Green Accounting as a Part of University Social Responsibility: A Literature Review

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Abstract: Recently, the most challenging world problem currently faces is climate change like global warming, soil erosion, land degradation, and pollution .That problem primarily caused by human who indiscriminate use of natural resources. New environmental regulations needed over the problems. The opportunity exists for professional accountants to contribute to solving those issues through green accounting. This paper is primarily to understand the concept of green accounting and describing green accounting as a part of university social responsibility. Paper showed that green accounting is one of the accounting concepts which reffers to environmental element in the organizations. Implementation of green accounting is not only in the industry companies but also in the university as a form of university's responsibility for society. University's responsibility for society is called University Social Responsibility. This paper found that green accounting as a part of University Social Responsibility is one of green movement which tilting towards consensus on the pivotal concept of sustainable development. Green accounting identifies, measures, and allocates that are to be addressed in environmental management accounting systems of the university. Many environmental costs can be significantly eliminated as a result of green accounting. The fact that green accounting not fully implemented in university, this paper found that green accounting could help university to identify environmental cost and saving opportunities to develop greener movement.

Keywords: Green accounting, university social responsibility, environmental element, environmental cost.

Recently, the most challenging world problem currently faces is climate change. Climate change is the condition that there is a change in the statistical distribution of weather's pattern or fluctuation and repeats over prolonged periods when that change lasts for an extended period of time. Climate change is like global warming, soil erosion, land degradation, and all many kind of pollution. Scientists detects that there are a certain human activities have also been identified as significant causes of recent climate change. The largest known human contribution comes from the burning of fossil fuels. That activity was releasing carbon dioxide gas to the atmosphere. Human activities contribute to climate change since the start of the industrial era. Now, human activities result in emissions for principal greenhouses gases are carbon dioxide, methane, nitrous oxide, and halocarbons (Nunes and do Carmo, 2008; Walmsley 2010).

The greenhouses effect is a naturall phenomenon whereby certain gases in the earth's atmosphere absorb heat that would otherwise escape to space. This heat originates from visible sunlight that warms the earth's atmosphere where some of it absorbed by greenhouses gases and radiated back to the surface. The histories and magnitudes various forcing are esteemed of solar radiation in recent decades are then examined for the potential to cause the observed pattern of climate change. Climate changes impacts are already occurring in the Greater Himalayas. The most widely reported effect is the rapid reduction of glaciers which has implications for future downstream water supply. Ongoing climate shange over succeeding decades will likely have additional negative impacts across these mountains including significant cascading effects on river flows, groundwater recharge, natural hazards, and human livelihoods.

Climate change not only caused human activates but also may give impact on human health and activities. Increasing recognition of the process of climate change has led to a growing interest by health researchers in assessing the potential mechanisms by which changes in climate could influence health. Such health effects will be modulated by factors such as socio-economic development and by the degree to which effective adaption measures are implemented. Though most research have assessed the potential impacts of climate changes in isolation from other environmental changes will be experiences against a background of other global changes such as population growth, urbanization, land use changes and depletion of fresh water resources that themselves have implications interact with climate change to magnify the impacts.

Climate change in hydrology can influences biodiversity in a variety of ways, moisture arability governs physiology, metabolic and reproductive processes, phenology, there line positions, and the geographic distribution of freshwater and wetland habitats. Climate change influenced affects the ability of biological system to support human needs. Climate change made increase into higher temperature. Heat is already cause of weather relates deaths in United Stated with more than 6,300 deaths resulting from exposure to extremely hot weather between 1979 and 2006. Diseases such as cholera and salmonella, which are transmitted through contaminated food or water, could become more widespread with climate change because of increased flooding.

Climate change could also cause more severe allergy symptoms because a warmer climate is expected to promote the growth of the molds, weeds, grasses, and trees that cause allergic reactions in some people. Climate change has already caused the spring pollen season to begin earlier in North America. Ragweed has been observed to grow faster and flower earlier in urban areas where effects of climate change are enhanced compared with rural areas.

So, what we can do to minimalize the impact of climate change? We can start from regulation first. The industrial company used to single bottom line basis for sustainable. The single bottom line concept enlighten business logic for business principles that implementation *value-centered sustainability*. The single bottom line concept motivated industrial companies to make a profit as the primary driver i the effort to maintain the growth and survival of the company. Today, companies are required not only the pursuit of economic gain but also should be oriented towards the Triple Bottom Line concept – People, Planet, and Profit – proposed by Elkington through his book *Cannibals With Forks, the Triple Bottom Line of Twentieth Century Business.*

Green Accounting

Accountant is not only analyst and make financial statement but also can make new regulations over the problem and minimalize the impact of climate change. The new environmental accounting regulation can solve that issues through green accounting that we hope can make our world greener.

Accounting is a discourse that is affected and affects the environment. Accounting grows and thrives in a society that has also been growing. Its existence is not a value-free against future development. Methods of accounting introduced by Luca Pacioli at that time deemed to be sufficient and adequate because able to solve the problem of reporting and bookkeeping business needed at this time, however, when the complexity of the business is getting higher, the necessary methods of measurement, recognition and reporting of the more advanced (Utomo, 2000). As a result, the accounting continues to evolve to match the needs of his time.

When the environmental movement (green movement) swept the world, accounting to improve itself to be ready to internalize the externalities that arise as a consequence of industrial processes, so was born the term Green Accounting or accounting environment (environmental accounting). Similarly, when most of the industry is starting to show its social face (capitalism with a human face), indicated with a focus on employees and community development activities, as well as attention to other stakeholders, accounting accommodate such changes by generating a discourse of social accounting (social responsibility accounting). Since understanding of accounting as part of the service functions of social, cultural, economic and even political, many factors affect the accounting itself.

The term Green Accounting in his article as follows; The Introduction of "Green Accounting", however well thought out, will, under the present system of accounting phallocentric, do nothing to avert today's environmental crisis. In fact, it could of make matters even worse (Cooper, 1992, p. 36). According to the Environmental Accounting Guidelines (2005), "Environmental accounting, as defined In These guidelines, aims at Achieving sustainable development, maintaining a favorable relationship with the community, and pursuing effective and efficient environmental conservation activities.

Green accounting is one of type accounting that can give you information about how many environmental costs to be incurred companies to produce environment-friendly products or services. Green Accounting is a new system of environmental accounting that enables the calculation of income for the country, having regard to the economic damage and the depletion of natural resources. According to the EPA, Green Accounting management is the identification, prioritization, quantification or qualification, and the incorporation of environmental costs into the decision.

Using of the concept of green accounting for companies to encourage the ability to minimize the environmental problems that it faces. Many large enterprises and service industries are now implementing environmental accounting. The aim is to improve the efficiency of environmental management by assessing environmental activities from the stand point of environmental costs and the economic benefit.

Environmental costs are the effects of the financial side of the non-financial ability charged as a result of the activities that affect environmental quality. Environmental accounting system consists of conventional accounting environment and ecological accounting. Conventional environmental was accounting to measure the effects of the natural environment in a company in financial terms. Accounting ecological trying to measure the impact of a company based on the environment, but the measurements are made in the form of physical units (the rest of the production of goods in kilograms, energy consumption in kilojoules, etc.), but the standard measurement used not in the form of financial entities (Sukma, 2013).

In 1990, an opinion poll in the United States (Bragdon and Donovan, 1990) and some countries (Choi, 1999) reported that most people feel that the discourse of the environment is important and the requirements and standards to be not complicated, and the development environment continuous must be continuously improved with of course its expensive boarding (Bragdon and Donovan, 1990). The results of this opinion poll suggested that stakeholders focus in terms of the company responsible for environmental issues. Much can be done by companies to communicate their attention to environmental issues; it covers newspapers, business publications, television or radio, as well as the annual financial statements (Gamble, et al., 1995).

Currently there are no basic standard concerning environmental disclosure items. However, some institutions have issued recommendations environmental disclosure, including Economic and Social Council-the United Nations (ECOSOC-UN), Ernst and Ernst, Institute of Chartered Accountants in England and Wales (ICAEW) and the Global Reporting Initiative (GRI). The motivation behind the company to report on environmental issues is dominated by a factor of volunteerism (Ball, 2005; Choi, 1999), capitalization or financing of environmental problems and the existence of contingent liabilities set out in accounting standards such as FASB (Gamble, et al., 1995), their agency theory (Watts and Zimmerman's. 1978), the theory of political legitimacy and economic theory (Gray, et al., 1995).

In this study, is expected to reinforce the parties associated with the Green Accounting in its effort to join and participate in the effort to realize the concern for the environment. A little more expected that Green accounting become agents of change for environmental improvement (Bebbington, 1997). The thing to note is the changes made by the research findings in the Green Accounting is not just of theoretical side but also from the practice in area. The possibility of changes in accounting practices depends on the transformation of understanding of accounting to the current generation (Day, 1995). The theory was created based on empirical research would be more convincing in terms of the transformation of the art. To that end, transformation Green Accounting is empowering both educators and learners is the basis for the present study. For the making of the curriculum in education was also very instrumental in the transformation of the concept of Green Accounting optimizing this.

In today's conditions, probably the most important and interesting is the development agenda of the Green Accounting as a concept of sustainable elaboration which is expected to become the basis for decision making. Redclift (1987) states that the definition of sustainable development is promoting between natural resources are limited to the achievement of economic objectives. Sustainability is a close relationship between economic, environmental and social. To that end, Green Accounting associated with sustainability, will require adjustments between conventional accounting with social needs in the vicinity. Green Accounting associated with sustainability are provides information such as the calculation of what it will cost incurred by the company to the products / services they produce are products / services that are environmentally friendly, safe for consumption or use.

Green Accounting Measurement

Most environmental problems are closely connected with social problems such as poverty. Building a sustainable community with the integration of environmental improvement, economic, and social becomes important to ensure future generations can enjoy life to the harmonization comfortable environment. New technology development and deployment of products and services that are environmentally friendly is an important activity that minimalize with less significant environmental impacts. Disclosure of environmental information becomes a very important factor in improving the social functions of an infrastructure that provides economic benefits that environmentally friendly.

Until now, there are some standards for reporting the issue of sustainability of a company. In 2005, the international auditing and Assurances standards boards (IAASB) approved international standard for sustainability reporting companies. , International Standard for Assurance Engagements (ISAE) 3000 is used by accounting firms that conduct corporate responsibility assurance engagements if there is a no national alternative (Ballou et. al., 2006). In November 2003, Statement of Position (SOP) 03-2, Attest Engagements on Greenhouse Gas Emissions Information, was developed by the Joint Task Force of the American Institute of Certified Public Accountants (AICPA) and Canadian Institute of

Chartered Accountants (CICA) on Sustainability Reporting to provide guidance for the application of assurance standard AT101 to greenhouse gas information (AICPA, 2011).

The Global Reporting Initiative (GRI), a comprehensive sustainability reporting framework that serves as a guide for any organization reporting on its economic, environmental, and social performance, was established in 1997. The Sustainability Reporting Guidelines provide reporting principles, reporting guidance, and standard disclosures (including performance indicators) (2011). The Sustainability Reporting guidelines provide reporting principles and guidance and standard disclosures (including performance indicators) (2011). All of these initiatives contribute to comprehensive reporting and stakeholders' understanding of finance l, social and environmental issues, but they do not provide guidance for measuring the social and environmental costs.

In Indonesia, the Indonesian Institute of Accountants (IAI) has developed a standard of disclosure of environmental accounting under Statement of Financial Accounting Standards (SFAS) No. 32 and 33. Both SFAS regulates liability companies from the mining and forest concession owners to report item-item environment in the financial statements. In addition, Indonesia also has a framework for the conservation of the environment with the issuance of Law No. 23 of 1997 on Environmental Management, which revised the previous regulation of 1982 on Environmental Management. Furthermore, a memorandum of understanding between KLH and BI was signed in 2005 ago as a follow-up of Bank Indonesia Regulation No. 7/2 / PBI / 2005. Environmental aspect to be one of the determining variables in lending and environmental performance issued by the Ministry of Environment through the PROPER is their benchmark.

Since 2000 Japan succeeded in proving that with the implementation of Green Accounting increase its profit. Based on "A Survey of Corporate Environmental behavior" implemented by the Ministry of Environment Japan, showed that the number of companies that implement green accounting increased from 40.9% to 51% due to reduce the environmental costs so that profits can be increased (Kokubu and Nashioka, 2001).

Japan's Environment Agency which later became the Ministry of Environment issued the environmental accounting guidelines (Environmental Accounting Guidelines) in May 2000. This guide was then revised in 2002 and 2005. All companies in Japan are required to apply the Green Accounting. Japanese big companies began to put the position of environmental accounting (Green Accounting) is aligned with financial accounting. A growing number of companies in Japan has been implementing environmental accounting in accordance with the regulations and instructions issued by the Ministry of the Environment of Japan. Background importance of environmental accounting is basically demanding full consciousness companies and other organizations that have benefited from the environment. It is important for companies or other organizations in order to increase efforts in considering sustainable environmental conservation (Sukma, 2013).

Environmental Reporting Guidelines at the latest in 2012 there were two parts, namely Part One: Concept of Environmental Reporting and Reporting Principles and Part Two: Report Contents in Environmental Reporting. In the first part there are three chapters, namely Chapter 1: Concept of Environmental Reporting, Chapter 2: Principles of Environmental Reporting, and Chapter 3: Framework for reporting environmental. The second section, there are five chapters in it, namely Chapter 4: Report Parameters and Summary; Chapter 5: Information and Indicators on how Environmentally Focused Management Including Environmental Management is working; Chapter 6: Information and Indicators on Environmental Impacts of Business Activities and Environmental Initiatives Undertaken to Mitigate Them; Chapet 7: Information and Indicator on the Economic and Social Context of Environmentally Focused Management, and Chapter 8: Miscellaneous Content to Be Disclosed.

Environmental costs in writing An Introduction to Environmental Accounting As A Business Management Tool (1995) compiled by United States Environmental Protection Agency (US EPA) says if the costs which occurred in the company can be divided into several groups:

Conventional Costs are the cost of raw materials, utilities, capital goods, and supply usually discussed in cost accounting and capital budgeting, but not considered as environmental costs. Potentially Hidden Costs are the costs that may be potentially hidden from the manager. Among them are environmental upfront costs that occur before the surgery. Contingent costs or contingency fees are fees that may or may not be occured in the future. Image and Relationship Costs include the cost of annual environmental reporting and public relations activities, the cost of voluntary activities environment such as planting trees, and the costs for the program awards or recognition.

Environmental prevention costs are the costs for activities performed to prevent waste produced and or waste that cause environmental damage. Examples of preventive activities: Evaluation and selection of suppliers, the evaluation and selection tools for pollution control, process design and product to reduce or eliminate waste, training personnel, studying the environmental impact, audit environmental risks, the implementation of field research, the development of an environmental management system, recycle the product, and obtaining ISO 14001 certification. Environmental detection costs are the costs for activities performed to determine whether a product, process, and other activities in the company has met the environmental standards applicable or not. Environmental standards and procedures to be followed by the company is defined in three ways, are government regulation, voluntary standards (ISO 14001) developed by the International Standards Organization, and Environmental policies developed by management.

Environmental internal failure costs are the costs for the activities undertaken since it produces waste and garbage, but not discharged to the outside environment. Internal failure costs occur to remove and process waste and garbage when it is manufactured. Activities internal failures have one of two objectives: to ensure that the waste and sewage produced is not discharged to the outside environment; and to reduce the level of waste disposed so that the numbers do not pass environmental standards. Environmental external failure costs are the costs for activities undertaken after removing sewage or waste into the environment. External failure costs can be further divided into categories of realized and unrealized. External failure costs Realized (Tirrenus external failure cost) is experienced and fees paid by the company. The cost of failure that cannot be realized (unrealized external failure costs) or social costs (societal cost), caused by the company but experienced and paid for by the parties outside the company.

University Social Responsibility

Implementation of green accounting is not only in industry companies but also in the university as a form of university’s responsibility for society. The concept of social responsibility or Corporate Social Responsibilities (CSR) at the college was better known as University Social Responsibilities (USR). University Social Responsibilities (USR), is basically an ethical policies which affect the quality of the performance of community colleges that include students, administrators, teachers and all employees of the college through the management responsible for the impact of education, cognitive, labor and the environment generated by universities through an interactive dialogue with the public in order to generate sustainable human development.

University Social Responsibility (USR) can be defined a policy of ethical quality in the activities of the university community (students, lectures, and administrative staff), through responsible management of the educational, cognitive, labor and environmental impacts of the university, in a participative dialogue with society to promote sustainable human development in four steps: (1) commitment, (2) self-diagnosis, (3) compliance, and (4) accountability. (Vallaeys, 2013: 1). In addition, USR also be described as the university's commitment to achieve something other than education (knowledge transfer), research, teaching, and scholarship (Esfijani et al, 2012). USR can also be interpreted as a philosophy of the universities role in the ethical approach to develop and establish ties with local and global community to continue the development of social, ecological, environmental, engineering and economics.

University social responsibility (USR), is a philosophy or principle for social movement, which can be perceived as a philosophy of a university to use an ethical approach to develop and engage with the local and global community in order to sustain the social, ecological, environmental, technical, and economic development. USR described as university engagement and that university partnership with its communities is achieved through education (transferring knowledge), provision of services, research, teaching, and scholarship. Scope of USR is economic, ethical, suchh social, philanthropic, and environmental.

USR covering social issues, the environment and the economy cannot be separated from the strategic and operational plan of the university, where the most important aspect is how universities interact with internal and external stakeholders. The concept of this USR becomes important points while in the 2nd Asia-Europe Education Workshop with the theme Knowledge societies Austria: Universities and their Social Responsibility. During the discussions in the workshop, the conclusions that can be drawn is that the social dimension should be integrated with policies and strategic plans in higher education institutions. Based on this continuous approach, sustainable campus is a strategy that seeks to reduce the ecological impact of the institution through the rational use of resources and educate the entire community is in college about sustainability ethics.

Why university should have a University Social Responsibility? Because every graduate from that university not only has a competitive competence in technology and science but also has a high sense of environmental awakes and always able to minimize the negative environmental impact of what they do. In addition by making the adoption of green campus was through trees planting around the campus, the application of non-smoking areas on campus and to realize the campus into a clean and healthy environment. Some of those steps should be done by a college to apply USR as part of an ongoing activity and embodied in the vision and mission of the college.

Green Accounting as a Part of USR

Sustainable management and sustainable campus with attention to environmental aspects become very aware of. Climate change was caused by pollution of water, air and natural resources become the world's problems today. Those problems led to a crisis of water, energy and the reduction of green land today and the future. Green accounting university-based social responsibly aims to create a campus infrastructure that comply with the needs and support the comfort and productivity. Green accounting as a part of University Social Responsibility is one of green movement which tilting towards consensus on the pivotal concept of sustainable development. Green accounting in University Social Responsibility is green tools to support green movement in the world. Green accounting identifies, measures, and allocates that are to be addressed in environmental management accounting systems of the university.

Green accounting was associated with sustainability are giving information such as the calculation of what it will cost incurred by the college in order that intra-campus activities or existing infrastructure within the campus environment is an environment-friendly. One of the environmental programs lately is primarily intended for university environment is called eco-campus program (Green Campus). Basically a variety of environmental programs made by the government is no exception eco-campus is voluntary (volunteer) and a stimulus program, where there is no element of coercion or pressure from the government. Thus the expected is emerging and developing awareness and people's awareness of its own campus in preserving the environment. Likewise, the campus as a gathering place for intellectuals and place of birth to the next generation of young intellectuals are expected to be a model or example for other institutions in good environmental management.

Green Campus is a program or movement that is trying to make the campus a comfortable, shady, shady, and beautiful and of course, can reduce global warming. Campus is expected to implement science and technology is held primarily in the field of environment. Campus should become the motor of change towards a green environment. Go green concept here is not just to plant trees or make the campus into a "green". But how the campus can be use existing resources effectively and efficiently. Ranging was using of electricity, water, paper, waste management, drainage channels and much more.

According to the Environment Agency Surabaya (2011), eco-campus is defined as a campus that has been caring and cultured environment and has conducted environmental management systematically and continuously. Eco-campus is a reflection of the involvement of the entire academic community located within the campus to always pay attention to aspects of health and the surrounding environment.

Some indicators of the creation of eco-campus, among others, the policy management campus-oriented environmental management, their efforts to save water, paper, and electricity, their reforestation to achieve ideal proportions green open space, the availability of the building / building environmentally friendly, maintenance of cleanliness and environmental comfort, the creation of a campus without smoking and pollution-free, the implementation of environmental education for students, as well as the awareness and involvement of all elements of the academic community in the culture of environmental care.

To achieve the indicators are very comprehensive urgent action is required sustainable and not just a mere ceremonial or event. Therefore, changes in the mindset of entering academic community in addressing and treating the environment with care is the first step which needs to be pursued. There is an appreciation given to universities which managed to increase green space and lowering carbon emissions in the environment around the university. One such award is the UI Green Metric. UI Green Metric is a tribute organized by the University of Indonesia (UI), which is given to college - universities worldwide that have a strong commitment to environmental management in the campus since 2010.

CONCLUSION

The most challenging world problem currently faces is climate change like global warming, soil erosion, land degradation, and pollution .That problem primarily caused by human who indiscriminate use of natural resources. New environmental regulations needed over the problems. The opportunity exists for professional accountants to contribute to solving that issues through green accounting.

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