issue.

Aside from meeting with the multi-stakeholders and the government officials, two meetings on the village level were held at the village hall.

The first was on September 28, 2006, and was attended by about 30 personnel. It was in this meeting the Sluice Box and retort was introduced by Randy Baker (UNIDO Ecosystem Consultant specialized in Mercury). The Sluice box and retort demonstration was curiously and

enthusiastically attended and watched by the people of Tanoyan. It was precisely a good time to explain further the process of mercurial contamination to human, and to stress out the importance of using the sluice box and retort. in order to lessen the risk of mercurial pollution in the environment and the impact on the community.

March 6. 2007, a second meeting held at the village hall. Lestari was accompanied by Randy Baker, Rini Sulaiman, Budi Susilorini, UNIDO team, who alternately presented the effectiveness of sluice box and retort in reducing the mercurial pollution, the importance of reducing or eradicating the use of mercury in cyanide technology, and the safety of the miners.
A set of questioner was distributed to the attendance. The attendance was mostly ladies who brought their children along.
The other meetings were held at mining locations (about 14 meetings) where Lestari was accompanied by UNIDO experts, Randy, Budi and Kevin. The discussions interest many housewives that attended these meetings. The rest of the discussions were carried out by local technicians, for either try-out of the Sluice Box and Retort during the break time of the miners.
In order to be more effective the method of meetings was changed by focusing to small groups, because in the first meeting many were still confused about mercury and cyanide.

Some results of the meetings with the policy setters :
Bolaang Mongondow Trading and Industry Bureau promised to do sudden check on the trading of mercury, and press on monthly sales report of PPI company, the official distributor of poisonous and hazardous material include mercury and cyanide. In the mean time the Environment Impact Control Agency (Bapedalda) stated that they will intensely socializes the environment friendly gold processing, specifically to explicitly clarify the Environmental Impact Analysis (AMDAL).

The village level meetings had resulted in the following:

- The mining entrepreneur are willing to look for gold processing technique that could lessen the impact of mercury.
- The mining entrepreneurs are willing to have a try-out of the sluice box and will do their best to find the benefit of using the sluice box.

- The mining entrepreneurs stated that they will continue to use the sluice box or the trough and will try the retort.
- The miners understanding about the hazard of mercury and cyanide has increased.
- A better and more economical technology in capturing more gold had been given as solution to problem issue.

Meetings to re-enforce the network had been continuously carried out even though not always similar to the plan. The network with local community, NGOs and Government Institutions has been built up and maintained even though a work team has not been organized so far, to be the foundation of the activities in the future.

4. Technical training and Human Resources Power.

The training of local technician was not done and it was a concern for UNIDO that they recommended Seryanto, a staff of Bolaang Mongondow Mining and Energy Bureau to be one of the technician. Seriyanto has participated in the Global Mercury Project Workshop organized by UNIDO at Kotamobagu in February 2006. Due to bureaucracy, Seriyanto could not join us until December 2006. In the meantime Urip Detu from Tanoyan who had also attended UNIDO workshop was trained to be technician. The presence of the local technicians are very helpful for a sustainable implementation of sluice box and retort, especially that Urip Detu, a local people and a member of the local credit union (KUD) who always participates in the Tanoyan community's activities. As for Seriyanto, in his capacity as a staff of the Bolaang Mongondow Mining and Energy Bureau, his experience could be benefited by many. The learning process came from Randy Baker of UNIDO who came in late September. Randy introduced and explained about the sluice box and retort, the process of making the sluice box, showed the sample, and how to use it, and explained the benefit of using the sluice box.

Prior to the campaign in Bolaang Mongondow Raymond, the campaign Coordinator and Purnama Nainggolan, the Outreach Coordinator were sent to Pasaman District, West Sumatera for four days, from September 17 to 21for a training and field visit to increase their knowledge about gold processing in small scale mining and to increase their understanding on the hazard of mercury and the alternative and simpler cyanide process using the trommel.

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5. Development of campaign material for health.

There are three kinds of campaign material developed to support this program.

Brochures:

- Recycling damaged mercury,
- Prevention of mercurial contamination to your family,
- Keeping our water resource from mercurial contamination

Paper brochures with the following messages:

- Why is it important for mothers and children to avoid mercurial vapor.

Plastic posters:

- Steps of making Sluice Box,
- The benefit of Sluice box in reducing the use of mercury.

The cost of plastic poster is quite expensive. Durable material were chosen so that is could last longer when posted at the mines.

The third is the leaflets. Two kinds of leaflets explained about the material, steps of making the sluice box and the purpose of the sluice box and retort.

The posters, leaflets and brochures were distributed mainly at Tanoyan the main area of this activity. At the end of this campaign, all the posters had been distributed and posted at the villagers' houses, government's buildings, outposts, health centers, schools and other strategic places plus at the trommel locations. The message in the brochure could be seen clearly by the people who see it. It was also distributed to the government institutions and NGOs at Kotamobagu and mass media at Kotamobagu and Manado.

Types	Message	Total	Target
Posters	Explains the importance of avoiding exposure to mercury vapors.	500	Local Government Mass Media NGO Mining entrepreneurs Miners Farmers Housewives Educators Health personnel Children
Plastic Poster	The entire process of making the Sluice box and the trough, and the benefit of the Sluice Box	100	
Brochures 1	Method of using quicksilver and recycled quicksilver,	100	
Brochures 2	Quicksilver and family's health	100	
Brochures 3	Keeping our clean water resource clean	100	
Leaflets 1	. Raw material, steps and purpose of using trough / the Sluice Box	500	
Leaflet 2	Raw material, steps and purpose of using retort	500	

C. Developing Material and Equipment Supply and Access.

Many of the activities in this section were not carried out. By the introduction of low mercury gold process technology the miners began to understand that there is a more effective method that could capture more gold without mercury. Even though no one has fully implemented the Sluice box to capture the gold, but their interest to use the technology has been heard, just like what Suharto Mokobombang expressed: "The last few years the mercury has been hard to find. Even if you can get it, it will not be much. There should be new innovations so that even though it is hard, but we could scrimp. Sluice box could be the solution." (Profile Column , Koran Lestari December 28 edition, 2006).

1. Identification of local supplier.

The material for sluice box for the campaign were obtained from a building material shop and was assembled by a welder in Manado and Kotamobagu, while the material and the assembling of the retort was done in a workshop in Manado.

D. Developing Village Level Awareness.

1. Meeting with the trained group.

Meeting with the trained group at the mine location as an effort to socialize he program was done regularly, twice a week. Usually the main subject is to demonstrate the how and whys the sluice box and retort could capture gold that could lessen the use of mercury and at the same time lessen the environmental pollution. Aside from the demonstration a discussion about the effects of mercury against the health of the miners, family and community were carried out in every opportunity. From September 2006, this equipment has been introduces and demonstrated, and many try-outs had been done to the miners, and entrepreneurs. It was documented that at least 34 try-outs were done during the campaign. Seriyanto and Urip Detu had been intensively focusing their study in order to find a model, assembling, turning time and other requirements in so that the Sluice box could render optimum result. Sluice box demonstration had also been done in the village the trained as a program in family celebration to either the trained group or just anybody.

In April 2007, leaflets and brochures to support the message had been distributed to the community of Tanoyan, in order to remind them the information related to the use of mercury, the risk and the choice to lessen the exposure to mercury. Posters have been posted in strategic places in early March 2007.

Mini documentary were that exposed the mining environment and its activities was broadcasted in "Dego-Dego Lestari" program by Totabuan TV station and Manado-Gorontalo TV station. It is expected that TV watchers have watched it.

In general we could say that part of the community, in this case the entrepreneurs and the miners have begun to be aware of the importance of reducing the use or mercury in gold process. This is parallel to their statement that at the moment mercury is used to measure the degree or content of gold. Now the use of sluice box and retort is an alternative to contemplate upon.

2. Local Newsletter.

This activity was not carried out because this program was not conducted at Talawaan Tatelu area, District of North Minahasa. UNIDO decided to avoid any activity in mining area where there is conflict. Due to the time and access concerns, it was finally decided to focus at Tanoyan, Sub-District of Lolayan, District of Bolaang Mongondow.

E. Fish Sampling

1. Background

The Tanoyan mining area is situated approximately 15 km south of Kotamobagu, Bolaang Mongondow District, North Sulawesi. Mining activity started here in 1986 and has continued unabated over that last 20 years. The mining area spread out within the headwaters of the Tanoyan River and its tributaries like Onkag Mongondow that is surrounded by rice paddies, coconut plantation and cornfields. Local streams are used to draw water to flood the paddies. In rainy season the streams overflow and flood the surrounding landscape, including paddies.

There was flood in 2005 that, according to Manado Health Department, caused the mercury in well water to become contaminated; the mercury level was elevated above the human health drinking water guideline (1.0 µg/L) Presumably the source of mercury was from the contaminated cyanide tailing ponds that routinely fill and discharge to the local streams. People

are advised not to drink their well water and this fear persists nearly two years later. People are also uncertain about the health risks of mercury in rice, banana, coconut, kangkung (local aquatic plant), fish, corn and livestock, because of the belief that mercury is taken up from contaminated water by all of these foods.

Legal or illegal miners use mercury for gold processing. The illegal miners probably outnumber the legal ones, and the amount of mercury used is enormous. So, a great deal of mercury has been used in this area for a long time. So far no fish data have been collected from this river system. During the September 2006 mission to North Sulawesi, given the long history of mercury use in the area and the absence of data, it was decided that a fish collection program for mercury analysis would be undertaken.

2. Methods

Fish sampling was conducted during mid-October 2006 by Danso Ahyuan, Hanny Tioho, Purnama Nainggolan (Lestari) and Papa Tita, a local miner. Fish were collected by electro fishing using nets. All fish captured were identified to species and measured for fork length cm). A tissue sample was taken from each fish, dried to a constant weight (<60°) and stored in bags.

Fish tissue samples were taken back to Canado and analyzed for total mercury at the University of Victoria. Samples were dried to low humidity, ground to a fine powder, weighed precisely, and then was analyzed for Hg by thermal decomposition Zeeman corrected atomic absorption (YDZ-AA) using LUMEX mercury analyzer RA-915+ and RP-91C pyrolysis attachment. The Zeeman correction technique corrects for most interferences and therefore produces high sensitivity and selectivity analysis. Importantly, a highly precise analytical balance is needed ot obtain high precision results. Accuracy and precision were estimated by analysis of certified reference materials (CRMs). To check for accuracy, DOLT-2 [Dogfish liver; NRCC Institute for Environmental Chemistry; Certified Hg value of 1,99± 0.1 PPM] was analyzed. And precision was always better than 5%.

The fish collection stations were revisited in March 2007 by R. Baker to describe each site and acquire photographs and to collect stream sediment for mercury analysis. Sediments will be

transported back to Canada for analysis of total mercury and will be reported independently from this report.

Four locations were chosen for fish sampling along the Tanoyan River or its tributaries, as follows:

1. Station 1 Mopusi River (%1n 0640100 E 0064437 N) upstream reference location away from mining area near Mopusi Village. Near a vehicle crossing on a 10m wide shallow of ~0,3 m/s. One dead catfish (lele) was observed in the stream According to the villagers catfish, tilapia (mujair), eel and sharkminnow (Nilam) can be capture there.

2. Station 2 Kinali River, tributary to Tanoyan near mining area (0640577 E 0066124 N) near a bridge crossing at small scale mining. The stream is 15 m wide, meandering and slow velocity but with sufficient slope to create riffle areas. Larval fish were easily observed. Water striders were also present, which suggests some environmental degradation. Sediment was sampled upstream of a road crossing in clayey silty sand about 0,3 m deep in very soft and unconsolidated gray/brown sediment.

3. Station 3 Tanoyan River (Onkag River) downstream of mining area (0643657 E 0069703 N). The river here is wide (15 – 20 m) and deep with very soft and deep sediment along side the river bank, limiting access. The stream is low energy, meandering and has quiet runs with small, intermittent riffle section over coarse, hard compacted cobble bottom with a thin veneer of sandy surface sediment. Sediments were collected from two locations here. One from near shore, in a brown clayey silt, very flocculent and released gas when disturbed. Worm tubes could be seen on the surface. Sediment was also collected upstream of a riffle area near the middle of the stream I 0,3 m water. Sediment here was soft, brown sand and also released gas bubbles.

4. Station 4 Tanoyan River downstream of mining area at bridge crossing near Mopait Village (0641999 E 007020 N). The river is 20 m wide, less than 0,5 m deep with uniform compacted cobble bottom. Larval fish were observed. It was difficult to locate

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sediments for sampling. Small composite sample taken near shore from behind small compacted boulders in depositional halo.

Fish were also collected from a small rice paddy pond adjacent to the Kinali River at station 2 near the mining area that is subject to flooding of the river or is fed from the river to flood the padddie. Sediment was also collected in one of these ponds. Water was very shallow (<10cm) with abundant vegetation growth (Kangkung), anoxic conditions and very organic with abundant decaying organic material.

3. Analysis Result

3.1 Result of Sampling Effort

Five species of fish were captured including Nile tilapia or Nila (*Oreochromis niloticus*) Moambique tilapia or mujair (*Oreochromis mossambicus*), silver sharkminnow or nilem (*Osteochilus hasseltii*), walking catfish or lele (*Claria batrachus*) and Java barb or tawes (*Barbonymus goniontus*). Only 17 nile tilapia and 21 silver sharkminnow were captured from all locations, including ponds, and analysed for mercury, Five mujair were also captured in the pond and these were analyzed for mercury.

Java barb were most abundant species captured at all location except station 1. None of these fish were analysed for mercury however, for unknown reasons. Walking catfish was present at all stations except station 4 and in the pond and were also not sample for mercury.

Mujair (Mozambiqie tilapia) was not present in the streams, only from the pond. According to local people, mujair is not common in streams and only a few farmers will have mujair. Although the two species of tilapia are similar, nile (Nile tilapia is more popular because they grow and reproduce more quickly than mujair. We were also told that tilapia (Mujair and nila) are more difficult to capture now because people believe that cyanidation has reduced the number of fish in local stream.

We also learn that people fish with cyanide, adding a briquette to the stream and gathering any fish killed in the area. As cyanide is a non-discriminatory chemical, benthic organisms will also be killed and this practice may have diminished fisheries resources in this area.

3.2. Mercury in Fish

Tissue mercury concentration were converted from dry to wet weights assuming a moisture content of 78%, which is common for freshwater fish. Raw data for each species from the four stream locations and ponds are presented in Table 1. Several trends are immediately apparent, notwithstanding minor differences in fish size among locations.

- Silver sharkminnow or nilem are consistently higher in mercury than Nile Tilapia at all stations except the upstream reference where they were similar. At all mining affected stream stations and the pond, mercury concentration in nilem were 25% to three times greater than similar size tilapia.
- The relationship between stream location (and presumably, mercury contamination) and mercury concentration in tilapia is not consistent. There was very little difference among fish from different river stations, with lower concentrations at station 2, in the mining area and concentrations between 0.16 and 0.24 mg/kg at the other stations. There was very little correlation between fish size and mercury.
- Nilem had higher mercury concentrations than tilapia at all locations downstream of the reference station 1, ranging from 0.21 mg/kg to 0.28 mg/kg (Table 2). Higher mercury concentration was more closely related to location of capture and not to a positive correlation between fish size and mercury concentration.
- Mercury concentrations of both nila and tilapia, were highest in the pond, with nilem being nearly double the mean concentration on tilapia (0.24 mg/kg). Nilem averaged 0.47 mg/kg and ranged up to 0.60 mg/kg in only 12 cm fish.

CHAPTER V. PERSONAL STORY AND IMPACT

During the involvement in this program, we noted some people experiencing something meaningful and some negative impact. The following are something expressed by them.

- Urip Detu stated that he is not satisfied yet about the job he has at the moment. Even though the Sluice Box has been proved to be able to yield 71,4% gold out of the trommel compared with what mercury could yield, he still want to try to achieve the same yield using sluice box, so that there will be no reason for the mine entrepreneurs not to shift totally to sluice box. His first intention to get involved in this program was due to his participation in community activities that he has been involved with since his youth. He was not really expecting anything. But after he got involved and appointed to be a paid technician in which he declined at first, but for the sake of the people and work activity, he decided to accept the offer. In every opportunity he always spends it socializing the activities conducted by Lestari, even in family celebrations where he is frequently asked to be the master of ceremony.
- Seriyanto, a staff of Bolaang Mongondow District Mining and Energy Bureau, a local technician, stated that his involvement in this program, even though it did not starts smoothly due to bureaucracy, yet afterward what he gained was a deeper knowledge of the sluice box. In the past he knew only the theory. He also learned about the real livelihood of the miner community, that when they are well, they are happy, but when they are in trouble, they are really in trouble. In his institution, the fund for study or research is very small and that is why this program is very helpful. From this activity, he could obtain various recommendations, and the result of the study could be a reference in their library and something to use in the future.

The impact of this activity to the miners, local government, public, media and program organizer are:

- During the activity, the campaign on reducing mercury in small scale mines include facts of the enormous total mercury used and its impact on a number of areas in North Sulawesi has aroused the people's attention to this issue. The officers of related government institutions now are challenged to be proactive in helping to overcome this problem. The Trading and

Industry Bureau has committed to monitor the distribution of mercury and cyanide and also suggested that there should be labeled. Each of the government institution involved in this program are now aware of the importance of coordination among them in order to increase the affectivity of monitoring and control and to cultivate the small scale mines.

- The miner's community and trommel owners at Tanoyan is now acquainted with the sluice box and retort as an alternative technology of gold processing. Although it has not been fully implemented, but a motivation toward the technology do exist by now. Muhammad Iqbal said that through this program his decision to use the cyanide method is getting steady. From Urip Detu story, this program has inspired the people at Bubongayon (about 8 km's from Tanoyan) to use the sluice box. The carpet given by Lestari is now borrowed and being used there. The miners there are Tanoyan villagers that they always come home to Tanoyan.
- The formula of ore processing with sluice box has been socialized to the people and positive responses had been expressed. Four mining entrepreneurs (Rano, Suharto Mokobombang, Jamal Mokobombang and Arsyad Mokobombang) who had been actively participating in the try-outs had stated that they will implement the sluice box technology in their operation. Nothing to loose in installing the sluice box because capitally they are strong enough. The crushed ores by the trommel will go through the sluice box then to the pool and later to be processed in the cyanide drum. Although the focus of the campaign is the sluice box, but in many opportunity it has been synergized with the information about the use of retort.
- Jan Paputungan with whom we met during the distribution of posters, leaflets and brochures, is convinced that it is more economical, and had committed to implement the sluice box technology and retort. Jan has been a miner for 15 years and had long since desiring to try the sluice box technology but due to lack of information he could not.
- Although it has been explicitly mentioned by the Bolaang Mongondow Government Secretary, in this case Head of the economic section, that it is time to stop using the mercury due to its impact that affects the other economic sectors in that region, like the threat to farmers at Dumoga by the mercury polluted river that flows through Dumoga, yet there are more actions need to be taken to materialized the region's policy due to the many aspects that has to be contemplated and to seek its solutions.
- The analysis of the post test program questioners showed that the miners had learned that the mercury is hazardous. The 85% positive responds were collected, 23% through the

government, Radio 20%, Lestari 19%, Posters 18%, neighbors 14%, TV 8% and Newspaper 4%. Yet their dependency on mercury is still high. Every mine is still using mercury (66,7%) that averagely crushes ores in the trommel for 3 hours (50%) using 1 kg of mercury per trammel (42%). The miners still practicing open furnace (38%) either beside the drum or trommel or close to the residential area. Only 23,1% are using sluice box and 3,8% are using the retort. The miners are more acquainted with the sluice box, due to the time frame, it was chosen to be the focus of the campaign and not retort. The time for sluice box try-out and to find the best way to use it is long enough. More time in the future is needed to socialize the benefit of using the sluice box and retort in order to shift the attitude totally because only 34% of the respondents stated that they would try to reduces the exposure to mercury and 19,3% did not respond.

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CHAPTER VI. CONSTRAINTS

During the eight months program many opportunities for positive changes related to the success and challenges faced in achieving the objective of the program. The following are the constraints or challenges faced by Lestari that have been formulated for future success.

- In-depth information about the program had to be conveyed to related government institutions especially Mining and Energy Bureau. This is to avoid miss-perception that could impede the partnership and cooperation in carrying out the programs in mining sector.
- The baseline was not systematically set that at the end of the program it is hard to measure the quantitative changes that have taken place.
- The related institutions were not really aware of the role and responsibility of each of them in relation and coordination development.
- The lack of systematical and progressive documentation system in the outreach program and media campaign.
- The imbalance between the management and outreach team in implementing the activities. The total outreach is so little and the absence of educators for peers that would help the spread the information to the miners, mine entrepreneurs, housewives, children, young adults and the community in general.
- The team from Manado who conducted the fish survey failed to submit the report that has been awaited by the community.
- The impact of the campaign in the community could not bee seen due to the belated printing and distribution of supporting campaign material.
- Internal planning, monitoring and evaluation of the program were not tightly conducted since the beginning of the campaign to the end.
- Inexplicit responsibility of each personnel that occurred since the beginning of the program.
- Sluggish funding had hampered the implementation of the program in the field.

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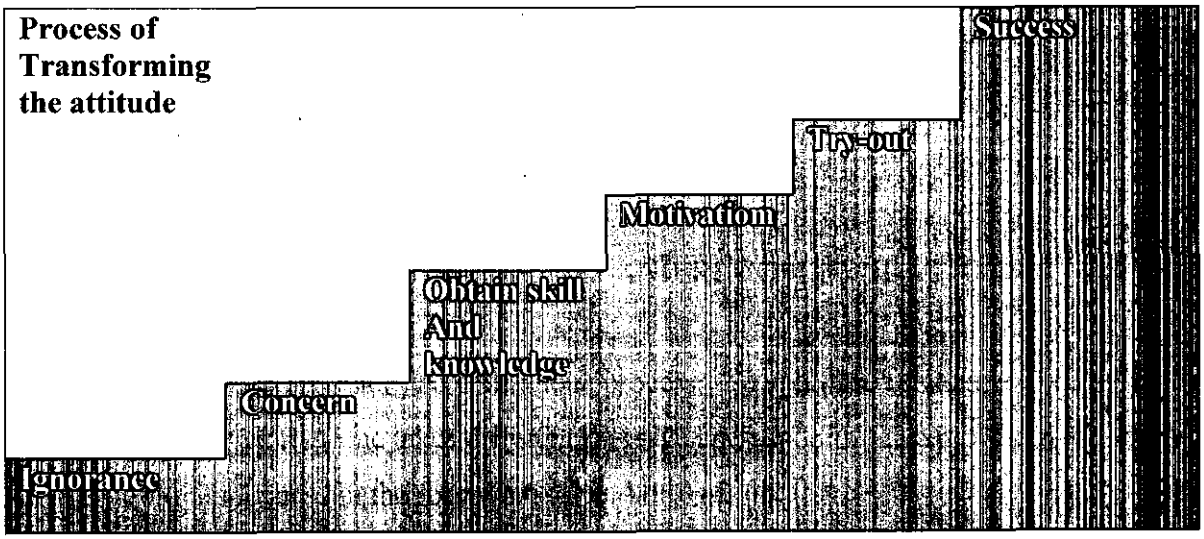
CHAPTER VII. CONCLUSSION AND RECOMMENDATIONS

A change in attitude and behavior is a continuous process. The purpose of changing the attitude of the target group to a better one takes different message and supports. The process of changing the attitude could be pictured in the following table.



The Program of Community Awareness on Hazards and Health Risk of Mercury and Cyanide and Improved Techniques for Gold Recovery in North Sulawesi, Indonesia, The scheme of attitude change above, were due to the messages and support in every phase as the following:

Ignorance Concern	The total of Information handouts at the mine locations in North Sulawesi, specifically Bolaang Mongondow District and the gold processing model with mercury. The condition of North Sulawesi, Bolaang Mongondow is not safe due to the amount of mercury used in gold processes. The impact of mercury is not only at the mining area but also up the river due to the many trommels set around the river. Thus the sea (Manado Bay, Buyat Bay, etc.,) had been polluted by mercury. At this phase, the community was informed about the pollution process, the exposure to mercury for either the environment or human.
Concern	When the community began to show intention to learn more, the information of the risk that may be some of them had suffered due to the years of exposure to mercury is given. The explanation is stressed on the facts that the symptoms of exposure to mercury on human do not appear right away but it accumulates. Alternative options were then given to reduce the

Acquired knowledge and skill	hazard of mercurial usage. At the same time this information will give new understanding to the community, because the miners use to say that they have been working with mercury for years, yet there is no effect of mercury on them. In this phase alternatives to reduce the exposure to mercury and its impact on health is given.
Acquired and skill Motivation	The alternative model for low mercury gold processing (Sluice box and retort) began to be introduced and demonstrated directly in from of the mining community and trommel owners. From this process a comparison of the yield and the other benefit of using sluice box were made against the conventional method that had been used for years. Hopefully the many try-outs and demonstrations will arouse the motivation in the miners and trommel owners and to put it into practice by themselves.
Motivation Try-out	The awareness on the hazards of mercury for himself as well as for the community and environment plus the fact that by using sluice box could also be beneficial will encourage the miners to put it into practice. At this point the try-out should be continuously demonstrated so it could the community could see that optimum result could be achieved using the sluice box. Here is where we need a person as a model who is seriously willing to set his choice and to be consistently trying to use the sluice box.
Try-out Success	Some groups of miners (Suharto Mokobombang, Rano, Jamal Mokobombang and Arsyad Mokobombang) had spent some time to keep on doing the try-out for anxious to find out whether the sluice box could yield the same amount of gold like the trommel with mercury. Now the use of mercury has been reduced from 1 kg for each trommel, now only 100grams. It is a matter of time and perseverance in order to achieve the result that is equal to the traditional process with mercury. Support and enforcement from related institutions are still needed by the miners so they could permanently implement the sluice box technology. Information, knowledge and innovation about the sluice box, retort and the

	right technology to support them should always be provided.

From all the series of the activities conducted so far, and based on the community's reaction specifically the miners and the entrepreneurs who had intensively participated in the sluice box and retort try-outs, the result achieved is still at the motivational growth and self conducted tryouts of the sluice box and retort. It could be that the try-out conducted is not a permanent that continuous support and assistance instead of 'simply trying' or to use it only when mercury is not available or not enough.

According to our findings, the regional government, related institutions and the miners' community will hold important roles in matters related to mercury used in mining in the future.

Approach to management.participation.

- During the implementation of this program Lestari tried to develop a participatory approach that consists of the element of technical guidance provision, escalation of local community capacity, and policy implementation facility. This approach should be continuously spread out and explicitly clarified specifically in the relationship between the related bureaus of regional government and miners' community and organization that care about the mercury problem in the small scale mining.
- Escalating local capacity of either the government institutions or communities and its organizations should be prioritized because it is related with the sustainable and self support of the local community in overcoming the mercurial problem.
- Meeting and discussion to seek solution will become an important point in building understanding among the parties involved so that communication will be reinforced and cooperation as a team could be developed.
- Cooperation in planning and preparation prior to the implementation of the program are very important. Guidance related to the field activities includes the information management system should be thoroughly prepared.

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"Zero Mercury" Work Group.

- The program of reducing or eradicating the use of mercury in small scale mining in the future is to be conducted cooperatively in a workgroup that consists of the community, NGOs, and related government institutions. With this kind of team the facilitating role and coordination between sectors and level in the community and also in the government could be done integratedly.
- Multisectoral approach like this would be able to press the government to allocate enough funds in reducing or eradicating the use of mercury in small scale mining.

Political / Policy Support.

- Looking at the importance of government roles, It is necessary to have a program that could press the government to pro-actively developing a tight strategy of reducing or restricting the use of mercury in small scale mining. This should includes the escalating the effort of research to find alternatives of gold processing model that is more effective compares to the use of mercury.

NGO Orientation.

- The skill in managing the program, briefing, orientation and training for the NGO staff needs to be escalated that each member of the team could understand their role and responsibility. Then the communication and coordination among the staff could be built up for the success of the program.
- Staff orientation about the program should cover the purpose, strategy, technical problem, and administration. The main attention of the program coordinator should be on the implementation of the activity, and should spend enough time for guidance.
- NGO Network building (forum and coalition) will increase the capacity of the NGO as a whole include the total dependency on the donor. It will also increase the involvement and human resources provided to carry out the program.
- NGO forum is still needed to increase reinforcement in teamwork coordination, mandate on the roles, technical skills and managerial includes funds raising.

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Change of Behavior (Information, Education and Communication)

- Change of behavior toward certain target in order to achieve the right target is necessary. A continuous improvement of capacity of related institutions, community, and NGOs who cares about mercury is necessary to develop concept, planning and to carry out the communication activities of the change of behavior that strayed to other specific changes.
- To develop a new attitude that could change the level of awareness, knowledge and action, needs a strong human resource especially in monitoring and evaluating the program itself especially when the program is new and trial tested.

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CHAPTER VIII . ATTACHMENTS

1. Post program survey result and analysis. (By dr. Henry)
2. Report on "Minimizing the use of mercury at the small scale mining environment by using the sluice box" research by Seriyanto, local Lestari technician – Staff of Bolaang Mongondow District Mining and Energy Bureau.
3. Radio Talkshow CD
4. TV talkshow CD
5. Mini Documentary CD
6. Posters and brochures CD
7. Clipping of printed media
8. Fish report by Randy Baker
9. List of participants of journalist trip on September
10. List of participants of journalist trip on Desember
11. List of Articles published in printed media as long as September & December
12. List of Narasumber Radio program on September
13. List of Narasumber Radio Program on Desember
14. List of Nara sumber Program TV Talkshow Interactive
15. Transcript of radio talkshow
16. Transcript of TV talkshow.
17. Photoes

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Lampiran-lampiran

Tabel Daftar Peserta Jurnalist Trip Pertama (September)

No.	Nama	Media
1	Farry A. Mandagi	TV 5 Dimensi Tomohon
2.	Friska	-idem-
3.	Ismail Maga	Radio Smart FM Manado
4.	Karel P	Tribun Sulut Manado
5.	Isa Jusuf	-idem-
6.	Lucky N	-idem-
7.	Giovanni Pontoh	Citra FM Manado
8.	Hendrik S.	Harian Swara Kita Manado

Tabel Daftar Perserta Jurnalist Trip kedua (Desember)

No.	Nama	Media
1.	Ronny L	Pasific TV Manado
2.	Frans Kurniawan	Radio Montini FM Manado
3.	Stenny Oroh	Harian Komentar Manado
4.	Hendrik	Harian Swara Kita Manado
5.	Alfa Samola	-idem-
6.	Noldy E	-idem-
7.	R. Rompas	-idem-
8.	Friska	Radio Cosmo Female Manado
9.	Raymond Pasla	Harian Metro Manado
10.	Tini	Harian Tribun Sulut Manado

Tabel Daftar Narasumber dan Instansi Asal

No.	Nama	Instansi
1	Juardi Damapolii	Kepala Tata Usaha -KTU Dinas Pertambangan dan Energi Bolmong
2	Ir. Supardi	Kepala bidang Pengawasan Bapedalda Bolmong
4	George Tanor	Kasubdin Perdagangan Disperindag Bolmong
5	Ineng Raupu	Pengusaha tambang desa Tanoyan
6	Dr. Hendry Palandeng	Public Health Lestari
7	Seryanto	Teknisi Lestari, Dinas Pertambangan dan Energi Bolmong
8	Iryanto	Dinas Pertambangan dan Energi Bolmong
9	Harun Manopo	Bapedalda Bolmong

Tabel Daftar Narasumber dan Instansi Asal

No.	Nama	Instansi Asal
1.	Gun Lapadengan SH	Kepala Dinas Pertambangan dan Energi Kab. Bolmong
2.	Dra. Rahmi Mokoginta	Kepala Dinas Perindutrian dan Perdagangan Kab Bolmong
3.	Dr. Hari Wahyudi	Kepala Sub Dinas P3L Dinkes Kab Bolmong
4.	I Wayan Gde	Kepala Bidang Amdal Bapedalda Kab Bolmong
5	Syamsudin Mokoginta	Kepala Dinas Kesehatan Kab Bolmong
6	Jamaludin	Kepala Sub Dinas Pertambangan Umum Dinas Pertambangan dan Energi Kab Bolmong
7	Hardi Mokodompit	Kepala Bapedalda Kab Bolmong
8	Urip Detu	Teknisi Lestari, Warga Tanoyan

Tabel Daftar Narasumber dan Instansi Asal

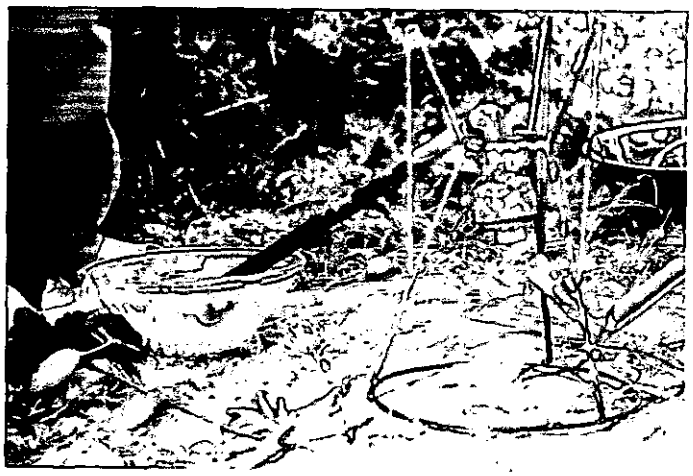
No.	Nama	Instansi Asal
1	Danso Ahyua	BPLH Sulut
2.	Dr. Hendry Palandeng	Public Health Lestari
3.	Jimmy Kawengian	Dinas Perindustrian dan Perdagangan Sulut
4.	Yani Rembet	Kepala Sub Dinas Perdagangan Dinas Perindustrian dan Perdagangan Sulut
5.	Ade Deyong	Penambang dari Desa Tatelu – Minahasa Utara
6.	Bobby Polii	Ketua Pusat Studi Lingkungan Universitas Sam Ratulangi
7.	Sonny	Kepala Sub Dinas Amdal BPLH Sulut
8.	Victor Malonda	Wakil Kepala Dinas Pertambangan dan Energi Sulut

Tabel Daftar Narasumber dan Instansi Asal

No.	Nama	Instansi Asal
1.	Ir. Victor Malonda	Wakil Kepala Dinas Pertambangan dan Energi Sulut
2.	Dr. Hendry Palandeng	Public Health Lestari
3.	Ade Deyong	Penambang dari Desa Tatelu – Minahasa Utara

Anggota Kelompok Binaan

No	Nama	Lokasi
01	Zainal Ansik	Talong
02	Rano	Talong
03	Igbal Delapanga	Lingkobungon
04	Muhammad Anwar	Lingkobungon
05	Jamal Mokobombang	Talong
06	Suharto Mokobombang	Talong
07	Arsyad Mokobombang	Talong
08	Dahlan Manggo	Rappe

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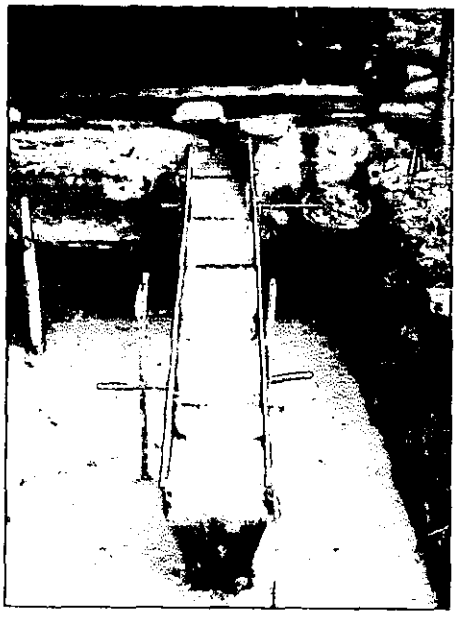

media informasi
pengelolaan
sumberdaya alam
yang transparan
dan berkelanjutan

LESTARI

Kolom Redaksi

Penanggung Jawab:
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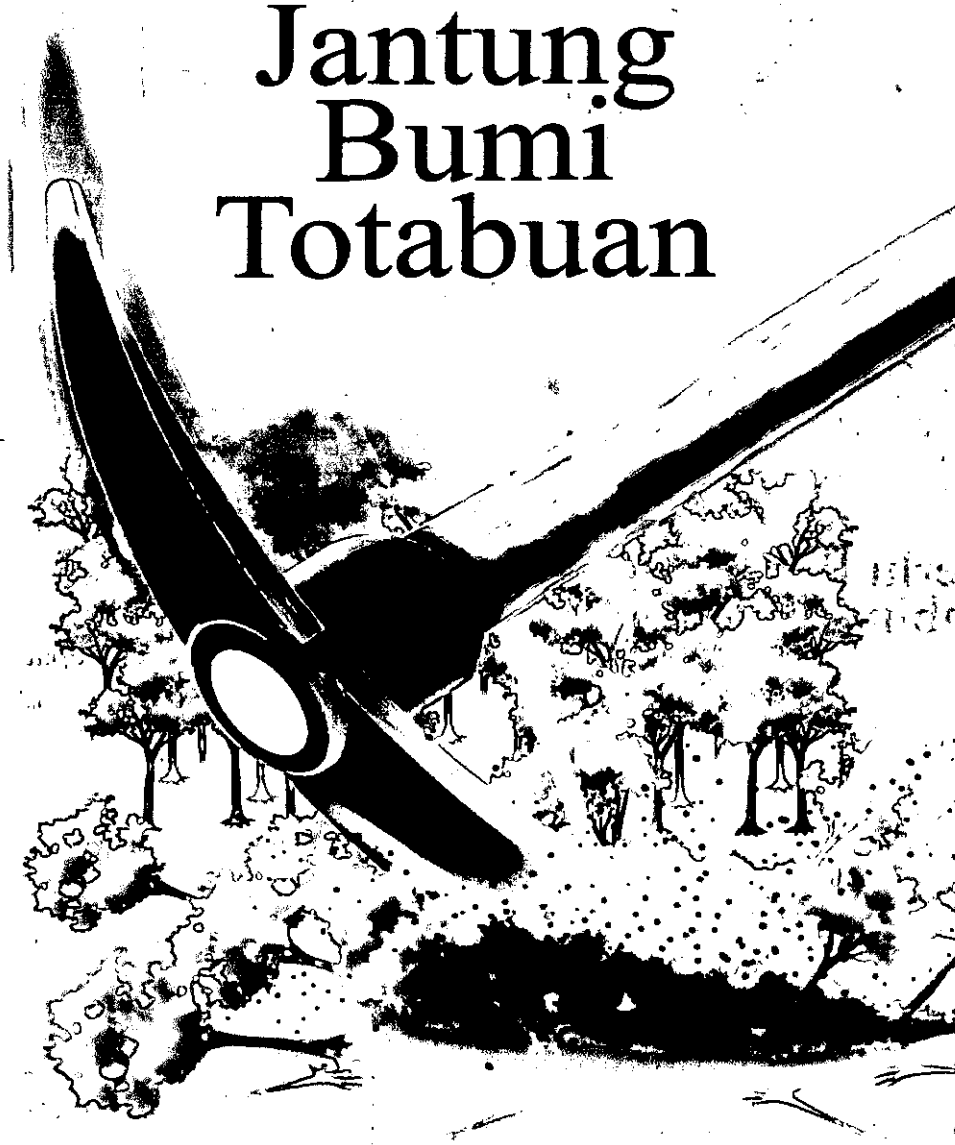
Manado Post ◦ SELASA, 31 Oktober 2006 ◦ 23

DITERBITKAN ATAS KERJASAMA MANADO POST ◦ YAYASAN LESTARI-WWF-GEF/UNDP

Tambang Di Kawasan Lindung
(Taman Nasional Bogani Nani Wartabone)

Menghujam Jantung Bumi Totabuan



Fokus

Buah Simalakama dari Kawasan Lindung

SEBUAH kawasan hutan dipilih menjadi daerah yang dilindungi karena memiliki fungsi penyangga kehidupan manusia dan atau tempat pengawetan aneka ragam tumbuhan dan satwa. Kebijakan perlindungan kawasan ini tersebar dalam sejumlah istilah, seperti cagar alam, suaka margasatwa, hutan lindung atau Taman Nasional.

Lewat kebijakan ini, Indonesia telah menetapkan seluas 55,2 juta hektar sebagai kawasan lindung dan untuk memastikan kawasan-kawasan tersebut menjalankan fungsi alamiinya, dihadirkan sejumlah perangkat hukum mulai dari hirarkhi tertinggi berbentuk Undang-undang, Peraturan Pemerintah, hingga keaturan yang mengikat secara lokal seperti Perda.

Dengan pemaknaan fungsi dan deretan aturan yang membentengi kawasan lindung, seharusnya daerah ini sulit dijamah atau di eksploitasi, apalagi dirusak. Tapi apa mau dikata. Kawasan-kawasan tersebut terus dilaporkan mengalami tekanan sangat berat oleh praktik pembalakan liar, kebakaran serta tumpang tindihnya peruntukan lahan perkebunan dan sejumlah hak pemanfaatan hutan. Bahkan, terbersit kabar akan dibebaskan sebahagian luasan hutan lindung untuk aktivitas pertambangan.

Bisa dibayangkan, kondisi hutan di Sulawesi Utara yang memang sudah tidak mencapai kuota 30 persen angka minimal untuk keseimbangan ekologi, kini harus dihantui ancaman yang lebih berat dari eksploitasi tambang emas. Sebab tidak terbantahkan lagi bahwa industri keruk ini punya daya rusak yang tinggi terhadap alam. Bukit hijau diratakan jadi tanah gersang, air sungai, sawah dan kolam terinfeksi logam berat. Padahal, tanpa kegiatan pertambangan pun ancaman yang dihadapi oleh kawasan lindung sudah begitu dahsyat. Setengah dari total luas 495 ribu hektar kawasan lindung di Sulut dilaporkan telah rusak parah. Sehingga tak bisa maksimal menjalankan fungsinya sebagai penyangga kehidupan manusia dalam mengatur tata air, mencegah banjir dan mengendalikan erosi. Ketika musim panas kita kekeringan, saat hujan kita kebanjiran.

Kondisi ini menjadi sangat dilematis saat potret Taman Nasional (TN) Bogani Nani Wartabone di Kabupaten Bolaang Mongondow dijadikan contoh persoalan. Kawasan lindung yang menjadi jantung konservasi hidrologi warga Totabuan, telah lama digerogoti kegiatan tambang rakyat. Kemilau emas sangat kuat menarik para petani meninggalkan cangkul dan sawahnya menjadi penambang. Catatan kantor Balai TN Bogani Nani Wartabone, paling sedikit 6 ribu penambang berburu emas di dalam kawasan. Wajar kalau dua pulahan polisi kehutanan tak mampu membendung serbuan para penambang. Bahkan terkesan ,merelakan' luasan 300 hektar kawasan lindung itu ,dicabik-cabik' menjadi gersang.

Namun, lepas dari semua ekses negatif yang ada, harus diakui bahwa keberadaan pertambangan inkonvensional tersebut telah menghadirkan lapangan kerja yang besar bagi masyarakat dan menghidupkan ekonomi lokal. Paling sedikit 50 persen penduduk di hampir setiap desa lingkar kawasan, hidup dari kegiatan yang tergolong illegal itu. Konon, prosentase yang cukup besar juga disumbangkan untuk PAD sektor pertambangan Pemkab Bolmong dari tambang inkonvensional. Mungkin faktor inilah yang membuat kegiatan merusak lingkungan itu terus dibiarkan. Karena menghidupi banyak pihak dalam pola hubungan saling menguntungkan, mulai dari penambang, pemodal, pedagang, preman, pemilik warung, hingga pejabat. Bahkan politisi ikut mengais keuntungan. Mereka berjanji akan berjuang agar pemerintah RI mau membebaskan luasan 350 hektar kawasan lindung tersebut menjadi Wilayah Pertambangan Rakyat.

Jelas ini masalah yang pelik. Oleh sebab itu keinginan warga Dumoga mendapat ijin menambang dalam kawasan lindung harus ditempatkan sebagai sebuah fenomena ekonomi informal yang lahir dari kondisi keterpinggiran eksistensi masyarakat memperoleh akses pemanfaatan sumberdaya alam. Dengan dukungan sistim saling menguntungkan berbagai pihak, maka pertimbangan dampak ekologis jadi urutan paling akhir. Memang sebuah simalakama. (MG)

Rencana Konversi 350 Ha TN-BNW

WPR Harus Menjamin Kelestarian Kawasan Lindung

BEBAN Taman Nasional Bogani Nani Wartabone (TNBNW) terus bertambah. Berkembangnya kegiatan *tambang hingga luasan sekitar 300 ha* diyakini banyak pihak menjadi salah satu 'agen pengubah' bentang alam dan kandungan ekologis (biodeversity) kawasan.

Tahun ini seiring makin tingginya intensitas pengeboran 'perut' TN-BNW, mencuat kebutuhan agar status penambang yang sementara berkegiatan saat ini dilegalkan saja. "Tujuannya agar kegiatan tambang bisa dikontrol dan tak terus merakan luasan kawasan lindung, di samping mungkin Pemda bisa menarik retribusi atas kegiatan ini," ujar J 'Abang' Sitinjak aktivis lingkungan di Bolmong.

Rencanaya sebagaimana yang telah terbahas di legislatif Bolmong, ada sekitar 350 hektar luas lahan yang masuk dalam kawasan konservasi TNBNW akan dikonversi menjadi Wilayah Pertambangan Rakyat (WPR) atau Pertambangan Skala Kecil (PSK), sebagaimana keinginan warga sekitar Kecamatan Dumoga.

Meski harus melalui tahapan proses yang cukup panjang, namun semangat ke arah melegalisasi seratusan hektar dijadikan WPR sangat kuat. Di luasan ini menyebar kawasan Pertambangan Emas Tanpa Ijin (PETI) di lokasi Beringin, BH, Cup-cup, Bibir Merah, Domato, Superbusa, Kaki Tiga, Moleo, Lembah Sunyi, dan Taruna. "Areal yang ingin dibebaskan ini masuk kawasan Dumoga Barat dan Utara," ujar Ramly Mamonto, Sekretaris Forum Komunikasi Peduli Masyarakat Dumoga (FKPMD).

Setelah menggelindingkan sejumlah aksi demo oleh Forum Komunikasi Peduli Masyarakat Dumoga (FKPMD) dan elemen masyarakat lainnya di era tahun 1990-an, DPRD dan Pemkab Bolsang Mongondow dalam waktu dekat menyampaikannya hasrat masyarakat Dumoga ke Jakarta. Meskipun proses pelepasan lahan dalam kawasan itu harus melalui tahapan hebat pergulatan di DPRD RI bersama-sama dengan Departemen Kehutanan RI karena harus berujung pada revisi sejumlah perangkat undang-undang (lihat diagram pada halaman 4).

Di balik detil substansi yang telah *tertata pada banyak aturan*, toh tak membuat warga serta-merta sependapat. Mereka berharap proteksi atas kawasan

Kegiatan tambang harus tetap dikontrol

foto: mody/lestari

lindung perlu memikirkan manfaat yang secara langsung bisa dirasakan oleh warga di sekitar. Walaupun bila dipahami lebih ilmiah lagi, tak terhitung manfaat yang akan diraup dari upaya melestarikan kekayaan ekologis yang ada di kawasan lindung ini.

"Kami tahu bahwa ini adalah kawasan lindung, ada aturan yang mengaturnya. Tapi harus juga dipikirkan bagaimana kesejahteraan masyarakat yang ada di sekitar kawasan taman nasional," ujar Asri Damopolii, warga Imandi, Kecamatan Dumoga Timur.

Persoalan perut masih dianggap sebagai alasan utama 'menyoal' aturan soal kawasan lindung. Warga menyorot kenyataan sepanjang 1986, sejak ramai-ramainya PETI dalam kawasan taman nasional telah dilakukan sejumlah operasi lapangan. Bahkan operasi Santiago yang dilakukan kala itu berhasil menurunkan penambang liar beserta peralatannya. Meski disusul dengan operasi selanjutnya, berikut menggelandang para penambang ini dengan proses hukum, hal itu tak membuat warga jera.

"Kenapa ini masih terjadi, karena ada persoalan perut di sana. Jangan sampai hanya karena taman nasional, warga Dumoga diusir dari sekitar wilayah taman nasional. Ini harus dipikirkan," kilah Awaluddin Umbohu, mahasiswa Universitas Dumoga Kotamobagu.

Kenyataannya masalah tak hanya berhenti pada persoalan pemenuhan perut semata. 20 tahun PETI bergejolak dalam kawasan taman nasional bukan tidak memberi imbas terhadap keanegaraganan hayati dalam kawasan taman nasional. Jusman Hunou, aktivis Perlindungan Alam Liar Sulawesi (PALS) mmbeber aktivitas PETI membawa dampak ikutan bagi rantai kehidupan taman nasional.

Selain memberi dampak pada siklus hidrologis atau tata guna air, juga memberi dampak besar terhadap tata air, alur ekologis siklus ekologis dalam kawasan. Ada ancaman yang muncul ketika terjadi alih fungsi dari kawasan konservasi menjadi kawasan tambang.

Hidupan liar, satwa endemik Sulawesi yang hidup dalam kawasan TNBNW seperti Anoa, Maleo dan Babirusa populasinya ikut menurun dan keseimbang ekosistem berubah. "Karenanya yang harus dipikirkan adalah mencari solusi bersama. Cari win-win solution. Warga bisa bertahan hidup, taman nasional berjalan berkesinambungan sesuai fungsinya," ujar Mamonta seraya menambahkan, "Selama hal ini tidak dilakukan, tidak dibebaskan lahan untuk aktivitas WPR atau PSK, aktivitas tambang liar dalam kawasan pasti akan berlanjut, makanya bila memang akan di-WPR-kan baiknya ini harus diikuti oleh jaminan semua pihak bahwa kelangsungan TN-BNW itu mutlak" ujar Mamonta.(rigp)

Pertimbangkan Keseimbangan Ekologi dan Ekonomi

Di mana-mana kebutuhan melestarikan kekayaan alam pasti akan berhadapan dengan keinginan untuk mendapatkan manfaat secara cepat bagi tingkat ekonomi warga lokal. Hal inipun merebak saat penambang liar merangsek di kawasan lindung Taman Nasional Bogani Nani Wartabone (TNBNW).

Terlepas dari adanya perjuangan untuk me-WPR-kan 350ha luasan saat ini, persoalan ekonomi warga harus tetap dikontrol agar seimbang dengan kebutuhan melanggengkan relung ekologi kawasan ini. Menurut Kepala Bagian Ekonomi Sekretariat Daerah Kabupaten Bolmong, Dwi Dharma, penerapan aturan hendaknya jangan terlalu kaku.

Harus dipikirkan kembali apakah masyarakat juga mendapatkan nilai lebih dari sebuah kawasan taman nasional ketika ditetapkan. Aturan ditetapkan untuk mempertahankan keseimbangan, fungsinya, yang perlu dilestarikan bukan hanya alamnya tetapi juga kelangsungan hidup manusia yang ada di sekitar kawasan.

Ketika masyarakat didesak memenuhi kebutuhan ekonomi, masyarakat akan cenderung mencari sumber daya alam yang instan untuk memenuhi kebutuhannya. Meski memang, sekarang telah terjadi perubahan kultur hutan itu sendiri karena adanya aktivitas-aktivitas dalam kawasan taman nasional.

Biasanya musim hujan menyimpan air dan musim panas mengirit air. Waktu banjir masyarakat Dumoga mengalami kerugian cukup besar. Areal pertanian hancur. Tapi kenapa masyarakat masih tetap memilih naik ke tambang meskipun telah ditegur banjir bandang? *"Perlu ada sosialisasi kepada masyarakat sekitar* sehingga baik kebutuhan ekonomi dan ekologi bisa berjalan bersama-sama. Jangan-jangan ketika dihitung justru aktivitas pertanian pendapatannya lebih besar dibanding menambang," tambahnya.

Ditambahkan Rudy personil TNBNW, perlu ebuah bentuk pengelolaan kolaboratif semua stakeholder yang berkepentingan dengan taman nasional. Sehingga pelestarian ekologi bisa jalan di samping ekonomi bisa dipenuhi. Ke depan pengelolaan taman nasional tidak sendiri-sendiri, harus dengan multi pihak yang diwadahi dengan model pengelolaan kolaboratif. "Siapa melakukan apa, siapa berperan sebagai apa, harus dipertegas kembali Sehingga masyarakat berseri dan taman nasional tetap lestari," harapnya. (rigp)

Kata Pakar

Perlu Regulasi dan Pembinaan Penambang

Dr Ir Daniel Limbong MSc
(Dosen FPIK Unsrat)

BAGAIMANA agar kegiatan tambang rakyat di Kawasan Hutan Lindung Taman Nasional Bogani Nani Wartabone bisa 'ditekan' dampaknya, dan tak mengancam kelangsungan kawasan lindung tersebut. Ada banyak hal yang perlu dilakukan dan diperhatikan terkait dengan 'kontroversi' kegiatan tambang yang rencananya bakal dilegalkan jadi WPR (Wilayah Pertambangan Rakyat) itu.

Berikut pandangan Dr Ir Daniel Limbong MSc dosen senior FPIK (Fakultas Perikanan dan Ilmu Kelautan) Unsrat.

"Kalau memang sulit direlokasi, maka kegiatan tambang rakyat di kawasan lindung saat ini perlu segera diregulasi. Dengan regulasi dan menjadi WPR akan lebih mudah mengontrol perkembangan kegiatan tambang sekaligus memberi peluang keberlanjutan dari taman nasional yang ada saat ini.

Harus disadari saat ini pelaku penambang tak sesuai lagi dengan persepsi masa lalu, kenyataannya saat ini kegiatan tambang umumnya dilakoni oleh mereka yang punya kemampuan. Dan juga bila direlokasi tak pas karena kegiatan tambang berbeda dengan kegiatan lain, karena jelas kandungan deposit emas suatu kawasan akan berbeda dengan kawasan lain.

Mungkin yang tepat adalah dilokalisir. Dikaitkan dengan rencana me-WPR-kan kawasan yang sementara dikelola saat ini, kami memberi point khusus agar instrumen aturan yang baru tak hanya dilegalkan begitu saja, akan tetapi perlu pembinaan yang dilakukan oleh instansi teknis terutama Distamben Bolmong dan Tingkat I.

Pembinaan yang mengarah pada kesadaran penambang agar mereka ikut aturan yang telah ditetapkan. Hal lain perlunya memfasilitasi para penambang agar mereka mendapat bantuan finansial untuk mengolah kegiatan tambang lebih baik lagi.

Pengalaman yang kami lihat selama ini, penambang rakyat kerap hanya dilihat sebagai 'musuh' dan objek semata, padahal berkaca pada lain negara seperti di Kanada ada kegiatan tambang di lokasi kawasan lindung yang kegiatannya diatur sedemikian rupa sehingga turut menambah 'income' bagi pengelolaan kawasan lindung tersebut.

Nah bagi kegiatan tambang di TN BNW baiknya dimulai dengan melakukan tahapan-tahapan menuju kegiatan tambang yang lestari, terutama menjawab kebutuhan atas pelestarian dan fungsi kawasan lindung sebagaimana yang telah diamanatkan oleh aturan. Dan tentu pula harus diikuti oleh mekanisme pengontrolan yang ketat oleh Pemerintah". (eqt)

Sosok

Srikandi Lingkungan Bolmong

Erni Tungkagi SP
(Warga Kinomaligan, Dumoga Barat)

POSTUR tubuhnya terbilang mungil, bicaranyapun agak pelan. Namun sosok Ibu satu anak ini punya semangat besar dikaitkan dengan persoalan lingkungan di Bolmong beberapa tahun terakhir.

Bila ditelisik satu demi *satu apa yang dikerjakan* perempuan kelahiran 11 Juli 1977 ini termasuk mencengangkan. Istri tercinta Bobby Damopolii ini

tetap meluangkan waktu yang banyak di sela kesibukan mengajar di Fakultas Pertanian Universitas Dumoga Kotamobagu (UDK). Di samping kesehariannya harus berada di balik perangkat siar TV Totabuan, dan masih banyak lagi aktivitas rutin yang digelutinya.

"Pokoknya ada banyak *aktivitas yang dilakukan. Tapi* kuncinya hanya membagi waktu. Kalau itu tidak dilakukan jangankan kerja, perhatian dan kasih sayang untuk keluarga pasti tidak cukup diberikan," tutur jebolan beberapa pelatihan yang berfokus gender ini.

Mama Iki termasuk aktif menggerakkan perempuan *dalam pelestarian* lingkungan. Erni aktif bersosialisasi di desa-desa yang berada di sekitar kawasan taman nasional. Jarak dan waktu tak jadi penghalang, masuk-keluar hutan sekalipun.

"Yang namanya tanggung jawab dalam kondisi apapun kita harus tetap memberi diri," tambah Ketua Badan Pendiri LSM Swara BoBai Totabuan ini. "Pernah waktu saya mengandung sekitar 9 bulan, harus memberikan sosialisasi tentang perempuan dan lingkungan di Motayangan dan Torsat. Ini berat, tapi harus dituaikan" ujarnya mengenang.

Memang masih ada hal yang mengganjal ketika *melihat potret kehidupan* warga yang tinggal di sekitar kawasan taman nasional. Tapal batas yang tidak jelas antara taman nasional dan daerah bercocok tanam.

"Saya mengerti betul bagaiman kultur masyarakat di sini. Tak mungkin mereka merusak hutan yang menjadi penyanggah kehidupannya. Coba dipertegas tata batasnya. Jangan-jangan mereka menambang masih masuk di lahan yang menjadi milikNya," harap jebolan Fakultas Pertanian Jurusan Budidaya Tanaman UDK 2003 silam ini.(rigp)

Suara dari Kampung

Jhonny Kotambunan
(Warga Tonom)

Cari Solusi yang Tepat

KEJAR-kejaran dengan aparat penegak hukum bukan hal baru bagi Penambang Emas Tanpa Ijin (PETI), termasuk di lokasi tambang Beringin ini. Tahun 1980-an hal ini pernah terjadi, hingga akhirnya mereka harus turun dari lokasi tambang.

Alasan ekonomi masih menjadi alasan kuat hingga mereka naik kembali ke areal pertambangan liar ini, meski mendapat perlawanan keras dari aparat.

Penambang emas liar dalam kawasan pernah

Antara hak alam dan hak manusia

foto: mody/lestari

direlokasi di Bolingongot, sebuah lokasi di luar kawasan taman nasional.

"Karena bijih emas yang tersedia sedikit di bending di tempat sebeluminya (taman nasional, red), jadinya penambang kembali. Minimal bijih emas yang tersedia musti sama, baru relokasi bisa dilakukan," tambah pria yang sudah belasan tahun menjadi penambang ini.

Menurutnya, bila memang penegakan hukum dilakukan pasti akan menimbulkan gesekan yang cukup tajam dengan masyarakat penambang. Karena di dalam kawasan bergelut 6000-an penambang. Dan mereka pasti mati-matian lokasi yang mereka anggap sumber kehidupannya. "Tidak mungkin setelah diusir dalam kawasan tanpa solusi yang tepat, persoalan akan berakhir. Harus diingat bahwa ada 6000-an penambang yang menggantungkan hidupnya di sana," tambahnya.

"Benar ini adalah kawasan lindung. Tapi harus dipikirkan, masyarakat juga butuh makan untuk kelangsungan hidupnya." Karenanya, pemerintah diharapkan bisa memperjuangkan lokasi PETI yang menyebar dalam kawasan, dikonversi menjadi WPR. Ketika dijadikan WPR ada hak dan kewajiban semua pihak yang musti diatur. Semisal, usai dilakukan eksplorasi lahan eks tambang harus direhabilitasi, dihutankan kembali, setelah lima tahun digunakan, penambang harus keluar kawasan.

"Dari pada terus menimbulkan kontroversi, lebih baik dijadikan WPR. Namun harus dipertegas apa hak *dan kewajiban semua penambang. Langgar kesepakatan* ada sanksinya," usulnya.(rigp)

Opini

Kawasan Lindung dan Pertambangan Rakyat

Oleh:

Dr Ir Jhon Tasirin MSc

Dosen Manajemen Hutan Tropis, Pasca Sarjana UNSRAT
Staf Ahli, BPLH Propinsi Sulut

DARI sudut pengembangan kesejahteraan masyarakat, kawasan konservasi lebih sering didera argumen yang beroposisi dibanding dengan gagasan yang mendukung. Hutan dilihat sebagai gudang yang memiliki kekayaan besar. Kekayaan tersebut bisa dilepas setiap saat dalam waktu singkat dengan pertimbangan nilai ekonomi yang dominan. Kekayaan tersebut bisa juga dinikmati secara perlahan-lahan, dalam waktu lama dengan nilai ekologi yang dominan. Dominasi nilai ekonomi dan ekologi memasang target pada tiga komponen utama yang dimiliki oleh hutan yakni kayu, air dan keanekaragaman hayati.

Kayu adalah produk hutan yang diincar untuk pertumbuhan ekonomi. Air telah lama diperlakukan sebagai barang bebas, yang datang sebagai curahan anugerah tanpa perlu pengelolaan. Keanekaragaman hayati adalah objek alam yang jarang mendapat perhatian pengelolaan di daerah karena wewenang pengelolaannya ada di pemerintah pusat. Padahal jika di tinjau dari ekonomi makro, pembangunan hutan merupakan investasi untuk sekaligus mendapatkan produk kayu, air, dan keanekaragaman hayati. Dalam payung pemikiran seperti ini kawasan berhutan diatur agar bisa melayani kepentingan perlindungan dan produksi.

Akar kontroversi pengelolaan hutan adalah agar hutan tersebut tetap hutan untuk mendapatkan nilai ekonomi semaksimal mungkin tapi di saat yang sama juga untuk menjaga kestabilan fungsi ekologi. Dengan melihat kenyataan bahwa hutan juga memiliki nilai ekonomi, sosial dan budaya bagi penduduk setempat yang pada umumnya miskin dan tertinggal maka pelarangan agar orang tidak masuk hutan semakin tersudut oleh argumen kemiskinan dan keterbelakangan ini.

Argumen oposan terhadap hutan sebagai kawasan konservasi semakin menjadi-jadi ketika tanah dimana hutan itu bertumbuh memiliki kandungan objek strategis berharga tinggi seperti emas, minyak dan gas. Para oposan ini datang dari (1) kelompok yang cerdas hukum dan birokrasi serta (2) kelompok eksekutor lapangan. Ada kelompok eksekutor yang independen terhadap kelompok pertama. Mereka adalah rakyat kebanyakan yang melakukan penambangan tanpa tameng hukum. Wilayah Pertambangan Rakyat (WPR) adalah produk hukum yang akan memberikan tameng hukum bagi penambang skala kecil agar usahanya legal dan bisa dilawasi.

Persoalannya adalah jika WPR tersebut harus dibangun di kawasan lindung, kawasan yang secara teliti sudah dipertimbangkan agar tidak diganggu. Setiap jengkal kawasan lindung (misalnya Taman Nasional Bogani Nani Wartabone, TNBNW) pada prinsipnya sedang memikul beban untuk menjamin (1) keseimbangan tata air di musim kemarau dan penghujan, (2) ketersediaan ruang untuk eksistensi keanekaan hayati, (3) kestabilan iklim lokal dan global. Dipihak lain, argumen pengurangan kemiskinan dan peningkatan kesejahteraan akan lebih cepat tercapai jika WPR ditetapkan.

Konversi kawasan lindung menjadi peruntukan yang lain pasti akan mengganggu keseimbangan ekologi yang diharapkan muncul. Diperlukan studi komprehesif yang mampu menghitung dan memberikan rekomendasi sejauh mana bentuk dan besaran perubahan yang tidak melebihi batas toleransi dari sistem ekologi yang tercakup.

Suatu sistem ekologi selalu memberikan reaksi terhadap perubahan. Ada reaksi yang menarik sistem itu agar kembali ke kondisi semula, terjadi pemulihan ekosistem. Ada reaksi yang menarik sistem itu agar pergantian arah menuju ke kematian atau ke bentuk ekosistem yang lain. Studi tersebut harus mampu mengidentifikasi ke mana suksesi ekosistem itu mengarah. Tekanan terhadap kawasan hutan sampai diluar batas toleransinya, akan mengakibatkan kawasan tersebut tidak bisa lagi melayani tidak hanya fungsi ekologinya tapi juga fungsi ekonominya.

Perlu dicamkan bahwa transaksi moneter tidak akan pernah bisa menyelesaikan konflik antara nilai ekonomi dan ekologi dari suatu kawasan berhutan. Apa lagi, implementasi pengelolaan berbasis ekologi dalam banyak kasus akan membatasi pengunaan sumber daya yang dianggap lebih menguntungkan. Jadi, pertimbangan kebijakan harus demi kesejahteraan jangka panjang. Produksi harus menguntungkan dan berkelanjutan tapi juga sistem produksinya harus menjamin bahwa semua proses dan fungsi yang ada pada hutan harus terus berlanjut. Konsep ini memberikan implikasi semua manfaat yang bisa digali dari hutan tidak boleh hilang di masa yang akan datang hanya karena manfaat sesaat baik itu datang dari pertambangan rakyat, penebangan kayu maupun pengembangan pertanian. (***)

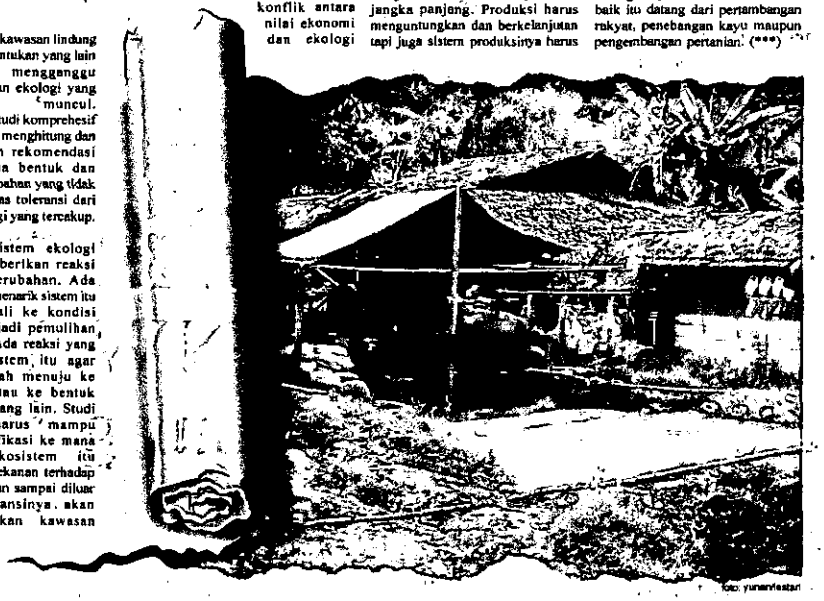


foto: yunanfestari

Dego-dego

Hutan Dijarah, Hutanku Malang

Oleh:

Ciquita Mendes M

Penulis : Warga biasa tinggal di Manado

ENTAH disengaja atau tidak, kerap kali kebutuhan pelestarian nilai-nilai ekologis harus berbenturan dengan pendapat perlunya memenuhi kebutuhan ekonomi warga dalam waktu yang cepat. Di banyak kesempatan seminar atau forum dialog, kalimat "Apalah artinya melestarikan kawasan lindung bilamana kesejahteraan rakyat di sekitar kawasan terabaikan" sering terlontar.

Mungkin ada unsur benarnya. Namun Saya sendiri cenderung melihat pandangan demikian terlalu di'dramatisir' dan terkesan klise. Kita justru kerap menjebakkan diri pada hitung-hitungan timpang dan terlalu menyederhanakan masalah.

Bila memang mau menghitung untung-rugi melestarikan keragaman hayati sebuah kawasan banding dengan langsung mengeksploitasi 'fisik' kawasan tersebut, hasil hitungan tetap mendudukan produk pelestarian alam jauh lebih besar manfaatnya ketimbang eksploitasi untuk kebutuhan jangka pendek.

Untuk ukuran tertentu banyak ilmuwan yang berani menyimpulkan nilai ekologis kerap tak terupiahkan alias tak terhitung nilainya. Ada kajian yang diturunkan sebuah lembaga tentang analisis valuasi ekonomi antara ekonomi tambang dan ekonomi hutan lindung menunjukkan bahwa ekonomi hutan lindung yang berkelanjutan bernilai dua kali lipat dari pada nilai ekonomi tambang yang hanya sementara.

Hutan lindung memberikan nilai manfaat ekonomi sebesar Rp. 265,5 milyar/tahun, sementara ekonomi tambang dan HPH hanya memberi manfaat sebesar Rp.121,3 milyar/tahun, atau hanya setengahnya.

Aplikasi yang lebih riil dari hitung-hitungan ini pernah diturunkan **TEMPO edisi 25 September 2006**, dalam Liputan Khusus tentang Dugaan Jarahan Pembalakan Kayu terkenal Adelin Lis. Angka kerugian negara akibat pembalakan yang diduga dilakukan oleh Adelin versi Kementerian Negara Lingkungan Hidup nilainya sekitar Rp227,02 Triliun.

Dari mana saja distribusi angka sebesar ini. Ada sedikitnya 8 komponen yang menjadi dasar perhitungan kerugian oleh Kementrian Negara LH. Kedelapan nilai itu adalah nilai kayu tegakkan hutan, umur pakai lahan dan hutan, pelepasan karbon, hilangnya unsur hara, pengendalian erosi dan limpasan, fungsi pengurai limbah, fungsi penampungan air dan pengaturan tata air.

Kedelapan komponen ini memiliki nilai masing-masing dan setelah dikonversi didapat hasil Rp227,02 Triliun. Nilai ini berpeluang meningkat tergantung sifat kawasan yang akan dikorbankan. Untuk kawasan lindung seperti Taman Nasional Bogani Nani Wartabone yang memiliki keragaman hayati komponen hitungan akan lebih banyak dan tentu saja nilai rupiah akan jauh lebih tinggi lagi.

Bila kita mau menghitung sejenak berapa potensi ekonomi yang dikandung keragaman hayati TN BNW nilainya dipastikan akan sangat 'wah'. Dari segi ekologis, kawasan Taman Nasional Bogani Nani Wartabone memiliki karakteristik ekologis perwakilan Wilayah Wallacea dengan potensi keanekaragaman hayati yang tinggi. Terdapat empat tipe ekosistem yang menonjol, yaitu hutan sekunder, hutan hujan dataran rendah, hutan hujan pegunungan dan hutan lumut.

Potensi keanekaragaman jenis tumbuhan di dalam kawasan Taman Nasional Bogani Nani Wartabone terdiri dari 400 jenis pohon, 120 jenis epifit, dan 49 jenis paku-pakuan. Demikian halnya dengan potensi keanekaragaman jenis satwa di dalam kawasan Taman Nasional Bogani Nani Wartabone mengoleksi 24 jenis mamalia, 11 jenis reptilia, 2 jenis amphibi, 64 jenis aves, 36 jenis kupu-kupu, 200 jenis kumbang dan 19 jenis ikan air tawar (Sumber Balai TN-BNW).

Dikaitkan dengan rencana 'melokalisir' tiga-ratusan ha lahan di kawasan lindung tersebut dengan tujuan kegiatan WPR (Wilayah Pertambangan Rakyat), sejogyanya rancangan ini lahir atas dasar untuk tetap melestarikan kawasan yang dilindungi dan tak hanya berpijak atas desakan memenuhi tuntutan ekonomi warga lokal.

Hutan yang terpelihara akan menyumbang manfaat yang sangat besar dan bisa meningkatkan kesejahteraan dan perekonomian warga secara keseluruhan.(***)

foto: modyfestari

Apa Itu Kawasan Lindung?

TASI

KALI ini TASI ingin bagi pengetahuan sejumlah istilah tentang pelestarian alam. Sebab banyak kali masalah yang muncul hanya karena tidak paham arti dari nama sebutan sebuah kawasan yang dilindungi.

Kawasan Lindung adalah sebuah daerah berbentuk daratan (misalnya Hutan, Bukit , Gunung) dan atau perairan (Laut, Danau, Sungai) yang secara alami punya peran sebagai penyangga kehidupan manusia dan tempat hidup alami anekaragam tumbuhan dan hewan

Mengapa dilindungi ? Sebab kalau kawasan tersebut rusak, maka hubungan antara alam dan lingkungan jadi tidak seimbang. Contohnya, kita akan sulit dapat air saat musim panas, sebaliknya air akan melimpah alias banjir ketika musim hujan tiba.

Karena begitu penting peran kawasan lindung, maka secara internasional diatur peruntukannya berdasarkan fungsi-fungsi alaminya. *Pertama*, Kawasan Suaka Alam yang dibagi dalam 2 fungsi, sebagai Cagar Alam dan Suaka Margasatwa.

Kedua, Kawasan Pelestarian Alam yang di bagi dalam 3 fungsi, sebagai Taman Nasional, Taman Hutan Raya dan Taman Wisata Alam. Ketiga, hutan lindung.

Nama Kawasan	Fungsi Lindung	Pemanfatasannya
1. Cagar Alam	Kondisi alam yang khas untuk pengaweta keanekaragaman tumbuhan dan satwa	Kepentingan Penelitian, Pendidikan dan Budidaya
2. Suaka Magasatwa	Tempat hidup jenis satwa endemik (khas)	Penelitian, Pendidikan, Wisata Terbatas dan Budidaya
3. Taman Nasional	Memiliki ekosistem asli	Penelitian, Pendidikan, Pariwisata, budidaya dan pemanfaatan Terbatas
4. Taman Hutan Raya	Tempat koleksi tumbuhan dan satwa	Penelitian, Pendidikan, Pariwisata, budidaya dan pemanfaatan Terbatas
5. Taman Wisata Alam	Sebagai sajian wisata	Penelitian, Pendidikan, Pariwisata, budidaya dan pemanfaatan Terbatas
6. Hutan Lindung		Tak ada kegiatan yang diperbolehkan

Diktip dari berbagai sumber. (MG)

Jelajah LESTARI
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TN-BNW DARI WAKTU KE WAKTU

Taman Nasional Bogani Nani Wartabone merupakan gabungan tiga kawasan suaka alam

- Suaka Margasatwa Dumoga seluas sekitar 93.500ha (SK Mentan No.746/Kptsn/Um/8/1979)
- Suaka Margasatwa Bone sekitar 110.000ha di Kabupaten Gorontalo (SK Mentan No 746/Kpts/Um/12/1979)
- Serta cagar alam Bulawa seluas 75.200ha (SK Mentan No 438/Kptsn/Um/6/1980).
- Berdasarkan pernyataan Menteri Pertanian No 736/Mentan/X/1982 pada kongres Taman Nasional se-Dunia III di Bali 1982, ketiga kawasan suaka alam ini dinyatakan sebagai Taman Nasional dengan nama TN Dumoga Bone dengan luas 300.000ha
- Pada 1991 sesuai SK Menteri Kehutanan No *731/Kptsn-II/91 status kawasan tersebut* dikukuhkan dengan luas 287.115 ha dan 170.115 ha terletak di Kabupaten Bone Bolango Provinsi Gorontalo.
- Sesuai Keputusan Menteri Kehutanan No 1068/Kpts-II/1992 ditetapkan namanya menjadi TN Bogani Nani Wartabone

Sumber : Tesis Ester Lintong, Resolusi Konflik Pertambangan di T N B Nani Wartabone, 2005)

Jenis gangguan di TNBNW

No	Jenis Gangguan	Jumlah
1	Pencurian hasil hutan (rotan, kayu bakar)	302 M^3
2	*Penebangan liar*	*544 Ha (333.64 M^3)*
3	PETI (Penambangan emas tanpa ijin)	628.4 Ha
4	Perburuan liar	69 ekor
5	Perladangan liar	4,324.20 Ha

Sumber: Laporan Tahunan TNBNW, 2005.

Luas zonasi TNBNW usulan hasil revisi Tahun 2006

No	Zona	Luas (ha)	Luas (%)
1	Zona inti	184.890	64
2	Zona rimba	75.396	26
3	Zona Pemanfaatan	14.794	5
4	Zona Rehabilitasi	12.035	4
	Jumlah	287.115	100

Sumber: Analisa studio, 2006

Pertambangan di Kawasan TN BNW

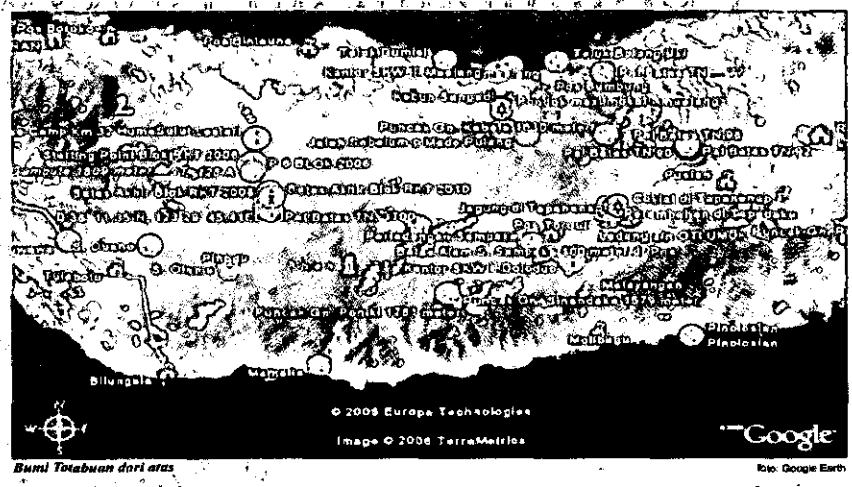
- Sedikitnya 571 lubang liar
- 341 lubang yang aktif beroperasi
- Dari luas kawasan TNBNW 287.115 ha terambah sebanyak 306 ha
- Sekitar 7 ribu orang yang hilir-mudik masuk ke luar kawasan

Kegiatan PETI dalam Kawasan TN BNW

	Lokasi	Jumlah Lubang	Jumlah Penambang
Kec. Dumoga Barat Desa Toraut	Maleo	33	200
	Beringin	17	100
	Kaki Tiga	4	200
	Karamba	3	300
	Sari Rasa	5	400
	Tahan Sendiri	...	...
	Carlota	3	...
	Teluk	12	600
	Aspal	8	750
	Tripleks	*4*	...
	Super Busa Lama	8	300
	Super Busa Baru	8	...
	Kambuna	8	600
	Manguni	5	750
	Domato Asal Yakin	4	...
	BH	3	150
	Bulu Tui	4	400
	Edi Sante	3	900
	Maleo Cor	5	...
	Bute	...	400
	Panta Putih	5	300
	Tai Ade	...	100
	Bibir Merah	...	100
	Antara	...	100
Kec. Dumoga Timur Desa Tenom	Mulut Singa	...	100
	Rebutan Desember	3	...
	Beringin Rubuh	4	...
	Asal Yakin	3	...
	Ilatat I	3	...
	Ilatat II	3	...
	Pangi Basar	2	...

Ket : .... Belum Ada Data

Sumber : Tesis Ester Lintong, Resolusi Konflik Pertambangan di T N B Nani Wartabone, 2005



Buni Totabuan dari atas

Foto: Google Earth

TN BNW Tinggal Dilindung Sejarah

DI antara banyak tantangan dalam melestarikan kelangsungan sebuah kawasan lindung, kegiatan tambang (rakyat) termasuk salah satu di antara beberapa persoalan yang mengemuka. Bahkan kerap kali terjadi, status kawasan yang dilindungi baru ditetapkan setelah *kawasan terlanjur 'ditambang' terlebih* dahulu.

Untungnya catatan sejarah memihak kawasan lindung TN-BNW (Taman Nasional Bogani Nani Wartabone). Kronologis perlindungan atas kawasan ini jauh sebelum ada kegiatan tambang yang baru merambah sekitar 1986. Awalnya taman Nasional Bogani Nani Wartabone merupakan gabungan dari tiga kawasan suaka alam yaitu : Suaka Margasatwa Dumoga seluas sekitar 93.500ha (SK Mentan No.746/Kptsn/Um/8/1979), suaka Margasatwa Bone sekitar 110.000ha di Kabupaten Gorontalo (SK Mentan No 746/ *Kpts/Um/12/1979), serta cagar alam* Bulawa seluas 75.200ha (SK Mentan No 438/Kptsn/Um/6/1980).

Selanjutnya berdasarkan pernyataan Menteri Pertanian No 736/Mentan/X/1982 pada kongres Taman Nasional se-Dunia III di Bali 1982, ketiga kawasan suaka alam ini dinyatakan sebagai Taman Nasional dengan nama TN Dumoga Bone dengan luas 300.000ha (E Lintong, Resolusi Konflik Pertambangan di Taman Nasional Bogani Nani Wartabone, 2005).

Perkembangan lanjutan menyebut pada 1991 sesuai SK Menteri Kehutanan No 731/Kptsn-II/91 status kawasan tersebut dikukuhkan dengan luas 287.115 ha dan 170.115 ha terletak di Kabupaten Bone Bolango Provinsi Gorontalo. Dan sesuai Keputusan Menteri Kehutanan No 1068/ Kpts-II/1992 ditetapkan namanya menjadi TN Bogani Nani Wartabone hingga saat ini.(cqt)

foto:mody/lestari

Jadi problem pelestarian kawasan lindung

PETI, 1 dari 5 Agen Gangguan

HINGGA paruh akhir 2006 sebagaimana data pihak Balai TN-BNW terdata ada sedikitnya 5 agen yang berpotensi menjadi penggangu kesinambungan kawasan lindung paling utama di Bolmong ini. Ironinya tak hanya soal PETI (Pertambangan Emas Tanpa Ijin), kenyataannya masih ada 4 agen perusak yang sangat potensial lainnya.

Di luar PETI masih ada kegiatan *Pencurian hasil hutan seperti rotan*, kayu bakar. Juga kegiatan illegal loging atau penebangan liar yang sesuai data paling baru (2006) luasan rusak menyentuh angka 544 Ha atau sekitar 333.64M3. Tingginya kekayaan stawa di kawasan lindung *memicu pesatnya kegiatan* perburuan liar.

Kegiatan tak selaras lainnya disumbang oleh aktivitas perladangan liar dengan akumulasi luasan 4,324,20 Ha. Deretan angka tersebut di atas sangat berpeluang besar mengalami peningkatan bilamana tak dilakukan upaya untuk menekan penggerusan wilayah kawasan lindung oleh instansi dan elemen terkait.(cqt)

PETI Merambah TN-BNW
Kubangan Sari Rasa Hingga Rebutan Desember

DALAM luasan sekitar 300-an ha saat ini di kawasan Lindung *Taman Nasional Bogani Nani* Wartabone pada 2003 saja, telah ada sekitar 160 kubangan lubang yang dibuat penambang untuk mendapatkan rep (batuan).

Tiga tahun kemudian atau pada 2006 ini, data lanjutan dari pihak TNBNW jumlah lubang berkembang pesat.

Terdata ada sedikitnya 571 lubang liar di mana 341 lubang *yang aktif beroperasi. Dari luas* kawasan TNBNW saat ini 287.115 ha terambah sebanyak 306 ha. Akibat kegiatan yang sedemikian aktif, terdata sekitar 7 ribu orang hilir-mudik masuk ke luar kawasan ini.

Lubang atau lokasi penggalian rep ini punya banyak nama yang cukup menarik didengar. Misalnya untuk PETI di Kecamatan Dumoga Barat ada sebutan Sari rasa, *Carlota, Domato Asal Yakin*, Tahan Sendiri dan masih banyak lagi. Sementara di Dumoga Timur ada lubang dengan sebutan Mulut Singa, Beringin Rubuh hingga Rebutan Desember. Sebagus apapun namanya yang pasti tak memberi jaminan amannya kegiatan ini.(cqt)

Sekarat Walau Dibenteng 8 Aturan

SEJAK ditetapkan pada 1991 sesuai SK Menteri Kehutanan No 731/Kptsn-II/91 status kawasan tersebut dikukuhkan dengan luas 287.115 ha, tercatat ada sedikitnya 8 perangkat aturan yang membentengi Taman Nasional Bogani Nani Wartabone (TNBNW).

Kenyataannya hingga akhir 2006, kondisi kawasan lindung ini tetap sekarat belum aman dari terjangan kegiatan yang tak lestari seperti illegal loging maupun pertambangan emas liar. Delapan perangkat aturan yang memayungi keabsahan TNBNW 'merekomendasikan' perlunya perlindungan hukum atas berbagai komponen alamiah yang dikandung oleh kawasan. (cqt)

foto:yunan/lestari

Menggali di antara peraturan

Kedelapan piranti aturan yaitu :

- UU Nomor 41 Tahun 1999 tentang Kehutanan
- UU *Nomor 5 Tahun* 1990 tentang Konservasi SDA dan Ekosistem
- Peraturan Pemerintah Nomor 68 Tahun 1998 tentang Pengelolaan Suaka Alam dan Pelestarian
- PP Nomor 45 Tahun 2004 tentang Perlindungan Hutan
- PP Nomor 7 Tahun 1999 tentang Pengawetan Jenis Tumbuhan dan Satwa
- PP Nomor 8 Tahun 1999 tentang *Pemanfaatan Jenis* Tumbuhan dan Satwa
- Peraturan Menteri Kehutanan Nomor 19 tahun 2004 tentang Pengelolaan Kolaborasi.
- Perda Nomor 10 Tahun 2005 *tentang Retribusi Masuk* kawasan TN-BNW

Sumber: Balai TNBNW, 2006

Palakat

foto:yunan/lestari

Penggunaan Kawasan Lindung Harus Lewat Ijin Pemerintah RI

UU No. 5 Tahun 1990 Tentang Konservasi Sumberdaya Alam Hayati dan Ekosistemnya menegaskan pada Pasal 34, bahwa Pengelolaan kawasan pelestarian alam yaitu Taman Nasional, Taman Hutan Rakyat dan Taman Wisata Alam adalah kewenangan Pemerintah RI (Pusat).

Ijin Prinsip penggunaan kawasan lindung dikeluarkan setelah ada rekomendasi hasil penelitian terpadu dan mendapat persetujuan DPR RI. (Keputusan Menhut No. 410 Tahun 2006).

Yang dimaksud Penelitian Terpadu adalah sebuah rangkaian proses yang diawali oleh :

1. **Kajian Internal Departemen Kehutanan**
2. **Penelitian oleh Lembaga Pemerintah**
3. **Pengkajian dan Penyampaian hasil ke DPR RI**
4. **DPR RI mengeluarkan Rekomendasi**
5. **Keluar ketetapan melalui keputusan Pemerintah.**

Dikutip dari berbagai sumber. (MG)

LESTARI
Multi Media Machine

Tanggal : 16
Bulan : September
Tahun : 2006
Nomor Edisi : 1672/Tahun VI
Halaman : 20 (Bolaang Mongondow)

☐ Manado Post ■ Komentar ☐ Tribun Sulut ☐ Metro ☐ Posko ☐ Swara Kita ☐ Kompas ☐ Media Indonesia

KOMENTAR
Sabtu, 16 September 2006

Meski hanya pinjam pakai

WPR di Dumoga Bisa Terealisasi

Kotamobagu, *KOMENTAR*

Aspirasi warga Dumoga Raya agar bisa diberi sekitar 250 hektar areal taman Nasional Dumoga Nani Wartabone guna dijadikan Wilayah Pertambangan Rakyat (WPR) tampaknya bisa terealisai. Meskipun tak dilepas untuk selamanya, namun ada peluang pemerintah pusat meminjamkannya dalam jangka waktu tertentu.

Semuanya akan sangat tergantung pada keputusan Departemen Kehutanan RI , yang tentu saja perlu disokong sepenuhnya oleh Dinas Kehutanan Bolmong serta pengelolah taman nasional tadi. "Dengan dibantu pengelola taman nasional dan Dishutbun Bolmong, kami melihat ada peluang Dephut untuk memberi izin pembukaan WPR di Taman Nasional Dumoga Nani Wartabone. Hanya saja peluang yang terbuka itu hanya untuk peminjaman dalam jangka waktu tertentu, dalam arti tidak bisa dijadikan WPR untuk selamanya," kata Yani Tuuk, tokoh pemuda dari Dumoga yang juga legislator Bolmong dari F-PDIP.

Karena peluang tersebut, apalagi Pemkab dan Dekab Bolmong sendiri telah menyatakan dukungannya atas perjuangan warga Dumoga, Tuuk mengaku ia dan sejumlah perwakilan warga Dumoga berencana menyampaikan langsung permohonan ke Dephut. Tentu saja setelah ada rekomendasi dari Dekab, Pemkab dan pengelola taman nasional. "Bila tidak ada aral melintang, bulan depan warga Dumoga yang begitu mendambakan pembukaan WPR legal di wilayahnya, akan berangkat ke Jakarta untuk maksud tersebut," imbuhnya.

Tuuk pun berharap kepada instansi terkait, agar bisa memahami betapa pentingnya WPR ini terhadap kelangsungan hidup warga. Sebab sebagian warga Dumoga bersatu yang meliputi kecamatan Dumoga Utara, Barat dan Timur, memang menggantungkan hidup mereka pada pertambangan emas tradisional. Dia pun menjamin, situasi kamtibmas di sana akan tetap kondusif bila warga bisa tenang mencari nafkah. Tidak selalu merasa dikejar-kejar. (tus)

☐ Kantor Balai Taman Nasional Bogani Nani Wartabone.

Tribun Sulut
SELASA, 26 SEPTEMBER 2006

350 Hektar Areal TNBNW Dijadikan WPR

Toengkagie: Sama-sama Berjuang ke Pusat

MANADO—Balai Taman Nasional Bogani Nani Wartabone (BTNBNW) tak bisa mengambil keputusan seputar rencana pembebasan lahan kawasan taman nasional. Pembebasan lahan sebesar 350 hektar untuk dijadikan wilayah pertambangan rakyat harus menanti keputusan pusat.

Hal tersebut dikatakan Kepala BTNBNW Ir Arief Toengkagie kepada wartawan. Diakuinya, sekarang ini ada usulan untuk menjadikan 350 kawasan taman nasional sebagai wilayah pertambangan. Hanya saja hal tersebut tidak secepat membalikkan telapak tangan. Apalagi, status kawasan TNBNW adalah kawasan taman nasional, kawasan konservasi. "Artinya, harus melalui proses bila ingin menjadikan areal pertambangan. Ingat statusnya adalah taman nasional, tak bisa ada aktivitas seperti itu," ujarnya.

Prosesnya tambah Toengkagie, harus melalui persetujuan pemerintah pusat, entah Departemen Kehutanan ataupun mekanisme pembahasan DPR-RI. "Kalau memang itu diiyakan, dengan sendirinya 350 hektar dalam kawasan itu diberikan," jelasnya.

Karenanya harapnya, stakeholder yang berkepentingan terhadap hal tersebut hendaknya sama-sama mengusulkannya ke Departemen Kehutanan. "Kita sama-sama berharap agar itu bisa dikabulkan," ujarnya.

Mantan Kepala Balai Taman Nasional Bunaken ini menjelaskan, akan banyak dampak yang muncul manakala aktivitas pertambangan dalam kawasan tidak dihentikan.

"Areal persawahan akan semakin sulit mendapatkan air. Karena TNBNW merupakan penyedia air. Kalau dirusak petani juga akan mengalami kesulitan," ujarnya. "Kalau sekarang mungkin belum terasa. Tapi mungkin nanti."(rel)

Tribun Sulut
JUMAT, 22 SEPTEMBER 2006

Tambang Liar, Kanker Ganas TNBNW

LESTARI
Multi Media Machine

Tanggal :
Bulan :
Tahun :
Nomor Edisi :
Halaman :

Manado Post ☐ Komentar ☐ Tribun Sulut ☐ Metro ☐ Posko ☐ Swara Kita ☐ Kompas ☐ Media Indonesia

DUKUNGAN Pemerintah Kabupaten Bolaang Mongondow dan Pemerintah Propinsi mengamankan kawasan Taman Nasional Bogani Nani Wartabone (TNBNW) masih dibutuhkan. Pertambangan Emas Tanpa Izin (PETI) tak ubahnya sebuah kanker ganas yang siap menghisap habis potensi Sumber Daya Alam yang ada di kawasan hijau itu.

Tak hanya itu, aktivitas tambang rakyat lainnya yang berada di dekat TNBNW juga mulai menekan luas kawasan itu. Sebut saja lokasi tambang rakyat Tanoyan, Mintu, Dumoga dan beberapa areal lainnya.

Ambil misal tambang rakyat yang ada di Tanoyan Selatan, Kecamatan Lolayan. Pun lahan tambang yang digunakan sekarang ini masih milik pribadi, namun ancaman penebangan liar menyentuh areal kawasan taman nasional. Kebanyakan balok kayu yang digunakan sebagai tiang penyanggah lubang tambang diambil dari hutan yang bersinggungan langsung dengan lokasi hutan konservasi ini. Dikuatirkan bila aktivitas seperti ini masih terus terjadi, penekanan terhadap luas kawasan TNBNW sekarang ini sebesar 287.115 hektar semakin terbuka lebar.

Tercatat, aktivitas tambang dalam kawasan ini menyentul 571 lubang liar. Yang masih aktif beroperasi sebanyak 341 lubang. Dari luas kawasan itu, sebanyak 306 hektar yang telah dirambah. Tercatat pula sebayak 7 ribu orang yang keluar masuk kawasan dalam sebuah aktivitas pertambangan liar.

Dari sisi ekonomi, masyarakat yang melakukan aktivitas *tambang hanya* dalam waktu sekejab bisa merasakan nikmatnya emas tambangan. Mendulang dolar tergolong cepat. Karena hanya beberapa jam sudah bisa menghasilkan uang.

Tapi yang harus diingat bahwa, aktivas kenikmatan sesaat ini bisa menjadi bumerang. Jangankan krisis air, banjir bisa *menjadi ancaman* berulang-ulang bila hal ini masih dibiarkan.

Tak hanya itu, belakangan ini pun masih menjadi pergulatan yang cukup hebat, sedikitnya ada sekitar 350 hektar lahan yang diusulkan menjadi areal tambang rakyat. Pikirkan masak-masak sebelum melangkah. Jangan sampai bahaya banjir yang lebih dahsyat dibanding sebelumnya siap meluluhlantakkan pelataran Totabuan. Tegakan pohon dalam kawasan TNBNW bisa berpindah tempat di atas rumah penduduk.(*)

Tribun Sulut
JUMAT, 22 SEPTEMBER 2006

Profil TNBNW

KAWASAN Taman Nasional Bogani Nani Wartabone yang ditetapkan sesuai Surat Keputusan Menteri Kehutanan No. 1068/Kpts-II/92 tanggal 18 Nopember 1992 seluas 287.115 hektar, sebelumnya dikenal dengan nama Taman Nasional Bumoga Bone.

Perubahan nama ini merupakan salah satu upaya untuk menghormati pahlawan di Sulawesi Utara. Dengan penggunaan nama pahlawan ini diharapkan secara psikologis dapat menggugah masyarakat setempat untuk turut berpartisipasi aktif dalam menjaga kelestariannya.

Taman Nasional Bogani Nani Wartabone terletak di antara Lembah Dumoga Kabupaten Bolaang Mongondow sampai Lembah Bone Kabupaten Gorontalo, Sulawesi Utara.

Sumberdaya alam hayati taman nasional tersebut bukan saja merupakan aset bagi pembangunan daerah, tetapi bersifat nasional bahkan internasional. Hal ini dibuktikan bahwa kawasan tersebut merupakan peralihan antara Zona Malaysia dan Australia yang dikenal dengan "Wallacca Area". Dengan demikian banyak dijumpai karakteristik dan keunikan jenis tumbuhan dan satwa beserta ekosistemnya. Kecuali itu, kawasan taman nasional sesuai dengan lokasi dan topografinya berfungsi sebagai sumber air dan daerah tangkapan air bagi beberapa bendungan seperti Toraut dan Kosinggolan. Beberapa jenis satwa khas dan endemik yang ada antara lain maleo, anoa dan babirusa.

Taman Nasional Bogani Nani Wartabone merupakan rangkaian pegunungan dari ketinggian 50 - 1.900 m dpl, membentang dari Barat ke Timur dan dikelilingi oleh lembah-lembah yang sempit dan lereng bukit yang terjal. Puncak gunung yang tinggi antara lain Gunung Kabila (1.735 m), Gunung Padang (1.300 m) di Dumoga dan Gunung Gambuta (1.954 m), Gunung Ali (1.945 m) serta Gunung Damar di Bone.

Jenis tanahnya sebagian besar adalah Latosol. Batuan induk berasal dari gunung api dan gunung kapur, pada umumnya lapisan tanah atas makin ke Barat makin tipis.

Pada umumnya curah hujan di kawasan ini cukup tinggi dan merata. Antara bulan Nopember dan April bertiup angin Utara yang membawa hujan, sedangkan antara bulan April dan Nopember bertiup angin Selatan yang kering, sehingga kawasan ini mengalami musim kemarau.(*)

Tribun Sulut
JUMAT, 22 SEPTEMBER 2006

Pemerintah Tawarkan Solusi

AKTIFITAS PETI dalam kawasan diakui TNBNW sebagai ancaman yang cukup serius untuk kelangsungan habitat kawasan dan di luar kawasan. Di sisi ekonomi memberikan keuntungan bagi penambang. Sedangkan di sisi ekologis menyebabkan perubahan bentang alam, tata guna air terganggu, pencemaran tanah, air dan udara.

"Ini ancaman yang bisa saja terjadi dengan adanya aktivitas pertambangan dalam kawasan," ujar Kepala Balai Taman Nasional Bogani Nani Wartabone Ir Arief Toengkagie.

TNBNW sendiri memberikan tiga alternatif dalam mengatasi persoalan dalam kawasan itu. Mulai dari penegakan hukum, dilakukan operasi aparat, enclave sementara. Pun langkah ini tak bisa dilakukan karena bersinggungan dengan aturan. Langah terakhir adalah melakukan relokasi PETI dan menjadi areal baru yang bisa memberikan kesejahteraan lebih. Pun langkah terakhir ini masih dibarengi dengan langkah identifikasi lokasi yang bisa memberikan kesejahteraan lebih bagi penambang dalam kawasan TNBNW.

"Yang harus dilakukan juga adalah bagaimana melakukan kegiatan rehabilitasi bila rencana relokasi PETI dilakukan," ujarnya. "Krisis air memang menjadi ancaman. Karena air banyak yang masuk dan keluar dari lubang hasil pertambangan."(*)

Tribun Sulut
JUMAT, 22 SEPTEMBER 2006

Keanekaragaman Hayati Flora dan Fauna

DENGAN ketinggian yang bervariasi antara 50 - 2.000 m dpl. kawasan ini memiliki beberapa tipe hutan. Lebih dari 90% kawasan taman nasional tertutup oleh hutan primer.

Sesuai dengan hasil ekspedisi Linnaeus I (1991), di dalam kawasan taman nasional terdapat 216 jenis dari suku tumbuhan tinggi, 120 jenis paku-pakuan dan 22 jenis suku lumut. Selain itu dijumpai adanya 24 jenis anggrek (ekspedisi Putri Anggrek I Kabila, 1992). Hal tersebut merupakan tambahan dari jenis yang telah diketahui beberapa tahun lalu yaitu lebih kurang 250 jenis tumbuhan.

Kawasan ini juga memiliki beberapa satwa khas Sulawesi. Di antaranya mamalia, anoa dataran rendah (Kubalus depscicornnis), anoa dataran tinggi (Babalus quarlesi), tangkasi (Tarsius Spectrum), yakis (Macaca nigra-nigra, Macaca nigrescens). Sedang reftil, yaitu ular natnia (Python molorus, Python reticularus). Jenis amfibia, yaitu katak darat (Bufo celebensis), katak pohon (Phacophorus monticola). Jenis ayes, yaitu malco (Macroephalon maleo), dan rangkong Sulawesi (Tyticereos cassidix).(*)

Potensi Wisata Alam

1. Di Tumokang Kosinggolan : keindahan alam, sumber air panas, keunikan alam dan atraksi (berkemah, lintas alam, memancing, foto hunting).
2. Di Torout, Lombongo, Tambun : danau, air terjun, keunikan alam, peninggalan budaya, berkemah, memancing, lintas alam, foto hunting dan berenang.
3. Di Hungayono terdapat batuan stalaktit calsit semacam kristal yang mengkilat, sumber air panas dan tempat bertelur burung maleo

KOMENTAR
Rabu, 20 September 2006

Arif Beri Lampu Hijau

Kotamobagu, *KOMENTAR*

Warga Dumoga bolch berlega menyusul pernyataan Kepala Balai Taman Nasional Dumoga Nani Wartabone, Ir Arief Tungkagi, bahwa permintaan untuk melepás 250 ribu hektar kawasan hutan lindung untuk dijadikan WPR berpeluang besar untuk disetujui pusat.

Sebab pihaknya juga telah memberikan rekomendasi untuk selanjutnya disampaikan ke DPR RI.

"Usulan warga Dumoga akan dikaji dan ditinjau dari segi pemanfaatannya. Dan menurut kami, berpeluang besar untuk disetujui apalagi pemerintah, dalam hal ini eksekutif dan legislatif sudah menyetujuinya dnegan pembentukan tim gabungan yang akan memperjuangkan aspirasi tersebut ke pusat," kata Tungkagi.

Lebih lanjut dijelaskan, mengubah fungsi kawasan taman nasional adalah kewenangan dari Menteri Kehutanan dan DPR RI. Pihaknya hanya memfasilitasi aspriasi dari warga Dumoga yang telah didukung Pemkab dan Dekab Bolmong.(tus)

Pemprop diminta turun tangan

Illegal Logging Marak di Taman Nasional Bogani

METRO, Manado-Kondisi Taman Nasional Bogani Nani Wartabone semakin memprihatinkan. Aktivitas Penambangan Emas Tanpa Izin (PETI), *illegal logging* dan perambahan hutan masih terjadi. Balai Taman Nasional berharap dukungan pemprop, karena selama ini instansi teknis Pemprop Sulut terkesan minim memberikan perhatian terhadap kerusakan yang dialami Taman Nasional Nani Wartabone.

Diakui Kepala Balai Taman Nasional Bogani Nani Wartabone Ir Arief Toengkagie, aktivitas-aktivitas yang merusak taman nasional masih terus terjadi. Sehingga, dampak kerusakan lingkungan yang terjadi dalam kawasan belum teratasi.

"Karenanya kita berharap dukungan pemprop dalam mengatasi hal ini. Karena pemprop juga termasuk stakeholder di dalamnya," ujarnya. Bagaimana dengan sumbangsih Polda Sulut sendiri. Menurutnya, aparat kepolisian terus memberikan peran dalam pengamanan kawasan termasuk menelisik siapa-siapa saja yang berperan di dalamnya. "Yang pasti balai bekerja sama dengan pihak kepollsian tak pandang bulu dalam mengamankan kawasan ini," ujarnya.(ODI)

LESTARI
Multi Media Machine

Tanggal : 21
Bulan : September
Tahun : 2006
Nomor Edisi : 00260
Halaman : 6 (Bolaat)

Manado Post Komentar Tribun Sulut Metro Posko Swara Kita Kompas Media Indonesia

SWARA KITA KAMIS 21 SEPTEMBER 2006

Soal Retribusi di Tanoyan

Gun: Akan Saya Tertibkan

Kotamobagu---Adanya retribusi yang diduga hanya berdasarkan kesepakatan oknum tertentu di Dinas Pertambangan dan Energi (Distamben) Bolmong, diakui Kepala Distamben, Gun Lapadengan SH untuk segera ditertibkan. "Kalau benar ada retribusi yang ditarik tanpa dasar hukum yang jelas, maka itu akan saya tertibkan,"katanya ketika dihubungi Harian ini, baru-baru. Menurut Lapadengan, retribusi yang ditarik kepada para pemilik tromol dan tong sianida di lokasi pertambangan Tanoyan, berdasarkan peraturan daerah (perda) nomor 25 tahun 2001. Besaran retribusi itu, menurut Lapadengan, adalah 5 persen dari harga jual. Disinggung mengenai jumlah retribusi pertambangan Tanoyan yang masuk ke Distamben, *mantan Kabag Hukum* Pemkab Bolmong ini mengaku sangat kecil. "Disana banyak tromol yang beroperasi, tapi terus terang saja, yang bayar retribusi itu hanya dua orang,"ungkapnya sembari menyebut dua nama pemilik tromol dan tong sianida itu.(jede)

Tribun Sulut
SENIN, 18 SEPTEMBER 2006

Pertambangan Kian Marak di Tanoyan

Pasokan Air Bersih Terancam

KOTAMOBAGU –Pasokan Air bersih bagi petani yang ada di Desa Tanoyan Kecamatan Lolayan Kotamobagu semakin terancam menyusul maraknya pertambangan di wilayah tersebut.

Kawasan Tanoyan sendiri saat ini sedang marak terjadi penggalian tambang oleh masyarakat sekitar yang didukung oleh Pemerintah daerah yang melegalkan penambangan dilakukan dengan adanya kebijakan pemerintah soal PAD.

Hal ini justru mengancam keberadaan dari para petani padi yang berada di kawasan Tanoyan karena terancamnya pasokan air bersih untuk dialirkan ke sawah mereka karena kegiatan proses tambang tersebut.

Apalagi di kawasan pertambangan tersebut para penambang sudah menggunakan zat-zat berbahaya yang digunakan dalam proses pertambangan seperti bahan kimia Merkuri dan Sianida yang bisa mengancam kesehatan masyarakat.

Sementara itu dari hasil pantauan langsung di kawasan pertambangan tersebut limbah dari hasil proses pertambangan tersebut hanya dibuang secara sembarangan yang sangat berpotensi mengakibatkan tercemarnya air di kawasan tersebut.

Hal ini seperti pengakuan dari beberapa petani yang mengungkapkan terjadinya penurunan hasil sawah mereka karena adanya kegiatan pertambangan yang ada di kawasan tersebut.

Dijelaskan oleh para petani semenjak adanya pertambangan yang ada di kawasan mereka terjadi penurunan hasil yang cukup signifikan akibat dari kesulitan air yang diakibatkan oleh penurunan debit air bersih yang tersedia.

Sementara itu peran pemerintah sendiri justru mendukung kegiatan tambang yang ada di Kawasan Tanoyan dengan melegalkan pertambangan lewat bagi hasil lewat penyetoran PAD kepada Dinas terkait tanpa pemikiran tentang dampak lain yang akan terjadi. **(isa)**

LESTARI
Multi Media Machine

Tanggal : 19
Bulan : Oktober
Tahun : 2006
Nomor Edisi : 961 / Tahun V
Halaman : II (Ekonomi)

[ ]Manado Post [ ]Komentar [ ]Tribun Sulut [x]Metro [ ]Posko [ ]Swara Kita [ ]Kompas [ ]Media Indonesia

METRO • Rabu • 18 Oktober • 2006

Mendulang untung, merusak lingkungan?

Potret Keberadaan PETI di Lokasi Kawasan TN-BNW(3)

Catatan: Rolly Wowor

SESUAI hasil investigasi melalui hunting bareng sejumlah wartawan dari berbagai media bersama Yayasan Lestari, sedikitnya ada sekitar 900 lubang yang digali para penambang di kawasan lindung TN-BNW. Bisa dibayangkan seberapa besar tekanan yang menindih kawasan itu. Kepala Seksi Konsentrasi Wilayah II Doloduo Balai TN-BNW Vinsen Reinnuaren SSos mengatakan, prinsipnya berdasarkan UU No 5 Tahun 1990 dan UU No 41 Tahun 1999 tentang Konservasi Sumber Daya Alam, yang namanya hutan lindung, tidak diperbolehkan adanya kegiatan pertambangan di dalamnya. "Sedangkan bagi siapa saja yang ingin masuk di kawasan tersebut untuk kepentingan wisata ataupun bermaksud melakukan penelitian satwa endemik atau kajian ilmiah lainnya, harus mengantongi izin. Kalu tidak dikenakan sanksi sesuai aturan yang berlaku," kata Reinnuaren. Tapi kenapa sampai saat ini petugas Jagawana (Polisi Kehutanan) seakan tak mampu membloklir hilir mudiknya sekitar 6.000-an penambang liar masuk kawasan lindung tersebut. Ketika ditanya, Reinnuaren menyatakan, salah satu kendala kongkrit dalam melakukan pengawasan TN-BNW adalah masalah keterbatasan personel. "Jumlah petugas sangat terbatas, hanya 20 orang saja," tukasnya. Menurutnya, konversi hutan lindung menjadi lahan WPR dalam arti kata harus dilakukan relokasi ke lahan lainnya, dengan memperhatikan untung ruginya terhadap konservasi lingkungan alam itu sendiri.

Sementara dari pihak warga (penambang, *red*) melalui Sekretaris Forum Peduli Masyarakat Dumoga Bersatu (FPMDB) Ramly Mamonto mengutarakan, relokasi sebenarnya sudah pernah diupayakan oleh Pemprop sendiri, dengan mengambil lokasi di wilayah Bolingongot, Kecamatan Lolayan, namun karena lahannya tidak produktif menghasilkan emas, maka rencana tersebut gagal. Sebenarnya menurut mantan anggota DPRD Bolmong ini, warga di sekitar lokasi memahami betul bahaya yang bakal terjadi akibat rusaknya TN-BNW. Hanya saja demi mendapatkan sesuap nasi, terpaksa kegiatan menambang dalam kawasan itu, dilakukan.

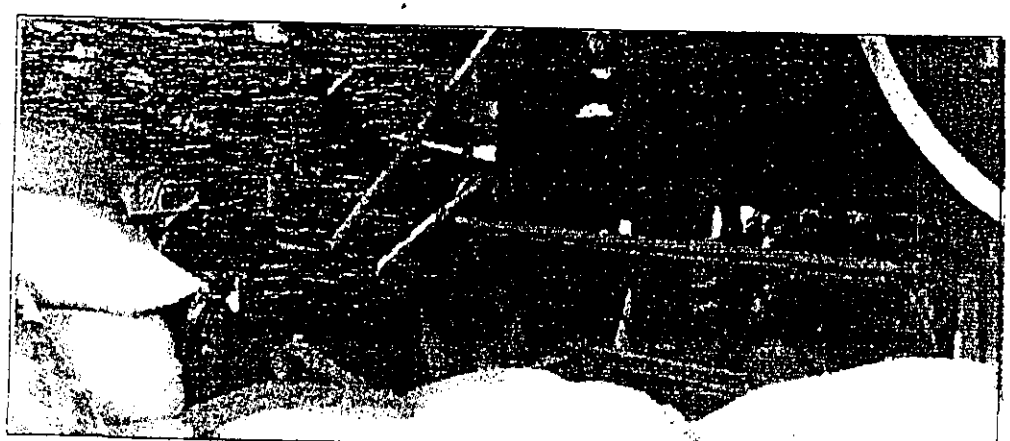
Memang sangat dilematis. Pasalnya, jika Pemerintah memaksa mereka (PETI, *red*) keluar dari kawasan, maka dipastikan akan menimbulkan gejolak ekonomi sosial. Namun sebaliknya, kalau aktivitas penambangan itu terus dibiarkan, alam akan 'beronlak' sehingga bencana banjir tak terelakan lagi.

Fakta ini merupakan contoh kasus yang menantang Pemerintah sebagai *leading sector* untuk mampu menyelesaikan persoalan ini, sehingga pelestarian alam tetap terjaga tanpa mengabaikan kepentingan hajat hidup rakyatnya. Semoga!

SWARA KITA RABU 20 SEPTEMBER 2006

Retribusi di Tanoyan Mekanismenya Tak Jelas

- Kadistamben Bolmong Sebut Berdasar Perda 25/2001, Namun Akui tak Ada Kontrol Lewat Petugas di Lapangan
- Gubernur: Silakan Tarik Retribusi Asal Ada Payung Hukum yang Jelas



■ MEKANISME kontrol terhadap retribusi atas tromol di Tanoyan ini harus jelas, supaya kesan penarikan retribusinya tak asalan. (foto: henzoe/sk)

Bolmong—Retribusi bagi pemilik mesin pengolan emas di Desa Tanoyan Kecamatan Lolayan Bolmong, ternyata masih ruwet. Mekanisme penarikan retribusi yang menurut pihak Dinas Pertambangan dan Energi (Distamben) Bolmong berdasar Perda 25 Tahun 2001 itu tak diiringi dengan kontrol di lapangan.

Hal ini diakui Kadistamben Bolmong Gun Lapadengan SH. "Kalau dibilang tak ada landasan hukum, tidak juga. Karena retribusi itu kami lakukan berdasarkan Perda 25/2001. Soal itu tak diketahui DPRD Bolmong, kami sendiri tak tahu kenapa sampai begitu. Cuma memang kami tak punya tugas untuk mengontrol langsung di lapangan," katanya.

Lapadengan menyebut untuk penarikan retribusi didasarkan pada 5% dari total produksi. "Jadi tidak langsung ditunjuk Rp2 juta/tong sianida. Cuma, ya itu tadi, kami tidak memiliki petugas yang mengrontol di lapangan untuk memastikan benar tidaknya hasil total produksi mereka. Jadi, selama ini cuma berdasarkan pengakuan pemilik tong atau tromol saja," akunya.

Namun, Lapangan membantah jika banyak yang sudah membayar. "Dari data kami, hanya ada dua pemilik tromol yang sudah membayar. Banyak dari pemilik justru belum membayar retribusi ini," pungkasnya.

HARUS JELAS

Merebaknya dugaan penarikan "retribusi gelap" di lokasi pertambangan rakyat Desa Tanoyan Kecamatan Lolayan Bolmong, yang ditengarai melibatkan Distamben Bolmong, ternyata menarik perhatian Pemprov Sulut.

Gubernur Sulut Sinyo Harry Sarundajang yang ditemui Swara Kita, Selasa (19/9) kemarin usai pembahasan persiapan HUT Provinsi ke-42 mengatakan, apabila berdasarkan aturan atau memiliki payung hukum yang jelas, izin yang diberlakukan kepada penambang emas di Desa Tanoyan sah-sah saja.

Baca: Retribusi (Halaman 2)

Retribusi ... dari Halaman 1

Namun jika tidak, maka Dinas/Instansi setempat harus mempertanggung jawabkan kepada masyarakat. "Sebenarnya, saya rasa tidak mungkin kalau dalam suatu penarikan pajak tidak didasarkan dengan aturan. Itu semua ada mekanisme hukumnya. Pendek kata, Pemerintah dalam menjalankan tugas dan tanggung jawab harus berdasarkan aturan hukum yang menjadi sandaran peningkatan baik pembangunan maupun SDM setempat," jelas Sarundajang.

Gubernur juga meminta agar pihak-pihak yang terkait jangan mengambil sutau tindakan tanpa melihat bentuk kesepakatan awal. Alasannya, yang namanya komitmen jelas harus didasari dengan hukum yang jelas pula. "Soal komitmen, itu harus jelas pula," singkatnya.

Pemberlakukan Undang-Undang Otonomi Daerah (Otda) nomor 22 tahun 2003 itu sangat relevan.

Apa yang menjadi resiko dari suatu pengambilan kebijakan, sepenuhnya merupakan wewenang dari pemerintahan setempat. Kendati demikian kata Gubernur, Pemprov akan tetap melakukan pengawasan ketat.

"Meski begitu, di mana Pemkab dan Dewan mengadakan rapat paripurna soal laporan pertanggung jawaban APBD yang sudah termasuk dalam dengan PAD, Pemprov tetap akan memantau dan mengawasinya," tandas Gubernur.(erka)

LESTARI
Multi Media Machine

Tanggal : 4
Bulan : November
Tahun : 2006
Nomor Edisi : 00321
Halaman : 1 - Utama

[ ]Manado Post [ ]Komentar [ ]Tribun Sulut [ ]Metro [ ]Posko [x]Swara Kita [ ]Kompas [ ]Media Indonesia

SWARA KITA SABTU 4 NOVEMBER 2006

Jelajah di Taman Nasional Bogani Nani Wartabone

Paru-Paru Dunia yang Rusak Dalam

Berganti-gantian, perambah hutan dan penambang liar menciptakan "kemelaratan" alamiah di kawasan Taman Nasional Bogani Nani Wartabone (TNBNW) Bolmong. Ibarat tubuh manusia yang dimakan penyakit kronis, paru-paru dunia itu, perlahan namun pasti, rusak dari dalam. Wolter 'Epang' Pangaliia dan Ronald Rompas dari Tim Jelajah Swara Kita yang berangkat ke sana bersama rombongan insan pers baru-baru ini, tergabung dalam tim Lestari, sempat memotret alam Nani Wartabone, yang nampak 'canggung' saat harus berbagi lahan dengan para penambang liar di Torout.

Liputan PANJANG dan melelahkan.
Tim Jelajah Swara Kita Itulah kesan di kala melakukan penjelajahan menuju areal TNBNW di Bolmong, khususnya di kompleks pertambangan emas (liar) yang berada di Torout Dumoga.

Baca: Paru (Halaman 2)

■ AKTIVITAS penambangan di Dumoga. (foto: dok Lestari)

Paru ... dari Halaman 1

Cuaca kemarau panjang tak pernah didera hujan rombongan tim dari yayasan Lestari harus melalui medan menanjak dan berbukit berdebu pekat. Memasuki areal tambang, nampak macam-macam bangunan sederhana beratap terpal beraneka warna.

Tambang Torout adalah sebuah lahan seluas 350 hektar yang menyimpan kekayaan logam mulia di dalamnya. Karena itulah sejak era 70-an hingga saat *ini sudah puluhan ribu warga*, baik dari Sulut maupun luar daerah, tertarik merambah lahan ini untuk menggaruk tanah inci demi inci untuk mendapatkan emas. Hampir dapat dikatakan ini adalah wilayah yang "tidak" tersentuh hukum, karena demi emas banyak korban jiwa yang bertumbangan. Bagi para penambang liar, hukum rimba adalah pegangan mereka selama ini. Dimulai dari pondok peristirahatan para pendulang; perjalanan kumpulan kuli tinta bersama yayasan Lestari meninjau penambang yang sementara memperjuangkan hektar TNBNW untuk disahkan menjadi lahan PSK atau Penambang Skala Kecil yang legal. Menyusuri lereng yang berdebu dengan rutinitas yang tinggi dari 4 ribuan orang yang berada di lokasi ini, membuat lokasi *tambang nampak seperti kota* kecil di tengah hutan konservasi. Padahal menurut UU nomor 9 tahun 1990, kawasan seperti ini tidak bisa dilalui, apalagi digaruk atau dijadikan tempat bermukim.

Proses penambangan sejak lama telah mengobok-obok kawasan hutan, juga merobah bentangan kawasan Taman Nasional ini. Buktinya terlihat pada sejumlah lokasi yang oleh penambang dinamakan Superbusa, Beringin, BH, Cup-cup, Bibir Merah, Domato, Lembah Sunyi, yang bertaburan lobang-lobang galian.

Sebut saja Roy, salah satu perambah lahan Torout, sempat *menjelaskan bagaimana* kerja mereka setiap hari menggali lobang demi lobang untuk mengejar rep emas coklat. "Lubang ini baru 3 minggu digali, dengan kedalaman 20 meter dan lorong sepanjang 10 meter," ungkap *pria berlato itu, sambil* menunjuk sebuah lobang tambang yang dalam dan gelap. Bayangkan, 3 minggu para penambang sudah sanggup menggali seperti itu, berarti apabila pengoperasian sejak tahun 1996, bisa ditebak berapa panjang terowongan maupun parit di daerah ini.

"Kalau dalam keadaan sunyi penambang yang ada hanya sekitar 4 ribuan, tapi kalau ada yang mendapatkan hasil yang besar maka jumlah penambang akan membludak hingga 6 ribuan orang," ungkap Ramli Mamonto, mantan anggota *Dewan Bolmong dari Faksi* PDIP. Dengan kekuatan seperti ini dipastikan Paru-paru dunia seperti Taman Nasional Bogani Nani Wartabone telah rusak dalam.(*)

LESTARI
Multi Media Mediine

Tanggal : 16
Bulan : Oktober
Tahun : 2006
Nomor Edisi : 959 / Tahun II
Halaman : 11 (Hiasan)

Manado Post | Komentar | Tribun Sulut | Metro | Poskol | Swara Kita | Kompas | Media Indonesia

METRO • Senin • 16 Oktober • 2006

Mendulang untung, merusak lingkungan?

Potret Keberadaan PETI di Lokasi Kawasan TN-BNW(1)

Catatan: Rolly Wowor

METRO, Manado - Taman Nasional Bogani Nani Wartabone (TN-BNW) yang terletak di Bolmong tepatnya di Dumoga, merupakan salah satu kawasan hutan yang semestinya dilindungi, kini terancam hancur akibat aktivitas liar Penambang Emas Tanpa Izin (PETI) di areal tersebut.

Dari sisi lingkungan hidup, hancurnya kawasan hutan lindung akan berdampak buruk terhadap kehidupan ekosistem yang ada di sekitarnya, termasuk peradaban warga setempat serta biasanya bagi kepentingan umum. Hal menakutkan yang bakal berlaku akibat tandusnya kawasan tersebut, tidak lain adalah terjadinya bencana banjir bandang susulan, seperti pengalaman pada pertengahan tahun ini. Belum lagi pengaruh negatifnya terhadap bencana ekologi lainnya, termasuk perubahan bentang alam, serta tercemarnya kondisi tanah, air dan udara dengan merkuri dan sianida yang sering digunakan dalam proses pengolahan hasil tambang (batu rep) untuk mendapatkan kandungan emas di dalamnya. Hal tersebut juga, secara langsung akan memberikan ancaman serius bagi kesehatan manusia yang bermukim di kompleks lokasi bersangkutan. Potret buram keberadaan TN-BNW ini terkuak melalui kegiatan *hunting bareng* oleh sejumlah Wartawan dari berbagai media bersama yayasan Lestari selama dua hari, yang dimulai sejak Jumat (13/10) lalu. Singkat cerita, raut alam TN-BNW di salah satu gugusan benteng *bioderversity* daerah 'Lumbung Beras' tersebut, telah usang, layu bercampur 'lesu' dan tidak lagi memancarkan wajah 'cantiknya.' *Ironisnya* lagi, tuntutan warga setempat untuk menjadikan 350 hektar lahan dari total luas kawasan sebesar 287.115 hektar yang ada, guna dijadikan Wilayah Pertambangan Rakyat (WPR), semakin menambah tekanan menurunnya (degradasi) mutu kawasan lindung yang notabene berfungsi sebagai penyanggah sistem ekologis daerah Bolmong khususnya.(bersambung)

SWARA KITA SENIN 18 DESEMBER 2006

Dari Hunting Bareng Yayasan Lestari-Media

Mencari Solusi Tambang Emas Ramah Lingkungan

Liputan
Ronald Rompas,
Kotamobagu

MASALAH pertambangan liar yang masih terus dilakoni sejumlah Penambang Tanpa Ijin (Peti) di kawasan konservasi alam Taman Nasional Bogani Nani Wartabone (TNB-NW) yang terletak di Kabupaten Bolmong, seakan-akan tak berujung.

Kendati Pemerintah Kabupaten (Pemkab) Bolmong telah turun tangan untuk mengatasi hal itu, namun hingga kini pengrusakan lingkungan itu belum juga ditemukan solusinya.

Beberapa waktu lalu, Yayasan Lestari, lembaga yang sangat konsisten dalam hal memperhatikan masalah-masalah lingkungan, bersama-sama dengan sejumlah wartawan dari berbagai Media Cetak dan Elektronik yang ada di Sulut telah melakukan peninjauan dan melihat secara langsung kegiatan di Lokasi Penambangan Liar yang telah menelan seluas 350 hektar dari ribuan hektar Taman Nasional Bogani Nani Wartabone tersebut.

Menindaklanjuti peninjauan tersebut, Sabtu (16/12) pekan lalu. Yayasan Lestari di bawah pimpinan Senior Editor Raymond Mudami bersama sejumlah wartawan melakukan pertemuan dengan Pemkab Bolmong, guna melakukan pembahasan tentang mencari solusi tambang emas yang ramah akan lingkungan.

Baca: Mencari (Halaman 2)

LEGI
Multi Media Machine

Tanggal :
Bulan :
Tahun :
Nomor Edisi :
Halaman :

Manado Post | Komentar | Tribun Sulut | Metro | Posko | Swara Kita | Kompas | Media Indonesia

Mencari ... dari Halaman 1

Sebab, penambangan liar yang dilakukan di kawasan TN-BNW tersebut, sering menggunakan sejumlah bahan-bahan kimia yang berbahaya dan dapat mencemari dan merusak lingkungan hidup, semisal bahan B3 dan Merkuri serta bahan Sianida.

Kepala Badan Pengendalian Dampak Lingkungan Daerah (Bapedalda) Ir Hi Moh Hardi Mokodompit dalam pertemuan itu, sempat ditanyakan sejauh mana penanganan terhadap pencemaran lingkungan yang ada di wilayah Bolmong akibat penggunaan bahan-bahan berbahaya oleh para penambang, serta upaya dan solusi yang akan dilakukan oleh pihak Pemkab Bolmong untuk mengatasi permasalah ini.

Menurut Mokodompit, tentang pencemaran yang ada di kawasan pertambangan liar tersebut, pihaknya telah melakukan sosialisasi kepada masyarakat yang melakukan penambangan dikawasan tersebut haruslah menggunakan bahan-bahan yang ramah lingkungan. Selain itu juga, pihaknya saat ini sementara melakukan pengkajian terhadap dampak pencemaran lingkungan akibat aktivitas penambangan liar tersebut. "Saat ini, kita sementara melakukan koordinasi dengan pihak Departemen Lingkungan hidup untuk melakukan sejumlah program dan kajian guna mengatasi masalah pencemaran yang diakibatkan aktivitas Peti tersebut. Karena memang, sampai saat ini kita belum menemukan kajian yang benar-benar akurat untuk mengukur seberapa jauh dampak pencemaran yang ditimbulkan oleh Peti hingga saat ini," ujarnya.

Sementara untuk penggunaan sejumlah bahan B3 yakni bahan Merkuri dan Sianida, Mokodompit mengatakan, pihaknya sampai saat ini hanya memiliki kewenangan untuk melakukan pengawasan terhadap penggunaan-penggunaan bahan-bahan tersebut. Sedangkan untuk penyeluran atau penjualan bahan-bahan tersebut, pihaknya tidak memiliki wewenang untuk melakukan pembatasan-pembatasan. Pasalnya, kewenangan tersebut berada ditangan instansi Dinas Perdagangan dan Perindustrian (Diperindag) Pemkab Bolmong. "Memang telah terjadi beberapa kasus pencemaran yang diakibatkan oleh penggunaan bahan-bahan tersebut di wilayah Bolmong ini. Namun, kalau itu digunakan oleh para penambang yang legalitasnya jelas, itu bagi kita mudah untuk dilakukan pengawasan. Akan tetapi, Peti ini kan merupakan penambang yang ilegal, maka susah untuk dilakukan kontrol terhadap penggunaan-penggunaan bahan-bahan berbahaya tersebut," jelas Mokodompit.

Lebih lanjut Mokodompit menjelaskan, untuk mengatasi permasalahan-permasalah tersebut, pihak Pemkab Bolmong saat ini sementara merencanakan sejumlah solusi. Solusi yang pertama adalah, pihak pemerintah merencanakan untuk memberikan legalitas terhadap para penamabang di kawasan TN-BNW mengingat hal ini menyangkut kebutuhan masyarakat banyak. Sedangkan solusi yang kedua adalah memindahkan lokasi penambang liar tersebut ke wilayah yang lain diluar TN-BNW. "Untuk solusi yang pertama, tentinya hal tersebut harus melalui kajian dan ijin dari pihak pemerintah pusat dan DPR-RI, sebab kawasan tersebut merupakan kawasan konservasi alam. Sedangkan untuk solusi yang kedua, pemerintah daerah memang harus mencari kawasan untuk merelokasi para penambang ini. Atau pilihan yang ketiga yakni penghentian secara paksa," katanya.

Namun untuk menjalankan ketiga pilihan tersebut, pihaknya tentu memerlukan dana yang cukup besar. Mulai dari pengkajiannya ketiga pilihan tersebut serta untuk pengadaan alat-alat penguji untuk melakukan pengawasan terhadap jalannya penambangan yang dilakukan oleh masyarakat tersebut.

"Ketiga pilihan tersebut memang diakui belum begitu efektiv untuk mencegah terjadinya pencemaran dan pengrusakkan lingkungan. Untuk itu, pemerintah daerah telah menyiapkan sejumlah dana yakni untuk alat-alat pengujian telah disiapkan dana sebesar kurang lebih Rp 300 juta. Sedangkan untuk keseluruhan penanganan pencemaran lingkungan hidup, pemerintah telah menyiapkan dana kurang lebih 1 miliar pada anggaran APBD 2007 nanti," tuturnya.

Pertemuan kemudian dilakukan dengan pihak Disperindag Pemkab Bolmong. Karena, instansi ini yang tahu persis mekanisme perdagangan bahan-bahan B3 atau Merkuri dan Sianida. Yang menurut informasi yang didapat, penjualan bahan-bahan ini di wilayah Bolmong cukup bebas. Buktinya, para penambang liar bisa mendapatkan bahan-bahan ini dalam jumlah yang cukup besar dalam menunjang aktivitas penambangan yakni sebagai bahan pendukung untuk mendapatkan hasil emas yang di-

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tambang. Di instasi ini, tim Yayasan Lestari bersama sejumlah wartawan menemui Kepala Sub Bidang Perdagangan Disperindag Pemkab Bolmong Ir GED Tanor.

Menurut Tanor, penjualan bahan-bahan B3 seperti Merkuri dan Sianida memang telah diatur dalam peraturan dan ketetapan Menteri Perdagangan. Yang menyatakan bahwa, bahan-bahan tersebut dapat dijual kepada pihak-pihak yang memiliki ijin penggunaan yang jelas. Sebab, bahan-bahan tersebut juga sangat dibutuhkan oleh masyarakat yang melakukan kegiatan-kegiatan dengan mendapat pengawsan yang cukup ketat. Akan tetapi, pada kenyataannya, bahan-bahan tersebut sering dijual dan disalahgunakan oleh pihak-pihak tertentu. "Menurut keputusan Menteri Tahun 2006 tentang penggunaan bahan-bahan ini, telah ditunjuk distributor penyaluran bahan-bahan ini. Mekanismenya, dari distributor langsung menjual secara langsung ke pengguna. Itulah yang sebenarnya yang menjadi kendala bagi kita yang ada di unit-unit perdagangan," kata Tanor.

Untuk itu, lanjutnya, pihaknya telah melakukan sejumlah pengawasan terhadap penjualan bahan-bahan ini oleh sejumlah penjualan yang dilakukan oleh pihak-pihak yang ditunjuk langsung oleh pihak Distributor dalam hal ini pihak PPI Manado yang ditunjuk oleh Surat Keputusan Menteri. "Guna untuk mencegah terjadinya perluasan penggunaan bahan-bahan ini terutama dalam hal pengrusakkan lingkungan, pihaknya telah menyiapkan aturan-aturan dan perijinan bagi para penggunan maupun penjual. Sebab, dari jumlah yang diarahkan untuk wilayah Kabupatan Bolmong sebanyak 2,5 ton untuk bahan Sianida dalam waktu setiap 2 bulan. Sedangkan, untuk Merkuri tidak ada," tandasnya.

Mengenai adanya bahan merkuri yang beredar di wilayah Kabupaten Bolmong, pihaknya sampai saat ini sementara mencari dari mana asal bahan tersebut. "Upaya yang dilakukan oleh pihak Pemerintah Daerah saat ini adalah dengan mengharuskan para perusahaan yang menggunakan bahan-bahan B3, untuk memasukan laporan penggunaan-penggunaan bahan-bahan tersebut setiap bulannya. Jika kedapata ada yang melanggar ketentuan yang berlaku, maka pihaknya akan mengenakan sangsi tegas bagi para pengusaha-pengusaha yang menggunakan bahan-bahan tersebut diluar ketentuan," jelas Tanor.(*)