GREEN TAXONOMY FOR SUSTAINABLE DEVELOPMENT: INSIGHTS FROM INTERNATIONAL PRACTICES AND STRATEGIC RECOMMENDATIONS FOR VIETNAM

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ABSTRACT:

This study seeks to advance Vietnam's green taxonomy by examining international green and sustainable taxonomy frameworks from diverse countries and regions. Through a comprehensive analysis of these frameworks, the study identifies global best practices and highlights gaps within Vietnam's existing green finance system. The findings serve as the foundation for strategic recommendations to develop a green taxonomy tailored to Vietnam's sustainability objectives, fostering alignment with international standards and supporting the country's transition to a more sustainable economy.

Keyword: green taxonomy, net-zero emissions, sustainable development, sustainable finance.

1. Introduction

The global shift towards sustainable development has gained substaintial traction in the past decades, largely motivated by the pressing need to address climate change and achieve the Sustainable Development Goals (SDGs) set by the United Nations. Various initiatives, technological advancements, government regulations and programs, sustainable projects, and research efforts have been launched globally to bring about the transition to a sustainable development [10]. One of the key elements of this transition is the development and use of green taxonomy, which provide a structured framework for classifying economic activities based on their environmental impact. Green taxonomy is an essential tool for classifying and directing investments toward activities that contribute to climate goals, particularly the goal of mitigating climate change (SDG 13) and fostering responsible consumption and production (SDG 12) [11, 15]. As countries worldwide strive to align their economic activities with these objectives, the role of green taxonomy becomes increasingly critical in directing financial resources toward sustainable development [15]. Vietnam faces significant environmental challenges due to rapid industrialization and urbanization [19]. Its commitment to achieving net-zero emissions by 2050, as pledged at COP26, highlights the need for a green taxonomy tailored to its specific context. The

development of a green taxonomy is a critical step for Vietnam as it seeks to align its economic activities with global sustainability goals.

While existing literature provides a robust foundation on the design and implementation of green taxonomies, several gaps remain, particularly in the context of developing economies. Much of the research focuses on developed countries like those in the European Union [11, 14], with limited attention paid to the unique challenges faced by developing countries like Vietnam. Thus, there is a need for more research on how green taxonomies can be adapted to Vietnam's context, as well as how these taxonomies can be integrated into existing financial systems in the country.

This study aims to provide tailored recommendations for the development of a green taxonomy in Vietnam by analyzing international frameworks. A thorough review of existing literature will be conducted, focusing on successful experiences from both developed and developing countries. These global experiences will offer valuable insights into best practices for developing green and sustainable finance taxonomies. Based on these findings, strategic recommendations will be proposed to guide the formulation of a green taxonomy that aligns with Vietnam's sustainable development goals, particularly its commitment to climate action, resource efficiency, and environmental protection.

The structure of this paper is organized as follows. Section 1 provides an introduction, followed by a literature review on green taxonomies and their current global status in section 2. Section 3 examines the experiences of various countries in establishing green/sustainable taxonomies. Section 4 offers an analysis of the government scheme of green finance in Vietnam, along with a proposed framework for the development of a green taxonomy in the country. Finally, the paper concludes with a brief discussion and summary in section 5.

2. Literature review

Green taxonomy refers to a classification system that identifies economic activities relateted to environmentally sustainable, based on predefined criteria and objectives. Key components of a green taxonomy typically include a clear set of environmental objectives, sector-specific technical screening criteria, and thresholds that align with global climate targets, such as the Paris Agreement [11]. Green taxonomy provides a standardized framework for classifying economic activities based on their environmental impact, benefiting both financial markets and sustainability efforts [16]. By establishing clear sustainability criteria, they help financial institutions, investors, and policymakers consistently identify environmentally sustainable activities, promoting increased transparency in the market [11]. Additionally, green taxonomy directs capital toward projects aligned with climate goals, such as climate change mitigation and resource efficiency, thereby encouraging sustainable investments. It also fosters international cooperation and improve access to global climate finance, particularly important for countries like Vietnam seeking to meet ambitious environmental targets [14].

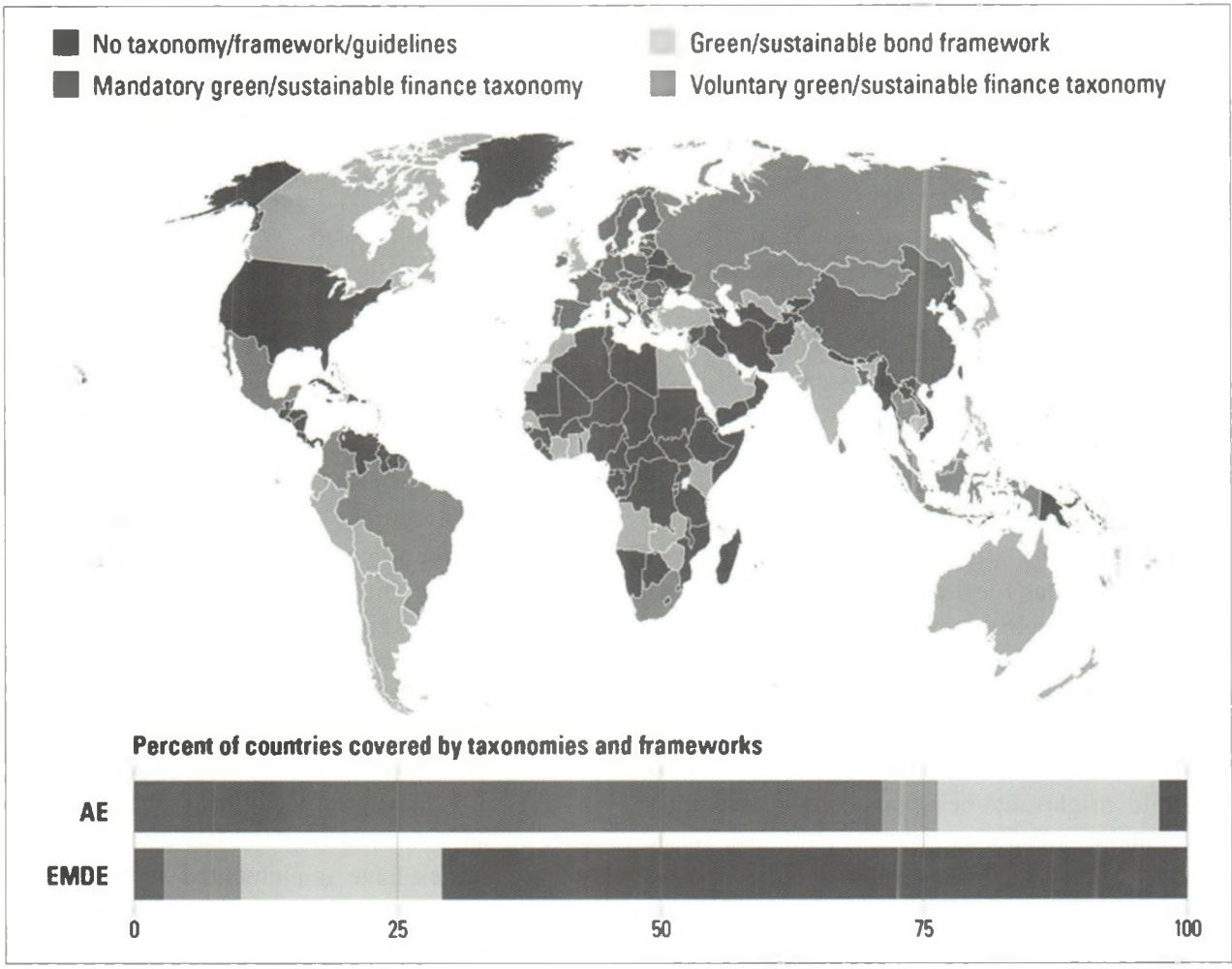
Figure 1 illustrates the global distribution of green finance taxonomies and frameworks. While most countries have implemented some form of guidelines or frameworks for sustainable finance, a significant portion remains without any formal regulations. Advanced economies (AE) demonstrate a higher prevalence of taxonomies and frameworks, particularly mandatory ones, indicating a more advanced regulatory landscape. Emerging markets and developing economies (EMDE) exhibit a more diverse picture, with a mix of voluntary and mandatory frameworks. This suggests that while these regions are increasingly adopting sustainable finance principles, their regulatory environments may vary significantly. Overall, the global trend is towards a growing adoption of sustainable finance instruments and regulations, albeit with regional disparities.

3. International experiences with green and sustainable taxonomy framework

3.1. European (EU)

The EU Green Taxonomy is launched under the EU's Action Plan on Sustainable Finance in 2018, the

Figure 1: A global overview of sustainable finance taxonomies



Source: Worldbank, 2024 [12]

taxonomy was officially introduced with the adoption of the Taxonomy Regulation in June 2020 [7]. This regulation is designed to provide a common classification system, identifying activities that significantly contribute to the EU's environmental objectives, particularly climate change mitigation, adaptation, water and marine resource protection, pollution prevention, biodiversity protection, and transition to a circular economy. Key to the EU taxonomy is its rigorous science-based criteria and adherence to the "Do No Significant Harm" (DNSH) principle, ensuring that classified activities meet strict thresholds for environmental impact and avoid adverse effects on other sustainability goals [8].

The EU taxonomy's framework is structured into two main components: the environmental objectives and the detailed technical screening criteria, which provide quantitative benchmarks to assess the alignment of economic activities with sustainable goals. Its classification of activities as "aligned," "transition," or "enabling" enables investors to differentiate between fully sustainable, transitional, and supportive activities, thus enhancing transparency in capital allocation. This tiered approach is particularly impactful in helping investors identify projects that support long-term environmental goals, especially in sectors crucial to climate mitigation, such as energy, transportation, and construction [9]. Currently, the taxonomy's scope is being expanded to include social criteria, emphasizing a comprehensive framework that addresses both environmental and social impacts.

3.2. ASEAN

The ASEAN Sustainable Taxonomy is a key initiative for unifying sustainable finance practices across the region's financial sectors. Launched by the ASEAN Capital Markets Forum (ACMF) with the introduction of ASEAN Green Bond Standards in 2017 [1], it laid the foundation for green, social, and sustainability bonds, aligning ASEAN markets with global standards. In 2021, the first version of the ASEAN Taxonomy for Sustainable Finance expanded beyond bonds, providing a common framework across banking and other financial sectors to support sustainable activities [2]. It focuses on four environmental objectives: climate change mitigation, climate change adaptation, ecosystem protection, and promoting resource resilience and a circular economy. These objectives underscore the region's priority areas in addressing environmental challenges. The lastest version, which issued in April, 2024

The Taxonomy comprises two key elements: the Foundation Framework and the Plus Standard [3]. The Foundation Framework allows for qualitative assessments, requiring that activities contribute to at least one environmental objective, adhere to the DNSH principle, and include significant efforts for transition. The Plus Standard, still under development, introduces quantitative metrics to further assess and classify green activities, with an initial focus on climate change mitigation. This classification system, which categorizes activities as green, amber, or red, helps guide investment decisions and supports a region-wide sustainable finance framework.

3.3. China

China's green taxonomy has played a central role in advancing its green finance agenda, reflecting a commitment to sustainable financial practices. It began with the China Banking Regulatory Commission's (CBRC) 2012 Green Credit Guidelines, requiring banks to integrate environmental and social risks into governance [5]. To support this, the CBRC developed a green lending taxonomy, a reporting system, and an evaluation framework to monitor green lending activities. In 2022, the China Banking and Insurance Regulatory Commission (CBIRC) extended the Green Credit Guidelines to the Green Finance Guidelines to cover (re)insurance and insurance asset management companies [6].

China has also engaged in global collaboration, notably with the European Union, to develop a Common Ground Taxonomy, promoting greater consistency in green finance. Additionally, the National Association of Financial Market Institutional Investors (NAFMII) has introduced social bond and transition bond taxonomies, currently in pilot phases [13]. These efforts highlight China's effort in shaping global green finance standards and fostering sustainable financial systems.

3.4. Thailand

Thailand's green taxonomy is a key step toward aligning its financial sector with sustainable practices. The first draft, released in December 2022 by the Thailand Taxonomy Board (TTB) with support from the Climate Bonds Initiative, aims to guide discussions on decarbonization and set criteria for activities contributing to climate change mitigation [17]. The taxonomy is divided into two phases. Phase I, launched in 2023, identifies activities in the energy and transportation sectors that contribute to environmental goals. Phase II is still in development and will expand to include other critical sectors such as construction, real estate, waste management, agriculture, and manufacturing [4]. The taxonomy is aligned with the goals of Paris Agreement, reflecting Thailand's commitment to reducing greenhouse gas emissions. It follows the common structure of most taxonomies consisting of four layers: objectives, sectors, activities and screening criteria [18]. The primary objectives of Thailand's green taxonomy are to define and classify economic activities that contribute to environmental sustainability, with an initial focus on climate change mitigation. Future phases of the taxonomy will expand to include criteria for climate adaptation, the sustainable use and protection of marine and water resources, biodiversity and ecosystem restoration, pollution prevention and control, and the promotion of resource resilience and a circular economy. These

Table 1. A comparison of sectors included in different green and/or sustainable taxonomies

EU	ASEAN	China	Thailand
Forestry	Agriculture, forestry and fishing	Clean production industry	Energy
Agriculture	Electricity, gas, steam and air conditioning supply	Manufacture of energy efficient equipment	Transportation
Manufacturing	Manufacturing	Clean energy industry	Manufacturing*
Electricity, gas, steam and air conditioning supply	Transportation and storage	Industry of ecology and environment	Agriculture*
Water, sewerage, waste and the related remediation	Water supply, sewerage, waste management	Green upgrade of infrastructure	Real estate and Construction*
Transportation and storage	Construction and real estate	Green services	Waste management*
ICT			
Buildings			

objectives are central to Thailand's broader climate and environmental policy framework. The taxonomy is based on science-driven, dynamic principles and DNSH approaches. It is also tailored to the specific characteristics of the country. Activities will be categorized as green, amber, or red based on their environmental impact, ensuring a thorough and transparent evaluation process to support sustainable finance in Thailand.

4. Developing green taxonomy for Vietnam

4.1. Government scheme

The Vietnamese government has introduced numerous regulations and policies to promote the development of green finance. These include a framework of regulations aimed at guiding the growth of green finance such as Decision No. 1393/QD-TTg approving the National Strategy on green growth for the period 2011-2020 with vision to 2050, Decision No 882/ QĐ-TTg on approving of the National Action Plan on Green growth in Vietnam for the Period of 2021 – 2030 and Promulgating the lists of sectors and establishments emitting greenhouse gases subject to greenhouse gas inventory. In addition, specific legal provisions related to green credit and green bonds has been issued such as Decision No. 1408/QĐ-NHNN dated July 26, 2023 promulgating the Action Plan of the Banking sector to implement the National Strategy on Green Growth for the Period of 2021 - 2030, Decision No. 1604/QD-NHNN dated August 7, 2018 of the Governor of the State Bank of Vietnam on approving the Project on developing green banking in Vietnam, which identifies the goal of directing credit capital flows to financing environmentally friendly projects, Decision No. 1191/QD-TTg of the Prime Minister approving the Bond Market Development Roadmap for the 2017-2020 period, with a vision to 2030, or Clause 2, Article 150 of the Law on Environmental Protection 2020 addresses the use of capital raised from green bonds. These initiatives reflect the government's commitment to fostering sustainable financial practices in support of environmental objectives.

4.2. Proposing a framework for Vietnam's green taxonomy

Based on these above arguments, a proposed framework for developing Vietnam's green taxonomy is as follows:

Engage stakeholders and establish a steering committee: Consultations with stakeholders such as private companies, financial institutions, civil society, and international organizations are essential to ensure Vietnam's green taxonomy is

inclusive and aligned with diverse interests. Collaboration between the public and private sectors is crucial to address practical challenges. A steering committee, including representatives from key government ministries (the Ministry of Finance, the Ministry of Natural Resources and Environment, and the Ministry of Planning and Investment), financial regulators like the State Bank of Vietnam, industry leaders, and environmental experts, should be formed to provide oversight, coordination, and expert guidance for the effective development and implementation of the taxonomy.

Conduct a baseline assessment: This involves analyzing current Vietnamese policies, standards, and guidelines related to sustainable finance, climate action, and environmental protection. Additionally, international best practices from established green taxonomies, particularly from the European Union, China, and other emerging economies, should be examined to understand relevant criteria, technical screening standards, and methodologies that can inform Vietnam's approach.

Develop environmental objectives: These objectives should focus on achieving net-zero emissions by 2050, improving biodiversity, enhancing water resource management, and promoting resource efficiency. Additionally, it is crucial to align these objectives with global standards, such as the Paris Agreement and the DNSH framework.

Create technical screening criteria: These criteria must assess the contribution of activities to environmental objectives, such as emissions reduction and resource efficiency, while also setting quantitative thresholds for sustainability, like energy efficiency standards. The lifecycle impacts of activities should be considered, and safeguards must be in place to avoid significant environmental harm, in accordance with international principles, including the EU's DNSH standard.

Table 2. Classification criteria

Sector	Content
Energy	*Renewable Energy:* Promote solar, biomass, and wind energy projects that reduce GHG emissions, protect biodiversity, and minimize community impact. *Energy Efficiency:* Support initiatives improving energy use, reducing carbon footprints, and enhancing energy transmission and storage systems.
Transportation	*Low-Carbon Transport:* Focus on electric vehicles and related infrastructure like charging stations. *Public Transport:* Invest in sky trains, and non-motorized transport like bus and public bike-sharing services.
Water and Waste Management	*Water Management:* Encourage efficient water use, wastewater treatment, and rainwater harvesting projects. *Waste Reduction:* Promote water and waste reuse, supporting circular economy models.
Construction/ Building	*Green Buildings:* Prioritize projects using energy-efficient systems and eco-friendly materials, minimizing carbon footprints. *Green Public Buildings:* Focus on sustainable public constructions with lower energy use. *Renovation:* Support eco-friendly repair methods reducing environmental impacts like air pollution and noise.
Agriculture, Forestry, and Fisheries	*Sustainable Farming:* Support organic farming practices and natural resource conservation. *Forestry Management:* Promote forest biodiversity conservation and sustainable forest management. *Fisheries Management:* Encourage biodiversity conservation and sustainable seafood harvesting.

Sector	Content
Manufacturing and Industry	*Low-Carbon Manufacturing:* Support processes using renewable energy and resources with low environmental impact. *Cleaner Production:* Promote technologies minimizing GHG emissions and waste, supporting circular economy goals.
Waste Management	*Waste Collection and Classification:* Support technologies that reduce waste and integrate it into the circular economy. *Waste Treatment and Recycling:* Encourage projects prioritizing waste treatment and recycling for circular economy inputs.
Information, Communication, and Services	*ICT:* Support renewable energy-powered communication technologies promoting green and sustainable goals. *Education:* Promote environmental education using green technology and energy efficiency. *Tourism:* Support sustainable tourism that protects biodiversity and promotes environmental awareness

Pilot and test the taxonomy: Before full implementation, the green taxonomy should undergo a pilot phase in collaboration with financial institutions, investors, and companies, with a focus on sectors like renewable energy, agriculture, and manufacturing. These sectors are significant contributors to greenhouse gas emissions and environmental degradation, making them central to any efforts to achieve sustainability. Feedbacks from stakeholders will be crucial in evaluating the taxonomy's usability, clarity, and effectiveness and ensuring the taxonomy's alignment with national goals.

Establish a monitoring and reporting system: Mandatory reporting requirements for financial institutions and businesses utilizing the taxonomy will promote transparency and accountability in sustainable finance practices. Regular reviews and updates to the taxonomy will ensure flexibility and its ability to adapt to new environmental challenges, scientific advancements, and international developments.

Capacity building and awareness raising: To ensure effective implementation, training programs should be provided to financial institutions, investors, and regulators, equipping them with the necessary skills to apply the green taxonomy. Public awareness campaigns targeting businesses, investors, and the broader public will also emphasize the taxonomy's role in promoting sustainable development and achieving Vietnam's climate goals. Collaboration with international partners can provide additional expertise and financial support, strengthening Vietnam's efforts in sustainable finance.

Launch and promote the green taxonomy: The final version of the green taxonomy, including all guidelines, criteria, and reporting requirements, should be officially launched with a dedicated event to encourage adoption. Regular assessments of the taxonomy's impact on sustainable investments and national environmental goals will track its effectiveness in fostering Vietnam's green growth.

5. Conclusion and policy recommendations

To develop a green taxonomy suitable for Vietnam, it is essential to involve financial institutions in the process, as they possess the expertise in green financing and play a pivotal role in mobilizing green capital. The criteria for certifying green projects should also be flexible, allowing for adaptability to varying contexts while maintaining a defined threshold for classification. Moreover, Vietnam should align its green taxonomy with international standards to avoid conflicts for businesses operating globally, preventing them from having to meet both Vietnamese and international criteria. The taxonomy should move beyond the general categories outlined in the 9050/NHNN-TD document by providing more detailed classifications.

Clear guidelines are needed on who will certify green projects - whether it be the Ministry of Natural Resources and Environment, the State Bank of Vietnam, financial institutions, or reputable third-party organizations. Additionally, regulatory oversight must ensure the credibility of green classifications, and the inclusion of projects following circular economy models should be considered. Vietnam currently lacks a specific legal framework for classifying green investment projects, and while the 2020 Environmental Protection Law defines green credit and bonds, it does not provide clear guidelines on what qualifies as green. Therefore, a more comprehensive and adaptable framework is needed to promote sustainable development ■

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PHÂN LOẠI XANH CHO PHÁT TRIỂN BỀN VỮNG: KINH NGHIỆM TỪ CÁC THÔNG LỆ QUỐC TẾ VÀ KHUYẾN NGHỊ CHIẾN LƯỢC CHO VIỆT NAM

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TÓM TẮT:

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Từ khoá: danh mục phân loại xanh, phát thải ròng bằng 0, phát triển bền vững, tài chính bền vững.