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SUSTAINABLE BANKING IN KERALA: BANKERS PERSPECTIVES.

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Abstract : Sustainable banking, which integrates environmental and social considerations into financial decision-making, has gained increasing importance as banks respond to regulatory expectations and societal demands. This study examines the level of awareness, extent of adoption, and key challenges associated with sustainable banking practices among professionals working in public and private sector banks in Kerala, India. Primary data were collected through a structured questionnaire administered to 234 banking professionals, focusing on institutional alignment with sustainability frameworks, implementation of green banking initiatives, and perceived operational constraints. Descriptive statistical techniques were employed to analyse the data. The findings indicate universal compliance with sustainability-related guidelines issued by the Reserve Bank of India, alongside widespread adoption of internal sustainability policies across banks. Prominent initiatives include paperless banking practices, community-focused social programs, and selected energy conservation measures. A majority of respondents reported a high level of adoption of sustainable banking practices; however, several challenges continue to hinder comprehensive implementation. Time and resource limitations, insufficient industry-wide participation, and operational constraints emerged as the most significant barriers. Overall, the results suggest that while sustainable banking practices in Kerala have reached a relatively mature stage, their adoption remains uneven across operational dimensions. The study offers valuable insights for policymakers, regulators, and bank management in strengthening strategic alignment, resource allocation, and institutional support to enhance the effectiveness of sustainable banking initiatives.

Keywords: Sustainable Banking, Green Banking Practices, Adoption, Challenges, Banking Professionals

1. Introduction

Sustainable banking, often referred to as green banking, has emerged as a key approach for integrating Environmental, Social, and Governance (ESG) principles into the financial sector. Globally, banks are increasingly expected to adopt environmentally responsible practices, not only to manage systemic risks but also to gain a competitive advantage (Park and Kim (2020). Over time, sustainable banking has evolved beyond a moral obligation to become a strategic priority, shaping both operational and long-term business strategies.

This approach closely aligns with the Triple Bottom Line framework, which highlights the importance of economic, environmental, and social aspects. Banks are putting sustainability into action through established frameworks like the Global Reporting Initiative's Integrated Reporting Framework. This framework identifies six key capitals—Financial, Manufactured, Intellectual, Human, Social and Relationship, and Natural Capital—that are vital for creating value and ensuring transparent reporting. Moreover, banks are aligning their strategies with both global and national benchmarks, such as the United Nations Sustainable Development Goals (UNSDGs) and India's National Voluntary Guidelines on Responsible Business Conduct (NVGRBC), to effectively guide and disclose their ESG performance.

Within banks, the ESG (Environment, Social and Governance) framework covers various dimensions. Environmental initiatives aim at sustainable lending, energy efficiency, reducing carbon emissions, promoting green infrastructure, and encouraging paperless banking. Social responsibility efforts encompass rural development, skill training, education, healthcare, financial inclusion, gender equality, and environmental conservation. Governance structures usually focus on board composition, committee operations, policies, stakeholder engagement, risk management, and employee welfare. Together, these practices showcase the banking sector's dedication to long-term, inclusive, and value-driven development. Despite the regulatory guidance and increasing institutional focus, research shows that awareness and implementation of sustainable

banking practices can vary widely among banks, especially at the operational level. It's essential to understand how banking professionals perceive, adopt, and tackle challenges in implementing sustainable practices to create effective policies and operational strategies.

This article explores the level of awareness, adoption, and the challenges that banking professionals in Kerala encounter regarding sustainable banking practices. The insights are drawn from survey responses provided by 234 participants from both public and private sector banks. The study highlights how institutions are engaging with sustainability, the practical initiatives they're putting into action, and the barriers they face in the process. These findings are preliminary, forming part of a larger research project that the author is currently pursuing for their doctoral study. By presenting these initial insights, the paper aims to deepen understanding of sustainable banking practices within the Indian landscape.

2. Literature Review

The journey of sustainable banking in India has transformed significantly, shifting from basic corporate social responsibility (CSR) initiatives to a more thorough integration of environmental, social, and governance (ESG) principles. This change has been shaped by regulatory frameworks established by the Reserve Bank of India (Durani, 2023; Liang, Chang, & Shao, 2018). Today, both public and private banks are increasingly motivated by regulatory pressures, stakeholder demands, and investor expectations to embed ESG objectives into their operations. Public sector banks have a distinct responsibility to align with national sustainability goals, promoting green financing and fostering inclusive growth (Bhattacharya, Das, & Basu, 2023). Meanwhile, private sector banks are capitalizing on ESG integration as a strategic advantage, revising their lending practices, focusing on green initiatives, and avoiding environmentally harmful activities (Jaiwani & Gopalkrishnan, 2025; Singh, 2022). Notable players like HDFC Bank, Yes Bank, and ICICI are leading the charge with impressive investments in renewable energy, waste reduction, and social initiatives, proving that sustainability can boost brand reputation, satisfy investors, and mitigate long-term risks (Gaba & Sharma, 2024). Technology is also playing a crucial role by cutting down on paper usage, enhancing energy efficiency, and promoting financial inclusion (Manasseh, Logan, & Ede, 2024).

Research highlights that the successful adoption of sustainable banking depends heavily on employee perceptions and organizational support. Vijai and Natarajan (2015) found that while employees in Indian banks understand the importance of sustainability, the actual adoption often lags due to a lack of awareness, high operational costs, and insufficient infrastructure. Okyere-Kwakye and Md Nor (2021) pointed out that having strong internal management support plays a big role in motivating employees to embrace green banking, whereas outside pressures from competitors or customers don't have as much impact. Aung (2024) noticed a similar trend in Myanmar's private banks, stressing that when managers are actively involved, it really boosts employees' willingness to adopt sustainable practices, especially when they feel they have little control over their actions. To make sustainable banking a reality, structured ESG frameworks and strategic adoption are key. Bukhari, Hashim, and Amran (2020) laid out a clear roadmap for rolling out ESG strategies, whether step-by-step or all at once, depending on the organization's situation. Niţescu and Cristea (2020) also pointed out how governance structures, like the size of the management board, can affect ESG adoption, emphasizing that internal factors are crucial for success. Integrating human resources is just as important. Anjum, Rahaman, Choudhury, and Rahman (2022) investigated how Green Human Resource Management (GHRM) is adopted through electronic HRM (E-HRM) in Bangladeshi banks and found challenges like low awareness, technical issues, and lack of institutional support. Noor, Tunnufus, Handrian, and Yumhi (2023) showed that transformational leadership really strengthens the link between GHRM practices and employee engagement, highlighting how vital leadership and structured human resource (HR) strategies are. Azizzadeh et al. (2022) further stressed that both technical skills and soft skills—like honesty, digital know-how, and interpersonal abilities—are crucial for employees to effectively support sustainable banking practices.

Despite the growing awareness around green banking, there are still plenty of internal and external challenges that hinder its adoption. According to Musyaffi, Santika, Zairin, Johari, Rosnidah, and Mentari (2023), psychological factors—such as ingrained habits, risk perceptions, and social norms—can often be more influential than practical limitations in blocking the uptake of green banking technologies. Operational challenges like high costs, inadequate infrastructure, low employee engagement, and a lack of coordination among stakeholders were also pointed out by Vijai and Natarajan (2015) and Anjum et al. (2022). Together, these studies indicate that for sustainable banking to take off, it's crucial to have strong management support, engaged employees, well-structured ESG frameworks, and effective tech integration. Yet, there's been a lack of exploration into these areas within the Indian context, particularly at the state level in places like Kerala. Although earlier research has addressed green banking transitions from a regulatory and institutional standpoint, it has seldom incorporated bankers' viewpoints (Ganguly, Chattopadhyay, & Bhattacharya, 2025) in both public and private banks. This highlights the need for the current study.

3.Methodology

A cross-sectional survey was conducted with 234 banking professionals from both public and private sector banks in Kerala to evaluate their awareness, adoption, and the challenges they face regarding sustainable banking practices. The participants included individuals at various levels, such as branch managers, probationary officers, and clerical staff. The study encompassed major public sector banks like SBI, Canara Bank, PNB, and Bank of Baroda, along with private sector banks such as HDFC Bank, ICICI Bank, Federal Bank, and SIB. To ensure a comprehensive view, respondents were selected from urban, semi-urban, and rural branches across the state. Data collection was done through a structured questionnaire divided into two parts. The first part gathered information about the respondents and their institutions, including the type of bank (public or private), bank name and location, years of experience in banking, and job category. The second part focused on sustainable banking practices, evaluating awareness of sustainable or green banking, perceptions of its significance, involvement in sustainability frameworks, duration of sustainable banking adoption, specific initiatives undertaken, the level of adoption, and challenges faced. Descriptive statistics were used to analyse the responses, laying out demographic information in tables and illustrating other findings with charts and diagrams. This method offers a clear and detailed snapshot of the patterns and trends, providing practical insights into the adoption of sustainable banking. By prioritizing clear and interpretable results, the study fosters transparency and relevance, emphasizing the genuine perspectives of banking professionals.

4. Results and findings

4.1 Demographic Profile of Respondents

A total of 234 banking employees from public and private sector banks participated in the study. The demographic details of the respondents are summarized in Table 4.1.

Table 4.1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Age Group	28–32	110	47.00%
	33–37	93	39.70%
	38 and above	31	13.30%
Education	Bachelors	97	41.45%
	Masters	65	27.78%
	Professional	46	19.66%
	Others	26	11.11%
Gender	Male	142	60.70%
	Female	92	39.30%
Type of Bank	Public sector	110	47.10%
	Private sector	124	52.90%
Location of Bank	Rural	104	44.40%
	Semi-urban	66	28.20%
	Urban	64	27.40%
Years of Banking Experience	0–3	72	30.80%
	4–6	94	40.20%

	7–10	45	19.20%
	More than 10	23	9.80%
Category of Job	Branch Manager	34	14.53%
	Probationary Officer	60	25.64%
	Clerical Staff	140	59.83%
Awareness of Sustainable Banking	Yes	233	99.60%
	No	1	0.40%
Importance of Sustainable Banking Practices	Yes	234	100%
	No	0	0%

The sample was balanced, with most respondents aged 28–37, representing early to mid-career professionals. Most participants held bachelor's or master's degrees, indicating a well-educated workforce capable of understanding sustainability-related concepts. The gender distribution was 61% male and 39% female, while representation from public and private banks was almost equal. Branches from rural, semi-urban, and urban locations were included, ensuring geographic diversity. Clerical staff constituted the largest job category, followed by probationary officers and branch managers, while most respondents had 4–6 years of banking experience. Overall, the demographics suggest that the sample provides a reliable representation of Kerala's banking workforce and their perspectives on sustainable banking practices.

4.2 Awareness and Perceived Importance of Sustainable Banking.

The study aimed to evaluate the extent of awareness and the perceived importance of sustainable banking practices among employees of both public and private sector banks in Kerala. The findings show that awareness is impressively high, with a staggering 99.6% of participants saying they know about sustainable banking. Only one person (0.4%) admitted they weren't familiar with the term, which suggests that sustainability has really woven itself into the everyday language of the banking industry. This widespread awareness likely stems from the growing emphasis by the Reserve Bank of India (RBI) and other financial regulators on sustainability guidelines in banking. Banks have been rolling out training sessions, workshops, and digital updates to help employees understand their environmental and social responsibilities (Mammah & Ohazurike, 2025). This indicates a mature phase of policy adoption, where even those in non-managerial roles are well-versed in sustainability concepts.

Moreover, the data reveals that every single respondent (100%) believes sustainable banking is "important." This overwhelming agreement shows that it's not just about being aware; there's a genuine appreciation for its significance in today's banking landscape. This consensus underscores how employee values are in sync with the global push for green finance and responsible banking. It seems employees understand that sustainability not only aids in protecting the environment but also enhances the long-term reputation of their institutions, builds customer trust, and strengthens financial stability (Yan et al., 2022).

4.3 Participation in Sustainable Banking Frameworks and Protocols.

To understand the institutional alignment of banks with sustainability standards, respondents were asked whether their banks were part of any (multiple options could be selected), major sustainability protocols or frameworks. The results, shown in Figure.1., highlight a strong commitment to national regulations, but a rather limited connection to international or voluntary sustainability initiatives.

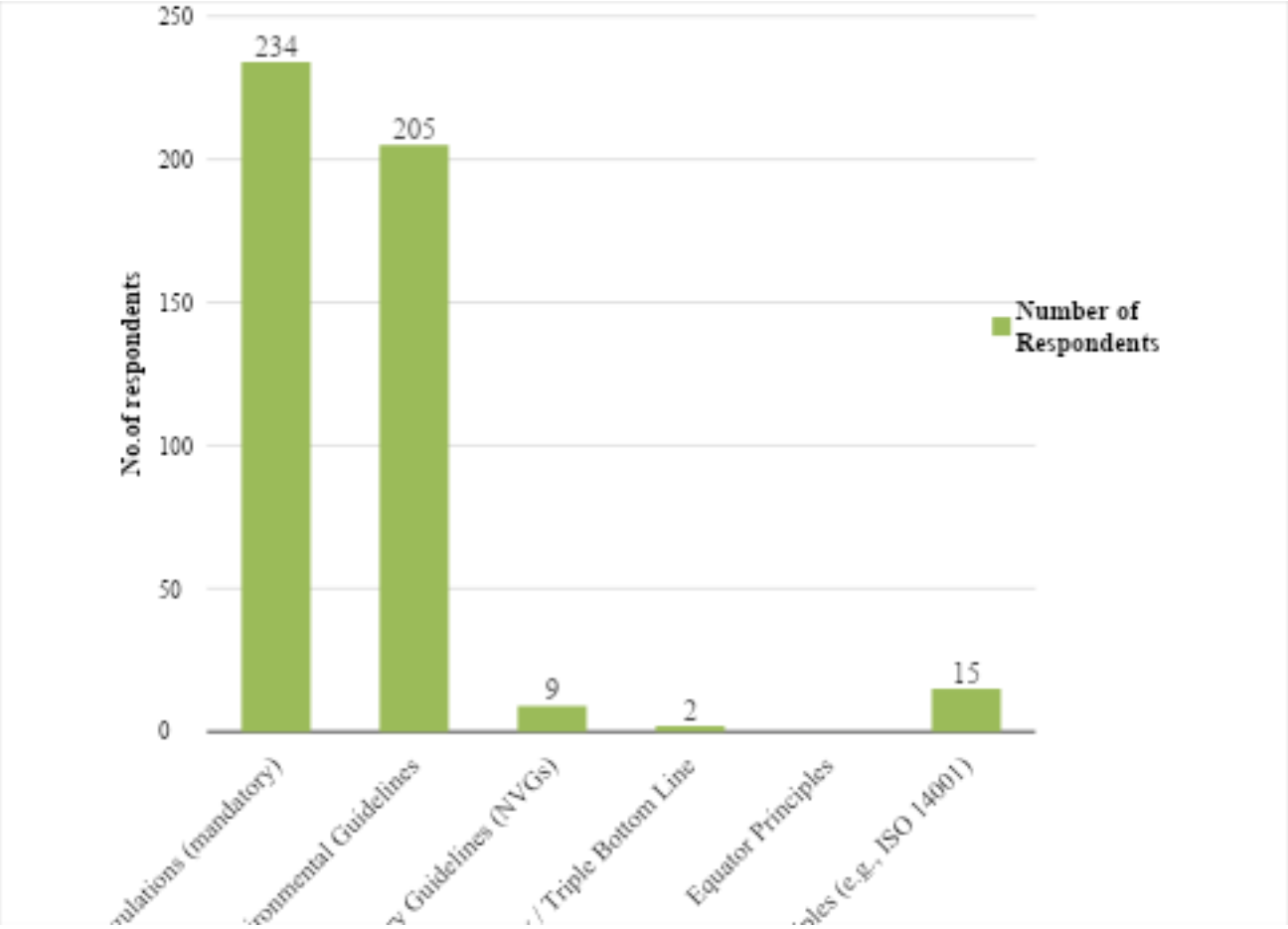


Figure:1 Banks Participation in Sustainability Protocols/Frameworks

Interestingly, all 234 respondents (100%) confirmed that their banks adhere to the Reserve Bank of India (RBI) regulations related to sustainable or green banking. This unanimous feedback underscores that RBI guidelines are the key mandatory benchmark for all banks in India. These regulations focus on responsible lending, managing environmental risks, and promoting financial inclusion, which are essential for sustainable banking governance in the country (Park & Kim, 2020). Beyond just following RBI rules, a significant 87.5% of respondents mentioned that their banks have developed their own internal sustainability or environmental policies. This shows that most banks are not just ticking boxes for compliance; they are actively embedding sustainability into their operational practices. These internal frameworks often encompass initiatives like paperless transactions, energy efficiency, waste reduction, and ethical financing policies. This trend also indicates a growing maturity in how banks are integrating Environmental, Social, and Governance (ESG) principles into their operations (Mishra & Sant, 2024).

Despite the growing conversation around sustainability, the uptake of both national and international voluntary guidelines is still quite low. Only 4% of those surveyed said their banks follow the National Voluntary Guidelines for Social, Environmental, and Economic Responsibilities of Business (NVGs) set forth by the Ministry of Corporate Affairs. Even fewer, just 0.8%, reported that they align with the Principles of Sustainability/Triple Bottom Line (People–Planet–Profit) approach. Interestingly, none of the respondents mentioned being involved with the Equator Principles, which is a well-known framework for managing environmental and social risks in project financing. This indicates that while Indian banks may be adhering to local sustainability policies, their engagement with global voluntary sustainability networks is still quite limited (Chaturvedi et al., 2024).

A small fraction, about 6.5%, acknowledged adopting general environmental principles, which could involve following ISO 14001 standards or implementing other internal environmental management systems. This lack of participation might stem from a few factors, such as the absence of regulatory enforcement, limited resources, or insufficient pressure from stakeholders, particularly in smaller or regionally focused banks.

The findings reveal a twofold nature of sustainable banking in India:

• On one hand, there's a robust and widespread adherence to regulatory compliance, driven by mandatory RBI circulars and national policy guidance.

• On the other hand, the commitment to voluntary and international sustainability initiatives is quite weak, signaling a chance for Indian banks to deepen their involvement in globally accepted sustainability practices.

These results point to the necessity for capacity-building programs and incentives that can inspire banks—particularly those in the public sector and rural areas—to participate in international frameworks like the

Equator Principles or the UNEP Finance Initiative. Strengthening this involvement would not only boost the banks' reputations but also help align the Indian banking system with global sustainable finance standards (Abaza et al., 2002; McInerney, 2017).

4.4 Duration of Implementation of Environmentally Sustainable Banking Practices

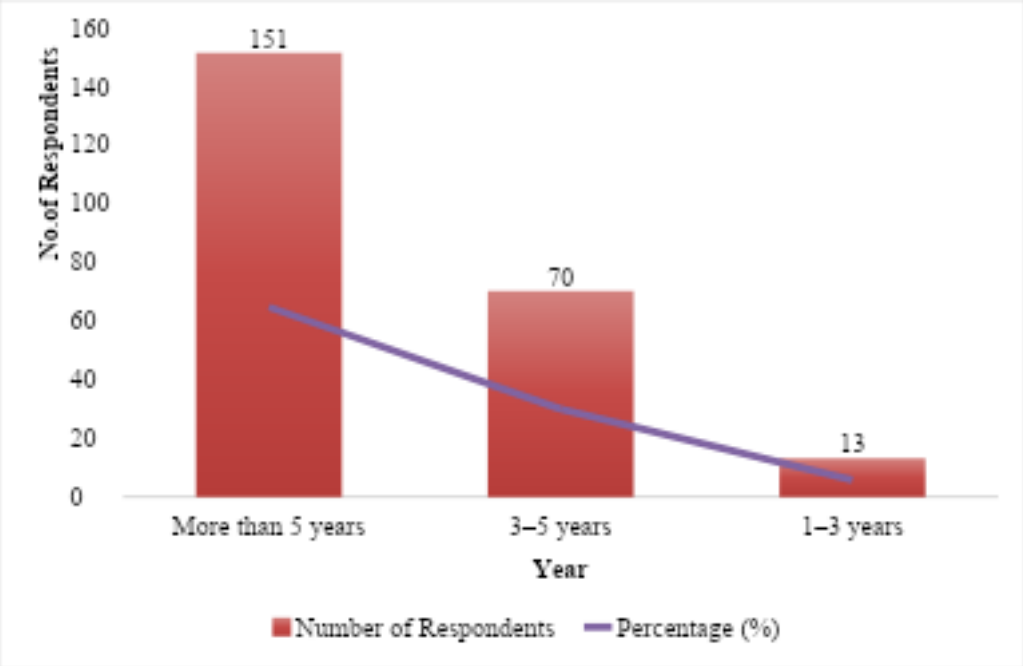


Figure:2 Duration of Implementing sustainable banking practices

Figure 2 shows that a majority of banks (64.5%) have been implementing sustainable practices for more than five years, reflecting a sustained commitment to environmental stewardship. Nearly 30% reported a three- to five-year implementation period, while a small minority (5.7%) indicated one to three years. These patterns highlight a progressive, long-term approach to sustainability, with digital and paperless banking leading adoption (Thathsarani, Wei, & Samaraweera, 2021; Varma & Kaur, 2024).

4.5 Adoption and Implementation of Sustainable Banking Practices

A significant majority, around 85.9%, believe that their banks are genuinely embracing sustainable banking practices (Figure.3). This suggests that sustainability is increasingly woven into the very fabric of strategic and operational plans.

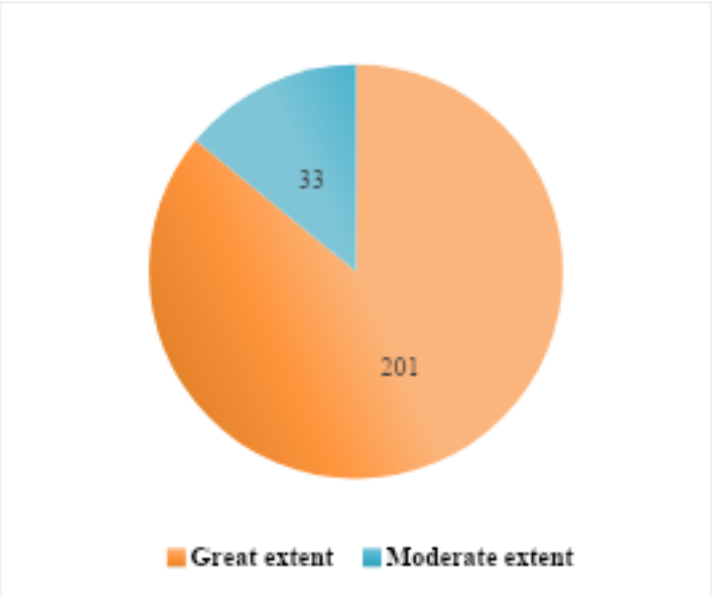


Figure:3 Extend of adoption of sustainable banking practices

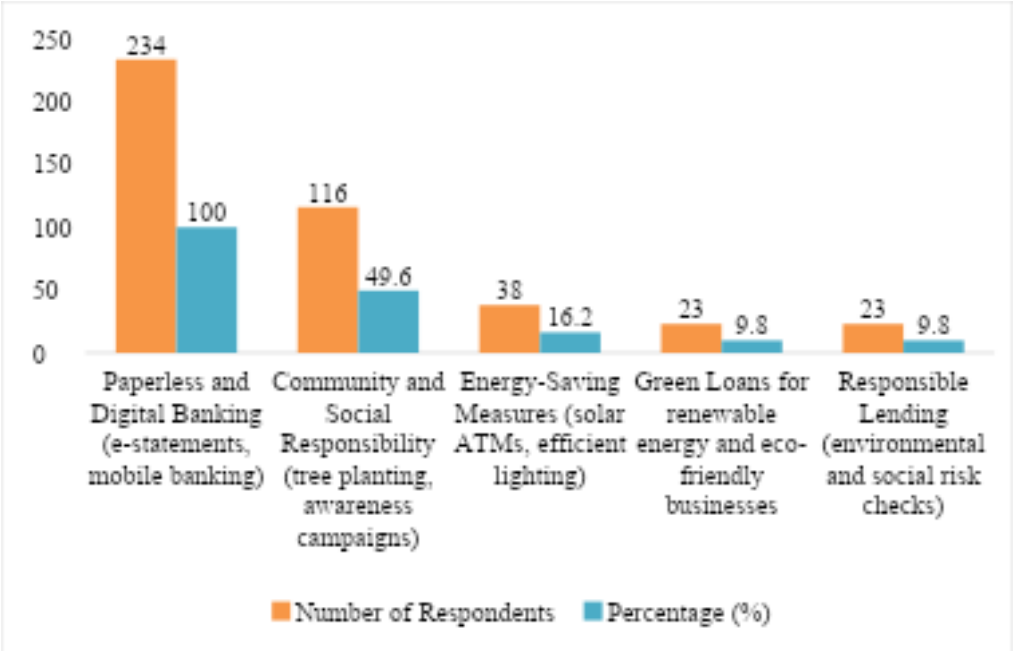


Figure:4 Sustainable banking practices implemented

Figure 4. further details the specific initiatives implemented:

- **Paperless and Digital Banking:** Adopted universally (100%), reflecting the near-complete digital transformation of banking operations.
- **Community and Social Responsibility Initiatives:** Implemented by approximately half of the respondents (49.6%), showing moderate engagement in social and environmental programs.
- **Energy-Saving Measures:** Adopted by 16.2%, indicating limited uptake of infrastructure-related sustainability efforts.
- **Green Loans and Responsible Lending:** Both practices reported by 9.8% of respondents, highlighting that environmentally focused financial products are still in early stages of adoption.

Because each participant could choose more than one option (multiple options could be selected), the total count of selections is higher than the total number of respondents. Overall, the findings demonstrate that operational sustainability, particularly through digitalization, is well-established, while strategic sustainability initiatives such as green financing remain limited.

4.6 Challenges faced in implementation of sustainable practices.

Respondents were asked to identify the obstacles their banks face in implementing sustainable banking initiatives. Since one respondent could pick more than one option, the total selections ended up being greater than the number of respondents.

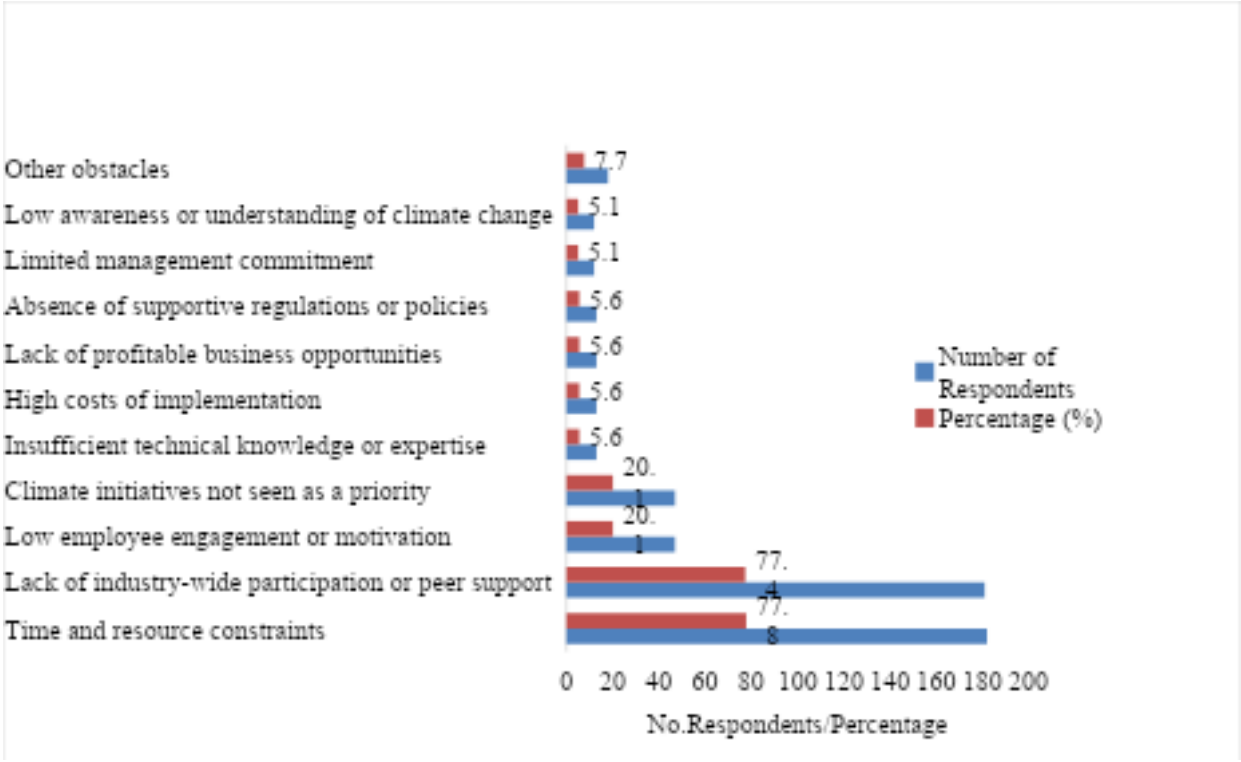


Figure:5 Obstacles faced in implementation of sustainable banking practices

The results, based on 234 responses (Figure.5.), are summarized as follows:

• A significant number of respondents, 182 to be exact (77.8%), pointed out that time and resource constraints are the biggest hurdles, showing that operational limitations make it tough to prioritize sustainability initiatives.

• Another 181 respondents (77.4%) mentioned the lack of industry-wide participation or peer support, suggesting that banks feel their sustainability efforts fall flat without broader engagement from the sector.

• Low employee engagement and motivation, along with climate initiatives not being viewed as a priority within the bank, were each noted by 47 respondents (20.1%), hinting at some internal cultural and priority-related challenges.

• A handful of respondents, 13 in total (5.6%), cited insufficient technical knowledge or expertise, high implementation costs, a lack of profitable business opportunities, and the absence of supportive regulations or policies, all pointing to capacity, financial, and regulatory issues.

• Limited management commitment and a low level of awareness or understanding of climate change were the least frequently mentioned obstacles, each noted by 12 respondents (5.1%), indicating that senior leadership support and awareness are generally in place.

• A smaller group of 18 respondents (7.7%) identified various other challenges. Overall, these findings highlight those operational limitations—like time, resources, and the absence of sector-wide support—are the main barriers to adopting sustainable banking, while management commitment and awareness seem to be less of a concern.

Overall, the study highlights that Kerala's banking professionals are highly aware of sustainable banking and recognize its importance, with strong adherence to mandatory RBI guidelines. However, voluntary and global sustainability initiatives remain underutilized. Adoption is pronounced in digital and paperless practices but limited in environmentally focused financial products. Operational constraints and limited sector-wide collaboration are the key challenges to broader implementation. These insights provide actionable directions for policymakers and banking managers to strengthen sustainability integration, emphasizing international engagement, capacity-building, and incentive mechanisms.

5. Discussion

The findings of this study indicate that sustainable banking has gained substantial awareness among banking professionals in Kerala, with 99.6% of respondents reporting familiarity and 100% recognizing its importance (Table 4.1). This high level of awareness reflects the effective dissemination of ESG and sustainability principles through RBI guidelines, institutional training, workshops, and digital updates (Durani, 2023; Liang, Chang, & Shao, 2018; Mammah & Ohazurike, 2025; Yan et al., 2022). Analysis of participation in sustainability frameworks shows a strong compliance with mandatory RBI regulations, with 100% adherence, and 87.5% of respondents noting the presence of internal bank policies (Figure 1). However, engagement with voluntary or international sustainability initiatives is limited, as only 4% of banks follow the National Voluntary Guidelines (NVGs), 0.8% adopt the Principles of Sustainability/Triple Bottom Line approach, 6.5% report ISO 14001 or other environmental standards, and none are involved with the Equator Principles (Abaza et al., 2002; Chaturvedi et al., 2024). This dual scenario indicates robust regulatory compliance but weak adoption of globally recognized sustainability practices, highlighting opportunities for capacity-building programs, incentives, and collaborative initiatives across the sector (Abaza et al., 2002; McInerney, 2017). In terms of duration, most banks (64.5%) have been implementing sustainable practices for more than five years, demonstrating a long-term commitment, though the focus largely remains on digitalization and paperless operations rather than green financial products or responsible lending (Figure 2, Figure 3) (Thathsarani, Wei, & Samaraweera, 2021; Varma & Kaur, 2024). Specific sustainable initiatives show that paperless banking is universal (100%), while community/social responsibility projects have moderate adoption (49.6%), energy-saving measures are limited (16.2%), and environmentally oriented financial products like green loans or responsible lending are still emerging (9.8% each) (Figure 4). Comparing public and private sector banks, public banks tend to emphasize social and environmental inclusion initiatives, while private banks prioritize operational efficiency, innovation, and digitalization, reflecting differences in strategic priorities and stakeholder pressures (Bhattacharya, Das, & Basu, 2023; Jaiwani & Gopalkrishnan, 2025; Mishra & Sant, 2024; Singh, 2022). Additionally, urban branches demonstrate slightly higher adoption of energy-saving technologies and green products compared to rural branches, likely due to better infrastructure and greater customer demand, though overall engagement remains limited outside digitalization (Mishra & Sant, 2024; Varma & Kaur, 2024). Operational challenges identified include time and resource constraints (77.8%), lack of industry-wide participation or peer support (77.4%), and low employee engagement (20.1%), whereas management commitment and awareness were less frequently cited barriers (5.1%), indicating that while leadership support exists, operational and structural factors impede broader adoption (Figure 5) (Anjum et al., 2022; Aung, 2024; Azizzadeh et al., 2022; Bukhari, Hashim, & Amran, 2020; Musyaffi et al., 2023; Nițescu & Cristea, 2020; Noor et al., 2023; Okyere-Kwakye & Md Nor, 2021; Vijai & Natarajan, 2015). Overall, these results highlight that while awareness and initial adoption are high, strategic sustainability—encompassing green financial products, ESG-aligned lending, and international collaboration—remains nascent. Addressing these gaps requires targeted interventions, including incentivizing participation in global frameworks, enhancing sector-wide collaboration, and providing technical and financial support to both public and private banks across urban and rural regions, ultimately aligning Kerala's banking sector with global sustainable finance standards.

6. Conclusion

This study examined the awareness, adoption, and challenges of sustainable banking practices among 234 banking professionals from both public and private sector banks in Kerala. The findings indicate that nearly all respondents are aware of sustainable banking and recognize its importance, reflecting the effectiveness of regulatory and institutional efforts, particularly those led by the Reserve Bank of India.

Despite this high level of awareness, the adoption of sustainable practices varies. While digital and paperless banking initiatives have become standard, other important measures—such as green lending, responsible financing, and energy-saving strategies—are still limited. This suggests that many banks are prioritizing operational sustainability over strategic sustainability, which involves reshaping lending practices, aligning with ESG standards, and supporting environmentally focused projects.

The study also highlights differences between public and private banks: public banks tend to emphasize social responsibility and inclusion, whereas private banks focus on innovation and digital efficiency. Key obstacles to broader adoption include limited time and resources, insufficient sector-wide participation, and moderate employee engagement, whereas management support and awareness are generally adequate but need to be translated into actionable strategies. Overall, the study demonstrates that while Kerala's banking sector has established a strong foundation in sustainability awareness, significant efforts are still required to translate this awareness into tangible, strategic actions. Enhancing operational integration, promoting collaboration among

banks, and expanding adoption beyond regulatory compliance are essential steps for the sector to contribute meaningfully to sustainable finance in India.

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Conflict of Interest: The authors declare no conflicts of interest, financial or otherwise, that could influence the research or interpretation of results.
Abbreviations: ATM –Automated Teller Machine; CSR – Corporate Social Responsibility; E-HRM – Electronic Human Resource Management; ESG – Environmental, Social, and Governance; GHRM – Green Human Resource Management; GRI – Global Reporting Initiative; HDFC – Housing Development Finance Corporation (Bank); HR – Human Resource; ICICI – Industrial Credit and Investment Corporation of India (Bank); ISO – International Organization for Standardization; NVGs – National Voluntary Guidelines for Social, Environmental, and Economic Responsibilities of Business; NVGRBC – National Voluntary Guidelines on Responsible Business Conduct; PNB – Punjab National Bank; RBI – Reserve Bank of India; SBI – State Bank of India; SDGs – Sustainable Development Goals; SEM – Structural Equation Modeling; SIB – South Indian Bank; TBL – Triple Bottom Line; UNEP FI – United Nations Environment Programme – Finance Initiative; UNSDGs – United Nations Sustainable Development Goals.

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