DECORATING BIODIVERSITY ACCOUNTABILITY REPORT IN INDONESIA LOCAL GOVERNMENT

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Abstract - This study aims to raise the discourse on biodiversity reporting by considering the interaction of government and natural living systems towards a biodiversity accountability framework. We analyze local people's perspectives on accounting that can influence accounting standards and accountability reporting. The method used is grounded, which allows researchers to raise the fundamental problems that surround biodiversity reports. This study found that biodiversity reports have an external dimension in terms of accountability that meets public needs motivated by a sense of responsibility. It is expressed through individual actions and the mission of the organization towards the biodiversity environment.

Keywords - Accounting, Biodiversity Report, Local Government, Indonesia

I. INTRODUCTION

In recent years the attitudes, behavior, and strategies of the government about biodiversity are changing. However, the government's perception of their interdependence with biodiversity remains varied. The government perceives biodiversity, among others, related to technology, services, and natural management (Houdet, 2008). In this regard, combining strategies to reduce biodiversity problems bring up the new thinking of the form of biodiversity report (Iftikhar et al., 2007), as well as it is business management and production processes (Houdet et al., 2009). It is evident in the provision of biodiversity information systems in the government organization which it has not become an integral part of government plans for decision making and management of resources, liabilities, skills, and organizations (Houdet et al., 2009).

In this case, awareness about reporting on the relationship between the exploitation of nature and biodiversity must be a significantconcern for local governments. It is to respond to pressure from stakeholders, including non-governmental organizations, local communities, and rating agencies, who argue that the current report has not analyzed the risks and problems faced concerning natural exploitation and biodiversity (Hanson et al., 2008). Alternatively, in other words, the report is not following people's perspectives on the interdependence relationship between humans and biodiversity.

Therefore, researchers argue that biodiversity reporting is needed to ensure understanding and assessment of the nature and dynamics of interactions between government and biodiversity. So far, the government has not revealed a strategy that combines losses and efforts for environmental conservation. The biodiversity accounting report only focuses on providing information for economic decision making in supporting the current political paradigm of economic growth and development. While accounting terminology has become part of “business language” to communicate information. In anthropological terms, language is the main factor that causes the dominant position of the human species on the planet. In economic terms, the word “domination” is the success of the market system, and the knowledge that shapes the language of accounting and its use and both play an essential role in achieving economic power. In this case, the government is not fluent in the language of accounting or is not accustomed to its use, therefore, unaware of the effects of this race of economic domination.

This paper aims to reformulate local government reports on biodiversity so that economic dominance over nature can be reduced. We argue that (a) a tool is needed to take into account government interactions with biodiversity, and both need to be integrated; (b) the need for a management information system for internal parties to guide decision making; and (c) reporting tools for external parties for institutional purposes (for example, referring to norms or targets based on the law), especially the needs of stakeholders for the framework of government responsibility for biodiversity and ecosystem services used by others. As such, this paper proposes a discourse to take into account government interactions with living systems, towards an operational of the biodiversity accountability framework. First of all, researchers analyze how management accounting approaches or costs in helping governments account for biodiversity, and ecosystem services from the perspective of local communities and strive to achieve organizational targets. Then, researchers discuss how accounting from the perspective of local communities can influence accounting standards and accountability reporting.

II. THE ROLE OF ACCOUNTANTS AND DEVELOPMENT OF BIODIVERSITY ACCOUNTING REFORMULATION

Gray et al. (1993) describe possible approaches for formulating biodiversity reports, namely: inventory, and sustainable costs and flow of resources. The thinking behind the inventory approach is to identify, record, monitor, and report on various categories of natural capital. The inventory provides a practical and systematic approach to calculating natural assets. Meanwhile, the approach of sustainable cost and resource flow calculates the organizational costs needed to restore biodiversity.However, it is difficult to apply practically to natural assets, given the current level of environmental expertise that results in monetary costs from environmental degradation being deemed unfeasible. Therefore, an asset-based inventory approach is preferred over a resource flow method that focuses on flora and fauna flows.

At the micro-level, the role of accountants in accounting for natural assets is not clear. People doubt with the appropriateness of environmental accounting (like Solomon, 2012) because they believe that the existence of conventional accountants is less objective in valuing the environment. More recently, 'green' accountants such as Gray (1990), Macve and Carey (1992), Owen (1992), and Adams (1992) oppose this view. Gray (1990) feels that accountants have an information design and control system that enables them to process and capture relevant data, as well as they have a broader set of capabilities related to independence. Macve and Carey (1992) advocate a multidisciplinary approach. First, independent specialists who meet the requirements in various scientific disciplines play a role in classifying and collecting data on biodiversity. Then, secondly, the role of an accountant is to make a report which is suitable for managers and stakeholders for making a decision.

As is known, the role of accountants in the publication process is seen as an essential professional advantage. Based on the accountants' experience of the annual reporting cycle, the accountant has a role in communicating the organization's finances. Indeed, the function of communicating information is at the heart of accounting (for example, AAA, 1966). Owen (1992) views the development of external reporting practices to promote public accountability as one of the two areas of interest in the green agenda group (Owen 1992). Adams (1992) views accountants as managers, processors, originators, and gauges of information which are experts in their fields. This accounting terminology has also been used to describe environmental accounting, namely: ‘an accountant is a person who pays attention to stock and money flows; therefore, an environmental accountant discusses the stock and flow of goods, and environmental services’ (Wright, 1990).

Besides, the development of an independent environmental advisory team is proliferating, and they are unifying their expertise in multi-disciplinary groups. Therefore, accountants can accommodate their green information to make biodiversity reports. Gray (1990) considers the accountant's expertise to be 'recognizing, assessing and recording transactions, and designing information systems for control within an organization.' Cost/benefit analysis, for example, provides techniques that are useful for environmental improvement, once the initial stages of data collection and aggregation have finished, accountants, play a significant role in communicating environmental information. Accountants as financial communicators, therefore, can prove their most significant contribution to environmental initiation.

In general, the accounting system provides information to end-users. The organization, which is a social servant, legitimized by the community, provides information to those who are interested in valuing the organization's resources. These resources can be financial or non-financial, such as wildlife assets. For example, a company's shareholders need to receive information about corporate management of their marginal assets to assess the financial performance and overall management environment. Directors are responsible to shareholders for the management of wildlife assets in the surrounding environment. The question that develops in this regard is: Are people's lives worse because of the organization's activities? Are there benefits at the expense of habitat or species degradation? Loss of habitat and species due to loss of biodiversity both nationally and globally can only be assessed based on information obtained as a whole. Useful measurement is the beginning of effective monitoring. In this case, the provision of information to the public enables the public to monitor conservation taking place by the government in a coordinated manner.

As is known, conventional accounting is arranged sequentially, starting from collecting data using information systems, then classifying data, and subsequently, making financial statements in monetary value for external needs. The role of accountants in each stage of the reporting process is needed. This sequential model seems appropriate to be implemented when accountants make wildlife asset reports. First, the initial step is to collect physical and habitat data from wildlife and classify it. Second, decide to assess the assets of wildlife in monetary or non-monetary forms. Third, report wildlife data, and create information in the final report that can be used to assess the environmental performance of the organization. For example, the United Kingdom has adopted this sequential model

for reporting wildlife assets by providing aggregate statistics, even without monetary value.

III. METHOD

This study uses the Grounded Theory (GT) method. This theory is one type of qualitative method which is inductive because it wants to find a new theory. The object of research is a phenomenon in the natural context that is understood after field data is obtained, both through interviews and observations; then the researcher interprets the data. The study was conducted on local governments in Indonesia. The sample chosen was Makassar City as the capital of South Sulawesi province, which is densely populated and has many activities that can damage biodiversity. Other regions are Gowa Regency which is a satellite area of Makassar city, and Barru Regency which is a satellite area of Pare-pare City. All samples have severe environmental degradation problems.

The selected informants are government staff, NGOs, and citizen who are concerned with biodiversity reports of the local government—the selection of informants through snowball techniques.Interviews were conducted during the three-month data collection process and information gathering through formal and informal interviews. Writing notes using verbal skills related to environmental problems and their relationship to biodiversity are represented. Therefore, the research steps can be seen in Table 1.

Step	Focus	The objective of the step
1	What is vital for the community?	The researcher develops a set of core community values and indicators.
2	Where is the biodiversity report going?	Researchers brainstorm about biodiversity reports concerning indicators that have been developed.
3	What do people need to know and why?	Researchers gather information needed by the public for an ideal biodiversity report.
4	What is the form of the biodiversity report reformulation?	Formulate relevant information for a biodiversity report

Table 1.Research steps

IV. FINDINGS AND DISCUSSION

Accounting practices have evolved over the centuries and are designed to calculate financial figures, and, in particular, the formation of equities and profits. The conventional accounting paradigm, with its narrow focus only on accounting numbers, does not capture the environmental consequences of organizational activities. Therefore, the need to develop new methods of recording, measuring, and disclosing biodiversity is very much needed. That includes assessing the impact of externalities in accounting reports, such as pollution or habitat destruction. Possible approaches to dealing with externalities include the basis for calculating damage costs, prevention, and the basis for restorative assessments.

According to the informant: “normatively biodiversity reports must be calculated and reported by government organizations transparently,” the problem is how can this be done? Because applying accounting techniques to ecological problems is difficult (Maunders and Burritt, 1991). According to the informant: “The root problems of any discussion about biodiversity accounting is that biodiversity data are not available and the government does not know how to record them.” The work that has been done is limited to some studies conducted mainly by Jones (1996, 2003), Jones and Matthews (2000), Houdet (2008), Houdet et al. (2009), and Bebbington (2010) who set two broad and conflicting approaches when recording biodiversity.First, measuring changes in biodiversity using hierarchical pyramids.

This pyramid outlines six critical levels of difference in natural assets. There are essential differences between critical and non-critical habitats. Critical habitats are not assessed because they cannot be contested, while non-critical habitats are non-threatened capital. Inventories gradually begin at level 1 categorization, which is to assess habitat type (e.g., forest or grassland type) and the status of natural capital (for example, protected habitats, such as national parks). Level 2 is an inventory of rare and endangered species. Levels 3 and 4 are assessments of flora and fauna of critical habitats, first by species, and then by population.

Furthermore, there are two inventories of all habitats at levels 5 and 6, the first by species and the second by population. Jones suggested that organizations record this information year after year so that habitat changes that occur over time can be monitored. According to the informant: “this information must be communicated to stakeholders for monitoring purposes, for example, by companies both in their sustainability reports and in their annual reports.” Exclamation Jones (2003) of the nature inventory model has been cited in a special edition by Siddiqui (2013) which consider mangrove forests in

Bangladesh. Siddiqui (2013) found that the model could be operationalized even though it was limited by the availability of data.

Second, a broader approach is the ecosystem approach. This approach adopts a top-down approach and deconstructs ecosystems/habitats, rather than a bottom-up approach that moves up from flora and fauna. The researcher adopts a comprehensive deconstructive approach by identifying marketed ecosystem services, non-market ecosystem services, and other non-market environmental impacts. Meanwhile, Houdet (2008), and Houdet et al. (2009) adopted a life cycle approach. They provide management accounting guidelines for providing ecosystem services, regulatory and maintenance services, and for socio-cultural services.

Proponents of biodiversity accounting and their efforts to provide financial values to wildlife and species are faced with significant challenges in developing effective techniques and approaches to produce monetary value. Although, for decades, individual species and wildlife must and can be valued in any form of financial value have been the philosophical riddles debated in the social and environmental reporting literature. In that sense, accounting as a biodiversity calculative technology can only be accounted for if species can be valued in financial terms. Therefore, this study concludes the findings in table 2 as follows.

Issues	Findings
Information	Changes in biodiversity due to conservation and exploitation
Frequency	Annual
Value	Ethnocentric

Table 2. Summary of Findings

Biodiversity reports are a means by which individuals and organizations are responsible for their actions (for example, through legal obligations and reporting requirements, and explicit disclosures), and also are a means by which organizations and individuals take internal responsibility for protecting biodiversity. Therefore, organizations need to have a mission and values that can open themselves to public or external supervision, and assess the performance of the organization with their goals. Accountability, therefore, operates along this dimension which involves many actors (communities and individuals), uses various mechanisms and performance standards (external and internal, explicit and implicit, legal, and voluntary), and requires varying degrees of organizational response (functional and strategic).

V. CONCLUSIONS AND SUGGESTIONS

The biodiversity report has an external dimension in terms of the obligation to meet specified standards of behavior and is internally motivated by a sense of responsibility. It is seen through individual actions and organizational missions on the environment of biodiversity. The findings of this study are no different from the proposals of democratic accountability theorists, although their focus is on public and legislative institutions rather than non-profit organizations. More precisely, biodiversity reports on the government environment allow the government to control itself over nature and protect it.

The form of government accountability for biodiversity produced in this study is an ethnocentric form which assumes that humans and nature are equal, and there is no dominance between one another. Therefore, the report contains human life that protects nature.

The implications of research on biodiversity accounting are as follows: first, accountants participate in multidisciplinary groups that rely on conservationists and naturalists in gathering and classifying data. The accountant, in this case, prepares and disseminates cost information using methods developed by other parties. An interdisciplinary approach like this is essential in initiating the environment.

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