

## Insights into Blue Accounting Disclosures: Accounting Discipline Paradigm

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### Abstract

*The rapid evolution of marine knowledge necessitates in-depth transdisciplinary ocean sustainability studies that could provide pathways in solving the losses in ocean health and catalyze the blue economy, both of which present significant challenges. This decline in ocean health should be a cause for global concern because the oceans provide food, livelihood, and employment for billions of people worldwide. It also negates the United Nations Sustainable Development Goals. The paper provides a conceptual understanding of blue accounting disclosure from the stand point of accounting discipline in view of conflicting paradigms available in the public domain. The research method used is a qualitative method through literature review and conceptual modeling. The study's findings establish a new paradigm for blue accounting disclosure, focusing on sustainability reporting for the oceans and marine ecosystems by corporate bodies. The findings of this study have policy and practical implications for the advancement of corporate reporting and the accounting profession. The paper recommends a paradigm shift from traditional accounting practices, focused primarily on financial reporting to embrace more forward-looking disclosures in corporate reporting.*

**Keywords:** Oceans, Sustainability, Blue Accounting, Blue Accounting Disclosure, Corporate Reporting

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### 1.0 Introduction

The oceans are natural capital that every country should continue to enjoy now and, in the future (Fuad & Setyawan, 2020). Climate change also has a direct bearing on the ocean health as a key stressor predicated on the ocean-climate nexus (Intergovernmental Panel on Climate Change, 2007; 2014a, and b). According to the First Global Integrated Marine Assessment (2016), the oceans are becoming less resilient, clean, blue and productive. Furthermore, the impact of the human stressors (Economic exploitation) on the ocean is expected to grow as the human population approaches nine billion by 2050. The assessment further discovered that much of the oceans are

now seriously degraded, with changes and losses in the structure, function, and benefits to marine eco systems leading to a rapid decline in ocean health due to marine damage.

The health of the oceans therefore should be a critical concern to humanity and smart forward-looking solutions are needed to mitigate these stressors, preserve ocean health and sustainably improve management of its resources for the benefit of present and future generations. This concerns is what has spurred the United Nations through its Decade of Ocean Science for Sustainable Development (2021-2030) programme under the aegis of the Intergovernmental Oceanographic Commission (IOC) to bring together and unite stakeholders across diverse disciplines under a common global platform to develop transdisciplinary research in order to provide smart solutions and reverse rapid losses in ocean health and to achieve a cleaner, resilient, productive blue oceans by 2030 (Intergovernmental Oceanographic Commission-UNESCO, 2024).

According to Abreu, David, Segura, and Formigoni (2019), and Fuad and Setyawan (2020), to reinforce marine knowledge and support the blue economy, new accounting standards, ocean practices, and disclosure frameworks bespoke to address this challenge, need to be developed and adopted. Thus, the rapid evolution of marine knowledge necessitates in-depth cross-disciplinary ocean sustainability studies and corroborations into the ocean sciences by accountants into understanding how the nature of some categories of businesses impacts the oceans and its ecosystems, and the resulting risk and opportunities on their cashflows, financial position and performance. This gap necessitated ocean sustainability research within corporate reporting to explore a new information disclosure type which has spawned blue accounting disclosures in the field of Accounting.

Blue accounting disclosure from an accounting discipline paradigm is suggested as a new ocean-climate niche field in corporate reporting that realigns attention to environmental disclosures and thus requires sustainability reporting on the oceans and marine ecosystem and reports blue growth in the blue economy to an increasingly growing number of information-savvy stakeholders (Abreu et al., 2019; Fuad & Setyawan, 2020). As a result, this forward-looking sustainability disclosure can be adapted to evaluate solutions to scale ocean regeneration, improve management of marine resources, safeguard Marine Protected Areas (MPAs), scale up ocean resilience to climate change, and safeguard ocean health for generations (Rahmamyanti & Sari, 2023; Syah, Saraswati, Sukoharsono & Roekhudin, 2020; Abreu et al., 2019).

Blue accounting disclosures practices draws roots from a series of recommendations advanced by the European Commission from 2001, for inclusion as part of marine environmental disclosures of European Union entities (European Commission, 2001a, and b; 2008; 2012a, and b 2020; European Union Marine Strategy Framework Directive, 2008). Furthermore, it aligns with the Task Force on Nature-Related Financial Disclosures, which are modeled after the Task Force on Climate-Related Financial Disclosure. Blue accounting disclosure are also in tandem with the Sustainable Development Goals (SDGS). In Nigeria, like the rest of the world, blue accounting disclosures are not mandatory disclosures, but a unique form of environment specific voluntary

disclosure by diverse economic sectors of the blue economy that is accommodated by the Sustainability Disclosure Guidelines of the Nigerian Exchange Group for quoted firms listed on the Stock Exchange.

Blue accounting disclosures are voluntary disclosures, however, is not generally and globally practiced. Therefore, the need to advance the frontiers of blue accounting research in order to establish a new paradigm for blue accounting disclosure, focused on sustainability reporting for the oceans and marine ecosystems by corporate bodies from the stand point of accounting discipline in view of conflicting paradigms available in the public domain is thus the motivation and relevance of the study.

## 2.0 Literature Review

Blue accounting is a generic term for ocean and marine ecosystems sustainability (African Union, 2020, Failler, Lallemand, & March, 2023). This meaning requires deconstruction of the term and examining each word in the context of usage in sustainability reporting for the oceans and marine ecosystems to provide clarity. According to Syah et al. (2020), the word 'Blue' in the term refers to water quality. The discipline of hydrology which is the study of water helps to provides interpretation of this meaning in the context of color classification for various water bodies as practiced in hydrology (Hoekstra, 2019). Syah et al. (2020), further narrows it to sea water quality. "Seawater quality refers to water bodies with a high concentration of salinity, typically found in marine environments such as oceans and seas." (UNESCO, 2014)

'Accounting' in this context refers to aligning water decisions with desired outcomes (Syah et al., 2020). The use of the term as posited by Syah et al. (2020) connotes sustainability. The Brundtland Report (1987), posits that sustainability is "development that meets the needs of the current generation without jeopardizing the ability of the next generation to meet their own." This definition provides a broad idea of the concept of sustainability, on which most definitions in literature are rooted. The interpretation and usage of the term 'Accounting' in this context differ fundamentally from accountants' common understanding of what the term accounting means, which is the process of recording, classifying, summarizing, analyzing, and interpreting financial transactions to provide information for decision-making. It is essentially the language of business, presenting a quantitative representation of a company's financial health (Carnegie, Parker, & Tsahuridu, 2021).

There are two schools of thought to blue accounting. The first school of thought is rooted in the discipline of economics. This paradigm is predicated on a top-to-bottom aggregate approach of valuing and accounting for economic activities resulting from the ocean and marine ecosystems, and integrating the benefits and contributions through the System of National Accounts or National Accounting Frameworks to provide a holistic view of an economy using methodologies such as the System of Environmental Economic Accounting. This is because economics is often considered an aggregate science, and importantly issues around how to accurately determine and

compute gross domestic product (GDP) (Colgan, 2016; Ram, Ramrattan, & Frederick, 2019; Wang, He, Zhou, Gao, & Deng, 2018; African Union, 2020, Failler, Lallemand, & March, 2023).

The second school of thought is rooted in the discipline of accounting. This new paradigm is predicated on a bottom-to-top approach and starts from a firm-wide level. The basic assumption of this paradigm is that ocean sustainability can be integrated into corporate reporting by businesses in the blue economy to demonstrate the extent of their ocean sustainability performance (Abreu et al., 2019; Fuad & Setyawan, 2020; Syah et al., 2020; Wanta, & Gunawan, 2021; Ardiansyah & Umarella, 2022; Rahmayanti, & Sari, 2023).

### **Blue Accounting Disclosure**

Extant studies on blue accounting in accounting literature provide different perspectives on blue accounting disclosure. For instance, studies in the search for accounting standards to fit ocean sustainability as part of corporate reporting such as, Abreu et al. (2019), and Fuad and Setyawan (2020), all argued that there is a clear and urgent need for the development of specific accounting standards to prescribe accounting treatment related to the ocean ecosystems and blue economy and its adoption in financial reporting. Similar to accounting standard specific and tailored for climate change (IFRS S2 Climate-related Disclosure. Effective 1st January, 2024).

According to Fuad and Setyawan (2020), blue accounting is based on the creation of marine knowledge that starts with the ocean which is an asset of the blue economy and blue accounting disclosure provides useful information to stakeholders and governments on the measures taken by firms to enhance marine ecosystem resilience and sustainability. Abreu et al. (2019), state that blue accounting is marine knowledge that would equip stakeholders with valuable information on the oceans and marine ecosystem based on new accounting standards that identify, measure, value, and report this information as part of financial reporting in the preparation of financial statements.

Rahmamyanti and Sari (2023), posits that blue accounting can be constructed as a conceptual framework of financial reporting to provide insights into the potentials of the blue economy. However, the study, provided a limited understanding on how such a conceptual framework can be developed into financial reporting without recourse to bespoke accounting standards as posited by Abreu et al. (2019), and Fuad and Setyawan (2020).

Syah et al. (2020), asserts that blue accounting and sustainability are synonymous. Furthermore, that blue accounting disclosure connotes ocean sustainability reporting in financial statements. The study suggests that the construction of blue accounting into sustainability reports can be started through conceptual papers. Wanta, and Gunawan (2021), suggest that blue accounting disclosures are sustainable blue disclosures that can be used to evaluate ocean sustainability performance of firms in the blue economy. This study provides the first baseline insights into blue accounting disclosure from a sustainability accounting paradigm.

### **Corporate Reporting**

According to Beattie (2000), significant changes in the corporate external reporting environment have prompted calls for fundamental adjustments to corporate reporting practices to embrace more

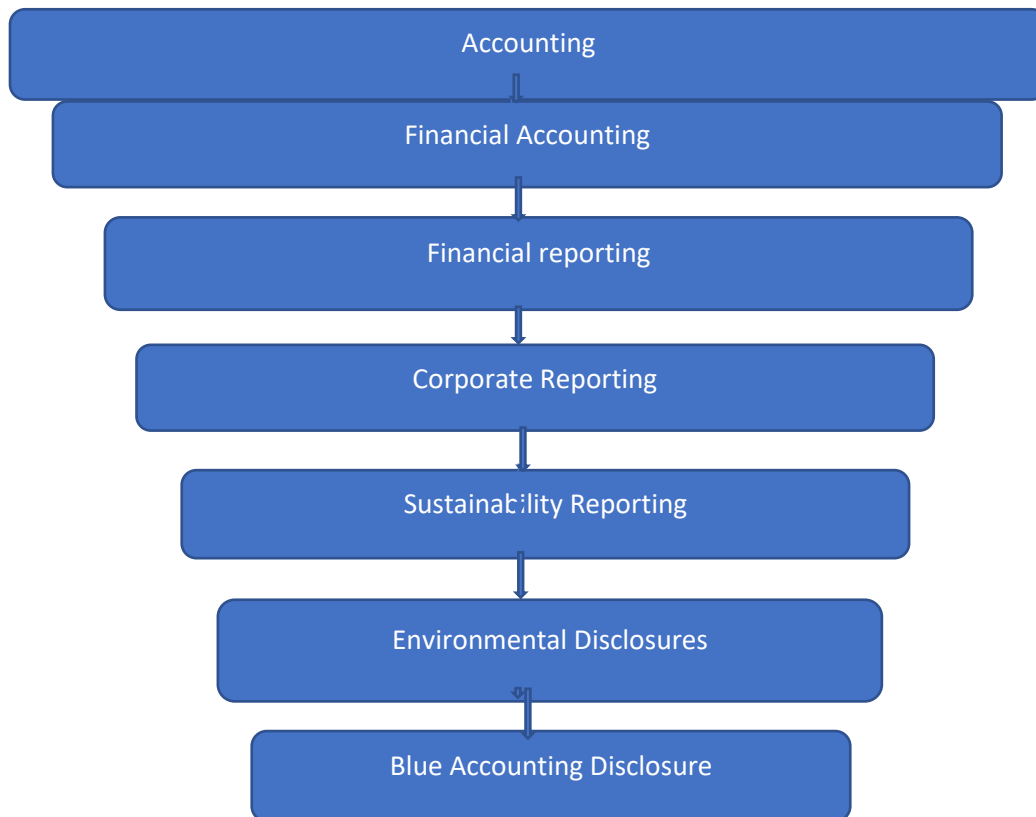
forward-looking, non-financial, and soft information to stakeholders. This is in view of limitations to traditional corporate reporting (Oyewo & Isa, 2017). Corporate reporting and financial reporting are two related but distinct concepts, where corporate reporting encompasses a broader range of information, including financial and non-financial information, while financial reporting focuses specifically on a company's financial health and performance (Eccles & Krzus, 2010).

The fundamental point of departure is that financial reporting requires the strict application of accounting standards in the preparation of financial statements (Carnegie et al., 2021). According to Ande (2021), current financial reporting by most entities contributes marginally to understanding forward-looking or non-financial concerns that are relevant and material for understanding the nature, or scale of those concerns not envisaged or captured based on current existing accounting standards. Thus, the need to bring to stakeholder attention such concerns using forward-looking disclosures.

### **3.0 Conceptual Framework**

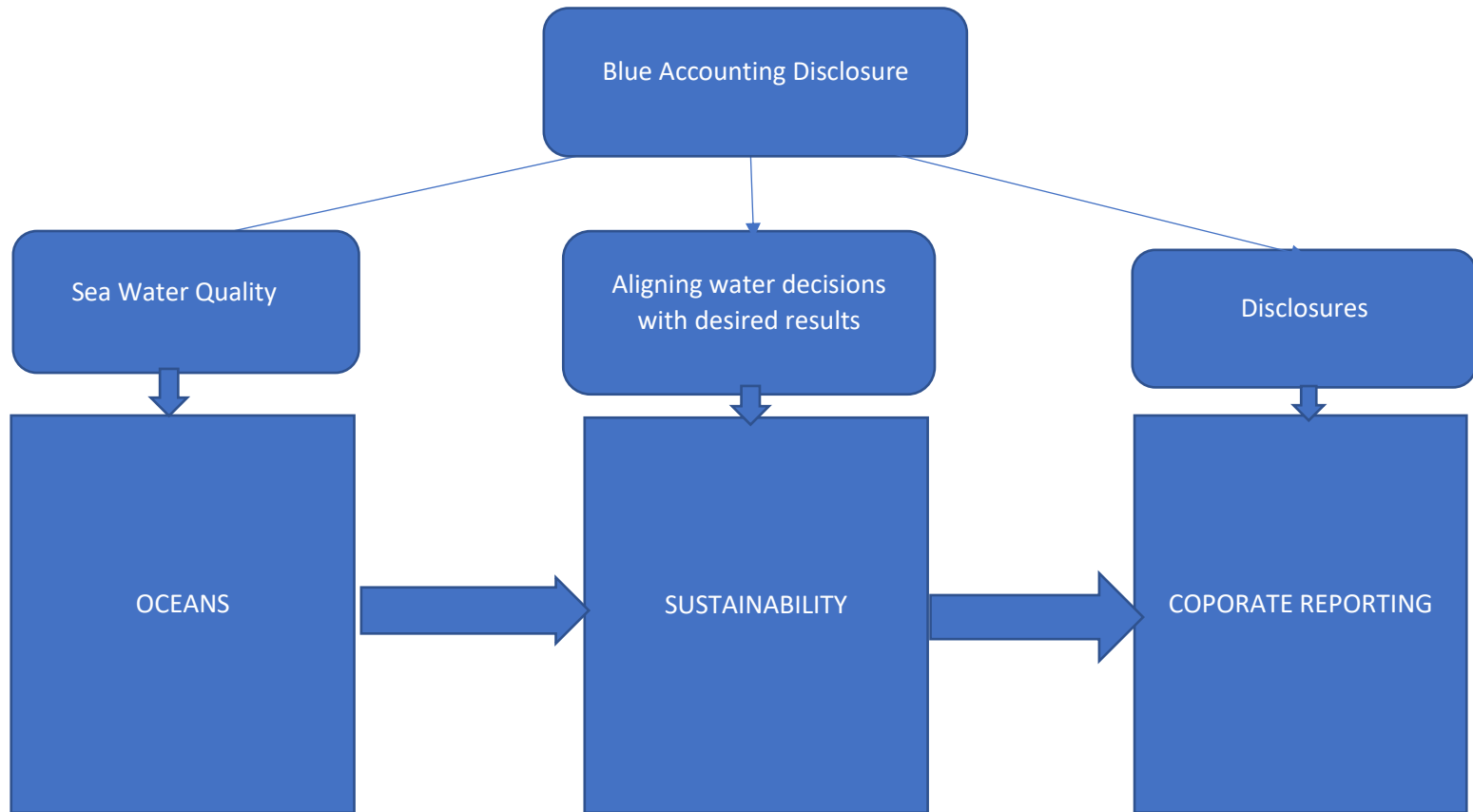
The common denominator in the conceptual definitions of blue accounting in literature is that blue accounting disclosure is underpinned by three pillars: (i) concerns about the oceans and marine ecosystems: the oceans and marine ecosystems are key assets of the blue economy. According to the United Nations Environmental Programme (2022), the global blue economy was worth \$2.5 trillion in 2022, and is the equivalent of the world's seventh-largest economy. It is a source of food, mineral resources, employment, livelihood and shared prosperity (Failler, Lallemand, & March, 2023; Ram et al., 2019). (ii) Sustainability: what makes this ocean economy 'blue' is the presence of sustainability (Colgan, 2016; Ram et al., 2019; African Union, 2020, Failler et al., 2023) (iii) Corporate reporting: ocean sustainability disclosures in view of a lack of specific accounting standard to enable financial reporting in financial statements, thus disclosures through corporate reporting can be presented to stakeholders as highlighted by Wanta, and Gunawan (2021). Blue accounting disclosures because the not mandatory but voluntary disclosures draw support from established theories such as the theoretical framework of legitimacy, stakeholder and institutional theories

Hence the term "Blue Accounting Disclosure" after a synthesize of literature can be adapted and conceptualized in this study as ocean sustainability corporate reporting by diverse economic sectors of the blue economy to stakeholders. In order words blue accounting disclosures are ocean sustainability disclosures. They are also environment and sustainability disclosure specific for the blue economy. Figure 1 depicts how blue accounting disclosures is situated and linked in the discipline of accounting. Figure 2 depicts the paper conceptualization of this paradigm.



**Figure 1. Conceptualization Blue Accounting Disclosure.**

**Source:** Author's Adaptation (2024)



**Figure 1. Conceptualization Blue Accounting Disclosure.**

**Source:** Author's Adaptation (2024)



#### **4.0 Discussion**

The conceptual modeling demonstrates a new paradigm that sustainability reporting for the oceans and marine ecosystems by corporate bodies is possible and can be presented in corporate reports for stakeholders by applying extant generic sustainability disclosure framework by entities in diverse economic sectors of the blue economy. There are a number of generic sustainability reporting frameworks that can accommodate ocean sustainability corporate reporting (Blue Accounting Disclosure). One of such sustainability reporting frameworks is the Global Reporting Initiative (GRI), which divides sustainability reporting into three standards: economic, environmental, and social performance topics-specific standards and is designed based on the Triple Bottom-Line framework.

According to Oyewo and Isa (2017), the Global Reporting Initiative (GRI) is increasingly becoming the de-facto standard for global sustainability reporting. GRI standards are structured as a set of interconnected standards. They were designed to work together to help an organization prepare a sustainability report based on reporting principles and focusing on material topics (GRI, 2023). The environmental topics-specific standards of the Global Reporting Initiative 300 guidelines with application to biodiversity reporting can be adapted and used as a baseline for ocean sustainability corporate reporting. Other sustainability frameworks that can accommodate ocean sustainability corporate reporting is the Task Force on Nature-related Disclosures which is still at early stages of adoption and the UN Global Compact

#### **5.0 Conclusion**

The paper aimed to establish a new paradigm for blue accounting disclosure. The new paradigm is established from a synthesize of literature and conceptual modeling and posits that blue accounting disclosure is ocean sustainability corporate reporting by entities in diverse economics of the blue economy. The study's findings have policy and practical implications for the advancement of corporate reporting and the accounting profession. The policy implication which can be referred to by regulatory bodies when developing policies to promote environmentally responsible business practices within the blue economy. The practical implication which can be referred to by firm when developing ocean/marine ecosystem sustainability projects and programme. The paper recommends a paradigm shift from traditional accounting practices, which are primarily focused on financial reporting, to more forward-looking disclosures in corporate reporting. Future research can examine blue accounting disclosure as a research construct against other research construct(s) in order to provide empirical evidence.



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