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Green Finance Practices by Nepalese Commercial Banks: Fostering Sustainable Development in Nepal

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ABSTRACT

Intending to integrate environmental, social, and governance (ESG) issues into financial choices, the global financial landscape has changed its growing pressure for sustainable development. Recently, green finance practices are gaining popularity as a key strategy in many countries in the world. However, Nepal, which is renowned for its natural beauty, suffers from several environmental issues. For instance, international initiatives, of the sustainable development goals (SDGs) of the United Nations (UN), emphasize the alignment of financial flows with sustainable development. The study has adopted a qualitative research method to investigate the practices and barriers preventing Nepalese commercial banks from implementing green finance practices. This study reveals the complex issues specific to Nepal through in-depth interviews with senior executives, risk managers, and sustainability officers. The findings of the study demonstrate several obstacles such as the implementation of regulatory framework, few green investment opportunities, perceived financial risks, a lack of knowledge and experience among banking professionals, and the requirement for strong institutional support and leadership commitment. To get rid of these barriers, it is recommended that Nepal's commercial banks embrace green finance practices widely, fit into the nation's sustainable development objectives and support global environmental efforts.

1. INTRODUCTION

Green finance practices by Nepalese commercial banks are crucial in advancing sustainable development in Nepal. Through the incorporation of environmental, social, and governance (ESG) factors in their investment choices, banks can direct capital towards environmentally friendly initiatives such as renewable energy, waste management, and sustainable agriculture. The global financial landscape has undergone a significant transformation towards the incorporation of environmental, social, and governance aspects into financial decision-making in the face of mounting environmental concerns and the growing urgency for sustainable development [1]. The adoption of green finance practices has drawn attention as a key strategy as countries strive to balance economic growth and environmental preservation [2]. The term "green finance" refers to a variety of financial tools, approaches, and services that direct funding to businesses and projects that are good for the environment, while also considering their long-term sustainability and societal benefits [3]. Nepalese financial institutions conceptualize green finance as the facilitation of monetary instruments and services that bolster ecologically viable initiatives. Such initiatives encompass funding directed towards renewable energy, sustainable farming, and energy-efficient innovations [4]. Furthermore, this concept encompasses the incorporation of environmental, social, and governance (ESG) standards in credit assessments to advance sustainable growth and mitigate ecological footprints. Among financial institutions, there is a new idea known as "green banking", which emphasizes both environmental preservation and sustainable development. Although it is still in its early stages in many parts of the world, several researchers [5, 6] have acknowledged its significance. Prior researcher [7] propose that green banking acts as a bridge between economic progress and environmental preservation [6]. Prior study [8] state that sustainable services can further support the advancement of green banking. As a result, banks are now viewing green banking as a means to address emerging environmental challenges and fulfill their corporate social responsibility [6]. Green finance not only helps to alleviate environmental harm but also stimulates economic progress and societal welfare. Furthermore, the promotion of green finance strengthens banks' ability to withstand climate-related risks while appealing to ethically conscious investors. On a broader scale, this approach not only contributes to the safeguarding of the planet but also aligns with the goals of sustainable development [9]. However, the adoption of green finance practices remains intricate, often encountering barriers that impede their effective implementation. Ultimately, these endeavors play a significant role in Nepal's shift towards a more environmentally conscious and sustainable future, in line with international endeavors to address climate change and realize the sustainable development goals.

According to the UNDP, sustainable green finance aims to boost the flow of financial investments into projects and initiatives for sustainable development, environmental goods and services, and policies that support the growth of a more circular economy, green economy, and sustainable economy [3]. The green finance industry has recently grown in both public and commercial sectors [10]. This can be ascribed to several events, such as the 2015 passage of the Paris Agreement and a strong investor push for sustainable green investments, all of which have strengthened the business case for green finance. Investments in environmentally friendly industries such as renewable energy, are becoming increasingly competitive, and it is now well understood that they also contribute to sustainable development.

This recent development in eco-friendly finance can be credited to institutions and rich nations that have developed financial systems [11]. China was a pioneer in greening its economic and financial system among emerging markets and has since grown to be one of the largest global markets for green finance, as evidenced by its part of the green bond market and the potential of the enormous carbon emission trading market, which is anticipated by the UNDP [3], to be the largest emission trading system (ETS) in the world. South Asian nations, such as Bangladesh and India, have made progress on a regional level, and markets in the ASEAN region are also expanding. According to this theory, financiers, governments, and investors worldwide are realizing the enormous potential of opening up green and climate-resilient investment opportunities in emerging economies [10]. Nations have the opportunity to remove obstacles and draw funding for initiatives with social and environmental safeguards at their core.

Nepal, a nation characterized by its rich natural heritage and biodiversity, is no exception to these global sustainability imperatives [12]. Numerous environmental issues, including deforestation, pollution, and vulnerability to climate change, exist in the nation. Global initiatives, such as the Sustainable Development Goals (SDGs), emphasize the importance of matching financial flows with sustainable development trajectories while acknowledging the crucial role that financial institutions play in promoting sustainable growth. Commercial banks, as the main players in the financial sector, have a crucial obligation to adopt and promote green finance practices to speed up the shift to a more sustainable economy [13].

Despite the need for green finance adoption, Nepalese commercial banks have only recently begun to switch. Institutional, legislative, cultural, and economic hurdles combine to produce an environment that makes it difficult for certain practices to be adopted [6]. A comprehensive exploration of these barriers and their underlying causes is paramount for facilitating a smoother integration of green finance practices into the banking sector.

The banking industry is increasingly focusing on green finance practices because of the worldwide trend towards sustainable development. Green finance refers to investments and financial services that support ecologically and socially responsible projects, thereby assisting in the reduction of greenhouse gas emissions and the promotion of sustainable development [14]. Despite the growing recognition of the importance of green finance, its adoption in developing economies such as Nepal has been relatively slow [15]. This study also examines the obstacles preventing commercial banks from implementing green finance practices. Policymakers, stakeholders, and banking institutions can develop focused initiatives to hasten the adoption of green finance concepts in the Nepalese financial sector by being aware of these challenges [3, 16].

This qualitative study tries to answer the following research questions as:

- What is the current status of implementation of regulatory framework on green finance in Nepal?
- What are the prioritized areas of green investment of Nepal Rastra Bank that align with sustainable development goals and how such areas are considered by Nepalese commercial banks as green finance opportunities?
- How do Nepalese commercial banks mitigate the financial risk regarding the green finance?
- How commercial banks are aware about challenges of green finance?

2. LITERATURE REVIEW

The United Nations' sustainable development goals (SDGs) are difficult for developing nations to meet. They frequently lack the institutional support, funding, and technological means necessary to strike a balance between environmental preservation and economic progress. Investments in renewable energy, energy efficiency, clean technology, sustainable agriculture, and infrastructure are the main goals of green financing. By assisting these industries, green finance contributes to the SDGs' achievement in developing nations by establishing a link with a sustainable, profitable future. The adoption of green banking practices in the banking sector has become a significant topic of interest worldwide, driven by growing recognition of the importance of sustainable development and environmental responsibility [17]. Prior research [12], state that comparing the banking sectors with the non-banking sectors, the former plays a considerably larger role and is responsible for the Nepali Financial System. The banking industry is governed by the Nepal Rastra Bank, the country's central bank, which also grants limited banking privileges to co-operatives and non-governmental organizations (NGOs) [18]. In Nepal, banks and financial institutions are categorized into four classes commercial banks, development banks, finance business companies, and micro financial institutions of classes A, B, C, and D, respectively. However, cooperative organizations and NGOs no longer receive operational licenses from the NRB. The Insurance Board is responsible for overseeing the insurance industry and only one of the securities regulators, the Security Board of Nepal (SEBON), is responsible for regulating all of the listed companies in Nepal. Other major financial organizations, such as the Employees Provident Fund, Citizen Investment Trust, and Postal Saving Banks also exist in Nepal under their specific acts in Nepal [19]. The Nepalese government has authorized several frameworks and regulations to aid in this transition because it understands the significance of addressing climate change, sustainable development, and the green economy. The Nepal National Planning Commission, National Climate Policy [20]. Sustainable development goals status and roadmap 2016-2030 are also encouraging green investment projects, and committed to the protection of environmental issues [3]. Some of Nepal’s sustainable development goals such as food security and sustainable agriculture (SDG2), water management (SDG6), access to clean energy (SDG7), sustainable economic growth (SDG8), resilient infrastructure (SDG9), sustainable cities and forests (SDG11), and climate change (SDG15), are closely related to sustainable banking through the green finance and investment [16]. Nepal is exceptional because investing in green projects is a common practice in the energy sector. This is because of the increasing number of green industries, hydropower, renewable energy, etc. However, it is still essential to seize the opportunity to create an integrated sustainable green financing system so that all economic sectors can progress along green lines while considering sustainable development goals. This is crucial because Nepal's existing green finance development is modest and falls short of meeting its investment needs and taking advantage of green investment opportunities.

The best way to understand the obstacles to green finance promotion in Nepal is to take a two-specific approach that includes general financial obstacles and green finance-specific obstacles. Regulators must address both obstacles in their policies and practices and promote investment behaviors. Banks and financial institutions play a crucial role in promoting such investment behaviors maximizing optional capital flows in priority areas, and contributing to national and international markets in green financing [11]. Previous studies have highlighted several key challenges in the adoption of green finance practices in various contexts. Regulatory constraints and the absence of a supportive policy framework have been identified as significant obstacles [21]. In the Nepalese context, the lack of implementation of guidelines and incentives for green finance could inhibit its adoption in the banking sector [6, 13].

The availability of green investment opportunities is another crucial factor in adopting green finance practices. Several studies have emphasized that the limited availability of viable green projects can hinder banks' willingness to engage in green financing [7, 22]. In Nepal, the renewable energy sector offers promising avenues for green investments [19]. However, it is essential to explore whether commercial banks can leverage these opportunities effectively. The financial risks associated with green investments have been a recurring concern [18]. Commercial banks may perceive green projects as riskier because of unfamiliarity with these ventures and uncertainties in the regulatory environment [23]. Addressing these risk perceptions is crucial for fostering green finance practices in Nepalese banks.

Moreover, the level of awareness and understanding of green finance among banking professionals can influence its adoption. Studies have shown that a lack of awareness and inadequate training can impede the integration of environmental considerations into banking practices [24-26]. Exploring Nepalese banking professionals' knowledge and perceptions regarding green finance will provide valuable insights into this aspect. A sustainable finance model has a positive effect on social, environmental, and economic sustainability. It is closely connected to the attainment of SDGs in European Union nations [27]. The public sector's significant involvement in funding sustainable development therefore collaboration between public and market financial systems is essential for sustainability. Mandatory regulations are effective for promoting sustainable finance investments [28]. Green banking initiatives improve customer trust and brand image. Indian banks encounter obstacles in adopting green practices [29]. Highly educated individuals tend to embrace green banking technologies. Green financing policies are required to promote a cleaner environment and maintain macroeconomic stability it has positive effects on pollution reduction and GDP [30].

Green policy and environmental training for the employees have a notable influence on a bank's environmental performance. There is a statistically significant positive relationship between green banking practices, green investment and the bank's environmental performance [31]. Banks' investment decisions in green projects have a positive effect of environmental performance [32]. Factors like environmental interest and policy guidelines influence green banking adoption. Stakeholder pressure is associated with green banking adoption [33]. Sustainable banking practices improve brand value, image, and competitiveness. Reduced transaction costs and higher profitability also reduce corruption and encourage economic opportunities in at-risk groups [34]. Consumer awareness about green banking in India is lacking in India it need to enhance green banking initiatives for sustainability [35]. Indian banks exhibit sluggish reaction to environmental programs due to the absence of regulations and fear of financial loss [36]. Banks are motivated by environmental and social demands to adopt sustainable practices. Prominent banks must acknowledge their worldwide corporate duties.

The literature on green finance barriers primarily focuses on developed economies, there is a lack of comprehensive research in developing countries, particularly Nepal. This study aims to fill this gap by investigating the specific barriers commercial banks face in adopting green finance practices.

3. MATERIALS AND METHODS

This research endeavor utilizes a qualitative research methodology in order to investigate deeply and comprehensively into the various obstacles hindering the uptake of environmentally-friendly financial practices by commercial banking institutions. The primary objective of this study is to precisely pinpoint the specific regulations, strategies, and their coherence with the overarching goal of sustainable development, a relatively emerging idea in the dominion of financial sustainability in the context of Nepal. Qualitative research is particularly suited for exploring complex and context-specific issues, such as the challenges faced by banks in developing countries, such as Nepal [37]. Semi-structured interviews were conducted with key stakeholders from commercial banks in Nepal. The population comprises senior executives and risk managers from Nepalese commercial banks. In order to ensure a diverse range of experiences and perspectives on green finance practices, purposive sampling was utilized. In Nepal, commercial banks are classified based on their ownership structure, including government-owned, joint-venture, and private commercial banks. Six participants, two from each category of commercial banks in Nepal, were equally represented. These participants included a senior executive and a risk manager from each of the sampled banks, who are directly involved in financial risk management and sustainable practices within the commercial banking sector. Pseudonyms were assigned to the participants in the results section.

The interview protocol was designed to cover a wide range of topics related to green finance, including regulatory frameworks, green finance practices and availability of green investment opportunities, financial risk perceptions while adopting green finance, awareness levels and challenges of green finance in Nepal. The questions were open-ended, allowing the participants to provide detailed insights and elaborate on their views. In the beginning, the researcher explained the purpose, procedure, confidentiality, risks and benefits, withdrawal, and contact information to the participants. Sufficient time was given to the participant to read and understand the information. When the participants agreed and signed in consent form a copy of the form was provided to them for their records. Finally, the participants were voluntarily involved in the interview.

Thematic analysis was used to analyze the interview data. The transcripts were carefully reviewed to identify recurring themes and patterns regarding barriers to green finance adoption by commercial banks. This iterative process involves coding data, categorizing codes into themes, and refining the thematic framework. To enhance the validity of the findings, triangulation was employed by cross-verifying the data from multiple participants and comparing their perspectives. To ensure reliability, the research process was thoroughly documented, and the researchers engaged in regular discussions to enhance consistency and minimize bias. This study adhered to the ethical guidelines for collecting opinions by ensuring the privacy and confidentiality of the participants. Informed consent was obtained from all participants before conducting the interviews, and they were assured of the voluntary nature of their participation. The research was conducted with utmost respect for the ethical principles of research involving human subjects.

4. RESULTS

The aim of this research centers on examining the green finance framework that aligns with the sustainable development goals as adopted by Nepalese commercial banks. The objectives of the qualitative analysis include gaining insights into the current state of implementation of regulatory frameworks for green finance in Nepal, exploring the priority areas for green investments outlined by Nepal Rastra Bank in line with sustainable development goals, determining the financial risk perceptions held by Nepalese commercial banks regarding green finance, and assessing the challenges perceived in the realm of green finance. Through in-depth interviews with key stakeholders, including senior executives, risk managers, several prominent themes emerged, shedding light on the challenges faced by these banks in integrating green finance into their operations. The result section is classified based on implementation of regulatory frameworks, green finance practices and availability of green investment opportunities, alignment with sustainable development goals (SGDs), awareness levels and challenges of green finance in Nepal.

4.1 Regulatory frameworks implementation

Green finance practices in Nepal are currently in the evolution phase. The participants argue that green finance policies are circulated by Nepal Rastra Bank consisting of the mandatory provision of corporate social responsibility (CSR) and investing in clean and renewable energy. A significant barrier identified by the participants was the absence of a voluntary implementation regulatory framework rather than mandatory compliance with green finance in Nepal. The bank does not incorporate green finance priorities into its core business strategies. Harikrishna stated, “There is proper implementation of specific policies and regulatory support for green finance as per the demand of rules and regulations. But only limited financial institutions are motivated to increase their investment voluntarily."

The voluntary initiation for green finance in Nepal has been cited as a significant hindrance. Participants emphasized the importance of the voluntary initiations and incentives to encourage and implement the adoption of green financial practices. This finding align with researchs [28, 29, 36]. Nepal Rastra Bank circulated by its monetary policy to manage their investment portfolio with the target of 15 per cent of total credit to their agriculture sector, 10 percent in energy, and 15 percent in small, micro and medium enterprises [38].

4.2 Green finance practices and availability of green investment opportunities

Participants also emphasized that the scarcity of viable green projects hindered their ability to engage in green financing. While Nepal's renewable energy sector showed potential, participants felt that there were limited opportunities to meet the criteria for green investments. Ganesh, Ramchandra, and Ramesh mentioned, "We want to invest in green projects, but there are not enough well-structured opportunities. We need more projects that align with our sustainability goals”.

The financial risks associated with green investments were a concern for the participants. Unfamiliarity with these projects, combined with uncertainties in the regulatory environment, led some banks to perceive green financing as riskier than conventional financing. Sakuntala and Ramesh explained, "There is a perception that green projects might be riskier, especially if we're not familiar with the technology or the long-term viability of these initiatives." Unfamiliarity with green projects coupled with uncertainties in the regulatory environment leads some banks to perceive green financing as riskier than conventional financing. This perception affected their willingness to embrace green finance. This finding is supported by prior researches [31, 32, 34, 39].

4.3 Financial risk perceptions on green finance

In response to perceived risks, participants expressed the need for strategies to mitigate these risks in green investments. Ramesh and Harikrishna suggested that “We need collaborative efforts with other financial institutions, share best practices, and explore partnerships with experienced green finance organizations to reduce risks associated with green projects”. The participants suggested various strategies to mitigate the risks associated with green investments. Collaborative efforts with other financial institutions, sharing best practices, and forming partnerships with experienced green finance organizations are recommended to reduce uncertainties associated with green projects. This finding is supported by the result of studies [34, 39] in several countries.

4.4 Align with sustainable development goals (SGDs)

In response to the sustainable development goals, participants expressed that banks are knowing or unknowingly prioritizing the lending policies towards clean energy, sustainable agriculture, and environmental screening before lending, especially in infrastructure development. The sustainable officers of the commercial state that “Banks are in compliance status of green investment," similarly managers argue that before investing in projects or managing their portfolio, they strictly adhere to the regulators' recommendations. Banks are maintaining their investment portfolios in areas such as agriculture, health, society, and hydropower projects. A modest amount of credit is supplied to the target demographic through corporate social responsibility (CSR) and microfinance. All banks and financial organizations must set aside a particular percentage of net earnings for their CSR funds, according to the instructions from Nepal Rastra Bank. The participants also argue that green finance practices strive to attain the broader objectives of sustainable development in the nations and position the roadmap of sustainable development goals. This findings is aligned with the findings in studies [27, 30, 39, 40] in developing and developed countries.

4.5 Awareness levels and challenges of green finance in Nepal

Sumina adds that “the lack of expertise and insufficient efforts to improve the capabilities of financial institutions and stakeholders in the field of green finance has been a significant challenge.” This has resulted in commercial banks being unable to effectively maintain a green finance portfolio.

Sajan states that “there is no proper outlined environmental standards further compounds this issue, it becomes difficult for financial institutions to assess and implement sustainable practices.” The current system lacks adequate rewards and infrastructure in financing sites for beneficial impacts and fails to impose sufficient penalties for negative consequences. This creates a disincentive for financial institutions to actively engage in green finance practices and hinders the growth of environmentally friendly initiatives. Consequently, there is a pressing need to address these shortcomings and enhance the capacity of financial institutions and stakeholders in the realm of green finance through comprehensive training programs, knowledge-sharing platforms, and regulatory measures that promote responsible and sustainable financing practices. The finding from this qualitative investigation aligns with studies [31, 36]. The scarcity of well-structured and viable green projects poses a challenge for banks seeking to engage in green financing. While there is potential within Nepal's renewable energy sector, limited opportunities to meet the criteria for green investments hinder banks' ability to actively participate in sustainable initiatives. This study revealed that a lack of awareness and expertise in green finance among banking professionals was a significant barrier. Sakuntala, Ganesh, and Harikrishna mentioned that “The teams needed better training and education on green finance principles and practices. We need to enhance employees' understanding of green finance. Without a well-informed team, it is challenging to implement these practices effectively." A significant challenge is the lack of awareness and expertise in sustainable green finance among banking professionals. Participants highlighted the need for better training and education to enhance employees' understanding of green finance principles and practices, thereby enabling more effective implementation of sustainable financial initiatives.

The participants highlighted the importance of strong institutional support and a culture that prioritizes green finance. Some respondents felt that a clear commitment from top management was essential for driving green finance initiatives. Both Ganesh and Sakuntala stated, "We need leadership that's fully committed to green finance. Without the backing of top management, it is challenging to make substantial changes.” The importance of strong institutional support and a culture that prioritizes green finance have emerged as barriers. Participants stressed the significance of committed leadership at the management level to drive green finance initiatives within banks. A clear commitment from top management is essential to bring about substantial changes.

Several important topics emerged from a qualitative inquiry into the impediments to the adoption of green finance practices by commercial banks in Nepal.

5. DISCUSSION

Financial risk perceptions were a recurring concern in the literature review, and the participants in this study shared similar sentiments. Unfamiliarity with green projects and uncertainties in the regulatory environment contribute to banks' perceptions of the increased risks in green financing. This aligns with previous studies emphasizing the need to address these risk perceptions to promote green finance [23]. The results also highlight the necessity for awareness and expertise among banking professionals, which was identified as a significant barrier in the literature review. The participants expressed the need for better training and education on green finance principles and practices. This underscores the critical role of capacity-building initiatives in facilitating the integration of environmental considerations into banking operations [24, 26]. Institutional support and a culture that prioritized green finance were highlighted by the participants, echoing the need for leadership commitment identified in the literature review. Top management's dedication is considered essential for driving green finance initiatives, emphasizing the role of organizational culture in overcoming barriers (Ganesh and Sakuntala). In response to green banking to reduce risk, enhance sustainable banking with long-term stability, and align with sustainable development goals (SDGs) in the nation. Commercial banks' development through an understanding of their stakeholders' needs, and provides some recommendations for the banks' future course, including enticing more sustainable talent to support banks' operations, providing a wider variety of sustainable financial products in numerous sectors, upgrading the credit system to engage more SMEs and the general public, and continuing to strengthen sustainable finance [41]. Banks and the financial sectors have begun to take climate change risks into account and align themselves with sustainable development objectives [28]. Therefore, adopting green banking goes beyond simply being more environmentally friendly, because it also has benefits for the bank, such as a reduction in risk and cost, an improvement in the bank's reputation, and a contribution to the common good of the environment [33]. Green banking helps the bank's business goals, in addition to its corporate social in a complete approach. To achieve the goals of sustainable development, green technology must be financed with green money. Current financial markets are anticipated to devote savings to programs utilizing leading-edge green technologies that will help limit the rate of environmental damage [30]. It can be seen that the pool of financing is still matched with projects that are ecologically destructive and worsen the current conditions despite the environment's rapid decline and numerous attempts.

Green banking emphasizes eco-friendly products and services that are responsible for social well-being and environmental protection. It consists of green loans, finance, CSR, Internet banking, and network communications [29]. Participants responded that the Nepalese banking sector was required to improve training, education, green finance principles, and practices for better adoption of green banking practices. Further improvement of regulatory support for green finance is essential for improving green banking initiatives. The result supports the statement that a lack of awareness and education about green banking [29, 35] impacts its initiation. To encourage banks and financial institutions to make compulsory investments while considering environmental issues, usage of relevant technologies, and management systems, banks and regulators should play a proactive role in incorporating social and ecological factors into their lending principles. Banks subject to regulatory body mandates must be aware of sustainability issues and adhere to international standards and frameworks to improve green banking practices [36]. Businesses and customers have no interest in green banking, making it difficult for them to access the financing offered by banks. Therefore, investment intermediaries should invest in technological innovation by promoting green jobs and developing competitive advantages, and governments should develop promoting and incentive policies such as tax benefits soft loan schemes and so on [7].

The findings of this qualitative investigation align with and provide further insights into the existing literature on the barriers to the adoption of green finance practices in the banking sector. The results confirm several key barriers identified in the literature review while shedding light on the specific challenges faced by commercial banks in Nepal. The absence of a clear regulatory framework has emerged as a significant barrier to both the literature review and results. Regulatory constraints and a lack of supportive policies have been recognized as obstacles in various contexts [42, 43]. The participants of this study echoed this concern, emphasizing the need for specific policies and guidelines to encourage green financing. This suggests that regulatory support is crucial for overcoming barriers to green finance, regardless of the country's developmental stage. The limited availability of green investment opportunities, another barrier identified in the literature review, also resonates with these findings. While the renewable energy sector in Nepal holds potential, participants have highlighted the scarcity of well-structured projects that align with sustainability goals. This highlights the importance of creating a robust pipeline of viable green projects to encourage banks' engagement in green financing, which is consistent with the literature [22, 26]. In response to major challenges of green banking awareness, regulator support, the backing of top-level management, and collaboration challenges of green projects. Prior research claims that due to unquantified risks, inadequate knowledge about the projected outcomes of green initiatives, and strict government regulations, the majority of banks are unwilling to finance sustainable projects. The lack of a clear sustainable green policy poses a challenge to the adoption of green banking [34]. Banks must examine their frameworks and plans to stay on top of their sustainability commitments in light of new challenges and objectives [44]. The literature explores how sound national policy and guidelines can influence the financial sector to play a more productive role in building a green environment by inspiring investment into environmentally friendly projects [32], and promoting environmentally friendly technologies by banks. The government is crucial for improving banks' standing and consumers' awareness [31]. Considering the prior study, the current leadership and academic research in this field play important roles in motivating banking sectors, regulators, and investors to bolster green financing practices [40]. In the financial sector, such as commercial banks, improving the green regulatory framework with the collaboration of all stakeholders may contribute to achieving the required sustainable goals [29].

The findings also support various prior studies on the promotion of sustainable development of green banking practices. Previous researcher [39] argues that there are different levels of economic development and inequality across a range of economic, sociocultural, and institutional frameworks. The study suggests that sustainable banking can help overcome inequality traps that arise from market failures in the environmental, social, and governance (ESG) domains in societies with poor rule of law. Based on ESG principles, Sustainable banking encourages two-way trust between lenders and borrowers, which strengthens underperforming institutions, advances equitable opportunities, and creates bidirectional trust between lenders and borrowers, supplementing weak institutions, promoting equal opportunities, and fostering sustainable development. This study supports the findings [27], that the awareness and attitude of bank managers are positive in their banking system towards sustainable banking practices, green investment, and sustainable development.

Additionally, participants' suggestions for risk mitigation strategies, such as collaboration with other financial institutions and sharing best practices, are consistent with the literature's emphasis on knowledge sharing and partnerships to reduce perceived risks (Ganesh & Sakuntala). The results of this qualitative investigation provide valuable insights that align with and expand upon the barriers highlighted in the literature review. The findings of this study emphasize the specific challenges faced by commercial banks, indicating the need for targeted strategies to address these barriers and promote the adoption of green finance practices in Nepal's banking sector, in line with the country's sustainable development goals.

6. CONCLUSION

Commercial banks must include accountability and sustainability in their business practices. They can increase public trust and achieve social obligations by including environmental issues in their lending practices. The research focuses on analyzing green finance practices by Nepalese commercial banks aligned with sustainable development goals. This qualitative analysis explores the understanding of green investment opportunities, financial risk perception, awareness of green investment, regulatory implementation, and green finance practices aligned with sustainable development goals. Green finance practices in Nepal are in an evolving stage. Participants discuss green finance policies by Nepal Rastra Bank, including mandatory CSR and investing in clean energy. Participants note the absence of a voluntary implementation regulatory framework rather than mandatory compliance with green finance in Nepal, as a result bank does not prioritize green finance in its core strategies. The scarcity of viable green projects hinders engagement in green financing. The renewable energy sector in Nepal has potential but limited opportunities for green investments. Financial risks associated with green investments concern participants. Unfamiliarity with green projects and regulatory uncertainties make banks see green financing as riskier. Participants suggest strategies to mitigate risks in green investments, such as collaboration with other financial institutions and they feel banks are prioritizing lending policies towards clean energy and sustainable agriculture to meet the lending portfolio standard circulated by NRB. Banks invest in agriculture, health, society, and hydropower projects and allocate a percentage of earnings to CSR funds as per Nepal Rastra Bank's instructions. Green finance practices aim for sustainable development goals but face challenges such as a lack of incentives for positive impacts and penalties for negative consequences. Banking professionals lack awareness and expertise in green finance, which is a significant barrier for promoting their sustainability which emphasizes the need for better training to enhance understanding of green finance. Strong institutional support and clear commitment from top management are crucial for driving green finance initiatives to pave for sustainability.

7. IMPLICATION OF THE STUDY

Banks must establish robust risk management strategies to tackle concerns about financial risks linked with green investments engaging in partnerships with other financial institutions which can aid in diminishing risks and bolstering trust in green financing. Despite facing limited prospects, banks ought to explore various sectors like renewable energy, green infrastructure, and sustainable agriculture to broaden their investment portfolios and contribute to sustainable development. Conducting training sessions and awareness programs for banking professionals regarding green finance can help bridge the knowledge gap and cultivate a culture of sustainability within financial institutions. The research emphasizes the necessity for further scholarly investigations into green finance practices in Nepal, with a specific emphasis on comprehending the obstacles and prospects associated with implementing green investment strategies. Academic institutions have the opportunity to incorporate courses on green finance into their curriculum to prepare future banking professionals with the essential knowledge and skills required to advocate for sustainable finance. Policymakers need to contemplate the formulation of a voluntary regulatory framework that encourages banks to participate in green financing while ensuring alignment with sustainable development objectives. The introduction of incentive mechanisms for positive environmental outcomes and consequences for negative impacts can incentivize banks to prioritize green finance endeavors. A strong commitment from senior management and strong institutional support are crucial in propelling green finance initiatives and nurturing sustainability within the banking sector.

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