

ANALYSIS OF GREEN ACCOUNTING IMPLEMENTATION AT PT TIMAH (COMPANY) Tbk

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ABSTRACT

Timah is a mining company in the province of Bangka Belitung and is a pride of its people, although the presence of tin mining can be directly dangerous to the environment such as forests and water pollution. However, PT Timah has carried out environmental conservation and empowerment activities for the local community. The purpose of this study is to analyze the implementation of environmental accounting related to financial reporting. As a large mining company, it is fitting for PT Timah to pay attention to the environment and living conditions of the surrounding community as a result of its mining activities. By using descriptive methods, and quantitative approaches and data collection from reliable sources concluded that PT Timah has a good action on the environment. The results of this study will improve the good image of PT Timah. PT Timah has taken sufficiently good steps to preserve the environment after the mining. Every year, the Company always plans to reclaim land of up to 2,000 ha..

Keywords: Timah, Green, Accounting, Mining.



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INTRODUCTION

The application of environmental accounting in Indonesia has now developed into a new side approach in environmental management. Environmental accounting in the design of development, operation and maintenance will always apply the principles of sustainability and environmentally friendly practices. This is as mandated in Law No. 36 of 2009 concerning Health and Law no. 32 of 2009 concerning Protection and Management of the Environment. The state of technology in human life greatly affects the balance of the environment around it. In the era of the company's movement towards a green company, the industry was not only required to be limited to processing waste, but the demands of the community-consumer were even further, namely that the production process of a product, from raw material collection to disposal of a product after consumption (use), would not damage the environment. (Idris, nd). In an effort to preserve the environment, the science of accounting plays a role through voluntary disclosure in financial reports related to environmental costs. The accounting system in which there are accounts related to environmental costs is called green accounting or environmental accounting (Aniela, 2012).

PT Timah (Persero) Tbk (“PT Timah”) is a tin mining company in Indonesia located in the province of Bangka Belitung. As the second largest tin producer in the world, PT Timah has operated integrated tin mining activities ranging from exploration, mining, smelting to product marketing abroad. As a large mining company, PT Timah should pay attention to the environment and the living conditions of the surrounding community as a result of its mining activities. The environmental accounting function is divided into two, namely internal and external (Environmental Accounting Guidelines, Japan, 2005). Through disclosing quantitative measurement results of environmental conservation activities, external functions allow a company to influence the decisions of stakeholders, such as consumers, business partners, investors, and local communities. In Indonesia, Law No.40 of 2007 article 74 stipulates that companies that carry out business activities in the sector and / or related to natural resources are required to carry out Social and Environmental Responsibility. Social and Environmental Responsibility is a company obligation that is budgeted and calculated as company costs, the implementation of which is carried out with due observance of appropriateness and fairness. Sustainability Report (SR) is company information regarding economic, environmental and government performance. But not only reporting from collected data, SR is a method to internalize and improve an organization's commitment to sustainable development in a way that can be demonstrated to internal and external stakeholders.

The Global Reporting Initiative (GRI) is an independent international standards organization. In addition to helping business people, GRI also helps governments and other organizations to understand and communicate the impact of their business on issues of climate change, human rights, and corruption. Global Reporting Initiative (GRI), is a company reporting guide to support sustainable development initiated by the United Nations through the Coalition for Environmental Economies (CERES) and UNEP in 1997. GRI is a non-profit organization that promotes social, economic and environmental sustainability. GRI provides companies and organizations with a comprehensive sustainability reporting framework that is widely used around the world.

The implementation of Social and Environmental Responsibility is usually recorded in a report which can be reported separately or combined in an annual report. Social and Environmental Responsibility Reporting in Indonesia is regulated by IAI (Indonesian Accountants Association), which advises companies to disclose social and environmental responsibilities as written in Financial Accounting Standards (PSAK) no 1 (Revised 2009) paragraph 12, which reads: “An entity may also presents, apart from financial reports, reports on the environment and reports on value added (value added statements), especially for industries where environmental factors play an important role and for industries that consider employees as a group of report users who play an important role”. These additional reports are outside the scope of Financial Accounting Standards.

METHODS

The research method used by researchers is descriptive with a qualitative approach. Descriptive research is a writing that describes the actual situation of the object under study, according to the actual situation at the time of direct research. Researchers designed this research to be a qualitative descriptive study with a case study approach. This research focuses intensively on one particular object and studies it as a case. The data used in this research is secondary data, namely data obtained by researchers indirectly through intermediary media. These data are sourced from the company's annual report for the period 2019, the 2019 Sustainability Report, the 2019 financial report obtained from the Indonesia Stock Exchange website, the Ministry of Environment website, the PT Timah TBK website. The data collected were analyzed using triangulation of data. This method is used to measure information about environmental accounting on the data collected by referring to the main indicators about the G3.1 GRI environment as follows.

Environmental performance indicators, covering: material sub-indicators, covering the use of materials and materials from recycled materials; energy sub-indicators, energy indicators cover five important areas of an organization's energy use, including direct and indirect energy. Direct energy is the energy used by the organization and its products and services. Indirect energy use is energy used by other organizations or communities serving the organization; water sub-indicator, an explanation of water use, water sources affected by company activities; biodiversity sub-indicator (biodiversity), an explanation of the locations that intersect with protected areas and the various impacts of company activities on biodiversity; emission, effluent and waste sub-indicators include indicators that measure standard environmental expenditures considered as pollutants; product and service sub-indicators, covering company initiatives in reducing environmental impacts in products and services; compliance sub-indicators, disclosure of monetary value of fines and sanctions related to environmental regulations; sub-indicators of transportation / transportation, disclosure of environmental impacts due to the transfer of products and other goods; overarching sub-indicator that reveals the total expenditure on environmental protection and investment by type.

RESULTS AND DISCUSSION

Research result

Material sub-indicators (EN1, EN2);

PT TIMAH utilizes various materials in the two smelting units in Muntok and Kundur effectively, efficiently and responsibly to minimize the presence of residual smelting waste. The number of materials, both recycled and auxiliary materials, is presented in the following table.

Table 1. Use of Materials for Tin Smelting

Jenis Material	Smelting Facility			Description
	Muntok	Kundur	Total	
Tin Ore	22.697	18.279	40.975	Raw material
Slag	1.957	610	2.567	Recycled raw materials
Dust	1.563	1.114	2.677	Recycled raw materials
Dross	4911	4.441	9.352	Recycled raw materials
Hardhead	591	342	933	Recycled raw materials
Tin Iron	198	167	365	Recycled raw materials
Anthracite Coal	8.920	5.948	12.498	Auxiliary material
Flux	531	266	797	Auxiliary material
Total raw materials	26.019	24.933	58.869	
Total material	33.292	31.152	70.164	

Source: Results of data processing

The company has disclosed in accordance with EN 1 the details of the use of materials by weight or volume for 2019. As shown in the table above, the recycled material used by the Company in the refined tin production process, as the main product, in its smelter is slag, dust, dross, hardhead, and tin. The total recycled material utilized in 2019 was 15,894 metric tons (mton) or covering 22.60% of the total material for production (EN1, EN2). This number represents a reduction in the use of recycled raw materials, from 14% in 2018.

Apart from tin metal as the main product, PT TIMAH also produces several other products, namely bronze and brass alloys and tin solder. The three products are basically processed from recycled materials with different percentages. PT TIMAH's products have obtained product quality assurance certificates from the London Metal Exchange, namely LME BS EN 610: 1996, and from ASTM International, namely ASTM B 339-1995. This confirms the high quality of PT TIMAH's products and also that the waste management process has been optimal, so that the impact on the environment is minimal. Even so, the Company continues to take steps such as planting trees,

testing chimney emissions, implementing a filter system for tin dust, controlling liquid waste from outlets, testing seawater quality, and testing water quality to mitigate the environmental impacts of its production activities (EN1, EN2) .

PT Timah TBK has disclosed GRI 301: Material according to the indicator table which includes disclosure of management approach, disclosure of recycled materials used and disclosure of reclaimed products and their packaging materials (EN1, EN2).

Energy Sub-indicators (EN3, EN4, EN5, EN6, EN7);

PT TIMAH uses energy for two purposes, namely operational activities and operational support activities. For mining and smelting operations, the Company uses primary energy in the form of BBM and LPG. Meanwhile, for operational support activities, secondary energy is used in the form of electricity supplied from PLN and from its own power plants. Electricity energy is mainly used for administrative purposes and lighting facilities.

The main energy sources used in the Company's production process activities in 2019, based on the volume of use, are industrial diesel fuel, anthracite coal, and fuel oil. The total energy used in 2014 reached 639,042 gigajoules, an increase of 5.90% from the total energy used in 2013, amounting to 603,422 gigajoules (EN3).

Table 2 Energy Use of PT Timah TBK

Primary source	unit	Energy Content	2019		2018	
			Total	Total Energy (GJ)	Total	Total Energy (GJ)
Anthracite coal	ton	28.50 Gj/ton	15,382.23	438,394	9,232	263,106
Solar industry (HSD)	kiloliter	36.40 Gj/liter	38.827.316	1.471.555	45.238.377	1.714.534
Fuel oil	kiloliter	38.00 Gj/liter	10.969.072	415.728	9.374.540	355.295
Total				1.916.394		2.124.021

Source: data processing results

The company has listed the direct energy use from primary energy sources according to EN3 provisions for 2019 which can be seen in the table above. Fossil fuels are a non-renewable natural energy source that is mostly used in the operational activities of PT Timah (Persero) Tbk. This has a direct impact on the environment, as the reserves of fossil fuels on earth are depleting and increasing the concentration of greenhouse gases due to combustion.

As shown in the table above, throughout 2014, the PLTD facility in the Metallurgical Unit generated electrical energy of 8,086,601 kWh (29,111). The electrical energy produced in 2019 decreased by 9% from 15,053,207 kWh in 2018. This is in line with the decline in the amount of refined tin produced in 2019. In 2019, the Tin Metallurgical Unit also used 2,420 kg of briquettes and 300 kg of LPG gas.

The Company's PLTD uses diesel fuel to supply electricity needs for operational activities and operational support. To save energy use, PT TIMAH has taken several innovative steps, for example conducting large scale tin mining which is more efficient in addition to extending the use of KIP in offshore mining, replacing the role of energy-intensive dredges (EN4). In addition, to reduce the use of electrical energy both from its own power plants and from PLN, PT TIMAH has implemented a series of policies to save electricity consumption (EN5). Programs and policies

taken to save electricity consumption include socialization and implementation to workers for (EN5):

1. Raise the AC temperature setting to 25o
2. Maximizing AC capacity
3. Utilization of natural light
4. The use of energy-efficient electric lamps
5. Improving the quality of the electricity network

Meanwhile, to save fuel consumption for transportation, several initiatives have been undertaken including (EN6):

1. Mining operational optimization program
2. Monitoring and Regulation of Non-Mining Vehicle Services
3. Video conferencing between work units

The company has not been able to display quantitative data that shows the direct effect of each program item being implemented on the volume of primary fuel use and the volume of electricity consumption from PLN, as a result of these efficiency initiatives because there is no information system specifically developed. However, overall energy use data shows a decrease in energy demand as a result of implementing these efficiency initiatives (EN6).

PT TIMAH currently relies more on non-renewable energy sources to meet the energy supply for tin mining activities as well as for supporting mining activities. However, since the last few years, the Company has also continued to develop techniques for utilizing renewable energy in its operations, namely olein which is made from palm oil. The company continues to carry out technical studies and business studies before transferring fuel technology comprehensively to its various main production tools. In 2014, the Company started using olein fuel, which has been blended into HSD fuel by the manufacturer, in the furnaces in the Metallurgy Unit. The Metallurgical Unit and the Kundur Production Unit have also implemented a furnace regenerator system that utilizes heat from exhaust gas to heat the combustion air as an alternative source of energy (EN7).

PT Timah TBK has disclosed GRI 302: Energy according to the indicator table which covers: disclosure of management approach, disclosure of energy consumption within the organization, energy consumption outside the organization, energy intensity, reducing energy consumption, and reduction in energy needed for products and services (EN3, EN4, EN5, EN6, EN7).

Water sub-indicator (EN8, EN9, EN10);

for disclosures regarding EN8, EN9 and EN10 are as follows. The use of water is carried out efficiently and wisely in every production process at PT Timah. In the tin mining process, both onshore and offshore, water is used to spray the soil layers containing tin ore, and to separate tin ore from other materials. In the ore smelting process, water is used to wash the ore and cool engines and generators. The company obtains most of its water from damming the river flow at the mining sites. A small portion comes from ground and sea water that has been processed first. the amount of water used does not exceed 5% of the volume of each water source so that it does not interfere with the availability or disturb the sustainability of water bodies. All of the water used in onshore mining operations (100%) is recycled water which is treated through the application of a closed loop water circulation system. In addition to efficiency, this system also prevents wastewater sediment from polluting river water.

In order to maintain the availability of surface water and preserve the environment, particularly water sources, the Company also carries out water resources conservation activities through several activities, including:

1. Utilization of rainwater for washing vehicles.
2. Construction of water reservoirs for water conservation and

3. Making Biopori holes in offices & settlements.
4. Through these steps, we actively participate in efforts to maintain and conserve surface water sources.

With all of these efforts, during the reporting period, PT TIMAH received no reports or complaints from the public or the local government regarding disruption of water sources due to falling water levels due to water extraction.

One of the environmental preservation methods that the Company strives for is the efficient use of water. The company reuses part or even all of the water that has been previously used in its production and mining processes. Throughout 2019, the water used in all of the Company's onshore mines was recycled 100% through the application of a closed water circulation system. The company has obtained a permit from the local government to contain water into the reservoir and drain it to mining sites and production units through large trenches. This water is used repeatedly after passing through the process of deposition of sludge and other materials, and is circulated in a closed manner.

Biodiversity (Biodiversity) sub-indicator (EN11, EN12, EN13, EN14, EN 15); around 8% or 27 thousand hectares of the Company's land IUP area in the form of forests are areas categorized as protected forests, and another 1% or 2,648 hectares are conservation forests. Until 2019, PT Timah did not carry out any land mining activities in these two zones. All mining activities take place in locations that do not intersect with areas categorized as protected forest or areas with high biodiversity value outside protected forest areas. PT TIMAH conducts routine monitoring of environmental conditions around the mining area to minimize environmental damage, as well as part of efforts to mitigate environmental risks. Environmental monitoring activities include: monitoring of water quality, air quality, soil quality, soil pollution, erosion, and wildlife and aquatic biota that live around the mining area. This routine monitoring activity provides an overview of the fulfillment of the environmental quality standards (BML), and the development of environmental quality around and in the managed area. In the post-mining land reclamation process, the Company involves the surrounding community and business partners so that the direct impact of this activity on their lives can be direct. felt.

The various activities that we have carried out to maintain the biodiversity of the managed area during 2019 are as follows:

1. Maximizing revegetation using local plants, namely nyato, mahogany, gaharu, jackfruit, durian, mango, rambutan, soursop;
2. Carry out a plant enrichment program with rare and economically valuable plants. Among other things, in the form of butter plants, black stems, contraceptives;
3. Carry out the cultivation of endemic plants in nursery facilities. Where the plants cultivated include jambu-jambuan, cempedak.

PT Timah's commitment to maintaining the harmony of the production process with a sustainable environment underlies its mining activities on land and sea. All overland mining activities carried out by the Company in the Bangka Belitung Islands take place on land that has been legalized by the Government with the issuance of Mining Business Permits (IUP).

The company implements a policy not to carry out offshore mining in areas where there are concentrations of coral reefs, which are the main support for the marine ecosystem. PT TIMAH Tbk has conducted an Environmental Impact Analysis (AMDAL) prior to opening offshore mining. This was done to minimize the impact arising from mining activities. The technology transfer effort from KK to BWD that the Company is currently taking has also enabled the Company to mine at depths of up to 60 meters. As such, the Company's mining practices are less disturbing as they can be carried out at a considerable distance from the coast.

Emission sub-indicators (EN16, EN17, EN18, EN19, EN20),

The main source of emissions from PT TIMAH Tbk's operational activities is the use of non-renewable fossil fuel mining equipment, namely diesel and gasoline, as well as the installation of diesel-fueled power plants. To reduce emissions to the air contributed by the Company, PT TIMAH Tbk continuously strives to reduce the production of greenhouse gas emissions. One of the efforts taken is to make efficient use of energy in each work unit and every line of company activity. Through this efficiency program, in 2019, PT TIMAH Tbk managed to save or reduce energy use in the amount of 207,627 GigaJoule, from the original 2,124,021 GigaJoule in 2018 to 1,916,394 GigaJoule in 2019. The efforts made are as follows :

- Replacing lighting tools with LED lamps
- Replacing non-inverter air conditioners with inverter air conditioners
- Energy saving program turns off electricity when the office is not operating.
- Smelting recovery system (smelting slag II to obtain tin ore with a grade of more than 2%) using fuming furnace technology.
- Increase in smelting recovery using fuming furnace technology by 1.4%, from 97.6% to 99%.
- Fuel replacement for the fuming furnace that uses fuel that is more efficient, economical and environmentally friendly, namely pulverized coal, which previously used fuel oil in stationary reverberatory furnaces.

PT Timah as a mining company contributes to the amount and concentration of greenhouse gases in the atmosphere. This is what makes the Company make every effort to reduce the amount of emissions in its production process which are expected to be useful for the continuation of living things in the future. Facilities to measure the carbon footprint of the previous year have not yet been adopted

The tin mining industry clearly uses certain chemicals that can produce halogenated gases (gases containing the atoms of the halogen elements, namely chlorine and bromine) although on a relatively much smaller scale. These gases, especially chlorofluoro carbon or CFCs, play a very active role in the destruction of the ozone layer which protects living things from solar radiation. so during the reporting year, PT TIMAH Tbk contributed direct greenhouse gas emissions (coverage 1) from the use of diesel by 139,847,818,500 tons of CO₂eq, a decrease compared to 2018 which was recorded at 153,374,328,900 tons of CO₂eq. Meanwhile, indirect greenhouse gas emissions (coverage 2) from the use of electricity were recorded at 7,552,885,334 kg of CO₂, a decrease compared to 2018, which amounted to 14,059,695,338 kg of CO₂.

The process that occurs during the smelting of tin ore that occurs at the Kundur Metallurgical Unit, the West Mine and the PLTD in Mentok, Kundur, Baturusa, and Balaikarya Sungailiat produces gas emissions which are classified as nitrogen oxides (NOX) and sulfur oxides (SOX). As pollutants in the air, nitrogen oxides and sulfur oxides can disrupt living things by triggering acid rain, reducing air quality, worsening forest degradation, and causing various other health problems. As a measure to reduce emissions of these gases into the air, the Company has long implemented fuel gas desulfurization technology equipped with a baghouse filter, which can reduce total sulfur dioxide (SO₂) emissions from chimneys by up to 80%. In addition to maintaining the survival of living things, with these various actions, the Company also gets financial benefits because the application of these two technologies results in cleaner chimney conditions so that engine work can be optimized and fuel consumption can be minimized. Meanwhile, NOX gas emissions can be controlled by applying selective noncatalytic reduction technology, which can reduce emissions of nitrogen oxide (NO₂) levels in exhaust gas by 75-98%. In its annual report, the company has disclosed EN20 provisions concerning NO_x, Sox which are broken down by type and weight.

Waste Water Sub Indicator (EN21, EN 22, EN23, EN24, EN25);

The main focus of the Company related to solid waste and liquid waste (effluent) management is to ensure that the waste that the Company releases into the environment from mining and production processes has a minimal negative impact on the environment as well as the communities around the Company's operational areas. The Company's approach to responsible waste management is also based on the 3R principle, namely reduce, reuse and recycle. The wastewater generated by the Tin Ore Washing Center at the Mentok Metallurgical Unit is processed and handled at the Company's wastewater treatment facility, where the technology used is to precipitate the solid material through a closed water circulation system.

At this location, some of the waste water is channeled into water bodies, namely rivers around the mine, after undergoing strict supervision which ensures that the water no longer contains elements that are harmful to health and will not disturb the ecosystem of the river body. The company has disclosed the provisions of EN21 regarding the amount of water discharged by quality and purpose in 2019.

Types of solid waste that are specifically handled are listed in the attachment table. The 2019 annual report provides a more detailed explanation of the provisions of EN22 than the previous annual reports.

Throughout 2019, the anticipatory steps taken by the Company to prevent this have proven successful: there were no incidents of chemical, oil and fuel spills, and no complaints from the public regarding the Company's waste management practices (in accordance with EN23 provisions).

The company disclosed the provisions of EN24 regarding B3 waste for the whole year 2019. To manage the waste generated from production activities, the Company does it internally or submits the work to a third party who has obtained a waste management license from the Company. Thus, in 2019 the Company will not export or import B3 solid waste or other solid waste. Regarding the provisions of EN 25, the closed water circulation system implemented in 2019 and previous years at the Company's onshore mines ensures that no mining runoff is discharged or discharged intentionally into the surrounding river bodies.

Products and Services sub-indicators (EN26, EN27);

disclosures to EN26 and 27 are as follows. Tin metal as the main product of the Company is essentially a material that can be recycled relatively easily. Some examples of the use of recycled tin can be found in electronic products and packaging. In addition, the Company's tin products have obtained product quality assurance certificates from the London Metal Exchange, namely LME BS EN 610: 1996, and from ASTM International, namely ASTM B 339-1995. This confirms the high quality of PT Timah (Persero) Tbk's products and also that the waste management process has been optimal, so that the impact on the environment is less. This is clearly reflected in the steps taken by the Company throughout 2019 to mitigate the resulting environmental impacts. These measures include tree planting, stack emission tests, seawater quality tests, and water quality tests. In 2017-2019, none of the Company's products were withdrawn or collected from the public to be processed, reused, or recycled by the Company itself.

Compliance sub-indicator (EN28);

For the provisions of EN28, the Company always upholds and is fully committed to all laws and regulations as well as international environmental standards. Therefore, throughout 2019, the Company has never received any claims or violations of the provisions and laws and regulations in the environmental sector so that the Company has never received sanctions to pay fines. The Company always refers to and complies with a number of provisions and laws and regulations from the Government. The following is a summary of the provisions and regulations governing PT TIMAH Tbk's environmental program from the regulations related to environmental accounting

1. Control and prevention aspects
2. Environmental Permit Aspects
3. Environmental Audit Aspects
4. Aspects of Waste Management and Hazardous and Toxic Waste (B3)
5. Aspects of Water Quality Management and Water Pollution Control (Sea Water, Waste and Domestic)
6. Aspects of Sea Pollution and / or Destruction Control
1. 7. Controlling Aspects of Conventional Air Pollution and Green House Gas (GHG) Emissions
7. Management Aspects of Hazardous and Toxic Materials
8. Radioactive Management Aspects
9. Reclamation and Postmining Aspects

Regarding the regulations from the Ministry of Environment and Forestry regarding the obligation to make environmental permits, the Company always updates environmental permits as required in the regulations which will later be elaborated in the Environmental Impact Analysis (ANDAL), Environmental Management Plan (RKL) and Environmental Monitoring Plan (RPL).) which becomes a reference for the management and monitoring of environmental impacts so that negative risks that may occur to the environment can be avoided or minimized and positive impacts can be increased. This is a manifestation of fulfilling compliance with environmental management, during 2019, PT TIMAH Tbk has spent a number of environmental management and preservation costs.

Sub-indicator Freight / Transport (EN29);

All mining products on land and at sea are distributed to the smelting unit using a number of transportation means, then the results are sent to the Company's warehouse or to the port to be delivered to consumers. During the transportation process, gas emissions arise from trucks and transport vessels used by the Company.

Comprehensive Sub-indicator (EN30);

To finance various environmental management efforts in all of its operational areas, the Company spent Rp 9,935,521,532 in 2019, which was less than in 2018, which was Rp. 11,638,757,000. This is the company's first step towards minimizing the impact of mining on the environment around the mine. PT TIMAH Tbk makes serious efforts to manage the environment to fulfill its commitment to preserve the environment. PT TIMAH Tbk makes serious efforts to carry out environmental management to fulfill its commitment to preserving the environment. These efforts, among others, are realized through the application of environmentally friendly technology in operational areas. One of the efforts made is technological innovation. In addition to updating production equipment with environmentally friendly technology, it can also maximize production targets. Environmentally friendly technology policies are also applied to processes from upstream to downstream so as to save fuel and energy, thus making the production process more efficient.

One of the technological innovations carried out is the application of Integrated Small Mining (TKT) using the Bore Hole Mining (BHM) tool. TKT is a technology used in the subsurface mining pattern or commonly known as sub surface mining, which is spray mining that is carried out underground. Not only done on land, environmentally friendly commitments are also made in marine mining where Production Suction Ships (KIP) have also implemented washing technology that is more environmentally friendly. Tin obtained from marine mining can now be washed on land so that the disposal from washing is no longer thrown into the sea. The more innovations and innovations to create technology to minimize environmental impacts can minimize the cost of environmental management, for the company this is certainly not easy because every time making technological innovations takes a long time, it can even reach up to years.

Tin mining activities that have been going on for decades and are taking place in official mining areas and in the vicinity of residences have certainly had an impact on the surrounding community, both on socio-economic and environmental impacts. The life of the surrounding community, the level of welfare and economic activities will depend on the Company's activities. However, when mining and processing activities end, accompanying the depletion of natural resources that can be processed economically, will affect the welfare of the surrounding community and leave damage to the social order of society and also changes in environmental conditions, if not managed properly. This impact is managed by PT TIMAH to be positive by empowering the economic capacity of the community around the managed area. This is also in accordance with the BUMN regulations which are used as the basis for the above activities, including carrying out the mandate from the Ministry of Social Affairs for efforts to alleviate poverty. Furthermore, PT TIMAH prepares and realizes corporate social responsibility programs with the approach that the implementation of corporate social responsibility also means fulfilling the expectations of stakeholders including the surrounding community, namely the development of welfare in line with the development of the Company's business.

Companies in reporting their environmental responsibilities (environmental accounting) also use indicators from the GRI that companies report in their sustainability reports. However, the company still has not reported all the points contained in the GRI indicator, this can be seen from the results of the above research that companies in reporting environmental accounting there are still several sub-indicators that have not been included in it, such as: the company still has not included indicators of the entire activity process. environmental responsibility, disclosure in GRI Emissions and Influents, the company still does not include the handling and processing of emissions and in full, as well as disclosure of biodiversity, the company still has not disclosed about the significant impacts arising from the operation of products and services on biodiversity.

Disclosures made by the company regarding its environmental accounting are only 80 sub indicators out of 91 sub indicators GRI GRI-Series 300 So it can be said that the company in disclosing environmental accounting according to the GRI-Series 300 indicator is still 87%. The company is still continuing to develop environmentally friendly units and create technology to minimize environmental impact and minimize environmental management costs, this can be seen from the report on environmental management costs, which from year to year are always increasing. PT TIMAH Tbk always ensures that environmental impact management from the early stages of operation to the reclamation stage of post-mining areas will contribute not only from an economic perspective, but also social and environmental aspects in the future. Nature and environmental preservation will be an important key for the realization of the meaning of sustainability for PT TIMAH Tbk. At this time, PT TIMAH Tbk not only strives to meet environmental compliance at the level of compliance, but has led to more than obedience (beyond compliance) with such efforts.

CONCLUSION

It can be concluded that the role of environmental accounting is required in every stage in the company's supply chain. However, the company has not fully implemented environmental accounting. This can be seen in the table above, there are still indicators that the company has not fully included. Broadly speaking, there are quite a lot of company data that can be used to support the application of environmental accounting. There is no information system that integrates environmental data with economic data. The company has not yet converted the units into monetary units for the cost efficiency obtained from waste processing and alternative energy.

Based on various evaluations in planning and financial reporting, and the realization of PT Timah's environmental development cooperation, it can be concluded that PT Timah is a company that adequately considers environmental safety optimally. Although broadly speaking, the impact caused by mining is already in a critical condition related to conditions of forest destruction, water

pollution, or the large number of professions from the majority of fishermen to unconventional miners (TI).

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