



A BACKGROUND POLICY PAPER ON **GREEN FINANCING IN NEPAL**



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A BACKGROUND
POLICY PAPER ON
GREEN FINANCING
IN NEPAL



नेपाल राष्ट्र बैंक

NEPAL RASTRA BANK

केन्द्रीय कार्यालय
बालुवाटार, काठमाडौं
Central Office
Baluwatar, Kathmandu

FOREWORD

I am delighted to read the "Background Policy Paper on Green Financing in Nepal" prepared by "SDG Sub-Platform on Green Financing". The paper supports the objective of promoting green investments in Nepal, which is very much timely to stimulate green growth contributing to resilient, equitable and sustainable development.

The issue of green financing has been at the core of Nepal Rastra Bank (NRB)'s priorities. The NRB has made several regulatory policy provisions to promote green financing in Nepal, which includes issuance of Environment and Social Risk Management (ESRM) Guidelines in 2018 and directives for the Banks and Financial Institutions (BFIs) to ensure assessment of environmental risks as required by national laws before extending credit facilities to industries. In addition, BFIs are also required to submit ESRM Reports in the prescribed format annually. Giving priority to promote clean energy and minimize environmental impacts of development projects, NRB has been making policy provisions of direct lending to renewable energy projects with single obligor limit up to 50% of core capital of BFIs.

Compared to other countries in the region, we are at the beginning of a long journey towards green financing in Nepal. I'm glad that the paper builds a strong foundation to kick start the process and chart out a road map for future. As we move on, capacities across the green financing landscape needs to be built. In this regard, I would like to commend the efforts made by the sub-platform to do an in-depth research on existing policy and institutional context, opportunities and challenges in promoting green financing in Nepal, and recommending key steps to be taken in short, medium and long term.

I would also like to acknowledge the support provided by UNDP for setting up the sub-platform on "green financing" and facilitating the process of framing out future road map to work on green financing in Nepal.

On behalf of NRB, I express my full commitments for implementation of the recommendations made and expect cooperation of all concerned partners for the same.

(Maha Prasad Adhikari)

FOREWORD



Nepal has long been considered among the world's most climate-vulnerable countries. This warrants a great deal of attention in managing vulnerabilities and ensuring that our development goals are sufficiently resilient to withstand whatever environmental shocks the future may bring.

As a least developed country, one of Nepal's biggest and most persistent challenges is to manage the resources needed to finance the complex development interventions that help the country mitigate the risks and build a resilient society. Leaving those risks unattended would mean letting vulnerability grow unchecked.

As the leading UN agency responsible for helping countries to address climate vulnerabilities, UNDP has supported the people and the Government of Nepal in their efforts to integrate climate change and disaster risk reduction and management into the overall development process. To that end, the 2030 Agenda for Sustainable Development provides a solid framework for the government and all stakeholders to join forces and take concrete action. As a custodian of the SDGs, UNDP continues to engage national stakeholders in identifying the key issues and barriers to achieving the Global Goals' resilience outcomes.

As a first step, UNDP supported the establishment of five thematic SDG sub-platforms on green financing, responsible supply, resilient cities, resilient infrastructure and policy coherence. Led by national experts, these platforms were tasked with facilitating stakeholder engagement and jointly accelerating progress on achieving the SDGs. Given that the SDGs do not function in silos, the sub-platforms also examined linkages between the five thematic areas.

I take this opportunity to thank the members of the SDG Sub-Platform on Green Financing for having set in train a thoughtful and meaningful discourse on innovative financing to trigger green growth and contribute to green recovery. I appreciate that this discourse, despite the difficulties created by COVID-19, was able to bring together the key stakeholders to produce the *Background Policy Paper on Green Financing for Nepal*.

People, planet and prosperity are at the heart of the Global Goals. The green financing instrument is a common denominator that cuts across all the three

spheres. Green financing also helps to minimize the huge gaps in financing the SDGs and to promote a resilient model of development. Nepal has identified a financial gap of NRs585 billion in achieving the SDGs by 2030, which includes NRs367 billion from the private sector. Nepal has committed itself to achieving a carbon-neutral economy by 2050 and aspires to mobilize \$28.4 billion to fulfill the mitigation targets under the Nationally Determined Contributions.

UNDP stands ready to help the Government of Nepal to minimize those financing gaps, particularly by identifying non-traditional sources of funding, including the private sector, through innovative financing instruments. It is encouraging that the paper has analysed various such options and put forward a roadmap with immediate, medium and long-term priorities. I believe that the roadmap's implementation will help to channel investments effectively so that they support Nepal's development vision of *Prosperous Nepal, Happy Nepali*.

I acknowledge with gratitude the voluntary contributions of the platform members, and the visionary leadership of the Chair, Mr. Sanjib Subba, and the Vice-Chair, Ms. Sushama Sharma, for making the sub-platform a great success. I would like to thank Mr. Rastraraj Bhandari for his contribution to this paper and all the experts for their in-depth reviews and valuable comments.

I'm also particularly encouraged by the commitments of the Governor of Nepal Rastra Bank, Mr. Maha Prasad Adhikari, who recognizes this report as a foundation for future work on green financing in Nepal. I fully endorse his assertion that building capacities across the financing landscape is the need of the hour and commend his able leadership for creating policy incentives for banking and financing institutions to support green investment.

And I thank my colleague, Mr. Vijaya Singh, UNDP Policy Advisor, for conceptualizing and successfully piloting the platform approach for the first time in Nepal.

A handwritten signature in black ink, appearing to read 'Ayshanie'.

Ayshanie Medagangoda-Labé
UNDP Resident Representative in Nepal

ACKNOWLEDGEMENT

We acknowledge the hard work of Mr. Rastraraj Bhandari, who took the sole responsibility of conducting the technical research and analysis as well as drafting this report under the guidance of SDG Sub-platform Chair Mr. Sanjib Subba, Co-Chair Ms. Sushama Sharma and UNDP's Policy advisor, Mr. Vijaya Singh. Mr. BN Gharti of the Banking & Insurance Management Pvt. Ltd Nepal deserves special thanks for providing continuous support and guidance for this study. Support received from UNESCAP in conducting the study and expert review of the report is well acknowledged.

We further acknowledge the valuable input received from SDG Sub-platform members and various other actors such as the local project developers, banking and financing Institutions, and development partners who play an important role in greening Nepal's financial system. We express our special thanks to Dr. Gunakar Bhatta, Executive Director, Nepal Rastra Bank (NRB), Ms. Asmita Khanal, Assistant Director of NRB, Mr. Satish Gautam, National Programme Manager of UNDP-supported Renewable Energy for Rural Livelihood Programme (RERL), Mr. Deependra Chhetri, former Governor of NRB and former Vice Chair of National Planning Commission of Nepal, Mr. Vincent Wierda, Regional Coordinator for Asia at UNCDF, Ms. Pushkala Lakshmi Ratan, International Finance Corporation (IFC), Mr. Cedric Rimaud, Climate Bond Initiative (CBI), Mr. Asad Maken, Governance Specialist, UNDP Bangkok Regional Hub (BRH), Mr. Shabda Gyawali, Dolma Impact Fund and Ms. Yanki Ukyab, Development Economist, UNDP Nepal.

TABLE OF CONTENTS

Abbreviations	2
Executive Summary	3
1 Introduction	7
2 Background on Green Finance	11
2.1 A Common Understanding of Green Finance	12
2.2 Catalyzing factors for the growth of green finance	13
2.3 Green Finance Approaches, Instruments and Products	14
2.4 Existing Status of Green Finance (Globally and Regionally)	15
2.5 Delivering a green economy through financial policy	20
3 Review of the State of Green Finance in Nepal	23
3.1 Country Economy Overview and Green Recovery	24
3.2 Characteristics of the Nepali Financial System	26
3.3 Green Finance Needs and Opportunities	27
3.4 Key Sustainability Policies, Frameworks & Strategies	30
3.5 Current Development of Green Finance in Nepal	34
3.6 Key Barriers in promoting Green Finance in Nepal	40
4 Priorities for Green Finance in Nepal	45
4.1 Low Hanging Fruits	46
4.2 Roles and Responsibilities of Relevant Stakeholders	48
4.3 Tools and Instruments for Enhancing Green Finance	51
4.4 Sector Specific Initiatives	61
5 Way Forward – Strategies & Policy Recommendations	65
6 Appendix 1 Glossary of Green Finance Products	71

LIST OF FIGURES AND TABLES

Figure 1	Components of Green Finance Definitions	12
Figure 2	Broad categorization of financial solutions for SDG implementation	15
Figure 3	Annual Green Bond Issuance in 2020	16
Figure 4	Stages of Green Finance Integration for SBI member countries	17
Figure 5	Asia Pacific Cumulative Green Bond Issuance	18
Figure 6	Climate Friendly Investment Potential in South Asia	29
Figure 7	SBN Progression Matrix with Assessment Results for Nepal	37
Figure 8	UNDP Financial Toolbox	52
Figure 9	Outstanding domestic bonds in Nepal	52
Figure 10	Roadmap with Common Milestones for Developing Green Bond Markets	55
Figure 11	Basic Rationale and Principles for the Green Finance Catalyzing Facility	57
Figure 12	Taxonomy of criteria for green bond certification for the Climate Bonds Initiative	61
Figure 13	Nepal's Climate Investment Potential broken down by Sectors	62
Table 1	Mapping the Initiatives Taken by South-Asian Countries in Green Finance	19
Table 2	Nepali Bank's Asset Sectors as defined by E&S risk category	28
Table 3	Key Acts, Policies and Frameworks in Nepal	31

ABBREVIATIONS

BFI	Banks and Financial Institutions
ESRM	Environmental and Social Risk Management
ESG	Environmental, Social and Governance
FDI	Foreign Direct Investment
GFCF	Green Finance Catalyzing Facility
ICMA	International Capital Markets Association
IFC	International Finance Corporation
NBA	Nepal Bankers Association
NDCs	Nationally Determined Contributions
NRB	Nepal Rastra Bank
SBN	Sustainable Banking Network
SMEs	Small and Medium Enterprises
SDGs	Sustainable Development Goals



EXECUTIVE SUMMARY

Despite the impacts of COVID-19 on human health and economy, green finance is gaining increasing momentum around the world, including in the Asia & Pacific region, as a strategy to move countries towards a low-carbon economy **cost effectively**. In this context, Nepal has a unique opportunity to capitalize on this wave of green finance by resolving the barriers, innovating financial tools and technology and establishing effective partnerships globally, regionally and locally **moving forward**.

In Nepal, the current development of green finance is largely regulatory driven. At the same time, several Banks and Financial Institutions (BFIs) are also raising ambition by partnering with international institutions and developing green finance instruments. Other than a myriad of national level policies, frameworks and guidelines—such as Nepal’s Nationally Determined Contribution (NDC) to the Paris Agreement—the “Guidelines on Environmental and Social Risk Management for Banks and Financial Institutions (ESRM)” adopted by Nepal Rastra Bank (NRB) in 2018 and the subsequent directives for implementation have been the guiding force behind Nepal’s regulatory driven approach to green finance. According to the Sustainable Banking Network,¹ Nepal’s progress is largely regulatory driven and has evolved into the “Implementation Stage” towards a sustainable financial system. As next steps, Nepal is gearing towards the adoption of a national green finance roadmap and the issuance of its first green bond.

A International Finance Corporation (IFC) study from 2017 estimates a total climate-smart investment opportunity of USD 46 billion in Nepal from 2018 to 2030 which can be unlocked through green finance.² This is in the backdrop of an investment gap which has been estimated between 10-15 percent of GDP annually over the next decade.³ Given the potential of attracting new finance to fill the investment needs estimated, and the importance of such financing to be green, there is an immediate need to realize the progress already made in green financing while assessing existing challenges and gaps before developing strategies, priorities and action plans for the way forward.

Doing so requires an identification and implementation of green finance strategies while acknowledging that the context and national circumstances differ considerably for each country. This is particularly important in Nepal given the baseline portfolio of the country in terms of energy usage is largely green to begin with, which is rather unique when compared to other countries in the region. Nonetheless, the COVID-19 pandemic provides an opportunity to adopt a green recovery path, with green finance at its core, in transitioning Nepal towards a green and circular economy.

¹ The Sustainable Banking Network (SBN) is a unique, voluntary community of financial sector regulatory agencies and banking associations from emerging markets committed to advancing sustainable finance in line with international good practice. The 40-member countries represent US\$43 trillion (85 percent) of the total banking assets in emerging markets.

² The IFC study focuses on the sectors that have the greatest potential to attract private investment, namely renewable energy, transport, green buildings, urban water, climate-smart agriculture, and municipal solid waste management as part of climate-smart investment opportunity. See more here: <https://www.ifc.org/wps/wcm/connect/fa3bea68-20f1-4cb4-90b9-3e812d38067f/Climate+Investment+Opportunities+in+South+Asia+-+An+IFC+Analysis.pdf?MOD=AJPERES&CVID=l.raVua>

³ World Bank. 2019. New World Bank report highlights private sector solutions for sustainable infrastructure development in Nepal. <https://www.worldbank.org/en/news/press-release/2019/09/10/new-world-bank-report-highlights-private-sector-solutions-for-sustainable-infrastructure-development-in-nepal>

Barriers to Green Finance

Significant barriers remain in the form of generic barriers, that are applicable to any form of Foreign Direct Investment (FDI) inflow into an emerging economy, to more specific barriers particularly relevant to green projects. To begin with, a lack of common definition and understanding on the definition of “green” in the context of Nepal is a significant barrier. In addition, lack of capacity and awareness on green finance along the value chain, shortage of long-term finance, lack of pipeline of bankable green projects, limited credit information and lack of transparency on climate related disclosure and data are some specific barriers to green finance in Nepal. Small and Medium Enterprises (SMEs) face additional barriers as the current lending model is largely collateral based financing with BFI’s hesitant to take the risks resulting from project based financing. Furthermore, SMEs also face high upfront costs and limited capacity in aligning projects with the various social and environmental safeguard policy of the investors alongside the large transaction costs associated with funding small-scale projects. In the absence of government level regulations and policy, there is a lack of incentive in going green and aligning with industry best practices, which limits BFI’s as well as industries from being the first mover in going green in the fear of an unequal playing field.

Priorities for Green Finance

Along with reforms on Nepal’s regulatory framework, there are opportunities to engage with capital and insurance markets, innovate capacity building within Nepal’s financial structure and identify the low hanging fruits to develop an integrated approach to green finance. Nepal needs to immediately define and adopt what “green” means in the context of Nepal in line with regional and international best practices. Then, Nepal needs to launch policy reforms across various sectors and utilize green finance tools and instruments in attracting domestic and international investors for green projects. A decentralized structure under the new federal regime provides opportunities as well as challenges which need to be further explored. Sectoral opportunities need to be further explored in creating a pipeline of projects with detailed investment plans to attract investors. The sectors that have the most potential to attract such investment include renewable energy, clean transportation, green buildings, and the sectors of water and waste. Sustainable tourism, climate smart agriculture and agri-business are other sectors that provide large potentials. At the current state of shallow capital markets, green loans will play a more important role than green bonds initially, in terms of inclusiveness across the market, replication and scale, and should be looked at as a key green finance instrument accordingly.

Way Forward

As first steps, it is imperative to achieve the low hanging fruits in the country. These include incentivizing both regulatory agencies and BFI’s to join international green networks across the value chain to support green finance capacity building; identifying and working with potential investors and investment funds; getting government support in establishing a high-level green finance task force with public consultation; and providing low hanging reputational incentives for BFI’s that are taking strides in green finance. Simultaneously, sector specific thematic working groups need to be established who can work in identifying and designing a potential pipeline of green projects and investment plans backed by financiers under comprehensive market and regulatory assessments.

Investment risks need to be identified and transferred across the financiers to find the ideal model of financing. It is equally important to address the need for long-term financing and a shift away from collateral based financing to project based financing. There is also a need for an enabling environment on the growth of private equity and venture capital firms in the country alongside the growth of public-private partnerships in the green sector. Particular attention needs to be paid at ensuring access to green finance to SMEs and that green finance policies have environmental, social and gender safeguards at their core. To make green finance attractive in the sub-national level, there is a need for local governments to have investment-grade creditworthiness. This requires credible accounting frameworks, sound financial management systems, independent auditing of local government finance, and performance evaluation for local government services.⁴

The regulatory approach initiated by the Nepal Rastra Bank (NRB) needs to be complemented by the private sector and the market, such as through the adoption of voluntary green guidelines and initiatives to create a holistic ecosystem for green finance moving forward. Nepal's current framework involves interagency collaboration between financial supervisors/regulators, industry associations and Financial Institutions (FIs). This collaboration also needs to include other public agencies such as environmental agencies and ministries alongside representatives of civil society such as NGOs, associations, and media. This means, greening the financial system requires an integrated approach that looks at the entire value chain from investors to project developers with the regulatory body incentivizing and assisting these various stakeholders.

In the national level, an idea could be to provide a pipeline of green bankable projects ideally from the level of Ministry of Finance and the Investment Board of Nepal consistent with international best practices to gather momentum and attract investors. To this end, there is an immediate need in utilizing green finance mechanisms, such as green bonds, to pilot financing a green project in the municipal level along with a variety of stakeholders including banks, private sectors and development partners such as UNDP. Learning from these pilots will feed to policy making and institutional strengthening for transformation towards the growth in market led green finance such as through green bonds. This can also pave the way to kick-start international financing coming into the country under green finance from the private sector.

In this backdrop, it is not advised to reinvent the wheel. Rather, Nepal needs to learn from best practices from the region as well as other emerging markets in greening the financial system in a fashion that works best for the country. Caution needs to be made, however, as what works in another country setting may not work in Nepal as despite the regional similarities, the financial systems vary drastically across countries. Nonetheless, it is the right time for Nepal to formulate and implement conducive policies to utilize an integrated approach to develop a green ecosystem in the pursuit of a green and circular economy that can deliver both climate and sustainable development impacts consistent with the targets under the UN Paris Agreement and the Sustainable Development Goals (SDGs).

⁴ IFC. 2017. Climate Investment Opportunities in South Asia. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/resources/final+climate+investment+opportunities+in+south+asia+-+an+ifc+analysis





1

INTRODUCTION



Broadly put, green finance seeks to increase the flow of financial investments into sustainable development projects and initiatives, environmental products and activities, and policies that encourage the development of a more circular, green and sustainable economy. Recent years have seen a growth in the sector of green finance from the private and public sector alike. This can be attributed to various factors including the adoption of several international agreements like the Paris Agreement in 2015 alongside a strong push from investors towards green investments, all of which have helped strengthen the business case for green finance. Investments in green sectors such as renewable energy are increasingly more competitive and in fact are now well known to provide double dividends in the form of revenue generation as well as co-benefits to sustainable development.

This recent advancement in green finance can be attributed to mature financial systems in the advanced countries and institutions across the world. Within the emerging markets, China was a first mover in greening its financial system, and has today become one of the world's largest markets for green finance as seen with its share of the green bond market alongside the potential of the vast carbon credit trading market expected to be the largest Emissions Trading System (ETS) in the world. Markets in the ASEAN region are picking up as well with South Asian countries like Bangladesh and India making strides regionally. Under this premise, investors, policymakers and the finance community around the world are realizing the tremendous potential in unlocking climate resilient and green investment opportunities in emerging markets. Countries are presented with an opportunity to resolve barriers and attract financing for projects that have environmental and social safeguards at their heart.

In this context, this background policy study aims to do two things. First, it aims to provide a brief overview on green finance including the variety of green finance instruments countries have at their disposal. Then, the paper contextualizes the broader discourse on green finance with that of Nepal to serve as a foundation document for future work on developing green financing in Nepal, to assess Nepal's readiness to green financing, and to provide guidance on key steps and processes to be followed.

To do so, this study largely employs a desk review of available resources and employs the progression matrix framework used by the Sustainable Banking Network (SBN) along the three pillars of Strategic Alignment, Climate and Green Finance, and Environmental and Social Governance (ESG) integration. The paper also seeks inspiration on content and methodology from international and regional best practices on foundational studies. Finally, the paper benefits from open-ended interviews with a host of stakeholders involved in green finance in Nepal alongside consultation with the members of Nepal's SDG Sub-Platform on Green Finance and international green finance experts.

The primary audience of this study is government officials, policymakers and regulators in Nepal who will lead the growth of green finance in the country. The secondary audience is the bankers, finance experts as well as other stakeholders involved with the financial sector quite broadly.





2

BACKGROUND ON GREEN FINANCE

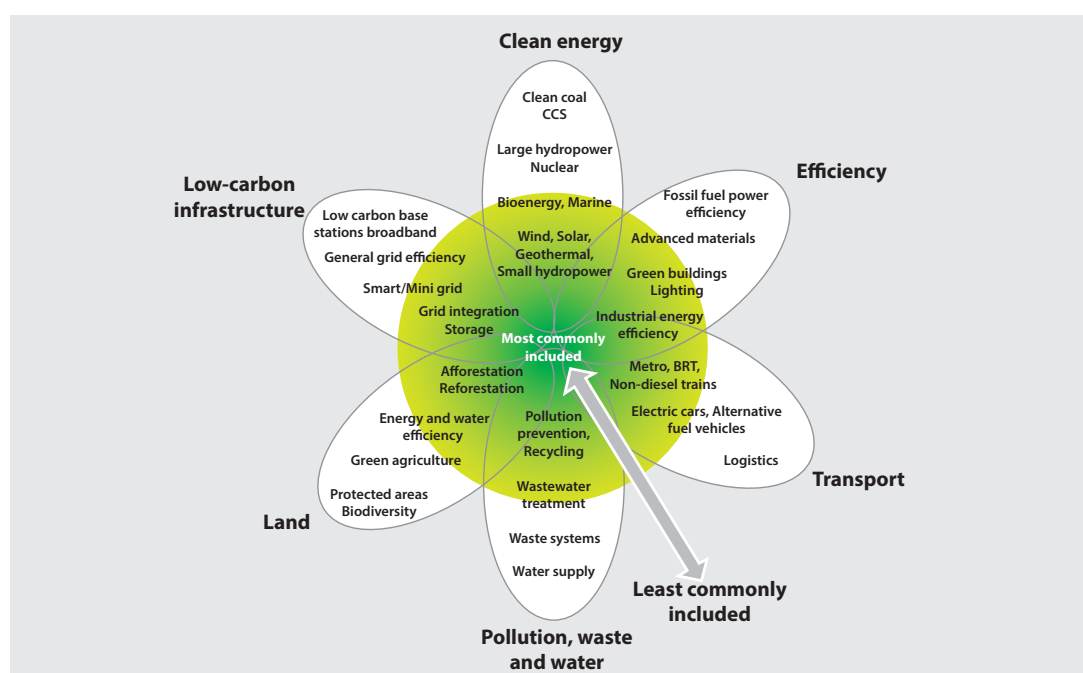


2.1 A Common Understanding of Green Finance

Green finance is not just a single product or activity financing, but an entire financial system which must use a variety of instruments and approaches to finance a range of activities ranging from renewable energy, forestry expansion, or transportation.⁵ Green finance is broader in scope than climate finance as it covers other environmental topics while it has a narrower scope than sustainable finance given the latter also covers social, economic and other Sustainable Development Goals (SDGs). An integrated green finance strategy ensures that such a financing approach would be under the primary goal of promoting a green economic transformation toward low-carbon, sustainable, and inclusive pathways.

Under this premise, various stakeholders including banks, investors, financial service providers, policy makers and regulators, academia and NGOs have been involved in defining what “green” means in their individual contexts. This decentralization has resulted in multiple definitions that vary in regard to scope, level of detail, transparency and other dimensions. The most (as well as the least) commonly included sectors in the various green bond definitions and taxonomies are highlighted below in figure 1.

FIGURE 1 COMPONENTS OF GREEN FINANCE DEFINITIONS⁶



Source: UNEP, 2016

This helps highlight that there is no global consensus on the conceptual definition as well as taxonomy for green finance. Nonetheless, significant progress is being made in achieving a common and unified definition that is ambitious in scope. In 2020, the European Union (EU) agreed on an ambitious ‘Sustainable Finance Taxonomy’ while the People’s Republic of China (PRC) adopted the ‘Green Bond Endorsed Project Catalogue’. The PRC catalogue was released

⁵ ADB. 2017. Catalyzing Green Finance: A Concept for Leveraging Blended Finance for Green Development. <https://www.adb.org/sites/default/files/publication/357156/catalyzing-green-finance.pdf>

⁶ The figure is illustrative but not exhaustive. Please see at UNEP. 2016. Definition and Concepts Background Note. https://wedocs.unep.org/bitstream/handle/20.500.11822/10603/definitions_concept.pdf?sequence=1&isAllowed=y

for consultation in June 2020, and has received widespread attention as it not only excludes the utilization of clean fossil-fuel based energy but also unifies the policy within the various regulators inside the country for green finance moving forward including the Green Industry Catalogue of NDRC which included clean-coal technology in 2019.⁷ Outside the country level efforts, the World Bank provides a guide on ‘Developing a National Green Taxonomy’ which can provide insights on developing a unified taxonomy.⁸ Without reinventing the wheel, therefore, aligning domestic definitions with international best practices (e.g. ICMA green bond principles) in consultation with guidelines from international institutions can help move towards a unified consensus on green finance and attract more international green-driven capital as a result.

2.2 Catalyzing factors for the growth of green finance

In the last decade, the growth of green finance, has propelled in economies around the world to a total amount of assets outstanding exceeding USD 1 trillion globally.⁹ This transition can be understood through a shift in multiple layers out of which, the three pertinent layers include decisions in the international level, national level and business level.

In the international level, the Paris Agreement from the United Nations Climate Change Conference (COP 21), the Agenda 2030 with the Sustainable Development Goals (SDGs), and the United Nations’ Addis Ababa Financing for Development Action Agenda, all adopted in 2015, have created the roadmap towards sustainable and low-carbon development objectives. Together with the Sendai Framework for Disaster Risk Reduction, signed in Japan in March 2015, these agreements provide a set of common standards and achievable targets to reduce carbon emissions and manage the risks of climate change and natural disasters.¹⁰

At the national level, countries are increasingly realizing the benefits of utilizing green finance in achieving their climate and green commitments cost-effectively while meeting domestic needs and considerations. The support towards this transition has come in various forms. These range from policy and legislative support away from brown investments and towards green investments, resolving barriers to investments to catalyze private and public investments, and to engaging with financial and market-based instruments in a national and sub-national level to increase financial flows. Utilizing green finance is also an effective way of reducing the cost of implementing the Nationally Determined Contributions (NDCs) for a host country.¹¹ Engaging with market mechanisms under Article 6 of the Paris Agreement (PA) alone has the potential to reduce the total cost of independent implementation of countries’ NDCs by more than USD 250 billion per year in 2030. If countries invest these cost savings into enhanced mitigation ambition, Article 6 has the potential to facilitating the further removal of GhG emissions by 50 percent or ~5 GtCO₂/year in 2030.¹²

⁷ C. Rui. 2020. A Greener Green Bond Catalogue: The incoming China’s unified Taxonomy notches new win. <https://gsh.cib.natixis.com/our-center-of-expertise/articles/a-greener-green-bond-catalogue-the-incoming-china-s-unified-taxonomy-notches-new-win> The catalogue now unifies the standards of China’s green bonds, and the scope covers all types of green bonds, “including but not limited to green financial bonds, green corporate bonds, green debt financing instruments and green asset-backed securities.”, making a single standard for sustainable finance worthy projects in China going forward.

⁸ World Bank. 2020. Developing a Green Finance Taxonomy. <http://documents1.worldbank.org/curated/en/953011593410423487/pdf/Developing-a-National-Green-Taxonomy-A-World-Bank-Guide.pdf>

⁹ BloombergNEF. 2020. Record Month Shoots Green Bonds Past Trillion-Dollar Mark. <https://about.bnef.com/blog/record-month-shoots-green-bonds-past-trillion-dollar-mark/>

¹⁰ UNDP. Sustainable Development Goals Background. <https://www1.undp.org/content/oslo-governance-centre/en/home/sustainable-development-goals/background.html>

¹¹ Commitments to climate action under the Paris Agreement are outlined in each countries’ Nationally Determined Contributions (NDCs) which are to be updated every 5 years, with more ambition.

¹² Jae Edmonds et al., “The Economic Potential of Article 6 of the Paris Agreement and Implementation Challenges” (Washington, D.C: IETA, University of Maryland and CPLC, September 2019).

Challenging the traditional notion that social and environmental challenge should be addressed only by philanthropic donations led to the growth of impact investing globally. Impact investments are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return.¹³ The 2020 Annual Impact Investor Survey from the Global Impact Investing Network (GIIN), which includes an updated market sizing analysis, estimates the current market size at USD 715 billion.¹⁴

The business case of green finance has emerged to be very strong in recent years. Companies are increasingly facing challenges such as scarce natural resources, weak financial markets, limited local buying power and lack of qualified talent that are limiting their potential to grow.¹⁵ Instead of committing to longer-term investments, recent trend suggests that many companies are “treading water – sitting on cash, buying back shares and paying high dividends”.¹⁶ By integrating sustainability considerations across the value chain, companies can protect and create value for themselves by, for example, increasing sales, developing new market segments, strengthening the brand, improving operational efficiency, stimulating product innovation and reducing employee turnover.¹⁷

In addition, several studies also highlight the positive correlation between corporate financial performance (CFP) and environmental & social governance.¹⁸ By jointly investing in knowledge transfer and investment in innovation, companies are leading alliances to reap mutual benefits while avoiding to put any single company at a competitive disadvantage.¹⁹ This has been supported by the investor’s perspective with the increasing trend in responsible investing alongside strong civil society and employee morals and movements towards responsible and inclusive business practices, and sustainability performance.

2.3 Green Finance Approaches, Instruments and Products

The variety and sophistication of financial approaches, instruments and products to fund green projects has expanded in recent years as they are critical to the foundation of green finance. This has helped innovate and diversify ways through which resources are mobilized and spent. Broadly, UNDP classifies financing solutions or approaches for SDG implementation into six broad categories which, in turn, overlap between each other and are also relevant for green finance. This has been visualized below in Figure 2.

¹³ Global Impact Investing Network. What you need to know about Impact Investing. <https://thegiin.org/impact-investing/need-to-know/>

¹⁴ GIIN. 2020. Annual Impact Investor Survey. Available at <https://thegiin.org/research/publication/impinv-survey-2020>

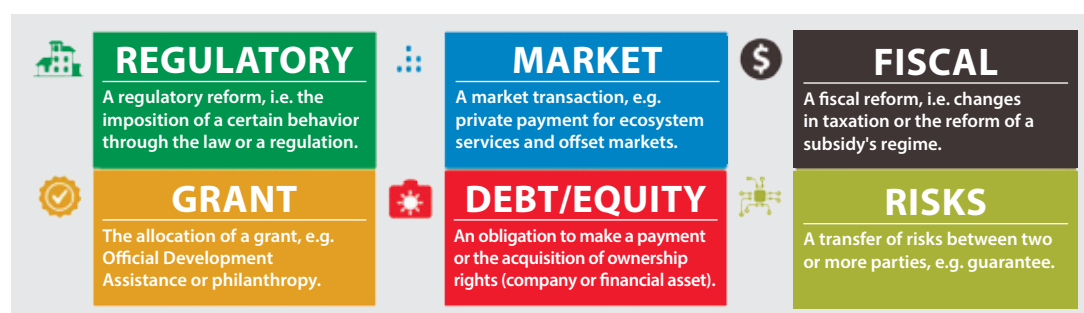
¹⁵ EY Global. 2019. “Why Sustainable Development Goals Should Be in Your Business Plan | EY - Global.” Retrieved December 9, 2019 (https://www.ey.com/en_gl/assurance/why-sustainable-development-goals-should-be-in-your-business-plan).

¹⁶ Business and Sustainable Development Commission. 2017. *Better Business, Better World*. <https://sustainabledevelopment.un.org/content/documents/23999BetterBusinessBetterWorld.pdf>

¹⁷ GRI, United Nations Global Compact, wbcSD. 2019. *SDG Compass Guide*.

¹⁸ Deutsche Asset & Wealth Management (UK) Limited. 2015. *ESG & Corporate Financial Performance*.

¹⁹ Ingram, George. 2017. “The SDGs Need Business, Business Needs the SDGs.” Retrieved December 9, 2019 (<https://www.brookings.edu/blog/future-development/2017/04/03/the-sdgs-need-business-business-needs-the-sdgs/>).

FIGURE 2 BROAD CATEGORIZATION OF FINANCIAL SOLUTIONS FOR SDG IMPLEMENTATION²⁰

Source: UNDP. 2018

Within this broad categorization of financial solutions, financial products and services on green finance can be divided into investment, banking and insurance products with a predominant share of debt and equity instruments.²¹ Examples include: 'blended' finance (where concessional public finance is blended with non-concessional public or private finance); green and blue bonds (where bonds are issued on domestic and international capital markets for the financing of environmentally – sound infrastructure); lending in local currencies and to sub-national authorities; Islamic financing instruments (such as Islamic bonds or sukuk which are asset-backed instruments); guarantee schemes (designed to reduce/share risk); diaspora financing schemes (where diaspora communities are supported and incentivized to invest in projects and businesses 'back home'); impact investment (investments that aim to create positive social or environmental returns in addition to a financial return for investors); crowd funding (the practice of funding a project or venture by raising monetary contributions from a large number of people); countercyclical loan contracts (where debt service automatically falls when a major shock occurs); weather and disaster insurance schemes, and more.²²

Green bonds, in particular, have received considerable attention and visibility in recent years as the most prevalent green financial product. A green bond is a fixed income instrument designed specifically to support new or existing projects that are meant to have positive environmental or climate effects.²³ Despite the impacts of the COVID-19 pandemic, the issuance of green bonds in 2020 reached USD269.5bn, just above Climate Bonds 2019 final total of USD266.5bn (2018: USD171.4bn) according to figures from the Climate Bonds Initiative (CBI).²⁴ This trend is only expected to increase moving forward.

2.4 Existing Status of Green Finance (Globally and Regionally)

Global Landscape: The development of green finance has its roots in the organized financial markets of China, Europe and the US. In fact, the trend for environmental, sustainable or socially responsible investment started as early as in the 90's marked by the initiation of United Nations Environmental Program Finance Initiative (UNEP FI) in 1992 alongside the Dow Jones Sustainability Index in 1999.²⁵ The adoption of the Kyoto Protocol (KP) in 1997 alongside the establishment of the Clean Development Mechanism (CDM) enabling the creation of carbon markets that involve developing countries presents another significant milestone in the growth of green finance.

²⁰ NDP. 2018. *Financing the 2030 Agenda*.

²¹ Green Finance Platform. Explore Green Finance. <https://greenfinanceplatform.org/page/explore-green-finance>

²² UNDP. 2018. *Financing the 2030 Agenda*.

²³ Bloomberg. 2019. What are green bonds and how green is green. <https://www.bloomberg.com/news/articles/2019-03-24/what-are-green-bonds-and-how-green-is-green-quicktake>

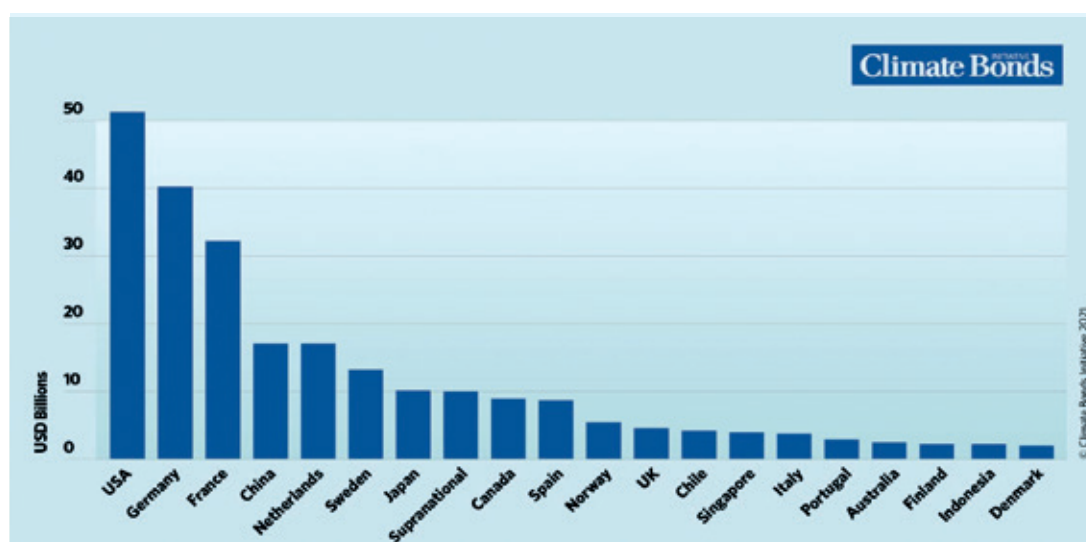
²⁴ Climate Bonds Initiative. 2021. Record \$269.5bn green issuance for 2020: Late surge sees pandemic year pip 2019 total by \$3bn. <https://www.climatebonds.net/2021/01/record-2695bn-green-issuance-2020-late-surge-sees-pandemic-year-pip-2019-total-3bn>

²⁵ W.Olaf. 2012. Sustainable Banking – History and Current Developments. Available at SSRN: <https://ssrn.com/abstract=2159947>

Additionally, the Equator Principles were launched in 2003 by IFC and the Principles for Responsible Investment (PRI) were adopted in 2006 as the first investor network focused on responsible and green investments.²⁶ In 2007, the European Investment Bank issued the first green bond, under the label Climate Awareness Bond, as a structured bond with proceedings dedicated to energy efficiency and renewable energy projects.²⁷ This was followed by the World Bank's first issuance of green bonds in 2008. These landmark events paved the path for the modern-day green finance approaches, instruments and products as we know today. Naturally, it also meant that countries with developed markets in Europe and North America were first movers in incorporating green finance into their financial systems.

This trend continues to exist today and is most visible through the green bond market. In 2020, the US led the country rankings in global green bonds issuances with USD51.1bn followed by Germany (40.2bn) and France (32.1bn).²⁸ Although issuance from China slowed down in 2020 (17.2bn), it remained the country with the second largest cumulative total after the USA. The annual green bond issuance in 2020 has been highlighted below in Figure 3.

FIGURE 3 ANNUAL GREEN BOND ISSUANCE IN 2020²⁹



Source: Climate Bonds Initiative. 2021

Emerging market countries are also receiving increasing attention due to their potential as well as need to green their financial system. Within this new trend, China was a first mover and has today become one of the world's largest markets for green finance and has become the world's largest investor in renewable energy.³⁰ Despite the fall in China's green bond issuance in 2020, China continues to remain the second largest cumulative green bond issuer in the world (USD 124.4bn), second only to the United States.³¹ At the same time, the Chinese financial system is also the source of more than half of global coal financing. To overcome this dichotomy, green finance needs to move from a niche to green the financial system as a whole.³²

²⁶ *Ibid.*

²⁷ European Investment Bank. Climate Awareness Bonds. <https://www.eib.org/en/investor-relations/cab/index.htm>

²⁸ Climate Bonds Initiative. 2021. Record \$269.5bn green issuance for 2020: Late surge sees pandemic year pip 2019 total by \$3bn.

²⁹ Climate Bonds Initiative. 2021

³⁰ R. Bhandari & M.L. Larsen. 2020. Green Finance for the BRI country Nepal – can lessons from China help? <https://greenfdc.org/green-finance-for-the-bri-country-nepal-can-lessons-from-china-help/>

³¹ E. Boey. 2020. Is Asia's Appetite For Sustainable Finance Up Or Down? Wealth Briefing Asia. <https://www.wealthbriefingasia.com/article.php?id=188032#.X1T-fX9MzZQI>

³² R. Bhandari & M.L. Larsen. 2020. Green Finance for the BRI country Nepal – can lessons from China help?

The state, as of 2019, of green finance deployment within national financial systems for some emerging markets is highlighted below in Figure 4. Only the members of the SBN are included in the figure as it is adapted based on the progression matrix and assessment results conducted by the Sustainable Banking Network (SBN).³³

FIGURE 4 STAGES OF GREEN FINANCE INTEGRATION FOR SBI MEMBER COUNTRIES³⁴



Source: Sustainable Banking Network. 2019

Out of the 39 member countries of SBN, only 24 countries have launched national policies, guidelines, principles, or roadmaps focused on sustainable banking.³⁵ Out of these, China and Indonesia are now close to having a mature green finance market. Nepal is ahead of India in terms of regulatory driven green finance policies and frameworks and is in the developing stage of the implementation phase of its green financial system alongside Sri Lanka and Pakistan from the region, based on the SBN progression matrix.

Asia and the Pacific: Within the Asia and the Pacific, other than the PRC, South Korea and Japan, countries from the ASEAN³⁶ region (most notably Indonesia and Singapore) are regarded as the first movers in making significant joint progress in green finance. Using the market for green bonds as a reference helps highlight this growth as highlighted in Figure 5.

As of 31 December 2020, the cumulative green bonds issuance from the Asia and Pacific countries was USD 221.6 billion. This is led by the PRC well in front with USD 124.4bn, while Japan with USD 26.3.3bn, Australia with USD 15.0bn, India with USD 11.8bn and South Korea with USD 9.5bn fill out the remaining four of the top five nations.

³³ The Sustainable Banking Network (SBN) is a voluntary community of financial sector regulatory agencies and banking associations from emerging markets committed to advancing sustainable finance in line with international good practice. Working under the secretariat of the International Finance Corporation (IFC), the SBN currently comprises of 39 member-countries that represent US\$43 trillion (86 percent) of the total banking assets in emerging markets.

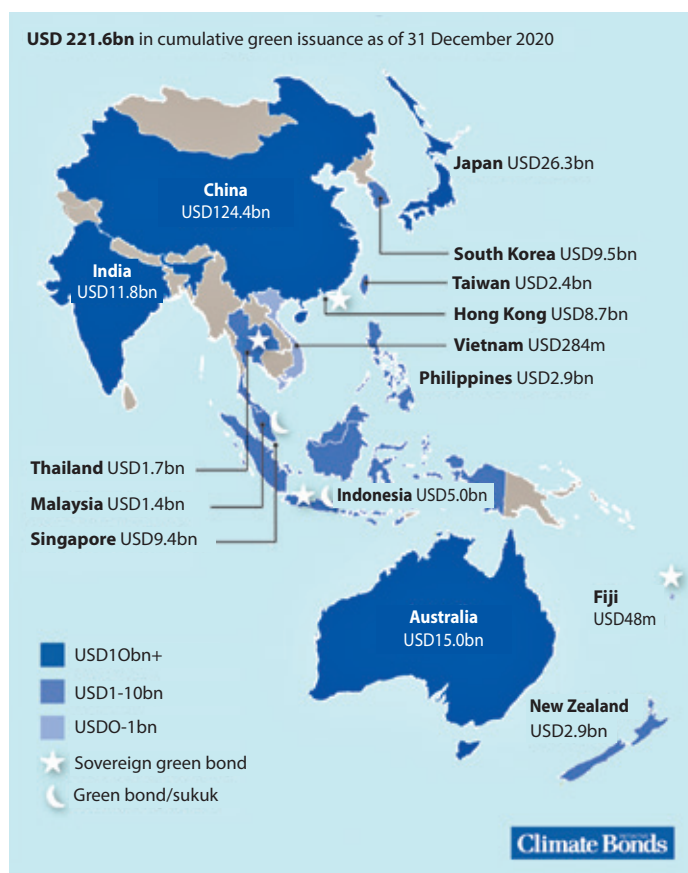
³⁴ Sustainable Banking Network. 2019. Country Progress Report for Nepal.

³⁵ They include Bangladesh, Brazil, Cambodia, China, Colombia, Ecuador, Georgia, Ghana, Indonesia, Kenya, Mexico, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Panama, Paraguay, Peru, South Africa, Sri Lanka, Thailand, Turkey and Vietnam.

³⁶ The Association of Southeast Asian Nations (ASEAN) comprises ten countries: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Since the first green bond issuance from the Philippines in 2016, the market for green bonds is in a rise in the ASEAN region. ASEAN issuance almost doubled, reaching USD7.8bn in 2019 from USD4.1bn in 2018, supported by new regulations and guidelines. Two-thirds of the proceeds are allocated to the Buildings and Energy sectors. Indonesia, Malaysia, Vietnam, Philippines and Thailand have been issuing green bonds and Indonesia has topped the list by issuing green bonds of USD 5.0 billion followed by Philippines and Thailand with USD 2.9 billion and USD 1.7 billion respectively as of 2020, as shown in figure 5. Singapore is also notable with its cumulative green bond issuance at USD 9.4bn at the end of 2020. Green loans are also a strong feature of the ASEAN market, comprising of 22.5 percent of the loans in ASEAN and led by Singapore.³⁷

FIGURE 5 ASIA PACIFIC CUMULATIVE GREEN BOND ISSUANCE



Source: Climate Bonds Initiative. 2020

Among these countries in the ASEAN region, Indonesia is one example of a country that has made significant progress in a holistic approach to greening its financial system. The Indonesia Sustainable Finance Initiative (ISFI) aims to promote inclusive sustainable finance practices while supporting the implementing of the Sustainable Finance Roadmap. Indonesia has also adopted a series of policies and regulations relevant across the various layers of institutions in the country to transition its financial system. Some of them include regulation on the issuance and the terms of Green Bond; regulation on the application of Sustainable Finance; a law requiring companies to submit annual reports with social and environmental responsibility information; and, a clean energy handbook for financial service Institutions. This growth in green finance in South East Asian countries has received considerable attention in the literature.

South Asia: The state of green finance is still in its nascent stage in South Asia and has received little attention in the broader green finance literature in contrast to its vast potential. Within the South Asian countries, Bangladesh has made significant strides in green finance, while Nepal, Sri Lanka and Pakistan are currently developing their green finance system and in process to implementing it. No information on green finance could be found for Afghanistan while the Royal Monetary Authority of Bhutan (RMA Bhutan) is developing its roadmap for green financing. Some of the key steps taken by South Asian countries, mostly regulatory driven, have been highlighted below in Table 1.

³⁷ Infrastructure Asia. Green Finance in Emerging Asia. <https://www.infrastructureasia.org/en/insights/green-finance-in-emerging-asia>

TABLE 1 MAPPING THE INITIATIVES TAKEN BY SOUTH-ASIAN COUNTRIES IN GREEN FINANCE

Country ³⁸	Initiatives Taken
Bangladesh	<p>2019 - The Bangladesh Green Transformation Fund (GTF) launched in 2016 was expanded.</p> <p>2017 - Updated Guidelines on ESRM for Banks and FIs were introduced; Environmental and Social Risk Assessment Tools were introduced.</p> <p>2016 – Bangladesh Sets Green Finance Minimum Target at 5 percent for Banks and Financial Institutions</p> <p>2012 - Mandatory Environmental Risk Management Guidelines were launched</p> <p>2011 - Environmental Risk Management Guidelines (ESRM) were introduced by Bangladesh Bank; Policy Guidelines for Green Banking were issued.</p>
Sri Lanka	<p>2019 - Roadmap for Sustainable Finance was launched.</p> <p>2018 - “Communicating Sustainability” from the Colombo Stock Exchange was launched.</p>
Nepal	<p>2020 – Included ESRM in Unified Directives issued by Nepal Rastra Bank (NRB)</p> <p>2018 - Guideline on Environmental and Social Risk Management (ESRM) for Banks and Financial Institutions was released.</p>
India	<p>2019 – Reserve Bank of India Guidelines on Lending to Priority Sectors, Including Renewable Energy</p> <p>2018 – The State Bank of India issued its first USD650 million climate bond</p> <p>2017 - Disclosure Requirements for Issuance and Listing of Green Debt Securities</p> <p>2016 – India’s first green bank, the “Indian Renewable Energy Development Agency (IREDA)” was formed.</p> <p>2015 – Yes Bank issued India’s first green bond.</p> <p>2011 - India's National Voluntary Guidelines on Social, Environmental, and Economic Responsibilities of Business</p>
Pakistan	<p>2017 – Pakistan Green Banking Guidelines were released.</p> <p>2013 – Pakistan released its Corporate Social Responsibility Voluntary Guidelines</p>

³⁸ No information on green finance could be found for Afghanistan while the Royal Monetary Authority of Bhutan (RMA Bhutan) is currently developing its road-map for green financing. See more at: <https://www.afri-global.org/news/2020/01/rma-bhutan-embarks-green-finance-roadmap>

Similar to Nepal, the process in Bangladesh is largely regulatory driven with the country adopting the ESRM guidelines in 2012, and further updating them in 2017. The Environmental and Social Risk Assessment Tools were also introduced in the same year. In 2019, the Bangladesh Green Transformation Fund which was established in 2016 was also expanded.

Green bond issuance is still nascent in South Asia except for India which is seeing an increasing issuance of green bonds. As of June 2020, India has a cumulative issuance of green bonds worth a value of USD 11.8 bn,³⁹ falling only behind China in terms of global green bond issuance within emerging markets.⁴⁰ Although India has made significant strides in green bond issuance, there is still a gap in regulatory driven green finance policies and frameworks for the overall development of a green financial system.

Among other countries in the region, Bhutan has been working with UNESCAP on capacity building on capital market development while Sri Lanka, Nepal and Bangladesh are also in the various stages of trying to issue their first green bond. In 2020, Bhutan issued a 3-year domestic green bond of USD41 million making it the first time for a least developed and landlocked developing country to issue such a bond.⁴¹

2.5 Delivering a green economy through financial policy

At its heart, green finance is a strategy for a sustainable planet and a means to achieve an inclusive pathway towards a low-carbon and green economy. Under this premise, green finance should be seen as a means to deliver a green economy through financial policy. This means, each sector has an important role to play throughout the value chain of development and investment projects.

Achieving a green economy through green finance is a long and complex process and requires an invested commitment and cooperation from all sectors of the financial system. It also requires specialized investment vehicles, fiscal and financial support, financial Infrastructure, capacity building and knowledge transfer as well as the necessary legal infrastructure moving forward. This needs to be complemented by acknowledging that financing needs, barriers and opportunities differ substantially across countries and regions.

Although many large middle-income countries have been able to mobilize more domestic and private resources for development, many low-income countries, some small island developing states, land-locked developing countries and those emerging from conflict still face significant barriers. Not only do they need substantial resources to green their financial system, they typically have limited capacities to raise domestic revenues (e.g. because small populations are widely dispersed over large distances and/or due to large subsistence and informal sectors), and are also considered less 'attractive' options for private investment (e.g. because risks of project failure are high, political instability, poor local infrastructure or other factors).⁴² This is common and is normal

³⁹ CBI, 2020

⁴⁰ Amundi & IFC. 2019. Emerging Market Green Bonds Report 2019. Momentum Builds as Nascent Markets Grow. <https://www.ifc.org/wps/wcm/connect/a64560ef-b074-4a53-8173-f678ccb4f9cd/202005-EM-Green-Bonds-Report-2019.pdf?MOD=AJPERES&CVID=n7Gtahg>

⁴¹ T. Subhanij & M. Abe. 2020. Bhutan's first sovereign bond: Financing lessons during pandemic. The Financial Express. <https://thefinancialexpress.com.bd/views/bhutans-first-sovereign-bond-financing-lessons-during-pandemic-1602426500>

⁴² UNDP. 2018. Financing the 2030 Agenda | UNDP.

for any emerging market. Accordingly, financial innovation through tools and instruments such as de-risking instruments and blended finance approach can help overcome such barriers.

Green finance, through the development of innovative financial approaches, instruments and products, therefore, presents an opportunity for countries in all levels of economic and social development to achieving a green economy. This should include climate mitigation, adaptation as well as any other green purposes. Under this premise, the next section seeks to explore the background, challenges and opportunities to utilizing green finance in the context of Nepal while learning from the global and regional best-practices.



3

REVIEW OF THE STATE OF GREEN FINANCE IN NEPAL



3.1 Country Economy Overview and Green Recovery

Over the last decade, Nepal has gone through a transition towards a new constitution in 2015 that set in place a new federal structure. This places challenges as well as opportunities for the growth and development of the country moving forward.

In 2019, Nepal showed significant resilience and made progress with a 6.9 percent GDP growth rate bringing the GDP of Nepal to USD 30.6 billion, compared to 2018. This was fueled by an increase in agricultural production, ease in energy supply, acceleration in construction activities, expansion in industrial production, and an uptick in tourist arrival.⁴³ SMEs have been a key engine of growth in Nepal, contributing to 20 percent of GDP and creating over 60 percent of jobs in the country.⁴⁴

Despite Nepal's upward development trajectory as seen by three consecutive years of substantial economic expansion, the COVID-19 pandemic has adversely impacted Nepal's economy and growth.⁴⁵ All sectors that contribute to the GDP including remittance, tourism, agriculture and industries have taken a hit and have furthered the economic cost. According to the World Bank, economic growth slowed to 0.2 percent in 2020, mainly due to a national lockdown in response to the pandemic.⁴⁶ As tourism arrivals stopped and domestic transport, wholesale and retail trade were disrupted, the growth of the service sector deteriorated to an 18-year low of 0.7 percent. The fiscal deficit increased in FY20 as trade restrictions caused a 5 percent contraction in tax revenue. The COVID-19 pandemic disproportionately affected the poor and vulnerable.

The government responded to the crisis through fiscal and monetary measures. Such ranged from immediate support to reduce the impact of health and livelihood as well as liquidity support to banks and credit restructuring/rescheduling facilities, provision of working capital loans up to 20 percent for business units to meet operational expenses, relaxations on loan loss provision, etc. to the private sector. Although, the outlook on the economy initially looked grim and uncertain, the gradual easing of lockdown restrictions has left the economy to revive to a certain extent. Data from Nepal Rastra Bank based on six month's data ending on mid-January, 2021 provides the following macroeconomic and financial overview:⁴⁷

- 1) Inflation remained at 3.56 percent on y-o-y basis.
- 2) Imports decreased by 4.8 percent and exports increased by 6.1 percent.
- 3) Remittances increased by 11.1 percent in NPR terms and by 6.7 percent in USD terms, compared to the same period of the previous year
- 4) Balance of Payments remained at a surplus of Rs.124.92 billion.

⁴³ Nepal Rastra Bank. 2019. Monetary Policy for 2019/20. https://www.nrb.org.np/contents/uploads/2020/04/Monetary_Policy_in_English-2019-20_Full_Text-new.pdf

⁴⁴ The Kathmandu Post. 2020. IFC provides \$25 million credit to NMB Bank to boost green financing and access to credit for SMEs. <https://kathmandupost.com/money/2020/06/30/ifc-provides-25-million-credit-to-nmb-bank-to-boost-green-financing-and-access-to-credit-for-smes>

⁴⁵ World Bank. 2020. Nepal Development Update. <https://www.worldbank.org/en/country/nepal/publication/nepaldevelopmentupdate>

⁴⁶ World Bank. The World Bank in Nepal Overview. <https://www.worldbank.org/en/country/nepal/overview>

⁴⁷ Nepal Rastra Bank. 2021. Current Macroeconomic and Financial Situation of Nepal. <https://www.nrb.org.np/contents/uploads/2021/02/Current-Macroeconomic-and-Financial-Situation-English-Based-on-six-Months-data-2020.21-1.pdf>

- 5) Gross foreign exchange reserves stood at USD 12.78 billion.
- 6) Federal Government spending amounted to Rs.415.75 billion and revenue collection Rs.422.24 billion.
- 7) Broad money (M2) expanded by 9.6 percent. On y-o-y basis, M2 expanded 23.0 percent. Deposits at BFIs increased by 9.2 percent and claims on private sector increased by 11.0 percent. On y-o-y basis, deposits increased by 22.0 percent and claims on private sector by 15.0 percent.

Other Indicators: Nepal has climbed the ladder in the ease of doing business ranking with the 94th position in 2020, compared to the 105th position in 2016. On the other hand, despite ambitious targets in its NDC, Nepal still lags behind in achieving a climate resilient and sustainable development pathway when looked at in the global context. As per figures available from 2018, Nepal ranks 109 in GHG emissions ranking and 105 in SDG index ranking, which covers 157 of the 193 UN member states.⁴⁸ Nepal trails Sri Lanka and Bhutan in the index, but has performed better than India, Bangladesh, Pakistan and Afghanistan doing significantly well in the regional context. The SDG score indicates that, on average, Nepal has reached 61.6 percent of its way towards attaining all the SDGs.

Green Recovery: There is an immediate need for Nepal to pursue a climate resilient green recovery package with green financing at its core as green fiscal recovery packages are highly climate-positive with large long-run multipliers and offer superior economic characteristics.⁴⁹ A 2020 policy paper from the Integrated Center for International Mountain Development (ICIMOD) also highlights this moment as a window of opportunity for Nepal in adopting green recovery packages that focus on investments on green infrastructure and nature based solutions.⁵⁰ Such green recovery packages should also support MSMEs and the private sector while providing market confidence through policies to signal a transition towards a low-carbon pathway.

Green finance can be an integral component in supporting a green recovery by providing a range of innovative financial instruments in supporting this transition. An Asian Development Bank publication also highlights the green finance strategies countries have at their disposal in a post COVID-19 economic recovery for the people and the planet.⁵¹ To this end, the term 'transition finance' has emerged which can also prove to be a starting point for the market to see a credible brown to green transition as ambitious, inclusive and aligned with the Paris Agreement.⁵² In fact, adopting the recommendations from this study can help with a green recovery and towards a green economy in Nepal.

⁴⁸ The Kathmandu Post. 2017. Nepal ranks 3rd in South Asian Sustainable Development Goals index. <https://kathmandupost.com/money/2017/07/08/nepal-ranks-3rd-in-south-asian-sustainable-development-goals-index>

⁴⁹ Cameron Hepburn et al., "Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?," *Oxford Review of Economic Policy*, May 8, 2020, graa015, <https://doi.org/10.1093/oxrep/graa015>.

⁵⁰ ICIMOD. 2020. COVID-19 impact and policy responses in the Hindu Kush Himalaya. International Centre for Integrated Mountain Development.

⁵¹ ADB. 2020. Green Finance Strategies for Post COVID-19 Economic Recovery in Southeast Asia: Green Recoveries for People and Planet. <https://www.adb.org/sites/default/files/publication/639141/green-finance-post-covid-19-southeast-asia.pdf>

⁵² CBI. 2020. Financing Credible Transitions: How to ensure the transition label has impact. <https://www.climatebonds.net/system/tdf/reports/cbi-fin-cred-transitions-092020-report-page.pdf?file=1&type=node&id=54300&force=0>

3.2 Characteristics of the Nepali Financial System

The Nepali Financial System is attributed to the banking and non-banking sectors with the banking sector playing a much bigger role.⁵³ Nepal Rastra Bank, the Central Bank of Nepal, regulates the banking sector which includes the Banks and Financial Institutions (BFIs) as well as licensed co-operatives and NGOs to perform limited banking transactions.⁵⁴ However, NRB has already stopped providing operating licenses to co-operatives and NGOs. The four classes of BFIs include commercial banks (Class A), development banks (Class B), finance companies (Class C) and microfinance financial institutions (Class D). The Insurance Board is the Insurance Regulatory Authority while the Securities Board of Nepal (SEBON) is the apex regulator of the Securities market in Nepal. Other financial institutions in Nepal include the Employees Provident Fund, the Citizen Investment Trust and the Postal Saving Bank.

The Nepali financial sector is dominated by banks, which represents around 87 percent of the total assets. Out of the 27 commercial banks in 2021, three are publicly owned, and 24 are privately owned out of which five are foreign joint ventures. On a year-on-year basis, deposits increased by 18.7 percent and claims on private sector by 10.3 percent. Despite their large share in the financial sector, commercial banks face several challenges including interest rate instability, recurring loan able fund problems, barriers to financial access, lack of good governance, and loan to unproductive sectors.⁵⁵

Beyond commercial banks, there are 19 development banks, 21 finance companies and 76 microfinance institutions as of mid January 2021.⁵⁶ For the past two years, the banking system in Nepal – and particularly the development banks – are experiencing restructuring and consolidation through mergers and acquisitions (M&As), encouraged by the NRB. In fact, between 2018 and 2019 the number of development banks decreased from 33 to 29 and it has come down to 19 as of mid-January 2021. The Micro Credit Development Banks (Class ‘D’ Banks) are micro finance institutions that work in providing banking and financial services to the poor and marginalized. Small sized loan, group-based lending, group savings, small-scale entrepreneurs, diversified utilization, quick repayment, close monitoring and simple terms/conditions on credit (without collateral) are the determining characteristics of micro-finance and, albeit small, they also form a component of Nepal’s banking sector.⁵⁷

The Nepal Rastra Bank (NRB) is an active member of international sustainable or green finance networks such as the Sustainable Banking Network and the Alliance for Financial Inclusion (AFI). However, the NRB is not a member of the Network for Greening the Financial System (NGFS) which is also a global network of central banks and supervisory authorities.

Nepal’s non-bank financial sector, including insurance and the stock market, is relatively small.

⁵³ R. S. Kharel & D. R. Pokhrel. 2019. Does Nepal’s Financial Structure Matter for Economic Growth? Nepal Rastra Bank. https://www.nrb.org.np/contents/uploads/2019/12/NRB_Economic_Review-Vol_24_2_October_20123_Does_Nepals_Financial_Structure_Matter_for_Economic_GrowthRam_Sharan_Kharel_Ph.D_and_Dilli_Ram_Pokhrel_Ph.D..pdf

⁵⁴ As mentioned in the monetary policy for FY2018/19, cooperatives licensed by the NRB to carry out limited banking operations have been removed from the NRB’s regulatory and supervisory purview with effect from July 17, 2018.

⁵⁵ *Ibid.*

⁵⁶ Nepal Rastra Bank. 2021. List of Banks and Financial Institutions as of Mid Jan, 2021 (Licensed by NRB). <https://www.nrb.org.np/contents/uploads/2021/02/List-of-BFIs-Poush-2077--English.pdf>

⁵⁷ Nepal Rastra Bank. 2013. Some Glimpses of Micro-Finance Activities in Nepal. https://www.nrb.org.np/contents/uploads/2020/03/MFD_Activities_Brocher_20700219.pdf

The **Nepali Insurance Sector** is still in its nascent stage. However, despite the early stages of Nepal's insurance industry, the sector has grown steadily in recent years. According to projections from the Insurance Board, 27 percent of citizens were expected to have access to insurance by the end of end of 2021.⁵⁸ In retrospect, only 10 percent of citizens had access to insurance, including employment term life insurance, in 2018.⁵⁹ As of 2020, 19 life insurance companies, 20 non-life or general insurance companies and one re-insurance company are operating in the country.⁶⁰ Latest figures from 2018 suggest that the insurance premium to GDP ratio for Nepal was 2.6 percent.⁶¹ Regionally, this is slightly less than for India (3.49 percent) but much higher than for Sri Lanka (1.26 percent).

The **Nepali Stock Exchange (NEPSE)** was established in 1994. Stock market capitalization in mid-January 2021 stood at Rs. 3079.94 billion compared to Rs. 1792.76 billion in mid-July 2020. As of mid-January 2020, there were 215 companies listed on NEPSE including 145BFIs and insurance companies, 37 hydropower companies, 19 manufacturing and processing industries, four hotels, four trading companies and six others.⁶² The share of BFIs and insurance companies in stock market capitalization is 71.9 percent. Needless to say, the capital market in Nepal is small and imperfect with a firm grip of a few major players.⁶³

3.3 Green Finance Needs and Opportunities

Despite having a negligible share of GhG emissions in the world, Nepal is one of the most vulnerable country to climate change in the world. Amidst the background of increasing climate vulnerability, the increasing economic cost of climate change, and the need for all countries to reduce their carbon emissions, there is an immediate need for Nepal to green its financial system to internalize environmental externalities and to reduce risk perceptions. According to the SBN 2020 report, drafting a sustainable finance roadmap is a key priority for Nepal.⁶⁴ Under this premise, this section iterates the economic and political arguments to highlight the need and opportunities of green finance in Nepal.

Economic Needs and Opportunities:

Risky Assets: Nepal's financial system is dominated by banks with much of their assets invested in sectors such as agriculture, construction, and real estate which can have negative impacts on the environment.⁶⁵ This continues to expose the financial system to high environmental and climate risks. Furthermore, very little is known on the capacity within banks to perform environmental risk calculations whilst making investments.

⁵⁸ Investopaper. 2021. Current Status of Insurance Business in Nepal. <https://www.investopaper.com/news/current-status-of-insurance-business-in-nepal/#:~:text=1%20billion%20in%20insurance%20premiums,633.3%20million%20as%20the%20insurance>.

⁵⁹ Investopaper. 2021. Current Status of Insurance Business in Nepal.

⁶⁰ Nepal Rastra Bank. 2020. Annual Report

⁶¹ Ministry of Finance. 2019. Economic Survey 2018/19. Government of Nepal. https://mof.gov.np/uploads/document/file/compiled%20economic%20Survey%20english%207-25_20191111101758.pdf

⁶² Nepal Rastra Bank. 2021. Current Macroeconomic and Financial Situation of Nepal at p 8

⁶³ J. P. Bist. 2020. The Stock Market after the Pandemic. The Kathmandu Post. <https://kathmandupost.com/columns/2020/05/10/the-stock-market-after-the-pandemic>

⁶⁴ Sustainable Banking Network NECESSARY AMBITION: How Low-Income Countries Are Adopting Sustainable Finance to Address Poverty, Climate Change, and Other Urgent Challenges

⁶⁵ P. Baral. 2020. Greening the Nepali Financial Sector: Strike While the Iron Is Hot. The Diplomat. <https://thediplomat.com/2020/04/greening-the-nepali-financial-sector-strike-while-the-iron-is-hot/>

Although the loan assets of Nepali banks are diversified, the majority of investments are in wholesale and retail, manufacturing, construction and agricultural sectors. This has been highlighted below in Table 2. All of these four sectors have varied Environmental & Social (E&S) risks associated with it. Construction and manufacturing sectors are particularly risky as highlighted by the E&S risk category defined by the Mongolian Sustainable Finance (MSF) principles. The data for these sectors for Mongolian banks is also included in the table below to provide reference to the situation in Nepal. Therefore, Nepal needs to increase the resiliency of its economic and financial system not just by incorporating long-term environmental and climate risks into account, but also by safeguarding current investments by innovating green insurance schemes.

TABLE 2 NEPALI BANK'S ASSET SECTORS AS DEFINED BY E&S RISK CATEGORY⁶⁸

Sectors	Total Loan Assets Nepal	Total Loan Assets Mongolia	E&S risk category defined by the MSF principles
Agriculture ⁶⁶	11.6	2.3	Low-High
Mining	0.28	7.7	High
Finance, Insurance and Real Estate	8.03	17.0	Low
Wholesale, retail	22.06	13.8	Low-High
Manufacturing ⁶⁷	13.7	10.2	Medium-High
Construction	10.06	9.3	Medium-High
Hospitality and tourism	4.24	2.1	Low
Transportation, Warehousing and Communication	2.55	1.4	Low
Electricity, Gas and Water	4.79	NA	Medium – High

Financing Gap and Opportunities: A preliminary estimate of the annual investment requirement between 2016-2030 for Nepal ranges between 42 to 54 percent of GDP with the average requirement estimated to be about Rs. 1,770 billion per year, or nearly 49 percent of GDP over the entire duration of the SDG.⁶⁹ On an annual basis, the World Bank estimates investment needs of average 10-15 percent of GDP annually over the next decade for Nepal to graduate from least developed country status by 2022 and towards a middle-income country by 2030.⁷⁰ According to Nepal's enhanced NDC, the cost of achieving the conditional mitigation targets is estimated to be USD 25 billion while the cost of achieving the unconditional targets is USD 3.4 billion.⁷¹

There is an increased business case for green finance and for utilizing private sector investments to satisfy this financing gap. Presently, the Nepalese government has a framework to catalyze public financing into climate change in the broader context of economic development and government

⁶⁶ Including Forestry, Beverage Production and Fisheries.

⁶⁷ Non-food production related as highlighted by NRB is listed as manufacturing.

⁶⁸ This indicative table has been compiled by the author with adaptations and reference from the E&S risk category defined by the Mongolian Sustainable Finance Roadmap and data on Nepal received from Nepal Rastra Bank 2018 – 2019 annual report.

⁶⁹ UNDP. 2018. Sustainable Development Goals Status and Roadmap: 2016 – 2030. <https://www.np.undp.org/content/nepal/en/home/library/sustainable-development-goals-national-report---nepal/sustainable-development-goals-statusand-roadmap-2016-2030.html>

⁷⁰ World Bank. 2019. Nepal Infrastructure Sector Assessment. <https://openknowledge.worldbank.org/handle/10986/32355>

⁷¹ Ministry of Forests and Environment Nepal. 2020. Nepal's Enhanced Nationally Determined Contribution (NDC). [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nepal%20Second/Second%20Nationally%20Determined%20Contribution%20\(NDC\)%20-%202020.pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nepal%20Second/Second%20Nationally%20Determined%20Contribution%20(NDC)%20-%202020.pdf)

fiscal planning process.⁷² However, greening the financial system would provide the much-needed incentives for increased private sector investments in green sectors such as renewable energy. According to a study from the International Finance Corporation (IFC), this would open up an investment potential of USD 46.1 billion by 2030, which the private sector, including the MDBs, local and regional financial institutions can tap into (see figure 6).⁷³ It is important to note that meeting this potential can also fulfill the conditional targets as outlined in Nepal's new enhanced NDC which provides an additional argument on the need for private finance.

More than half (USD 24.6 bn) of the USD 46 bn of Nepal's business opportunity is in the renewable energy sector, equaling an installed capacity of 12,000 MW. This is primarily in the hydropower sector which alone can attract USD 22.5 billion between 2018 and 2030 but also in other forms of renewable energy including solar and biomass.⁷⁴ Clean and sustainable transport infrastructure also has the potential to unlock investments of USD 10 bn in Nepal. Within South Asia, Nepal ranks third only after India and Bangladesh in terms of climate investment opportunities, all of which can be unlocked by utilizing green finance. This has been highlighted below in figure 6.

FIGURE 6 CLIMATE FRIENDLY INVESTMENT POTENTIAL IN SOUTH ASIA⁷⁵

	Bangladesh	Bhutan	India	Maldives	Nepal	Sri Lanka	Total
Renewable energy	\$3.2 billion	\$72 million	\$403.7 billion	\$55 million	\$2.1 billion	\$2.3 billion	\$411.4 billion
Large hydro	-	\$40.6 billion	\$44 billion	-	\$22.5 billion	\$190 million	\$107.3 billion
Green buildings	\$118.8 billion	\$390 million	\$1.4 trillion	\$200 million	\$3.4 billion	\$8.4 billion	\$1.53 trillion
Transport infrastructure	\$23.7 billion	\$615 million	\$250 billion	\$1.5 billion	\$10 billion	\$326 million	\$286.1 billion
Transport electric vehicles	-	\$322 million	\$667 billion	-	\$2.5 billion	-	\$669.8 billion
Municipal solid waste	\$4 billion	\$11.5 million	\$11 billion	\$46 million	\$83 million	\$3.5 billion	\$18.6 billion
Climate-smart urban water	\$13 billion	\$106 million	\$128 billion	\$86 million	\$686 million	\$2.7 billion	\$144.6 billion
Climate-smart agriculture	\$9.1 billion	\$140 million	\$194 billion	\$31 million	\$4.8 billion	\$964 million	\$209 billion
TOTAL	\$171.8 billion	\$42.3 billion	\$3.1 trillion	\$1.9 billion	\$46.1 billion	\$18.4 billion	\$3.4 trillion

↑ INCREASING INVESTMENT OPPORTUNITY BY COUNTRY

Source: International Finance Corporation (IFC), 2017

Rising Economic Cost of Climate Change: According to the 2020 Global Climate Vulnerability Index, Nepal is ranked as the 9th most vulnerable country to climate change in the world.⁷⁶ Estimates suggest the economic cost of climate change to Nepal at around 1.5 percent - 2 percent of GDP which can jump to 2 percent - 3 percent.⁷⁷ The climate is a global public good which requires a global effort in reducing emissions which will ultimately reduce the cost of climate change to individual countries. Nonetheless, investments in climate adaptation and disaster resilience can help soften the impacts on economic loss. In fact, a UNDP study highlights that

⁷² Ministry of Finance. 2017. Climate Change Financing Framework: A roadmap to systematically strengthen climate change mainstreaming into planning and budgeting. Government of Nepal. https://mof.gov.np/uploads/document/file/CCFF_FINAL_Web_20180222050438.pdf

⁷³ IFC. 2017. Climate Investment Opportunities in South Asia. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/resources/final+climate+investment+opportunities+in+south+asia+-+an+ifc+analysis

⁷⁴ IFC. 2017. Climate Investment Opportunities in South Asia.

⁷⁵ *Ibid.*

⁷⁶ German Watch. 2020. Global Climate Risk Index. https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_10.pdf

⁷⁷ UNDRR. 2012. Economic Impact Assessment of Climate Change in Key Sectors in Nepal. <https://www.preventionweb.net/publication/economic-impact-assessment-climate-change-key-sectors-nepal-study-implementation-plan> UNDP. 2015. Putting Resilience at the Heart of Development. <https://www.undp.org/content/undp/en/home/librarypage/crisis-prevention-and-recovery/putting-resilience-at-the-heart-of-development.html>

every dollar spent in reducing vulnerability to disasters saves around seven dollars in economic losses.⁷⁸

Although the majority of proceeds from green finance benefit climate mitigation, there is nonetheless opportunities to finance climate adaptation projects moving forward. This can be achieved through tailored green finance instruments such as green and parametric insurance schemes, as explained below in Section 4.3, which can help reduce the rising economic cost of climate change in least developed countries like Nepal.

Political Needs and Opportunities:

Finally, there is a strong political case for Nepal to green its financial system. The devastating earthquake of 2015 followed by the economic blockade crisis highlighted the need for Nepal to reduce its energy dependency abroad.⁷⁹ In 2017, Kathmandu was listed as the 7th most polluted city in the world.⁸⁰ This has resulted in an increased socio-economic cost with citizens increasingly getting frustrated with the government.⁸¹ This means Nepal needs to think long-term, realize its potential in hydropower and renewable energy generation, and demonstrate the political as well as financial benefits of investing in green projects. Nepal can also capitalize politically at the regional level by developing synergies with countries in the region such as India and Bangladesh as such cooperation can bring increased benefits as highlighted by the case of the ASEAN market.

3.4 Key Sustainability Policies, Frameworks & Strategies

The Government of Nepal recognizes the importance of climate action, sustainable development and green economy and has approved a series of policies and frameworks to support this transition. At the heart of this transition include the Nationally Determined Contribution (NDC) alongside the enhanced NDC, National Climate Policy 2019 and the 2017 Nepal Sustainable Development Goals: Status and Roadmap 2016 – 2030 roadmap by the National Planning Commission. To achieve SDG implementation by 2030, the report provides intermediate milestones in 2019 (end of the 14th periodic plan), 2022 (anticipated date for graduation from LDC status), and 2025 (vantage point for an accelerated development phase).⁸² The roadmap also provides clearly defined and measurable targets under each SDG.⁸³

In terms of green finance, which is much narrower than sustainable finance, only certain SDG goals are relevant. While SDG13 on climate change is the most straightforward relation, green finance can also be unlocked to support Nepal's goals under SDG2 on food security and sustainable agriculture, SDG6 on water management, SDG7 on access to clean energy, SDG8 on sustainable economic growth and employment, SDG9 on resilient infrastructure, SDG11 on sustainable cities, and SDG 15 on sustainable forestry.⁸⁴ Diving deep into these specific sub-sectors also coincides with various policies and frameworks that exist to support individual sectors. Some of these include the 'Guidelines for Green Building Technology', the 'Urban Development Strategy', the 'Solid Waste Management Act of 2011' and the 'Agriculture Development Strategy 2015 – 2035'.

⁷⁸ UNDP. 2015. Putting Resilience at the Heart of Development. <https://www.undp.org/publications/putting-resilience-heart-development>

⁷⁹ A. Yadav. 2016. Is India really behind Nepal's economic blockade? Scroll India. <https://scroll.in/article/802653/is-india-really-behind-nepals-economic-blockade>

⁸⁰ The Himalayan Times. 2017. Nepal's Capital 7th Most Polluted City in the World. <https://thehimalayantimes.com/kathmandu/kathmandu-listed-as-7th-most-polluted-city-in-world/>

⁸¹ B. Saud & G. Paudel. 2018. The Threat of Ambient Air Pollution in Kathmandu, Nepal. Hindawi Journal of Environmental and Public Health. <https://www.hindawi.com/journals/jeph/2018/1504591/>

⁸² UNDP Nepal. 2018. Sustainable Development Goals Status and Roadmap: 2016 – 2030.

⁸³ The exception to this is Goal 14 on Sustainable Oceans given Nepal is a landlocked country and the SDG is not relevant in the national context.

⁸⁴ This largely depends on the how green finance will be defined by the individual country.

Achieving the SDGs and attaining climate resilience and sustainable development is also woven into Nepal's '15th 5-year Development Plan'.⁸⁵ The complete list of all relevant acts, policies and frameworks is highlighted in the table below.

TABLE 3 KEY ACTS, POLICIES AND FRAMEWORKS IN NEPAL

Key Acts, Policies and Frameworks
• Guidelines for Green Building Technology
• Nationally Determined Contributions (NDC)
• REDD+ Strategy 2017
• Nepal Forest Policy (2017)
• Nepal Climate Financing Framework (2017)
• Urban Development Strategy
• National DRR Strategy and Action Plan 2019
• Solid Waste Management Act in 2011
• Agriculture Development Strategy 2015–2035
• Nepal's 15 th 5 Year Development Plan (2019/2020 – 2023/2024)
• Nepal Sustainable Development Goals: Status and Roadmap 2016-2030
• Industrial Policy, 2011
• Climate Change Policy, 2011(2019)
• National Adaptation Plan of Action, 2010
• Environmental Protection Act, 2019
• Environment Protection Rules (EPR) 2020
• National Agricultural Policy, 2004
• Foreign Investment and Technology Transfer Act (FITTA) 2019
• Industrial Enterprises Act, 2016

Another national level policy framework that is key in transitioning towards green finance is Nepal's Nationally Determined Contribution (NDC). Nepal's NDC outlines actions to encourage green energy, sustainable transport, climate-friendly agricultural practices, waste management, and institutional changes to implement its low-carbon economic development strategy. Nepal's targets, which are, unless otherwise specified, conditional upon international support under the enhanced NDC have been highlighted in the box below.

⁸⁵ Nepal Planning Commission. 2020. The Fifteenth Plan (Fiscal Year 2019/20 – 2023/24). Government of Nepal. https://npc.gov.np/images/category/15th_plan_English_Version.pdf

Targets under Nepal's 2020 Enhanced NDC	
	Conditional Targets
Energy	<p>(Energy Generation)</p> <p>By 2030, expand clean energy generation from approximately 1400 MW to 15,000 MW</p> <p>By 2030, ensure 15% of the total energy demand is supplied using clean energy sources. Of this, 5,000 MW is an unconditional target,</p>
	<p>(Transport)</p> <p>By 2025, ensure 25% of all private vehicle sales (including two wheelers) and 20% of all four-wheeler public passenger vehicle sales will be electric.</p> <p>By 2030, ensure 90% of all private vehicle sales (including two wheelers) and 60% of all four-wheeler public passenger vehicle sales will be electric.</p> <p>By 2030, develop 200 km of electric rail network</p>
	<p>(Residential cooking and biogas)</p> <p>By 2030, ensure 25% of all households use electric stoves as their primary mode of cooking.</p> <p>By 2025, install 500,000 improved cook stoves, specifically in rural areas.</p> <p>By 2025, install an additional 200,000 household biogas plants and 500 large scale biogas plants (institutional/ industrial/ community).</p>
Agriculture, forestry and other land use (AFOLU)	<p>By 2030, maintain 45% of the total area of the country under forest cover (including other wooded land limited to less than 4%).</p> <p>By 2030, adopt low emission technologies in brick and cement industries to reduce coal consumption and air pollution, including through the development and/or enactment of emission standards.</p>
Industry	<p>By 2025, formulate guidelines and establish mechanisms to monitor emissions from large industries.</p> <p>By 2030, reduce coal consumption and air pollution from brick and cement industries through development of emission standards</p>
Waste	<p>By 2025, treat 380 million litres/day of wastewater and manage 60,000 cubic meters/year of faecal sludge.</p>

The National Climate Finance Framework facilitates the integration of national policies and strategies relating to climate finance in budgeting process and helps the government channel climate projects and streamline investments through the national system for a long-term scaled up approach. In terms of public revenue and public financing, Nepal's government has been incorporating 'climate budget code classification' since F/Y 2013-14 to track allocations to climate change relevant programs and projects at national level as highlighted in the National Climate Change Financing Framework.⁸⁶ It is currently in the process of integrating climate finance in Public Financial Management (PFM) systems for effective climate financing.

The Environmental Protection Act (EPA) of 2019 has repealed the former environmental protection act from 1996 and provides added compliance mechanisms particularly for project developers in proposal development to project implementation. The requirements include the submission of an Environmental Study Report to be prepared prior to initiation of the Proposal; an Environmental Management Plan detailing the safeguard mechanisms to be adopted by project developers; and an Environmental Assessment Report to be submitted after two years of initiation of the proposal.⁸⁷ Furthermore, the act also prescribes the formation of an environment fund, a loose exclusion list on projects that contribute to pollution, the promotion of engagement with carbon markets as well as mechanisms for non-compliance. The Environmental Protection Rules (EPR) 2020 repeals the EPR 1997 and while ambitious, has received criticisms for trying to over regulate each step of the process, limiting 'flexibility' and 'innovation', and elongating the approval process while leaving gaps to delay report approval.⁸⁸

The most significant foreign investment laws are the revised Foreign Investment and Technology Transfer Act (FITTA) and the Public-Private Partnership (PPP) and Investment Act, 2019. The FITTA provides significant clarity in defining and attracting foreign investment into Nepal. It also provides the provision of a Standard Operating Procedure(SOP) to make the FDI process transparent and convenient (Section 22.E) and a Single Point Service Centre is proposed in to provide the concessions, facilities, incentives and services to foreign investors including registration and administrative related work.

Other regulations that are relevant include the Foreign Exchange (Regulation) Act, 2019 (1962), the Immigration Rules of 1994, the Customs Act, 2019 (1962), the Industrial Enterprise Act of 2016, the Special Economic Zone (SEZ) Act of 2016 and its 2019 amendment, the Electricity Act of 1992, the Privatization Act of 1994, and the annual budget, which outlines customs, duties, export service charges, sales, airfreight and income taxes, and other excise taxes that affect foreign investment.⁸⁹

⁸⁶ Ministry of Finance. 2017. Climate Change Financing Framework: A roadmap to systematically strengthen climate change mainstreaming into planning and budgeting. Government of Nepal.

⁸⁷ Pioneer Law Associates. 2019. Environmental Protection Act. Government of Nepal. <http://www.pioneerlaw.com/news/environment-protection-act-2019#:~:text=The%20Act%20prescribes%20formation%20of,quality%20of%20air%20and%20water.&text=Environmental%20Fund%20will%20constitute%20amounts,State%20Government%20and%20Local%20Bodies>.

⁸⁸ B. Uprety. 2020. Environment Protection Rules, 2020 Regulated And Impractical. Spotlight News Magazine. <https://www.spotlightnepal.com/2020/07/13/environment-protection-rules-2020-regulated-and-impractical/>

⁸⁹ US State Department. 2019. Investment Climate Statements in Nepal. *Updated as of 2020*

3.5 Current Development of Green Finance in Nepal

Nepal is unique because investments in green projects, particularly in the energy sector, is already a well-established practice. This is because, unlike for most emerging and industrialized countries, the green sectors such as renewable energy and hydropower in Nepal have enjoyed an advantage in the absence of other fossil-fuel alternatives. Nonetheless, it remains crucial to realize the opportunity to develop an integrated green finance system so that all sectors of the economy can move towards green and sustainable pathways. This is important as current development of green finance in Nepal is limited and is far off from achieving Nepal's investment needs as well as utilizing green investment opportunities as highlighted in the section above.

In looking at it from the point of view of the financial system, the trend of development of green finance within emerging markets has taken place either driven by the market (e.g. Cambodia, Kyrgyz Republic) or through regulators (e.g. Bangladesh, Pakistan, China). In Nepal, the current development of green finance is largely regulatory driven.

Regulatory Driven: Other than the above-mentioned sustainability policies and frameworks, the "Guidelines on Environmental and Social Risk Management for Banks and Financial Institutions (ESRM)" issued by the NRB in 2018 has been the guiding force behind Nepal's regulatory driven development of green finance. The Nepal ESRM Guideline contains general and sector-specific checklists and sector-wide lists of permits and licenses to support financial institutions assessment of E&S risk.⁹⁰ Alongside, the ESRM also contains the necessary tools, templates and resources to support ESRM implementation in banks.⁹¹ The adoption of the ESRM guidelines is Nepal's achievement through the Sustainable Banking Network (SBN) which supports and tracks green finance development in emerging markets.

Since the issuance of the ESRM guidelines, NRB has now directed the BFIs, via Unified Directives, to prepare the policy, and have an arrangement of Environment risk assessment while extending loan and to submit the report within 30 days from the closing of every FY.⁹²

Alongside the broad benefits of the ESRM guidelines, regulators in Nepal have also introduced sector specific policies. For example, NRB has been directing the BFIs to assess environmental impacts of projects with Environmental Impact Assessment (EIAs) for several years. NRB has also directed commercial banks to allocate a set proportion of total credit to priority sectors. As of 2020, commercial banks have been instructed to extend at least 15 percent of their total credit to the agriculture sector by 2023; and 10 percent to the energy and 15 percent to SMEs by 2024.⁹³ Class B and Class C BFIs have been instructed to extend at least 20 percent and 15 percent respectively to the agriculture, energy and tourism sectors and SMEs. Additional policy provisions to support green financing in Nepal include:

- Monetary policy for 2020/21 has provisioned for the issuance of Energy bond by the BFIs to comply with the regulatory requirement of investing in energy sector.

⁹⁰ IFC SBN. 2020. Necessary Ambition: How Low-Income Countries Are Adopting Sustainable Finance to Address Poverty, Climate Change, and Other Urgent Challenges

⁹¹ *Ibid.*

⁹² Nepal Rastra Bank, Unified Directives of No. 2, issued in 2020 <https://www.nrb.org.np/contents/uploads/2020/09/Unified-Directives-2077-2.pdf>

⁹³ The dates are end of Nepali Calendar year 2080 for the agriculture sector and the year 2081 for the other sectors in Nepali Calendar system. *Ibid.* at p. 367

- BFIs are required to extend credit at base rate plus up to one percentage point for a period up to 5 years to the hydropower projects that have started exporting hydropower.
- BFIs are required to provide credit facility at base rate plus one percentage point to the reservoir-based hydropower projects.
- BFIs are allowed to take 'External Commercial Borrowing (ECB)' to invest in energy and other productive sectors.

NRB has also directed the BFIs to provide at least 5 percent of their total loan portfolio in the deprived sector. Renewable energy is one such element of deprived sector lending.⁹⁴ Loan up to the limits mentioned by NRB are provided for the promotion of renewable energy projects based on Private and Public Private Partnership (PPP), and promoted by the User Committee, Cooperatives (excluding the Savings and Credit Cooperatives), Private and Public Private Institutions targeting the deprived people and bearing 50 percent (compared to generally around 30 percent for other sectors) or above of the project costs by themselves. These sectors include:

- Micro and Small Hydroelectricity Projects having capacity up to 1,000 KW
- Solar Mini Grid having capacity up to 500 KW
- Gasifier Technology up to 200 KW
- Wind and Solar Wind Energy Mixed System
- Institutional Bio-gas Plant up to 200 Cube Meter

Finally, Vehicle Loan favoring individual borrowers can be financed by the BFIs up to 50 percent of the Tax invoice but in case of electrical vehicles it can be financed up to 80 percent, which provision is particularly for promoting green financing.

Access to Finance: Access to finance is key for an economy such as Nepal with a strong presence of SMEs. However, according to Nepal Rastra Bank, only 50 percent of SMEs have access to loans from BFIs. Out of this, only 25 percent of SMEs have taken loans from BFIs, of which 85% (21% of SMEs in Nepal) have taken collateralized loans from commercial banks.

To increase finance to SME and agriculture sectors, several initiatives have been taken. For example, the NRB has jointly implemented 'Access to Finance (A2F)' with the UN Capital Development Fund (UNCDF) with the aim to help financial institutions serve agriculture value chain actors with appropriate financial products more effectively. Under A2F, UNCDF partnered with 13 banks and financial institutions in Nepal to promote agriculture and value chain financing through a Performance Based Agreement in that UNCDF provided grants to commercial banks based on performance. The UNCDF has also been actively in promoting digital products, which has enabled for faster and more efficient payments, for example. The Government of Nepal has also formally joined the Better Than Cash Alliance (BTCA) which is an alliance of governments, private sector and development organizations committed to accelerating the shift from cash to electronic payments.

Recent years have seen efforts to drive finance in the context of decentralization under the new federal structure of Nepal. Rapid urbanization has motivated UNCDF to pilot its **Municipal**

⁹⁴ A range of green technologies that are included are Solar Home Systems, Solar Cooker, Solar Dryer, Solar Pump, Biogas, Improved Water Mills, and Improved Cook Stoves.

Investment Finance (MIF) programme and to develop financing instruments that diversify and aggregate municipalities' financial base in Nepal.⁹⁵ The **Local Climate Adaptive Living Facility (LoCAL)** has also started, helping local governments channel global climate adaptation financing to the local level, to cope with the increased cost of building resilience against climate change and natural disasters.⁹⁶ Although there has been little work that focuses on the diffusion of green finance from the regulators and the market to the local level, it will be important to explore a green finance strategy for the country that takes into account the sub national angle to the discourse on green finance in the wake of decentralization in Nepal moving forward.

The Alternative Energy Promotion Centre (AEPC), the apex governmental body responsible for promotion of renewable energy in Nepal has tried to encourage commercial financing in the renewable energy sector. It initiated Micro Hydro Debt Fund with financial support of the German Development Cooperation Agency GIZ. However, the experience was not encouraging as most of the micro hydropower plants thus supported defaulted in paying back their loans. It was observed that the two banks involved were not well aware of the vagaries of small-scale projects and as a consequence adequate technical support was not provided to the communities responsible for project development.

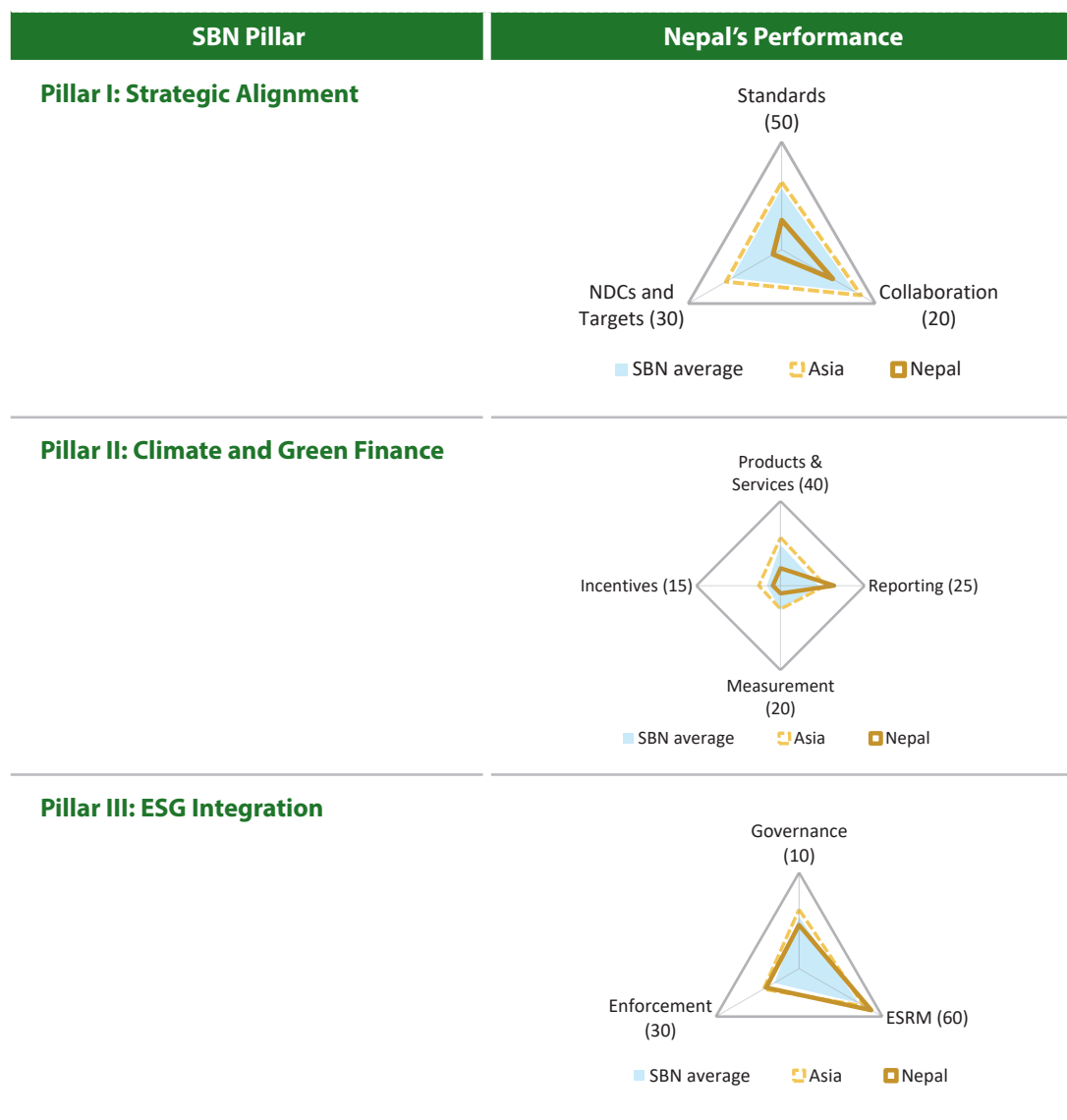
To streamline its financial support to RE projects AEPC established Central Renewable Energy Fund in 2015 to gradually reduce subsidy driven RE promotion practice by increasing the share of credit in project financing and attract the private sector to develop RE projects in off-grid areas too. Though still tentative and very small in scale, CREF has come up with several financial instruments such as soft loans, partial credit guarantee, vendor financing and vendor challenge fund with the support of UNDP and UNCDF. Credit guarantee mechanism in particular has been successful to attract financing from commercial banks to community owned and managed off-grid mini hydropower projects located even in remote districts like Jumla and Mugu. On the other hand, vendor financing was found attractive by farmers in the Terai to install solar pumps for small irrigation projects. Lately, AEPC has teamed up with the World Bank and Department for International Development (DfID), UK to scale up private financing both in scope and size. It intends to support private companies to develop both on-grid and off-grid RE projects and DfID in particular is scoping opportunities to establish vendor financing mechanism within CREF.

Measuring Progress: Nepal is making progress in developing its green finance system and has evolved from the "Preparation" stage to the "Implementation" stage in recent years according to the Sustainable Banking Network (SBN). SBN categorizes progress based on a progression matrix whose framework utilizes the pillars of Strategic Alignment, Climate and Green Finance, and ESG Integration. Although Nepal's ESR is quite ambitious in ESG integration, the framework doesn't fully capture the other two pillars. This has been highlighted below in Figure (8), where Nepal's performance in each of the indicators along the three pillars have been compared with the SBN average and the average in Asia.

⁹⁵ More information at <https://www.uncdf.org/nepal>

⁹⁶ *Ibid.* at UNCDF

FIGURE 7 SBN PROGRESSION MATRIX WITH ASSESSMENT RESULTS FOR NEPAL⁹⁷



Source: Sustainable Banking Network. 2019

As seen in figure 7, within strategic alignment, Nepal's current framework involves interagency collaboration between financial supervisors/regulators, industry associations and Financial Institutions (FIs). However, this collaboration does not include other public agencies such as environmental agencies and ministries alongside representatives of civil society such as NGOs, associations, and media.

As SBN evaluates in a sustainable financial system, green and climate finance is only one of the three pillars. Within green finance, Nepal currently lacks in several aspects including lack of range of products and services, lack of incentives and monitoring requirements. At the moment, Nepal requires FIs to report on climate/green finance flows alongside them to report publicly on their green finance activities. However, the framework does not require FIs to report on climate risk exposure on the portfolio level nor does it make E&S policies, practices, and results externally verified through assurances and independent reviews. Nepal also does not require FIs to calculate the environmental benefits of their investments, nor does it require any climate risk exposure

⁹⁷ For detailed information, please see Nepal's 2019 Country Progress Report from SBN.

assessment. Along with a systematic update of Nepal's framework, there is much space for capacity building within Nepalese banks in climate risk exposure methodologies such as climate scenario analysis and climate risk stress testing. This is because banks play a key role in "assessing risks, originating loans, and underwriting the issuance of equities and debts."⁹⁸

Market Driven: Market driven development of green finance in Nepal is scattered and is still in its infancy phase. Furthermore, it is difficult to track the flow of market driven green financing in Nepal due to the absence of proper monitoring and evaluation methodologies alongside the lack of definition on what green means in the context of Nepal.

A few BFIs of Nepal have a few green finance instruments; however, they are yet to develop integrated strategies across the investment value chain in green finance. Banks including Nepal Investment Bank, NMB Bank have introduced green finance instruments such as Green Double Fixed Deposit and Green Fixed deposits to be invested in sustainable, climate & environment-friendly projects through Eco-Loans. Nepal SBI bank is in the process to extend the lending Rs. 50 billion plus under green financing. Even in 2012, the Ace Development Bank, which has since merged to Nepal Investment Bank, became the first bank in Nepal to go green in its operations by investing in carbon credits issued under the Clean Development Mechanism (CDM).⁹⁹

NMB Bank

NMB is focused on financing of sustainable projects in the renewable energy sector in alignment with the government of Nepal's growth plans. Such investments have focused on solar, biogas, micro-hydro, clean cook stoves, solar dryer, solar pumping and improved water mill (IWM). To meet the demands and challenges from renewable energy vendors, consumers and other stakeholders, NMB bank has also established a separate Renewable Energy Department. NMB has also developed tailored green finance instruments such as NMB Green Fixed Deposits.

In addition, the bank is working in a cooperative effort with Micro Finance institutions for providing access to energy in Rural areas (especially off grid locations). The bank has been collaborating with various International Agencies and Development Partners for the promotion and development of RE sector in the country. The latest example of international partnerships comes from a USD 25 million green loan from the International Finance Corporation (IFC) to NMB Bank, to boost financing for green projects and small and medium enterprises (SMEs).¹⁰⁰

This loan is IFC's first climate focused lending to a financial institution in Nepal, incorporating the internationally recognized green loan principles. This support excludes hydro financing and is expected to contribute towards reducing CO2 emissions in the country. Over the next 5 years, IFC is expected to help expand NMB's SME portfolio to over USD 1 billion helping create up to 50,000 jobs. According to NMB Bank, they are also thinking about the potential of a green bond issuance.

The Development Bankers Association of Nepal (DBAN) has now started working on the utilization and promotion of green finance and is keen on creating uniform standards applicable to the DBAN Member Banks for green financing. At the same time, BFIs are developing growing interest in tapping the green bonds market. Nepal SBI bank as well as Nepal Infrastructure Bank have highlighted their work towards the issuance of a green bond. Finally, lending related to green financing have also been issued from Micro Financial Institution.

⁹⁸ UNEP. 2016. Green Finance for Developing Countries: Needs, Concerns and Innovations. <https://www.unep.org/resources/report/green-finance-developing-countries-needs-concerns-and-innovations>

⁹⁹ B. Rai. 2013. Right climate to trade carbon. Nepali Times. <https://archive.nepalitimes.com/news.php?id=19901>

¹⁰⁰ The Kathmandu Post. 2020. IFC provides \$25 million credit to NMB Bank to boost green financing and access to credit for SMEs. <https://kathmandupost.com/money/2020/06/30/ifc-provides-25-million-credit-to-nmb-bank-to-boost-green-financing-and-access-to-credit-for-smes>

Private Equity Funds: The private equity / venture capital ecosystem in Nepal is still in its nascent stage.¹⁰¹ Presently, these funds make their investment through FDI approval routes and are governed by the FDI regulation despite the lack of specific legal and regulatory framework. The need for private equity firms in attracting FDI as well as their reach to SMEs make PE firms an attractive asset class in an emerging market such as Nepal. Furthermore, given they are funded mostly by Development Financial Institutions (DFIs), they utilize robust environmental and social safeguards, often consistent with international best practices. In doing so, these firms will play an important role in attracting green finance moving forward.

The introduction of the Specialized Investment Fund Regulation (SIF regulation) by the Securities Board of Nepal (SEBON) is a positive step to regulate pooled investment funds/vehicles like private equity, venture capital and hedge funds. However, there is a need for additional incentives and reforms to ease the process to attract further private equity investments in Nepal. These incentives and reforms include tax incentives; coordinated, harmonized and timely approval environment; removal of restrictions for PE firms on use of debt like financial instruments, including convertible loans.¹⁰²

Funds in Spotlight

Dolma Impact Fund is the first international private equity and impact fund dedicated to providing capital and expertise to growth companies in Nepal. Dolma works with its companies to enhance E&S performance which is consistent with its Environmental and Social Management System (ESMS). In this respect, their ESMS system is consistent with the IFC Performance Standards. Their portfolio includes four renewable energy projects comprising of two in the hydropower sector and the remaining two on-grid solar projects.

Business Oxygen Private Limited (BO2) is Nepal's first private-equity fund with a climate focus. It is a part of the IFC's Global SME Ventures initiative with investments from the IFC of the World Bank Group, Climate Investment Fund's (PPCR) and UK Aid's DFID and is managed by WLC Ventures Pvt. Ltd, a subsidiary of White Lotus Centre Pvt. Ltd. BO2 is a sector-agnostic fund that combines risk capital financing with advisory support to help investee small and medium enterprises develop fundamental financial systems, quality-assurance standards, and corporate governance frameworks. BO2 investment process incorporates IFC's Environmental, Social and Governance (ESG) standards. The fund has been investing on climate smart business that is working proactively towards climate adaptation and mitigation. Bo2 has till date made climate related investments in establishing distributed roof top market in Nepal to support the private sector movement to include solar into the energy mix of Nepal, invested in one of Nepal's largest CNG and organic fertilizer producing plant which has capacity to convert 45 tons of organic waste to green fuel, as well as Nepal's first bio-mass pellets which will use the annual under growths of the forest floor from a Sustainably Managed Forest and convert them into fuel pellets.

However, as highlighted earlier, while green financing is happening in the mainstream financial system, the lack of a clear definition of 'green' makes it difficult to assess and quantify the current development of green finance in Nepal.

¹⁰¹ S. Gyawali. 2020. Private Equity: Prospects and Opportunities in Nepal. <https://www.linkedin.com/pulse/private-equity-prospects-opportunities-nepal-shabda-gyawali/>

¹⁰² *Ibid.*

3.6 Key Barriers in promoting Green Finance in Nepal

Barriers in promoting green finance in Nepal can be best understood by using a two-fold approach that involves generic finance barriers that affect all investments and transactions and green finance specific barriers.¹⁰³ There are significant overlaps between the generic and specific barriers and will have to be pursued in parallel to unlock Nepal's potential for capital inflow, particularly from international markets on green finance.

Generic Barriers: Much has been written on the investment barriers to Nepal. The primary barrier includes poor access to investors which is a result of several tax, policy and regulatory barriers. In this premise, the Investment Board of Nepal (IBN), established in 2011, plays a key role in promoting the inflow of FDI, approving large scale investment projects as well as acting as the implementing and managing agency for various public-private partnership projects (PPP).¹⁰⁴ However, barriers remain. A 2019 study from the U.S. Department of State summarizes barriers that undermine foreign investment in Nepal as follows¹⁰⁵:

- Laws limiting the operation of foreign banks
- Limitations on the repatriation of profits
- Limited currency exchange facilities
- Government's monopoly over certain sectors of the economy, such as electricity transmission and petroleum distribution
- Poorly trained workforce
- Proliferation of politicized trade unions that inhibit market entry
- Inefficient government bureaucracy and corruption
- Cumbersome and obstructive immigration laws and visa policies

The government has made efforts to address these issues in the past four years as seen with the Foreign Investment and Technology Transfer Act (FITTA) of 2019. However, there is room for further revision of FITTA on issues such as the procedures for FDI approval and the fact that FDI in primary agriculture sector and small & cottage enterprises is restricted. Despite regulatory and legislative reforms in recent years, investors are wary of the lack of transparency in the regulatory process and that these reforms will not be implemented. Nonetheless, Nepal has climbed the ladder in the ease of doing business ranking with the 94th position in 2020, compared to the 105th position in 2016 which is a positive sign.

Other barriers include financial inclusion and access to finance for enterprises, especially Small and Medium Enterprises (SMEs) and a need for a shift from collateral-based financing to project based financing. The Global Financial Inclusion Index (Global Findex) last updated in 2018 from the World Bank highlights that only 45.4 percent of the adult population (over 15 years old) in Nepal owns a bank account in any type of financial institution out of which only around 31 percent are active users.¹⁰⁶

¹⁰³ UNEP. 2016. National Sustainable Finance Roadmap of Mongolia. Unlocking Mongolia's Potential to Become a Sustainable Finance Knowledge Centre in the Region. UNEP, IFC, SBN & MSFA. https://greengrowthknowledge.org/sites/default/files/downloads/resource/National_Sustainable_Finance_Roadmap_of_Mongolia.pdf

¹⁰⁴ The IBN handles investments larger than approximately USD 52 million, while the Department of Industry (DOI) is responsible for investments less than USD 52 million.

¹⁰⁵ U.S. Department of State. 2019. Investment Climate Statements: Nepal. https://www.state.gov/reports/2019-investment-climate-statements/nepal/?fbclid=IwAR2TP_bwf_A0F0yLY9hro5ZEpt5ntMmK5dYvYT2szD2bqt_QuCVt0mASzBA

¹⁰⁶ A. Wagle. 2019. The myths surrounding and the barriers to financial inclusion. The Kathmandu Post. <http://kathmandupost.com/columns/2019/07/08/the-myths-surrounding-and-the-barriers-to-financial-inclusion>

Another barriers the overall lack of digital and innovation ecosystem, especially in the remote areas of Nepal. While the overall mobile penetration itself has crossed 136 percent as of 2020, accounting for dual sim customers and other factors means the true mobile penetration rate is less than 100 percent.¹⁰⁷ Within this, the smart phone penetration has crossed 60 percent in 2020 —compared to the 50 percent penetration rate in 2018—bringing Nepal’s range to par with the world’s average rate for smartphone penetration. It is important to utilize this growing momentum and complement it with digital and financial literacy programs to facilitate establishing an overall digital ecosystem as it will be a key element of a modern green economy.

Although the barriers mentioned above are pertinent, it is difficult to estimate its impact on green finance, especially in the level of domestic financing. It is equally important to highlight that barriers in the “demand” side including lack of access to long-term funding and the lack of project – based financing in Nepal which puts SMEs in a particular disadvantage. Some of the more specific barriers to green finance are highlighted below.

Specific Barriers:

Much has been written on specific barriers to attracting green investment opportunities globally. The key barriers include short-term nature of investors, policy uncertainty, and the lack of appropriate scale in investment opportunities.¹⁰⁸ What is less covered in the academic literature include technology risk, benchmarking, market liquidity, fossil fuel subsidies, fiduciary duty, and credit rating.¹⁰⁹ Immaturity of the financial markets and renewable energy sectors alongside the misalignment of policy directions between policy makers and investors are other key barriers. The key barriers in Nepal include:

Limited Capacity: Although green projects have exercised an advantage in Nepal, the concept of green finance is relatively new in Nepal. There is, therefore, a lack of common understanding on the scope of green finance and green finance instruments across stakeholders, particularly in local governments who will play an important role moving forward. This is made more difficult as there is a lack of common definition, criteria and standard to define green assets. Limited capacity extends across the value chain from local investors, government stakeholders and project developers. Financial institutions lack capacity in measurement and reporting of environmental and social risks (E&S) that can have a negative impact on investments. On the other hand, project developers do not have the capacity to align their projects based on industry standards commonly required by investors. This requires support on capacity building and technical knowledge across the various range of stakeholders.¹¹⁰

High Upfront and Transaction Costs: Greening the financial system has, or at least is perceived to have, high upfront costs for financial institutions as it requires innovation in new financial instruments that requires capital as well as capacity. This is particularly true for voluntary initiatives in the absence of government frameworks, standards and incentives. For example, issuing a green bond has a high upfront cost which can arise from bond certification and validation etc. Based

¹⁰⁷ Nepal Telecom. 2020. <https://www.nepaltelecom.com/2017/07/mobile-internet-broadband-penetration-nepal.html>

¹⁰⁸ S. Hafner, O. James & A. Jones. 2019. A Scoping Review of Barriers to Investment in Climate Change Solutions. Sustainability, MDPI, vol. 11(11), pages 1-19, June.

¹⁰⁹ *Ibid.*

¹¹⁰ The IFC in particular is working towards developing the capacity of NRB as well as risk officers in several BFIs in Nepal to support capacity building and technical knowledge transfer.

on interviews with BFIs such as the Nepal Infrastructure Bank, these upfront costs are not barriers for large institutions but prove costly for smaller institutions. Cost barriers are particularly true for small scale project owners as banks require high collateral, depending on the perceived risk and alignment with international green practices requires both cost and capacity.¹¹¹ As small scale projects are more common in the country due to the major role of MSMEs, the transaction costs can be large. This requires innovative bundling strategies to combine projects or different aspects of projects into a portfolio to create efficiencies and economies of scale.¹¹²

Furthermore, the narrative that going green is costly is still pertinent within BFIs in Nepal which has led to BFIs from paying more attention to green investments. In the absence of an enabling environment, the fear is for an unequal playing field between brown and green projects. However, this is likely to change moving forward given the efforts of the NRB in implementing the ESRM guidelines by including the provisions in the Unified Directives.

Unclear Project Pipeline: Despite the vast potential of unlocking green investments, particularly in the sector of renewable energy and clean transportation, there is an insufficient pipeline of bankable and standardized green projects for investors such that proceedings issued from green finance instruments can be utilized. This is a major barrier in the ASEAN region as well as globally.¹¹³ This also extends to project specific barriers associated with the key industries that provide investment potential in the country. Barriers hindering investments in such sectors, particularly renewable energy and clean transportation, need to be resolved to provide clear pipelines of green projects for investors. This is made particularly difficult as private stakeholders involved in building green projects cite the government's unwillingness to allow increased role of private sectors despite the increasing flexibility in paper.¹¹⁴ There have been attempts to develop project pipelines in Nepal including the work from UNDP in preparing a pipeline as part of its readiness to the Green Climate Fund (GCF) as well as project pipelines from the Investment Board of Nepal.¹¹⁵ Nonetheless, there is room to do further work on creating green bankable projects specifically, ideally from the level of Ministry of Finance to ensure there is a sufficient supply of green projects.

Long Term Credit Supply is Constrained: Commercial banks provide short term credit supply as banks' resources come from deposits which tend to be short to medium term.¹¹⁶ In contrast, green infrastructure projects require long-term finance which causes a maturity mismatch for banks.¹¹⁷ In the context of Nepal, long term credit supply is further constrained by "limited products offering long-term deposits, low uptake of corporate bonds, non-existent yield curve and the shallowness of the capital market."¹¹⁸

¹¹¹ Liebman, Ariel & Reynolds, Aisha & Robertson, Dani & Nolan, Sharna & Argyriou, Megan & Sargent, Beth. 2019. Green Finance in Indonesia Barriers and Solutions. 10.1007/978-981-10-8710-3_5-1.

¹¹² Weston, Peter & Lockhart, Eric & Reber, Tim & Booth, Sam & Kalhor, Wakar. (2018). Financial and Operational Bundling Strategies for Sustainable Micro-grid Business Models.

¹¹³ OECD. 2016. Green bonds: Mobilising the debt capital markets for a low-carbon transition. Policy Perspectives. <https://www.oecd.org/environment/cc/Green%20bonds%20PP%20%5Bf3%5D%20%5Blr%5D.pdf>

¹¹⁴ This was highlighted in the SDG Sub-Platform on Green Finance meeting by several project developers and Private Equity firms.

¹¹⁵ Information on project pipelines (not necessarily green) from the Investment Board of Nepal are available at <https://ibn.gov.np/ibn-projects/>

¹¹⁶ Sachs, J. D., W. T. Woo, N. Yoshino, and F. Taghizadeh-Hesary. 2019. Why Is Green Finance Important? ADBI Working Paper 917. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/why-green-finance-important>

¹¹⁷ *Ibid.*

¹¹⁸ IFC. 2018. Creating Markets in Nepal: Country Private Sector Diagnostics. https://www.ifc.org/wps/wcm/connect/cf66e8dc-f7c0-42b9-80ef-fc13920f89dd/CPSD_Nepal_Oct18_2_Web.pdf?MOD=AJPERES&CVID=msllQer

Limited Credit Information and Rating in the Market: Although both credit information and ratings are available in Nepal¹¹⁹, the sharing of information is limited, and significant gaps remain in this sector. As a result, BFIs employ high collateral requirements which restricts access to finance to firms with sufficient land and immovable assets.¹²⁰ Furthermore, Nepal currently lacks a sovereign credit rating, which is an independent assessment of the creditworthiness of a country, which reduces insights investors can have on the level of risks associated with investing in Nepal. To this end, Fitch Ratings—one of the three major global credit rating agency—has been assigned to conduct credit rating of Nepal as of mid-December 2019.¹²¹ To diffuse green finance in the local level, there is a need to provide support in developing credit worthiness in the municipal level.

Lack of Transparency on Climate Related Disclosure and Data: The recent adoption of the ESRM guidelines and the subsequent directive is a positive step towards resolving this barrier. For example, Step 8 on E&S reporting of the ESRM guidelines highlights that B/FIs must establish E&S performance reporting procedures for both internal reporting to senior management and external reporting to NRB, shareholders and stakeholders. However, it is too early to understand the implementation of the ESRM guidelines as BFIs are still in the process of mainstreaming the ESRM guidelines. Furthermore, although ESRM framework is ambitious, there are several limitations that can still be addressed. First, the framework does not require FIs to report on climate risk exposure on the portfolio level. Nor does it make E&S policies, practices, and results externally verified through assurances and independent reviews. Nepal also does not require FIs to calculate the environmental benefits of their investments, nor does it require any climate risk exposure assessment.

¹¹⁹ BFIS are not allowed to lend without credit information, which is provided by Credit Information Center Ltd. Credit Rating is required for loan above Rs.50 crore, and there are 2 credit rating agencies operating in Nepal

¹²⁰ *Ibid.*

¹²¹ *New Business Age*. 2020. Credit Rating of Nepal within 6 months. <https://www.newbusinessage.com/Articles/view/12178>





4

PRIORITIES FOR GREEN FINANCE IN NEPAL

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2

3

Green finance is still in its infancy stage in Nepal as the country is keen in moving towards the development of a sustainable finance roadmap and the issuance of a green bond.¹²²

are right priorities that will shape Nepal's path towards greening its financial system. Building upon the existing priorities, this chapter flushes out the low hanging fruits in green finance, the relevant national and international stakeholders in the process, the need and process of building domestic capacity as well as potentials of a blended finance pathway moving forward. The chapter will also explore potential green finance instruments relevant in the context of Nepal with a particular focus on green bonds, green loans as well as green funds. The chapter also explores sector specific initiatives for the major sectors with green finance investment potential in the country.

4.1 Low Hanging Fruits

Although a common definition of “green” and a national roadmap that outlines Nepal's green finance strategy is of primary importance, there are several low-hanging fruits that Nepal can achieve in the short-term. These range from encouraging Nepalese regulators in the insurance and securities market to join international networks to understand best practices and employ strategies in the context of Nepal to the creation of a Green Finance Taskforce building upon the existing **SDG Sub-Platform on Green Financing** and taking inspiration from the pioneering work conducted by international best practices, as well as organizing workshops with experts from green and sustainability bonds (e.g. the “Green Bond Boot Camp” run by the Climate Bonds Initiative) targeted at professionals from the banking, insurance and securities market.

The China Green Finance Task Group is one such example for the creation of a green finance taskforce. It was set up in 2014 in China to help the central government identify barriers and opportunities in green finance, and to make concrete recommendations on green finance policies. Their recommendations formed a key part of the 2016 “Guidelines for Establishing the Green Financial System” policy document, which sparked a rapid green finance development in China. As first steps, it is accordingly important for Nepal to establish a similar task force convened by the Ministry of Finance with experts from all across the value chain, including a strong representation from the private sector and local government officials in this new federal structure, to design a green financial system that is right for Nepal. The taskforce should also comprise of participants from the banking, insurance and securities industry in Nepal alongside relevant NGOs, media organizations, universities and think-tanks. Another notable example includes the UK Green Finance Task Force. The task force could then support to convene a sectoral taskforce on relevant industries.

Nepal's membership within the Sustainable Banking Network gives hope for the future of Nepal's green finance regime. However, it is imperative for Nepalese financial institutions, academic institutions, banks and NGOs to work in facilitating direct technical assistance channels between Nepal and the rest of the world. This can be done by creating an opportunity for financial institutions in Nepal to prepare a “green finance” framework, which is relevant to each institution and can outline the institutions ambition in green finance, and that this be socialized within each institution to ensure the buy-in of key professional teams. Key organizations include UNESCAP, the

¹²² IFC SBN. 2020. Necessary Ambition: How Low-Income Countries Are Adopting Sustainable Finance to Address Poverty, Climate Change, and Other Urgent Challenges

World Bank, and leading universities. Furthermore, a bilateral channel between China and Nepal can play a key role in knowledge transfer and capacity building for Nepal to learn the lessons acquired in China's experience in green finance.

An initiative of particular potential in this regard is the Green Finance Leadership Program led by Tsinghua University, focused on technical assistance on green finance from China to developing country financial system regulators. Joining international and regional networks of likeminded regulators, investors, insurance companies etc. can also go a long way in capacity building as seen with Nepal's membership with SBN. It is also advised to encourage banks and financial institutions to develop voluntary networks with ambitious guidelines.

Key recommendations as 'low-hanging fruits' in greening Nepal's financial system alongside the potential activity lead and partners, and best-practices is highlighted below.

Recommendations	Activity Lead	Potential Partners	Best - Practice
1.1 Establish a Green Finance Taskforce to prepare guidelines for Green Finance in Nepal	NRB, UNDP	NRB, SDG Sub Platform on Green Financing	China's Green Finance Task Group made up of experts from ministries, financial regulators, academics, banks and other financial institutions, international experts; UK Green Finance Taskforce
1.2 Explore Technical Assistance Facilities	NRB, UNDP, Nepal Bankers Association (NBA)	UNESCAP, the World Bank, IFC, Universities	Green Finance Leadership Program led by Tsinghua University, focuses on technical assistance on green finance from Chinese to developing countries. Green Finance Platform also has a list of available capacity building tools accessible online.
1.3 Encourage Nepal Securities Board to join international networks	Nepal Securities Board	UNEP, IFC	UN Sustainable Stock Exchanges (SSE) Initiative; In 2018, the Colombo Stock Exchange launched "Communicating Sustainability". ¹²³
1.5 Encourage the Insurance Board to join international networks	Nepal Insurance Board	IFC, UNEP	UNEP Principles for Sustainable Insurance (PSI); IFC - Global Index Insurance Facility; Sustainable Insurance Initiative (SII)
1.6. Encourage Banks to establish a voluntary green finance network	Nepal Bankers Association, NRB	IFC, FMO	Mongolian Sustainable Finance Initiative and the associated Mongolia Sustainable Finance Principles
1.7 Establish Best-Sustainable Bank Award	NRB, Nepal Bankers Association	Ministry of Finance	The Mongolian Bankers Association has introduced the "Best Sustainable Bank" award.

¹²³ Central Bank of Sri Lanka. 2019. Roadmap for Sustainable Finance in Sri Lanka. <https://www.cbsl.gov.lk/sites/default/files/Sri%20Lanka%20Sustainable%20Finance%20Roadmap%20FINAL%2008.04.19.pdf>

1.8 Identify potential investors to green finance in Nepal	UNDP, NBA	CDC, IFC, UNEP, Development Organizations	One avenue could be from Europe as the European Investment Bank (EIB) announced its investment of USD 100 million in the 'Amundi Planet – Emerging Green One' Fund. This fund is dedicated exclusively to emerging markets and focuses on investing in green bonds issued by private sector financial institutions. ¹²⁴
1.9 Require BFIs to set up a "Climate Risk Fund"	NRB, NBA	IFC, UNEP	Bangladesh has directed the banks and financial institutions to allocate at least 10 percent of their corporate social responsibility (CSR) budget to the Climate Risk Fund, either by providing direct grants or by providing finance at a reduced rate of interest. ¹²⁵
2.0 Encourage BFIs and non-BFIs to join UNEP FI.	NBA, UNDP	UNEP FI	IDLC Finance Limited is the largest non-bank financial institution and one of the leading merchant banks of Bangladesh which has been a member of UNEP FI since 2011.

4.2 Roles and Responsibilities of Relevant Stakeholders

The Nepali Financial System is characterized by a myriad of BFIs which, in fact, has led to the NRB actively encouraging mergers and acquisitions within banks and financial institutions in recent years. Bringing together these stakeholders who have a direct interest in the financial system is important. However, it is equally important to acknowledge that greening the financial system is a process, which can span over multiple years, starting with existing lending practices within banks, evolving towards the issuance of green bonds and finally culminating with specialized investment vehicles towards particular industry segments (e.g., infrastructure funds, renewable energy private debt funds, etc.).¹²⁶

This means, there needs to be an integrated stakeholder mapping that takes into account the entire value chain of an investment; ranging from investors to potential project developers, as well as organizations involved in monitoring and evaluation. It is equally important to highlight international stakeholders as they form best practices in each and every step in the process. To simplify, Climate Bonds Initiative (CBI) and International Capital Markets Association (ICMA) provide guidelines on green bonds issuances; Principles of Responsible Investing (PRI) & Global Reporting Initiative (GRI) provide guidelines on reporting whereas IFC, through its Performance Standards, provides industry best practices on managing environmental and social risks, or the Asian Development Bank (ADB) through its Safeguard Policy.

¹²⁴ IJSD. 2018. Adaptation Finance Update: Green Bonds on the Rise but Will Adaptation Projects Benefit? <http://sdg.ijsd.org/news/adaptation-finance-update-green-bonds-on-the-rise-but-will-adaptation-projects-benefit/>

¹²⁵ UNEP. 2016. Green Finance for Developing Countries: Needs, Concerns and Innovations.

¹²⁶ UNEP. 2016. Green Finance for Developing Countries: Needs, Concerns and Innovations.

An important category of stakeholders are the verifiers. Both the ICMA's Green and Social Bond Principles or the Climate Bond Standards require that a "second party opinion" (SPO) be conducted for any green project being financed through a green bond. This report is central to the trust that investors will place in the investment opportunity to ensure that the selected projects are aligned with international standards. This SPO can be further complemented with a certification delivered by the Climate Bond Standard to give any green bond the "climate bond" label, adding to the marketability of such securities to investors. Through this verification process, project owners will also develop a green bond framework and learn how to deliver projects that are aligned with globally accepted principles, thus adding to their technical knowledge of green bonds. Such verification can also be performed on green loans.

The table below provides a comprehensive stakeholder mapping including all relevant entities in greening Nepal's financial system. They have been categorized into 'Policy Development', 'Market Standards', 'Technical and Funding Support', and 'Capacity Building, Awareness and Research'.¹²⁷ In bold are the stakeholders, which should be engaged in priority.

Stakeholder Mapping		
Policy Development	Market Standards	
Key financial and sustainability policy and regulatory bodies	Financiers and investors	Industry associations and networks
<ol style="list-style-type: none"> 1. Nepal Rastra Bank 2. Securities Board of Nepal 3. Nepal Insurance Board 4. National Planning Commission 5. Ministry of Finance 6. Ministry of Forest and Environment 7. Ministry of Physical Infrastructure and Transport 8. Ministry of Energy, Water Resources and Irrigation 9. Nepal Electricity Authority (NEA) 10. Alternative Energy Promotion Centre (AEPC) 	<ol style="list-style-type: none"> 1. Banks and Financial Institutions (BFIs) 2. Insurance companies 3. Foreign investors 4. Private Equity Firms 	<ol style="list-style-type: none"> 1. Nepal Bankers Association 2. Development Bankers Association Nepal 3. Nepal Federation of Savings and Credit Cooperative Unions Ltd. (NEFSCUN) 4. Nepal Financial Institutions Association 5. Nepal Microfinance Bankers Association 6. Federation of Nepalese Chambers of Commerce and Industry (FNCCI) 7. Confederation of Nepalese Industries (CNI) 8. Federation of Nepal Cottage and Small Industries (FNCSI) 9. Independent Power Producers' Association, Nepal (IPPAN) 10. Renewable Energy Associations

¹²⁷ This framework for stakeholder mapping has been adopted from Mongolia's Sustainable Finance Roadmap.

Technical and Funding Support		
Key International Organizations		
1. United Nations Agencies (i.e. UN Environment, UNDP, UNITAR, etc.)	6. Partnership for Action on Green Economy	11. USAID
2. International Finance Corporation (IFC)	7. German development Bank (KfW)	12. AUSAID
3. World Bank	8. Asian Infrastructure Investment Bank (AIIB)	13. Equator Principles
4. Asian Development Bank (ADB)	9. Asia Foundation	14. Global Reporting Initiative (GRI)
5. Green Climate Fund (GCF)	10. Global Environment Facility (GEF)	15. Climate Bonds Initiative (CBI)
Second Party Opinion Providers		
1. Sustainalytics	5. TUV-Nord	9. Carbon Care Asia
2. Vigeo-Eiris (Moody's)	6. EY	10. Carbon Trust
3. Cicero	7. Deloitte	
4. DNVGL	8. KPMG	
Capacity Building, Awareness & Research		
Training and research institutions:	Media	Civil society and NGOs
1. Tsinghua University	1. National Televisions	1. Worldwide Fund for Nature (WWF)
2. International Institute of Green Finance (IIGF)	2. Website	2. Global Green Growth Institute (GGGI)
3. Kathmandu College of Management (KCM)	3. National Newspapers (Particularly Nepali Times & Kathmandu Post)	3. ICIMOD
4. King's College, Nepal		4. Centre for Renewable Energy Technology Nepal (CRTN)
		5. IUCN
		6. GGGI
		7. NEAs to GCF and other vertical funds

International Networks		
1. Sustainable Banking Network (SBN)	6. Alliance for Financial Inclusion (AFI)	11. Association of Development Financing Institutions in Asia and the Pacific (ADFIAP)
2. UN Environment	7. NDC Partnership	12. Taskforce for Climate Related Financial Disclosures (TCFD)
3. Central Banks and Supervisors Network for Greening the Financial System (NGFS)	8. Green Bank Network	13. Asia Investor Group on Climate Change
4. Sustainable Stock Exchange Initiative (SSEI)	9. Green Investment Banks Initiative	14. International Water Stewardship Standard
5. Sustainable Insurance Initiative (SII)	10. Principles for Responsible Investment (PRI)	

While stakeholder mapping is the easy part, the interaction between these stakeholders in greening Nepal's financial system is yet to formalize. To do so, there can be various approaches to mobilizing stakeholders to reach the same results. This goes back to the dual options of a regulatory driven or market driven approach to green finance. Indonesia and Philippines provide interesting examples.

In Indonesia, the government paved the way for green bond issuance through sovereign green bond issuance, pooling sustainability funds, and SOEs green bond issuance. However, Indonesia doesn't have a strong RE policy, as opposed to the Philippines. In the Philippines, even though green finance market is driven by the private sector, the government played a key role in implementing enabling policies for green projects such as FIT for RE projects. These kinds of policies eventually led to RE and other green projects being developed. The government also provided green finance guidelines to support the private sector, which can serve as an example for Nepal.

4.3 Tools and Instruments for Enhancing Green Finance

Among the variety of green finance tools and instruments that can be utilized, green bonds have emerged as the go to tool to raise capital for green projects. Accordingly, issuance of green bonds is also frequently listed to be synonymous to the growth of green finance.¹²⁸ Other financial products (debt, equity, insurance, or guarantees) common in the green finance space are green lending guidelines, green bonds, carbon finance, green insurance, green initial public offerings (IPOs), green stock indices, green credit, green asset securitization, and green banks (ADB 2017). These products are available for use from the BFIs to their own discretion but generally require guidelines and incentives either from regulators or voluntarily for uptake. Although the paper does not go into each financial product in detail, the list of these relevant products for green finance along with their glossary is provided in Appendix 1.

¹²⁸ Several publications refer to green finance and issuance of green bonds interchangeably. One must note that issuance of green bonds is one, among the several, indicators for green finance.

Given the aim of this study is a policy paper, instead of discussion about financial products, this section looks rather upstream into the broader toolbox that is available in the contest of green finance policy. These broad financing options are visualized in the financing toolbox below in figure 8.

FIGURE 8 UNDP FINANCIAL TOOLBOX¹²⁹

Bonds	<ul style="list-style-type: none"> • Sovereign bonds issued on international and domestic markets • Diaspora bonds • GDP-linked bonds • Green/blue bonds • Social impact bonds • Development impact bonds
Loans and guarantees	<ul style="list-style-type: none"> • Loans (including: Multilateral and bilateral development banks, other official flows (OOFs), counter-cyclical loans, contingent credit facilities, development policy loan deferred draw-down options, catastrophe risk deferred, drawdown options, debt buy backs, debt-swaps, blended finance, public-private partnerships, guarantees)
Public Revenue	<ul style="list-style-type: none"> • Taxes and levies (Including: income taxes, value added/consumption tax, property taxes, tariffs, green taxes, domestic financial transaction tax, airline ticket tax)
Insurance	<ul style="list-style-type: none"> • Weather index-based insurance • Catastrophe Risk Insurance Facility
Funds	<ul style="list-style-type: none"> • Vertical Funds (e.g. GAVI Alliance, Global Fund and UNITAID, Adaptation Fund, Global Environment Facility, Green Climate Fund, Securities and structured funds) • Microfinance investment funds
Grants	<ul style="list-style-type: none"> • Official Development Assistance (ODA) • Philanthropic and other private donations

Source: UNDP. 2018

Bonds: A bond is a fixed income instrument which plays an integral part of the financial system. A healthy bond market is beneficial for several reasons. It provides an alternative funding avenue to the public and private sector which can be utilized for long-term financing and enabling efficient mobilization and allocation of resources.¹³⁰

There are a variety of bonds that institutions can use including sovereign bonds issued on international and domestic markets, diaspora bonds issued by a country for its expatriates, GDP-linked bonds that are linked

FIGURE 9 OUTSTANDING DOMESTIC BONDS IN NEPAL

**Outstanding domestic bonds
(in NPR billion for fiscal year 2075/76*)**

	Bonds	Amount	Percentage
1	Treasury bills	146.8	32.4%
2	Development bonds	297.3	65.6%
3	National Savings bonds	-	0%
4	Citizen Savings bonds	8.4	1.9%
5	Foreign employment bonds	0.5	0.1%
6	Special bonds	-	0%
	Total	452.9	100%

Source: Nepal Rastra Bank. 2019

¹²⁹ UNDP. 2018. *Financing the 2030 Agenda*

¹³⁰ PwC. 2020. A Roadmap for strengthening Nepal's Bond Market. <https://www.pwc.in/assets/pdfs/consulting/financial-services/a-roadmap-for-strengthening-nepals-bond-market.pdf>

to the issuing country's GDP. Within sustainable and green finance, green bonds have gained increased popularity for gaining positive returns as well as a positive effect on the environment.

In Nepal, the bond market remains largely underdeveloped with debt securities being issued by both the government and corporate organizations. Most of the existing bond issuance is from the government whilst debentures are issued by BFs that are traded in the stock market. The outstanding domestic bonds as of 2018-2019 is highlighted in figure 9¹³¹ which shows that development bonds make the largest share of bond issuance in Nepal.

Beyond primary subscription, there is minimal trading volume of bonds which hinders market-based price discovery and yield curve generation.¹³² Although treasury bills are traded over the counter to some extent, there is no existing trading platform for trading of government securities in the secondary market.¹³³ Even debentures are rarely traded in the secondary market. Furthermore, Nepal has neither issued a bond in foreign currency nor has it issued a bond in local currency in international markets. Previous attempts to do so, alongside the plan to issue a diaspora bond, have not been successful.¹³⁴

It is critical for the Ministry of Finance to consider issuing a local currency Sovereign Green Bond in the local bond markets in Nepal (e.g. a "green" development bond) and act as a strong "signal" to the market towards future development. Some countries similar in size and constraints to Nepal have already issued a Sovereign green bond, such as Fiji, the Seychelles (a "blue" bond for the maritime economy), the Republic of Indonesia, and even Bhutan. Such signal will demonstrate a commitment at the top of the country towards green objectives, as well as set the stage for other transactions by financial institutions and non-bank financial institutions. Local investors who are already buyers of government securities can be mobilized to ensure a broad uptake of such issuance and demonstrate a solid interest in green securities.

Needless to say, there are significant barriers towards the development of a mature bond market in Nepal. A 2020 study by PwC summarizes these barriers as follows:¹³⁵

1. Lack of demand and supply has always been significant, owing to lucrative funding and investment alternatives.
2. Interest income on bonds draws a higher tax than the interest earned on fixed deposits. This discourages investor participation in the bond market.
3. Poor corporate governance, weak regulatory controls and disclosure standards have contributed towards lack of investor confidence.
4. Political instability, slow macroeconomic environment and limited regulatory support have stunted the growth of the bond market.
5. To ensure seamless trading in the secondary market, an electronic trading platform, a central depository and a settlement system are needed.

¹³¹ PwC. 2020. A Roadmap for strengthening Nepal's Bond Market.

¹³² *Ibid.*

¹³³ *Ibid.*

¹³⁴ Important lessons are to be learnt from Nepal's unsuccessful attempts of bond issuance. See <https://blogs.worldbank.org/peoplemove/whatever-happened-tonepals-diaspora-bonds-for-diaspora-bonds>

¹³⁵ PwC. 2020. A Roadmap for strengthening Nepal's Bond Market.

Against these barriers, IFC has become the first international agency to have been granted approval to issue Nepali currency bonds in international markets worth USD 500 million in local currency in Nepal, as of October 2020.¹³⁶ However, given the pandemic, IFC is currently still waiting for the right time for the issuance of the bond.

Regarding the choice of the currency for the issuance of green bonds, Nepal has several options. The most appropriate route is to issue a green bond in the domestic markets in the Nepal in Nepalese Rupees. This will ensure that the public finances are not exposed to foreign exchange risks until the maturity of the bonds. Another option is to issue in foreign currency. Under this option, there are two possible paths: i) USD, EUR, JPY or CHF, among others, can be used to issue a green bond in the international markets. The foreign currency capital can then be converted back into domestic currency using market instruments, like the ones promoted by the TCX Fund.¹³⁷ For example, the Bank of the Philippines Islands has issued a CHF-denominated green bond at a negative yield, demonstrating some appetite by European investors for bonds from the Philippines; or ii) given the proximity of Nepal to India and the fact that the Nepalese Rupee is pegged to the Indian Rupee,¹³⁸ the Nepal-based issuer (e.g. government-owned entity or private corporation) can issue a green bond in Indian Rupee in India to access India-based investors.

A similar case has been seen, for example when Yoma Strategic Holdings, a Myanmar-based company, issued¹³⁹ a USD 70 million bond in the Thai markets in Thai Bahts, thus allowing it to access the liquidity available for financing among Thai investors. Finally, it is possible to venture outside of Nepal and go to neighboring financial centers, such as Singapore, to issue a green bond that will cater to international investors for specific green projects. For example, Sindicatum has issued two green bonds in Singapore, one in Philippines Pesos in August 2018 and one in Indian Rupees in January 2018, to finance projects in their respective markets. These two green bonds have even made it to become listed on the London Stock Exchange¹⁴⁰, demonstrating the significant impact that such issuance can have in terms of visibility for global investors. Similarly, the Fiji Sovereign Green Bond has gained international recognition by listing on the London Stock Exchange¹⁴¹.

Under this premise, despite the potential of green bonds as an alternative form of long-term investments and attracting international capital, Nepal needs to first do the groundwork and demonstrate readiness. In Nepal, the Nepal Infrastructure Bank is already working towards issuing a green bond. Their approach needs to be studied in a better way.¹⁴² It is also recommended to work with initiatives such as International Capital Markets Association (ICMA) and the Climate Bonds Initiative (CBI), the latter being a non-for-profit organization, which provides an international certification for green bonds through third-party verifiers.

¹³⁶ The Kathmandu Post. 2018. IFC to release rupee bonds worth \$500m. <https://kathmandupost.com/money/2018/02/16/ifc-to-release-rupee-bonds-worth-500m>
<https://kathmandupost.com/money/2018/02/16/ifc-to-release-rupee-bonds-worth-500m>

¹³⁷ TCX Fund see more at <https://www.tcxfund.com/>

¹³⁸ The Hindu Business Line. 2017. Nepal to Keep Currency Pegged to Indian Rupee. <https://www.thehindubusinessline.com/money-and-banking/nepal-to-keep-currency-pegged-to-indian-rupee/article9689230.ece>

¹³⁹ Myanmar Times. 2019. Yoma Strategic raises US\$70 million in debut bond sale. <https://www.mmtimes.com/news/yoma-strategic-raises-us70-million-debut-bond-sale.html>

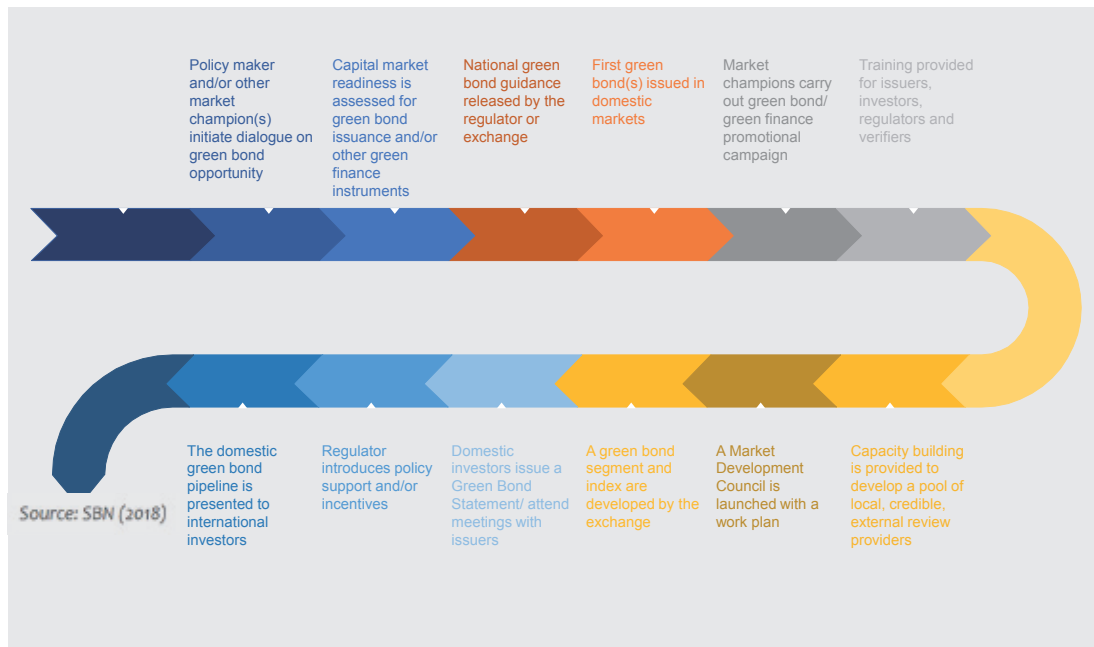
¹⁴⁰ Private Infrastructure Development Group. 2018. Sindicatum Renewable Energy lists INR and PHP Green Bonds. <https://www.pidg.org/2018/11/sindicatum-renewable-energy-lists-bonds>

¹⁴¹ LSEG. 2018. Fiji's first international green bond. <https://www.lseg.com/markets-products-and-services/our-markets/london-stock-exchange/fixed-income-markets/sustainable-bonds/fijian-international-green-bond#:~:text=%E2%80%9CToday's%20launch%20of%20Fiji's%20first,of%20market%20across%20the%20globe.%E2%80%9D>

¹⁴² It is important to do a green bond scoping study that looks into the potential of green bonds in the Nepali market in detail as such a study is currently lacking in the country.

Moving forward, the self-assessment and planning matrix from the SBN highlights a roadmap for a green bond issuance as shown below in figure 10.

FIGURE 10 ROADMAP WITH COMMON MILESTONES FOR DEVELOPING GREEN BOND MARKETS



Source: Sustainable Banking Network. 2018

As a pragmatic next step, issuance of a green bond in the domestic market to pilot a green project, funded by domestic resource mobilization such as through local governments, banks, and development partners such as UNDP, in collaboration with private sector to develop self-sustained green enterprises can be undertaken. Learning from these pilots will feed to policy making and institutional strengthening for transformation towards market led green finance such as through promoting the use of green bonds in financing projects. UNDP Nepal, through its existing network and scope of work in promoting green finance in Nepal, can play a role of interlocutor between local governments and communities to identify potential green projects and connect to the private sector for developing businesses and leveraging resources through the SDG sub-platform.

Green Loans and Guarantees: Green loans and guarantee provide another avenue of financing for green projects in Nepal. At its current state of shallow capital markets, green loans will play a more important role than green bonds initially, in terms of inclusiveness across the market, replication and scale. Green loans are therefore already in practice in Nepal with such mostly coming from multilateral and bilateral development banks who provide financing based on common and harmonized understanding on a definition for what counts as green.

There is an opportunity for Nepali BFIs to uptake green loans in financing green projects. To this end, it is important for BFIs to utilize standards such as the ICMA Green Loan Principles which are important for credibility, transparency and building investor confidence. In fact, green loan is becoming a popular product within BFIs around the world. A recent innovation in the commercial sector for green loans comes from HSBC Singapore which has established the HSBC SME Green Loan, in order to provide SMEs with finance to develop sustainable projects by utilizing existing 'green' certifications.¹⁴³

¹⁴³ HSBC. Insights on Green Loans. <https://www.business.hsbc.com.sg/en-sg/sg/article/green-loan>

Guarantees are common financial de-risking instruments and are essentially a contract by a third party (guarantor) to back the debt of a second party (the creditor) for its payments to the ultimate debt holder (investor).¹⁴⁴ For example, the UNCDF provides guarantees as well as performance based contracts under a blended finance approach in Nepal to fund projects that have a direct impact on the poor and vulnerable.¹⁴⁵ An attractive sector for the expansion of green loans is to be found in the real estate sector. Green Buildings are a powerful response to the threat of climate change, given the importance of carbon emissions linked with the use of energy within buildings. For example, In February 2020, OCBC Bank and UOB, both from Singapore, granted a SGD44m green loan to Shwe Taung Group¹⁴⁶ for a variety of green buildings projects, including offices, a shopping mall and a hotel. The development will include some measures to increase energy efficiency, such as installing double-glazed windows and rooftop solar panels, with the objective of reducing energy usage by 15 percent to 20 percent. One of the reasons for such loan to be possible for the two Singaporean banks was the green building certification of the said buildings against the BCA Standards, which Singaporean banks are familiar with.

Within the green loan category, it is also worth considering the option of structuring securitization vehicles for small green loans, which financial institutions can use to bring fresh capital towards the local markets. Such green loans can be used to finance programs for small-scale solar grid systems, electric vehicles (e.g. EV scooters or three-wheelers), solar-powered water pumps, small scale hydro power units, etc. More information on such vehicles has been detailed in a recent report¹⁴⁷ by the Climate Bonds Initiative for its application in India. This report can be used to further expand on this topic.

Another tool that has gained popularity for attracting finance from private sectors within emerging markets with relatively higher risks is blended finance. One approach within blended finance is to use "relatively small amounts of concessional donor funds to mitigate specific investment risks and help rebalance risk-reward profiles of pioneering, high-impact investments so that they have the potential to become commercially viable over time."¹⁴⁸ Providers of credit enhancement guarantees include Guarant Co¹⁴⁹ or the Credit Guarantee Investment Facility (CGIF),¹⁵⁰ which are both active in Asia and focus on infrastructure and microfinance financing. One noteworthy initiative is the Asian Development Bank's Green Finance Catalyzing Facility (GFCF) which develops a conceptual framework to utilize a blended finance approach to particularly fund green projects in the Asia Pacific. Figure 11 below highlights the basic rationale and principles for the GFCF.

¹⁴⁴ UNDP. Derisking Renewable Energy Investment. <https://www.undp.org/library/derisking-renewable-energy-investment>

¹⁴⁵ UNCDF Nepal. See more at <https://www.uncdf.org/nepal>

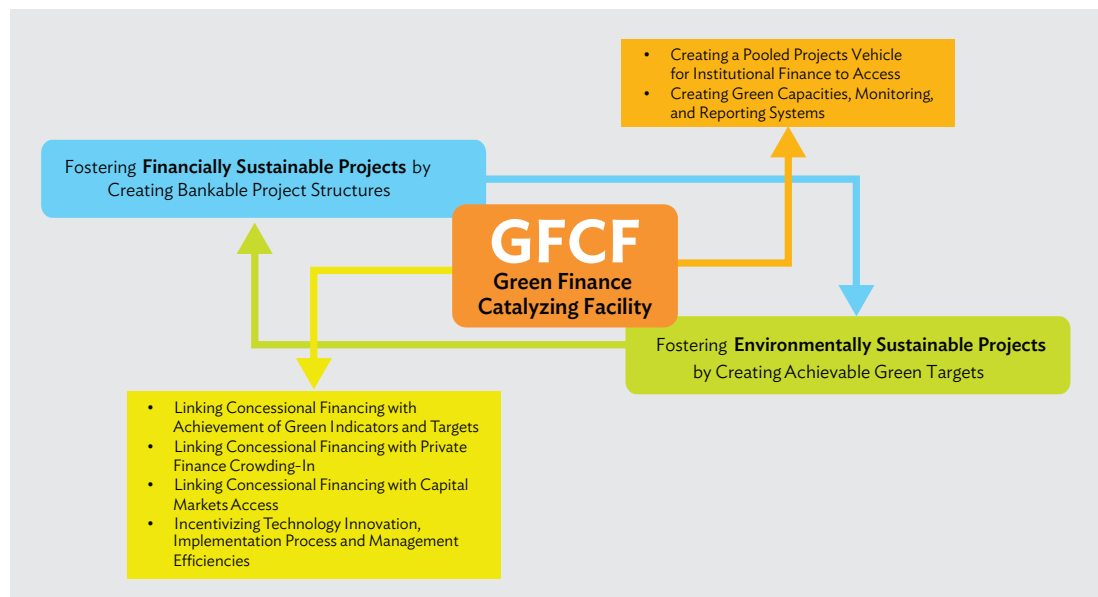
¹⁴⁶ Asia Property Awards. 2020. Shwe Taung Group obtains Myanmar's first green loan. <https://www.asiapropertyawards.com/en/shwe-taung-group-myanmar-developer-first-green-loan/>

¹⁴⁷ Climate Bonds Initiative. 2020. Securitisation as an enabler of green asset finance in India. <https://www.climatebonds.net/resources/reports/securitisation-enabler-green-asset-finance-india-0>

¹⁴⁸ IFC. Blended Concessional Finance. See more at https://www.ifc.org/wps/wcm/connect/CORP_EXT_Content/IFC_External_Corporate_Site/Solutions/Products+and+Services/Blended-Finance

¹⁴⁹ GuarantCo. Products and Benefits. See more at <https://guarantco.com/what-we-do/products-and-benefits/>

¹⁵⁰ Credit Guarantee and Investment Facility. See more at <https://www.cgif-abmi.org/about-us/>

FIGURE 11 BASIC RATIONALE AND PRINCIPLES FOR THE GREEN FINANCE CATALYZING FACILITY¹⁵¹

Source: Asian Development Bank. 2017

Public Revenue: Public revenues provides another source of financing for green projects under the polluters-pay principle. A particularly important instrument to generate public revenue while disincentivizing the brown sector is carbon pricing, which includes both carbon taxes and carbon markets. Particularly in the aftermath of COVID-19, carbon pricing can complement green stimulus packages in the form of increased emission reductions with the much-needed revenue generation. In recent years, carbon revenues generated through both carbon markets and carbon taxes have increased from USD22 billion in 2016 to USD44 billion in 2018.¹⁵²

One initiative that is gaining widespread attention is the framework for international carbon market mechanisms emerging under Article 6 of the Paris Agreement. Article 6 of the Agreement comprises three approaches for cooperation between Parties: “cooperative approaches” under Article 6.2; a new mechanism for promoting mitigation and sustainable development (Articles 6.4–6.7); and a framework for coordination of nonmarket cooperative approaches (Articles 6.8 and 6.9).¹⁵³

It has been estimated that international cooperation through Article 6 could yield cost savings on the order of 56 percent and 44 percent of the total abatement cost for meeting unconditional and conditional NDC targets, respectively.¹⁵⁴ However, it is important to note that the cost savings to NDC will differ for each country depending on their level, type and scale of involvement and interaction with Article 6. This can provide added benefit to Nepal as the country has expressed its intent or consideration in using market mechanisms in its NDC.

Loan Value Capture Models: public revenues are sometimes constrained by the economic capacity of a country, a local government or a municipality to raise financing from taxes, as they tend to add to the burden of local stakeholders and they are constrained. Infrastructure financing can sometimes result in a significant value creation, such as, for instance, the construction of

¹⁵¹ ADB. 2017. Catalyzing Green Finance: A Concept for Leveraging Blended Finance for Green Development

¹⁵² World Bank, “Using Carbon Revenues,” Technical Note (World Bank, 2019).

¹⁵³ Asian Development Bank, Decoding Article 6 of the Paris Agreement (Asian Development Bank, 2018), <http://dx.doi.org/10.22617/TIM189218-2>.

¹⁵⁴ Jae Edmonds et al., “The Economic Potential of Article 6 of the Paris Agreement and Implementation Challenges”

electric railway lines, which creates new axes of development in a country. Wherever a train station will be created, some new sources of economic wealth will start to emerge. Land values will rise in the proximity of the station, given the new access thus created. Buildings in and around the train stations can be developed to create residential housing and commercial real estate, such as shopping centers, which will create some new value directly linked with the new infrastructure. The Nepal government and the relevant ministries must look into new forms of value creation around infrastructure, which will allow Nepal to build such infrastructure¹⁵⁵.

In order to finance new infrastructure, the value that is created by these new projects can be captured through various mechanisms and, using a green bond, this value accruing in the future can be brought back to the present time and used to finance the needed infrastructure. This model has been applied with a lot of success in various Asian cities (e.g. Tokyo, Seoul, Hong Kong, Singapore, etc.) and can be used by Nepal to develop its economy in a very efficient way. Electric railway lines are an important sector within the green finance space. For example, the BTS Group in Bangkok has issued a very successful green bond to finance the construction of two new railway lines in the Thai capital¹⁵⁶.

Insurance: Insurance is at the heart of the green financial model because of its role of risk manager, risk carrier and investor and can play a key role in green finance across various sectors. In the private consumer field, green insurance is commonly categorized into three broad fields: green insurance in transportation, homes and businesses. Particular tools within these themes are highlighted in the table below.

Green Insurance Sector	Specific Policy
Transportation	<ul style="list-style-type: none"> Hybrid vehicle premium discounts Endorsements that allow hybrid replacement Alternative fuel premium discounts
Homes and Buildings	<ul style="list-style-type: none"> Premium discounts for LEED certified homes. Eco-friendly replacement materials endorsements Broad coverage for alternative energy sources
Businesses	<ul style="list-style-type: none"> Cover installing "green" building systems and materials Allow "green certified" rebuilding

The Nepali Insurance Sector is nascent but growing. In 2018, only 10 percent of citizens had access to any insurance, while this is projected to grow to 27 percent by the end of the 2020 fiscal year.¹⁵⁷ In particular, home insurance and coverage for farms have been rising since the 2015 earthquake.¹⁵⁸ An increasing interest among consumers to purchase insurance in Nepal is a positive sign for insurance providers. This also highlights that the insurance sector is going to

¹⁵⁵ ADB. 2019. Sustaining Transit Investment in Asia's Cities: A Beneficiary-Funding and Land Value Capture Perspective. <https://www.adb.org/publications/sustaining-transit-investment-asia-cities>

¹⁵⁶ BTS Group. 2019. BTS Group Green Bond receives well-responded from institutional and high-net-worth investors. <http://www.btsgroup.co.th/en/update/news-event/505/bts-group-green-bond-receives-well-responded-from-institutional-and-high-net-worth-investors>

¹⁵⁷ NRB Annual Report, 2019

¹⁵⁸ The Kathmandu Post. 2017. Insurers told to settle flood damage claims. <https://kathmandupost.com/money/2017/08/19/insurers-told-to-settle-flood-damage-claims>

play an increasingly important role as investors. Therefore, innovative insurance schemes such as parametric insurance needs to be explored in Nepal to safeguard the risks arising from climate change such as flooding while ensuring the insurance sector invests in green sectors.

The Philippines has issued a Catastrophe Bond with the World Bank and raised USD225m in 2019, whose notional value is linked with the occurrence of natural disasters.¹⁵⁹ In the case of Nepal, it is possible to structure a similar Sovereign bond around the occurrence of earthquakes. There is an active investor market for “cat” bonds globally and these instruments can be directly linked to the Climate Resilience Principles,¹⁶⁰ for example.

Funds: There are a series of special funds that are directed towards investing in green projects as highlighted above in Figure 9. One such important fund is the Green Climate Fund (GCF) which Nepal has been engaging with already. However, the Private Sector Facility of the GCF is something noteworthy to highlight given it has the primary mission to engage both the local and global private sector to support climate change mitigation and adaptation projects in developing countries.¹⁶¹ As of October 2019, 25 private sector projects have been approved for GCF resources amounting to USD 2.2 billion and mobilizing an additional USD 7 billion in co-financing under the Private Sector Facility. Nepal is yet to utilize funding under this GCF mechanism although progress is currently being made by some BFs in Nepal to develop readiness in attracting financing through this platform.¹⁶²

Digitalization and Fin-tech: The use of new financial technology is rising in the green and sustainable sector and is providing promising results. In particular, new financial technologies such as block chain, the Internet of Things, and big data offer the potential to unlock green finance. The Asian Development Bank outlines the possible application of financial technology to green finance in three broad areas: block chain applications for sustainable development; block chain use-cases for renewable energy, decentralized electricity market, carbon credits, and climate finance; and innovation in financial instruments, including green bonds.¹⁶³ Such benefits range from the use of block chain in increasing efficiency and decreasing transaction costs in projects ranging from cook-stoves and electricity markets to carbon markets.¹⁶⁴ However, it is important to mention that block chain is in itself an energy intensive sector and therefore requires careful evaluation and particular studies to evaluate its feasibility in the context of Nepal.

Building upon the existing initiatives on digitalization and fin-tech to increase access to finance such as the ones highlighted above in section 3.5, it is important to leverage the private sector as well as SMEs because they can help innovate and diffuse digitalization and fin-tech that cater to the needs of local people. One such example from the role of Gham Power Private Limited is highlighted in the box below.

¹⁵⁹ World Bank. 2019. World Bank Catastrophe Bond Transaction Insures the Republic of Philippines against Natural Disaster-related Losses Up to US\$225 million. <https://www.worldbank.org/en/news/press-release/2019/11/25/world-bank-catastrophe-bond-transaction-insures-the-republic-of-philippines-against-natural-disaster-related-losses-up-to-usd225-million>

¹⁶⁰ Climate Bonds Initiative. Climate Resilience Principles. See more at <https://www.climatebonds.net/climate-resilience-principles>

¹⁶¹ Green Climate Fund. 2019. The Green Climate Fund's Private Sector Facility. <https://www.greenclimate.fund/document/green-climate-fund-private-sector-facility#:~:text=GCF%20has%20a%20Private%20Sector,adaptation%20projects%20in%20developing%20countries>

¹⁶² Based on the interview with UNCDF, it was known that UNCDF is working on a private sector financing strategy to fund green projects in alignment with the Private Sector Facility of the GCF. The Nepal Investment Bank is also working towards the same.

¹⁶³ D. Nassiry. 2018. The Role of Fintech in Unlocking Green Finance: Policy Insights for Developing Countries. ADBI Working Paper 883. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/role-fintech-unlocking-green-finance>

¹⁶⁴ M. Scott. 2019. From cookstoves to carbon markets: how blockchain is supercharging sustainability. Reuters Events. <https://www.reuters.com/sustainability/cookstoves-carbon-markets-how-blockchain-supercharging-sustainability>

Gham Power Private Limited

Established in 2010, Gham Power Nepal Private Limited is a renewable-energy focused social enterprise based in Kathmandu. Till date, Gham Power has installed over 2500 solar projects that cumulatively generate 2.5 MW of electricity and has since its establishment, shifted focus from urban electrification to serving under-served rural markets. Gham Power has also become the first enterprise to install Micro grid in rural Nepal as well as the first energy enterprise in Nepal to adopt a Pay-As-You-Go (PAYG) scheme. It has installed 8 solar pumps in Kailali and Bardiya districts to promote aqua culture under the vendor financing mechanism promoted by CREF with UNDP and UNCDF support.

Partnering with local microfinance institutions, Gham Power has launched the “Yield Improvement in a Box Solution” and uses digital technology to provide access to finance to local farmers in pursuing reliable solar irrigation systems and technology with zero upfront costs. To do so, they have a digital platform called “Off-Grid Bazar” which utilizes the documentation from the microfinance institution of a particular farmer to recommend the optimal solar pump to meet the needs of the farmer. They also provide regular free Agri-advisory services through connected smart phones. Furthermore, they also have an equally relevant crowd funding platform that allows foreign investors/donors to invest directly in energy projects in Nepal.

Green Budgeting: Green budgeting refers to using the tools of budgetary policy making, including evaluating environmental impacts of budgetary and fiscal policies, to align public revenue and spending processes with environmental and climate goals. Green budgeting can play an important role in the context of Nepal that relies heavily on public financing such that public finances also follow green criteria and are held accountable if they are not doing so. Some of the tools countries can utilize under Green Budgeting include green budget tagging, environmental impact assessments, ecosystem services, including carbon pricing, green perspective to spending review, green perspective in performance setting.¹⁶⁵ Utilizing green budgeting also requires an enabling budgetary governance framework. The design and adoption of a Green Budgeting Statement as a key reporting tool can help ensure accountability and transparency.

Nepal has already made strides in climate budgeting. In 2013/14, Nepal's National Planning Commission released the 'Climate Change Budget Code'. The code outlines the criteria and method to track climate public expenditure and thereby facilitate prioritization of allocating development investment on the most vulnerable areas and key sectors.¹⁶⁶ This not only helps assess climate relevant investments through regular development programmes but also gives information about the level of public funding and helps identify the ministries implementing climate relevant programmes and their budget.¹⁶⁷ However, two limitations remain: first, the code is inadequate to identify the required level of funding to meet the needs in absence of required information to plan climate responses in the development plans; second, there is also a chance of overestimating the climate budget because a budget is counted as climate change relevant if it falls within one of the eleven criteria that defines a climate activity, which is subject to the interpretation of sector planners.¹⁶⁸ Alongside the need to update the climate budget code, there is also an opportunity to adopt a robust definition for “green” and to expand the budget code to incorporate green projects as well and not just projects in climate change.

¹⁶⁵ OECD. 2017. OECD Green Budgeting Framework. <https://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf>

¹⁶⁶ National Planning Commission. 2012. Climate Change Budget Code. Government of Nepal. <https://www.npc.gov.np/images/category/Climate-change-budget-code.pdf>

¹⁶⁷ Ministry of Finance. 2017. Climate Change Financing Framework: A roadmap to systematically strengthen climate change mainstreaming into planning and budgeting. Government of Nepal.

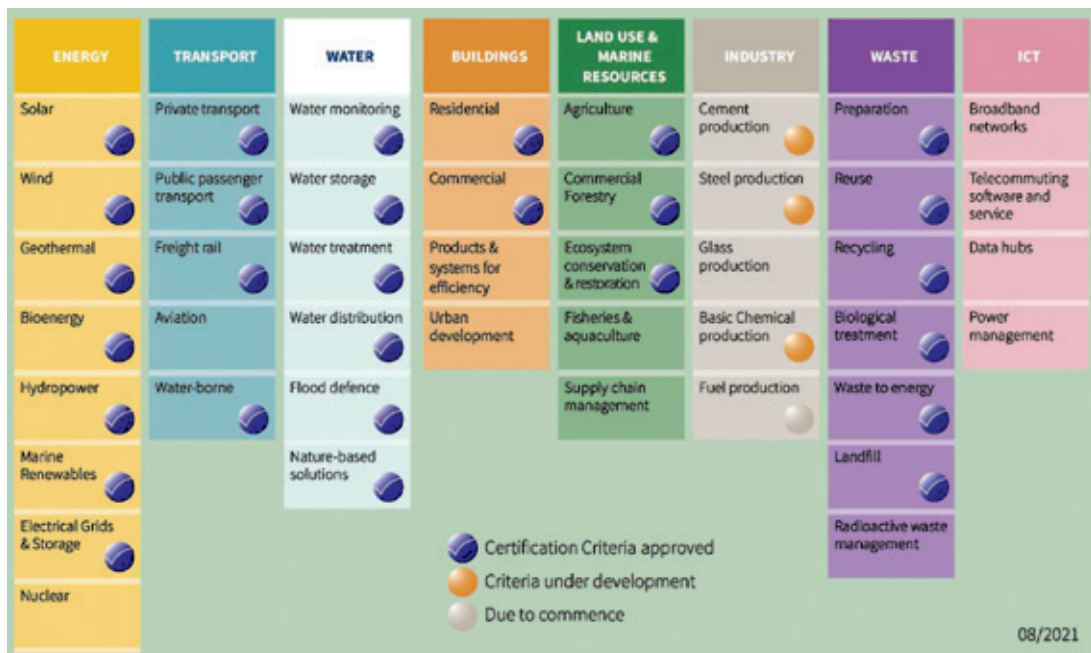
¹⁶⁸ *Ibid.*

In terms of international resources, the Paris Collaborative on Green Budgeting (PCGB), convened by the OECD, is one avenue that develops concrete and practical guidance to help governments at all levels embed consideration of climate and environmental goals within their budget frameworks. It also identifies research priorities and gaps to advance the analytical and methodological groundwork for green budgeting.

4.4 Sector Specific Initiatives

It is important to look at sector specific initiatives because the availability of projects alongside their varying greenness is important in accessing the benefits of green finance. There is a big potential for renewable energy in Nepal. In terms of large-scale projects, hydropower has received the most interest and investments in the country as the incumbent renewable energy sector. However, it is important to note that large hydropower projects may not be referred to as green. For example, the Climate Bonds Initiative only recently started providing certification to bonds whose proceeds go towards large hydropower projects.¹⁶⁹ The complete list of projects based on specific sectors alongside the project subcategory employed by the CBI in green bond certification is provided in below in figure 12.

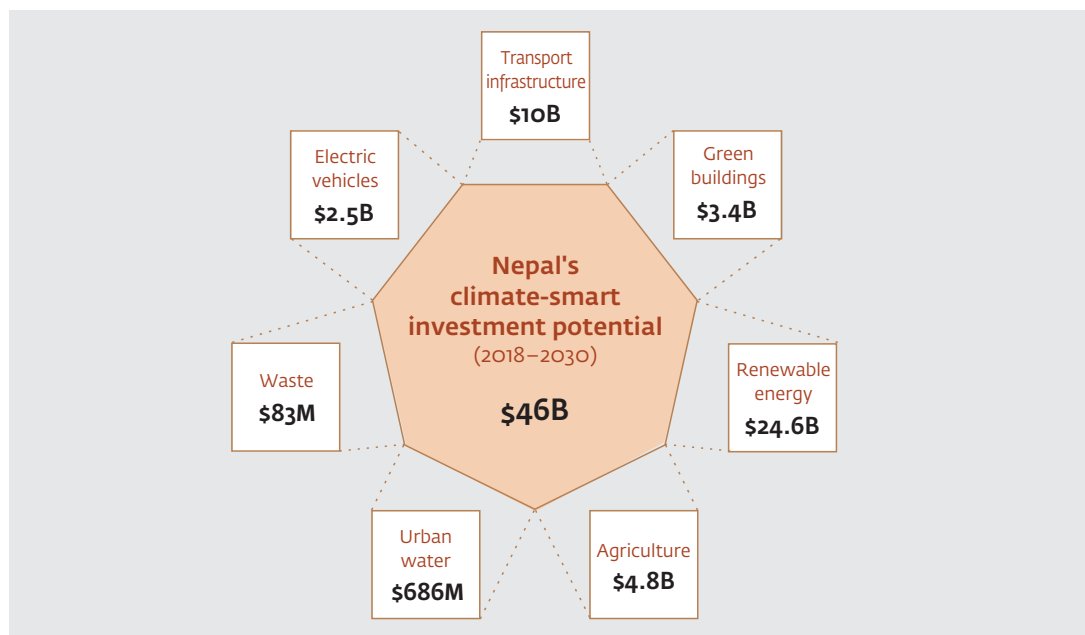
FIGURE 12 TAXONOMY OF CRITERIA FOR GREEN BOND CERTIFICATION FOR THE CLIMATE BONDS INITIATIVE



Source: Climate Bonds Initiative. 2021

Within these several green projects as characterized by the CBI, there is an abundance of potential within Nepal to develop projects via green finance tools and instruments. These potential green sectors include agriculture, energy, transport, tourism, buildings, water and waste. These sectors are in various stages of being green with the energy sector being dominated by the share of hydropower while the transportation sector being largely dominated by fossil-fuel usage. The sector specific investment potential for Nepal is estimated at USD 46 bn as highlighted in below in figure 13.

¹⁶⁹ Climate Bonds Initiative. Hydropower Standard. See more at <https://www.climatebonds.net/standard/hydropower>

FIGURE 13 NEPAL'S CLIMATE INVESTMENT POTENTIAL BROKEN DOWN BY SECTORS¹⁷⁰

Source: International Finance Corporation (IFC). 2017

Sector specific initiatives are needed. Green Buildings can be an important axis of development for Nepal, leveraging on the experience gained throughout the world by others. For this sector to become attractive for the issuance of green bonds, it is necessary that a certification scheme be developed to identify the energy savings, which can be associated with such buildings. The EDGE¹⁷¹ certification by the IFC can be used as a frame of reference for this purpose.

Sustainable tourism, climate smart agriculture and agri-business industries are referred to as “growth drivers” in the context of Nepal as they enjoy a strong comparative advantage and have the potential to spur large export markets and job creation.¹⁷² Working with SMEs to help diffuse innovative technology, such as solar irrigation pump, in the agriculture sector can help with productivity and high yield output towards the growth of climate smart agriculture in Nepal. There are opportunities to greening tourism value chains which provide cross-sectoral opportunities to focus on enhancing energy efficiency such as with green buildings, greening the transportation and mobility sectors, and focusing on solid waste management to create a systemic change in the existing portfolio. One example could be to work with in financing the large hotel industry in greening their value chains in contrast to local tea houses and home stays which enjoy a considerable advantage in being eco-conscious and green.

Waste management provides additional opportunities. In October 2020, the Global Green Growth Institute (GGGI) and the Swedish Energy Agency agreed to develop a mitigation activity that focuses on the waste sector in Nepal with the goal of completing transactions of internationally transferred mitigation outcomes (ITMOs) as a pilot for the next generation of carbon markets under Article 6.¹⁷³

¹⁷⁰ IFC. 2017. Climate Investment Opportunities in South Asia. Please note that the potential in the waste and urban water sector should be in the millions and not in the billions i.e., Waste (\$83 million); Urban Water (\$686 million).

¹⁷¹ IFC. Edge Buildings. See more at <https://edgebuildings.com/>

¹⁷² *Ibid.*

¹⁷³ GGGI. 2020. GGGI and SEA to develop four mitigation activities generating ITMOs in energy, waste, and manufacturing. <https://gggi.org/gggi-and-sea-to-develop-four-mitigation-activities-generating-itmos-in-energy-waste-and-manufacturing/>

Way Ahead: Fulfilling the investment potential requires significant efforts in not just resolving the barriers but also developing sector specific initiatives, particularly in utilizing the role of private sectors.¹⁷⁴ This requires government incentives and enabling environment. The role of private sector development alongside the challenges faced and policy interventions required has been duly captured by studies from IFC. Accordingly, among the host of business climate challenges faced by Nepal's private sector, the most critical relate to institutions and infrastructure.¹⁷⁵ Although a gap in technical skills and managerial capabilities is limiting growth-oriented firms from scaling up and rising up the value chain is a challenge, governance of policy design, implementation and monitoring is a major impediment to the growth of private sector in Nepal.¹⁷⁶

A sector specific taskforce, that includes local level governments who have the best reach in these projects, can provide the necessary market and regulatory assessment to provide accurate recommendations on furthering sector specific initiatives as well as in utilizing the right financial tools and instruments for these sectors. The latter is particularly important as different financing instruments can be relevant depending on the sector and the scale of the project. This can be complemented by existing studies such as the IFC study on Private Sector Diagnostics in Nepal which provides sector specific assessment and recommendations.¹⁷⁷ A taxonomy of eligible green projects depending on how Nepal defines green which includes a detailed list of indicators that can be used to quantify impact can also incentivize investors in going beyond hydropower investments and into what a variety of other sectors have to offer. The World Bank guide on "Developing a National Green Finance Taxonomy" can help Nepal be the guiding document in drafting a national taxonomy.

Once done, Nepal needs to find innovative ways of creating a pipeline of bankable green projects that can attract both domestic and international investors, through a variety of funding mechanisms to kick start green financing in the country.

¹⁷⁴ Please see Climate Investment Opportunities in South Asia - An IFC Analysis for a detailed understanding on project specific initiatives and the necessary recommendations to achieve the investment potential for these sectors.

¹⁷⁵ IFC. 2018. Creating Markets in Nepal: Country Private Sector Diagnostics

¹⁷⁶ *Ibid.*

¹⁷⁷ Please see IFC.2018. Creating Markets in Nepal: Country Private Sector Diagnostic. https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/creating+markets+in+nepal+country+private+sector+diagnostic





5

WAY FORWARD – STRATEGIES & POLICY RECOMMENDATIONS



Against the baseline of Nepal's portfolio already being green, Nepal's primary focus in greening its financial system moving forward should be defined through a comprehensive roadmap that is clear and enforceable to build an ecosystem for green finance. In fact, this report is already a step towards a roadmap as its structure is largely drawn from various national sustainability and green financing roadmap. Specific and subsector action plans need to be further developed to reflect the comprehensive actions that need to be taken.¹⁷⁸

Without reinventing the wheel, it is recommended to move forward based on the recommendations provided on the basis of the progression matrix from the Sustainable Banking Network as it has clear and quantifiable targets and is widely used to assess the level of how sustainable a banking system is. In fact, the IFC through SBN provides a clear roadmap to what are the key policy areas that need to be addressed in greening Nepal's financial system.¹⁷⁹ But furthermore, it is important to go into detail and address some specific barriers that exist in the country. Accordingly, the table below employs the recommendations made by SBN and is furthered by other relevant recommendations in the context of Nepal. The efficacy of these recommendations in developing Nepal's green finance system can be evaluated by several indicators which needs to be studied in detail, among which the progress of Nepal in the SBN evaluation matrix is perhaps the big indicator.

The recommendations in way forward are also largely regulatory driven which is, however, expected given the nuances of Nepal's financial system.¹⁸⁰ Several of these recommendations, however, would pave the way for increased role of the market and the private sector moving forward.

Theme	Recommendations
Green Finance Fundamentals	Define and adopt a green finance definition with a clear distinction between “climate finance”, “green finance”, and “sustainable finance”. See IFC definition on green finance; OECD on developing sustainable finance definitions.
	Develop sector specific taxonomies with clear evaluating thresholds. See China SDG Finance Taxonomy; EU Taxonomy; Word Bank guide on Developing a Green Finance Taxonomy
	Develop tools and guidance to assess green projects.
	Develop green project MRV and certification scheme.
	Develop a clear project pipeline of green projects to incentivize investors. See the development of a robust project pipeline in Colombia; European Union. NDC Partnership, the Climate Finance Accelerator, NDC Invest, the Global NDC Implementation Partners (GNI Plus) can assist.
Make explicit recommendation for external party verification	

¹⁷⁸ UNEP. 2016. National Sustainable Finance Roadmap of Mongolia. Unlocking Mongolia's Potential to Become a Sustainable Finance Knowledge Centre in the Region

¹⁷⁹ Please see 2019 Nepal Progress Report from SBN.

¹⁸⁰ Although market mechanisms and increased private sector engagement is key, interviews with experts suggest that largely regulatory driven approach is needed given the current state and trends. Furthermore, this unwillingness of government to mobilize private sector extends beyond the green finance industry.

Policy Incentives	Provide broad policy signalling to promote green finance (monetary policy, etc.):
	<ul style="list-style-type: none"> • Directed green credit policy instruments (e.g. subsidized loan rates for priority sectors, interest rate discounts, guarantees) • Differentiated reserve requirements • Differentiated capital adequacy requirements
	Develop a National Green Finance Roadmap. See Bangladesh, Sri Lanka Sustainable Finance Roadmap, Mongolia Sustainable Finance Roadmap
	Allocate resources to green activities through targeted refinance schemes, matching funds, guarantees and other risk sharing instruments (credit guarantee fund)
	Promote access for green start-up to international green funding sources including concessional funding, venture capital, grants, and technical assistance
	Introduce Green Foreign Direct Investment (FDI) Guidelines. See green FDI by UNCTAD & OECD
	Alignm to NDCs and national or regional climate change targets
	Provide guidelines for issuance of green bonds
	Promote green procurement practices
Governance and Coordination	Establish a Green Finance TaskForce with the representation of the civil society. See China Green Finance Taskforce; UK Green Finance Taskforce
	Develop a Governance & Coordination Action Plan and Budget
	Set up Thematic Working Groups with a clear agenda (e.g. develop pipeline for green projects,
	Establish bi-lateral collaborations with other countries and institutions
	Track progress and report publicly the latest states and trends.
	Provide capacity building to Financial Institutions, regulators & policymakers, local governments, project developers, NGOs & civil societies, and the broader stakeholders identified in this study.

REGULATORY	<p>Enforce compliance of the ESRM guidelines. See Bangladesh</p> <hr/> <p>Provide Financial and/or non-financial incentives including capacity building for the implementation of ESRM</p> <hr/> <p>Remove the strict limits to lending by foreign institutions, which is allowed only in case of unavailability of domestic debt and is subject to an interest rate cap of LIBOR plus 5.5 percent.</p> <hr/> <p>Make Reference to international E&S targets and greenfinance reportingstandards</p> <hr/> <p>Allow developers to sign dollar Power Purchase Agreement to ease FDI</p> <hr/> <p>Adopt and enforce the requirement of report on portfolio climate risk exposure</p> <hr/> <p>Explore the usage of carbon pricing mechanisms and use the generated revenue can then the progress towards a green economy.</p> <hr/> <p>Strengthening green budgeting system to ensure public finance is prioritized to fund for green projects</p> <hr/> <p>Promote the measurment subpilalr under the pillar of green and climate finance based off the SBN framework. This should require:</p> <ul style="list-style-type: none">• Requirement to calculate investments' environmental benefits• Taxonomy of potential environmental impacts• Methodologies, tools, templates to measure/report impacts• Requirement to monitor climate risk exposure at portfolio level• Reference to specific climate exposure methodologies• Encouragement of mitigation steps
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6

APPENDIX 1 GLOSSARY OF GREEN FINANCE PRODUCTS



Product Type	Green Product	Definition ¹⁸¹
DEBT	Green Bonds	A green bond is a type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental projects.
	Green Mortgages	A green mortgage is a mortgage specifically targeted at green buildings.
	Diaspora Bonds	A diaspora bond is a bond issued by a country to its expatriates. These bonds allow developing countries in need of financing to look to expats in wealthy countries for support.
	GDP-linked bonds	A GDP-linked bond is a debt security or derivative security in which the authorized issuer (a country) promises to pay a return, in addition to amortization, that varies with the behavior of the GDP .
	Green Loans	A green loan seeks to enable and empower businesses to finance projects which have a distinct environmental impact, or rather, which are directed towards financing ' green projects '.
	Green Commercial Building Loans	A Green Commercial Building Loan is a green loan targeted towards the commercial building sector for greening its construction and operations.
	Green Car Loans	A loan with a discounted interest rate on car loans for low emission vehicles to encourage borrowers to be more environmentally aware.
EQUITY	Green Initial Public Offerings	A green initial public offering (IPO) is a release of shares to members of the general public from a previously private company that develops or makes environmentally friendly products.
	Green Stock Indices	Green Stock indices provide integrated information that has been screened and verified concerning the environmental impacts and performance of companies.
	Green Venture Capital & Private Equity	Green private equity is a funding mechanism that helps entrepreneurs secure sustainable venture capital . Green private equity firms supply venture capital to companies that are focused on sustainability.

¹⁸¹ Please note that these definitions have been included in the document from available resources without explicit citations given it is only presented in tabular format as a glossary of common items.

INSURANCE	Green Insurance	Green insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental and economic sustainability .
	Weather Index-Based Insurance	Weather index-based insurance manages weather and climate risk by using a weather index , such as rainfall, to determine payouts which can be made more quickly and with less argument than is typical for conventional crop insurance .
	Catastrophe Risk Insurance Facility	Catastrophe Risk Insurance Facility is a multi-country risk pool and an insurance instrument to successfully develop parametric policies backed by both traditional and capital markets.
ASSET MANAGEMENT	Green Funds	A green fund is a mutual fund or another investment vehicle that will only invest in companies that are deemed socially conscious in their business dealings or directly promote environmental responsibility.
	Vertical Funds	Vertical funds are global programs for allocating official development assistance that focus specifically on an issue or them such as environment and climate change.
	Microfinance Investment Funds	Microfinance Investment Funds are Investment Funds targeted to bringing capital to the world of microfinance to produce a combination of financial, environmental and social returns.
	Carbon Funds	Carbon Funds support and encourage projects such as energy efficiency and renewable energy projects with long-term greenhouse gas (GHG) abatement benefits .



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