

SUSTAINABLE DEVELOPMENT: WHAT IS THE ROLE OF AUDIT?

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Abstract: This study aims to explore the potential use of environmental audit as a tool to assist in the achievement of sustainable development especially in the context of public sector where the environmental accountability, has been emphasized by the World Commission on Environment and Development (WCED) as one of the prerequisite to achieve the goal. This study employs qualitative method to explore the issue further in the context of Malaysia, a developing country. The respondents for this study were the public auditors, public officers and the Members of the Legislative. The findings clarify that environmental audit in the public sector could contribute positively to the achievement of sustainable development goals. However, in the context of developing countries where economic development is given priority over the needs to preserve the environment, the finding shows that the role of environmental audit is actually limited. It is merely used as a preventive measure to ensure planning and development is not significantly affected the environment and the society.

Keywords: Environmental audit, public sector, sustainable development, developing countries, environmental accountability.

Introduction

Environmental accountability, especially in the public sector has been emphasized by the World Commission on Environment and Development (WCED, 1987), is vital if the goal of sustainable development needs to be achieved. Therefore, a mechanism is needed to ensure accountability in the public sector is in place and environmental audit could be used for that purpose (Toepfer, 2004). The audit conducted in the public sector undoubtedly has been used as the main elements to safeguard the accountability in the public sector. However, the role of environmental audit in the context of strengthening environmental accountability in the public sector could still has the opportunity to be refined as study by Morin (2008) shows that despite having important role in the public sector, its contribution is minimal. Therefore, it is not surprising that the weakness of accountability continues to be an issue that prevented the achievement of sustainable development goals (Najam & Halle, 2010).

If audit cannot properly function as a mechanism to safeguard accountability, then the role of audit to contribute to the

achievement of sustainable development is in questioned especially in the context of developing countries where the economic development always been given priority over the efforts to preserve the environment (Liu, 2009). Thus, the potential role of audit and lack of environmental accountability become the motivation for this study to explore the potential role of environmental audit in the public sector in the context developing countries to achieve the sustainable development goals.

Discussion in this paper will be divided into four sections. First, the issue of environmental audit and sustainable development from the perspective of public sector is discussed. Next, is brief explanation about the methodology and subsequently, the findings and conclusion to end up the discussion.

Audit and Sustainable Development in the Public Sector

The Auditor-General Institution can contribute significantly to the achievement of sustainable development (Toepfer, 2004; INTOSAI, 2004) as it is one of the major institutions established to safeguard and strengthen accountability in

the public sector through the audit undertaken (Langseth, Pope & Stapenhurst, 1997). The audit is important to ensure good governance in the management of public resources which is the prerequisite for sustainable development (Toepfer, 2004) by providing information to the management in the planning of policies related to sustainable development (Shih *et al.*, 2006).

In the context of achieving sustainable development in the public sector, INTOSAI (2004) has outlined the role of the Auditor-General Institution as an autonomous organization to have the freedom to audit the government programs and activities to ensure the public resources have been used properly and effectively; the financial system is properly organized; activities are properly implemented; and to report objectively to the Parliament as well as to the public. Thus, the audit can have potential influence on the policy and environmental management system implemented by the government. However, to ensure the audit can be implemented effectively, the Auditor General Institution should have clear mandate in the law to undertake the environmental audit because the mandate is important to provide the Auditor-General an open access to the information even though it is not the key requirement (INTOSAI, 2004).

Even though the audit is considered important to assist in the effort to achieve the goals of sustainable development, the assessment of sustainable development itself is the major challenge that must be addressed by the audit profession if the need of environmental audit in order to contribute significantly to the achievement of these goals. Therefore, the development of an appropriate framework of performance indicators for sustainable development should be given priority because as emphasized by Diamantis and Westlake (1997), it is important to identify a set of appropriate environmental indicators for the environmental audit because no general agreement has been reached until this point on a set of environmental performance indicators to be used in the auditing. However, to develop

the appropriate performance indicators is not an easy task and is a major challenge to enable an objective audit assessment because the concept of sustainable development which requires a balance between economic development, social and the environment is still unclear and has raised various criticisms (Zubair, 2006).

The concept of sustainable development has been criticized for its ambiguity and focus on the broader perspective (Zubair, 2006) that posed problems to the parties involved in the decision making process to find the best interpretation because until now there is no agreement reached about a single definition of sustainable development that meets the needs of all parties (Farrell & Hart, 1998). The interpretation of sustainable development concept also criticized for not meeting the basic administration requirements set for agency and its linkages with the accountability path (Ross, 2000) because the term is used in different perspectives (Adams, 2001; Turner, 2006; Aras & Crowther 2008) depending on the context and objective of its application according to the needs of a group (Barraclough, 2001; Meyer, 2007). The diverse interpretation of sustainable development has increased the pressure to redefine the concept and its application (Aras & Crowther 2008).

Diverse interpretation of sustainable development also leads to the question of what actually need to preserve (Zubair, 2006) and how to implement development in a sustainable manner (Gandhi *et al.*, 2006). According to Zubair (2006), sustainability is concerned with the ability to maintain stable economic growth for a long period of time, to achieve justice in equity distribution between generations to use natural resources and limit the possibility of pollution to increase in order to maintain the current environmental quality. All of these aspects are interconnected but is difficult to get it together as each elements of environment, economy and social exists as a distinctive system that causes the overall assessment difficult to conduct as each system is evaluated separately (Harris, 2000).

As a distinctive system, separation of the environment, economic and social development also creates a modernization dilemma where the need for specialization has led to the problem of fragmentation that requires special administration to address problems and find solutions for each system. Therefore, an appropriate approach to combine all these aspects is required to get a method or a more realistic interpretation by creating integration between environmental indicators with social and economic indicators. The integration of these elements is important to enable the auditors to provide objective and practical audit recommendations (He *et al.*, 2007).

The need to achieve a balance between economic development, environment and social justice as derived in the concept of sustainable development also requires an integrated approach to produce a form of practical measurements in order to achieve a better quality of life for present and future generations (Turner, 2006). One of the early works to develop sustainable development indicator is as done by the World Resources Institute (WRI) (Hammond *et al.*, 1995). Based on the WRI framework, the development of performance measurement framework for sustainable development should focus on three aspects. First is the need to account the environmental resources and natural resources in the calculation of Gross Domestic Product (GDP) through the introduction of environmental accounting. Environmental resources and natural resources have to be accounted for in the GDP on the justification that reductions in environmental and natural resources also have the same effect as the reduction in capital economic asset to the society. However, to date, no country has taken into account the environmental and natural resources into national accounts.

Next, the performance indicators for sustainable development should also take into account the human resources requirement involving the development of human resource and social change. The performance

indicators should demonstrate the extents of community needs are met by taking into account the environmental impact to the health and welfare of the community as a key indicator of sustainability. Meanwhile, in accordance with the requirement to take into account the environmental impact to the society, performance indicators for sustainable development should also emphasize the community exposure to environmental problems such as the problem of pollution or access to clean water which is different according to social and economic groups.

When developing the performance indicators for sustainable development, the best management and monitoring system should be practiced to ensure a balance can be achieved between economic, environmental and social (Eser, 2007). However, it is difficult to implement a good monitoring system on the performance measurement for sustainable development because the concept is based on the needs and values of present and future generations that cannot be specifically determined as well as the determination of needs is different according to place (Dictus, 2007). Therefore, it makes it difficult to do a logical and transparent measurement in order to translate it into knowledge and then used in the decision-making process (Turner, 2006). In fact, it is difficult to get a consensus not only on the performance indicators but also on the best concept of framework to develop performance indicators for sustainable development (Hammond *et al.*, 1995).

The nature of audit assessment also has potential to influence the role of audit to contribute towards strengthening the environmental accountability for the purpose of achieving the goals of sustainable development. The *ex-post* audit in the public sector which is done during or after the implementation of development plans to assess the extent of achievement of a policy and the effects to the environment is not sufficient to ensure government project has been effectively implemented. Perhaps, a preliminary audit

assessment is needed before the project is implemented and should be incorporated in the environmental impact assessment (He *et al.*, 2009) and should be implemented on an ongoing basis in order to provide the desired effect (Goodall, 1995; Lang, 1999).

Eventhough conducting audit after a project has been implemented is seen insufficient to ensure effective implementation of a government project but the audit conducted during the development process may help to explain why the goals set for the policy cannot be fully achieved (He *et al.*, 2009). In fact, the Auditor General can raise the problems identified in the audit and recommendations made in the audit report can help the relevant government agencies to improve their performance and reduce costs (GAO, 1995). Thus, to further strengthen the role of environmental audit and to overcome the shortcomings in the *ex-post* environmental audit assessment, audit which conducted before (*ex-ante*) initiation of a development project should be integrated. Therefore a regular audit could be conducted on an ongoing basis (Goodall, 1995) to allow early detection of any potential environmental problems that may inhibit the pursuit of sustainable development, thus immediate remedial actions can be done to resolve it (Kakonge, 1998).

Conducting environmental audit on an ongoing basis is considered important especially when dealing with developmental issues which generally put priority to economic interest than to preserve the environment. The priority on the economic interest would indirectly give impact to the role of environmental audit as a key element to strengthen accountability in the public sector and also to the achievement of sustainable development because the importance of environmental conservation generally having negative relationship with economic developmental needs (Liu, 2009). The need for economic development, particularly for used in the industrial requirements, not only gives impact to the environment but also reduce the stock of natural

resources. On the other hand, concentration on environmental preservation will eventually pull out investment opportunities and increase the cost of development. Meanwhile for Gandhi *et al.* (2006), priority to economic development causes the natural resources to be fully utilized as inputs for production and the process ultimately has an impact on the environment. However, the environmental impact from economic development process is something that cannot be avoided.

According to Arrow *et al.* (1996), environmental problems that occur in the early stages of development are an acceptable effect because the main focus at this stage is on improving the economic position through exploitation of natural resources. Rostow (1960) also insisted on the full used of natural resources as capital in the process of development where the natural resources will be fully exploited for use as capital to the industry without considering the effect on the environment. However, over exploitation on the environmental and natural resources generally gives impact to the environmental quality and contributes to the problem of environmental degradation (Arrow *et al.*, 1996; Yandle *et al.*, 2002).

The issue of sustainable development only becomes an agenda when a country has achieved a desired level of economic condition that provides a better quality of life (Arrow *et al.*, 1996). The society is considered to have reached the level of economic maturity when the economy is moving towards the efficient use of resources. At this stage, attention towards the concept of welfare in society began to be given attention and influence the behavior of society towards the need to ensure a life in harmony with the environment and increase the demand for environmental protection, especially via the introduction of law and establishment of special institutions to protect the environment, to keep pace with the increase in the quality of life enjoyed. However, Liu (2009) contested the idea on the premise that achieving the level of economic maturity is still debatable because

to date, there is no answer for the question of what is the optimum level of development growth required before the environmental quality started to improve.

The question about the optimum level of economic development should be pursued and is a challenge for the global community to get the appropriate solution for environmental problems because as long as economic interests overcome the need to preserve the environment, solutions to environmental problems are difficult to achieve. Moreover, the importance of economic development requires attention given to the issue of environmental tolerance which is about either to maintain the current environmental conditions or the environment must be sacrificed for development. The needs to give tolerance to the environment is raised due to the limitations in the ability of the environment and natural resources to be used as input to the human economic activities (Harris, 2000; Williams & Millington, 2004; Turner, 2006).

Tolerance to the environment needs consideration given to the concept of substitution from two perspectives, weak or strong sustainability (McDonach & Yeneske, 2002) which have significant influence on the efforts to measure sustainable development (Turner, 2006). The concept of weak sustainability emphasizes on the concept of replacement. The concept emphasizes that the use of natural resources in the production process is allowed if the replacement output yield better benefits to human life than if those resources are maintained without use as input to produce a new output, which according to Williams and Millington (2004) created the need to expand the available storage of natural resources.

Strong sustainability perspective, on the other hand, emphasizes on the need to preserve natural resources, especially the resources that can not be renewed even if there is a need to use it for the benefit of mankind. In this context, reliance on the earth's ability to provide environmental resources need to be considered

if we are to reduce the use of resources (Williams & Millington, 2004). The need to consider the environmental tolerance from the perspective of weak and strong sustainability generally provides a challenge for environmental audit if it is used for the purpose of achieving the sustainable development goal (Turner, 2006).

Methodology

A qualitative approach was applied for this study with interview as a method of data collection. In this context, to enable the researcher to explore the issue in depth, semi-structured interview was employed. The used of semi-structured interview also enable both researcher and the respondents to explore new area while discussing this issue.

For the purpose of data collection, series of interviews were conducted with a sample group of 21 respondents consisting of nine auditors, six senior public officers and another six members of the Legislature, specifically members of the Public Accounts Committee (PAC) of Parliament and State Assembly. Interviews with the respondents were arranged in a period of six months from July to December 2011. Interviews were recorded and transcribed immediately. To assure the quality of this study, interview transcripts were certified by third parties as proposed by Mays and Pope (1995) and Horsburgh (2003). For the purpose of data analysis, thematic analysis was used as proposed by Attride-Stirling (2001).

The analysis was conducted in three stages of activity, which was done on a sequential progression of existing data involving the process of filtering the text, exploring the results and the integration the result to determine the conclusion and for the authentication purposes (Miles & Huberman, 1994; Arcury & Quandt, 1998; Attride-Stirling, 2001; Berg, 2001). In the filtering process, the text is broken into segments to facilitate analysis and to give meaning for easy understanding. Next, exploration of potential themes was conducted. Key attributes were identified before all available informations were consolidated to

enable actions and conclusion to be made. Finally, the information resulting from the exploration process of data were connected accordingly to form a conclusion and to enable a decision to be made to determine the validity of the study.

Results

The role of environmental audit in the context of environmental accountability for the purpose to achieve the goals of sustainable development can be discussed from the following perspectives.

Background of Respondents

The auditors involved in this study were divided into three main groups consisting of three auditors from each group of junior auditor, senior auditor and senior management. Each of them has been involved in the audit between three to more than 25 years. But in context of environmental audit, all of them have less than five years of experience.

For public agencies, six respondents were chosen for this study comprising of senior officers either the Head of Department or the officers directly involved in the environmental audit. In this context, respondents were representing agencies from the federal and state government. All of the respondents have been in the public service for a period of 10 to more than 25 years. Selection of federal and state government agencies determined the selection sample from the legislatures. Thus, the legislatures selected to be the sample for this study also representing the federal and state legislature. Both the government and opposition parties were involved in this study with both have experiences as the assemblymen ranging from five to more than 20 years. The table below shows the distribution of respondents and their years of service in the public sector.

Audit and Environmental Harmonization

Based on the feedbacks, majority of the respondents were positive on the potential

Table 1: Distribution of respondents

Respondent	Number of respondents	Years of service
Junior Auditor	3	Between 3 to 25 years
Senior Auditor	3	
Executive Audit	3	
Public Officers	6	10 to more than 25 years
Members of Parliament	1	More than 25 years
Members of State Assembly	5	Between 5 to 10 years
Total	21	

use of environmental audits to strengthen environmental accountability to ensure the sustainable development goals can be achieved. But the extent of the environmental audit can contribute to the process of strengthening the environmental accountability for the purpose of achieving sustainable development goal remains a question among respondents.

In the context of achieving the goals of sustainable development, generally the respondents think it is the role of government to promote the implementation of this aspect in the national development plans. A respondent for example said, *“This is a policy that has been made by the government for which DID determine which streams should be dug up ...”* [Agency #6]. Indeed, the government should give priority and full commitment to the sustainable development in formulating policies in order to achieve the intended goals, as can be understood from the following criticism, *“ If about sustainable development in Malaysia, it is still lacking, ... [for example] ... a well-planned city, ... is it compatible with the concept of the environment? Many do not match. That is, if we want to know whether there is sustainable development, how sustainable is it! Yes, it is only rhetoric. Speak but not preaching.”* [Legislature #2].

Although the role of government is important, but to what extent the efforts towards sustainable development has been addressed,

particularly in the context of developing countries is still a major concern as discussed by eight of the respondents. Status as a developing country needs economic development to be given priority over protecting the environment. In this context, the issue of harmonizing the environment and economic development become the concern and has to be carefully addressed in order to achieve the goals of sustainable development as explained by this respondent, "... we want a clean environment along with the development but as a developing country we cannot, [because] there are things that we need to let go. We cannot get both at the same time" [Auditor #8], because the issues on environment only been addressed in certain circumstances, particularly when there were incidents or disasters as the following respondent quoted, "... and an emphasis on environmental stability is only considered when disaster strikes" [Agency #5]. Weakness in development planning by the public sector has been recognized by four of the respondents as the main factor contributes to the problem. This respondent for example explained further, "... but rarely [environment] to be taken seriously when planning and in the decision making." [Agency #5].

For the following respondent, collaboration between the government and auditors is required to further strengthen the environmental accountability particularly to ensure the sustainable development agenda can be achieved by ensuring no repeating issues in the audit report that could give negative impression on the government's capability to manage the environment, "*Environmental sustainability is an agenda of the government and the EXCO responsible for environment with the audit, shall examine and ensure that there will be no recurring issue...*" [Legislature #4].

Audit and Development

Harmonizing the environment and the needs for economic development requires tolerance given to the environment. The issue has been raised by respondents because the possibility

to get the economic interest and environment in harmony is difficult to achieve especially in the context of developing country where the economic development is given priority over the interest to preserve the environment as the following respondents emphasized, "*The harmonization process is still difficult to implement because we are still in the developing stage ...*" [Agency#5].

The priority given to the economic development than protecting the environment generally has a significant influence to the potential role of environmental audit to contribute to the achievement of sustainable development goals. For respondents, the tolerance to the environment may limit the ability of auditors to raise issues related to the environment that may have had impact on economic development because of its potential to create conflict of interest with the government. The following respondent, for example, explained, "... like the state government want to repeal the permanent forest reserve area for the reason to generate income rather than to preserve the environment. We as auditors certainly don't want to remove the gazetted forest area for the reason we want to take care the environment. But we must remember that even if we have lots of forest area, but at the same time a lot of people people are in hunger, can we afford it? Sometimes we may say not agree, but we have to look at this issue also" [Auditor #3]

The need to provide tolerance to the environment illustrate the role of environmental audit more on efforts to raise awareness to the community, as the following respondent emphasized, "*If we are honest, we can help take care of this world. In Islam said who did the damage. We are, but we as the people in this field need to help bring awareness to the community about the responsibility to take of the environment ...*" [Agency #1], and to the public agency to give the environmental aspects a priority in its activities as raised by seven of the respondents. A respondent for example explained, "... even though we cannot prove

entirely but at least it is a sign to the auditees ... This means we aim at the auditees, to these auditees. This means that even if we think there is nothing happen but problem is still occurs. May be for us the impact of the environment is not so significant, [because] the forest is still there, still meets the international requirements but at the same time the elements that led to the contamination is also exist. So we give them a sign that this thing [environmental problem] is still there. So, we have to control from now" [Auditor #4]

Audit for Environmental Prevention

In accordance with the role to raise awareness among the society and public agencies on the importance to preserve the environment, environmental audit can be used as a preventive mechanism to ensure minimal potential impact on the environment from the activities undertaken by public agencies. The role of environmental audit as a preventive mechanism was discussed by seven of the respondents. According to respondent, as a preventive measure, the environmental audit needs to be proactively performed before any environmental problems occur, "We have to do both [audit before and after activities executed] ..." [Legislature #1]. In fact, as a preventive measure, continuous auditing is important as recognized by the following respondent,

Legislature #4 : *Of course we have to audit before [the problem exist].*

Researcher : *Meaning that we should conduct audit continuously.*

Legislature #4 : *Yes.*

Audit for environmental prevention also needs to be conducted in a holistic and comprehensive manner as raised by the respondents. A holistic and comprehensive audit is needed mainly to evaluate the potential of activities to contribute towards environmental sustainability. A respondent for example illustrated, "...Government audits generally

to determine compliance to the procedures to prevent any misappropriation. Our audit is even more. I not only have to do, we have to obey, then we have to make sure the area can be logged another 30 years" [Agency #2]. For another respondent, a holistic and comprehensive assessment means the scope of audit should not merely focus on legal compliance but should be extended to assess the long-term effects of activities to the environment, "... the audit scope has to be extended, stressed more on the deep side effect if the tree is cut down, [and] also the long-term effect ... The scope not just only about the offense of cutting down trees. The scope did not like that, looking for errors only" [Legislature #1]

Environmental audit as a preventive mechanism also requires changes in the role of auditors. Auditors should not be a mere fault finding but rather should be involved in the development planning process. Involvement in the development planning process, according to respondent, is important to assist the public sector to overcome weaknesses in planning for development and to ensure the development is done according to the rules set to avoid possibility of fraud through continuous monitoring, "There should be a representative of auditors in the local committee for development planning and he will give opinion from the audit point of view ... so people will not dare to commit any wrong doing because always been audited." [Legislature #1], as well as to ensure transparency in the activities of agencies as further emphasized, "The audit comes to give idea to ensure transparency is there If it is practiced, there will be no issue on the environment. There will be no flooding anywhere. Therefore the audit is crucial." [Legislature #1].

For another respondent, it is important to involve the auditors in the development planning process because the auditors can contribute inputs for improvements as emphasized, "Audit should contribute something because it is one of the channels to provide input to the overall planning by the government.

Audit can contribute inputs for improvements actually” [Agency #1]. In fact, auditors’ involvement in the development planning and decision-making process does not affect the auditors’ independence, as emphasized by the other respondent, “As I concern, there will be no conflict if the auditors is involved in the decision-making process. Why should a conflict arise The audit came to give idea to ensure transparency is there [Legislature #1].

The role of environmental auditing as a preventive measure, for some of the respondents, has yet been effectively implemented in the public sector as raised by five of the respondents. The retrospective approach in auditing has been associated with the problem. The retrospective approach which focus on the past events become the limitation for audit to anticipate potential environmental impact as the following respondent explained, “... there are aspects that we cannot assess. For example, the impact is not going to happen now. Instead, it will happen in the future. The potential impact could not be included in the report, but for me, to get a more holistic view, it needs to be included in the report. But as an auditor, we cannot rely on the possibility to happen because we are keen on retrospective not prospective” [Auditor #3]. Thus the role of Public Accounts Committee (PAC) to support the use of environmental audit becomes the concern of respondents.

Strong support from the PAC is required to further strengthen the role of audit as an effective environmental preventive measure. Commitment from the PAC is required to discuss and take action on the issues raised in the audit report. However, environmental issues are not a priority in the PAC’s discussion as mentioned by a respondent. According to the respondent, environmental issues only get attention from PAC and the Legislature in situations where there are incident occurs resulting in loss of life, “In environmental terms, it is acknowledged there is lack of attention. I also not giving much attention because there is no death These is habit, if there is death,

then there is problem ...” [Legislature #2], or involve the community as a whole, “... unless there is, every time you want to come here you cannot arrived on time because the traffic is so heavy. ... It is environmental problems as well. If the matter is raised by every person, it certainly will be discussed further. Only if every person is involved” [Legislature #2]. Environmental issues, on the other hand, only treated as a common issues in the absence of major incidents as further discussed by the respondent, “Environmental issues have cropped up from time to time If there is an issue raised, it is just discussed not the case for investigation. If it is not serious, it is only a discussion. .” [Legislature #2].

Selective acceptance on the issues reported in the audit reports by the users was not a surprising feedbacks because the users generally had a tendency to “wait and see” until the issues raised in the report to really occurs and give impact to the environment or loss of lives as recognized by eight of the respondents. A respondent, for example, shared his thought, “... as we do an audit of the state forest management ... the department or the state government had challenged the audit that the findings were not accurate and we did not have expertise in assessing the sustainability of their forests ... Recently when read in the press reports ... the river was hit by a devastating flood caused the area cannot resist erosion and logs felled flooded the river up to 50km in length ...” [Auditor #1].

Discussion

This study showed that majority of respondents were generally agreed environmental audit has an important role in ensuring the existence of environmental accountability in the public sector in order to achieve the sustainable development goal. In this context, the finding indirectly supports the idea that the audit conducted in the public sector is significant to contribute towards achieving the sustainable development goals as the audit works is important to ensure good governance in environmental

management as proposed by Toepfer (2004). However, despite the recognition, the finding of this study also contested the idea about the potential role of environmental audit for sustainable development, especially from the perspective of developing countries where the needs for economic development always been given priority than the efforts to preserve the environment.

In the context of developing countries, Malaysia for instance, the issue of sustainable development has become one of the issues in the national development plans to ensure that the benefit from development are not wasted to mitigate the destruction to the environment (Malaysia, 1976). In this regard, development planning in the public sector should focus on the issue of sustainability as it is the major weakness that must be overcome by the public sector. It is important to have an ideal development planning that considers the sustainability issues in the development planning process. The development planning should take into consideration the harmonization between the economic and environment for the purpose of achieving the goal of sustainable development as this factor is generally difficult to achieve especially in the context of developing countries where the economic development has always been given priority over preserving the environment.

As discussed by the respondents, environmental issues were only considered in the development planning when there were incidents that had an impact on the society either involved the loss of lives or destruction to property. In addition, the awareness about the importance to preserve the environment only happened in a remote group who actually affected directly by the activities undertaken or the environmental impact.

Accordingly, for the purpose to improve the development planning process in the public sector, involvement of the auditors need to be given consideration. Involvement of auditors in the development planning is particularly to strengthen the environmental accountability

in the public sector. In fact, involvement of auditors in the planning process is also important as the auditor can act as a mechanism to channel information to the management to use in the process of drafting policies related to sustainable development (Shih *et al.*, 2006).

Eventhough the role of auditors is given attention, but in context of developing countries, priority to economic development cannot be avoided. Therefore, it is not surprising that respondents raised the need for tolerance to the environment to be addressed. For respondents, the public interest should be given priority even if economic activity may have impacts to the environment as in the developing countries dependence on the natural resources as the capital for economic activities cannot be avoided for the sake of the people. As discussed by Rostow (1960), the environment is generally not given priority while the country is in the stages of development. Moreover, the impact on the environment as a result of economic development is something can be expected. Therefore, tolerance to the environment should be considered. However, if tolerance to the environment is considered and the use of environmental resources is justified, the extent of such use is permitted also need to be considered (McDonach & Yeneske, 2002; Williams & Millington, 2004; Turner, 2006).

As there is emphasis on the need to give tolerance to the environment, it could indirectly affects the role of environmental audits to effectively contributes to the achievement of sustainable development goal. Priority to the needs of economic development as compared to the importance of preserving the environment generally creates limitation to the auditor to express his views, particularly on the effectiveness of implementation of activities under government policy that could pose a conflict with the Executive (Khan, 2001; Mulgan, 2001). Potential conflict with the executives shows the government is not willing to accept changes to the expansion in the audit scope in order to allow the auditor to provide his views regarding the extent to which

a government policy is achieved, especially with regard to the environment which has also been raised by the respondent in respect of the government's selective acceptance of the issues raised in the audit report. Selective acceptance on the audit report shows that the government is unwilling to accept responsibility and give commitment to environmental accountability.

In addition to the environmental tolerance, audit approach can also be detrimental to the audit effectiveness to contribute to the sustainable development process. As stated by the respondents, the approach of *ex-post* audits does not make a significant impact on environmental conservation as the audit is carried out after the implementation of activity and issues or damages to the environment had already occurred. According to He *et al.* (2009), *ex-post* audit undertaken in the public sector during or after an activity is implemented to evaluate the performance of a policy and the potential environmental impacts of activities is not sufficient to ensure government projects have been implemented effectively.

As there are considerations on the weaknesses in the development planning and the need for environmental tolerance, this study shows that the implementation of environmental audit in the public sector from the perspective of developing countries is more likely to act as a preventive mechanism which aims to raise awareness among the public and government agencies to take into account the environmental considerations in the planning and development undertaken. The respondents indicated that the use of environmental audit as a preventive mechanism requires a change is made to the current audit approach and the role of auditors. It is important for auditors to perform the audit in a proactive and holistic approach taking into account the entire chain of environmental activities undertaken by the public sector.

The auditor also needs to consider implementing environmental audit on the ongoing basis rather than the current *ex-post* approach that conducted after an activity is

implemented. Conducting audits on an ongoing basis, as suggested also by Goodall (1995), will allow for a comprehensive assessment conducted to enable the real situation before, during or after the activities implemented is reported. Continuous auditing can help the public sector to identify weaknesses in early and make changes to any stage in the implementation of development activities. Thus, the audits will enable early preventive measures to be taken to ensure the environment is preserved for the benefit of mankind.

Using environmental audits as a preventive mechanism also requires emphasis given on the expansion of the role and responsibilities of auditors. Feedback from the respondents indicated the role of auditors should be expanded to involve in the process of development planning. Involvement of auditors in the process of development planning has been considered as crucial to strengthen the environmental accountability in the public sector. However, to involve auditors in planning the development is contravene to the auditing standards that prohibit the auditor involves in any decision-making process to protect the integrity of the auditors (INTOSAI, 2001).

Accordingly, as involvement of auditors in the decision-making process is in contradiction with current auditing standards, this study shows there is a demand for re-interpretation of the standards. Involvement of auditors in the decision-making process is considered as an extension to the existing role of the auditors and will not affect the independence of auditors. Instead, to involve auditors in the decision making process is absolutely necessary as the audit can act a preventive mechanism in order to increase environmental accountability in the public sector.

Conclusion

Environmental accountability, particularly on the part of the government and the public sector as outlined by WCED (1987), is required

to achieve the sustainable development goal. One of the important approaches that can be used to ensure environmental accountability in the public sector is through the implementation of environmental audit as the audit conducted can contribute significantly for that purpose (Toepfer, 2004). However, in the context of developing countries in which economic development takes priority over the interests of preserving the environment, issues of harmonization between the environment and development become a crucial factor that limits the role of environmental audit.

Harmonization between the environment and development is considered as deterrent factor and a major challenge to the achievement of sustainable development not only to the public sector, but also to the auditors. As harmonization between development and the environment for sustainable development is difficult to achieve because economic development eventually requires the use of environmental resources that in turn affects the quality of the environment, conflict may arise with the development as a result of the use of environmental resources in terms of whether is it necessary for the environment to be preserved or used for development purposes. To overcome this problem, harmonization with the environment that gives tolerance to the environmental must be given a priority because it is generally difficult to implement development without compromising the environment, especially if the country is in the developing stage.

Environmental audit, even if considered as an important element in ensuring the existence of environmental accountability in the public sector for the purpose of achieving sustainable development, but considering the development stages of country which need tolerance to the environment, the role of environmental audit to contribute to the achievement of sustainable development continues to be an issue that needs to be addressed. Environmental audit in the context of developing countries is generally considered as a preventive mechanism which

aims to raise awareness among the public agencies, the government and the legislature about the importance of preserving the environment while implementing development to ensure it is done in accordance with the laws and regulations to ensure the development undertaken is not giving negative impact not only for the environment but more important is to the society.

To conclude, although environmental audits is considered to have important role in strengthening environmental accountability, but its role to contribute to the achievement of sustainable development in context of developing countries is remain unclear due to the possibility of conflict of interest between the need for economic development or to preserve the environment. In that case, the role of environmental audit in the context of sustainable development is considered merely as a preventive mechanism to ensure development is properly implemented in the interests of the environment and mankind.

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