JURNAL
TATA KELOLA DAN AKUNTABILITAS
KEUANGAN NEGARA
e-ISSN 2549-452X | p-ISSN 2460-3937

Volume 8, Number 1, Jan-Jun 2022, 45-63

Assessing Public Sector Environmental Accountability Through Performance Audit: The Case of Maldives

Rabeea Ibrahim[1], Aminath Shuaau Mohamed[2]
Auditor General's Office, Ghaazee Building, Male', Maldives[1,2]
rabeea.ibrahim@audit.gov.mv[1], aminath.shuaau@audit.gov.mv[2]

ABSTRACT

Environmental accountability has gained much-needed attention due to the growing concern about climate change and its impact. Given that environmental management has been a function of government, especially in developing countries like the Maldives, the country's economy is dependent on its environment and natural resources, and the numerous efforts by the government toward environmental protection, promoting environmental accountability becomes crucial. At the heart of promoting environmental accountability lies the important role of public sector environmental performance audits. Through a qualitative research method of content analyses and unstructured interviews, this study aims to discuss the importance of environmental performance auditing in creating public sector accountability by alluding to the importance of environmental accountability and SAI Maldives' role in creating public sector environmental accountability.

KEYWORDS:
Public sector environmental accountability; environmental performance auditing; SDGs

DOI: 10.28986/jtaken.v8i1.755

ARTICLE HISTORY:
Received at : 30 September 2021
Published at : 28 June 2022

INTRODUCTION

There is a growing global concern regarding countries' environmental issues (Lampert, Metaal, Liu, & Gambarin, 2019). Consequently, there is an increasing need for firms and entities within both the private and public sectors to remain accountable for the environmental, economic, and social impacts of their activities. It can be noted that there are various developing reporting requirements for private sector entities to disclose their environmental behavior and activities. However, reporting requirements beyond the scope of financial performance for public sector entities are relatively scarce (Montesinos & Brusca, 2019).

Corresponding to these findings is the implementation of sustainability reporting among public sector entities in the Maldives. There is no legislation requiring disclosures in annual reports that go beyond the financial statement disclosure requirements. Hence entities within the public sector are not required to report or disclose their performance concerning the environmental impacts of their activities or sustainability reporting.

Despite the lack of requirements in the fields of environmental or sustainable reporting in the public sector, the major responsibility entrusted to governments across the world in the significant fight against climate change and environmental preservation efforts is signified by the various multilateral environmental agreements such as the United Nations Framework Convention on Climate Change (UNFCCC) (1992), the Kyoto Protocol (1997), and the Paris Agreement (2015) among others. Furthermore, there is a substantial obligation on governments to work towards sustainable development in line with the United Nations (UN) Sustainable Development Goals (SDGs) adopted by all UN member states in 2015, which sets out 17 goals and 169 targets across the areas of environment, economy and social aspects. With the gap in sustainability reporting requirements for government entities, there is a need for government agencies to be held accountable in the area of environmental issues, including sustainable development. This is primarily in conjunction with the significant responsibility vested within public entities to ensure beneficial socio-environmental impacts on a global scale. Consequently, there is a need for environmental performance auditing.

Environmental auditing, according to the International Organization of Supreme Audit Institutions Working Group on Environmental Auditing (INTOSAI WGEA) 9th Survey on Environmental Auditing, is defined as a financial, compliance and performance audit (as well as prior audit in some countries) that evaluates and gives opinions on environment-related matters. According to the same survey, performance-based environmental auditing was the most common method, with 93% of the SAIs that took part in the survey having a legislative mandate to audit environmental issues in performance audits (INTOSAI WGEA, 2019). As guidance for conducting environmental audits, INTOSAI has issued International Standards for SAIs (ISSAI) 5100-5199, containing Guidelines on Environmental Audit.

Although environmental audits can be carried out in financial, compliance, and performance audits, performance-based environmental audits are better suited for public sector requirements (Rose, 2001). As a government is entrusted with the responsibility for managing natural resources through various policies, a performance audit can assess the process more thoroughly, going beyond the scope of a financial or compliance audit.

In order to improve the use of audit mandates and audit instruments in the field of

environmental protection policies, the INTOSAI WGEA was established in the 14th Congress of the INTOSAI (INCOSAI) meeting held in 1992. The INTOSAI WGEA assists Supreme Audit Institutions (SAIs) in conducting environmental audits, promotes knowledge sharing among SAIs in environmental auditing, and produces guidance material on the subject (INTOSAI WGEA, 2019).

As stated by the Intergovernmental Panel on Climate Change (IPCC), Small Island Developing States (SIDS) like the Maldives are among those that will be impacted first and most severely as a result of climate change (Ministry of Environment and Energy, 2015). Hence the Maldives is an island nation highly vulnerable to global warming and climate change, despite contributing the least and being the least predisposed to adapt and respond to climate change. While the Maldives relies on the environment and its natural resources for a good portion of its Gross Domestic Product (GDP) (World Bank, 2021), the country is affected by many environmental concerns, from solid waste management to water and sanitation to renewable energy generation.

The Government of Maldives is at the forefront of the global climate change arena as a party to the UNFCCC and one of the first countries to ratify the Kyoto Protocol and the Paris Agreement. Although the country emits a negligible amount of greenhouse gases globally, the country presented its first Biennial Update Report of Maldives to the UNFCCC in 2020. The Maldives, as a member of the UN, is also working alongside other nations to achieve the UN SDGs (also referred to as Agenda 2030). These actions indicate that the Government of Maldives has made international commitments toward mitigating climate change and working toward sustainable development.

The main environmental legislation in the Maldives is the Environmental Protection and Preservation Act which governs environmental issues in the country. Along with the Act, the government aims to align its main environmental goals and policies according to the Strategic Action Plan (SAP) (2019-2023) launched by the incumbent government. Of the five sectors outlined in the Government's SAP as government focus areas, major environmental strategies and targets are contained within Sector One - Blue Economic and Sector Four - *Jazeera Dhiriulhun* (Island Life). There are further supporting policies and regulations which govern specific environmental issues, which are highlighted within the results of this study.

Governmental agencies may set targets for achieving environmental goals and be a party to various international conventions and protocols. Nevertheless, effective monitoring and review of the actual work being done to achieve the targets and meet the requirements of protocols are required to ensure accountability and transparency. Correspondingly, this gives rise to a need for environmental performance auditing in SAI Maldives to ascertain the extent to which the public sector of the Maldives is effective in meeting its environmental targets.

In order to strengthen accountability in the areas of environmental concern in the Maldives through environmental auditing, the Auditor General's Office of the Maldives became a member of the INTOSAI WGEA in 2021. Furthermore, a specialized audit unit for environmental auditing was established within the performance audit department in the same year to build capacity and ensure dedicated resources for environmental auditing within the SAI. As a result of the change, environmental performance audits focusing on renewable energy, protected areas, and waste management have been included in the Annual Work Plan of SAI Maldives for

the year 2022. Despite not having a dedicated environmental auditing unit previously, SAI Maldives has carried out performance audits that fall within the category of environmental audits defined by the INTOSAI WGEA. This includes the performance audit on the preparedness for implementing the SDGs, the audit of the Maldives Environmental Management Project, and the audit on the Effectiveness and Sustainability of the Response to Coastal Erosion.

This study emphasizes the growing significance of environmental audit from a public finance perspective and public sector environmental governance across different SAIs. Furthermore, it attempts to identify and link the importance of the environment to the Maldivian economy and highlight the duty of SAIs in creating environmental accountability in the public sector through environmental performance auditing. Moreover, it aims to assert the importance of environmental auditing in the successful implementation and monitoring of SDGs. The study also hopes to identify the current areas of concern in environmental issues in the Maldives and thus identify key areas for potential environmental audits for SAI Maldives.

LITERATURE REVIEW

Role of Public Sector in Environmental Management and Sustainable Development

There is various literature that discusses the responsibility of the public sector in environmental management and sustainable development. The influential Report of the World Commission on Environment and Development: Our Common Future defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987). Seifi and Crowther (2020) state that, although the concept of Corporate Social Responsibility (CSR) is more often associated with profit-seeking entities. That CSR would apply to all entities, including those within the public sector, is generally understood. This demonstrates that the public sector is not excluded from the broader responsibility towards society, including the environment and sustainable development efforts.

Ball et al. (2014, as cited in Roberto, Maglio, & Rey, 2020) states that public sector entities should be actively involved in sustainable development. One of its responsibilities is to establish and implement public policies that benefit society generally. Public sector entities have a more prevalent responsibility in performance sustainability reporting over private sector organizations, as the actions of the former are more linked to sustainable development than the market. Those statements support the argument that the public sector plays an essential role in sustainable development.

Methods of Accountability and Reporting Techniques in the Public Sector

The private sector is required to disclose its non-financial performance through different methods such as Integrated Reporting by the Value Reporting Foundation and the proposal for Corporate Sustainability Reporting Directive (CSRD). The European Union issued CSRD on 21 April 2021, which would amend the existing Non-Financial Reporting Directive to introduce a more detailed and inclusive reporting requirement (European Commission, 2021).

The private sector is obliged to be increasingly transparent and accountable for its socio-environmental actions through such reporting requirements. According to Montesinos and Brusca (2019), the public sector's non-financial disclosures and sustainability

reporting are still nascent, as seen by several studies, except for some countries. The Global Reporting Initiative (GRI), created in 1997, has issued different guidelines for sustainable reporting fully applicable to the public sector and issued its G1 Guide for Public Agencies in 2005 to specifically analyze certain aspects of the sector (Montesinos & Brusca, 2019). However, a study conducted by GRI to analyze the extent of implementation of reports in the public sector concluded that sustainable information is still in its infancy in the public sector (only 1.7% of reports published in GRI in 2009 are public entities (Montesinos & Brusca, 2019).

The International Integrated Reporting Council (IIRC), together with the Chartered Institute of Public Finance and Accountancy (CIPFA), published a guide for the application of integrated reporting in the public sector (Montesinos & Brusca, 2019). Although such guides have been published, Iacuzzi, Garlatti, Paolo, and Alessandro (2020) discusses the limitations of Integrated Reporting (IR) and the complexities of implementing it. The authors state that while the holistic approach may be helpful for senior management with a deep understanding and knowledge of the organization, few employees, let alone stakeholders, can conceptualize, let alone operationalize integrated thinking using its rather vague guidelines and definitions. It further identifies that the IR framework is missing indicators on how to account for stakeholders' inputs, outputs, and outcomes in a value co-creation process, which is fundamental, particularly for public sector organizations (Iacuzzi, *et al*., 2020).

Another emerging method of non-financial reporting is *sustainability reporting*. Roberto, Maglio, and Rey (2020) asserts that sustainability reporting techniques emerged due to the need to progress the sustainable development agenda in the past two decades. They further mention that, although the private sector has adopted sustainability reporting, progress within the public sector appears relatively stunted and that Sustainability Reporting is still an emerging field (Roberto, Maglio, & Rey, 2020). However, the authors also state that with the public sector playing a key role in working towards the SDGs, it is vital to align the organization's strategy and organizational report with the SDGs, informing the stakeholders of the current level of commitment to these objectives (Monteiro, Ribeiro, & Lemos, 2020). The fact that there are no existing international standards on sustainability (Seifi & Crowther, 2020) makes implementing and monitoring targets related to sustainability increasingly ambiguous.

Role of SAIs and Environmental Audit in Ensuring Accountability

Widespread calls for accountability are based on the demand that those governing be answerable and responsible for failing to deliver on their aims or output accountability (Kramarz & Park, 2016). However, as broader demands to be more responsible and answerable for how decisions are made are gaining momentum, bringing input accountability to attention and conducting ex-ante audits is important. Sułkowski and Dobrowolski (2021), in their study on the role of SAIs in energy accountability in EU countries, concluded that SAIs should change current audit strategies from conducting ex-post audits to ex-ante audits as this will lead to preventing irregularities. This will increase accountability by preventing audits from being a policing function which negates its leverage for spurring action. Yusoff, Mohamed, and Hadi (2016) argue that implementing audits on an ongoing basis rather than the current ex-post approach will allow a comprehensive assessment to identify weaknesses in the early stages. When dealing with development issues that generally prioritize economic interest rather than pre-

serving the environment, conducting environmental audits on an ongoing basis is considered important (Yusoff, Mohamed, & Hadi, 2016). The study also indicates that changes to the audit approach by performing the audit in a proactive, holistic manner by taking into account the entire chain of environmental activities undertaken by the public sector are vital for the use of environmental audit as a preventative mechanism.

The impact of audit on accountability is also dependent on accountability and policymaking, as in order to make positive changes, the recommendations and findings need to be acted upon (Montero & Le Blanc, 2019). Accountability can be a meaningful tool when incorporated into the first tier of environmental governance, where agenda and goal setting occur (Kramarz & Park, 2016). Hence, to Guillan (2013, as cited in Montero & Le Blanc, 2019), the relationships and linkages with stakeholders and the effectiveness of communication channels with relevant institutions and the public are crucial.

A modernization dilemma is created due to economic, environmental, and social development separation. The need for specialization has led to the problem of disintegration, which requires addressing problems and finding solutions for each system (Yusoff, Mohamed, & Hadi, 2016). Therefore, an integrated approach connecting environmental indicators with economic and social indicators is important to enabling auditors to provide practical and objective audit recommendations (Yusoff, Mohamed, & Hadi, 2016).

The practices of non-financial and sustainability reporting are still in the developing stage, as seen from the various studies conducted. This highlights the importance of a method for ensuring environmental accountability in the public sector. Montero and Le Blanc (2019) articulate that SAIs perform a central function within government accountability systems. They are generally aimed at promoting transparency, effectiveness, and accountability of the public sector and improving the performance of government institutions. Initially focused on compliance and financial auditing, SAIs' mandates have been expanded to assess the economy, efficiency, and effectiveness of public spending and government performance. The authors also identify how SAIs could play a key role in building accountability for the SDGs, including monitoring the implementation of SDGs and making recommendations for improving implementation (Montero & Le Blanc, 2019).

According to the World Commission on Environment and Development (WCED) (1987), environmental accountability, especially in the public sector, has been emphasized and identified to be vital if the goal of sustainable development needs to be achieved (Yusoff, Mohamed, & Hadi, 2016). As stated by Toepfer (2004, as cited in Yusoff, Mohamed, & Hadi, 2016), a mechanism is needed to ensure accountability in public is in place, and an environmental audit could be used. As maintained by Nazarova et al. (2021), the study conducted by the authors showed that environmental audits could make a positive contribution to the sustainable development of a green economy. It further states that today, only one world-famous tool provides independent analysis and recommendations for various process optimizations – audit (Nazarova et al., 2021).

Sułkowski and Dobrowolski (2021) researched the role SAIs in energy accountability in the European Union. They state that as the energy sector belongs to the strategic activity of the state, the national SAI is responsible for controlling the accountability of the whole sector and that the role of SAIs in sustainability transition will also be a part of the accountability process in the energy sector.

They further mention that regular energy consumption audits are necessary to identify waste of energy, help identify best practices for energy consumption, and that such audits can aid in achieving energy accountability and sustainability (Sułkowski & Dobrowolski, 2021).

Choudhary (2015) defines an *environmental audit* as a systemic, documented, periodic and objective evaluation of how well environmental regulatory requirements and commitments are met. An environmental audit is one tool that an organization can use in its environmental management system to help determine its environmental performance. In an environmental performance audit context, the environment is the fourth E in addition to the traditional 3-Es of Economy, Efficiency, and Effectiveness. A further two Es are added as Ethics and Equity. Choudhary further states that SAIs can promote sound financial management and public accountability, essential elements in sustainable development (Choudhary, 2015).

Exploring the developments in environmental auditing within SAIs, Leeuwen (2004b) stated that at the end of the 1980s, SAIs became aware of their responsibility towards the environment and environment policy. The research found that a growing number of SAIs became active in environmental auditing and that after a quantitative growth, a shift from regularity to performance audits was noticed. Now environmental audit is a substantial and

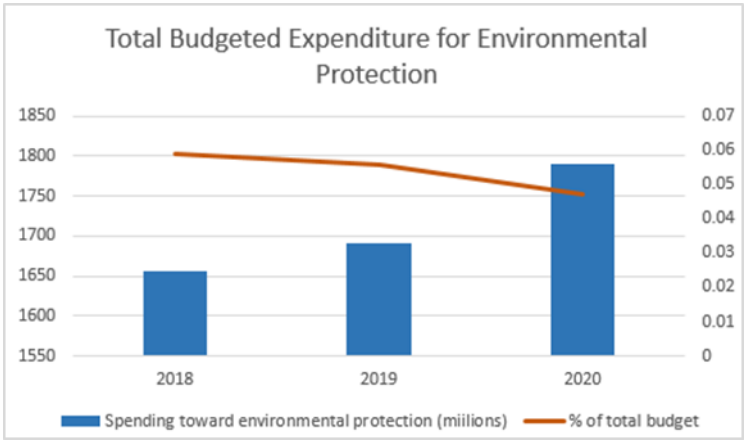

Figure 1. Total Budgeted Expenditure for Environmental Protection
Source: *Ministry of Finance (2021)*

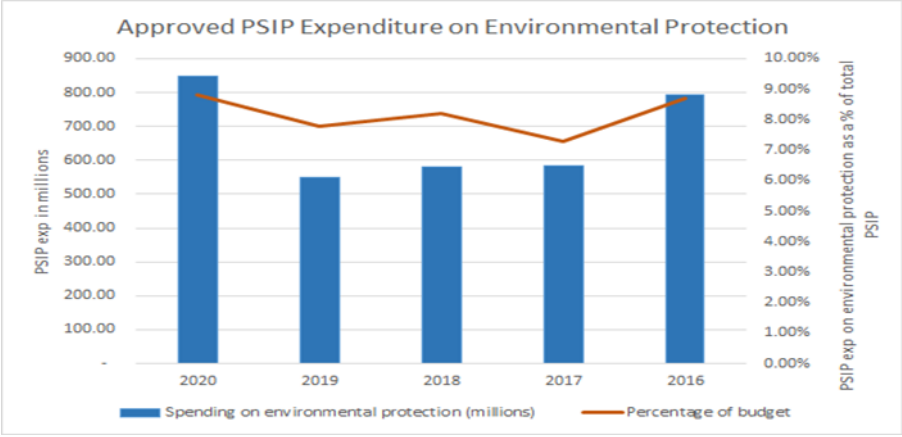

Figure 2. Approved PSIP Expenditure on Environmental Protection
Source: *Ministry of Finance (2021)*

regular part of the audit work of more than half of the SAIs (Leeuwen, 2004a).

RESEARCH METHOD

This study uses a qualitative method based on content analysis of primary documents such as environmental reports, national strategic action plans, legislation, international conventions, and other publicly available information, data, and statistics. The authors carried out unstructured interviews to increase the validity of the findings. The authors interview former and current Performance Audit Directors at SAI Maldives to get their perspective and experience on how environmental performance audit is fundamental in creating public sector accountability.

RESULT AND DISCUSSION

The Significance of the Environment to the Maldivian Economy

The pristine beaches, crystal waters, underwater coral reefs, and diverse marine wildlife sets this small island nation apart from other countries and is the biggest contributor to the national economy. The Maldives is a developing country relying heavily on its natural resources to promote its tourism industry, accounting for a quarter of its GDP (World Bank, 2021). Although the tourism industry currently accounts for the main source of income for the country, the fisheries sector has always been essential to the Maldivian economy. Until the 1970s, when tourism was established in the Maldives, the primary source of foreign currency was fish exports. This sector is essential, indicated by the fact that it is linked to the livelihoods of many Maldivians (Ministry of Finance, 2021). While we rely on our natural resources for our livelihood, our environment is one of the most peaceful environments in the world. The geophysical characteristics of the Maldives make it highly vulnerable to natural hazards and climate changes.

The significance of the environment for the Maldivian economy is further evident from the proportion of the national expenditure toward environmental protection. A large proportion of expenditure from the Public Sector Investment Program (PSIP) is also being allocated to environmental projects, as seen in Figures 1 and 2. On 1st October 2016 Government of the Maldives introduced the Green Tax levied on tourists. The Green Tax goes to the Green Fund to handle climate finance in various sectors such as renewable energy, energy efficiency, water and waste management, also coastal protection.

The Role of SAIs and the Call for Environmental Accountability in the Public Sector

The public sector faces drastic and ongoing changes shaped by macroeconomic, social, and environmental trends (Barber, Levy, & Mendonca, 2007). The public sector is pressured to revisit the concept of environmental sustainability due to the share of the public sector in the global economic activities and, especially in the case of Maldives, due to the significant role the environment plays in contributing to the country's economy.

In order to take steps to mitigate the adverse impact on the environment through economic activities, the Maldives has signed various conventions and protocols, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, among others. Furthermore, Maldives was the first country to sign the Kyoto Protocol (Ministry of Home Affairs, Housing, and Environment, 2001). The Maldives gives significant importance to taking part in the international agenda and is a member of several international organiza-

tions, standing at the forefront of voicing concerns about climate change and sea-level rise.

While the Maldives has always been a strong voice for bringing increased attention to climate change globally, the country has walked the talk by ratifying various legislations and addressing environmental issues in National Action Plans. In 1993 the Environmental Protection and Preservation Act (Act Number 4/1993) was ratified by the Government of the Maldives, prioritizing environmental conservation and the right to stop projects that contradict sustainability to Ministries implementing the law.

The Environmental Impact Assessment Regulation 2012 was established to incorporate the key role of building awareness and environmental health into planning and implementing development projects. Furthermore, the Climate Emergency Act (Act Number 9/2021) was ratified on 18 May 2021. This Act introduces guidelines for concerns and issues akin to climate change, such as reporting, and stipulates actions to address climate emergencies. The Act further aims to ensure the sustainability of natural resources by overcoming negative impacts and allocating funds for renewable energy sources (The President's Office, Republic of Maldives, 2021). The SAP 2019-2023 unveiled in 2019 by the current Administration outlines various strategies to address areas of environmental concern. The priority areas in the SAP guide the overall development direction of the Maldives to achieve economic development sustainably.

As a member of the UN, Maldives is also involved in meeting the United Nations Sustainable Development Goals under the 2030 Agenda for Sustainable Development adopted in 2015. The SDGs include 17 ambitious goals with 169 targets and 232 indicators across environmental, economic, and social aspects. The main strategies of the administration for achieving these SDGs are outlined within the SAP. In the Maldives, the SDGs' overall implementation and monitoring were carried out by the SDG Division of the Ministry of Environment until the responsibility was transferred to the Ministry of National Planning and Infrastructure in 2019 (Auditor General's Office, 2019).

The various international conventions signed by the Maldives, various regulations and legislation addressing environmental concerns, and an SAP developed in line with the UN SDGs provide evidence of Maldives' commitment to sustainable development and environmental protection. However, there must be an oversight of these legislations and action plans formulated to ensure proper monitoring, review, and accountability in following through with the desired objectives. Environmental performance audits by SAI Maldives can ensure accountability through regular audits conducted on the various environmental projects being carried out by the public sector and identifying areas that require further resource allocation to meet the allocated environmental targets. Furthermore, the environmental goals included within the SDGs signify the need for SAIs to dedicate resources to conducting environmental performance audits targeted at specific SDGs in order to maintain accountability in the process of achieving these goals.

Correspondingly, recent trends in environmental auditing have sought a way to relate environmental audits to SDGs. The steps taken by SAIs around the world to assess progress toward 21st-century challenges are foundations for building a more resilient, SDG-aligned economy and society (Association of Chartered Certified Accountants, 2020). However, working with environmental themes presents its challenges, and the characteristics of the 2030 Agenda augment these challenges. The challenges faced by SAIs in carrying out environmental audits include the cross-cutting nature of

environmental issues, the existence of multiple stakeholders, government organizations, and areas involved in environmental issues, difficulties in evaluating natural resources in monetary terms, environmental issues being often caused by market failures, limited information and scarcity of effective indicators for environmental policies and programs. These challenges and the characteristics of the 2030 Agenda have strong similarities. Considering these similarities, SAI Maldives can contribute to SDG implementation by integrating the SDG perspective while conducting environmental audits. These types of audits will take a broader and comprehensive view by considering the relationships between environmental policies subject to audit and other policies, programs, and agencies it may affect rather than the traditional approach of examining individual environmental policies, programs, and agencies in silos (INTOSAI WGEA, 2017).

Developing countries such as the Maldives also rely heavily on foreign aid in grants and loans. International development funding agencies have incorporated SDGs into their initiatives and strategies. This has led to public sector reforms becoming more efficient and competitive. Throughout 2014 - 2017, the Maldives received USD 327 million for climate finance in grants, loans, and co-financing. As a country that relies on donor funds to provide for well over 50% of the total funds allocated to environmental projects, accountability in the expenditure of these donor funds is vital to ensure effective and efficient usage of both donor and state allocated funds toward environmental projects. However, the objectives of environmental projects and their efficiency are beyond the scope of financial and compliance audits. Therefore there is a growing need for SAIs to include the audits of environmental projects being carried out to maintain public sector accountability in the effective use of funds in climate change mitigation and adaptation projects.

Given that environmental management has been a public sector function in the Maldives. Given that it is deemed so by the government by dedicating strategies at the national level strategic plan to combat environmental issues, it is evident that environmental accountability will play a significant role. Since the SAIs worldwide are taking a more comprehensive approach to serving their function of promoting greater accountability, SAI Maldives has to take a step toward promoting environmental accountability in the country.

The arguments gathered in this study make a strong case for the need for a robust review of environmental performance. The environmental audit is the most tested and reliable institutional mechanism to perform the previous reviews. The interconnection of social, environmental, and economic issues and the need for deeper stakeholder engagement require a shift in focus for SAIs. SAIs have to consider and overcome urgent environmental and social issues and challenges.

Experiences of SAI Maldives in Environmental Performance Auditing

The Auditor General's Office of the Maldives is mandated to conduct performance audits of the ministries, government offices, state-owned enterprises, government trusts, or trusts under the government's care according to Section 4 of the Audit Act (Act Number 4/2007). As environmental audits can be carried out as performance audits, it can be understood that environmental performance audits fall within this mandate. Following the establishment of the performance audit department at SAI Maldives in 2015, 23 performance audit reports have been published to 2021. While most of the audit topics chosen focus on the themes of various processes,

institutional arrangements, and projects, the topic of environment-related performance audits has only gained prevalence in recent years.

The first performance audit focused on an environmental topic was the performance audit report of the Maldives Environmental Management Project, and the audit report was published in 2017. The audit aimed to identify the extent to which the Solid Waste Management Program's objectives were achieved, whether the capacity building of personnel in the environment was carried out effectively and whether the project and project finances were managed effectively.

The Maldives Environmental Management Project (MEMP) was funded by the World Bank and initiated in 2008, and the project value was USD 17,231,619. The audit identified significant observations through the audit fieldwork, including repeated delays in project completion and weaknesses in the project monitoring system. Albeit not falling within the criterion of environmental audits, SAI Maldives carried out a performance audit on the preparedness for implementation of the sustainable development goals.

The audit report was published in 2019. The audit aimed to answer the extent to which the 2030 Agenda had been adapted into the national context, the securing of resources needed to implement the 2030 Agenda, and the mechanisms in place for the reporting and review of the progress towards implementation of the goals. The audit findings concluded that while there were ongoing efforts to adapt the SDGs into a national context and assign responsibility for SDGs implementation to goal leads, an effective follow-up and reporting mechanism was lacking. This signifies how performance auditing can contribute to the effective implementation and monitoring of the SDGs. Furthermore, by taking up environmental performance audits on the SDGs related to environmental targets, SAI Maldives can monitor the public sector's progress towards achieving those SDGs.

A performance audit conducted in 2019 on the provision of electricity in the Greater Male Region focused on the performance of the efforts made by the government to provide continuous electricity to the public. It analyzed the financial situation of the state-owned electric utility service provider. Furthermore, this audit explored the policies utilized and actions taken by the government in promoting the use of renewable energy as well. The audit found that while the government had taken various measures to encourage the use of renewable energy, the effectiveness of the incentives offered was insufficient as only a few parties had utilized the incentives offered.

SAI Maldives published the most recent environmental audit report which was the Effectiveness and Sustainability of the Response to Coastal Erosion performance audit report. The audit published in 2020 focused on a pressing environmental issue facing the islands of Maldives. The audit aimed to identify the causes of coastal erosion in the Maldives, the actions taken to mitigate coastal erosion, and assess the results of the actions taken. The audit observed that, among other things, sufficient data was not maintained with regards to coastal erosion, that there was a lack of proper monitoring and that the projects for mitigating coastal erosion were not carried out considering the islands that were most severely impacted by the problem. Following the practice of SAI Maldives in gradually increasing the frequency of environmental performance audits that are being conducted, included in this study are different areas related to environmental auditing through which SAI Maldives can add value and create environmental accountability in the public sector.

Potential Areas for Future Environmental Performance Audits in the Maldives

The Millenium Ecosystem Assessment (2005) defines an environmental driver as any manufactured or natural factor which directly or indirectly leads to a change in an ecosystem. While climate change is a direct driver of environmental change, economic development and population growth are indirect drivers. Unplanned, uncontrolled urbanization and industrialization, unsustainable use of resources, also habitat destruction leads to the degradation of the environment (Ministry of Environment and Energy, 2016a). Due to the environmental drivers mentioned above, Maldives has faced many environmental issues over the years. These issues include beach erosion, land reclamation, waste disposal, inadequate data, population growth, distribution, and lifestyle (Ministry of Planning, Human Resources, and Environment, 1996). While these factors are still prevalent in the Maldivian context, the main mitigation sectors in the Maldives include energy, transport, and waste. The energy demands of the Maldives are met through the import of resources for energy security. The reliance on fossil fuels to meet the energy demands is the dominant source of Green House Gas (GHG) emissions in the country.

Solar energy is the most commonly used renewable energy in the Maldives. Several policies have been initiated toward achieving low carbon transformation of the energy sector. The recent one is the Framework for Maldives' ambitious plan to achieve net-zero carbon emissions by 2030 included in the Climate Emergency Act. The Maldives Energy Policy and Strategy 2016 was introduced to provide reliable and sustainable electricity by reducing the reliance on fossil fuels and exploiting renewable technologies. Maldives Scaling Up Renewable Energy Investment Plan 2013-2017 was prepared as a requirement of the Scaling Up Renewable Energy Program in Low-Income Countries to become a carbon-neutral country.

The plan's components include renewable energy for the greater Male' region consisting of the Male' region's solar PV, waste-to-energy program, and region's renewable power system integration study. The other intervention is renewable energy for outer islands. This component was targeted to finance total renewable energy in about ten small electricity-consuming islands, upgrade power system in about 15 islands to be ready for large-scale renewable energy deployment, and increase the share of renewable electricity up to 30% of total electricity generation in about 30 islands. The third component of the plan is technical assistance and capacity building.

In addition to the above strategies, a project affiliated with Global Environment Facility (GEF), United Nations Environment Programme, was launched in 2015 to mainstream energy efficiency measures into policies, guidelines, standards, and building practices in the Maldives and to achieve a substantial reduction of GHG emissions (Ministry of Environment, Climate Change, and Technology, 2015). The Government of the Maldives has also exempted import duty on renewable equipment since 2010 to promote renewable energy. In partnership with Asian Development Bank, Climate Investment Funds, and European Investment Bank, Maldives started The Preparing Outer Islands for Sustainable Energy Development Project to transform existing energy grids in about 160 islands into a hybrid renewable energy system (Ministry of Environment, Climate Change, and Technology, 2016). Furthermore, funded by the Climate Change Fund and the World Bank, Accelerating Private Investments in Renewable Energy (ASPIRE) Project was initiated to facilitate

private investments in renewable energy and to increase the share of renewable energy in electricity generation (Ministry of Environment, Climate Change, and Technology, 2013). Fahi Ali Project, funded by the Chinese Government, was also launched in 2015 to distribute LED lights to the public at zero cost.

Audits focusing on whether the intended outcomes from the policies, actions, and projects are generated would be value-adding. Environmental performance audits in this area focusing on comparing and evaluating the adequacy of systems and procedures and the economy, effectiveness, and efficiency of the activities performed can be broad objectives of the audit of energy and sustainable energy projects.

The transport sector is the second-largest source of GHG emissions, and it is very challenging to mitigate the environmental impacts of this sector. Due to rapid urbanization, underdeveloped public transport system, and population growth. As a result, this sector is one of the contributors to environmental degradation. In the absence of mitigation in transport, emissions are projected to increase by nearly 181% by 2030 (Ministry of Environment and Energy, 2016a).

Several initiatives have been taken to mitigate the environmental impact due to transportation. Measures to improve road conditions, facilitate public transport, and reduce road congestion have been introduced. Although the mitigation efforts in this sector are encouraging, these efforts are very limited in scope and impact, and tracking the effectiveness of these measures remains a challenge. As the measures are subject to the broader acceptability of stakeholders, this also poses a major challenge. SAI Maldives can mitigate the challenges faced in this sector by evaluating the management of environmental impacts by auditing the economy, efficiency, and effectiveness of policies, efforts, and measures to mitigate the impact of transport on the environment.

Waste management is recognized as a pressing environmental concern in the Maldives. Rapid population growth, changing consumption patterns, the rapid growth of the tourism sector, and barriers to transportation are the main drivers of significantly rising waste management problems. In the Maldives, there is no practice of segregating waste at the household level. The Environmental Preservation and Protection Act (Act Number 4/93) is the legislative and policy instrument to mitigate the effects of waste. There are sections in the Act addressing waste management. Waste Management Regulation was enacted in 2013 to implement national policies concerning waste management. The National Waste Management Policy was formulated in 2008 and further developed in 2015 to manage waste effectively in the country and establish waste management centers in all inhabited islands.

A multi-donor funded The Greater Male' Environmental Improvement and Waste Management Project was initiated in 2018 with a target to be completed by 2023 to establish a sustainable solid waste management system for the capital region and inhabited outer islands. The project's primary output is to establish a Regional Waste Management Facility with a waste-to-energy treatment plant in Thilafushi. Deficiencies in waste management systems are a national concern. SAI Maldives may help improve the quality of waste management by addressing these insufficiencies compared to international best practices in waste management and providing recommendations to the relevant stakeholders.

The marine environment forms the dominating ecosystem of the Maldives. The coastal and marine ecosystems, especially the coral reefs, are globally significant. They form the seventh-largest reef system globally and are

rich in biodiversity (Ministry of Environment and Energy, 2016b). The biodiversity sector of the Maldives contributes to 89% of Maldives GDP, 98% of exports, 62% of foreign exchange, 49% of public revenue, and 71% of the nation's employment (Ministry of Environment and Energy, 2016b). This indicates that the economy and livelihoods of people are highly dependent on the country's biological resources. Due to the environmental drivers discussed above, the biodiversity of the Maldives has been subjected to extreme pressure.

There are many responses by the government to the threats to the biodiversity of Maldives. The Environmental Preservation and Protection Act (Act Number 4/1993) has provisions for the protection and conservation of biodiversity under which protected areas are classified. The conventions and plans adopted in the Maldives also support biodiversity conservation. Some of the important biodiversity-related international agreements to which Maldives is a signatory are the Convention on Biological Diversity (CBD), Cartagena Protocol on Biosafety, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Plant Protection Convention, and Indian Ocean Tuna Commission (IOTC). In addition to this, under the Fisheries Act (Act Number 14/2019), marine species are declared protected. The Regulation on Migratory Birds (2014/R-169) prohibits any activity that could harm seasonal migratory birds. The first National Biodiversity Strategic Action Plan (NBSAP) was prepared in 2002 to be used as guidance for other national policies, regulations, and work plans to implement the Convention on Biological Diversity (CBD) (Ministry of Environment and Energy, 2016b). A 10-year NBSAP was again developed in 2015 for 2016-2025 to address broad categories of concern. This NBSAP integrates national obligations of other relevant international conventions such as CITES, United Nations Convention to Combat Desertification (UNCCD), and UNFCCC. It will also contribute to the achievement of goals of biodiversity conventions to which the Maldives is yet to become a party (Ministry of Environment and Energy, 2016b).

The Atoll Ecosystem Conservation Project was initiated in 2004 with the support of the United Development Programme (UNDP) and the Global Environment Facility (GEF). These led to the declaration of Baa Atoll as a UNESCO Biosphere Reserve on 28 June 2012 (Ministry of Environment and Energy, 2016b). Choosing and determining audit topics for biodiversity can be challenging due to

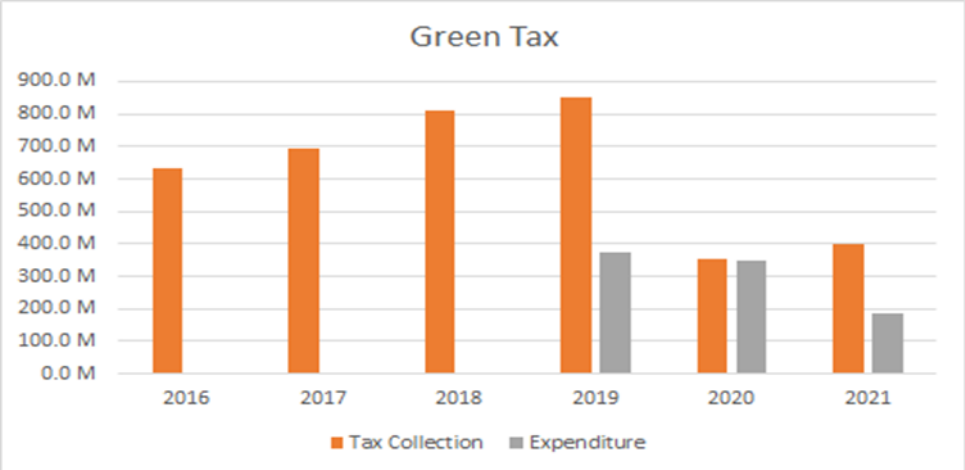

Figure 3. Green Tax Collection and Expenditure
Source: *Maldives Monetary Authority (2021) and Ministry of Finance (2021)*

the complexity of biodiversity issues. However, by taking a step-by-step approach by identifying the nation's biodiversity and threats to it and understanding the government's responses to the threats and the implementing agencies, the complexities of carrying out the audits can be overcome. Audits on biodiversity can evaluate the performance of government programs, national strategies, and plans to deal with threats to biodiversity and ensure conservation (INTOSAI WGEA, 2007).

Environment Impact Assessment (EIA) Regulation came into force in 2007 to enhance environmental sustainability and facilitate environmentally sound development. New regulation for EIA came into effect in 2012, superseding the 2007 regulation. This regulation was brought in to provide step-by-step guidance to government agencies, proponents, consultants, and the general public on obtaining approval in the form of an Environment Decision Statement for a Development Proposal. The Environmental Protection Agency (EPA) is mandated to form guidelines and standards of the EIA.

Environmental performance audits on management of EIAs, focusing on issues in implementation and monitoring of EIAs is an important area. EIA is another outcome of a public environmental assessment process that can correlate but does not equate to an audit. EIA is carried out before a new project is developed, whereas environmental auditing considers the actual impact of the proposed actions to carry out the project. Nonetheless, where an EIA results in conditions being set in development approval, it is important to conduct regular audits to monitor to see what impact occurs, ensure conditions of approval are complied with, and ensure that anticipated impacts are maintained within the levels predicted (Rose, 2001).

In addition to the measures discussed, the Government of Maldives introduced Green Tax in 2015. A trust fund in the name of Green Fund was established to utilize the revenue obtained from Green Tax collections. The Green Tax collections are only utilized for environmental protection projects.

A performance audit to assess the economy, efficiency, and effectiveness of the Green Fund would provide insight into the impact and value-for-money achieved through the taxes collected. Performance audits with the objectives to determine whether Green Fund is structured to achieve its objectives, application, disbursement, and monitoring processes are effective and efficient in ensuring funded projects are consistent with the objectives of Green Fund are critical in this regard.

While choosing areas for environmental audits, auditors should be aware of the potential challenges in gathering data for evidence. The first biennial update report to the United Nations Framework Convention on Climate Change in February 2020 highlighted that Maldives lacks a comprehensive national measurement, reporting, and verification (MRV) system. Five key areas; legal, institutional, procedural, availability, and management of data for MRV systems and indicators for mitigation actions were identified. Despite the challenges faced in building a system for tracking and managing the MRV system, Maldives is currently working with relevant institutions and stakeholders to design the MRV system, as reported by the Ministry of Environment, Climate Change and Technology (2020).

CONCLUSION

Numerous factors have contributed to change in attitude toward the environment, the most important being the multitude of international treaties and policies developing environ-

mental awareness (Ljubisavljević, Ljubisavljević, & Jovanovic, 2017). While environmental degradation has come center stage, the crux is how it is the least developed and developing populations like the Maldives who are suffering the consequences. Thirty-four years of broaching the subject of climate change by the Maldives at the 42nd General Assembly of the United Nations, we have a long way to see the sustainable world we had envisioned and hoped for. Climate change has accelerated to a point where irreversible damage is commonplace. As a nation on the brink of survival due to climate change, the government must take responsibility. As governments set out to address environmental degradation, the complexities and scale of the tasks are realized.

SAIs should examine how effective their governments have been in addressing the challenges shaped by macroeconomic, social, and environmental trends. With the importance placed on environmental issues on the national level by signing numerous treaties, establishing laws, regulations, plans, and policies in place to address the environmental issues, huge sums spent on environmental protection, SAI Maldives matters in ensuring environmental accountability.

Answering the research question, authors claim that an environmental performance audit is fundamental to creating public sector environmental accountability consistent with available literature and practice discussed in the study. From the discussions presented in this study, it can be concluded that there is a growing significance of environmental accountability and the important role SAIs play in contributing to this accountability. The discussions of this study also alluded to how environmental auditing has sought a way to relate environmental audits to SDGs to maintain accountability toward SDGs. Lastly, this study has identified the current areas of environmental concern in the Maldives, thus identifying some key areas for potential environmental audits for SAI Maldives.

SAI Maldives is on the right path to contributing to environmental accountability in the Maldives. We can take lessons from other SAIs and build capacity with the help of WGEA to take environmental auditing in the Maldives to new horizons. As environmental problems are often transboundary, cooperation between SAIs is desirable (Leeuwen, 2004a) as this can help develop the competence of SAIs by knowledge sharing. However, contributing to environmental accountability through environmental performance auditing in the Maldives will be hindered by the challenges inherent in the accountability.

Auditing sustainable development policy and environmental issues are obstructed by a lack of quantified and specific performance commitments against which policy implementation can be measured and a lack of baseline data to relate meaningful performance commitments to (Rose, 2001). SAI Maldives will also face challenges in terms of the cross-cutting nature of environmental issues, multiple stakeholders, government organizations and areas involved in environmental issues, difficulties in evaluating natural resources in monetary terms, and environmental issues often being caused by market failures. Despite the challenges in conducting environmental audits brought about by a lack of experience and exposure, SAI Maldives' contribution to environmental performance auditing is fundamental to creating public sector environmental accountability.

REFERENCES

Association of Chartered Certified Accountants. (2020). *Auditing the SDGs: Progress to 2030*. Retrieved from https://www.accaglobal.com/hk/en/professional-insights/global-

profession/Progress_to_2030.html

Auditor General's Office. (2019). Performance audit on preparedness for implementation of sustainable development goals. Retrieved from http://www.audit.gov.mv/Uploads/AuditReports/2019/03March/Performance%20Audit%20of%20Preparedness%20for%20Implementation%20of%20Sustainable%20Development%20Goals.pdf

Barber, M., Levy, A., & Mendonca, L. (2007). Global trends affecting the public sector. *Transforming Government-McKinsey & Company*, 4-12. Retrieved from https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/public%20sector/pdfs/mck%20on%20govt/inaugural%20edition/tg_global_trends.ashx

Brundtland, G. H. (1987). *Report of the World Commission on environment and development: Our common future*. Oslo: World Commission on Environment and Development.

Choudhary, R. P. (2015). Environmental audit: A need for sustainable development of mining industry. *International Journal of Innovative Research in Engineering & Management, 2*(4)35-39.

European Commission. (2021, April 21). *Sustainable finance package*. Retrieved from https://ec.europa.eu/info/publications/210421-sustainable-finance-communication_en#csrd

Iacuzzi, S., Garlatti, A., Paolo, F., & Alessandro, L. (2020). Integrated reporting and change: evidence from public universities. *Journal of Public Budgeting, Accounting & Financial Management, 32*(2), 291-310. DOI: 10.1108/JPBAFM-08-2019-0120

INTOSAI WGEA. (2007). *Auditing biodiversity: Guidance for Supreme Audit Institutions*. Retrieved from https://environmental-auditing.org/media/3235/eng07pr_fs_guidebiodiversity.pdf

INTOSAI WGEA. (2017). *The 2017-2019 INTOSAI WGEA Work Plan*. Retrieved from https://www.environmental-auditing.org/media/5286/the-2017-2019-intosai-wgea-workplan.pdf

INTOSAI WGEA. (2019). *The 9th survey on environmental auditing*. Retrieved from https://www.environmental-auditing.org/media/113683/23j-wgea_final-report-survey-9th_corbel-fin.pdf

INTOSAI WGEA. (n.d.). *Mission*. Retrieved from https://www.environmental-auditing.org/about/mission-mandate/

Kramarz, T., & Park, S. (2016). Accountability in global environmental governance: A meaningful tool for action? *Global Environmental Politics, 16*(2). DOI: 10.1162/GLEP_a_00349

Lampert, M., Metaal, S., Liu, S., & Gambarin, L. (2019). *Global rise in environmental concern*. Retrieved from https://glocalities.com/reports/environmental-trends-2021

Leeuwen, S. V. (2004a). Auditing international environmental agreements: The role of Supreme Audit Institutions. *Environment Systems and Decisions, Springer, 24*(2), 93-99. DOI: 10.1007/s10669-004-4800-2

Leeuwen, S. V. (2004b). Developments in environmental auditing by supreme audit institutions. *Environ Manage, 33* (2), 63-72. doi:10.1007/s00267-003-0063-9

Ljubisavljević, S., Ljubisavljević, L., & Jovanovic, D. (2017). Environmental audit for environmental improvement and protection. *Economic Themes, 55* (4), 521-538. DOI: 10.1515/ethemes-2017-0029

Maldives Monetary Authority. (2021). Economic update August 2021. *Economic Update, 3*(8). Retrieved from https://

www.mma.gov.mv/documents/Economic%20Update/2021/EU-Aug-2021.pdf

Ministry of Environment, Climate Change, and Technology. (2013). *Project - Accelerating private investments in renewable energy (ASPIRE)*. Retrieved from www.environment.gov.mv/: https://www.environment.gov.mv/v2/en/project/2250

Ministry of Environment, Climate Change, and Technology. (2015). *Project - Strengthening low-carbon energy island strategies*. Retrieved from www.environment.gov.mv: https://www.environment.gov.mv/v2/en/project/2232

Ministry of Environment, Climate Change, and Technology. (2016). *Preparing outer islands for sustainable energy development*. Retrieved from https://www.environment.gov.mv/v2/en/project/304

Ministry of Environment, Climate Change, and Technology. (2020). *Maldives first biennial update report*. Retrieved from https://www.environment.gov.mv/v2/wp-content/files/publications/20200206-pub-maldives-first-biennial-update-report.pdf

Ministry of Environment and Energy. (2015). *Maldives climate change policy framework*. Male': Ministry of Environment and Energy. Retrieved from https://www.environment.gov.mv/v2/en/download/4594

Ministry of Environment and Energy. (2016a). State of the environment 2016. Male': Ministry of Environment and Energy. Retrieved from https://www.environment.gov.mv/v2/wp-content/files/publications/20170202-pub-soe-2016.pdf

Ministry of Environment and Energy. (2016b). *National biodiversity strategy and action plan 2016-2025*. Male': Ministry of Environment and Energy. Retrieved from https://www.environment.gov.mv/v2/wp-content/files/publications/20160804-pub-nbsap-2016-2025.pdf

Ministry of Finance. (2021). *Budget in Statistics 2021*. Male': Ministry of Finance. Retrieved from https://www.finance.gov.mv/public/attachments/Em0mwtqxQ9hYFJUq6lh-fuqvFjs4Bpp5wIAE4FxUF.pdf

Ministry of Home Affairs, Housing, and Environment. (2001). *First National Communication of the Republic of Maldives to the United Nations Framework Convention on Climate Change*. Malé: Novelty Press, Maldives. Retrieved from https://unfccc.int/resource/docs/natc/maldnc1.pdf

Ministry of Planning, Human Resources, and Environment. (1996). Environmental changes in the Maldives: Current issues for management. *Food and Agriculture Organisation of the United Nations*. Retrieved from http://www.fao.org/3/X5623E/x5623e0r.htm

Monteiro, S., Ribeiro, V., & Lemos, K. (2020). Emerging trends on sustainability/integrated reporting: Public and private perspectives. *Springer*, 144-156. DOI:10.1007/978-981-15-6366-9_8

Montero, A. G., & Le Blanc, D. (2019, January 16). *The role of external audits in enhancing transparency and accountability for the Sustainable Development Goals*. Retrieved from https://www.un.org/development/desa/publications/working-paper/wp157

Montesinos, V., & Brusca, I. (2019). Non-financial reporting in the public sector: alternatives, trends, and opportunities. *Spanish Accounting Review, 22*(2), 123-128.

Nazarova, K., Nezhyva, M., Kucher, A., Hotsuliak, V., Melnyk, T., & Zaremba, O. (2021). Environmental audit in the sustainable development of the green economy. *European Journal of Sustainable Development*, 273-290. DOI: 10.14207/ejsd.2021.v10n2p273

Roberto, F., Maglio, R., & Rey, A. (2020). Accountability and sustainability reporting in the public sector: Evidence from Italian Municipalities. In S. Seifi & D. Crowther (Eds.), *CSR and sustainability in the public sector* (pp.29 -44). Singapore: Springer Nature Singapore Pte. Ltd.s

Rose, G. (2001). Environmental performance auditing of government - the role of an Australian commissioner for the environment. *Environmental & Planning Law Journal, 18*(3), 293-318.

Seifi, S., & Crowther, D. (2020). The developing public sector perspective. In S. Seifi & D. Crowther (Eds.), *CSR and sustainability in the public sector* (pp.13-27). Singapore: Springer Nature Singapore Pte Ltd.

Sułkowski, Ł., & Dobrowolski, Z. (2021). The role of supreme audit institutions in energy accountability in EU countries. *Energy Policy, 156*. DOI: 10.1016/j.enpol.2021.112413

The Millenium Ecosystem Assessment. (2005). The overview of the millennium ecosystem assessment. Retrieved from https://www.millenniumassessment.org/en/About.html

The President's Office, Republic of Maldives. (2021). *President ratifies Climate Emergency Act*. Retrieved from https://presidency.gov.mv/Press/Article/24678

World Bank. (2021). *The World Bank in the Maldives*. Retrieved from https://www.worldbank.org/en/country/maldives/overview

Yusoff, H. N., Mohamed, A. F., & Hadi, A. S. (2016). Sustainable development: What is the role of audit? *Journal of Sustainability Science and Management, 11*(1), 99-112.


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