Global *Microfinance* Case Competition 2022

Finding Opportunities And Possibilities For **Sustainability**

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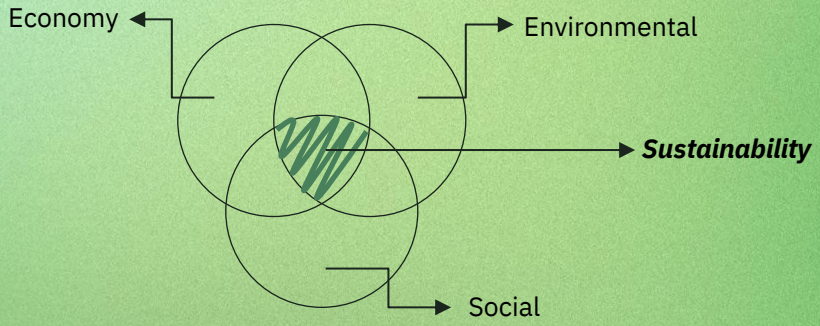
GMCC

MELBOURNE MICROFINANCE INITIATIVE

EMI

What is sustainability? Why to invest in green future?

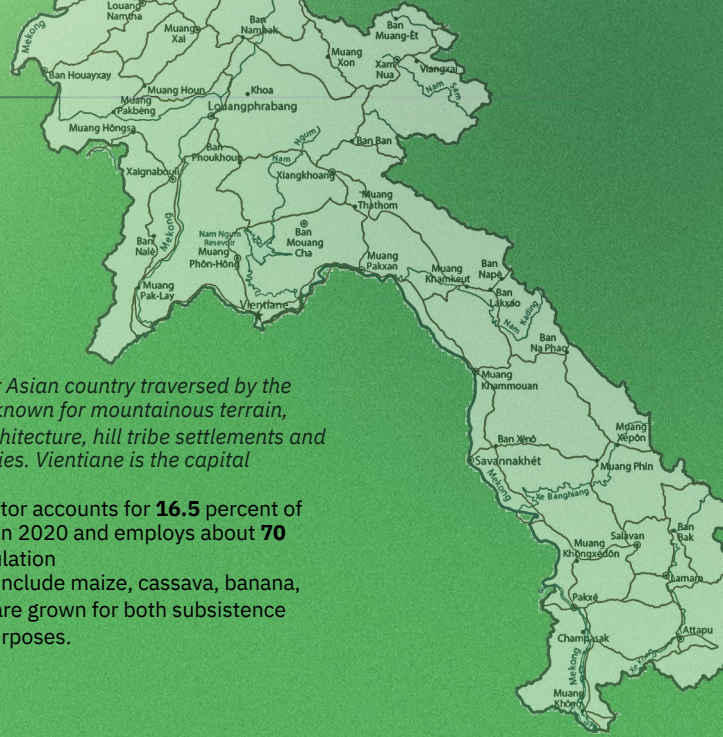


Sustainability is avoidance of the depletion of natural resources in order to maintain an ecological balance.

It can be achieved only if all the factors – **Economical**, **Environmental** as well as **Social** factors are empowered together.

Why invest in green ?

1. Mitigate risk · 2. Attract investments · 3. Direct savings · 4. Gain loyal customers · 5. Maximize employee retention.



Laos is a Southeast Asian country traversed by the Mekong River and known for mountainous terrain, French colonial architecture, hill tribe settlements and Buddhist monasteries. Vientiane is the capital

The agriculture sector accounts for **16.5** percent of the country's GDP in 2020 and employs about **70 percent** of its population

Other major crops include maize, cassava, banana, and coffee, which are grown for both subsistence and commercial purposes.

Ekphatthana Microfinance Institution (EMI)

is the first licensed microfinance institution to operate in Lao PDR under the government's microfinance regulations that were issued in 2005

Current Global Green Finance Status

Private finance reached **USD 326 billion** on average annually in 2017/2018 account for the majority of climate finance, at around **56%**. Of this quantity, 85% flowed to renewable energy, **14%** to low-carbon transport, and under **1%** to all other subsectors

The pandemic has pressed several countries to embrace measures to reduce its potential of becoming a full-scale crisis and also created new budgetary pressures on all countries, with urgent redistribution of funds towards health sectors. Ambitious and innovative policies for sustainable recovery and even greater collaboration among public and private actors will be needed to achieve climate goals.

Taxonomy of sustainable finance

Sustainable finance approaches its three themes with both positive and negative strategies.

ESG theme	Environmental		Social		Governance	
Type of finance	Green finance		Impact finance		Stakeholder finance	
Investment approach	Negative: exclusionary	Positive: integrated	Negative: exclusionary	Positive: integrated	Negative: exclusionary	Positive: integrated
Example: investment theme	Carbon neutral	Carbon reduction	Do no harm	Address social market failure	Follow ILO standards	Corporate purpose
Example: investment focus	Divestment	New green technologies	Pay above minimum wage	Girls' education	Effective health and safety regulations	Employee board representation

Current Laos Green Finance Status

USD 987 million were committed to Lao PDR during **2015-2019**. → **260% increase** 2019 annual flow rose to USD 314 million, in comparison to 02018

a Loans and Grants were key instruments used to channel the majority of the flows during 2015-2019.

b Loans and Grants accounted for **61% and 38%** of the flows respectively;

c only **one** percent of the flows was transferred through equity/ shares in collective investment vehicles

d Grants played significant roles in 2018 and 2019 and accounted for **59% and 49%** respectively

Our Vision And Route To Sustainability

Steps to approximate the amount of green financial flows and put it into perspective

Food security

Education

Social justice

Microfinance strategies

Economy

- Land locked to land linked
- Internet and telecommunication
- Information and market data

Environment

- Water land resource
- Pollution and wildlife

Social

- Ethnic diversity
- Human resource

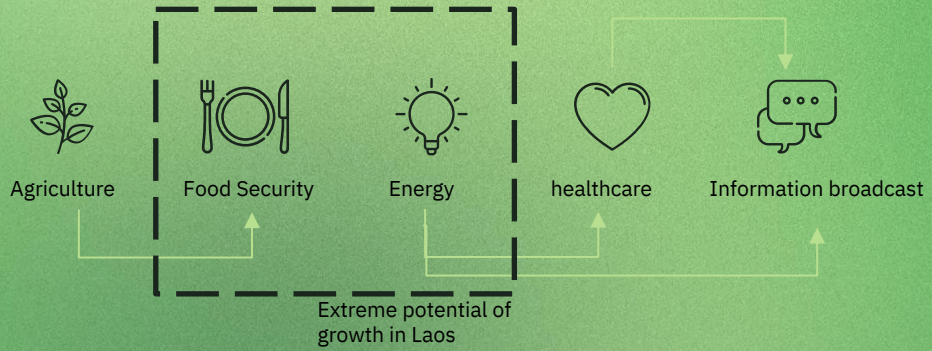
Objectives of the investments

Family Oriented investments

Education primed

Environment friendly

Potential sectors of investments



Specific Investments

1. Rice Marketing and Loans

The agriculture sector accounts for **16.5** percent of the country's GDP in 2020 and employs about **70 percent** of its population

Production → *Storage* → *Marketing* → *Post services*

- Diversifying the agricultural industry with attractive loan interests.
- Small scale loans to farmers for cultivation of rice coffee, banana.
- Loans for food storage and refrigeration
- Insurance
- Education on farming and finance
- Introduction to better payment system (**pay later)
- Soil, humus, natural resources information transmission.
- Marketing and collective selling of rice/ agricultural produce.

*** in action*

2. Banana - the next sustainable breakthrough

The humid and water availability of Laos gives ample opportunities of banana production. We introduce the loan strategies that encourages different industries within the banana production. Our diverse banana industry includes -

a. Textile

- fibre production
- Sanitary pads

b. Fertilizer

Banana trees are of extreme use case. One of them being sustainable sanitary pads. The fibres of the banana leaves have proven to be string and compatible fibres same as cottons, on top of that they are perfect for creating sanitary pads. This **solves women health situations in the region**.

3. Investment in energy

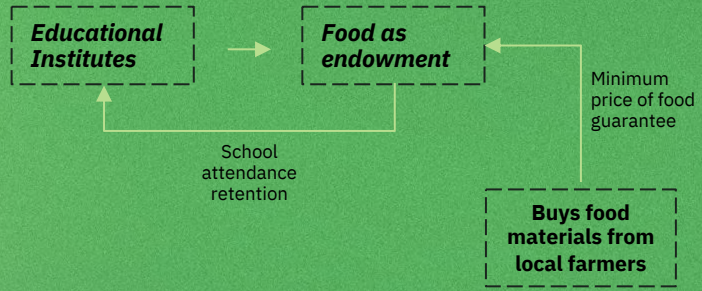
>90 % *of the Loas is electrified*

- Investing in businesses that sells LED bulbs.
- (existing) Solar energy investment.
- Natural light as power in dark houses.

4. Food and Education

Inspired from the midday meals (MDM) initiative in India. Laos can set similar microfinance benchmarks to promote food security and education at the same time. What is the MDM initiative?

We invest in educational institutes which provides such services that provides food with education for the school kids. This solves several social and economical issues can help Laos recovering economical hindrances.



"Moreover, microcredit seems to benefit mainly the middle and upper poor, failing to reach the extremely poor and vulnerable (Adjei, Thankom, and Hossain 2009; Kondo et al. 2008; Banerjee et al. 2015), or else offers loans that are too small to establish a viable new business (Ibrahim and Bauer 2013)"

Forward-looking policy directions to promote sustainable finance

(i) align finance with the SDGs while safeguarding financial stability
(ii) develop market infrastructure and ecosystems for sustainable finance and growth
(iii) expand fiscal revenue to ensure green and inclusive recovery.

Green finance and sustainable impact: evidence from the People's Republic of China

Data from 265 cities in the People's Republic of China (PRC) from 2015 to 2018 were examined for evidence of green finance usage being associated with positive environmental impacts

$$AQ_{i,t+12} = \alpha + \beta_1 Greenbond_{i,t} + \beta_2 GDP\ Growth_{i,t} + \beta_3 Weather_{i,t+12} + \gamma C_i + \delta M_t + \varepsilon_{i,t+12}$$

where $AQ_{i,t+12}$ represents air quality indicators (AQI and $PM_{2.5}$) for city i in month t+12, or a year after green bond issuance. $Greenbond_{i,t}$ is a vector of green bond

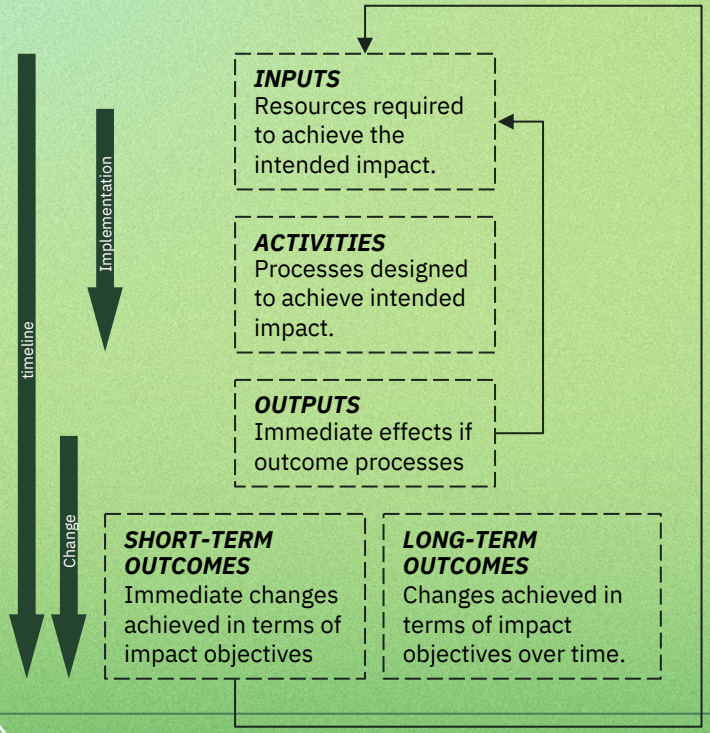
1 Green bond financing and air quality

Cities with more green bond financing witnessed improved air quality.

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	AQI	$PM_{2.5}$	AQI	$PM_{2.5}$	AQI	$PM_{2.5}$
Greenbond	−5.53**	−4.39**				
	(−2.47)	(−2.36)				
Certified_Greenbond			−5.87**	−3.84*		
			(−2.23)	(−1.76)		
Uncertified_Greenbond					−4.47	−5.65
					(−1.06)	(−1.62)
Observations	5,344	5,344	5,344	5,344	5,344	5,344
Adjusted R-squared	0.813	0.811	0.813	0.811	0.813	0.811
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
City and month fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

How to implement sustainable investment ?

We follow the Logic model, it measures the input, activities , and outputs in terms of outcomes. (source : Nicholls, 2021)



The Theory of Change (TOC) follows the same linear format as the Logic Model but adds analytic complexity with respect to the set of assumptions on how a particular action or set of actions will create an impact in the short, medium, and long term (Brown 2020).

The TOC includes more granular detail on specific operational activities and their expected effects. It is usually developed as a multistage, predictive, and heuristic model that allows an organization to conceptualize how an intended impact may be achieved over time

Specific Implementation Strategies

Banana to Textile industry investment

INPUTS	***ACTIVITIES***	***OUTPUTS***
Education and demonstration of the industry.	Attractive loans schemes and profit demonstration.	Medium and small scale loads allotted to diversity the sustainable quota

Economy (**Loan investments**)
Environment (**Banana cultivation and processing**)
Social (**Sanitary pads for women health**)
-TRUE SUSTAINABLE

Go to market strategy

Investment

Combining green and social bonds for our investors and producing sustainable bonds

Definition

Defining the key aspects of sustainability

Estimation

Elimination of strategies with negative or zero sustainable investments

Aggregation

Ddistribution into different sectors of economy to achieve true sustainability

Comparison

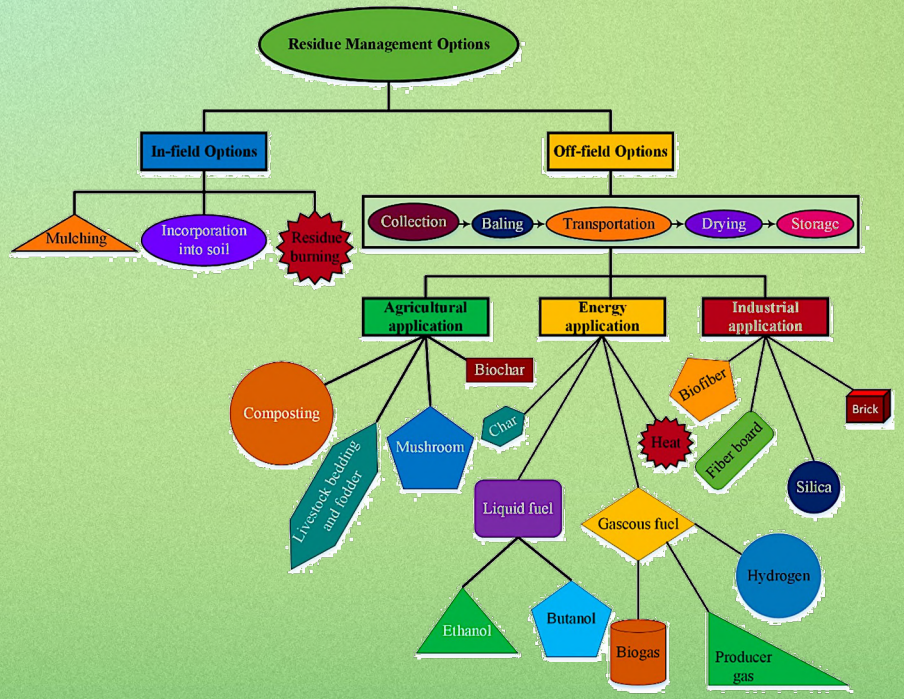
Investment strategies are living documents are subject to change when strategies are compared and implemented

Advertisement

Proper advertisement of investment and outcome to restart the flow

Investments implementation in agriculture sectors

Residue management system investment opportunities



Specific Investment Implementation

1. Weed removal business

INPUTS
Existing weed issues and harms of chemical to remove them

ACTIVITIES
Display of sustainable possibilities and opportunities.

OUTPUTS
Small scale loans to businesses with initiatives.

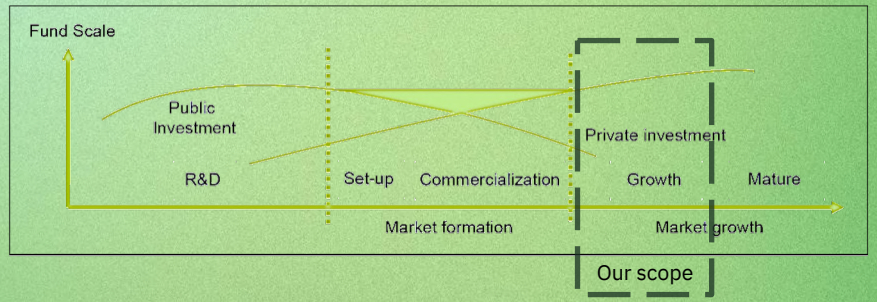
Economy – Environment - Social

Applying the same strategies for these mentioned sectors.

2. Insurance
3. Soil and land usage
4. Conservation Agriculture
5. Information broadcast
6. Water purification
7. Health and medicines

Analysis of financial impacts of green investment

Green market mechanism



Expected Rate of Return for Green Investment

The rate of return from a green investment is the sum of economic return [R] plus green return [GR] that derives from green value, which can also be expressed as total return [TR] of green investment.

Economic return is price [P] change of the investment object plus dividend [D].

Green return is the enhanced green value. For example, if a green project reduces carbon emissions, the reduced volume of emissions will be the green return.

$$\tilde{T}R_{t+1}(\tilde{P}_{t+1} - P_t + \tilde{D}_{t+1})/P_t + GR_{t+1}$$

Green return $[GR_{t+1}]$ is considered as non-probability variable assuming green value is preeptively recognized.

Expected total green rate of return can be written as follows.

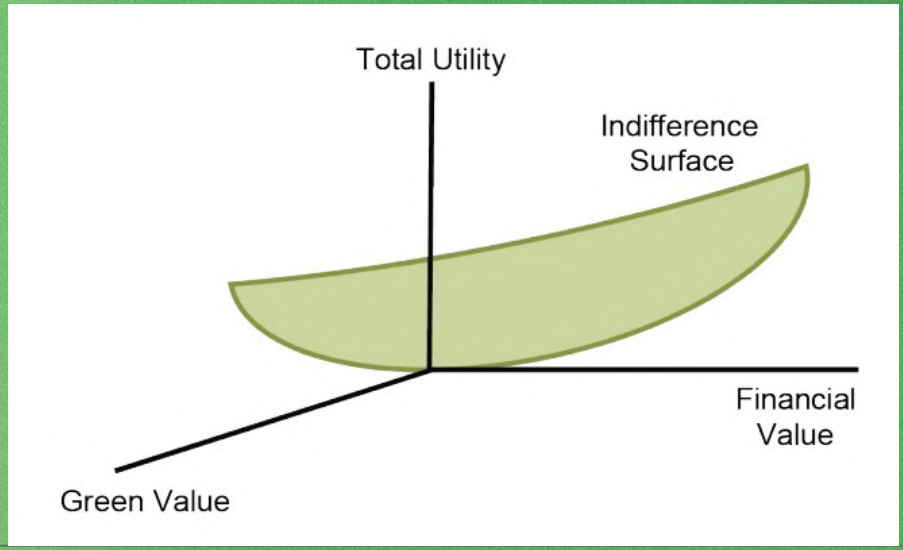
$$\mathrm{E}(\tilde{T}R_{t+1}) = E[(\tilde{P}_{t+1} - P_t + \tilde{D}_{t+1})/P_t] + GR_{t+1}$$

Green utility function can be suggested as

$$U(\tilde{T}R) = a + b\tilde{R} + c\tilde{R}^2 + dGR$$

Utility of green investor depends on total rate of return and volatility risk

$$E\left(U(\tilde{T}R)\right) = E[a + bR + c(\sigma^2\tilde{R}) + R^2] + dGR$$

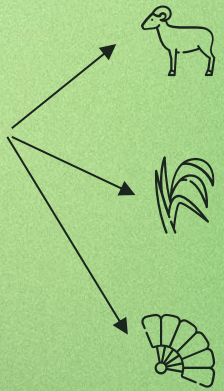


Analysis of financial impacts of green investment

Laos microfinance financial impact

21751 hours took small scaled loans

31,317.80 million KIP of loans released.



51.28% for livestock breeding

32.45% for crops and agriculture

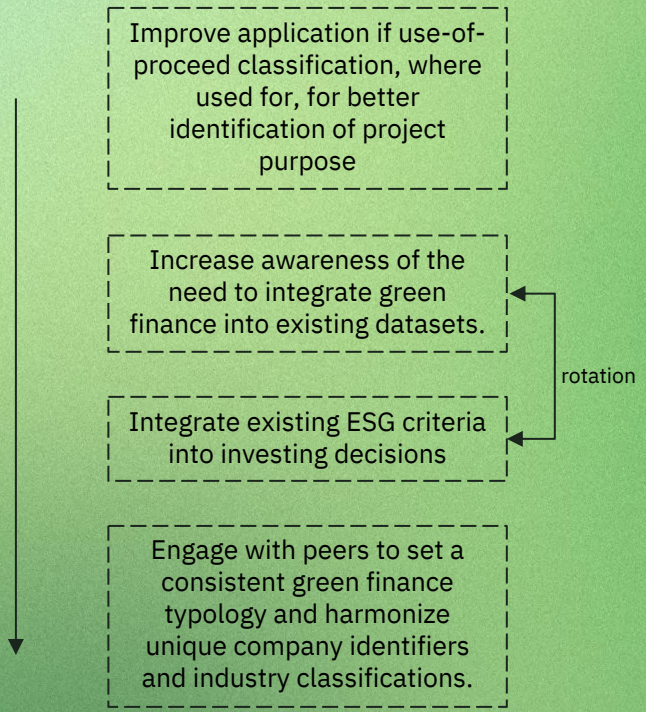
4.57% for handicraft

The results show that the loans provided by the microfinance program had a significantly positive impact on income and poverty reduction. Swope (2010) demonstrates that microfinance can lead to an increase in income, better nutrition for families, greater high school attendance, the empowerment of women and the reduction of poverty.

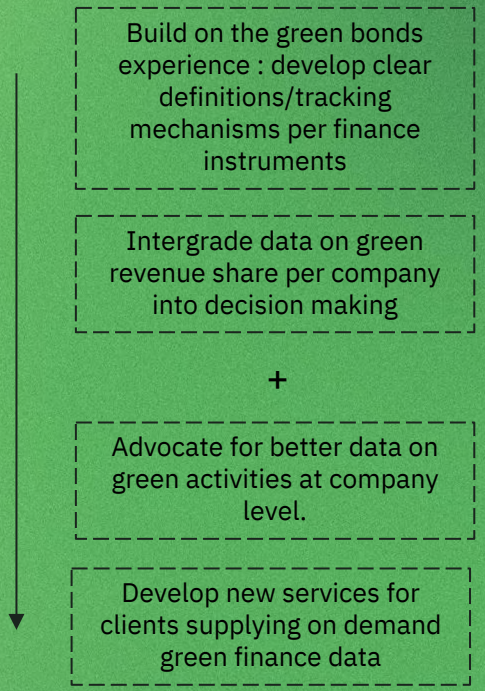
Individual loan segment loan sizes from US$500–3,300 are accessible potential is possible in several sectors that we proposed.

1. Food
2. Education
3. Health
4. Construction
5. Energy
6. Residue management
7. Information broadcast

Short term go to strategies for banking institutions



Mid/long term go to strategies for banking institutions



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Thanks!

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