Contextual Financial Analysis Report

Driving Sustainable Finance Reforms for Local & Green Enterprises

December 2022

Finance Watch

Development Alternatives

A Contextual Financial Analysis for Driving Sustainable Finance Reforms for Local & Green Enterprises

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ISBN: 978-93-95152-01-3

Published by: Development Alternatives
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Cover Photo by: Development Alternatives

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Acknowledgements

We would like to express our gratitude and appreciation to all those who gave us the opportunity to complete this report. A special thanks to all of them, whose help, stimulating suggestions, and encouragement helped the team in the completion of this report.

We thank the experts and partners from the Green Economy Coalition (GEC), the International Institute of Environment and Development (IIED) and the Finance Watch for their support, guidance, and valuable inputs. It has been undertaken in partnership with the Green Economy Coalition (GEC) and the International Institute for Environment and Development (IIED) and is funded by the European Commission. Our sincere thanks to other partner organisations in the Green Economy Coalition country hubs who shared their valuable insights and enriched our study, too.

We are also indebted to the local stakeholders in the three study sites in India and experts for their enormous support and inputs, without which conducting the study would not have been possible. Last but not least, our sincere thanks to the team at Development Alternatives (DA) who supported us during our research by providing their valuable suggestions and inputs on the methodology and findings. Thank you all!

List of Abbreviations

ABNAMRO	Algemene Bank Nederland and The Amsterdam and Rotterdam
ACGF	ASEAN Catalytic Green Finance Facility
ADB	Asian Development Bank
AMC	Asset Management Companies
APC	Agro-Processing Centre
APMC	Agricultural Produce Market Committees
ASEAN	Association of Southeast Asian Nations
ASI	Annual Survey of Industries
ASPIRE	A Scheme For Promotion Of Innovation, Rural Industries & Entrepreneurship
APY	Atal Pension Yojana
BIA	Bihar Industries Association
BSPCB	Bihar State Pollution Control Board
BSE	Bombay Stock Exchange
CA	Commission Agents
CCB	Central Cooperative Bank
CFA	Contextual Financial Analysis
CEFIM	Clean Energy Finance and Investment Mobilization
CFLI	Climate Finance Leadership Initiative
CGTMSE	Credit Guarantee Fund Trust for Micro and Small Enterprises
CII	Confederation of Indian Industry
CIPHET	Central Institute of Post Harvest Engineering and Technology
CLCSS	Credit Linked Capital Subsidy Scheme
CPCB	Central Pollution Control Board
CSO	Civil Society Organisation
DFI	Development Finance Institution
CITUS	Coir Industry Technology Upgradation Scheme (CITUS)
DOEFCC	Department of Environment, Forest and Climate Change
DOI	Department of Industries
DLTF	District Level Task Force
DRT	Debt Recovery Tribunals
DRAT	Debts Recovery Appellate Tribunal
EDC	Enterprise Development Centre
ESG	Environmental, Social and Governance
EP	Equator Principles
EU	European Union
FABA	Fly Ash Brick Association
FCBTKS	Fixed Chimney Bull's Trench Brick Kilns
FGD	Focused Group Discussion
FICCI	Federation of Indian Chambers of Commerce & Industry

GDP	Grosss Domestic Product
GEC	Green Economy Coalition
GOI	Government of India
HUF	Hindu Undivided Family
IBEF	India Brand Equity Foundation
ICAI	The Institute of Chartered Accountants of India
ICT	Information and Communications Technology
IFC	International Finance Corporation
ILO	International Labour Organization
IPSF	International Platform on Sustainable Finance
IRDAI	Insurance Regulatory and Development Authority
IREDA	Indian Renewable Energy Development Agency Limited
ITDC	India Tourism Development Corporation
KCC	Kisan Credit Card
KVK	Krishi Vigyan Kendra
LBI	Livelihood Business Incubator
LGE	Local Green Enterprises
LLP	Limited Liability Partnership
MFI	Micro Finance Institutions
MSME	Micro, Small and Medium Enterprises
MOEFCC	Ministry of Environment, Forest and Climate Change
NAAS	National Academy of Agricultural Sciences
NABARD	National Bank for Agriculture and Rural Development
NACAS	National Advisory Committee on Accounting Standards
NAPCC	National Action Plan on Climate Change
NBFC	Non-Banking Financial Company
NDUW	National Database of Unorganized Workers
NGFS	Network for Greening the Financial System
NGO	Non-Governmental Organisation
NGT	National Green Tribunal
NPA	Non Performing Assets
NSS	National Service Scheme
NSSO	National Sample Survey Office
NSFDC	National Scheduled Castes Finance and Development Corporation
NSE	National Stock Exchange of India Limited
NSIC	National Small Industries Corporation
OECD	Organisation for Economic Co-operation and Development
PACS	Primary Agricultural Credit Society
PAGE	Partnership for Action on Green Economy
PFRDA	Pension Fund Regulatory and Development Authority
PLI	Production Linked Incentive
PMGSY	Pradhan Mantri Gram Sadak Yojana

PMJDY	Pradhan Mantri Jan Dhan Yojana
PMSBY	Pradhan Mantri Suraksha Bima Yojana
PRC	Permanent Resident Certificate
PMEGP	Prime Minister's Employment Generation Programme
PRI	Principles for Responsible Investment
PV	Photovoltaics
RDB	Recovery of Debts and Bankruptcy
RDDB	Recovery of Debts and Bankruptcy Act
RTSOI	Responsible Tourism Society of India
RSETI	Rural Self Employment Training Institutes
SARFAESI	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act
SCB	Scheduled Commercial Bank
SDG	Sustainable Development Goals
SEBI	Securities and Exchange Board of India
SEED	Supporting Entrepreneurship for Environment and Development
SIDBI	Small Industries Development Bank of India
SLMC	State Level Monitoring Committee
SME	Small and Medium Enterprises
SRI	Socially Responsible Investing
SSE	Sustainable Stock Exchange
TARA	Technology and Action for Rural Advancement
TFCI	Tourism Finance Corporation Of India Limited
TIC	Training-cum-Incubation Centres
UNWTO	United Nations World Tourism Organization
UNEP	United Nations Environment Programme
UNCTAD	United Nations Conference on Trade and Development
VSBK	Vertical Shaft Brick Kiln
ZED	Zero Defect Zero Effect

Executive Summary

"In the midst of this global brainstorming on climate change, on behalf of India, I would like to present five nectar elements - 'Panchamrit', to deal with this challenge. First- India will take its non-fossil energy capacity to 500 GW by 2030. Second- India will meet 50 percent of its energy requirements from renewable energy by 2030. Third- India will reduce the total projected carbon emissions by one billion tonnes from now till 2030. Fourth- By 2030, India will reduce the carbon intensity of its economy by more than 45 percent. And fifth- by the year 2070, India will achieve the target of Net Zero.

These 'Panchamrits' will be an unprecedented contribution of India to climate action."

– Shri Narendra Modi
Hon'ble Prime Minister,
Government of India
At COP26 Summit at Glasgow

At the COP26 Summit at Glasgow (2021), the Government of India set itself to five focused targets in lines with its commitment to global climate action. These targets have been termed as '*Panchamrits*' ('*Panch*' meaning five and '*Amrit*' meaning *elixir*) and would require India to relentlessly pursue the green transformation of its economy in order to meet these.

Greening the Indian Economy

A green economy[1] has been recognized as essential for ensuring economic and environmental sustainability at the global, regional and sub-regional levels. While different interpretations of the concept exist, there is an established understanding of it being an economy that is "*low carbon, resource efficient and socially inclusive*." In case of developing countries like India, environmentally conscious MSMEs[2] (specifically micro and small enterprises) or Local Green Enterprises (LGE) can act as catalysts for realizing this transformation by not just creating local jobs but also reducing adverse effects on the environment, and to that effect, conserving nature.

In this context, this report strategically analyses the sustainable finance architecture in the agriculture and allied sector in Bundelkhand (Madhya Pradesh), tourism sector in Mandi (Himachal Pradesh) and construction sector in the overall State of Bihar, with the objective of assessing the effect of financing (or lack thereof) on the enterprises. Learnings from this analysis are envisaged to feed into dialogues around green economy and financial reforms at state, national and international levels.

Selection of Sectors & Geographies

Agriculture and allied sector in India experience an annual loss of US$ 9-10 billion due to climate change[3]. Among the agricultural dominant areas, the Bundelkhand region in Central India is a poverty hotspot. Nearly 90 percent of its population is dependent upon agriculture and allied activities for livelihood[4].

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[1] The term 'Green Economy' was coined in 1989, in the report titled Blueprint for a Green Economy. The report was aimed at supporting the British Government in implementing the idea of sustainable development.

[2] There are two composite criteria for defining a MSME in India, i.e., Investment in plant and machinery/equipment and annual turnover. The detailed criteria table is mentioned in chapter 1, under table 1.1. In this study we are referring to local micro enterprises (turnover is less than Rs.5 crore) and nano enterprises (enterprises which are having annual turnover between Rs.10 lakh to Rs. 1 crore) (Source: https://economictimes.indiatimes.com/opinion/et-commentary/lovlina-borgohains-labour-lost-curious-case-of-an-india-sporting-bout/articleshow/93397356.cms)

[3] Indian Council of Agricultural Research. (2019). (rep.). Climate Change and Indian Agriculture: Impacts, Coping Strategies, Programmes & Policy. Indian Council of Agricultural Research. Retrieved from https://naarm.org.in/wp-content/uploads/2020/06/ICAR-NAARM-Policy-on-Climate-Change-and-Agriculture_compressed.pdf.

[4] Apiculture: A Successful Venture in Enhancing the Farmer's Income in Hamirpur District of Bundelkhand Region | भारतीय कृषि अनुसंधान परिषद (icar.org.in)

Because 75 percent of the agricultural area here is rainfed, there is a direct and severe impact of fluctuations in rain cycles on the income of the population. Adoption of green practices in the agricultural and allied sector of Bundelkhand can lead to long term sustainability, especially in terms of the scope in reduction of poverty and in establishing food and livelihood security.

Eco-tourism in India is still at a very nascent stage. The greening initiatives in the tourism sector are sporadic and geographically scattered due to the absence of a uniform guideline at the national level and its unregulated implementation at state and district levels. This is especially problematic for a tourist hotspot like Chamba, Kullu and Mandi in Himachal Pradesh. Adopting green practices, both by the service providers and the tourists, could create a significant positive impact on the environment.

Construction sector contributes 23 percent of air pollution, 50 percent of climate change, 40 percent of water pollution and 50 percent of waste landfill in India[5]. As the second largest contributor to India's economy and generating massive scale of formal and informal employment, greening the construction sector – especially in terms of adopting greener brick alternatives, can play a vital role in climate change mitigation and environmental sustainability. As one of the top brick producing States in the country, witnessing an estimated increase of 7-10% in annual demand of bricks, Bihar serves as a viable starting point for this green transformation.

Methodology

This Contextual Financial Analysis (CFA) adopts quantitative and qualitative research approaches based on both primary and secondary data. It is divided into two segments, starting with a broader **Mapping of the Regulatory & Financial Ecosystem** and moving on to **Stakeholders' Landscaping & Identification of Signature Issues at Sectoral Level**. The methodologies used for developing these segments have been laid out in detail in subsequent chapter(s).

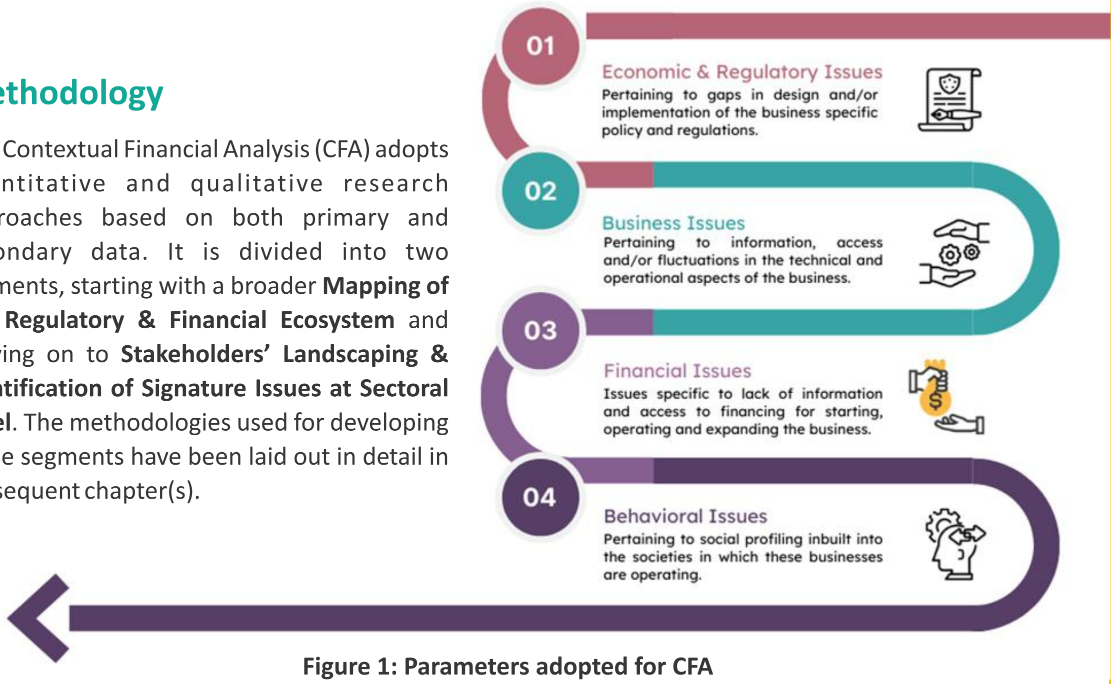

Figure 1: Parameters adopted for CFA

Key Finding(s)

The analysis highlights significant ecosystem gaps being faced by Local & Green Enterprises. These are bundled into four types, as given above.

Within these, the three sectors share some overlapping issues in addition to challenges specific to its own. For instance, unavailability of basic infrastructure is common between the agriculture & allied and tourism sector. The tourism and construction sector are aligned on the issue of lack of adequate and proper skills.

Among distinct issues, agriculture and allied sectors face lack of access to information and formal financing, poor integration of value chain, lack of entrepreneurial attitude etc. Tourism sector faces issues such as lack of awareness about funding schemes and limited guiding policies. The construction sector is marred with a low demand of fly ash bricks, unavailability of finance and incentives to set up green enterprises etc.

The below (Table 1) given issue matrix captures the independence and inter-relatedness in these issues across sectors.

[5] Sourceable. (2016, March 1). Construction's Impact on the Environment. Retrieved from https://sourceable.net/constructions-impact-on-the-environment/

Table 1: Matrix of Signature Issues Faced by LGEs or Green MSEs

Overall Signature Issues of MSMEs		Agriculture & Allied	Tourism	Construction
Economic & Regulatory Issues				
Design	1. Lack of Clear Taxonomy of Local & Green Enterprises			
	2. Inadequate policy integration of incentives (including financial) for enterprises that adopt green practices or are restorative in nature			
Implementation	3. Gaps in policy implementation & supporting infrastructure			
	4. Incomplete knowledge regarding (limited) policies and schemes available for supporting micro enterprises, their application processes etc.			
Business (Operational & Technical) Issues				
Inadequate Capacity	1. Inadequate business acumen -- lack of clarity on profit margins, market for the product/service etc.			
	2. Poor technical capacity for running the enterprise -- lack of clarity on inputs (quantity and sources), processes etc.			
	3. Lack of capacities and access of micro entrepreneurs to advanced facilities of digitization and technological innovation			
Infrastructure & Market	4. Absence/inadequacy of stable infrastructure such as electricity supply, connectivity of public transport facility, condition of roads, etc.			
	5. Poor access/availability of green inputs for production			
	6. Fluctuation in the price of raw materials			
	7. Lack of forward linkages and low market demand for green products			
Financial Issues				
Entrepreneur Sided	1. Lack of financial literacy among the entrepreneurs			
	2. Lack of proper documentation/compliances			
	3. Poor perceived bankability of micro entrepreneurs on account of:- - Lack of credit history - Lack of repaying capacity, arising due to irregular cash flows at business			
	4. Inadequate information and access to Government financing schemes, especially those for green practices (such as ZED)			
Financier Sided	5. Cumbersome application processes for loan and other schemes			
	6. Exuberantly high interest rates, and preference for lending to existing businesses than new ones			
	7. Inappropriate collateral requirements			
	8. No weightage to localness and greenness in lending decisions			
Behavioural Issues				
	1. Societal barriers and notions attached to women entrepreneurship (perceived lack of business acumen, restricted mobility, lack of confidence and access to knowledge/facilities etc).			*
	2. Negative impact of 'hand-outs' on the repayment decisions of the entrepreneurs (say, waiving off of loans for farmers)			
	3. Reluctance of adopting green products as an alternative to the ones conventionally used.			**

*In the case of the fly ash brick sector in Bihar, only a handful of enterprises are owned by women due to the nature of the activity.
** A shift in preference from conventional to green products/services was recorded in case of both agriculture (organic food) and eco-tourism (eco-services, homestays etc). Only in the case of fly ash bricks, there was a reluctance to shift from conventional red brick due to the lack of awareness of the benefits of FAB.

Recommendations: Reforms for Bridging the Gap

Inquiries conducted in lieu of the Contextual Financial Analysis point towards the following for reforming the ecosystem for Local & Green Enterprises.

Improving the Policy Landscape

➔ Development of clear terminologies and taxonomies pertaining to local, green entrepreneurship;

➔ Identification and classification of priority sectors for promotion of LGEs and due inclusion of such sectors as thrust areas in state policies;

➔ Integration of localness and greenness as factors in lending decisions, especially at micro entrepreneurs' level;

Improving the Ease of Access to Finance

➔ Development of and accessibility to innovative financial instruments contextualized to the needs of micro-enterprises, and differentiated as per funding requirements at various stages of operations (working capital v/s term loan) and scale (start-up v/s expansion);

➔ Provisions of innovative, green and sustainable financial models for implementation;

➔ Regulatory support to alternative financial institutions and investors;

➔ Dedicated supporting ecosystem for accessing available financial mechanisms (e.g. easy-to-use interfaces and interactive platform for knowledge sharing, finance camps and support services from CAs and CSOs for preparation of project reports, documentation, etc.);

Bolstering Information Access & Capacity

➔ Improving financial and digital literacy of entrepreneurs to enable better financial management and smoothening procedural difficulties in formal lending space;

➔ Information dissemination and awareness generation around available finance options, including government schemes and initiatives as well as alternative sources including micro-finance options, climate and impact funds, insurance instruments, etc.

➔ Handholding support to micro entrepreneurs for using enterprise facilitation platforms (ex. Udyami Mitra);

Enabling Better Access to Technology & Associated Services

➔ Global, national and sub-national transfer of technology, and adoption of best practices/innovations that are based on critical sustainability assessment criteria;

➔ Facilitating provision of affordable and accessible post-implementation services;

➔ Technological skill development of entrepreneurs and workforce to enhance their capacity to deliver and improve the quality of products and services;

Strengthening Physical Infrastructure, Forward & Backward Linkages for Green Businesses

➔ Development of sustainable localized value chain;

➔ Increased availability/access to post-harvest infrastructure;

➔ Expansion and last mile connectivity of aggregation facilities;

➔ Mainstreaming of innovative market linkage models;

➔ Availability of digital solutions for efficient backward and forward linkage to businesses;

Sustaining Reforms for Better Future

Bridging the existing ecosystem gaps to ensure that Local Green Enterprises have proper and smooth access to financing is one end of the stick. Sustaining this access starts by acknowledging that formal financing is not enough to feed the green economic transition on its own and requires support from additional funding sources in one way or another. Towards that end, international institutional fundings and projects that engage instruments such as carbon credits and green bonds can prove critical. Civil Society Organizations (CSOs), research think tanks and other private stakeholders can play a decisive role in designing and implementing these independently or on behalf of the Central/State Governments. An important point to note is that these instruments of innovative financing need not compete with the formal financing network, but can work parallely to support it. Consider the case where a bank is interested to invest in a green business, but the application is stuck due to lack of any guarantee/collateral. A Guarantee Fund established for green businesses can mitigate this risk for the banker by funding guarantees for the application.

Many such cases of formal financing and innovative financing instruments working hand in hand can be found in common space. Development Alternatives in support of the Green Economy Coalition (GEC) has been collating all such best practices under one roof for knowledge dissemination among relevant stakeholders. For more details, please check Mainstreaming Alternative Practices - South Asia (MAP-SA).

Initiatives by Development Alternatives

Development Alternatives is the National hub for India under the Green Economy Coalition. As a partner, it shares the coalition's commitment towards promoting inclusive and sustainable transitions. This Contextual Financial Analysis is one of the many initiatives undertaken to that effect. The others are:-

- ➔ Development of an Assessment Framework for Local Green Enterprises, with the larger objective of easing access to finance through dedicated policy and fiscal mechanisms based on clear definitions, taxonomies, criteria, as well as monitoring and evaluation frameworks;
- ➔ Development of a Facilitator's Toolkit for Green Entrepreneurs, with scope of conversion to an interactive resource and customization as per sectors;
- ➔ Research and Development of Innovative Financing Instruments, including blended financing options, climate funds, carbon credit-linked credit products, green bonds, dedicated risk mitigation products, etc.;
- ➔ Transfer & validation of appropriate technologies from around the world to address local needs in identified sectors and geographies. Eg- GEC hub countries
- ➔ Policy support and integration through advocacy and establishment of appropriate regulatory mechanisms and institutional mechanisms
- ➔ Fostering regional cooperation and knowledge sharing through development of South Asian Green Economy Network for learning, action, knowledge dissemination
- ➔ Skill Development and Capacity Building of entrepreneurs through Facilitation & Resource Centers for training, exposure visits, demonstration of tech etc.

This report is expected to fuel the dialogue around the green transition of the economy, in special context to reforming the ecosystem to support growth of Local Green Enterprises.

Chapter 1

Introduction

Micro, Small and Medium Enterprises (MSMEs) have emerged as a highly vibrant and dynamic sector of the Indian economy — playing a crucial role in employment generation, industrialization of rural and backward areas, and reduction in the inter and intra regional disparity in terms of economic growth.

1.1 Classification of MSMEs

Before the enactment of the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, the sector was heterogeneous in nature and composed of what were then called 'Small Scale Industries' – primarily consisting of cottage and village enterprises as well as coir, khadi and silk based traditional businesses. The Act brought these, along with service sector and medium scale businesses, under a common umbrella of Micro, Small and Medium Enterprises. It also introduced the classification system that segregated these on the basis of manufacturing and service activity, and then termed them as micro, small or medium as per their investment in plant and machinery or equipment. The immediate outcome of this was elimination of the ambiguity that earlier existed in differentiating one type or scale of MSME from another – in effect, paving the way for better guided policy and financial reforms for the sector.

The Ministry of Micro, Small & Medium Enterprises, Government of India revised the classification in alignment with the Atmanirbhar Bharat package in June 2022 (Table 2). The latest criteria doesn't differentiate between manufacturing and service based MSMEs, provides a higher ceiling of investment in plant and machinery or equipment, and consists of a second parameter of turnover to account for the change in value of money worth over time.

Table 2: Revised Classification of Micro, Small & Medium Enterprises

	Criteria →	**Investment in Plant and Machinery, or Equipment**	**Annual Turnover**
1	Micro Enterprises	Does not exceed 10 million rupees (<Rs. 1 crore)	Does not exceed 50 million rupees (<Rs. 5 crore)
2	Small Enterprises	Does not exceed 100 million rupees (< Rs. 10 crore)	Does not exceed 500 million crore rupees (<Rs.50 crore)
3	Medium Enterprises	Does not exceed 500 million rupees (<Rs. 50 crore)	Does not exceed 2500 million rupees (<Rs. 250 crore)

Source: e-Gazette Notification Dated 01 June 2022

1.2 Significance of Micro Enterprises in the Green Transition of India's Economy

Nearly 63 million MSMEs are operating in India as of today, contributing 30.27% to the country's GDP and generating employment for more than 111 million skilled, semi-skilled and unskilled workers. Unlike large industries, these enterprises require low-capital investments, and are thus widespread amongst rural and backward communities that have access to limited resources. This is evident from the fact that 51.25% (32.488 million) of all MSMEs in India are based in rural areas, supporting an equitable distribution of wealth via dispersion of economic activities.

More than 95% of the MSMEs in India belong to the category of micro enterprises. Though the classification doesn't define any number of workers as a criteria, most of these enterprises can be found to be either single owner businesses (such as home based shops or street vendors) or businesses with up to 10 workers. It not only generates localized employment opportunities, but has evidently been a segment where women are better represented – both in terms of participation in the workforce and ownership of business. This is especially due to comparatively low investment and low compliance needed for starting up a micro enterprise, vis-a-vis a factory or an outlet.

Only 13% of the micro enterprises in the country are formalized i.e., have any business identity proof such as a Permanent Account Number (PAN), Udyam Registration, GST Registration, Registration under Shops & Establishment Act etc. Due to their informal nature, these enterprises often fail to avail of the financial and non-financial incentives made available by the Central and State Governments for system optimization and resource efficiency. They instead become engines of carbon emission. It comes as no surprise that micro enterprises are estimated to be responsible for 70% of the industrial pollution in India and 13% of the annual global energy consumption.

In this sense, greening of the MSME sector – especially micro enterprises, is a crucial step towards greening the whole economy. Due to their low investment model, operational changes for green transition will be faster and more implementable among such enterprises than in case of large industries. In terms of the sector's scale, informality and reach to the bottom of the pyramid, such a transition will also have a direct and immediate impact over the lives of those associated with it.

1.3 Local Green Enterprises as Vehicles of Change

Local Green Enterprises (LGEs) can act as a powerful tool for enabling the micro enterprise to improve their performance and achieve the triple bottom line benefits.

Though there isn't any universally accepted definition of LGEs, different stakeholders have attempted to define them as per their understanding. At Development Alternatives, these are identified as a class of micro – and to some extent, small enterprises, that: -

➔ Adopt resilient and competitive models to ensure long-term sustainability;

➔ Contribute to environmental conservation by building their business models on the principles of resource efficiency and circularity and being inherently restorative and regenerative in practice

➔ Are inclusive and operate in a just and equitable manner. They also have localised economic distribution by virtue of value addition to local resources and retention of profits within the communities they serve.[6]

Figure 2: MSMEs to LGEs - Onion Diagram for Defining the Interlinkage

Another variation of the definition is provided by the Green Economy Coalition that defines the 'Local Green-Blue Enterprises' as "MSMEs that have a potential positive effect on the global or local environment, community, society, or economy, and strive to meet triple bottom line returns (economic, environmental and social). LGEs consist of informal and formal MSMEs and social enterprises that use green business models, develop green products or green their business practices."

There already exist successful businesses that may qualify to be called as Local Green Enterprises in the Indian context, as much as businesses that can transition to being one. However, due to lack of standardization of localness and greenness, and as a result — absence of integration in the policy architecture, efforts towards promoting LGEs are often segmented and fail to reap any significant impact. This is the first of the many challenges that this report elaborates on and provides recommendations to address. The subsequent pages also explain the other challenges at micro and

[6] Adapted from Poverty-Environment Partnership (PEP) Session. 7 Nov, 2017. Green Economy Coalition

maesco level that relate to financing, information and capacity building, technology and marketing support – or lack thereof of all, hindering the growth of LGEs in India.

For coherence, this report targets three specific sectors in select locations to drive this analysis. These are agriculture & allied sectors in Bundelkhand (Madhya Pradesh), tourism sector in Mandi (Himachal Pradesh) and construction sector in the overall State of Bihar. *For rationale of selection of sectors and geographies, please check the Executive Summary.*

1.4 Objective & Assumptions of the Report

This report aims to feed the dialogue for mainstreaming Local Green Enterprises at state, national and global level. In order to do that, it undertakes a comprehensive study of the selected sectors and geographies for:-

- ➔ Developing an understanding of the existing regulatory and financial landscape of Green MSMEs or LGEs in India;
- ➔ Mapping the stakeholders critical to the ecosystem;
- ➔ Identifying the signature issues, in special context to gaps in the financial architecture;
- ➔ Proposing recommendations for plugging the loopholes, and creating an enabling environment for the growth of such enterprises.

While this report may use the term 'LGE' or 'Green MSMEs' for simplicity, in terms of scale of operations, this analysis is relevant only for micro enterprises and those that have graduated to small scale but are yet near the lower edge in terms of investment in place and machinery or equipment, or annual turnover.

1.5 Framework & Methodology

The framework for this CFA is segmented into two broad categories:- **Analysis of Regulatory & Financial Landscape**, and **Stakeholders Mapping & Identification of Signature Issues**. Due to the applicability of these regulations and financial mechanisms across sectors and geographies in India, the former is conducted at a national level by means of secondary research. The second is based on sector specific findings captured by means of primary level enquiries. More details are given below (Table 3):-

Table 3: Outline of Regulatory & Financial Landscape Analysis

	Type of Landscape	Component	Coverage/Description
1	Regulatory	Legal Standing of MSMEs	The regulatory framework starts with a brief understanding of different types of registrations for MSMEs; followed by accounting and reportage applicable to them.
2		Development Strategy	This sub-section delves into the national and regional economic development strategies, including policies, that support LGEs.
3		Green Incentives Available to MSMEs in India	A number of schemes/policies have been put in place to promote resource efficiency and operational optimization among MSMEs. This sub-section talks about these in brief.
4	Financial	Status of Green & Sustainable Finance Adoption in Financing Landscape	Integration of Green Finance or the larger nexus of Sustainable Finance practices is critical for the LGEs to flourish. This sub-section comprises the information around the established understanding and adoption of green and/or sustainable finance in Indian lending space.
5		Financing Architecture	The architecture of financing institutions is contained in this sub-section. It also points to the types of financing instruments, regulations, financial inclusion and creditor, debtor and consumer protection.

1.5.1 Analysis of Regulatory & Financial Landscape

Before identifying the issues hindering the growth of Green MSMEs or LGEs in India, it is imperative to understand the ecosystem in which they operate. Regulatory and financial landscape is a critical component of it. This section provides an insight into what is currently made available by means of policy and financing to these enterprises. Please note that availability does not imply access – an issue that will be discussed later in the sectoral briefs. The outline of this analysis is as follows:- 1.5.2

Stakeholders' Mapping & Identification of Signature Issues

Signature issues in this report refer to those challenges that limit the ability of the LGEs or Green MSMEs to start and/or expand their business, sustain it or transition from high-carbon intensity practices to those that cap the carbon footprint and are restorative in nature.

Signature issues may have three core components:- 1.) External Issues, 2.) Internal Issues, and 3.) Sectoral Differences. A participatory systems inquiry based on the dialogue approach of the Green Economic Coalition is adopted for identifying all these components within the signature issues.

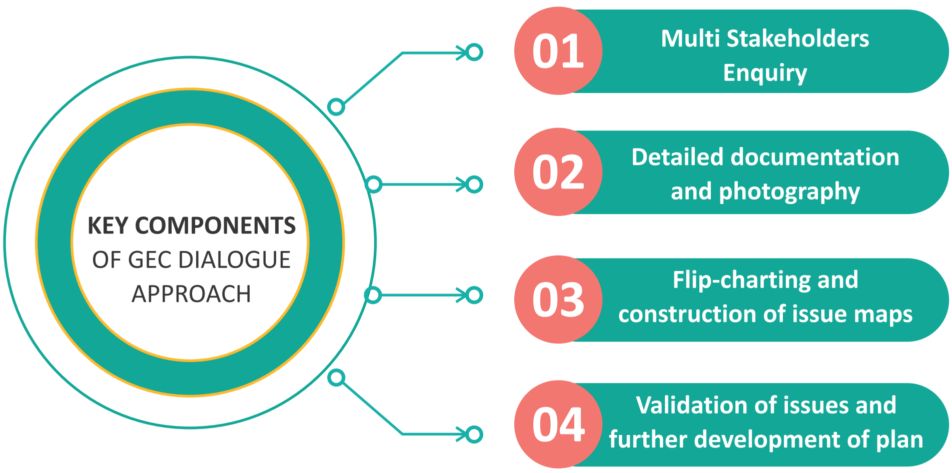

Figure 3: Key Components/Elements of GEC Dialogue Approach

This approach depends upon in-situ interviews or multi-stakeholder inquiries with both primary and secondary stakeholders across the value chain.

In this case, the stakeholders are selected for interviews from the three mentioned sectors using non-probability purposive sampling technique. Semi-structured questionnaires are used to conduct individual interviews, and Focused Group Discussions (FDGs) revolving around both pre-defined and instantaneous questions are conducted with set objectives. After conducting the multi-stakeholder inquiry, the issues are mapped to show the interrelationships. For holistic mapping of the issues, the causes and consequences are elucidated. The signature issues are then ranked on the least and most important basis. The issue maps are then created along with actions and interventions, with reference to the identified signature issues. Finally, the issues are validated and way ahead is chalked about in further dialogue with the stakeholders.

The next two chapters provide the findings of the analysis carried out based on this framework and methodology. Each chapter is dedicated to one category.

Chapter 2

Regulatory & Financial Landscape for LGEs or Green MSMEs

The concept of LGEs may be new to the entrepreneurial ecosystem of India, but the motivation of green transition is not. In fact, the Government of India and/or Reserve Bank of India has attempted to support growth of enterprises that are green in nature on several occasions, by policy and financial push respectively. This chapter focuses on these alongwith other structures that govern the operations of the primary stakeholder of this analysis – the LGEs or Green MSMEs.

2.1 Legal Standing of LGEs or Green MSMEs

2.1.1 Constitution of MSME and LGEs in India

MSMEs are classified as per the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, as given in Chapter 1. To legally identify itself as an MSME, the enterprise must be registered i.e, it must have at least one proof of business identity. In most cases, this could be Udyam Registration – popularly considered as the '*Aadhaar Card of the Business*'. Additionally, MSMEs may choose to follow the constitution of a firm or company. Sole Proprietorships and Partnership type of enterprises qualify to be called 'Firms'. Hindu Undivided Family (HUF), Public Limited Company, Private Limited Company, Limited Liability Partnership (LLP) etc allow an enterprise to be called as a 'Company'.

Neither the MSMED Act 2006 or the Companies Act 2013 has any mention of green enterprises. The term, in fact, is non-existent in the legal enterprise framework in India. There are provisions for social enterprises though, that can register themselves as a for-profit company (Private Limited Company, LLP etc), as a non-profit (under Section 8 of the Companies Act 2013), or as a charitable Public Trust or a Co-operative Society.

2.1.2 Defining Environmentally Sustainable Economic Activities & its Values

India's regulatory framework doesn't provide for any clear bifurcation of economic activities by their environmental impact. The closest to it is the **four-color classification scheme of the industrial sectors based on their pollution potential** (Figure 4). Launched in 2016, this scheme calculates the Pollution Index (PI) by taking into account four parameters:- 1.) Emissions or Air Pollutants, 2.) Effluents or Water Pollutants, 3.) Hazardous Waste Generated and 4.) Consumption of Resources. On this basis, the industries are classified into:-

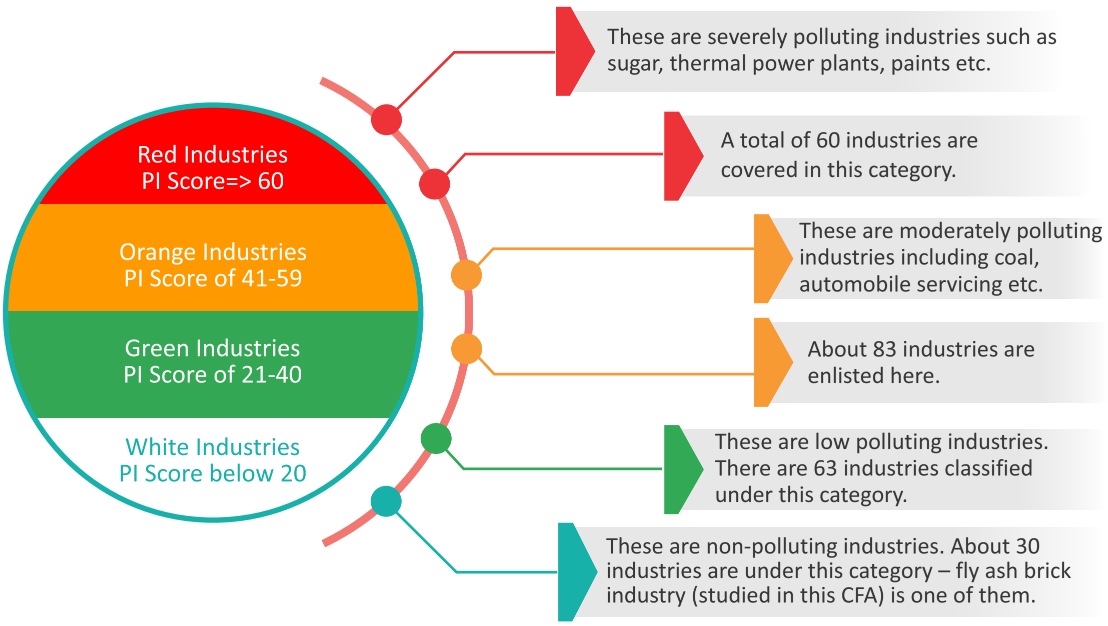

Figure 4: Four color classification for industries

White industries are exempted from acquiring the pollution clearances (Consent to Establish and/or Consent to Operate) – thus, furthering *Ease of Setting Up of Business for them*.

The main challenge why this classification cannot be considered relevant for the LGEs or Green MSMEs is because these are for enterprises with considerable investment – which more often than not, are medium and large enterprises. There is no low scale model of such classification for the micro and/or small enterprises engaging in low-carbon and green practices.

A government-backed green investment taxonomy that is in alignment with the global definitions and commitments will not only streamline the regulatory and financial efforts towards financing LGEs or Green MSMEs, but will also give clarity to the investors and businesses alike – encouraging them to invest their time and resources in supporting/becoming a part of the green transition of the India's economy.

2.1.3 Government-Backed Strategies & Support Measures for Greening of MSMEs

In a green economy, growth in employment and income are driven by public and private investment into such types of economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services (United Nation Environment Programme, 2017). While there is no National Green Economy Strategy in India to govern these investments, the Government of India has indeed attempted to support localization of the economic value addition by entrepreneurship development, and promotion of greenness within it. Some of these initiatives targeted towards MSMEs are given below:-

➔ ***Make in India*** Programme was launched in the year 2014 with the objective of attracting investments from across the globe for domestically manufacturing final products. This was meant to result in localized distribution of benefits in form of increased employment opportunities, skill enhancement etc. ***Make in India 2.0*** was specially focused on enabling MSMEs reap benefits of economies of scale, on account of localized manufacturing.

➔ ***Atmanirbhar Bharat*** was started as a campaign with the vision of making India self-reliant. MSMEs were highlighted to have an important role to play in it. Numerous schemes focusing on financing and debt restructuring for MSMEs were announced as a part of the package.

➔ ***MSME Sustainable Certification***, popularly known as Zero Defect, Zero Effect or ZED encourages MSMEs to constantly upgrade the quality of their products and processes, via adoption of Zero-Defect production processes and without impacting the environment.

➔ Eco-mark is issued by the Bureau of Indian Standards (BIS) as a certification mark for products that are ecologically safe and conform to the standards prescribed by the BIS under the ***Ecomark Scheme of India (ECOMARK) – Ecomark Labelling*** (Shree Dev Bhoomi Institute of Education Science and Technology, 2020).

➔ ***Green Business Scheme*** is offered by various Financial Development Corporations in India, for enabling the target group (Safai-Karamcharis in case of National Safai Karamchari Financial Development Corporation, for instance) earn livelihood by means of starting a green business. Loans for purchasing e-rickshaws, setting up waste collection businesses etc are provided under the scheme.

➔ **The Sustainable Finance Scheme** by Small Industries Development Bank of India (SIDBI) funds sustainable development projects that contribute energy efficiency and cleaner production but are not covered under the international or bilateral lines of credit (StartUp India, 2021). The scheme develops the entire value chain of energy efficiency (EE)/ cleaner production (CP) and sustainable development projects that lead to necessary improvements in EE/ CP/ sustainable development in the MSMEs that are presently not covered under the viable financing lines of credit.

The penetration of these incentives shows variation on the basis of type of area and availability of entrepreneurship development mechanisms (such as District Industries Centre and other hand holding agencies). Entrepreneurs of urban and peri-urban areas are known to have better access to information about these schemes/incentives, processes for applying for these etc, vis-a-vis rural entrepreneurs

2.2 Introduction to the Financial Landscape in India

India's financial system is regulated and supervised by independent regulators in the sectors such as insurance, banking and capital markets. For businesses like MSMEs, the significance of these institutions increases by leaps and bounds simply because of their ability to provide risk mitigation options. In the next few sub-sections, this report presents findings from the study of these institutions and maps out the financial credit products offered through them that ease attainment and repayment of finance for MSMEs in India.

2.2.1 Apex Financial Institution for Banking Sector

The Indian banking sector is primarily regulated by ***the Reserve Bank of India (RBI) Act 1934 and the Banking Regulation (BR) Act 1949. The Foreign Exchange Management Act (FEMA) 1999*** regulates cross-border exchange transactions by Indian entities, including banks.

Among these, the RBI Act, 1934 provides the basis for the functioning of the Reserve Bank of India (RBI), which is the highest statutory body under the jurisdiction of the Ministry of Finance. The primary function of financial supervisory authorities like RBI is to ensure the proper functioning, stability and integrity of the local financial system. They are usually independent from the government, but follow/comply with a set of democratically defined financial legislations (such as prudential regulations such as Basel III, financial market regulations, consumer protection regulations). Their decisions and actions can impact the way the financial system operates (Reserve Bank of India, 2005).

2.2.2 Composition of Financial Sector in India

A typical financial system in any economy consists of banks and other **financial institutions, markets, instruments, and services**. Structurally, India's financial system can be categorized into two broad segments:- 1.) ***Financial intermediaries***, consisting of Banks (commercial banks, regional rural banks, local area banks, and cooperative banks), Non-Banking Financial Companies (NBFCs), Development Finance Institutions (DFIs) as well as insurance companies, mutual funds, pension funds etc, and; 2.) ***Financial support services***, that include credit rating agencies, credit information companies, securitisation/asset reconstruction companies, depositories, among others.[7] The RBI defines the financial intermediaries as follows:-

Scheduled Commercial Banks (SCBs) are banks included in the second schedule of the RBI Act. It comprises Public Sector Banks, Regional Rural Banks, Private Sector Banks, Small Finance Banks (SFBs), Scheduled Payments Banks and Foreign Banks. The financial sector in India is predominantly a banking sector with commercial banks accounting for more than 64% of the total assets held by the financial system.

Non-Banking Financial Company is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. NBFC cannot accept demand deposits.[8]

[7] https://m.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=866

[8] https://www.rbi.org.in/Scripts/FAQView.aspx?Id=92

Cooperative Banks comprises short-term and long-term co-operative credit structures. The short-term co-operative credit structure operates with a three-tier system - Primary Agricultural Credit Societies (PACS) at the village level, Central Cooperative Banks (CCBs) at the district level and State Cooperative Banks (StCBs) at the State level. PACS are outside the purview of the Banking Regulation Act, 1949 and hence not regulated by the Reserve Bank of India. StCBs/DCCBs are registered under the provisions of State Cooperative Societies Act of the State concerned and are regulated by the Reserve Bank. Powers have been delegated to National Bank for Agricultural and Rural Development (NABARD) to conduct inspection of State and Central Cooperative Banks (RBI , NA).

Small Finance Banks are set up, primarily to undertake basic banking activities of acceptance of deposits and lending to underserved sections including small business units, small and marginal farmers, micro and small industries and unorganized sector entities (RBI, 2019).

Development Finance Institutions (DFIs): A DFI is defined as "an institution promoted or assisted by Government mainly to provide development finance to one or more sectors or sub-sectors of the economy (RBI, 2004).

Microfinance Institutions Microfinance is a form of financial service which provides small loans and other financial services to poor and low-income households. An NBFC-MFI has been defined as a non-deposit taking NBFC with minimum net owned fund of ₹5 crore (₹2 crore for NBFC-MFIs registered in the Northeastern Region) and having minimum 85 percent of its net assets (assets other than cash, bank balances and money market instruments) in the nature of 'qualifying assets'. RBI has also set criteria for qualifying assets.[9]

Digital Finance Providers or Fintech is generally described as an industry that uses technology to make financial systems and the delivery of financial services more efficient. It is "technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services" (RBI, 2020).

2.2.3 Regulations of Lending to Micro & Small Enterprises

Micro and small enterprises have attained focused attention in the lending space, especially in the past few years, in India. The financial sector has kept pace with the regulatory initiatives towards promoting these enterprises, to which effect, various mandates have been set by the RBI in order to promote inclusive lending practices – in special context to offering financing to underprivileged and marginalized entrepreneurs. Some of these are given below:-

- ➔ The Government of India launched a Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) with a view to facilitate flow of credit to the MSE sector without the need for collaterals or third party guarantees. The financial institutions are authorized to process the loan while applying for the guarantee based on the application of the entrepreneurs.
- ➔ Banks are also mandated to not accept collateral security in case of loans up to Rs.1 lakh to units in the MSE sector.
- ➔ Guidelines on `Streamlining flow of credit to Micro and Small Enterprises (MSEs)' for facilitating timely and adequate credit flow during their 'Life Cycle' were issued by RBI to Scheduled Commercial Banks (SCBs).

In addition to these, the Government of India has set provisions to enhance repayment capacity of these borrowing enterprises by means of improving their business capacities (via training conducted

[9] Consultative document on regulation of MFIs, June 2021, RBI

by Rural Self Employment Training Institutes), setting resolution mechanisms for delay of payments from vendors (MSME Samadhaan) as well as in worse cases, for bad loans (Framework for Revival and Rehabilitation of Micro, Small and Medium Enterprises).

2.2.4 Financial Inclusion

The **National Strategy for Financial Inclusion 2019-2024**, prepared by RBI with inputs from the Central Government and financial regulators (Securities & Exchange Board of India, Insurance Regulatory & Development Authority and Pension Fund Regulatory & Development Authority) and released on January 10, 2020, sets the vision and objectives of financial inclusion policies in India. It targetted providing banking access to every village (or hamlet of 500 households in hilly areas) within its 5km radius by March 2020. Another overarching target was to ensure access to financial services through mobile devices to every adult by March 2024.

Pradhan Mantri Jan Dhan Yojana (PMJDY) was launched as a flagship initiative within the strategy in August 2014. It aimed to ensure access to availability of basic savings bank account, access to need based credit, remittances facility, insurance and pension among other financial services to the excluded sections i.e. weaker sections & low income groups. The program was targetted at individuals, which also covered entrepreneurs (sole proprietors, street vendors etc) who earlier did not have access to banking.

2.2.4.1 Priority Sector Lending

Priority sector lending includes funding to those sectors that have an impact on large sections of the population – including the weaker sections and the sectors which are employment-intensive such as agriculture, micro and small enterprises (RBI, 2007). The RBI issued Master Directions for Priority Sector Lending in September 2020 (revised timely, last in October 2022), that aims to encourage environment friendly lending policies that help achieve Sustainable Development Goals . [10]

2.2.5 Creditor and Debtor Protection [11]

The Government of India has put in place policies to protect interests of creditors, debtors and consumers. These are given below:-

2.2.5.1 Protection of Creditors

There are a few legalities in place for protection of creditors' rights. The Recovery of Debts Due to Banks and Financial Institutions (RDDB&FI) Act 1993, now known as Recovery of Debts and Bankruptcy (RDB) Act acts as a measure for expeditious adjudication and recovery of debts due to banks and financial institutions. This helps in effectively tackling the huge pendency of the cases filed on behalf of FIs permitting these secured creditors to realize their debts by sale of assets set as guarantee by the borrowers.

The **Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest** (SARFAESI) Act was put in place in 2002 and allows the banks to auction off the residential or commercial properties of the defaulters to recover loans. In order to provide ***expeditious adjudication and recovery of debts***, Debt Recovery Tribunals (DRTs) and Debts Recovery Appellate Tribunals (DRATs) were set-up in 1993 under the **Recovery of Debts and Bankruptcy (RDB) Act.**

2.2.5.2 Protection of Debtors

Loan or debt restructuring refers to changing existing loan contract terms for the borrower. This is to facilitate managing of loan principal (initial size of the loan) and interest obligations due/pending to the financial institution, which has extended the particular loan. In India, the Insolvency and

[10] https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=11959

[11] This report doesn't cover consumer protection by means of it being targetted at entrepreneurs/enterprises.

Bankruptcy Code (IBC) was enacted in 2016 following a series of recommendations to revamp the country's insolvency framework. Insolvency occurs when an individual, company, or other organization cannot meet its financial obligations for paying debts as they become due.[12]

Debt restructuring schemes benefit the companies also as they get a headroom to match their cash flow with the due EMIs. Only those companies can avail the debt restructuring scheme who have been making regular payments on their loan account. The scheme usually requires the loan accounts to be classified as 'Standard' as on a specific date of reference. If the loan account has not been regularly serviced by the borrower in a timely manner, then it is classified as a defaulting account and categorized as substandard after a designated period of time. Such a category of borrowers are not usually eligible for loan restructuring.

2.3 Greening of the Financial Landscape

Designing and injecting funds into projects that lead to green outcomes can not only yield wise returns but can also go a long way in supporting the entire sustainable entrepreneurship ecosystem. At a global level, this has led to an increasing consciousness about the need of *greening the finance for financing the green enterprises/initiatives*. Principles for Responsible Investment (PRI), Equator Principles (EP) and UNEP Statement of Commitment by Financial Institutions on sustainable development suggest ways for implementing green finance among the signatories. Similar initiatives may be seen at the national level as well. This segment captures the level to which green and sustainable financing has made its way to the financial landscape in India, in order to draw attention to the positive shift at play. Please note that green financing and sustainable financing are two different concepts with interlinkages. Given below (Figure 5) is a quick diagram explaining that for reference.

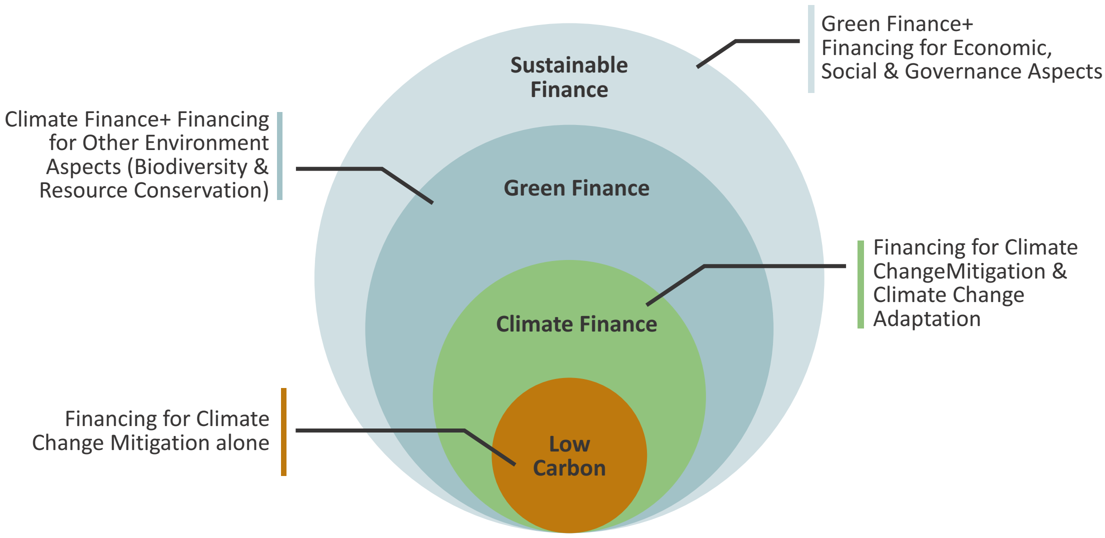

Figure 5: Interlinkage of Green & Sustainable Finance

2.3.1 Thrust to Sustainable Finance in the Indian Financing Context

Sustainable Finance is defined as investment decisions that take into account the environmental, social, and governance (ESG) factors of an economic activity or project (Baken, 2021). Environmental considerations might include climate change mitigation and adaptation, as well as the preservation of biodiversity, pollution prevention and the circular economy. Social considerations could refer to issues of inequality, inclusiveness, labour relations, investment in human capital and communities, as well as human rights issues. The governance of public and

[12] https://www.icsi.edu/media/webmodules/ILP_Study_with_TP.pdf, accessed on September 28, 2021

private institutions – including management structures, employee relations and executive remuneration – plays a fundamental role in ensuring the inclusion of social and environmental considerations in the decision-making process (EC, 2022).

India has emerged as an important destination for investors inclined to fund projects that lead to or are aligned with Sustainable Development Goals (SDGs). To this effect, the ESG-based financing has gained a nexus of supporters, even amongst financial institutions. The State Bank of India (SBI) formulating an ESG compliant lending policy for enterprises is one such example[13]. DBS Bank too promotes Sustainability-linked loans by pegging the interest rate of the credit to performance metrics developed on lines of ESG[14]. Similar initiatives can be found among social investors and venture capitalists in India.

This momentum of acknowledging the environmental, social and governance impact of a project or enterprise and weighing it enough to base the lending decision off it is commendable. However, **micro enterprises, or those that have recently graduated to small scale but only with a marginal increase in investment in plant and machinery or equipment, or annual turnover, are far from gaining from it**. For one, the ESG framework complies with the parameters applicable for small and medium enterprises instead of micro enterprises within the MSME segment. The reportage and disclosures also require a considerable amount of human and capital resource commitment. This level of documentation and investment may not make sense for a micro enterprise, for which sustaining a business on a day to day basis is a priority.

A metric system adjusted to the business models of micro enterprises stands to gain an essential place within this landscape. Various institutions/agencies and networks at national and international levels have shown interest in cross-dialogue for developing such a system and/or policies that back it. India is a member country of the **International Platform for Sustainable Finance (IPSF)**, launched in October 2019. IPSF receives diverse representation of public authorities that are in charge of developing policies around sustainable finance. (European Commission, 2020).

2.3.2 Incorporation of Green Financing Model

Green finance refers to the financial arrangements that are specific to the use for projects that are environmentally sustainable or that address the threat of climate change. These projects are targetted towards either climate adaptation, climate mitigation or other environmental aspecs such as biodiversity and resource conservation. Some examples are projects that include the production of energy from renewable sources, clean transportation that involves lower greenhouse gas emission, energy efficient projects like green building etc. In order to meet the financial needs for these types of projects, green financial instruments such as green bonds; carbon market instruments (e.g., carbon tax); and new financial institutions (e.g., green banks[15] and green funds) are being established.

2.3.2.1 Financial Products Promoting Environmentally Sustainable Economic Activities in the Local Market

India’s integration of green financing in its landscape started in 2007, a major part of which was the Reserve Bank of India (RBI) devising policies to encourage banks to align with sustainability goals. In 2015, for instance, RBI added small renewable energy projects under the Priority Sector Lending scheme in order to promote these. This led the Indian banks to devise their own policies for reducing their lending to carbon intensive sectors and adopt a green finance approach to credit (Davos Agenda, 2022). Signing to Principles for Responsible Investment (PRI), development of IREDA as India's first Green Bank, Socially Resonsible Investment (SRI) Fund by ABN AMRO are a few to

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13 https://www.financialexpress.com/industry/banking-finance/sbi-firms-up-esg-policy-but-wont-deny-loans-to-poor-scorers-right-away/2521280/

14 https://www.dbs.com/sustainability/responsible-banking/sustainable-financing/sustainable-linked-transactions

15 Referred to dedicated green financing institutions e.g., the Indian Renewable Energy Development Agency (IREDA) and Tata Cleantech Capital Limited (TCCL)

mention in this regard. The RBI also joined the Central Banks and Supervisors Network for Greening the Financial System (NGFS) as a member on April 23, 2021. This is a group of central banks and supervisors willing to share best practices and contribute to the development of environment and climate risk management in the financial sector, while mobilising mainstream finance to support the transition towards a sustainable economy (RBI Press Release, 2021). RBI, internally, is also in the process of formulating a roadmap for green banking in India by looking into various aspects of green finance.[16]

Two major stock exchanges in India, the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) are part of the Sustainable Stock Exchange (SSE) initiative and publish separate ESG indices. SSE is a UN Partnership Programme organised by the United Nations Conference on Trade and Development (UNCTAD), the UN Global Compact, UNEP Financial Initiative (UNEP-FI) and PRI. It recommends the stock exchanges of its signatory countries to come up with stock price indices that track the stock performance of such a set of domestic companies that are leaders in recognizing the ESG principles into their financing aspects.

2.3.2.2 Sustainability Reportage by Financial Institutions[17]

All institutions governed by the Securities & Exchange Board of India (SEBI) are mandatorily required to abide by business responsibility and sustainability reportage. This is except NABARD and SIDBI, both of which are governed under different Acts of the Parliament of India. The table given below (Table 4) maps the adoption of sustainability frameworks by major banks in the country. YES Bank and HDFC Bank are among the only private financial institutions to be abiding by all four of the sustainability

Table 4: Sustainability Reportage by Financial Institutions

Sustainabilitv Reportage Guideline	CDP	Global Reporting Initiative	Business Responsibility & Sustainability Reporting	Task Force on Climate Related Financial Disclosures
Axis BanK				
Bandhan Bank				
HDFC Bank				
ICICI Bank				
IDFC First Bank				
IndusInd Bank				
Kotak Mahindra Bank				
NABARD			NA	
Punjab National Bank				
RBL Bank				
State Bank of India				
SIDBI			NA	
YES Bank				

[16] Source : UN Green Finance Progress Report, 2017 https://www.cbd.int/financial/un/unep-greenfinanceprogress2017.pdf

[17] Case studies of 'best practice' in front-running financial institutions (odi.org)

frameworks.

2.3.2.3 'Green'' or 'Eco' Label for Financial Products

Green labelling, also known as environmental labels or eco-labels, refers to the accreditation of products in line with the specific environmental standards of authority (Shen, Zhang, Mi, 2019). The aim of green labelled financial products is to promote investments that help in mitigating and adapting to the ill-impact of climate change. After China, India is believed to be the second-largest emerging market for green bonds. This is even when green bonds hold a meagre share of 0.7% of the total bonds issuance in India since 2018 – indicating the vast unexplored potential (Outlook India, 2021).

The next few chapters adopt a sectoral approach to presenting the findings of the analysis. Here, you will find information regarding the stakeholders' landscape and the signature issues being faced by LGEs or Green MSMEs in starting up or expanding their business.

Chapter 3

Agriculture & Allied Sector in Bundelkhand

3.1 Snapshot of the Study Site

The study site selected for the agriculture and allied sector is Bundelkhand – a proposed state in Central India that comprises 13 districts, jointly formed by seven districts in the state of Uttar Pradesh and six from the state of Madhya Pradesh (Figure 6).

This region was once famous for its fertile soils, dense forests along with perennial streams and rivers. Owing to unsustainable use of natural resources and variation in climatic conditions due to emergence of new patterns, Bundelkhand is now turning into a desert. It is a semi-arid and primarily rain-fed region (Development Alternatives, 2020).

Figure 6: Location of the study sites, Bundelkhand

The economy of Bundelkhand is agrarian in nature. Over 80% of its population is engaged in farming and rearing of livestock, with some opting for labour work (NITI Aayog, 2012).

Despite being an ecologically and culturally rich region and possessing a strong railway connectivity, the industrial growth in Bundelkhand has been slow. Service sector especially has also not grown adequately. Despite the State Governments of both Uttar Pradesh and Madhya Pradesh putting in efforts to accelerate the economic growth of the region, levels of poverty have remained steadily high here. Local entrepreneurship, especially in the agricultural and allied sector, holds significant potential for paving the path for a green and inclusive economy in Bundelkhand.

3.2 Stakeholders' Landscape

The stakeholder network of agriculture and allied sector in Bundelkhand comprises those involved directly in the supply chain right from the production to the market supply, as well as enablers such as technology providers, skill development and knowledge providers, financiers etc. A glimpse of the landscape is provided in the below (Figure 7).

The agricultural supply chain can be divided into the upstream and downstream value chain, before it reaches the final market. The upstream value chain includes the producers (farmers/livestock owners/fishermen) and suppliers providing inputs such as seeds, fertilizers, machines/technologies and other raw materials etc. On the other hand, the downstream value chain accounts for processing units and logistical flow, that includes transporters, cold storage and warehouse facility providers, retailers – all the way leading up to consumers themselves.

There are other actors in the ecosystem who act as enablers by providing farmers with consultative services on crop input, spraying etc. These enablers range in size from small, family-run businesses to cooperatives and larger companies. They at times also act as credit sources for farmers, apart from the other finance providers such as community-level institutions, rural banks, MFIs, NBFCs, Development Finance Institutions etc. Capacity building and knowledge dissemination is an important service often provided by support organisations such as CSOs, KVIC/KVIBs, RSETI and other entities. Government counterparts play an active role in filling in the gaps and ensuring a smooth cycle for the farmers/agroentrepreneurs.

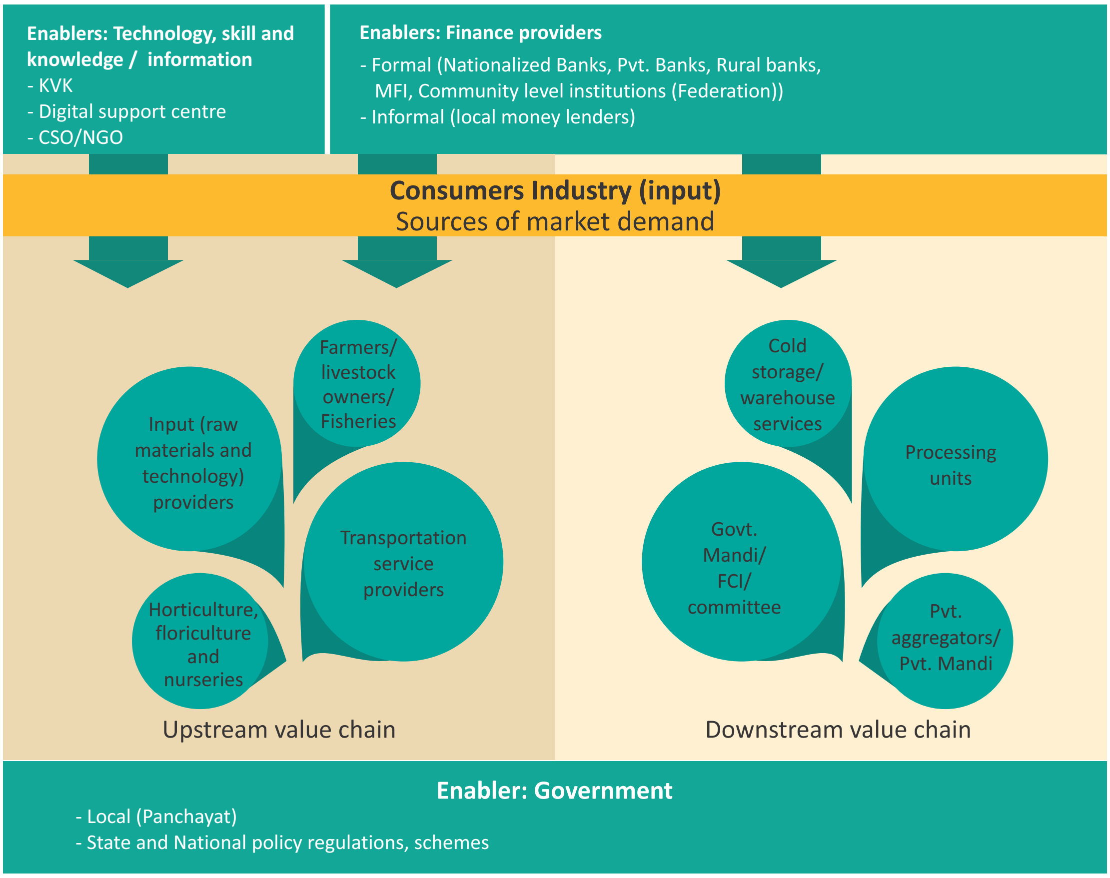


Figure 7: The stakeholder map

3.2.1 Upstream Value Chain

- **Input Providers**: Input providers supply products and services needed to operate and produce the final product. These inputs may include seeds, feed, nutrients, pesticides, equipment and technology.
- **Farmers/ livestock owners/ Fishermen**: This covers those who are actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities, including all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry and livestock rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting labourers, as well as persons engaged in various farming related occupations such as sericulture, vermiculture and agro-forestry. The term also includes tribal families / persons engaged in shifting cultivation and in the collection, use and sale of minor and non-timber forest produce (The Hindu, 2019).
- **Horticulture, Floriculture and Nurseries**: Horticulture refers to cultivation of plants used for food, medicinal purposes and for aesthetic gratification. Floriculture is a special branch of horticulture that focuses on producing flowering and foliage plants for decorative use. Nursery production involves growing plants under intensive management for use in another location.
- **Transportation Service Providers**: Transportation service provider refers to any party, person, agent, or carrier that provides freight, household goods, or passenger transportation or related services to an agency.

3.2.2 Downstream Value Chain

- **Cold Storage/ Warehouse Service**: Warehousing is the process of storing physical goods before they are sold or further distributed in a dedicated warehouse or storage facility. Warehouses safely and securely store products in an organized way to track where items are located, when they arrive, how long they have been there, and the quantity on hand.

- **Processing Unit**: Agro-Processing Centre (APC) is a place or subset of manufacturing where all the facilities required for pre-treatment, processing, drying, packaging, storage and marketing (optional) are available in sequential manner for the raw materials and intermediate products derived from the agricultural sector. (Kalnar, Mann, & Balakrishnana, 2018).

- **Government/ Private Aggregation Facilities (Mandi)**: Agricultural trade is made of complex supply chains, numerous agents, and high levels of commodity specificity. Mandis provide a regulated market space that reduces some of the challenges and encourages fair competition, as well as synergies between arhatiyas (Commission agent) and farmers.

- **Agricultural Produce Market Committee (APMC)**: It is a system operating under the State Government. The APMC has Yards/Mandis in the market area that regulates the notified agricultural produce and livestock. It ensures worthy prices and timely payments to the farmers for their produce. It is also responsible for the regulation of agricultural trading practices (Agricultural Produce Market Committee, 2021).

3.2.3 Enabler I - Technology, Skill & Knowledge

- **Krishi Vigyan Kendra (KVK)**: KVK plays a vital role in conducting on-farm Testing to demonstrate location-specific agricultural technologies. KVKs are functioning as Knowledge and Resource Centres of agriculture technology supporting initiatives of public, private & voluntary sectors for improving the agricultural economy of the districts and are linking the National Agricultural Research System (NARS) with extension systems and farmers (India Filings, 2021).

- **Digital Support Center**: These centres provide a single point of access for all IT services, multi-channel support for incidents and automated service request fulfilment. The Digital Service Centre manages all user interactions to accelerate incident resolution while minimizing agent involvement and support costs.

- **Civil society organization (CSO) or non-governmental organization (NGO)**: They are non-profit, voluntary citizens' groups which are organized on a local, national or international level. They are task-oriented and driven by people with a common interest. Civil society organizations perform a variety of services and humanitarian functions, bring citizens' concerns to Governments, monitor policies, and encourage political participation at the community level (United Nation, 2021).

3.2.4 Enabler II - Financing

- **Formal Sources of Finance**: Formal finance is financing capital which has been sourced from banks and other formal financial intermediaries. The formal source of finance includes rural banks – grameen banks, microfinance institutions, development banks, NBFCs, public and private sector banks, Small Finance Banks etc.

- **Informal Sources of Finance**: Informal finance is financing capital which are usually small, unsecured and short in maturity, sourced from local money lenders, friends and family. The local money lenders charge high interest rates due to providing unsecured loans (loans that don't require collateral). Entrepreneurs especially the ones engaged in agricultural and allied services rely on arranging immediate finances from friends and family where in most cases, the credit is interest free with no collateral required and flexibility in repayment periods.

3.3 Signature Barriers to Growth of Agri-Based LGEs or Green MSMEs

The signature issues affecting the growth of agri-based LGEs or Green MSMEs in Bundelkhand are divided into four categories:- Economic & Regulatory, Business (Technical and Operational), Behavioural and Financial. These are explained under (Table 5).

Table 5: Signature issues for Agriculture sector

Economic & Regulatory Issues	***Signature Issue 1*** *Inadequate access to information about Government schemes, their training programs and other incentives*	1. *Low information penetration about the Government schemes and incentives has created a hindrance for the farmers and farming communitie.* 2. *This holds true especially for the training conducted under Krishi Vigyan Kendra by the Government – disabling these farmers from enhancing their capacities and increasing their output/income.*
Business Issues (Technical & Operational)	***Signature Issue 2*** *Dependency on Third Parties / Inadequate Capacities*	3. *Third parties (such as CSOs) often play support agencies for farmers and farming communities – providing them training on the farming/processing, supplying raw material and selling off the product on their behalf.* 4. *This renders these* ***farmers or farming community members dependent upon these parties for their livelihood – disabling them from developing sufficient understanding of the value chain****. This is most applicable to skills that are not traditionally seen at the location.*
	Signature Issue 3 *Poor access to inputs for production*	5. ***Lack of knowledge of viable sources of inputs, their market price, as well as inadequate quality and distance to be travelled to avail these*** *are significant gaps in the value chain affecting crop productivity and outcomes.*
	Signature Issue 4 *Poor access to basic infrastructure*	6. ***Irregular supply of electricity (due to subsidies), improper road connectivity and public transport*** *affects the overall production and supply process.*
	Signature Issue 5 *Gaps in Post-Harvest Linkages*	7. ***Inadequate warehousing facilities*** *near villages forces farmers to immediately sell off their produce – wiping away the possibility of a higher price.* 8. ***APMC mandis require licensing,*** *the rent of which is passed on in terms of depressed prices by the license holders to the farming communities.* 9. *Sales in Government mandis are regulated through Commission Agents who take their own cut in the prices. This* ***lack of transparency, price cartelization, delay in payments affect farmers' income.*** 10. *These mandis are also at a far distance from villages, adding to the transportation costs.* 11. *Each State has its own APMC Act, licensing of which* ***prevents the traders from other States from joining the market for better price discovery of farmers.***
	Signature Issue 6 *Challenges related to digitalization*	12. ***The e-retail services****, that have the capacity to scale up the market share of any farmers by providing them with the most effective tools,* ***has erratic accessibility in rural areas****.* 13. ***Digital Seva Kendras are not properly functional at all places in the rural area****, limiting the access to e-governance facilities for the farmers.* 14. *Though the access to smartphones and interest has increased tremendously in the past few years,* ***it is marred with a severe gender bias****. Women farmers still do not have proper access to these facilities.*
Behavioural Issues	***Signature Issue 7*** *Government policies/provisions negatively affects farmers' behaviour*	15. ***Subsidization of inputs*** *leads the farmers to become highly dependent on these instead of them treating these as cushions.* 16. ***Waiving off of the bad loans*** *also affects their behaviour towards repayments since they lose the significance/urgency of repayments.*
	Signature Issue 8 *Societal barriers in women representation in entrepreneurship*	17. ***Lack of adequate supporting ecosystem for women entrepreneurs*** *is still a pertinent issue despite the efforts from the Central and State Governments to widen women representation in entrepreneurship. Among reasons for it are family responsibilities and societal pressure, leaving them underconfident for entrepreneurial pursuits.*

Financial Issues	***Signature Issue 9*** *Informal nature of credit borrowings*	*Most farmers in the study site were noted to be resorting to borrowing from informal sources such as sahukaars (money lenders) at higher interest rates, due to the following reasons:-* *18. **Lack of information** regarding lending provisions of the banking institutions, schemes available for them, processes etc.* *19. Schemes such as Kisan Credit Card (KCC) are based on the size of landholding of the farmer. Those with a **small landholding are in majority**, and thus, fail to qualify for these schemes. These lands also fail to qualify as collateral for loan.* *20. **Lack of complete documents** also disable farmers from proceeding with the application.* *21. **Farming is a seasonal occupation**, but the bank loan requires repayment installments set at regular intervals. Due to this irregularity, conventional private banks avoid lending to farmers.* *22. Formal loan lending process is not only believed to be cumbersome by the farmers, but **is evidently known to take time for conversion**. This doesn't suit the needs of the farming community since most of the times, their need for financing is immediate/short-term.* *23. There is also a **high transaction cost** in terms of man-hours invested in bank processes in place of working in the field, as well as in documentation and file preparation.* *All these, along with the apathetic attitude of the bankers, have resulted in the farmers opting for informal borrowing.*

Chapter 4

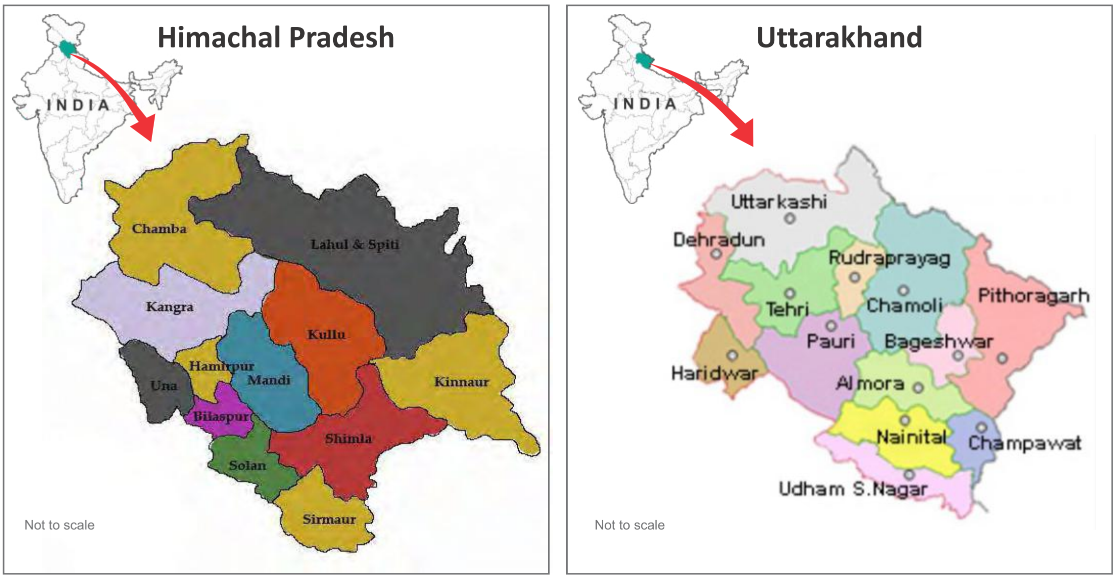
Ecotourism in Himachal Pradesh and Uttarakhand

4.1 Snapshot of the Study Site

For the purpose of studying ecotourism, the State of Himachal Pradesh is selected as the primary site on the basis of its heavy dependence on tourism for livelihoods. This was backed by the fact that the sector contributes 7% to the State Gross Domestic Product (IBEF, 2021). Within the State, focus is laid on **Chamba, Mandi and Kullu**, where the distribution of the percentage of tourist arrival is 6.34%, 6.78% and 18.29% respectively – the latter being the highest among its 12 districts.

Towards the South of Himachal Pradesh lies Uttarakhand. The State owes 2.78% of its Gross Domestic Product to the tourism sector – a share that is expected to increase hereon with the ongoing efforts of the State Government[18]. Considering the proximity and relevance to the study, **Uttarkashi** from Uttarakhand is also covered in context to eco-tourism in this study.

The selection of both the States (Figure 8) and their respective districts stands to benefit from the fact that Development Alternatives has an established knowledge base on sustainable livelihoods, involving youth and women, in the mountain ecosystem of these States. This knowledge base, as developed under previous initiatives of the organization, shall eliminate the need of repeating the process anew, in turn, optimizing efforts.



Source: https://himachalservices.nic.in/economics/pdf/economic_survey_2022-23.pdf

Source: https://uk.gov.in/sitemap (March, 2023)

Figure 8: Location of the study sites
Chamba, Mandi and Kullu (Himachal Pradesh) and Uttarakashi (Uttarakhand)

4.1.1. Concept of Eco-Tourism

The term 'Sustainable Tourism' drives its force from the concepts of ecology, equity and economy (Figure 9). As Abraham, et al. put in their book 'Ecotourism Economics and Environment', "A walk through the rainforest is not eco-tourism unless that particular walk somehow benefits that environment and the people who live there."

[18] Appendices (uttarakhandtourism.gov.in)

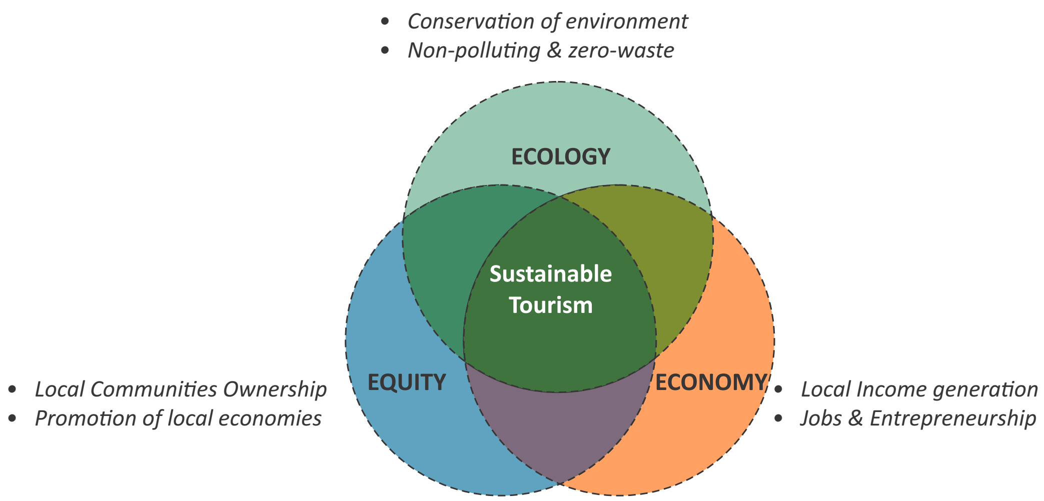


Figure 9: Concept of ecotourism

The UN World Trade Organization (UNWTO) [19] *puts it as, "forms of tourism which have the following characteristics: 1.) All nature-based forms of tourism in which the main motivation of the tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas; 2.) It contains educational and interpretation features; 3.) It is generally, but not exclusively organised by specialised tour operators for small groups. Service provider partners at the destinations tend to be small, locally owned businesses; 4.) It minimises negative impacts upon the natural and socio-cultural environment; 5.) It supports the maintenance of natural areas which are used as ecotourism attractions by a.) generating economic benefits for host communities, organisations and authorities managing natural areas with conservation purposes, b.) providing alternative employment and income opportunities for local communities, and c.) Increasing awareness towards the conservation of natural and cultural assets, both among locals and tourists."*

4.1.2 Demand for Green Product & Services

According to the Sustainable Travel Report launched by Booking.com (2021), as much as 96% of all Indian travelers identified sustainable travel as important to them, while nearly 76% said they were more determined to make sustainable choices when looking to travel again in the future. The same report mentions that about 39% of Indian travelers do not know how or where to find sustainable travel options and half (54%) think there are not enough of such options available.

4.2 Stakeholders' Landscape

The ecosystem of Local Green Enterprises in the tourism sector involves a diverse set of stakeholders, each having a crucial role to play in the growth of these enterprises. The exercise of mapping the stakeholders is thus relevant. The information attained as a result of it is illustrated in the below (Figure 10).

A. Government Stakeholder:

a. ***Central Government:*** **The Ministry of Tourism** is the national nodal agency for the formulation of national policies and programmes and for the co-ordination of activities of various Central Government agencies, State Governments/UTs and the private sector for the development and promotion of tourism in the country. The India Tourism Development Corporation (ITDC) works in association with each **State Tourism Department Corporation**, which is a public sector undertaking for the execution of the responsibilities such as business enhancement, development, direction and promotion of tourism in the state.

[19] Ecotourism and Protected areas | UNWTO

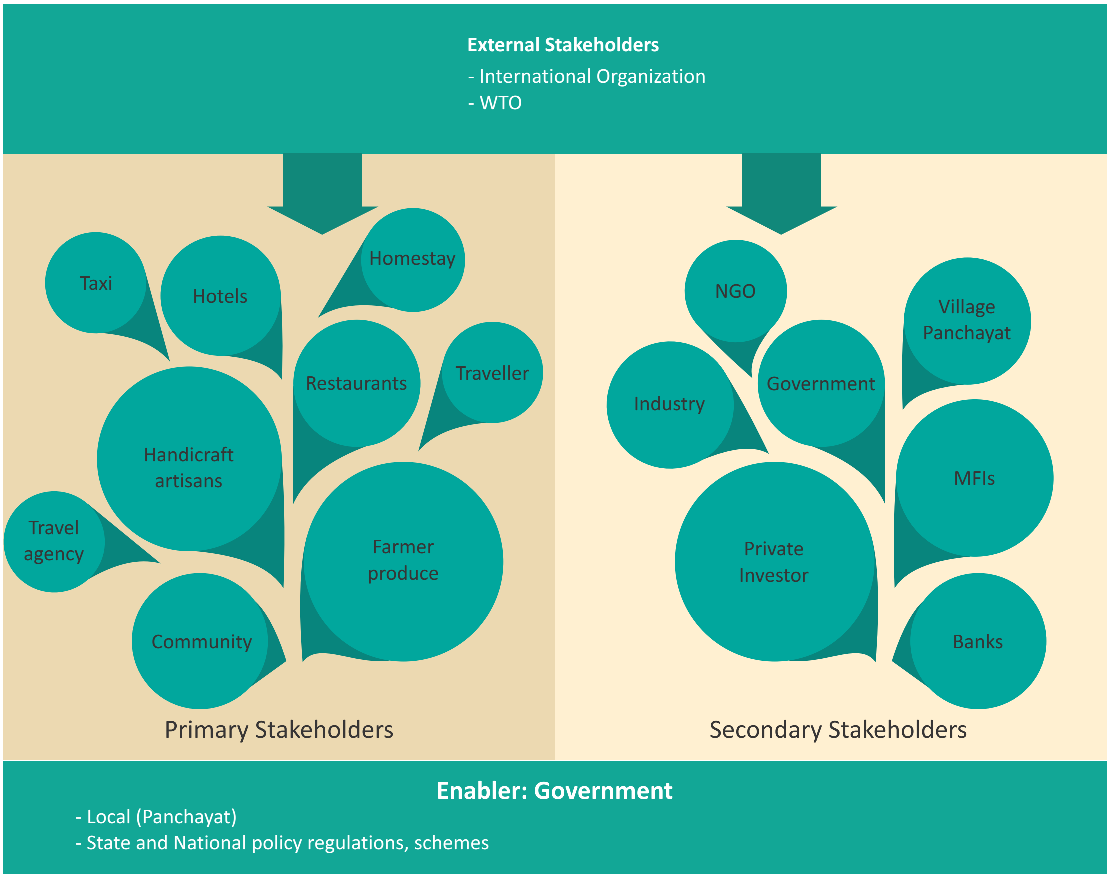


Figure 10: Stakeholder Map for Tourism sector

b. Other Central Ministries also play a significant role in development and promotion of Tourism in India.

c. **State Government:** The Government of Himachal Pradesh took a big leap by setting up Ecotourism Society of Himachal Pradesh (ECOSOC) in 2006, led by the State Forest Department. The Ecotourism Society is an autonomous body with a mandate to preserve and protect the natural, historical and cultural heritage of Himachal Pradesh. The platform is a source of authentic information to travellers w.r.t what is ecotourism, travel choices, trekking routes, forestry, etc. Apart from providing travel information, the society is also responsible for developing training materials and modules, capacity building for various stakeholders involved in the travel and tourism value chain.

The Governemnt of Uttarakhand also undertook an initiative towards environment conservation by setting up Ecotourism Development Corporation of Uttarakhand in 2017. It is classified as a state government company. Despite taking a big leap, the body seems to lag behind as it mostly seems to be inactive.

B. Financial Institutions: Tourism Finance Corporation of India Ltd. (TFCI) acts as a catalyst in the creation of infrastructure in the hospitality segment. It has representation from various financial lending institutions. Through the Aatmanirbhar Bharat scheme, TFCI has been funding MSMEs in the tourism sector.

C. Industry:

a. Local Green Enterprises: Almost 80% of the travel and tourism industry is composed of small medium enterprises (SMEs) which includes tourism value chain providers like hotels, restaurants, travel agencies, adventure tour companies, artisans and farmers etc. LGEs (especially homestays) still comprise only a small component of the segment – pointing to the scope of expansion.

b. **Service Providers:**- Industry players, who specialize in adventure tourism and tour operators apart from accommodation providers such as hotel, Bed and Breakfast (B&B), Farm Stay owners and tourist guides are important representatives in the industry segment.

c. **Aggregator:** These stakeholders have the ability to invest in marketing and promotion of a destination – employing the local staff, investing in training, creating the marketing linkages for the enterprises etc.

d. **Traveller/Tourist:** Traveller is the most crucial asset of the ecosystem upon which the entire tourism value chain depends. The decision taken by a traveller on how to travel, where to travel, where to stay, where to eat and shop creates the demand and supply in the tourism sector. The decision of the traveller is influenced by various factors like safety and hygiene of the stay, popular destination, affordability, etc.

D. **Non-Profit Organisations:** Responsible Tourism Society of India (RTSOI) comprises 13 widely experienced and eco-conscious professionals from the tourism industry, state departments of tourism and forests, wildlife conservation, NGOs as well as Members of Parliament. The main function of RTSOI is to promote and ensure environmentally responsible and sustainable practices in the tourism industry.

4.2.1 Interplay of Stakeholders

The Central and State Government are integral to the policy planning and implementation. They work in consultation with key influencers like private players, academicians, community and industry level stakeholders while drafting the policies for the tourism industry. The role of the industry stakeholders is to assist the tourism operators in voicing their concerns at the National platform. Social enterprises recognized by UNWTO and Outlook Responsible Tourism like *Not On Map, Himalayan Ecotourism, Spiti Ecosphere and Been There Doon That* are some of the upcoming startups that work in collaboration with local community with the mandate of generating employment, conservation and promotion of nature, heritage and culture etc. They play a key role in the upliftment of the local community and promotion of responsible tourism.

4.3 Signature Barriers for Tourism based LGEs in Himachal Pradesh & Uttarakhand

The signature issues identified during consultations with the enterprises in tourism or ecotourism space in the selected study site are as follow (Table 6):-

Table 6: Signature Issues for Tourism sector

Economic & Regulatory Issues	***Signature Issue 1*** *No clear definition of Ecotourism*	*1. There is no set definition of ecotourism at the national level, disabling any scope of its integration with the Central and/or State level tourism related policies and regulations.*
	Signature Issue 2 *Gaps in policy designs in tourism space*	*2. There are clear disconnects between the policies for promotion of local tourism and the ground reality.* *a. Most houses in Himachal Pradesh and Uttarakhand have vernacular architecture which is usually 100-200 years old with low height of the roof. According to the Homestay guidelines, a homestay cannot be approved if the height is below 7ft - thus restricting many locals from setting up their traditional houses as homestays.* *b. The Homestay policy in both the States also restricts the number of rooms in houses that can be set up as homestays from 1 to 4 in number. However, a huge chunk of homes in both the states have more than 4 rooms available which can be converted into a Homestay. (Tribune India, 2021).* *c. The Homestay Policy provides a financial aid of Rs.8000/- or 108 USD to locals for setting up a homestay. This fails to serve as an incentive since the actual investment is much higher and the entrepreneurs often fail to fill that gap on their own.* *This is a missed opportunity! Startups like Not On Map validate that there is a large set of travelers willing to explore and stay at traditional homes with low height and basic amenities.*

Economic & Regulatory Issues	***Signature Issue 3*** *Poor Implementation of Policies - Underdeveloped capacities*	3. *Tourism promotion policies in both the States have been found to be purely target oriented. There is however limited capacity building or training support to back this, which leaves the interpretation of a homestay business model and the understanding of its operations to each entrepreneur's risk.* 4. *Entrepreneurs have also pointed to the low quality of the (limited) capacity building sessions.*
	Signature Issue 4 *Inadequate access to information about Government financial and support schemes*	5. *Local administration is often found inadequately aware of the Government schemes and incentives available for homestay businesses. This is especially evident in the rural and peri-urban areas, where the administrators remain involved in day to day work including assisting the locals in documenting their Aadhaar Card, SC/ST Card etc.* 6. *This information asymmetry disables foundational support for promotion of tourism based enterprises in the State of Himachal Pradesh and Uttarakhand/*
Business Issues (Technical & Operational)	***Signature Issue 5*** *Uneven Development of Tourist Spots*	7. *Gaps in connecting infrastructure and positioning of the district is a major hurdle in its development as the ecotourism hub. The stakeholders highlighted the inadequacy of such support in the districts selected for this study. Tourism seems to be still centered around a few established spots, resulting in uneven distribution of the tourist arrival amidst the districts.* 8. *This also results in the exodus of the local communities from the offbeat districts to the popular ones for better opportunities, resulting in overloading in the established hotspots and deepening the issue of under-development of the other districts in terms of tourism.*
Behavioural Issues	***Signature Issue 6*** *Greenwashing of Enterprises*	9. *In the absence of a clear understanding of 'Ecotourism' as a business model, there is a rampant greenwashing of tourism based enterprises as ecobusinesses. This leads to poor management and overutilization of natural resources.* 10. *There are currently 2305 registered homestays and 3679 registered hotels in Himachal Pradesh. Many of these operate without license, authorization and skills – making it difficult to monitor the sustainability criteria (The Tribune India, 2021). This also results in disputes between homestay and hotel business operators – creating mistrust in the market.*
Financial Issues	***Signature Issue 7*** *Lending Centricity in Hotspots*	11. *Lenders seem to be more inclined towards investing in businesses in the tourist hotspots instead of the emerging ones, resulting in financing gaps in the latter areas.*
	Signature Issue 8 *Cumbersome Lending Processes*	12. *Lack of clarity regarding lending provisions of the financing institutions, schemes available for the development of homestays, process for application etc.* 13. *Lengthy processes at the end of bankers, right from loan application to loan conversion.* 14. *Requirement of collateral and lack of information on application for guarantee schemes such as Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE).* *Apart from these, the lending processes in this specific ecosystem and geography are also marred by inefficient and biassed practices that lead loan cases with good credibility towards rejection.*
	Signature Issue 9 *Gaps in Documentation*	1. *Most newly emerged homestays are informal i.e, they do not possess any valid proof of business identity (such as Udyam Registration). This causes rejection of their loan applications.* 2. *Many also do not possess the right financial understanding to be able to navigate through the Detailed Project Report (DPR) and other requisites for the loan application. They either fall prey to the middlemen (CAs) or do not apply for a formal loan at all.*

Chapter 5

Construction Sector in Bihar

India is the second largest producer of bricks in the world, contributing about 13% of the global production (averaging to about 4.75 lakh bricks every single minute). About 65% of the national brick production comes from the North Indian States lying on the Gangetic belt – Punjab, Haryana, Uttar Pradesh, Bihar and West Bengal. From among these States, Bihar was selected as the site for this study.

5.1 Snapshot of the Study Site

Bihar has about 7700 brick kilns that produce approximately 23 billion red bricks annually. In manufacturing of these red bricks, approximately 65 million tons of fertile soil is stripped off every year. This is equivalent to 300 square km of agricultural land (twice the size of Patna district!). Growth of brick kilns has surged and land under cultivation in Bihar has been lost during the year 2012-2016 for some of the most prominent crops (Figure 11).

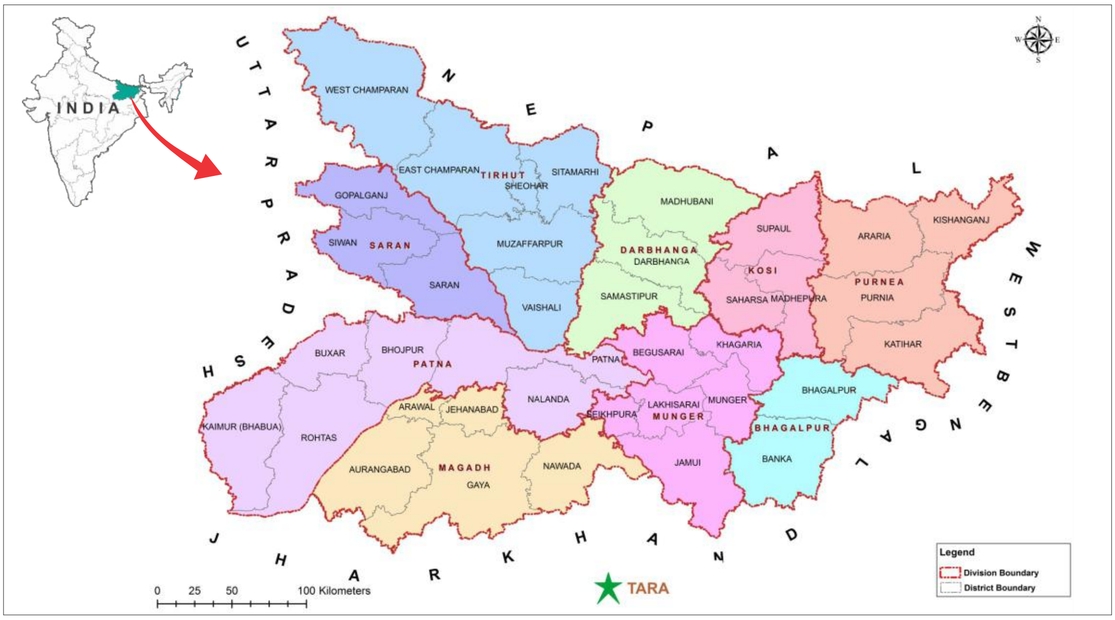


Figure 11: Location of study sites, Bihar

Another issue pertaining to the Bihar brick industry is its coal intensiveness. The industry is dominated by resource depleting and highly polluting technologies, such as Fixed Chimney Bull's Trench Kilns (FCBTKs). The production of fired clay bricks consumes around 4.8 million tonnes of coal per year, leading to the emission of 16 million tonnes of carbon dioxide (CO_2) and consumption of 53 million tonnes of topsoil. The increasing emissions of greenhouse gases, sulphur dioxide (SO_2), nitrogen oxides and Suspended Particulate Matter (SPM) from this production process contribute massively to climate change. In response to the negative impact of brick kilns, the Bihar State Pollution Control Board (BSPCB) has mandated all traditional brick kilns to adopt cleaner brick production technologies, such as fly ash bricks, zig-zag or vertical shaft brick kiln (VSBK) methods of brick firing. The fly ash brick manufacturing technology has limited environmental footprint, as it utilizes industrial waste of thermal power plants i.e., fly ash. Because it does not consume topsoil and thermal energy, it is an opportunity for Bihar brick industry to transition towards a zero-emission future. The potential of fly ash brick manufacturing in Bihar is 10 billion bricks per year. The fly ash can be utilized in infrastructure projects, enables creation of more enterprises and hence there is employment generation for unskilled workforce (Development Alternatives, The Fly Ash Brick Industry in Bihar-Status Report, 2019).

5.2 Stakeholders' Landscape

The construction sector comprises urban building and housing development, infrastructure development, and utilizes many resources like cement, bricks, steel, water, soil, glass, wood etc. The focus of this research is brick industry and specifically fly ash brick industry that caters to the urban, peri-urban and rural housing and building projects in Bihar. The ecosystem stakeholders are mapped here for reference (Figure 12).

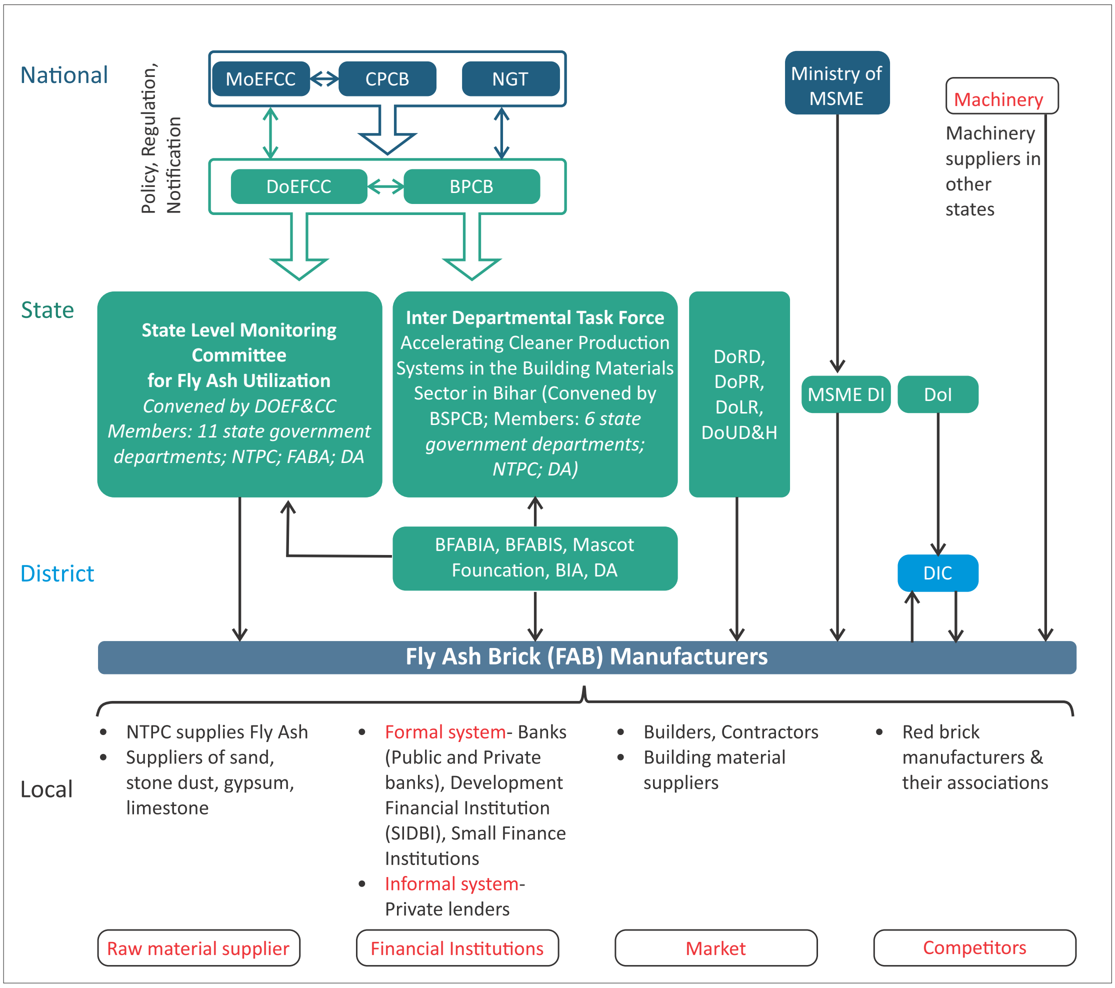


Figure 12: Stakeholder Map of Fly Ash Brick Sector in Bihar

→ **Central Government:** Ministry of Environment, Forest and Climate Change (MoEFCC) and Central Pollution Control Board (CPCB) lay policies, regulations and notifications for guiding and regulating the industries while the National Green Tribunal (NGT) provides resolution of legal cases and disputes related to the environment. The Ministry of Micro Small Medium Enterprises (MSME) formulates and administers the rules, regulations and laws related to MSMEs. It supports the establishment and development of enterprises across a range of industries and sectors, including fly ash.

→ ***Government at State Level:***

a. Department of Environment, Forest and Climate Change (DoEFCC) and Bihar State Pollution Control Board (BSPCB) ensures compliance of Government orders, policy decisions, guidelines and notifications at state level.

b. The Department of Industries (DoI), Government of Bihar is responsible for the comprehensive industrial and entrepreneurship development in the state; thereby, generating employment opportunities and fostering economic development of the state.

c. The MSME Development Institute at the State level (governed Centrally) that provides assistance for the promotion and development of MSMEs in the state of Bihar by implementing policy guidelines of the Ministry of MSME, Government of India.

d. The Department of Rural Development, Department of Land and Revenue, Department of Urban Development & Housing and other State Government Departments use fly ash bricks in construction projects and thus, are a part of this ecosystem.

e. A State Level Monitoring Committee (SLMC) for Fly Ash Utilization is convened by DoEFCC with members from 11 departments of the State Government of Bihar, National Thermal Power Corporation (NTPC), Fly Ash brick Association (FABA) and Development Alternatives (DA).

f. An Inter-Departmental Task Force on Accelerating Cleaner Production Systems in the Building Materials Sector in Bihar is convened by BSPCB and has members from 6 state government departments, NTPC and DA. This task force helps in providing technical knowledge and resolves challenges faced by fly ash brick entrepreneurs with possible solutions.

➔ ***Government at District Level:*** Each district in Bihar has a District Industry Centre (DIC) which supports and guides enterprises in different industries for engagement with government departments, financial institutions, documentation, and other administrative work. District Industries Centres (DIC) are responsible for promoting enterprises, particularly the medium, small and micro, at the district level and render all possible help and guidance in establishing the units. Besides, the DIC is also involved in implementation of the Prime Minister Employment Generation Programme (PMEGP) in the districts.

➔ ***Market Stakeholders:*** The industry of fly ash brick sector mainly comprises fly ash brick enterprises (mostly micro or small in scale) on the supply side and Government Contractors on the demand side. Private contractors and households have a very small share of the market demand so far. This segment, though, is developing. Others include raw material (fly ash, sand, stone dust, gypsum, limestone) suppliers, financial institutions; building material suppliers as well as red brick manufacturers and their associations.

➔ ***Industry Associations & NGOs:***

a. Bihar Fly Ash Brick Industries Association (BFABIA); Bihar Fly Ash Brick Industries Society (BFABIS); a local non-profit organization Mascot Foundation are the private associations and NGOs which collaboratively work at state level to support fly ash enterprises. These institutions have dialogue and exchange information on government orders, technology, data, research, monitoring and issues with respect to the fly ash brick production and use in the state, policy features vis a vis implementation, progress and challenges faced by fly ash brick entrepreneurs and possible solutions, project specific activities and progress involving DA and other national and local CSOs, technical backstopping and feedback on challenges faced by fly ash brick entrepreneurs and possible solutions and decisions and carry feedback from enterprises to SLMC, Task Force and BSPCB; and also provide onsite training and capacity building of enterprise workforce.

b. On a generic level, Bihar Industry Association (BIA) supports enterprises from all types of industries in operational matters like document preparation, supporting letters, providing knowledge and updated information about policies, schemes, relevant government departments & public utilities, knowledge about taxation and accounting practices, resolving issues like high electricity bills, training to business start-ups, market research, seed finance, etc.

5.3 Signature Barriers to Growth of Fly Ash Brick Enterprises in Bihar

The signature issues or barriers to the growth of fly ash brick enterprises are identified based on one-to-one interactions and Focused Group Discussions (FDGs) with them and other stakeholders directly involved in the ecosystem. The interlinkage between these stakeholders and the issues at their level are explained in the issue map given below. The prime of these are also explained in the matrix that follows (Figure 13).

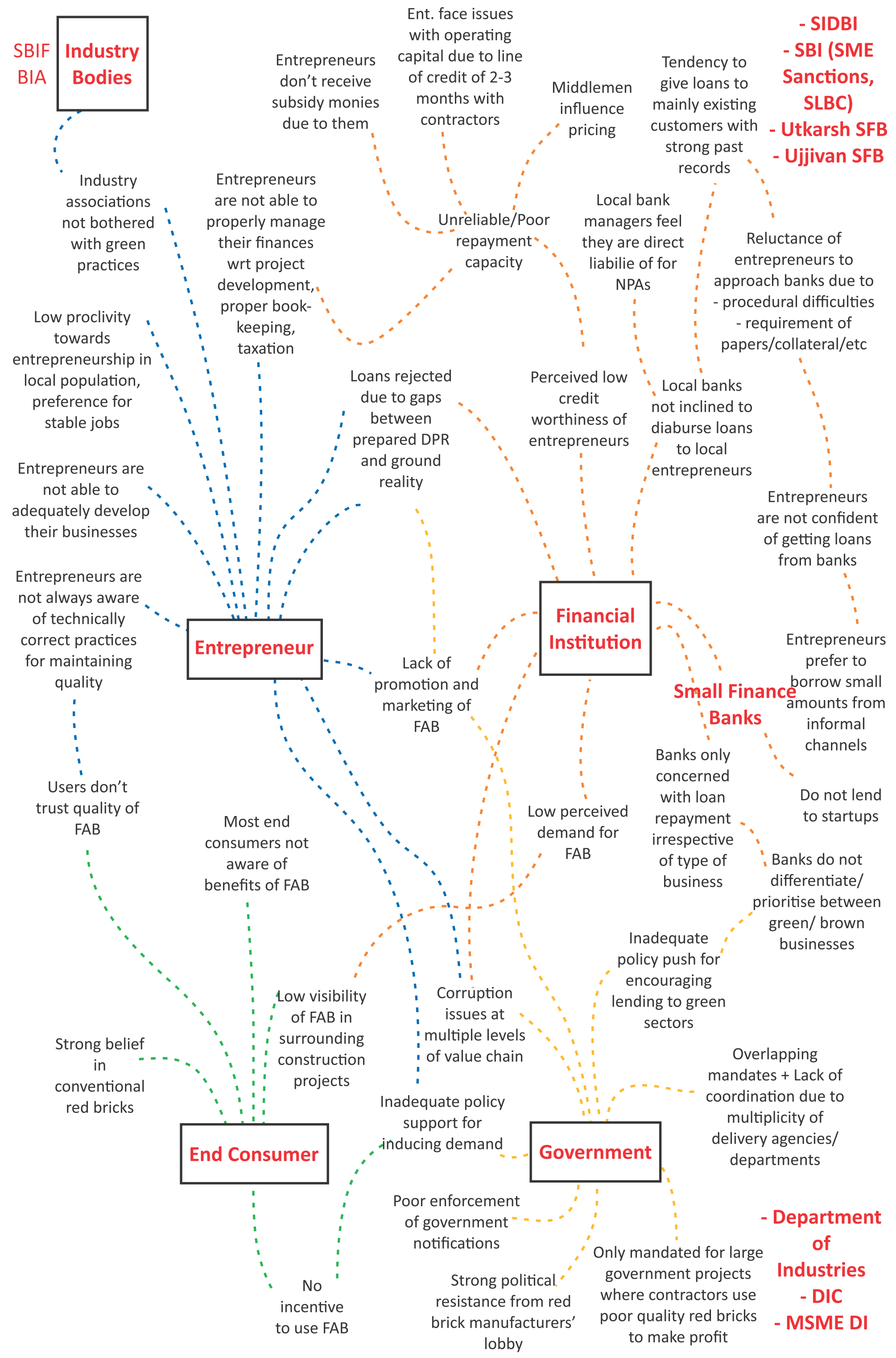


Figure 13 : Issue Map of Stakeholders of Fly Ash Brick Industry in Bihar

Table 7: Signature Issues of Construction sector

Economic & Regulatory Issues	***Signature Issue 1*** *Dearth of Dedicated Policy for Promotion of Fly Ash Brick Industry*	*1. While the State Government of Bihar in general and Bihar State Pollution Control Board in specific has issued multiple notifications and undertaken strenuous measures to support the growth of fly ash brick enterprises in the States, there is still a lack of dedicated policy that culminates all related notifications and puts down the vision of growth for the industry.*
	Signature Issue 2 *Inadequate thrust for increasing demand of FAB*	*2. Institutional construction is the major source of demand for the fly ash bricks in Bihar. Within this segment operate both Government and private contractors. The Government contractors by notification have to use fly ash bricks in construction of Government buildings. The demand however at private contractors and household construction level requires policy push - which isn't adequate as of yet. There is no incentive for them to use FAB (pricing incentives, construction related/green building benefits).*
	Signature Issue 3 *Inadequate information and access to Government financial and support schemes*	*Despite multiple Government schemes existing at Central and State level to support self-employment and entrepreneurship, its penetration among fly ash brick manufacturers is restricted due to the following reasons.* *3. There is limited, if not non-existent, knowledge of the benefits, eligibility and application processes under Central and State financing schemes such as Prime Minister Employment Generation Programme (PMEGP), PM MUDRA Yojana, Stand Up India Loans, CM Yuva Udyami Yojana etc.*
	Signature Issue 4 *Gaps in Due Diligence Processes*	*4. In the case of PMEGP, the District Level Task Force (DLTF) recommends or gives initial clearance to the applications by FAB manufacturers based on the papers and DPR without conducting field visits. When bankers conduct their due diligence, the process is stricter than in case of DLTF, many of these applications are rejected. This has also created a sense of distrust among the bankers on the due diligence processes under Government schemes. In consultation, they did in fact suggest more representation of bankers in the DLTF to ensure that the initial screening is strengthened.*
Business Issues (Technical & Operational)	***Signature Issue 5*** *Low Market Demand for Fly Ash Bricks*	*5. Fly ash bricks aren't being used adequately in rural projects. With proper marketing, this segment has a wide scope of growth.* *6. Construction companies have started operating their fly ash brick manufacturing processes, as a part of reverse linkage. This has put pressure on the micro and small level brick manufacturers whose market share are dwindling as a result.*
	Signature Issue 6 *Irregular supply and fluctuating prices of raw materials*	*7. Entrepreneurs have commented about the procurement of the fly ash from Thermal Power Plants to be cumbersome and irregular. There have also been reports of the fly ash brick manufacturers, who have now stopped operations, still procuring fly ash and selling that off at higher price to the active ones.* *8. Price of sand, stone dust, gypsum, limestone fluctuates depending on distance of procurement. FAB entrepreneurs often end up using the coarse sand to bring the costs down, which further depletes the quality of the bricm.* *9. Price of cement fluctuates with economic fluctuations.*
	Signature Issue 7 *Problems in Procurement and Servicing of Machines*	*10. Fly ash brick entrepreneurs have been found to be importing machines from the other States (Gujarat, Maharashtra, Odisha etc). Further probing has pointed to the lack of information regarding local machine manufacturers, or if there are any at all.* *11. There is scattered knowledge around vendors for servicing the machines too. Many FAB entrepreneurs mentioned having had modifications made to their machine by a local mechanic - not knowing whom else to approach. These mechanics don't always get the problem right, resulting in either the machine operating at lower capacity/quality or not operating at all.*
	Signature Issue 8 *Gaps in Technical Capacity*	*12. Fly ash brick entrepreneurs operating in Bihar have been found to have limited technical knowledge in terms of right ratio of the raw material for producing strong bricks, right set of machinery, etc. Though Development Alternatives with support from Bihar State Pollution Control Board has been providing one-to-one training in different districts of the State, the continuity and scale up of these trainings, especially to reach new entrepreneurs, is identified as a requirement.* *13. Due to such limited technical capacity, fly ash brick entrepreneurs are also unable to control quality or produce bricks of quality and quantity corresponding to the capacity of their machines - resulting in underutilization.*

	Signature Issue 9 *Lack of Business Acumen*	*14. Most FAB entrepreneurs have been found to have started their unit after hearing about or witnessing the usage of fly ash brick in construction in their previous occupations. Their knowledge of the FAB business model is often limited to secondary information found over the internet or via middlemen. During consultations, very few of the new entrepreneurs mentioned having interacted with the existing brick manufacturers or seeking support from Government Departments. Thus, failing to identify the right sources of raw material, vendors for machines, markets for the bricks etc.* *15. There is also an underdeveloped entrepreneurial capacity among these brick manufacturers. They are risk averse, fear formalization and often continue operating in a small nexus in dread of taxes instead of expanding their business.*
Behavioural Issues	***Signature Issue 10*** *Reluctance towards FAB as an alternative*	*16. Red bricks have for long been a default option for construction of houses, institutional and other buildings. Though a cleaner and greener alternative, traditional mindset as well as limited awareness about the fly ash bricks has restricted its take-up among households.* *17. There is a reluctance to switch to relatively new and unknown building material even at the contractor's end as building construction is a major investment with little room for error.*
Financial Issues	***Signature Issue 11*** *No weightage to the environmental impact in conventional lending criteria*	*18. Financing for greening an enterprise or for a green business such as FAB is not a policy backed mandate for banks. What that means is that banks are only concerned with credit worthiness of borrowers, business viability and loan repayment capacity irrespective of the type of business.* *19. Even though Environmental, Social and Governance (ESG) based lending is taking off in the global space, at national or State level, these are mostly available for the higher end of small or medium enterprises, apart from large corporations. There is no adjustable scale or assessment at micro enterprise level.*
	Signature Issue 12 *Poor Repaying Capacity of Entrepreneurs*	*20. About 85-90% of the demand for fly ash bricks in Bihar is driven by the Government Contractors. The FAB manufacturers acquire raw material on an immediate payment basis, and sell off the bricks to these Contractors on the 'Buy Now, Pay Later' model where the payment for the bricks comes at the later point. This not only results in erratic availability of working capital to run the business, but also the entrepreneur's capacity to pay installments if a loan was availed. This is considered a serious risk by the bankers.*
	Signature Issue 13 *Preference to Existing Businesses for Lending*	*21. Private Financial Institutions (FIs) prefer lending to those with established proof of concept or some surity of the business continuity (thus, better chances of repayment). In this sense, an existing business or an entrepreneur who has already run a FAB unit elsewhere and is wishing to expand is a better choice for the FI in comparison to a new business. This aligns with the requirement of 2-3 years of ITR as a mandatory/preferred document for loan applications, leaving out new entrepreneurs to dry.*
	Signature Issue 14 *Gaps in Documentation*	*22. Lack of complete documentation is a significant hurdle in the entrepreneur's journey of availing formal financing.* *23. Most entrepreneurs rely on third party experts (Chartered Accountants) for preparing their Detailed Project Report. Template mimicry in the proposed business financials has been highlighted by the bankers as a prime reason for rejection of loan application. Entrepreneurs often also do not have a clear understanding of their prepared DPRs and thus are unable to explain their vision to the bankers during loan interview.*
	Signature Issue 15 *Requirement of Collateral*	*24. Despite the existence of schemes such as CGTMSE, entrepreneurs have complained of being asked for a collateral and/or a third party guarantee for availing loans from private financial institutions. Application withdrawals due to lack of collateral/guarantee is a common scenario.* *25. There is also limited understanding of what qualifies for collateral. In consultations between FAB entrepreneurs and bankers, the latter mentioned the agricultural land not qualifying as a collateral unless the land use is changed (that follows a proper process of availing Change of Land Use). This knowledge is absent among most entrepreneurs.*

	Signature Issue 16 *Cumbersome banking processes*	26. *Fly ash brick entrepreneurs have complained of the banking processes being too cumbersome, requiring them to repeatedly revisit the financial institution - resulting in the loss of business hours.* 27. *The gestation period between a loan application and loan sanction is also long, while the entrepreneurs' requirements are mostly immediate.*
	Signature Issue 17 *Preference to Informal Lending*	28. *Due to all the reasons mentioned above, the entrepreneurs are known to prefer informal lending from the money lenders. They not only pay exuberantly high interest rates of these loans, but because these transactions are not recorded, their credit history doesn't develop. This gets them to the trap where informal loans feed into low credit scores (if not non-existent), which feed back into more informal borrowing.*

Chapter 6

Driving Sustainable Reforms for LGEs

The contextual financial analysis conducted in the Indian context for the agricultural and allied sector in Bundelkhand, eco-tourism sector in Himachal Pradesh and Uttarakhand, and construction sector in Bihar has enabled identification and validation of the signature issues affecting the micro entrepreneurs in these study sites. Further to that knowledge, this chapter discusses in detail reforms that are critical for the growth of such Local Green Enterprises.

6.1 Recommendations for Bridging the Gap

Strengthened policy and regulatory mechanisms can lay a solid foundation for Local Green Enterprises to thrive on. In order to achieve that, first and foremost, there is a need of setting clear taxonomies and terminologies pertaining to Local Green Enterprises. There currently exists subjectivity around the definition of 'local' and 'green' when it comes to enterprises or entrepreneurship. Having such a taxonomy in place will not only eradicate the confusion, but in turn, result in policies and regulation with clear objectives and outcomes. It is also envisaged to pace up the process of identification and classification of priority sectors for promotion of LGEs, and their due inclusion as thrust areas in the State Industrial Policies.

Policy integrations have direct linkage to Ease of *Access to Financing*. Once the taxonomy around LGEs is established, localness and greenness can be integrated as critical parameters in the lending decisions at financiers' end. This will permit contexualization of the ESG based lending for micro and small enterprises, who currently are unable to avail of it due to their informality or low scale. There will also be a scope of differentiating such financial products as per nature of funding need (working capital v/s term loan) and stage of operation (starting up vs expansion of business), thus moving away from a one-size-fit-all to a more customized lending pattern for such enterprises.

While such policy intergration is supposed to increase the flow of green financing or financing for Local Green Enterprises, **optimal utilization of the currently available funding demands robust information access, awareness and capacity building**. For one, the Central and State Governments already have mechanisms such as that of Single Window System (SWS) and Udyog Mitras in place to aid entrepreneurs in knowing more about and applying for Government financing schemes. The Government can augment the utility of these mechanisms by simplifying the interfaces and providing handholding support for navigation. Improved financial and digital literacy of entrepreneurs can act as a ready solution for overcoming procedural difficulties in loan processes.

Long term correction in the ecosystem of LGEs also calls for continued business and technical assistance, including aid to understand market and margins, sources of raw materials, machineries etc. This has relevance beyond building confidence and ensuring continuity of these enterprises. Best business cases can emerge from among these businesses, and serve as inspiration for more enterprises to transition.

Better access to technology/infrastructure and associated services is going to be another important enabler in this transition. Depending upon the sector, a strong commitment to cross-border technology transfer and adoption of global best practices can answer for most of the leakages in the business models. Say, in the case of agriculture, making post harvest infrastructure (such as storage for crops) accessible can prevent losses due to crop damage. Given this provision, the farmers will also not be pressured to sell off their crops at low rates lest they will be in complete loss. Similarly, such technology transfer will also help in creating sustainable localized value chains and/or expanding the last mile connectivity of aggregation facilities.

6.2 Innovative Financing to Sustain the Reforms

A critical step towards green transition of the economy is to acknowledge the fact that though the sustainable financial reforms can act as catalysts in the process of creating an enabling environment for Local Green Enterprises, these cannot drive the transition on their own. Progressing on the mandate requires supplementing existing business models with domestic and international funding and provisions of innovative financing instruments, including but not limited to carbon credits and green bonds.

Successful evidence of such interplay exists at sub-national, national and international level. One such example is given here for reference. Development Alternatives in support of the Green Economy Coalition (GEC) has been collating such best practices under Mainstreaming Alternative Practices - South Asia (MAP-SA). MAP-SA acts as a repository of best practices in green and just transition of the Indian economy. Visit this interactive interface to find sector and geography wise case studies of India.

Scan here to visit the
MAP-SA Site

Case Study

Promoting Financing for Agroforestry through **Sustainable Landscape Guarantee Program**

Image Courtesy: Rabo Foundation

SNAPSHOT	
Nature	Blended Finance Instrument - Loan Portfolio Guarantee
Year of Launch	September 2018
Sector & Country	Agro-Forestry and Sustainable Forestry in India
Primary Stakeholders	- Rabo Foundation - United States Agency for International Development (USAID) - Samunnati Financial Intermediation and Services Private Limited (SAMFIN) - Ananya Finance for Inclusive Growth Private Limited (Ananya)

KEY MESSAGE
Climate resilient agriculture and agro-forestry can play a decisive role in enabling India meet its target of achieving carbon neutrality by the year 2070. Unfortunately, due to lack of knowledge of such business models as well as long gestation period, investment in these sectors are considered high risk with unpredictable returns – limiting the availability of credit for small landholder farmers and farm based enterprises among others. Innovative financing instruments, such as loss guarantee, can nudge the financiers towards enhancing the credit inflow for this segment. *The Sustainable Landscape Guarantee Program by Rabo Foundation and USAID is one such example of an instrument in practice.*

Problem Statement

Agriculture and allied sector is an integral part of the Indian economy, driving 17-18% of the Gross Domestic Product and providing livelihood to as many as half (58%) of the Indian population[20]. The sector is one of the major thrust areas of the Government of India - as evident from the series of policies and incentives launched for doubling the income of the farmers by means of maintaining soil and water health, supporting integrated farming, and promoting entrepreneurship in the sector. For India to attain food security, agriculture and allied sector must continue to grow in a consistent fashion. However, this growth needs to be sustainable from both an economic and environmental lens.

A study conducted by the International Maize and Wheat Improvement Cente indicates that about 18% of the gross emissions in India belong to agriculture, forestry and land use[21]. There is a potential of

[20] Agriculture in India: Information About Indian Agriculture & Its Importance. (2022, October). India Brand Equity Foundation (IBEF). https://www.ibef.org/industry/agriculture-india

[21] Study reveals new opportunities to cut greenhouse gas emissions in India. (2018, November 26). International Maize and Wheat Improvement Center (CIMMYT). https://www.cimmyt.org/news/new-study-india-could-cut-nearly-18-of-agricultural-greenhouse-gas-emissions-through-cost-saving-farming-practices/

reducing 85.5 megatonnes of CO2 equivalent per year (which is equal to emissions from more than 60 million cars in a year) by promoting improved practices such as agroforestry[22]. Speeding this would require adequate financing support to small landholder farmers, farm based enterprises and other actors in the ecosystem. Unfortunately, the willingness to invest in these type of projects is low due to factors including but not limited to:-

1. **Long Gestation Period & Unpredictability:** The time between investment and the start of the returns from that investment in case of sustainable agriculture and agroforestry projects spans anywhere upto 7-8 years. Any natural or manmade disaster can risk the returns in that time frame, apart from other unpredicabilities.

2. **Difficulty in Viability Assessment:** There is limited awareness of technical and economic data pertaining to agroforestry and similar models. Thus, the assessment frameworks used by financial instuitutions to measure the viability of the projects do also not fit in these cases properly. Either the assessment doesn't take place or the results cannot be trusted (overestimation of risk or underestimation of returns).

3. **Unclear Structure:** There is also the issue of these sectors being disorganized, with involvement of middlemen and other third parties between the production and sale of the product. This opaque chain structure makes predicting the outcome of a project difficult for both enterprises/farmers and financiers.

By mitigating this risk for the financiers, innovative financing instruments can channel more finance in this landscape to support India's target of achieving carbon neutrality by the year 2070.

About The Program

In September 2018, Rabo Foundation and the United States Agency for International Development (USAID) launched the Sustainable Landscape Guarantee Program as a 10 year long initiative. Two non-banking financial institutions - Samunnati Financial Intermediation and Services Private Limited (SAMFIN) and Ananya Finance for Inclusive Growth Private Limited (Ananya) joined aboard as partners to support loan guarantees to cooperatives, producer companies and others directly or indirectly engaged in sustainable agriculture, forestry and land use. These guarantees were also extended to other microfinance institutions to borrow for onlending to the target segment.

Primary Actors & their Arrangement

- ➔ USAID is the international development agency of the U.S. Federal Government, driving efforts in the domains of agriculture and food security, climate change, economic growth and trade, water and sanitation, among other mandates. Its Sustainable Landscape Program supports the partner countries to protect, manage and restore forests.

- ➔ Rabo Foundation is the impact funding arm of Rabobank Group. It invests in projects that lead to improvements in the conditions of small landholder farmers and related enterprises.

- ➔ Samunnati Financial Intermediation and Services Private Limited (SAMFIN) is a Non-Banking Financial Corporations (NBFCs) with a clear objective to channelize finance into agriculture and allied sectors.

- ➔ Ananya Finance for Inclusive Growth Private Limited (Ananya) is a for profit NBFC that lends loans and technical assistance to microfinance institutions, growth-stage FPOs and impact MSMEs in the renewable energy, waste management, affordable health and livelihoods space.

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[22] Jain, N. (2019, February 25). Agriculture is a big contributor to greenhouse gas in India. A study finds a way to fix that. Scroll.In.https://scroll.in/article/914085/agriculture-is-a-big-contributor-to-greenhouse-gas-in-india-a-study-finds-a-way-to-fix-that

These actors played the following role in the intervention:-

	Rabo Foundation	USAID	SAMFIN	Ananya
Common Mandate	Mitigating risk for participating NBFCs		Identifying qualifying borrowers, underwrite and administer loans to them.	
Role	Acting as the first loss guarantor[23].	Acting as the second guarantor.	Providing USD 5 million in financial support in the form of guarantee for sustainably changing land use over the project period.	Providing USD 3 million in financial support in the form of guarantee over the project period.
Progress (if any)			About 35% of the set limit had been utilised by August 2020.	About 20% of the limit had been provided by September 2021.

The guarantee was made available for about half of the principal outstanding, the rest to be borne by the NBFCs themselves. To avoid any moral risks, the beneficiaries were not informed if their loan qualified under the program or without it.

Steps to Launch of the Program

The program design broadly followed the following process - from shortlisting of FIs to their final selection as partners.

Figure 14: Steps to Launch of the Sustainable Landscape Guarantee ProgramCaption for last figure in the CFA report

Impact in Brief

The pulLoans totalling to the value of US$ 15 millions were supported through this arrangement. By mitigating the default risk for the involved FIs and thus, encouraging them to lend to the target cohort, the program achieved two objective(s):-

1. Providing immediate loaning facility to the small landholding farmers and enterprises to switch/adopt sustainable agroforestry practices.
2. Enhance the exposure of the partnering financial institutions to investment in agroforestry as a part of their portfolio, as well as developing a demonstration effect wherein by witnessing these investments, more funders join aboard.

Challenges: Gaps in Program Design

A one of its kind program, this initiative by Rabo Foundation and USAID aimed at challenging inertia of investment in agroforestry, sustainable landuse and agriculture in India. Though it created some impact on the ecosystem, challenges to scaling it up were evident.

- ➔ The program assumed disinterest of the conventional financial institutions (public and private banks) to invest in such business models and thus, targetted itself to the non-banking financial institutions with sector/cohort specific portfolios. The design failed to account for the fact that NBFCs have short term to medium term liquidities, while the agroforestry models require long term investments. Due to this, the partnering financial institutions failed to channelize much investment into the program. This is clear from the fact that the initially planned size of the program was kept at US$75 million, but had to be brought down to US$15 million (to be expanded as per interest from more FIs).
- ➔ The program also didn't consider that NBFCs often have higher interest rates than conventional financial institutions. This, along with the other factors, made the scaling of the intervention problematic.

Learning(s)

It is apparent that mobilization of funding from the private sector is going to experience continued inertia unless consistent efforts towards knowledge dissemination (on investiability of such projects), capacity building (of both farmers/entrepreneus and financiers) and handholding are made. The Sustainable Landscape Guarantee Program aimed at creating a demonstration effect for other FIs. Though it didn't achieve the scale it had planned, the approach is viable. Documentation of existing success stories and case studies will develop confidence of the investors into such green business models.

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Annexure (s)

Stakeholder Categories and Sample Size for Consultation

A. Agriculture & Allied Sector

Stakeholder category	Details of stakeholder	Organization	No. of Respondents
Entrepreneur	Fisheries		3
	Farmers		3
	Food Processing Unit		3
	Poultry		2
	Fertilizer		1
	Vermicompost		1
	Cold Storage		1
Community institution	Farmers Producers Organizaton (FPO)	Harit Kisan Private Company Limited	2
		Niwari Farmer producer company	
	Federation	Sahyogini Mahila Mandal	2
		Sakhi Saheli Mahila Mandal	
	Cooperative Society		
Non-Government Organization (NGO)		Abhar Mahila Smiti (AMS)	1
Government	FCI (Warehouse)		1
	Agricultural Science Centre (*Krishi Vigyan Kendra- KVK*)	KVK Bharari (Jhansi, UP)	1
	Aggregation facility (*Mandi*) (Government)	Baruasagar Mandi	1
Formal Financial Institution	Micro Finance Institution (MFI)	Sonata Microfinance	1
	Banks	Canara Bank	2
		Madhyanchal Grameen Bank	
Informal financial institution	Money Lender		2
Other enabling services	Digital Service Centre		2
	Private aggregation facility		1

B. Ecotourism Sector

SL. No.	Stakeholder Set	Organization	No. of respondents
1	Private/ Aggregator	Social Enterprises (Not On Map, Been There Doon That)	2
2	Financial Institution	National/Regional Banks (IDBI, PnB, SBI, Kangra Cooperative Bank, Canara Bank, HP Cooperative Bank, HDFC Bank)	7
3	Entrepreneur	Homestays (3), Restaurants (1), Hotel (1), Adventure Tour company (2), Travel Agency (1), Eco Resort (1)	9
4	NGO	TATA Trust	1

C. Construction Sector

Sl.No.	Stakeholder Set	Organization	No. of respondents
1	Government	Department of Industries	2
		MSME Development Institute	2
		District Industries Centre	1
		Bihar State Pollution Control Board	1
2	Private	Independent consultants	2
3	NGO	Mascot Foundation	1
4	Financial Institution	SIDBI (1), SBI (2), Federal Bank (1), Ujjivan SFB (1), Utkarsh SFB (1)	6
5	Entrepreneur	Savera Fly Ash and Raja Fly Ash	2

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