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An Analysis of Impact of Climate Finance on MSMEs and Entrepreneurial Growth

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Abstract

Improved development and better financing for economic growth may be achieved through sustainable Finance (SF). The natural system must be protected and restored to achieve sustainable development. SIDBI, NITI Aayog, and the World Bank work together to make SF available to businesses of all sizes, from Microenterprises to Multinational conglomerates. Financial instruments such as climate funds, green bonds, impact financing, social bonds, microfinance, the SIDBI SF Scheme for funding, NABARD, and Make in India are the most important sources of sustainable financing for Small and Medium-sized businesses enterprises (MSME). As part of its commitment to achieving net-zero emissions by the year 2070, India has several MSMEs and SMEs involved in the Projects of solar power plants; renewable energy; green machinery; waste management; electric vehicles (EV); clean energy; recycling; poverty alleviation; and energy conservation. As a way to help the green economy flourish and to satisfy the sustainable development goals (SDGs) and ESG (Economic, Social, and Environmental) fundraising requirements, the RBI has determined that eco-friendly and environmentally friendly initiatives should be prioritized for priority sector lending (PSL). This article analyzes financial mechanics for green production and sustainable development using theoretical notions. Increasing the ESG to support long-term economic growth and the sustainability of small and medium-sized enterprises (SMEs) and large corporations (Government of India) through climate change missions is essential.

Keywords: Climate Finance, Environmental Finance, Sustainable Finance, Green Finance.

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Introduction

One way to combat climate change and its effects is to regulate emissions and promote renewable energy and sustainable development towards ESG-environmental, social, and governance. Sustainable Finance (SF) is one of these financial instruments. People and our planet will be better off in the long run if we work together to create a more sustainable, equitable, and resilient future for ourselves and the world. US and European financial markets saw the emergence of socially conscious investing as far back as the mid-to-late-1960s and early 1970s (Boxenhaum & Gound,2006). The Father of the Green Revolution, M.S. Swaminathan proposed the idea of an "Evergreen Revolution" in India, and the United Nations Environment Programme (UNEP) has played a significant role in defining and supporting the "Green Economy" to lessen environmental dangers. It is necessary to provide financial support for projects that reduce carbon emissions and pollution and improve energy and resource efficiency in fields such as clean technology. India's economy is among the world's fastest-growing and rising markets in terms of growth. Global Climate Risk Index 2021 ranks India as the seventh most susceptible country to climate change, with a 2019 loss of USD 69 billion, as evidenced by the country's vulnerability. Agricultural land use was responsible for 17% of world GHG emissions and 16% of India's

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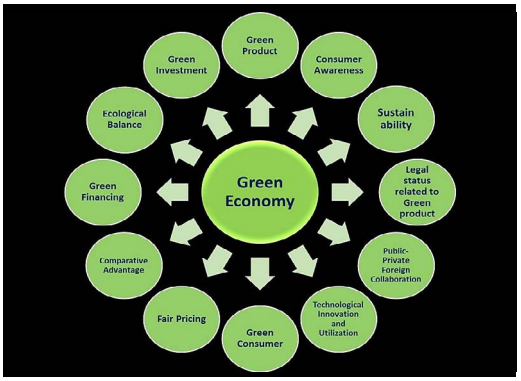


Source: https://environmentaltalking.blogspot.com/

Chart 1: Green growth indicators

total GHG emissions. Increased investment prospects in solar power generation are expected to result from India's One Sun, One World One Grid (OSOWOG) and the International Solar Alliance's (ISA), and the Green Grid Initiative's (GGI) initiatives at the Paris climate change conference in the coming years.

New definitions of MSMEs and Companies based on turnover and investment. Micro-enterprises Companies with a turnover of less than Rs. 5 crores and an investment of less than Rs. 1 crore Enterprises of this size Core medium enterprises (CMEs) are companies with less than Rs.10 crore and a revenue of Rs.50 crore. Limited liability companies (LLCs) with annual revenue under US$250 million that have less than 50 crore rupees invested.

SMEs and Climate Action

As the "backbone" of a country's economy, small and medium-sized enterprises (SMEs) are sometimes referred to as "indispensable" for a country's growth. More than half of all businesses are registered in emerging economies, and those countries account for more than a third of global GDP (Alibhai et al., 2017). The ILO (2019) finds that micro-sized and small firms (including formal and informal sectors) are 40.4 percent in low-income countries, 29.2 percent in lower-middle-income countries, and 40.5 percent in higher middle-income countries, based on alternative data resources.

As a result of the Covid-19 epidemic, small and medium-sized businesses have received more attention from international policymakers. Before 2015, the G20 put SMEs on the agenda, and the subject of how to effectively support SMEs for economic development has been at the top of the agenda ever since (GPFI 2016). The ILO (de Kok et al. 2013; ILO 2019), the OECD (Koirala 2018; OECD 2018; 2020b; 2020c), and the World Bank Group (Stein) are also important policy actors. Alibhai et al. 2017; Kumar 2017; WBG 2019), and the World Economic Forum (WEF 2016; 2020) have performed extensive research on the significance of SMEs for the global economy and the support these firms require to start-up and scale up. This COVID-19 epidemic has emphasized policy measures that target small and medium-sized enterprises (SMEs) (Kamal-Chaoui 2020; OECD 2020a).

Small and medium-sized enterprises (SMEs) have been hit the hardest by the epidemic's present economic crisis (OECD 2020a). SMEs are overrepresented in sectors like tourism and retail that are severely affected, such to inventory shortages, low cash reserves, shrinking customer bases, and credit restrictions (Kamal-Chaoui 2020). Global "economic backbone" stabilization will be critical in the coming years. The international community fights the short- and long-term consequences of the pandemic and climate change on the global economy. SEED's (2020b) research on SEED-supported SMEs' Covid-19 coping techniques gives qualitative evidence of the resilience of SMEs in recent times, even if these are challenging times for SMEs. An entrepreneurial spirit and a wide range of knowledge may be used to help small businesses adapt to climate change. In socially responsible, inclusive climate action, SMEs play an essential role. There are several ways in which small and medium-sized enterprises (SMEs) may contribute to social and environmental sustainability by taking on different responsibilities in delivering on climate action goals. People who are socially and economically disadvantaged are more vulnerable to climate change.

Climate change particularly impacts vulnerable people, making it a significant obstacle to sustainable development if it goes unchecked (IPCC 2014). Only one in five of the world's 107 low-income nations has a healthy, educated, and sustainable workforce, according to a UNDP (2020) assessment of 107 low-income countries' health, education, and sustainable livelihoods. Because of this, the world's poor are particularly vulnerable to the adverse effects of climate change and have no means of defending themselves against them (IPCC 2014; Olsson et al. 2014, UNFCCC 2018). As a result, climate change-related health deterioration, loss of livelihoods, and displacement exacerbate poverty and marginalization already suffered by the poor.

Women, one of the most vulnerable demographics, are particularly hard hit by climate change (IUCN 2015), and their ability to adapt is much more constrained (Aguilar Revelo et al. 2015). Global leaders have long understood that climate change and sustainable

development are linked. The 17 SDGs, of which seven specifically address climate change action, clearly express this understanding. By creating jobs and providing goods and services to rural and urban areas alike, small businesses help ensure more equitable and long-term development for the world's most disadvantaged people. Small and medium-sized enterprises (SMEs) play a critical role in promoting climate action in rural and urban areas where vulnerable populations are most at risk. Four out of every five new formal employment in developing economies are created by SMEs, which also absorb most of the unorganized labor population in low-income nations (UNDESA 2020).

As a result of the job opportunities provided by SMEs, marginalized or vulnerable populations, such as women and youth, are given more excellent agency and are better equipped to adapt to and mitigate the effects of climate change. It is observed that grassroots climate action at the local level has a higher success rate in establishing trust with local people and institutions because it is more sensitive to local conditions and includes participation from socially marginalized groups (IIED 2017). According to the International Labor Organization (ILO) (2017), female full-time permanent employees in the formal sector are more likely to work in SMEs (31 percent) than in more prominent organizations (27 percent); and Female managers more frequently manage SMEs. According to World Bank data from 2013, most Small and Medium-sized enterprises (SMEs) are concentrated in urban areas.

In rural areas, where most of the world's poor reside, SMEs' employment impacts are significant, as climate change increasingly affects their livelihoods (IPCC 2019). SMEs play a critical role in absorbing substantial proportions of formal and informal labor in rapidly increasing metropolitan environments plagued by rising economic inequality (Euromonitor 2013, 2017; UNEP 2015) and increased frequency of climate catastrophes (Kjellén 2019, UNEP 2015). SMEs play a critical role in the fight against climate change, but international policy frameworks and pledges do not adequately address the routes through which they acquire crucial roles. On the next page, you can see two examples of national climate action and development objectives in the Country Spotlight on Policy—Climate Change Mitigation and Adaptation Objectives.

Ugandan climate action policies acknowledge the private sector less prominently (with a marginal focus on SMEs). In contrast, India has explicitly recognized smaller enterprises' pivotal climate action role and translated this assertion into targeted large-scale initiatives to support SMEs to fulfill their climate action potential in their Nationally Determined Contributions (NDCs). As key private sector actors and levers of socially inclusive development, SMEs are intrinsically linked to achieving intersecting climate and socially sustainable economic development objectives. However, these examples demonstrate SMEs' varying importance in national agendas and policy implementation. Small and medium-sized businesses (SMEs) should be given more credit for developing climate-related solutions in the private sector. Because of their disproportionate vulnerability to climate impacts across sectors, SMEs must actively contribute to disruptive innovation to transcend their status as buyers of products and services for climate change mitigation or adaptation (Fayolle 2019). Calls for more private sector participation in climate change and sustainable development have traditionally focused on large corporations (IISD 2019). However, small and medium-sized businesses (SMEs) demonstrate a tremendous capacity to create goods and services that match consumer demand and can be efficiently supplied to people most susceptible to climate change's consequences (OECD 2017). This is due to both their creativity and ability to think outside the box that traditional businesses use (i.e., a break with business-as-usual). Because of their "high impact potential" goods and services, climate-smart innovators are pioneers in the corporate ecosystem.

It is customary for "climate-smart" SMEs or innovators (innovators) to incorporate vulnerable communities in developing nations and emerging markets into their offerings, consistent with SMEs in general. The difference is that these innovators put their creative potential to use by inventing and implementing new technology, goods, and services that help mitigate and adapt to climate change. Because of their green and climate-resilient business practices, these climate-smart SMEs contribute to developing low-carbon economies and create jobs in such sectors. Over one-quarter of SMEs in other regions, such as the European Union and the United States, provide green products. However, data on climate-savvy SMEs in these regions is few and disaggregated (Eurobarometer 2013).

Business as usual" has been replaced by "climate-smart SMEs," which are high-impact potential change drivers in offering business models from which more may be learned and copied. Climate-smart small and medium-sized enterprises (SMEs) can disrupt business

as usual, according to SEED's nearly two decades of supporting entrepreneurship for sustainable development worldwide. SEED has helped climate-smart firms in many industries, from SMEs that provide renewable energy to farmers and conservationists to corporations that focus on reducing their impact on the environment. Businesses like Daily Dump (featured in the Climate-Smart Enterprises Spotlight – Innovation Pathways on the following page) and Village Energy (featured as part of the SEED Low Carbon Award Winners in 2018) demonstrate how small and medium-sized enterprises (SMEs) can play an essential role in the development of climate-smart products and services while also benefiting their local economies. The tiny group of SME-related climate fund initiatives had the most support from the GCF, the CIF, and the Adaptation for Smallholder Agriculture Program of the International Fund for Agricultural Development (IFAD), with USD 179, 54, and 38 million each.

SME-focused initiatives have received USD 121.1 million, almost one-third of the total authorized funding for all projects. Present funding does not meet SME finance requirements while appreciating the transformational capacity of these private sector players to offer ground-up climate solutions when these figures are compared to USD 13.6 billion allocated for global climate funds at the same time. International climate funds ' present SME-focused project landscape is disproportionately targeted by small and medium-sized enterprises (SMEs) active in agricultural value chains. Small and medium-sized enterprises (SMEs) tend to focus on agriculture, with project volumes of $135.2. The water, sanitation, industrial, and energy sectors have project volumes of $62.6, 39.7, and 35 million. Smallholders and agribusinesses are the primary beneficiaries of SME-related agricultural initiatives, focusing on water availability, soil conservation, risk insurance schemes, and meteorological monitoring systems to improve their climate resilience. Farmers' water irrigation systems are a common focus of Small Business water and sanitation initiatives.

Agribusinesses make up about half of the SME-related energy initiatives assessed. Only 12.9 percent of all SME-related project volume is spent on industrial projects. The GEF is the primary source of funding for many non-agricultural initiatives. Climate-smart SMEs are developing new goods and services to assist their customers in mitigating and adapting to the effects of climate change in various contexts and activities. For example, businesses that are not involved in agricultural production, such as those in renewable energy, waste management, transportation, eco-tourist attractions, and manufacturing. Thus, they are under-utilized in the limited project scope of climate change funding flows.

The project financing quantities allotted to SMEs are lower than those allotted to other beneficiaries. The previously indicated very narrow scope of climate finance investments targeting SMEs - primarily in agriculture. As a percentage of all multinational climate fund programs, SME-focused projects are 30% less expensive. Extending the scope of climate funding to Multilateral Development Banks confirms the image of SMEs as being disregarded (MDBs). According to project databases from the African Development Bank, Asian Development Bank, Inter-American Development Bank, and WBG, just 3 percent of all projects and 1.35 percent of the total amount of funds granted are focused on small and medium-sized enterprises (SMEs). 18 Projects directed towards small and medium-sized enterprises (SMEs) as key beneficiaries across MDBs had project quantities of at least 40% relative to the MDBs' total average project volumes.

As a result, climate financing flows have only slightly included local FIs (microfinance institutions (MFIs) and banks) in the delivery of capital to small and medium-sized enterprises (SMEs). The topic of discussing and estimating the available quantities of climate finance and allocating funds for specific climate goals (i.e., for various mitigation or adaption measures) has drawn considerable worldwide interest. More emphasis should be directed to the most effective and efficient organizations in distributing available funds to maximize good climate-related consequences. In the first strategic pillar of the GEF Private Sector Facility, local financial institutions and notable lenders are called upon to play a more substantial role (GEF 2018).

A similar approach has been used by the GCF's MSME pilot program, which relies on private financing to address the needs of MSMEs from a variety of industries. According to the GCF's pilot program, just three grant requests have been approved since 2016. 19 A deeper investigation is needed to understand why just a few proposals were approved. For the first time, all accepted proposals acknowledge the importance of MSMEs and local financial institutions in climate action. Credit lines and a risk-sharing facility are used in these GCF-funded projects, which include investments in renewable energy and energy efficiency across sectors in Mongolia, Latin American agricultural firms, and women in agriculture in Ghana. In the context of development

cooperation (including climate finance), credit lines remain the predominant means of funding small and medium-sized enterprises (SMEs) through local banks, generally via on-lending programs using commercial banks as intermediaries (Alibhai et al. 2017). It is possible to guarantee that pledged money is delivered to SMEs successfully by using a variety of financial mechanisms, such as systems that respond to seasonality or other limits on the availability of funds for loan repayments and credit lines. In establishing and implementing these systems, the involvement of local financial institutions (FIs) must be emphasized even more.

Climate Finance for Small and Medium-sized Enterprises

Small and medium-sized enterprises (SMEs), particularly those with high impact potential, are an excellent way to extend the private sector's climate change adaptation and mitigation engagement. Increasingly, the private sector is being enlisted to play a more significant role in existing climate financing flows, including but not limited to SMEs. With the GCF Board contributing USD 200 million to the MSME Pilot Program (started in 2016), the GCF committed to enhancing access to credit for small and medium-sized enterprises (SMEs). Micro, small, and medium-sized businesses (MSMEs) to meet the goal of fostering a paradigm shift towards low-emission and climate-resilient development."

Small and medium-sized enterprises (SMMEs) will benefit from GCF's resources (2016 Global Competitiveness Framework). The GCF creates Co-financing options between international financial organizations and local enterprises to "support mitigation, and increasingly, adaptation efforts" (GCF 2020). Similarly, the GEF's Private Sector Facility defined two strategic pillars for the current four-year investment cycle (GEF-7) in 2018: to "mobilize the private sector as an agent for market reform. Private sector involvement should be widened, and SMEs should play a more prominent role as key entities capable of disrupting business as usual among the "vast array of private sector actors that vary in their industry, focus, size, and approach towards environmental issues using a mix of intervention models" (GEF 2018). It has been estimated that by 2030, inclusive and sustainable business models may generate USD 12 trillion in additional revenue and up to 380 million jobs worldwide, according to significant research from the Business and Sustainable Development Commission (BSDC 2017). Due to these commitments, there has been a continuous rise in SMEs as private sector beneficiaries, and levers in the paradigm shift to climate-smart, inclusive economies. However, it is necessary to overcome the gaps mentioned earlier in climate financing flows to achieve large-scale impacts and efficiently transform pledged money into capital delivered to SMEs on the ground to broaden the participation of SMEs as beneficiaries of climate finance.

Leaders in climate finance policy and practice may learn from effective practices in the SME finance and green finance realms to close the gaps mentioned earlier in knowledge. When it comes to environmental and climatic issues, there is a lot of overlap. There has been an increasing focus on private finance and local FIs in facilitating green finance efforts, such as the EU taxonomy for sustainable Finance (2018) and the International Finance Corporation's Sustainable Banking Network (2019). Using (c) SME finance insights, green and climate Finance can adapt funding to fit the requirements and limits of smaller businesses as both inventors and buyers of green and climate solutions mitigation and adaptation to climate change. There has been a lack of coordination between the green and SME finance agendas, but this is changing as attempts to connect these realms continue to rise (UNEP Inquiry 2016). Nonfinancial and financial approaches that have been tested and proved can provide valuable insights into how to better deliver financing to SMEs with high (climate) impact potential across industries. This chapter will use examples from various fields to provide specific proposals for climate funding.

Sustainable Finance in India

SIDBI has offered sustainable financing options for MSME development. There are 6.11 and 24.63% of manufacturing and service activity of micro small-medium firms in India, which adds to the nation's GDP and provides 33.4% of Indian industrial output (Figure 1). It also provides several e-adaptation funding and promotes advanced agricultural technology and a rise in green technology for various development projects as part of NABARD's climate financing facilitation. NABARD has established APL I, a production-related initiative. It links the promotion of organic farming with incentives to increase efficiency in resource usage, good waste management, etc. In 2012 and 2015, the Reserve Bank of India (RBI) revised its Priority Sector Lending and Sustainable Development (PSLD) guidelines to include environmental concerns in analyzing agricultural price development. India's National Institute of Technology

(NITI Aayog) has started a project called Shoonya, which aims to speed up electric vehicles (EVs) in urban delivery. EVs can reduce oil consumption, CO2 emissions, and glasshouse gas emissions. Five pledges for a cleaner world by India in CoP-26 –Climate Summit in Glasgow: At the Glasgow Climate Summit, five commitments were made to enable India CoP-26 to achieve a cleaner planet. The primary objective is to minimize carbon emissions and energy consumption from renewable energy.

Research Gap

Several writers have written about this subject matter as far as green finance technology, e-policies for energy conservation, or environmental sustainability. A European investment bank's involvement in India is the subject of the present study paper, which discusses sustainable financing in several areas. It also examines the country's EV sales and penetration rate, demonstrating its long-term economic progress. This study will consider ancillary units of electric chargers for electric vehicles and green growth as a research need. More sustainable financing for MSMEs and companies in India will be examined.

Augmenting Climate Financing for SMEs

There must be solutions to extend the role of climate financing in realizing the full impact potential of SMEs. To close these holes, we turn to multi-stakeholder collaboration in the next sections of this chapter. The following parts provide information on (a) how to do it efficiently. This includes finding and providing funding for climate-smart SMEs with high impact potential and utilizing the expertise of local financial institutions to facilitate the absorption and delivery of climate finance to these SMEs. An examination of (c) policy measures and methodologies for translating more significant overall quantities of climate funding committed to small and medium-sized enterprises (SMEs) into achieving targeted climate-related outcomes at scale will follow. The establishment of a climate financing pipeline of bankable, high-impact SMEs with an emphasis on impact monitoring and management (IMM) and financial planning and management is possible with quality business development support for SMEs.

Climate finance practitioners and policymakers should broaden their focus to include SMEs from a variety of industries and business activities (rather than concentrating solely on agribusinesses and smallholder farmers) by (a) establishing evidence of the climate impact potential of SMEs from a variety of industries; and (b) supporting local FIs in gaining access to this pipeline of bankable SMEs with demonstrated climate adaptation or mitigation impacts, including by integrating technological solutions. (c) Small and medium-sized enterprises (SMEs) must be helped to understand better, measure, monitor, and communicate their climate effects and the linked social and economic implications to create a pipeline of high-impact prospective SMEs across sectors.

In many cases, green and social companies have significant climatic impacts on the communities they serve but cannot often identify, analyze, and track these consequences. Meanwhile, many small and medium-sized businesses (SMEs) fail to "sell" their climate affect contributions and hence stay outside the scope of climate funding. SME impacts in developing countries must be categorized and tracked in the same way as the EU sustainable finance taxonomy categorizes company activities in the EU environment economies of several developing nations. Impact investing examples, like the IRIS+ System from the GIIN, can be expanded with the help of climate finance experts to categorize impacts and streamline processes for impact measurement and management (IMM) by small businesses themselves. It is not just IMM's mission to demonstrate the transformative power of SMEs in advancing climate change mitigation efforts. Still, it is also crucial to show these firms' social and economic advantages, including job creation and bankability. Increased efforts may be made to track and aggregate effect data across technologies, corporate activities, and national and international agendas using the impact assessment approach implemented by Uganda Green Enterprise Finance Accelerator (UGEFA) (UGEFA 2020a, 2020b, 2020c).

Verified climate effects can offer up new revenue sources for small and medium-sized businesses, for example, by making carbon markets more accessible. A Program of Activities for waste management companies was designed by VNV Advisory and GIZ and is presently registered with the Gold Standard to free up carbon revenue for businesses. To validate the carbon market relevance of smaller trash businesses, this solution offers an optimized and simple-to-use way of enabling SMEs' access to certification. The climate finance solution spotlight provides further information on this approach. Small and medium-sized enterprises (SMEs) operating in developing markets will be able to demonstrate their contribution to climate action that is socially inclusive if IMM ideas and technologies are widely used.

Additional funding from climate funds can help establish a pipeline of bankable small and medium-

sized enterprises (SMEs) that can absorb and sustainably deploy climate investment. SME financing and green enterprise assistance are used to help SMEs understand their climate and associated consequences, become investment-ready, and make educated financial decisions for the long-term future of their enterprises through incubation and acceleration programs. Grants, financing, or equity for climate-smart SMEs can be better utilized for long-term growth and sustainability when coupled with nonfinancial support focused on Finance. For small and medium-sized businesses (SMEs) to get more funding, they need solid financial management and planning abilities (OECD 2018).

Business support methods like investor matchmaking and "toolified" peer learning approaches can help aspiring entrepreneurs and growing SMEs critically self-assess the potential risks and benefits of various sources of capital while preparing to communicate their impact and bankability with financial institutions (SEED 2018b). In addition to BDS providers and business consultants, banks have also taken a more active role in giving business consultancy to establish a pipeline of bankable SMEs, for example, through the Stanbic Bank incubator program. However, to take advantage of the possibilities afforded by green-climate financing and provide funding to a pool of bankable SMEs, these financiers frequently require additional help in technical assistance or specific training. Funding should be made available to enable SMEs across sectors to become more bankable and utilize capital efficiently to increase their beneficial climate-related benefits. SMEs should be able to receive and distribute climate financing from local financial institutions.

Financial intermediaries like banks and microfinance institutions (MFIs) play a critical role in facilitating foreign (climate) financing flow to local businesses. Because of their understanding of the local environment and the country-specific funding ecosystem, these financiers can better help small businesses succeed (ITC 2019). These financial players might fill the smaller "missing middle" sums to aggregate smaller ticket sizes to raise the enormous quantities needed by small businesses and the large sums sought after by investors (ibid). The "missing middle" hotspot of sought Finance needs more leadership from the financial industry. It is possible for decision-makers and practitioners involved in climate finance to increase their commitments to and place a greater emphasis on the role of local financial institutions (FIs) that regularly work with small and medium-sized businesses to help them absorb climate finance and provide them with tailored financing to help them combat global warming. This can help the financial sector shift its mindset to include environmental factors in traditional lending practices.

Small and medium-sized enterprises (SMEs) increasingly rely on local financial institutions (FIs), such as banks, microfinance institutions (MFIs), and other types of financial institutions (LFIs), to help them access climate funding. To better serve small and medium-sized businesses, several commercial banks are already "downscaling" (or relocating "downstream") (Dalberg 2020; e-MFP 2018). Part of this strategy change is a response to competition among banks and government assistance for credit infrastructure building and removing regulatory and legal impediments to SMEs' access to financing, including credit guarantee programs (IFC 2010; EY 2012). Emerging market banks are increasingly establishing SME divisions to encourage investments in smaller businesses.

These units' financial risk management strategies, in particular, have been adjusted to meet the unique restrictions of small and medium-sized enterprises (SMEs), particularly in the areas of credit risk and high customer service expenses (IFC 2010). Small and medium-sized enterprises (SMEs) often require funding beyond the usual microfinance ticket size. As a result, MFIs are looking for ways to "upscale" their product offerings to fulfill these demands (e-MFP 2018). So, banks and MFIs are realizing the value of SMEs across industries and adapting their business operations to market trends in SME demand and the backing of government efforts. Local financial institutions (FIs) play an increasingly important role in climate financing. Those organizations specializing in providing lower ticket sizes and more flexible loan terms to small and medium-sized businesses (SMEs) may take advantage.

For local FIs to fulfill their role as essential intermediaries in the supply of climate finance to small and medium-sized enterprises, it is necessary to develop financial mechanisms that cater to their specific needs. Innovative financing and funding facilitation methods can help financiers handle the requirements of small and medium-sized enterprises (SMEs) by expanding on standard credit lines, which are the principal vehicle for development finance. Evergreen funds (which provide incremental capital), specialty equities markets, and green bonds assist early-stage enterprises in satisfying their growth financing needs, according to SME finance and green finance insights, while investing in their companies in a way that is good for the environment

(UNEP Inquiry 2017; Dalberg 2020). For specialist firms like climate-smart businesses, creative and concessional financing (recoverable grants or pay-for-success convertible notes) has shown to be a viable approach to funding (Dalberg 2020).

Concessional climate finance can address high-interest rates and risk securitization requirements, including expensive collateral requirements, using funding facilitation measures, such as a first loss default guarantee (FLDG). FLDGs are a popular component of financing solutions for small and medium-sized enterprises. TATA Cleantech has created the FLDG financing instrument for SMEs who sell rooftop solar systems, which minimizes loan collateral requirements. Seasonal cash flow swings are a problem for many small businesses, especially those involved in the processing or producing agricultural products. With the help of commercial banks, UGEFA has devised a method to address the cash flow gap in small-to-medium-sized enterprises (SMEs).

Due to the seasonality of production, an SME may have difficulty repaying a loan. In this case, a third-party service provider may step in to cover the loan payment for the SME, reducing the initial risk aversion of financiers. Fintech is increasingly being used to solve the "missing middle" problem faced by small and medium-sized businesses due to their lack of credit history and financial records. To show how alternative data (such as phone payments or supplier invoices) might be utilized to overcome SMEs' poor credit histories, FinMark Trust has developed the Green SME Scorecard. 26 A variety of possibilities for new climate finance delivery methods are illustrated by these case studies, which provide insights into ways of moving away from climate finance's reliance on credit lines, which might miss issues like the seasonality of cash flow cycles or the availability of data.

Local financial institutions (FIs) should be helped to take advantage of climate finance opportunities by sharing their expertise and expanding their capacity based on these creative finance examples. Technical support can help increase the involvement of local financial institutions (FIs) in distributing climate finance resources by increasing FIs' awareness, capacity, and motivation while also lowering transaction costs associated with SME lending. One option is to involve SMEs in their varied roles in climate action and other local players in the bottom-up creation of climate finance tools adapted to SME requirements. An Irrigation System is the focus of the Climate Finance Solution.

Micro leasing for high-value crops shows how boosting awareness among smallholder farmers, integrating seasonally-based repayments, and combining agri-inputs with clean energy technologies may provide adaptation options to smallholder farmers throughout Uganda. The solution creators' detailed and diverse understanding of smallholder farmers' demands and limits and local banks' willingness to provide end-user financing contribute to this solution's success. With hands-on climate finance training aimed at financial institutions (FIs), FIs may learn how to implement and create new creative financing mechanisms. This is similar to the training offered by SEED, CliFit, NABARD, and UGEFA instruments. Climate-friendly or green technology FIs are less experienced with financing and is already benefiting from practical solutions that streamline the application procedure and eligibility checks. Examples include the European Investment Bank's (EIB) EEQuest29, which gives financial institutions an online solution for automating and saving money on eligibility checks for energy efficiency investments by small and medium-sized enterprises (SMEs). As a result, small and medium-sized businesses (SMEs) now have an easier time learning about and obtaining financing specifically targeted to their needs and investment objectives.

Research Methodology

In this study, Secondary data has been taken for study. A comprehensive examination of sustainable Finance's effects on Micro, Small, and Medium-Sized Enterprises (MSMEs) and corporations.

Objectives

- To discover how the government collaborates with ECG to make money more environmentally friendly.
- To examine how sustainable financing is progressing in India.
- To provide an ecologically sustainable model for MSMEs and enterprises.

Sustainable Finance for Climate Finance

India's green economy is expected to create 50 million jobs by 2030 and 15 trillion by 2070 (according to IBEF). The World Bank predicts a 3% decline in India's GDP due to climate change and its resulting adverse impact on the country's inhabitants. This year's sales of the linked foreign bond have risen to a total of $10 billion. One hundred million dollars has been invested in the Indian business sector that focuses on the development of electric cars and waste management, the efficient use of resources, and water conservation. Sustainable Finance

Table 1: Financial mechanism for mitigation and adaptation

Financial Mechanism	Area	Meaning
Sustainable Finance, SIDBI	Integrate Environment, Social, and Governance	Sustainable Finance refers to "any form of financial service integrating environmental, social and governance criteria into the business or investment decisions for the lasting benefit of both clients and society."
Climate Finance India-National Adaptation Fund for Climate Change (NAFCC). National Clean Energy Fund National Adaptation Fund	A low sustainable carbon	Climate Finance is "local, national or transnational financing—drawn from public, private and alternative sources of financing—that seeks to support mitigation and adaptation actions that will address climate change."
Green Finance	The main focus is on diminution in transportation and industrial pollution, climate change, deforestation, and carbon footprint. The area of focus is "Green projects like renewable energies, energy efficiency, environmental audits, and water sanitation."	The Finance that provides funds to environmentally sustainable projects that should lead to green growth in the country is called Green finance.
Green Bonds	Environmental and climate projects.	"Green bonds" and "climate bonds" are used interchangeably. In environmental and climate projects, raising money is a fixed-income instrument.
ESG Bonds Investment/ Funding	ESG Issues	Portfolio of Equities or bonds which integrated investment process includes Environmental, Social, and Governance factors

Conclusion: Financial arrangements for environmentally sustainable projects, both equity & Debt, are called sustainable Finance.

contributes to the country's long-term economic and development objectives. As of 2020, a CFA Institute Trust study involving 3525 retail investors and 921 institutional investors from 15 major markets found that a mere 19% of institutional investors and 10 percent of retail investors were investing in the ESG sector; the remaining 76 and 69% of institutional investors and retail investors were interested in ESG. India has a slew of key actors in the sustainable finance field, including financial institutions such as banks and development banks and international organizations such as the United Nations, the OECD, the Group of 20, and the European Investment Bank (EIB). UNFCCC (United Nations Framework Convention on Climate Change) has been established to help nations in the poor world manage financial risks.

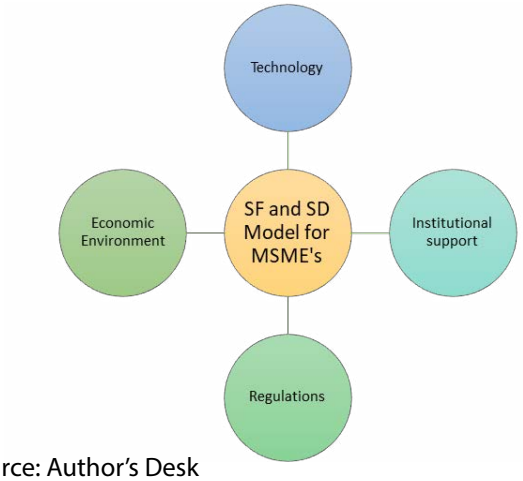
Share of installed generation capacity of different types of fuel:

- In terms of generation capacity, nuclear has a 1.7% share, with Coal 51.9% of the total, diesel has 0.1% share, gas has 6.4% share, lignite 1.7% share, hydropower has 12% share, and wind, solar, and other renewables have 26.4% of the total generation capacity share.
- There is a 40% reduction in the fossil fuel share of generation capacity from 60% of the fossil fuel share (Economic times -28 November 2021)
- The Table 1 below shows the financial mechanism for mitigation and adaptation of clean energy and climate change in many sectors and its meanings.

National Action Plan on Climate Change (NAPCC)

The missions and characteristics of the National Action Plan on Climate Change's NSM, NMEEE, NWM, GIM, NMSA, NMSKCC, NMSH, and NMSHE can help you better understand the environment and ecology.

Energy, transportation, green buildings, and climate-resilient cities are only a few of the many industries that need sufficient financial investment. Pollution reduction and afforestation are also necessary. Green construction



Source: Author's Desk

Figure 1: Sustainable Finance and Sustainable Development Model for MSME'S

will require $1400 billion in investment by 2030, while transportation will require $667 billion. If the 2030 aim for sustainable Finance is met, these industries will continue to expand and flourish. An essential source of funding for climate action, particularly micro-enterprises, is the European Investment Bank (EIB). Europe's lending arm is the European Investment Bank. It is the world's largest multilateral financial institution and one of the world's leading suppliers of climate financing. As a result of financing from the European Investment Bank (EIB), India's micro-enterprise sector is being bolstered in its efforts to combat climate change.

Digitalization technology adoption MSME and Company's AI - Artificial Intelligence, Machine Learning, IoT - The Internet of Things and Robotics will alter the green growth (Chart 1). Using satellite images and sensor data, COP26 climate scientists can estimate emissions using artificial intelligence and machine learning. Today's cutting-edge R2R innovations increase sustainability while also reducing risk through a process known as "risk mitigation ."International Private Equity Investors, Investment Banking Funds, and MSME and companies in the area of clean energy for the protection of people, plants planet, and profit, funding is needed to mitigate and adapt to meet the repercussions of a changing climate.

To raise finances and make efficient use of resources to achieve a carbon-free nation, the Reserve Bank of India (RBI) is formulating regulations that balance the organization's public and private regulatory interests. Sustainable growth may be accelerated through regulations and policies. Creating a better quality of life for current and future generations requires economic and environmental-green production and consumption by MSMEs and large corporations. Newer sustainable technologies for achieving socio-economic and environmental solutions will be created, as will job possibilities and small business growth.

Results and Analysis

Sustainable financing on MSME &Company, green growth, and sustainable development is analyzed using advantages, benefits, limits, and downsides. Government-sponsored schemes and programs, including NABARD, SIDBI, RBI, and Niti Ayoga, were utilized in the study. Development and developed countries work together to promote climate change reduction and adaptation. International Finance institutions, bankers, and governments all have a greater influence on accomplishing sustainable goals when they work together.

The RBI established a framework for ESG disclosure, and the environmental effect was included in commercial loans. The priority sector-leading rate has been extended to small renewables and social infrastructure projects. Governments and institutions have problems adopting green policies because of climate change. Technological advancements and ideas are reshaping Indian industry such that they embrace environmentally friendly, long-term strategies.

The commitment of the Indian government to a low-carbon and environmentally friendly economy. Investing in the green economy is becoming more attractive as large corporations begin to use green energy. New technologies like blockchain, GPUs (graphics processing units), AI, and quantum computing have the potential to revolutionize environmental protection. The producer spent a lot of money building infrastructure and implementing environmentally friendly practices. New policy measures are being considered to facilitate the transition from fossil fuels to non-fossil fuels. ESG Fund involvement is more prevalent in the Western market than in India because of the availability of green and sustainable development facilities and the support of experts. A cross-sectoral effort to improve capacity. Eco-entrepreneurship should be encouraged and supported to achieve a greener and more sustainable future. Several significant modifications have been made to the government's climate change policy. For "a specific climate change Fund, adaptation fund, Least Developed Nations fund," developed countries have not contributed. Diverse financial instruments, such as Green asset-backed securities, and more subsidies are required to help develop RE-related technologies

to achieve long-term sustainability. A growing number of financial institutions are looking to invest in long-term initiatives to boost the economy and safeguard the future of our country. For society, the investing community, and industry, ESG regulations ought to be presented positively. More collaborative policy measures need to be implemented with global stakeholders for a greener future. Governments can offer bonds to local and international investors through the World Bank and regional development banks by using private or governmental financial institutions.

It is imperative that India's government establish financial institutions specifically for advising and re-financing financial intermediaries dealing with climate transition risks as a result of policy, regulation, legal, and market changes and which integrate social, environmental, and governance for the flow of capital for financiers and investors involved in green and environmental change in the fields of clean energy, climate adaptation, sustainable agriculture, and waste management, To speed up electric vehicles, charging stations. The economics and the environment, a long-term and cost-effective solution is needed.

Conclusion

Waste management, ecotourism, renewable energy, organic agriculture, and the development of cutting-edge technologies in MSME should be fostered to attract more foreign direct investment. With the help of international partners, giant corporations are embracing green energy to reduce their operations' adverse environmental effects while also focusing regulatory attention on the green economy. Investing in ESG funds is available to everyone. Investors and companies alike may benefit from sustainable financing, which influences the environment and the economy. A lack of steady economic development necessitates the government's intervention in the ESG global wave of green or sustainable finance policy measures.

References

Aithal, P. S. (2016). Study on ABCD analysis technique for business models, business strategies, operating concepts & business systems. International Journal in Management and Social Science, 4(1), 95-115.

Aithal, P. S., Shailashree, V. T, & Kumar, P. M. (2016). Application of ABCD Analysis Framework on Private University System in India. International Journal of Management Sciences and Business Research, 5(4), 159-170.

Aithal, P. S. (2017). ABCD Analysis as Research Methodology in Company Case Studies.

International Journal of Management, Technology, and Social Sciences (IJMTS), 2(2), 40-54.

Aithal, A., & Aithal, P. S. (2017). ABCD analysis of task shifting–an optimum alternative solution to professional healthcare personnel shortage. International Journal of Health Sciencesand Pharmacy (IJHSP), 1(2), 36-51.

Aithal, P. S., Shailashree V. T, S., & Kumar, P. M. (2016). Analysis of ABC Model of Annual Research Productivity using ABCD Framework. International Journal of Current Research andModern Education (IJCRME), 1(1), 846-858.

Durrani, A., Rosmin, M., & Volz, U. (2020). The role of central banks in scaling up sustainable Finance–what do monetary authorities in the Asia-Pacific region think?. Journal of Sustainable Finance & Investment, 10(2), 92-112.

Dörry, S., & Schulz, C. (2018). Green financing interrupted. Potential directions for sustainable Finance in Luxembourg. Local Environment, 23(7), 717-733.

Shenoy, V., & Aithal, P. S. (2017). Quantitative ABCD Analysis of IEDRA Model of PlacementDetermination. International Journal of Case Studies in Business, IT and Education (IJCSBE), 1(2), 103-113.

Shelly, R., Sharma, T., & Bawa, S. S. (2020). Role of Micro, Small, and Medium Enterprises in Indian Economy. International Journal of Economics and Financial Issues, 10(5), 84 - 91.

Renwick, N, Gu, J & Xue, L (2018). The BRICS and Africa's search for green growth, clean energyand sustainable development. Energy Policy, 120(1), 675-683.

Soundarrajan, P., & Vivek, N. (2016). Green Finance for sustainable green economic growth in India. Agricultural Economics, 62(1), 35-44.

Verma, T. L., & Nema, D. K. (2019). Role of micro, small and medium enterprises (MSMEs) in achieving sustainable development goals. Int. J. Res. Eng. Appl. Manag, 4(1), 575-582.

Pathak, Devendra, Srivastava, Vishal and Sharma, Mohit (2014). Green Finance: How to Beneficiary in Indian Economy. SSRN Journals, 1(1), 1-7.

Strauß, N. (2021). Framing Sustainable Finance: A Critical Analysis of Op-eds in the Financial Times. International Journal of Business Communication, 1(1) 1-14.

Wang, Y., & Zhi, Q. (2016). The role of green Finance in environmental protection: Two aspects of market mechanism and policies. Energy Procedia, 104(1), 311-316.