



Inclusive Financial Ecosystem for Food Systems Transformation

Inception report

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Colophon

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Acronyms and abbreviations

ABC	Agricultura de Baixo Carbono
ACEF	Agricultural Competitiveness Enhancement Fund
AFFP	Agricultural and Fisheries Financing Program
AFRD	Agriculture, Fisheries, and Rural Development
AGRICULTURA	Secretaría de Agricultura y Desarrollo Rural (Mexico)
APR	Asia-Pacific Region
ARBs	Agrarian Reform Beneficiaries
BAAC	Bank of Agriculture and Agricultural Cooperatives (Thailand)
BB	Bangladesh Bank
BDE	Banco de Desarrollo del Ecuador
BDP	Banco de Desarrollo Productivo (Bolivia)
BDT	Bangladeshi Taka
BIRD	Bankers Institute of Rural Development (India)
BNDES	Brazilian Development Bank
BOB	Bolivian Boliviano
BPI	Bank of the Philippine Islands
BRL	Brazilian Real
BSP	Bangko Sentral ng Pilipinas
CFN	Coporación Financiera Nacional (Ecuador)
CNA	Consejo Nacional Agropecuario (Mexico)
DBP	Development Bank of the Philippines
DCCB	District Cooperative Central Bank
ERCA-RCEF	Expanded Rice Credit Assistance under the Rice Competitiveness Enhancement Fund
EUR	Euro
FAG	Agricultural Fund of Guarantees (Colombia)
FND	Financiera Nacional de Desarrollo Agropecuario, Rural, Forestal y Pesquero
FPO	Farmer Producer Organization
GDP	Gross Domestic Product
GLC	Ground Level Credit
Gol	Government of India
GRIP	Graduated Rural Income Generation
HBL	Habib Bank Limited
IDB	Inter-American Development Bank

IFE	Inclusive Financial Ecosystem
INR	Indian Rupee
JLG	Joint Liability Group
KCC	Kisan Credit Card
KYC	Know-Your Customer
LAC	Latin America and the Caribbean
LBP	Land Bank of the Philippines
MAG	Ministry of Agriculture and Livestock
MFI	Microfinance Institution
MISS	Modified Interest Subvention Scheme
MSME	Micro, Small, and Medium Enterprise
MXN	Mexican Peso
NABARD	National Bank for Agriculture and Rural Development (India)
NBFC	NBFC Non-Banking Financial Company
NBP	National Bank of Pakistan
NDB	National Development Bank (Pakistan)
NPL	Non-Performing Loan
OFPO	Off Farm Producer Organizations
PACS	Primary Agricultural Credit Society
PHP	Philippine Peso
PKR	Pakistan Rupee
PKSF	Palli Karma-Sahayak Foundation (Bangladesh)
PMFBY	Pradhan Mantri Fasal Bima Yojana
PMJDY	Pradhan Mantri Jan-Dhan Yojana
PO	Partner Organization
PPCBL	Punjab Provincial Cooperative Bank
PSL	Priority Sector Lending
PTPFC	Public Tech Platform for Frictionless Credit
RBI	Reserve Bank of India
RBIH	Reserve Bank Innovation Hub
RCB	Rural Cooperative Bank
RCC	Rural Credit Cooperative
RFI	Rural Financial Institution
RO	Regional Office
RRB	Regional Rural Bank

RP	Rabo Partnerships
SADER	Secretariat of Agriculture and Rural Development (Mexico)
SAF	Sustainable Agriculture Foundation
SAFP	Sustainable Agribusiness Financing Program
SBI	State Bank of India
SBP	State Bank of Pakistan
SBV	State Bank of Vietnam
SCB	Scheduled Commercial Bank (India)
SEPS	Superintendencia de Economía Popular y Solidaria
SHCP	Ministry of Finance
SHF	Smallholder farmer
SHG	Self-Help Group
SHG-BLP	Self Help Group-Bank Linkage Program
SME	Small and Medium Enterprise
SOCAP	Cooperative Financial Society (Mexico)
SOFIPO	Popular Finance Company (Mexico)
StCB	State Cooperative Bank (India)
TA	Technical Assistance
TDA	Agricultural Development Titles (Títulos de Desarrollo Agropecuario)
UBL	United Bank Limited
UCB	Urban Cooperative Bank
UPI	Unified Payments Interface
USD	United States Dollar
VBARD	Vietnam Bank for Agriculture and Rural Development (Agribank)
VBSP	Vietnam Bank for Social Policies
VND	Vietnamese đồng
ZTBL	Zaraj Taragiati Bank Limited (Pakistan)

Executive summary

The Inclusive Financial Ecosystem for Food Systems Transformation (IFE-FST) initiative, initiated by IFAD and executed by Rabo Partnerships, addresses the persistent financing gap faced by smallholder farmers in Latin America and the Caribbean (LAC) and Asia and the Pacific Region (APR). The initiative recognises the important (potential) role of National Development Banks (NDBs) in mobilising resources and fostering inclusive rural finance through strategic partnerships, innovation, and risk mitigation. The program is executed over a two-year period and structured in four sequential phases, including 1) Inception phase, 2) Solution design phase, 3) Execution phase, 4) Dissemination phase. This report concludes the first phase, taking into account findings from desk research, (online) stakeholder consultations, and two regional roundtables in LAC and APR, respectively.

To acknowledge the position of NDBs in the IFE, the role of other financial institutions (FIs) in agricultural finance should be examined. While commercial banks often largely contribute to the sector in absolute terms, they mainly focus on medium- and large-sized producers considering the perceived risks associated with smallholder farmers. Financial cooperatives and microfinance institutions generally have a higher risk appetite, and the objective to reach underserved populations. While they contribute to filling the smallholder finance gap, it is challenging for them to do so in a sustainable and scalable manner – they often struggle with capital-, management-, governance- and digital challenges, and cannot always offer affordable interest rates.

As NDBs are not driven solely by profit but by public policy goals, this allows them to prioritise underserved sectors, and offer longer-term and lower-cost financing that other FIs avoid, this way fulfilling a countercyclical role that is inherent to the nature of NDBs. This report analyses agricultural-focused NDBs from nine countries, across APR (India, Pakistan, Bangladesh, Vietnam, Philippines) and LAC (Bolivia, Colombia, Ecuador, Mexico). The NDBs in these countries present a mix of first- and second-tier operations, and a mix of corresponding products and services, as presented in table 1¹.

Country	NDB	First tier	Second tier	Agriculture most important sector	Working capital	Investment Capital	Marketing capital	Consumer loans	TA to farmers
Bangladesh	PKSF ²								
India	NABARD								
Pakistan	NBP								
Philippines	LBP								
Vietnam	AGRIBANK								
Bolivia	BDP								
Colombia	FINAGRO								
Ecuador	BanEcuador								
Mexico	FIRA								

Table 1: Overview of NDBs in scope

¹ The grey-colored boxes highlight key characteristics of each NDB. The blue and white boxes indicate that the characteristic listed at the top of the column does not apply to this NDB.

² PKSF is not a National Development Bank, but due to lack of an effectively operating NDB in Bangladesh, PKSF was proposed by APRACA and IFAD to participate in the APR roundtable.

More specifically, current practices of these NDBs include (in)direct lending, concessional finance, risk mitigation measures, sustainable agriculture finance, blended finance, and non-financial services. After conducting a detailed analysis on this, it can be concluded that NDBs' proximity to rural communities and/or their ability to scale through intermediaries enhances their reach and relevance. However, some key corresponding challenges include high operational costs, political interference, dependency on subsidies, and weak risk management, amongst others. To overcome these challenges, various worldwide best practices can be taken as an example.

These include for example BNDES' (Brazil) ABC Program for sustainable agriculture; FIRA's digital advisory program; NABARD's e-KCC for streamlined credit access, and innovative risk-sharing and blended finance models like NASIRA by FMO (the Netherlands). These examples demonstrate how integrated financial and non-financial services, digital tools, and public-private partnerships can enhance smallholders' access to financial services. The highlighted best practices are not meant to be exclusive, but serve as input for the solution design phase, for which three countries in each region will be selected in close alignment with IFAD.

The inception phase confirms that NDBs are critical actors in bridging the smallholder finance gap. However, to unlock their full potential, tailored solutions must address institutional constraints and leverage global best practices. The next phase will focus on co-developing a toolkit for six selected countries, emphasizing risk-sharing, blended finance, and digital financial services to catalyse inclusive and sustainable food systems transformation.

1 Introduction

IFAD has developed the grant initiative titled "Inclusive Financial Ecosystem for Food Systems Transformation" (IFE-FST) to address a critical challenge in agricultural and rural development: the lack of adequate financing for small-scale farmers in developing regions. Access to finance remains a major barrier for smallholders, who require capital to enhance productivity, adopt sustainable practices, and integrate more effectively into agricultural value chains.

National Development Banks (NDBs), with their development-oriented mandates, are uniquely positioned to mobilize resources and engage public and private actors in creating a financial ecosystem that supports small-scale farmers. NDBs operate within a broader Inclusive Financial Ecosystem (IFE), which includes, among others, government bodies, private sector entities, farmers organizations and international organizations. These actors contribute to creating an enabling environment for inclusive rural financing through resource mobilization, policy alignment, innovation, and risk mitigation.

Rabo Partnerships has been entrusted with the implementation of IFAD's grant. Its primary objective is to enhance the capacity of NDBs to deliver tailored and effective financial services that address the specific needs of small-scale farmers. This will be achieved by systematizing best practices in rural finance, fostering strategic partnerships within the IFE, and piloting innovative financial solutions in selected countries.

The program will be executed over a two-year period and is structured into four sequential phases:

1. Inception Phase
2. Solution Design Phase
3. Execution Phase
4. Dissemination Phase

The Inception Phase aims to systematically capture the experiences and best practices of NDBs in financing small-scale farmers across selected countries. This phase employs a dual approach:

- Extensive desk research to identify effective models and financial instruments utilized by NDBs, as well as to analyse the key challenges and opportunities they encounter in serving smallholder farmers. This included the consultation of existing sources on the topic from e.g., the Agri-PDB platform, ALIDE, and APRACA.
- Stakeholder engagement through online consultations with NDBs and other IFE actors—including IFAD country teams, central banks, private banks and international organizations—to gain deeper insights into the structure of agricultural finance landscape in the selected countries, the roles and instruments of NDBs, and the specific challenges of serving rural clients.
- Organization of two regional roundtables in Latin America and the Caribbean (LAC) and Asia-Pacific (APR), with the support of ALIDE and APRACA respectively, to promote dialogue and engagement between NDBs and other actors in the IFE and gain a better understanding of their challenges and best-practices.

This report summarizes the outcomes of the desk research, online stakeholder consultations, and regional roundtables for the nine pre-selected countries from the LAC and APR regions: Mexico, Ecuador, Colombia, Bolivia, Bangladesh, India, Pakistan, the Philippines, and Vietnam. It also highlights regional best practices identified during the inception phase.

2 Conclusions of country analyses and roundtables

Prior to the roundtables that were conducted in the Dominican Republic and in Indonesia, RP conducted in-depth country analyses of the 9 selected countries for the IFE-FST program. For these analyses, we relied on desk research, interviews with key stakeholders and experiences from other projects of RP and its partners. A more detailed description of these country analyses and call reports of the roundtables can be found respectively in Annex A and B of this report, but for the sake of readability we will include the conclusions of these country analyses and roundtables in this chapter.

2.1 How the IFE serves the agricultural sector

Across LAC and APR, the Inclusive Financial Ecosystem plays a key role in enhancing agricultural productivity and supporting smallholder farmers. While the structure and effectiveness of this ecosystem vary by country, it is usually composed of central and commercial banks, financial cooperatives and microfinance institutions, value chain actors, and National Development Banks (NDBs), each contributing to agricultural finance in a different way.

While agriculture is never the largest sector in the loan portfolio of commercial banks, they still contribute significantly in absolute terms. When zooming in on Mexico, BBVA dedicates around 4% of their portfolio to agriculture, resulting in USD 2.6 billion. In Ecuador, Banco Pichincha is estimated to have dedicated around 25% of their overall loan portfolio towards the agricultural sector, equalling to USD 2.4 billion. Considering that the NDBs in these countries have outstanding loans of USD 6.14 billion and USD 0.5 billion to the sector, respectively, it can be concluded that commercial banks play an important role in agricultural finance in absolute terms. When examining APR, the proportion of agricultural loans appears comparable. In Pakistan, the largest commercial bank, United Bank Limited (UBL), allocates 5.4% of its loan portfolio to rural lending, amounting to approximately USD 1.5 billion. In contrast, India shows a marked difference between public and private sector commercial banks in their support for agriculture. The State Bank of India (SBI), the largest public bank, holds an agricultural loan portfolio of USD 37.4 billion, representing 8% of its total loans. Meanwhile, HDFC, a leading private sector bank, has an agricultural loan portfolio of USD 21.6 billion, which is 4.6% of their total portfolio. In the Philippines, the agricultural sector represents a relatively small portion of commercial bank lending. Banco de Oro Unibank allocates just 2.5% of its total loan portfolio to agriculture - the highest among all commercial banks in the country.

However, the contribution of commercial banks can mainly be attributed to financing medium and large producers, as well as other large agri value chain companies. Exceptions are Banco FIE in Bolivia, focusing on MSMEs, and Banco Pichincha in Ecuador, the latter claiming a 57% market share in the banking sector's microcredit segments. But examples like these are rather limited. Smallholder farmers are often perceived as high-risk, mainly because of four types of risk, including:

- Credit risk: because of their informality, smallholder farmers (SHFs) often lack formal credit histories or collateral, making it difficult for banks to assess their creditworthiness.
- Production risk: the variability in agricultural output due to external (climate, pests, diseases) and internal (farm management) factors.
- Marketing risk: the inability to sell on time, in the right quantities, or to an acceptable quality standard. Farmers and Small and Medium Enterprises (SMEs) often lack facilities for storing products to sell when prices are more favourable.
- Price risk: the likelihood of financial losses due to changes in the level or volatility of commodity prices.

Commercial banks are often not equipped to fully understand and manage the risks specific to smallholder farmers. Because they do not have the technical knowledge necessary to understand the economics of farming and how agricultural markets work, many commercial banks fail to undertake detailed diagnostics to identify the specific risks associated with smallholder farmers, which leads to the perception of it being a high-risk sector. As a way to manage risk, banks often request collateral from smallholder farmers and MSMEs, who often have little or nothing to offer. Either

because they do not own land or other valuable assets or because they live in areas where land property rights are not recognised. The lack of land ownership (so-called ‘tenant farmers’ in India) is a major challenge across the world for increasing access to finance for smallholder farmers. As a result, they are excluded from formal credit systems. For example, it is estimated that in India alone, around 21 million tenant farmers remain financially excluded, even from subsidized lending schemes. For example, in Mexico over half of rural producers operate on communal lands called “Ejido”. This system was established after early 20th-century agrarian reforms. While the system ensures communal land rights, it typically does not allow land to be used as collateral for loans.

Other types of financial institutions, such as financial cooperatives and MFIs, contribute to filling this smallholder finance gap, according to their objective to reach underserved populations. Especially financial cooperatives are culturally embedded in local communities as they are governed by their members, and therefore closer to smallholder farmers and their needs. Mostly, financial cooperatives are regulated by a different entity than commercial banks. In Colombia, for example, Superfinanciera oversees commercial banks, development banks, and MFIs, while Supersolidaria oversees all types of cooperatives, including financial cooperatives. In India, cooperative banks are supervised by the National Bank for Agriculture Development (NABARD), whereas commercial banks are supervised by the Reserve Bank of India. Also, financial cooperatives - Primary Agricultural Credit Societies (PACS) - operate under the cooperative law, allowing them greater flexibility in the range of services they can offer to their members, compared to non-financial cooperatives, such as Farmer Producer Organisations, which are governed by company law. Considering their closeness to local communities and relationships with members, cooperatives are less rigid on collateral requirements, benefitting smallholders without formal incomes and/or land titles. In Mexico, cooperative financial societies (SOCAPs) and popular finance companies (SOFIPOs), are usually lending relationship based. At the same time, financial cooperatives often struggle with limited capital, management- and governance challenges, and technology gaps. So, while they play an important role in smallholder finance, cooperatives alone cannot fill the smallholder finance gap in a sustainable way. In countries like Vietnam and Bangladesh, microfinance institutions (MFIs) play a crucial role in advancing financial inclusion. Vietnam has four MFIs licensed by the State Bank of Vietnam (SBV), collectively accounting for 70% of all sector loans.³ These licenses enable them to accept deposits and borrow in foreign currencies. Bangladesh, home to one of the world’s most developed MFI sectors, has 731 licensed MFIs under the Microcredit Regulatory Authority (MRA), serving 31.53 million borrowers—18% of the population—of whom 90% are women.⁴ Despite their outreach, MFIs are often criticized for their single focus on credit instead of an all-finance view and their high interest rates, frequently exceeding 20-40%, which continue to pose barriers to financial access for farmers and also increases the risk of over indebtedness.

Apart from various types of financial institutions as mentioned above, value chain actors (buyers and input suppliers), aim to fill the financing gap through alternative methods. In all countries, it was found that smallholders receive inputs on credit from suppliers or cash advances from off-takers in exchange for future harvests. While successful examples of this are prevalent, it has proven to be less scalable than financing from formal FIs, who usually have more financial resources and services, broader access to risk mitigation instruments, and a larger market to tap into. Moreover, access to the formal financial system also enhances formality and builds credit history, which makes it easier to access credit in the future.

To summarise, various channels and methods exist to finance smallholder farmers in LAC and APR. Still, a large gap between demand and supply persists. Not only in terms of amounts – on which exact estimations are challenging to find – but also the type of finance being offered. Most loans available to smallholders are short-term, hindering investments in productivity-enhancing assets. Additionally, small-scale farmers often lack the financial literacy or documentation to access credit. And while agricultural insurance programs exist and are often subsidised, uptake

³ Source: ADB report

⁴ Source: MRA report

remains low, for example with 7% in Mexico, 8% in Ecuador and only 5% of the agricultural insurance policies in the Philippines are linked to credit.⁵

National Development Banks (NDBs), with their unique position, mandates, and tools, can play a crucial role in addressing these challenges, as also stated by Finance in Common in their Reference Book on Public Development Banks.⁶ As NDBs are not driven solely by profit but by public policy goals, this allows them to prioritise underserved sectors, and offer longer-term and lower-cost financing that other financial institutions (FIs) avoid. Additionally, they can deploy instruments that reduce the perceived risk of lending to smallholders, such as credit guarantees and blended finance structures. Most selected NDBs (FIRA, FINAGRO, BDP, NABARD, LBP) operate (partly) as second-tier institutions, allowing them to leverage local knowledge and infrastructure with other FIs. Additionally, NDBs often provide more than just credit: with technical assistance they improve productivity and financial literacy of farmers, and their digital platforms provide connections to buyers. Nevertheless, many NDBs face similar challenges in their operating models. As also stated by World Bank in its Survey of National Development Banks (2017): ‘The most important challenges identified, in descending order, were the need to “strengthen their risk management capacity,” “become financially self-sustainable,” “improve corporate governance and transparency,” “acquire more flexibility to hire and retain highly qualified staff,” and “reduce undue political interference”.’

The next section further elaborates on the role of NDBs in smallholder finance in both regions (APR and LAC), providing some concrete examples.

2.2 Asia Pacific Region

2.2.1 Overview of selected countries and NDBs

In the APR region, Bangladesh, India, Pakistan, the Philippines, and Vietnam were selected for the Inception Phase – which is in alignment with IFAD’s strategic priorities, the active presence of different types of NDBs and a clear need for enhanced financial inclusion for smallholder farmers (SHFs) in all of these countries. Table 2 provides a macro-overview of the five selected countries. Clear differences emerge between Southeast Asia (Vietnam and the Philippines) and South Asia (Pakistan, Bangladesh and India): the South Asian countries in this selection generally have larger populations, a higher share of agriculture in GDP, and greater levels of financial inclusion. India, which ranks highest in financial inclusion, interestingly shows no disparity in account ownership between rural and urban adults. Although not shown in the table, it is noteworthy that Pakistan has made serious efforts to enhance financial inclusion, with adult account ownership rising from 16% in 2015 to 64% in 2023 according to SBP.⁷ As agriculture in developing countries is often labour-intensive and low in productivity, it is unsurprising that countries with large populations also have a high proportion of employment in agriculture. In contrast, the geography of Maritime Southeast Asia—particularly the Philippines, with its many islands—poses challenges for agricultural development and efficient transportation, as well as challenges in reaching customers and providing financial services. Nonetheless, the high rate of smartphone ownership (73.6%) in the Philippines indicates strong potential for the expansion of digital financial services.

⁵ Source: World bank report - 2021 data.

⁶ Source: Finance in Common. (2025). *Public Development Banks, A Reference Book*. [FICS publishes a first Book of Reference on Public Development Banks | Finance in common](#)

⁷ Source: National Financial Inclusion Strategy, SBP

⁸ The table includes World Bank Findex data, which differs significantly from the data in SBP’s NFIS. This discrepancy may stem from the fact that the World Bank Findex emphasizes individual account ownership and active usage, whereas the State Bank of Pakistan includes all registered accounts—such as inactive ones and multiple accounts held by the same person. Additionally, the World Bank Findex gathers data through household surveys, while the SBP relies on information reported by financial institutions.

Country	Population size (in millions)	Agriculture as % of GDP	Share of employment in agriculture (2023)	Financial inclusion, total (Adults with an account)	Financial inclusion, rural (Adults with an account)
India	1,438.1	16%	44%	89%	90%
Pakistan	225	19%	36%	23%	21%
Bangladesh	171.5	11%	35%	43%	44%
Vietnam	100.4	12%	33%	71%	67%
Philippines	115.8	9%	22%	50%	46%

Table 2: Macro overview of selected countries in APR (World Bank, Findex, 2025)

NDBs play an important role in enhancing financial inclusion in the rural regions of the APR countries. There are many similarities in the products and services NDBs provide to their customers (table 3) directly (first tier), through other FIs (second-tier), or both- such as Land Bank of the Philippines (LBP). However, it is important to recognize that not all countries have a well-functioning NDB, and among those that do, not every NDB has the mandate to serve agriculture. For example, the National Bank of Pakistan (NBP) does not prioritize agriculture as a core sector, resulting in a limited agricultural portfolio of just 7%, which is largely focused on large rural infrastructure and government projects, leaving SHFs finance entirely underserved.

Country	NDB	First tier	Second tier	Agriculture as the most important sector in the portfolio	Working capital	Investment Capital	Marketing capital	Consumer loans	Technical assistance to farmers
Bangladesh	PKSF ⁹								
India	NABARD								
Pakistan	NBP								
Philippines	LBP								
Vietnam	AGRIBANK								

Table 3: Overview of NDBs in selected APR countries (Rabo Partnerships, 2025)

⁹ PKSF is not a National Development Bank, but due to lack of an effectively operating NDB in Bangladesh, PKSF was proposed by APRACA and IFAD to participate in the APR roundtable.

The following section explores the NDB landscape across the selected APR countries, pointing out both the differences and similarities in how these institutions serve SHFs and the challenges they encounter.

2.2.2 NDBs' contributions and challenges in smallholder finance

2.2.2.1 Direct lending

Among the five NDBs, there are three institutions that directly lend to agriculture customers. As mentioned in the previous section, NBP has a limited agriculture portfolio. Agribank and LBP on the other hand, both maintain a strong focus on agriculture; Agribank, also known as Vietnam Bank for Agriculture and Rural Development (VBARD), holds a dominant position in Vietnam's agricultural finance sector, with a total loan portfolio of USD 68 billion—60% of which is dedicated to agriculture. This represents approximately half of the country's agricultural lending market. The bank aims to increase this share to 65% by the end of 2025,¹⁰ reinforcing its commitment to rural and agricultural development. Meanwhile, LBP is the Philippines' largest agricultural financier, allocating 47% of its portfolio—equivalent to USD 12.4 billion—to agriculture, fisheries, and rural development. Of this, 99.9% is disbursed through direct lending, with only a small share channelled via partner financial institutions, microfinance institutions (MFIs), and rural banks. In 2023, the former CEO of Standard Chartered Philippines was appointed CEO of LBP. One of her key initiatives was to streamline the bank's lending approach, i.e. by consolidating numerous complex, crop-specific schemes into 15 simplified programs. This reform aimed to make it easier for bank staff to offer flexible loans aligned with farmers' production cycles, thereby improving service delivery and accessibility.¹¹

2.2.2.1.1 Challenges of direct lending

Direct lending requires NDBs to maintain a strong rural presence, along with the capacity to conduct thorough risk assessments and monitor loans effectively. In many cases, the absence or either capability has contributed to relatively high levels of NPLs and long turnaround times.

2.2.2.2 Indirect lending

NABARD in India, PKSF in Bangladesh, and through a lesser extent LBP and NBP, operate through indirect lending mechanisms. NABARD is one of India's largest financial institutions dedicated to rural development and agricultural financing. As of March 31, 2024, their balance sheet reached USD 106 billion. NABARD operates through 31 Regional Offices (ROs) across India, each responsible for overseeing rural credit and development programs within their respective states. To ensure grassroots-level engagement, it has also deployed District Development Managers (DDMs) in over 400 districts, facilitating direct interaction with rural stakeholders. NABARD mainly channels agricultural financing through the State Cooperative Banks (StCBs) and Regional Rural Banks (RRBs). Its most widely adopted product is KCC (Kisan Credit Card) – a subsidized, revolving credit facility designed to meet the short-term credit needs of farmers. In addition to its financing role, NABARD also acts as the supervisor of SCBs and RRBs.

While the officially designated NDBs focusing on agriculture in Bangladesh are Bangladesh Krishi Bank (BKB) and Rajshahi Krishi Unnayan Bank (RAKUB), PKSF is widely recognized as a key institution playing an NDB-like role. PKSF focuses on enhancing both financial and non-financial services for SHFs through innovative and tech-driven solutions and currently channelled USD 852 million in outstanding loans through its partner organizations (POs), primarily MFIs. In contrast, BKB's primary function is to channel government subsidies to agricultural beneficiaries. Its financial health has been deteriorating over the past years. As of FY2023–24, BKB reported a net loss exceeding USD 188 million, with non-performing assets amounting to USD 1.3 billion. By the end of 2024, the bank faced a capital shortfall

¹⁰ Source: ; Agribank, Annual Report, 2024

¹¹ Source: Roundtable, 28 May 2025

of USD 1.5 billion. In early 2025, BKB and RAKUB agreed to merge; a strategic move initiated by the government and Bangladesh Bank aimed at strengthening oversight in the banking sector, lowering operational costs for both institutions, and enhancing customer service delivery.

2.2.2.2.1 Challenges of indirect lending

Indirect lending often leads to less visibility into how funds are ultimately used by the final borrowers, making it difficult to ensure alignment with development goals and to monitor impact effectively. NABARD's Bankers Institute of Rural Development (BIRD), which is dedicated to training, capacity building and research, has noted that while their researchers conducted numerous impact studies, they are typically limited to specific projects. Comprehensive impact monitoring of general refinance activities across RRBs and SCBs remains a significant challenge. Additionally, lack of technical, managerial, and financial capacity at intermediary-level to effectively manage and disburse funds, can lead to inefficiencies and misuse of NDB funds. In the case of India, it is important to recognize that the maturity and level of professionalism among RRBs and SCBs varies significantly across different Indian states. PKSF addresses capacity gaps in Bangladesh at both the PO and farmer levels by investing heavily in capacity-building initiatives—an approach it considers essential for the effective implementation of its lending programs. However, given that PKSF works with 278 POs, this capacity-building approach is resource-intensive and presents significant challenges to scaling up its lending operations. Finally, multiple layers in the lending chain can increase administrative and operational costs, reducing the overall efficiency of fund deployment. For NABARD, the challenge is more pronounced than for PKSF due to the complexity of its lending structure. NABARD operates through a three-tier system—SCBs, District Central Cooperative Banks (DCCBs), and Primary Agricultural Credit Societies (PACS)—before reaching the end beneficiaries. In contrast, PKSF works through a single layer of POs, allowing for more direct engagement and minimizing the number of intermediaries that could add mark-ups to interest rates.

2.2.2.3 Concessional finance

Among all solutions presented by the selected NDBs during the roundtable as well as the desk research conducted, concessional finance stood out as the most common tool to provide SHFs with affordable credit. As mentioned in the previous section, KCC is the most common concessional loan product in India with more than 77 million borrowers resulting in USD 114.6 billion outstanding loan amount in 2024. The Government of India subsidizes 1.5% (nominal interest rate) to banks – private, public, cooperative and rural banks - for providing short-term agricultural loans and provides an additional Prompt Repayment Incentive of 3% (nominal interest rate) to farmers that repay their loans before the due date. Another example of concessional financing comes from the Philippines, where LBP works closely with the Department of Agriculture to extend credit support for agricultural and agri-related initiatives across the value chain. This is facilitated through programs such as the Agricultural Credit Support Project and the Agricultural Competitiveness Enhancement Fund (ACEF). As the designated implementing agency, LBP receives government funds and is responsible for both disbursing loans to beneficiaries and collecting repayments. Under the ACEF program, LBP has disbursed USD 213 million to nearly 80,000 loan accounts, offering financing at a concessional interest rate of 2% per annum.

2.2.2.3.1 Challenges of Concessional finance

Concessional financing for smallholder farmers, while beneficial in the short term, can foster dependency and unrealistic expectations among borrowers. When policies shift or funding is withdrawn, the sudden change can have severe negative consequences for beneficiaries. Additionally, the availability of subsidized credit can discourage private sector participation, as it undermines the viability of commercial financial products. Furthermore, loan waivers are often linked to concessional loan products. These waivers often make the market unattractive for banks, especially when the government's reimbursements are delayed or insufficient. In many cases, banks are left to absorb the financial burden. This environment can also lead to poor repayment behaviour, as borrowers may delay or avoid repayments in anticipation of future waivers.

As also stated by Gutierrez & Kliatskova of World Bank Group: ‘Subsidized lending is often used to address market failures that prevent access to finance.¹² However, it is the second-best option at least as it addresses the symptoms instead of the cause of the illness, and it has unintended secondary effects. Furthermore, often loan pricing is not the problem but lack of access due to lack of credit history or collateral, and borrowers will be able and willing to pay higher rates than the ones offered by the NDB if they were just offered credit. For these reasons, subsidies should be used sparsely and when the positive effects are likely to outweigh the associated inefficiencies.’

2.2.2.4 Risk mitigation: insurance & guarantees

NDBs increasingly recognize the need to move beyond concessional financing and are shifting toward risk mitigation strategies to create more leverage and encourage private sector participation. In this context, NABARD has established a Farmer Producer Organization (FPO) Guarantee Fund aimed at encouraging commercial and cooperative banks across India to lend to these traditionally underserved groups. The fund offers credit guarantee coverage of up to 85% for working capital and term loans, with ticket sizes ranging from USD 10,000 to USD 200,000.

Another example is PKSF, which has a livestock risk mitigation program, where ADB provides finance and PKSF provides technical support—such as veterinary services, vaccinations, and feed advice—to reduce risks and decrease livestock mortality through education and knowledge-sharing.

2.2.2.4.1 Challenges of risk mitigation measures

Many banks face challenges in adopting effective risk mitigation measures due to a lack of in-house expertise and limited access to reliable data on climate, weather patterns, and crop yields. This makes it difficult to accurately assess and monitor agricultural and climate-related risks. Additionally, collaboration with third parties—such as insurers or government agencies—can be complex and time-consuming, further slowing implementation. Moreover, when risk mitigation tools are overly standardized, they often fail to address localized risks, such as region-specific climate threats or unique market dynamics, reducing their effectiveness.

2.2.2.5 Sustainable agriculture finance

The increased focus on green and sustainable finance initiatives is evident and was highlighted by several NDBs during the regional roundtable. Agribank in Vietnam announced its strategic focus on green agriculture, sustainable forestry and renewable & clean energy. A concrete example of this commitment is Agribank’s implementation of a dedicated lending program aimed at promoting high-tech and environmentally friendly agriculture. With a minimum funding allocation of USD 2 billion, the program targets a wide range of stakeholders—including enterprises, cooperatives, cooperative unions, and farm owners—engaged in various stages of large-scale, safe agricultural production chains. Agribank offers reduced interest rates, ranging from 0.5% to 1.5% lower than the preferential lending interest rates typically applied to the agricultural and rural sectors. In its neighbouring Thailand, the Bank for Agriculture and Agricultural Cooperatives (BAAC) currently focuses on the development of loan products and financial literacy training programmes in collaboration with grant support from the Green Climate Fund (GCF) and the German government (GIZ). The activities are part of a larger effort to support Thai rice farmers with transitioning to climate-resilient farming. The GCF committed to invest EUR 38 million to strengthen climate-smart rice farming in Thailand with the aim to reach 250,000 smallholder farmers and expectation to mitigate 2.5 million tonnes of CO₂ equivalents by 2028.

It’s not only NDBs but also central banks that are playing a growing role in advancing green finance. For example, Bangladesh Bank has established a dedicated Sustainable Finance Department, which provides green finance solutions

¹² Source: World Bank. (2021). *National Development Financial Institutions: Trends, Crisis Response Activities, and Lessons Learned*. [National Development Financial Institutions: Trends, Crisis Response Activities, and Lessons Learned](#)

to first-tier banks and supports agribusiness and technology-related ventures through a special startup fund. The need and potential for technology-driven solutions in sustainable finance is visible. Institutions like PKSF are embracing these opportunities by developing sustainable agriculture loan products that leverage Geographic Information Systems (GIS) to analyse soil composition and crop suitability. This approach enables FIs to tailor financing to local environmental conditions, enhancing both the effectiveness and sustainability of agricultural investments.

2.2.2.5.1 Challenges of sustainable agriculture finance

While green and sustainable finance is essential for advancing the transition to sustainable food systems, both FIs and SHFs face significant barriers in providing and accessing such financing. One major challenge in many Asian countries is the absence of a national green taxonomy, which makes it difficult for FIs to clearly define what qualifies as green finance, as is also concluded by Prasun Kumar Das and Azeta Cungu in their global Landscape Study for FAO (2023).¹³ This lack of standardized classification hinders the development and structuring of tailored sustainable finance products for the agricultural sector. There is a lack of blended finance instruments or risk-sharing mechanisms to support the long-term financing that farmers need to adopt sustainable agricultural practices. Without these tools, financial institutions are often hesitant to invest due to the perceived risks. Additionally, many farmers lack access to markets that reward sustainability, which reduces the incentive to pursue green finance and transition to environmentally friendly practices.

2.2.2.6 Combining financial and non-financial services

During the roundtable, NDBs emphasized that the most effective approaches are those that integrate financial services with technical assistance. Grants serve as catalysts to pilot new concepts and can partly be used to deliver technical support to drive adoption of such concepts, while loans enable scaling up programs and ensure continuity for farmers. To this extent, PKSF collaborates with the ADB, IFAD and the European Union (EU) on projects such as the Rural Microenterprise Transformation Project and Promoting Agricultural Commercialization and Enterprises. Another example comes from Agribank, which has provided technical assistance to support the formation of loan groups (joint liability groups) and women's associations that promote peer accountability—an approach that has resulted in impressively low default rates, averaging just 0.6%.

Interestingly, many non-financial services focus on making the lives of SHFs easier by supporting them with access to agri inputs and market linkages. For instance, SBP has established integrated service hubs, functioning as “one-stop shops” for farmers, where inputs and value-added services are offered in collaboration with financial institutions. Another example comes from BAAC, which has created a Farmer Product Development Unit that helps farmers build market connections and supports the formation of agricultural marketing cooperatives composed of member aggregators.

2.2.2.6.1 Challenges of combining financial and non-financial services

Providing non-financial services requires significant investment in time, personnel and infrastructure. These services often do not generate direct revenue for the FI, making them financially unsustainable without external support or subsidies. Also, non-financial services are often context-specific, making it difficult to scale across regions and client segments. Finally, it is challenging to measure the impact of non-financial services and link them directly to financial outcomes, such as improved productivity or positive repayment behaviour. This may discourage FIs to adopt such services. Nonetheless, non-financial services are crucial in building the required capabilities and infrastructure to increase access to finance for smallholder farmers. Since private sector FIs are not competing with each other on these

¹³ Source: Das, P. K., & Cungu, A. (2023). *Green finance as a critical lever for delivering sustainable agrifood systems- A global landscape study*. FAO. [Green finance as a critical lever for delivering sustainable agrifood systems – A global landscape study](#)

services, it provides a fertile ground for NDB to take a lead in coordinating, developing and (partly) financing these non-financial services in their country.

2.2.3 Governance and institutional challenges

Each of the NDBs addressed in this report operates under strong government ownership and policy influence, tailored to their country’s development priorities. However, the degree to which NDBs rely on government funding and the autonomy they have in their operations varies across countries.

In India, NABARD receives substantial budgetary allocations and capital support from the government. However, NABARD does not solely rely on the government; it has a diversified funding model, comprising of funds, deposits and borrowings in the bond and money market. In addition to the government, Reserve Bank of India (RBI) also plays a significant role in shaping NABARD’s operations by setting key policies, such as interest rates and refinancing norms, that directly influence the institution. In Pakistan, NBP has a specific role of being the intermediary for treasury transactions on behalf of the Government of Pakistan and serving as an agent to the State Bank of Pakistan. NBP has a limited mandate to focus on agriculture, resulting in a limited agricultural portfolio, which is largely focused on large rural infrastructure and government projects. Vietnam’s Agribank operates under the supervision of the Ministry of Agriculture and Rural Development and is often appointed by the State Bank of Vietnam as the lead financial institution for implementing major government initiatives. Finally, LBP collaborates extensively with key government agencies, including the Departments of Agriculture, Agrarian Reform, Labor and Employment, and local government units. Its operations are also guided by the National Strategy for Financial Inclusion (NSFI) 2022–2028, spearheaded by the BSP.

A common challenge faced by NDBs is the need to coordinate with multiple government agencies and align with national strategies, which often leads to operational complexity. Additionally, regulatory constraints can limit their ability to serve higher-risk segments, such as smallholder farmers.

2.3 Latin America and the Caribbean

2.3.1 Overview of selected countries and NDBs

Upon alignment with IFAD, selected countries in the LAC region are Bolivia, Colombia, Ecuador, and Mexico. From a macroeconomic perspective, these four countries vary on many aspects, as shown in the below table. Yet, two key similarities can be noted. First, the % employment in agriculture is in all countries much higher than the % of GDP. In Colombia the difference is 5.3 percentage points (p.p.), up to a difference of 22.3 p.p. in Ecuador.

Country	Population size (in millions)	Agriculture as % of GDP	Share of employment in agriculture (2023)	Financial inclusion, total (Adults with an account)	Financial inclusion, rural (Adults with an account)
Bolivia	10.5	13.5	24%	57%	49%
Colombia	52.3	8.7	14%	57%	52%
Ecuador	18	7.7	30%	65%	63%
Mexico	129	3.8	12%	53%	47%

Table 4: Macro overview of selected countries in LAC (World Bank; Findex 2025)

Using highly efficient (i.e. mechanized) agricultural producing countries as a reference, in Australia the difference is 0.6 p.p., and in the Netherlands 0.4 p.p.^{14,15} As such, the four selected countries have a huge potential to increase their productivity in agriculture. To do so, access to credit is needed to make the required investments in mechanisation, infrastructure, and other measures that increase efficiency. However, access to credit is often lacking in agriculture. This is partly reflected by the second similarity among the countries, with financial inclusion being lower in rural areas compared to the overall rate of the country. The difference is largest in Ecuador, with 29 p.p.

NDBs can play a (potential) key role in enhancing access to finance for the agricultural sector and rural areas at large. Next sections dive deeper into NDBs’ approaches to this and the challenges they encounter. As a starting point, the below table provides an overview of the most relevant NDB in each country for the scope of this project. As can be noted, they represent a mix between first- and second-tier financing. Moreover, while FINAGRO and FIRA only finance the agricultural sector, BDP and BanEcuador finance other sectors as well. For the latter, other sectors make up around 75% of the loan portfolio. A detailed description about each NDB can be found in the Annex.

Country	NDB	First tier	Second tier	Agriculture most important sector	Working capital	Investment Capital	Marketing capital	Consumer loans	TA to farmers
Bolivia	BDP								
Colombia	FINAGRO								
Ecuador	BanEcuador								
Mexico	FIRA								

Table 5: Overview of NDBs in selected countries (Rabo Partnerships, 2025)

2.3.2 NDBs’ contributions and challenges in smallholder finance

2.3.2.1 Direct lending

Two of the selected NDBs directly lend to their end beneficiaries: BanEcuador and BDP. For BanEcuador, this is their only way of operating – they do not act as a second-tier institution. They provide direct credit to rural producers through a network of 170 branches that also reach remote and underserved areas.

BDP, however, added first-tier operations to their activities in 2015, after 19 years of operating only as a second-tier institution. The key reason for this was that the original model – relying on financial intermediaries – was not effectively reaching rural areas or smallholder farmers. These intermediaries often had limited geographic coverage and a low willingness to assume the risks associated with the agricultural sector, making it difficult for BDP to fulfil their development mandate. By introducing first-tier operations, BDP gained the ability to directly manage credit design, disbursement, and monitoring, allowing for more tailored and responsive financial services. An example includes “BDP Agropecuario”, which finances a wide range of agricultural activities including crop production, livestock rearing, and the production of animal-origin goods like milk and honey. This is BDP’s most widely used product, accounting for 38% of the microenterprise portfolio and 14% of the SME/large enterprise portfolio. Its success lies in the flexible repayment

¹⁴ According to World Bank data, agriculture is 2.6% of GDP, and 2% of total employment is in agriculture.

¹⁵ According to World Bank data, agriculture is 2.6% of GDP, and 2% of total employment is in agriculture.

terms aligned with agricultural cycles; grace periods of up to 6 months (micro) or 2 years (SMEs); and flexible interest rates (between 6-11.5% according to size of the institution).¹⁶

2.3.2.1.1 *Challenges of direct lending*

Direct lending by NDBs also presents several challenges. As it requires NDBs to maintain a broad physical presence in rural areas, it increases operational overhead. Additionally, NDBs must directly assess and manage the creditworthiness of smallholders, increasing the risk of NPLs. In its flagship program “Crédito 1x30” (1% interest over 30 years), BanEcuador witnessed a rapid increase of NPLs, reaching nearly 25% - the highest in Ecuador’s banking sector.¹⁷ This threatens the financial sustainability of the institution, and with that the potential long-term positive impact it can make. Additionally, political interference with NDBs’ lending policies can severely impact the viability of direct lending, as governments sometimes intertwine social support programs into lending, or announce debt waivers to gain electoral support. Managing this political interference was also an important common theme discussed between the NDBs during the roundtables.

2.3.2.2 *Second-tier lending*

In Mexico and Colombia, NDBs primarily operate as second-tier institutions, channelling funds through commercial banks, financial cooperatives, and MFIs. FIRA refinances loans through over 150 intermediaries, including banks and non-bank financial institutions, such as cooperatives. A key feature of FIRA’s model is its flexibility: intermediaries can access refinancing lines tailored to different types of credit (including working capital, investment and marketing).

FINAGRO similarly distributes subsidised credit through 70 affiliated intermediaries across Colombia, including both banks and cooperatives. It uses a tiered system of credit lines and guarantees to support small, medium, and large agricultural producers.

2.3.2.2.1 *Challenges of second-tier lending*

While second-tier lending allows NDBs to have a wide geographical scope without having to carry the responsibilities of operating a branch network, it also comes with challenges. For example, to become an affiliated intermediary of FINAGRO, all types of financial institutions must meet the same requirements. These include:

- Operational capacity to manage agricultural credit products.
- Integration with FINAGRO’s digital platform for credit registration and subsidy management.
- Adherence to FINAGRO’s service manual, which outlines detailed procedures for credit origination and disbursement; monitoring and reporting; and compliance with AML and anti-terrorism financing protocols.

These requirements are essential for ensuring transparency, accountability, and proper use of public funds, but at the same time they create administrative burdens for intermediaries and limit the potential outreach of an NDB. Especially smaller financial cooperatives may lack the technical infrastructure or staff capacity to fully comply. This can lead to reduced participation of smaller intermediaries who are closest to underserved rural populations.

2.3.2.3 *Risk mitigation through guarantees*

Among the four countries analysed, Colombia and Mexico have institutionalised guarantee funds that are actively used by their NDBs, while Ecuador and Bolivia have more limited or emerging structures in place.

¹⁶ Source: BDP. (2025). *Resumen de Productos*

¹⁷ Further elaborated in section 6.4.9.1

FINAGRO operates the “Fondo Agropecuario de Garantías” (FAG), a specialised guarantee fund that supports access to credit for agricultural and livestock projects. The fund provides partial guarantees to loans issued by financial intermediaries, covering up to 90% of the loan amount for low-income smallholders. The coverage percentage is tiered by borrower type – ranging from 50% for large producers to 90% for smallholders. The guarantee premium is paid by the borrower through the intermediary, and varies between 0.5% and 2.5% of the loan amount.

In Mexico, FIRA offers similar risk-sharing instruments through its FEGA trust fund. FEGA provides partial credit guarantees to financial intermediaries, typically covering 30-70% of the loan principal. In some cases, the guarantee fee is subsidised by the Ministry of Agriculture, further incentivising uptake.

2.3.2.3.1 Challenges of risk mitigation through guarantees

These examples from FINAGRO and FIRA both rely on financial intermediaries to channel the guarantees. In the case of FAG, it was reported that uptake remains limited. This can be either because intermediaries and farmers are unaware or do not fully understand how to access it. Furthermore, the FAG has historically faced solvency challenges and requires annual recapitalisation to sustain or expand operations, showcasing the operational constraints that come with this product. Lastly, even with partial guarantees provided, some lenders remain reluctant to serve smallholder farmers due to perceived high risk, high costs of distribution and/or low profitability.

2.3.2.4 Blended finance

Blended finance structures are increasingly used by NDBs to combine public and private capital in ways that reduce risk and improve the affordability of credit for smallholder farmers. FIRA has developed a range of blended finance schemes in collaboration with the Ministry of Agriculture (AGRICULTURA). In practice, FIRA acts as an operator of government support programs that complement credit with non-reimbursable funds (grants). For example, AGRICULTURA may provide direct subsidy, interest-rate bonus, or guarantee funds for certain target groups, while FIRA channels the complementary loan portion through its network of financial intermediaries. The grant component typically covers a portion of the project cost or acts as a first-loss buffer, thereby de-risking the loan. An illustrative case is the “Crédito Ganadero a la Palabra” program that was active from 2019-2020, where FIRA administered subsidised livestock loans bundled with government-provided cattle. The government’s in-kind grant reduced the loan principal farmers had to repay. This approach allowed FIRA-backed credit to reach riskier or less profitable segments by filling the viability gap with public funds.

Another example comes from FINAGRO, who issues “Títulos de Desarrollo Agropecuario” (TDAs), or Agricultural Development Titles. TDAs are one-year maturity financial instruments issued by FINAGRO and indexed to the Interbank Reference Rate. Interest is paid quarterly and deliberately set below prevailing market rates, allowing FINAGRO to offer subsidised credit to the agricultural sector, with 50% dedicated for smallholder farmers. All financial institutions in Colombia (except the state-owned Banco Agrario) are required to invest a fixed percentage (currently 5%) of their deposits into TDAs. This creates a steady, low-cost funding stream for FINAGRO which fluctuates in proportion to national savings trends. It can be seen as an institutionalized method to crowd-in private capital to allocate to agricultural finance.

2.3.2.4.1 Challenges of blended finance

Both examples rely heavily on government policies. If these were to shift, the funding mechanism of certain product lines of the respective NDBs could be impacted. In addition, structuring blended finance structures often have a longer development time than plain vanilla lending products. This is especially true when a NDB is involved with a stronger procedural focus than private banks and with less experience and expertise in these relatively new ways of finance structures. Hiring capable staff, continuous training, sharing best practices among NDBs and gaining experience is key to overcome these challenges.

2.3.2.5 Technical assistance and capacity building

All four countries offer technical assistance and capacity building to their end beneficiaries. BDP offers a wide range of non-financial services, with 60 out of their 800 employees being agronomists, focused on giving technical agriculture advice to clients. All documented knowledge on agricultural practices can be found in BDP's virtual centre of excellence. One concrete example includes "mapa de complejidades", showing sector suitability per municipality based on economic data.

Another – digital – example comes from FIRA, that has launched a digital advisory platform with satellite-based agronomic advice to farmers. Section 3.2 further elaborates on this platform.

2.3.2.5.1 Challenges of technical assistance and capacity building

Technical Assistance (TA) is important for both the farmer as well as the NDB itself – it increases farmers' financial literacy and agronomic knowledge, therewith increasing repayment capacity. Yet, reaching (remote) agricultural areas comes with high operational costs. This makes it difficult to scale TA activities. As a solution, NDBs often collaborate with agents to provide on-site TA, and increasingly examples can be noted of NDBs who offer TA through peer-to-peer training and digital channels. However, here it should be taken into account that farmers may lack the required digital literacy to use these tools effectively. Without adoption support, these solutions might face low uptake.

2.3.2.6 Sustainable agriculture finance

NDBs in all four countries are increasingly aligning their operations with national sustainability goals, though the depth and maturity of these frameworks vary. In Colombia, FINAGRO operates within a robust national sustainability framework supported by the country's Green Taxonomy and the National Climate Finance Strategy (ENFC), which aim to align financial flows with environmental objectives such as climate change mitigation, biodiversity conservation, and pollution control.¹⁸ FINAGRO's sustainability team mainly focuses on financial education, but has an increasing amount of people working on environmental sustainability and green credit lines. FIRA has emerged as a regional leader in sustainable finance, issuing green, blue, and gender bonds and integrating ESG criteria into its lending operations. Additionally, they have adopted a satellite-based advisory platform and geospatial tools to support climate-smart agriculture, demonstrating how digital infrastructure can enhance both sustainability and credit risk management. BanEcuador has begun incorporating sustainability into its credit programs, though its institutional capacity remains limited compared to its regional peers. While Bolivia does not have a formal sustainability mandate or taxonomy, BDP has sustainability embedded in their strategic plan, and introduced green credit lines and participates in regional sustainability dialogues. Additionally, they have developed a digital tool with crop recommendations depending on the area's climate and soil type. Across the four countries, international partnerships, particularly with the IDB and CAF, have played an important role in embedding sustainability within NDB operations.

2.3.2.6.1 Challenges of sustainable agriculture finance

Experience shows that sustainable agriculture finance needs to be combined with TA in order to be effective, and can therefore still be quite cumbersome to implement at scale at the moment. While most NDBs offer green credit lines, farmers do not always directly see the added value of this compared to other, short-term loans (having production increase in mind), leading to low adoption rates and/or ineffective use of the product at times. Further embeddedness with government programs (and potentially subsidies) could support to make these products more mainstream.

¹⁸ Source: UNFCCC, 2024 https://unfccc.int/sites/default/files/resource/2024.10.04_COLOMBIA_Sustainable_Finance_Strategy_and_related_regulation.pdf

2.3.3 Governance and institutional challenges

All four NDBs analysed – FIRA, FINAGRO, BDP, BanEcuador – are publicly owned institutions, though their governance structures and degrees of autonomy vary. FIRA in Mexico operates as a trust fund coordinated by the Ministry of Agriculture (AGRICULTURA), with the Ministry of Finance (SHCP) as a trustor and the central bank (BANXICO) as a trustee. It is managed through a network of trust funds (FIRA, FEGA, FONAGA, and FEFA), and while it has operational flexibility, its strategic direction is closely aligned with federal agricultural policy. FINAGRO in Colombia is majority-owned by the Colombian government through Grupo Bicentenario, with minority shares held by private financial institutions. This mixed ownership model introduces a dual accountability structure, though FINAGRO remains under public control and at all times has a president representing the government. BDP in Bolivia is largely (80%) owned by the State of Bolivia, with the other 20% owned by CAF (Development Bank of Latin America). This ownership is reflected in the board, with four directors being appointed by the Ministry of Economics and one by the CAF. Among the five directors, one is appointed as president. BanEcuador, also fully state-owned, operates under the supervisory of the superintendent for banks, as they are taking deposits from the public. Across all four institutions, common governance challenges include limited institutional autonomy due to public ownership, and exposure to political cycles.

2.4 Key takeaways

Drawing on the preceding sections of this chapter, the following insights summarize the strengths, weaknesses, opportunities, and threats (SWOT) associated with the ability of NDBs to finance SHFs.

2.4.1 Strengths

Based on the findings from the country analyses and roundtables, NDBs demonstrate several key strengths in financing SHFs. Their development-oriented mandates allow them to prioritize underserved sectors without the pressure of profit maximization. Next to this, close collaboration with their respective governments enables them to offer concessional finance, which makes credit more accessible and affordable for SHFs. Moreover, NDBs often work closely with international donors, which allows them to align their efforts with broader development goals. International donors play a vital role in strengthening NDBs by providing both financial and non-financial support. Financially, they contribute through project-specific funding, credit guarantees, and grants. On the non-financial side, they offer technical assistance, financial literacy programs, and digital platforms—all of which help enhance the capacity and productivity of SHFs. First-tier banks, due to their direct engagement with end beneficiaries, are better positioned to understand local needs and ensure transparency in how funds are allocated. Their close proximity also allows them to offer more favourable interest rates, as there are fewer intermediaries involved. In contrast, second-tier banks extend their reach by partnering with local financial institutions, enabling them to scale their impact across broader regions without having to operate branch networks.

2.4.2 Weaknesses

Despite these strengths, NDBs face notable weaknesses. Direct lending operations require a significant rural presence, which increases operational costs and can lead to inefficiencies and delays. Political interference in lending decisions can compromise the quality of loan portfolios and the financial sustainability of these institutions. Many NDBs depend heavily on subsidies, which can create borrower dependency, deter private sector involvement and generally are a second-best option. They also lack robust risk management systems, which hinders their ability to conduct thorough credit assessments beyond relying on landownership as collateral. Furthermore, loan monitoring and evaluating the impact of their programs remains a persistent challenge, particularly in indirect lending models. Finally, capacity constraints at NDBs and among their intermediaries, limit their ability to scale effectively.

2.4.3 Opportunities

Looking ahead, there are promising opportunities for NDBs to enhance their role in smallholder finance. The growing penetration of smartphones, digitization of land records, availability of alternative data for credit assessments, and the development of digital public infrastructure, opens up new possibilities for digital financial services. There is also

increasing global momentum around green and sustainable finance, which presents opportunities for NDBs to support climate-smart agriculture and attract new funding sources. Moving from subsidies to blended finance structures, often co-created with governments and/or international organisations, offer a way for NDBs to combine public and private capital, reducing risk and expanding outreach. Furthermore, collaborations with microfinance institutions and cooperatives, which have high capillarity in rural communities, can further strengthen their service delivery. At last, supportive policy and regulatory environments as well as integrated service models that combine finance with enhancing market access and input supply for farmers, positively impact the effectiveness of NDB interventions.

2.4.4 Threats

Nonetheless, several threats could impede the ability of NDBs to serve SHFs in their countries. Macroeconomic instability, such as inflation and currency volatility, can disrupt both the availability of funding and the performance of loan portfolios. Also, overreliance on subsidies and loan waivers risks distorting markets and weakening credit discipline. Even when repayment behaviour is strong, climate change and extreme weather circumstances further threaten agricultural productivity and, consequently, farmers' ability to repay loans. Countries such as Bangladesh and the Philippines are particularly vulnerable to these climate-related risks. Also, while the potential for digital financial services is growing rapidly, technological limitations and low levels of digital literacy among farmers can hinder the adoption of innovative financial solutions, risking further exclusion from formal financial systems. Complex requirements for financial intermediaries to participate in programs, may hinder them from engaging with NDBs, like FINAGRO. Finally, the financial fragility of certain NDBs could raise concerns about their long-term sustainability and capacity to fulfil their development mandates.

3 Best practices

In the previous chapter some of the instruments of NDBs in the selected countries have been described. In this chapter we will highlight some additional best practices of NDBs that we have encountered during the inception phase of this program. This is not meant to be exclusive, but serves as valuable input for the solution design phase of the IFE-FST program.

3.1 ABC program by BNDES, Brazil

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.1.1 Context

Brazil faces the challenge of increasing agricultural productivity while reducing greenhouse gas emissions and preserving its ecosystems. With international pressure mounting for sustainable, deforestation-free supply chains, Brazil’s agricultural sector must transition to low-carbon practices. The “Agricultura de Baixo Carbono” (ABC) Program by BNDES (Brazil’s NDB) addresses this by offering investment credit for sustainable agricultural technologies and practices.^{19 20}

The program aligns with Brazil’s climate commitments and supports small and medium-sized producers in transitioning to sustainable agricultural production systems, with a focus on low-carbon practices and environmental conservation. The program is structured into several thematic lines of credit, each targeting specific sustainable practices. The thematic lines range from recovery of degraded pastures and land conversion for sustainable use, to integration of agroforestry systems and waste management systems for animal production. Complementary to the credit line, clients can receive technical assistance being offered by EMBRAPA or other selected consultants.²¹ The ultimate objective is to reach environmentally sustainable agriculture practices, and at the same time increasing farmer productivity and -income.

3.1.2 Product specifics

The below table summarises the key features of the ABC credit product by BNDES. As BNDES is a second-tier NDB, the product is offered to end beneficiaries through financial intermediaries, being 80 in total.²²

Feature	Details
Who can apply	Individual rural producers, cooperatives, and agribusinesses.
What can be financed	Sustainable agriculture practices according to the 12 thematic credit lines as identified by BNDES.

¹⁹ Source: BNDES. (2025). *Renovagro – Programa de Financiamento a Sistemas de Produção Agropecuária Sustentáveis* [Renovagro – Programa de Financiamento a Sistemas de Produção Agropecuária Sustentáveis](#)

²⁰ Currently, the program is called RenovAgro. As this chapter analyses the history of the program, we consequently call it ABC.

²¹ “Empresa Brasileira de Pesquisa Agropecuária”, the state-owned Brazilian Agricultural Research Corporation with the mission to develop research, development, and innovation solutions for sustainable agriculture in Brazil.

²² Source: BNDES. (2025). *BNDES Finame*. [BNDES Finame - BNDES](#)

Ticket sizes	Up to BRL 20 million (USD 3.62 million) per beneficiary per year. ²³ For MSMEs, BNDEs may finance up to 100% of the project cost. For larger producers, financing may cover 60%-80% of the total investment.
Interest rates	<ul style="list-style-type: none"> • Fixed interest rate of up to 7% annually for recovery of degraded pastures and adaptation of rural properties in accordance with environmental legislation. • Fixed interest rate of up to 8.5% annually for other eligible investments.
Loan terms	Up to 12 years, with a grace period of up to 8 years depending on the type of investment.
How to apply	<ul style="list-style-type: none"> • The end beneficiary submits a proposal through a BNDES-accredited financial institution • Include technical project and environmental compliance documentation • Bank evaluates and submits to BNDES for approval and disbursement

3.1.3 Impact²⁴

The ABC Program was launched in 2010. Between 2010-2020, the program disbursed BRL 24.4 billion (USD 4.39 billion) over a total of 47,000 contracts, mostly to medium sized farmers.

The sub-program that was disbursed the most (41%) was the one for recovery of degraded pastures. Overall, the environmental impacts of the program were modest. Analysing the credit line for pasture recovery, it was found that obtaining credit under this program is associated with an average reduction of 3 percentage points (p.p.) in the pasture area of these polygons over a period of 4 years. Looking at clients who hired technical assistance as part of the contract, a reduction of 6 p.p. in the area of degraded pasture was noted 4 years after the credit was issued, and doubled (12 p.p.) after 6 years.

3.1.4 Key takeaways

The ABC Program teaches us various lessons to be taken into account for strengthening NDBs and farmers in other countries. To summarise, these takeaways include:

- The ABC Program was created as part of Brazil’s national strategy to reduce greenhouse gas emissions in agriculture. As the Program was aligned with national policies, it received strong political- and institutional backing.
- Through the ABC credit line farmers could access long-term, low-interest loans to adopt sustainable practices. As such, a barrier was reduced to access costly but beneficial farming practices that increase income.
- Technical Assistance complementary to a credit line is crucial for the effectiveness of the credit. Without it, technologies are not properly implemented and impact will be lacking.
- The ABC platform, coordinated by EMBRAPA, enabled monitoring of emissions reductions and technology adoption.²⁵ This brought together ministries, research institutions, and financial agents, to foster a collaborative governance model and measurement of impacts.

²³ 1 BRL = 0.18 USD

²⁴ Source: Climate Policy Initiative. (2024). *The Impact of Brazil’s ABC Program Credit on Pasture Recovery : Evidence from the Cerrado*. [Report-The-Impact-of-Brazils-ABC-Program-Credit-on-Pasture-Recovery.pdf](#)

²⁵ Source: Embrapa. (n.d.). *Plataforma ABC*. [Plataforma ABC - Portal Embrapa](#)

3.2 *Plataforma de Asesoría Técnica by FIRA, Mexico*²⁶

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.2.1 Context²⁷

Mexico’s agricultural sector faces challenges related to climate variability, low productivity, and limited access to technical assistance – especially for smallholder farmers. Traditional support services are often costly, fragmented, and hard to access for rural communities.

While FIRA has a large physical network of extension services, they wanted to address this challenge in a more scalable way. That is why they launched “Plataforma de Asesoría Técnica”, a digital tool that leverages Agriculture 4.0 technologies to provide real-time, personalised agronomic advice.²⁸ The platform is part of FIRA’s broader strategy to modernise rural finance and promote sustainable, climate-resilient agriculture.

3.2.2 Product specifics²⁹

The platform is built on NAX Solutions technology, and includes the key features as displayed below.

Feature	Details
Who can use it	Smallholder farmers (typically <50 ha), producer organisations, and technical advisors with or without prior FIRA credit history.
What is offered	Digital agricultural services, including satellite imagery, crop health monitoring, pest alerts. The services are integrated with FIRA’s broader financing ecosystem.
Technology used	Artificial Intelligence (AI), satellite imagery, Internet of Things (IoT) sensors.
Costs	FIRA subsidises up to 2 years of platform use for eligible users. After this, a tiered pricing model is applied according to farm size.
How to access	Farmers submit georeferenced data via FIRA agents. After this, FIRA validates and connects them with service providers. Training and onboarding are included in the services.

3.2.3 Impact

The platform was piloted in 2023, and scaled nationally in 2024. Since then, it has reached 4,000 farmers covering 100,000 ha. Consequently, these farmers reported improved water use efficiency and pest control; reduced fertilizer and agrochemical use; enhanced communication between farmers and advisors; and better planning and yield estimation.

As the platform has a geographic reach to 25 out of 32 states in the country, there is a large potential to further scale. However, limited digital literacy rates of farmers cause delays in adoption. FIRA’s wide network of physical technical

²⁶ Source: FIRA. (2025)

²⁷ Source: ALIDE. (n.d.). *Programa de FIRA de México*. [Programa de FIRA de México - ALIDE](#)

²⁸ Agriculture 4.0 is the use of advanced digital technologies – like Artificial Intelligence, Internet of Things, drones, and big data – to make farming more efficient, sustainable, and data driven.

²⁹Source: www.fira.gob.mx

assistance providers (both of FIRA internally as well as through partnered extension services) aim to support adoption of the technologies and practical use of advisory services.

3.2.4 Key takeaways

During our research, we have noticed that various NDBs are implementing digital platforms to support their end beneficiaries. The following lessons learned from this FIRA initiative can be applied in other countries as well:

- Accompanying technical assistance is key to ensure adoption of the digital platform.
- The integration of geospatial data and digital monitoring enhances credit risk management and productivity tracking.
- There is a wide variety of agricultural technology providers, each with innovative solutions. Understanding the specific needs of farmers is essential to selecting technologies that truly add value.
- Projects involving economic aggregators (e.g. producer cooperatives) show higher adoption rates due to clear goals and strong leadership.

3.3 e-KCC by NABARD, India

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.3.1 Context

KCC

The Government of India (GoI) introduced the Kisan Credit Card (KCC) scheme in 1998 to meet the production credit requirements of farmers in a timely manner. It allows them to purchase agricultural inputs and withdraw cash for production expenses. KCCs are issued by Private Sector Scheduled Commercial Banks, Public Sector Banks, Small Finance Banks, Primary Agricultural Credit Society (PACS) ceded with Scheduled Commercial Bank (SCBs), RRBs, and Rural Cooperative Banks (RCBs). Over the years, KCC has become the most common and accessible loan product for farmers in India.

e-KCC

Recently, NABARD - through 24x7 Moneyworks Consulting Pvt. Ltd, a next-generation agri-fintech venture - has developed an online portal for Kisan Credit Card (KCC), which can be accessed by farmers to submit their loan applications to RCBs and RRRs. The portal will have links to land record systems of state governments, satellite imagery, CIBIL, and Unique Identification Authority of India for Know-Your-Customer (KYC) authentication to facilitate underwriting of loans by banks. NABARD is working on integrating its e-KCC loan origination system portal with the Public Tech Platform for Frictionless Credit (PTPFC) of Reserve Bank Innovation Hub (RBIH), a wholly-owned subsidiary of the RBI.

The digitisation of agricultural lending will ensure instant doorstep delivery of credit to farmers while improving the efficiency of banks, advancing NABARD's mission of fostering rural prosperity. NABARD mentioned that through the integration with PTPFC, about 351 district and state cooperative banks (StCBs) and 43 RRBs will gain access to a range of services for more effective credit underwriting. The collaboration will streamline the lending process and reduce the turnaround time for loans from 3-4 weeks to just five minutes for India's 120 million farmers.

Even though this intervention is still in the early implementation phase, it will change the role of banks in the financial ecosystem. The platform will help cooperative banks to increase its efficiency in operations, as they already have the client outreach in the rural areas. Commercial banks are not so keen on these small agricultural loans, as profitability is relatively low for them. However, looking into future developments, when the platform would also be used for other loan products, it is expected that commercial banks will also participate. Cooperative banks will be facing more competition from commercial banks, once they also make significant use of the platform.

3.3.2 Product specifics³⁰

The below table summarises the key features of the KCC credit product by NABARD.

Feature	Details
Who can apply	Individual rural producers
What can be financed	Expenses related to crop cultivation, such as purchasing seeds, fertilizers, pesticides, as well as for meeting other cash requirements related to crop production and allied activities.
Ticket sizes	<ul style="list-style-type: none"> Loans up to INR 2 lakh (USD 2,338) are extended on a collateral-free basis, ensuring hassle-free access to credit for small and marginal farmers. Above INR 2 lakh (USD 2,338), collateral is required. The upper loan limit for KCC is INR 5 Lakh, which is an increase from the loan limit under the Modified Interest Subvention Scheme from INR 3 lakh (USD 3,507) to INR 5 lakh (USD 5,846).³¹
Interest rates	<ul style="list-style-type: none"> The GoI, under Modified Interest Subvention Scheme (MISS), provides interest subsidy of 1.5% to banks for providing short-term agricultural loans through KCC up to INR 3 lakh (USD 3,507.8) at a concessional interest rate of 7%.³² An additional Prompt Repayment Incentive (PRI) of 3% is provided to farmers on timely repayment of loans, which effectively reduces the rate of interest to 4% for farmers.
Loan terms	Revolving Credit Facility with a maximum validity of 5 years, with a potential 10% annual increase of limit every year, subject to annual review. Repayment is based on the crop period and the marketing period for the specific crop.
How to apply	<ul style="list-style-type: none"> The beneficiary selects the FI to submit the application (public sector, private sector, or cooperative banks). The beneficiary can: <ul style="list-style-type: none"> visit a bank branch or in the case of cooperative banks, visit the PACS to apply for the loan and submit the required documents (e.g. Aadhaar card, land document, address proof); or apply through the FI's website. NABARD is currently rolling out e-KCC nation-wide after having piloted eKCC across various banks over the past 2 years.

3.3.3 Impact³³

As of 2024, there are 77.2 million operative KCCs, resulting in a total amount of INR 9,80,404 crore (USD 114.6 billion) of operative KCCs. This marks more than a twofold increase compared to 2014. The KCC scheme has significantly enhanced

³⁰ Source: BNDES. (n.d.). *BNDES Finame*. [BNDES Finame - BNDES](#)

³¹ Source: Ministry of Finance. (2025). *Operative Kisan Credit Card (KCC) amount crosses ₹10 Lakh Crore benefiting 7.72 Crore Farmers*. [Press Release:Press Information Bureau](#)

³² Lakh is equal to one hundred thousand (10⁵) in the Indian numbering system. [Lakh - Wikipedia](#)

³³ Source: Climate Policy Initiative. (2024). *The Impact of Brazil's ABC Program Credit on Pasture Recovery: Evidence from the Cerrado*. [Report-The-Impact-of-Brazils-ABC-Program-Credit-on-Pasture-Recovery.pdf](#)

farmers' access to institutional credit, thereby reducing their dependence on informal lending sources—one of the scheme's primary objectives.

However, the implementation of KCCs faces several challenges. Tenant farmers often struggle to obtain KCCs due to the requirement of land ownership, even when the land is not used as collateral up to INR 2 Lakh (USD 2,338). As a result, many remain excluded from formal credit systems. Additionally, farmers frequently receive less than the loan amount they apply for, largely due to limited funds available with Regional Rural Banks (RRBs) and Cooperative Banks. This shortfall forces many to continue relying on informal credit sources alongside KCCs. Moreover, delays in the disbursement of credit further hinder the scheme's effectiveness. Furthermore, although the government stimulates timely payments through the PRI, repayment behaviour varies greatly per state. Repayment performance under the KCC scheme tends to be lower in states with low literacy levels, limited awareness of repayment obligations, and a history of political loan waivers. Additionally, repayment behaviour varies between existing and new borrowers, with new customers often exhibiting a lower repayment performance. Encouragingly, recent years have shown an encouraging improvement in the repayment performance of KCC loans. Between FY22 and FY24, NPAs under the KCC scheme declined across all major banking channels: from 15.1% to 14.16% for commercial banks, from 9.5% to 6.9% for Regional Rural Banks (RRBs), and from 7.1% to 6.5% for cooperative banks.³⁴

3.3.4 Key takeaways

The (e-)KCC scheme offers valuable insights that can inform the development of NDBs and support for farmers in other countries. Key lessons include:

- *Collaborative implementation with clear roles:*
Multiple stakeholders are involved in the roll-out and implementation of KCC and e-KCC. Each stakeholder has a clear mandate and visions are aligned.
- *Continuous product and process innovation:*
To ensure relevance and encourage adoption, financial products and processes must be regularly reviewed and updated:
 - A District Level Technical Committee annually sets the financial parameters of KCC for specific crops based on Scale of Finance – the estimated cost of cultivation per unit of land for specific crops.
 - The introduction of e-KCC aims to streamline and enhance the efficiency of the loan application and disbursement process.

3.4 NASIRA by FMO, the Netherlands³⁵

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.4.1 Context

Even though the Dutch development bank FMO is out of scope of this program, the innovative nature of this risk-sharing facility is worth sharing with other NDBs in this context. Therefore we decided to include this as a best practice.

³⁴ Source: Financial Express. (2025). NPAs with Kisan Credit Cards decline across banking channels. [KCC - Financial Express](#)

³⁵ Source: FMO. (2025). *Nasira- A new chance guaranteed*. [Nasira - FMO](#)

The NASIRA program is an innovative risk-sharing facility developed by FMO, the Dutch development bank. It is designed to support MSME entrepreneurs (i.e. youth-, female- and migrant-owned enterprises) in Sub-Saharan Africa and countries neighbouring Europe. NASIRA addresses the challenge of financial exclusion by enabling local financial institutions to lend underserved MSME segments that are typically perceived high-risk.

The program is supported by the European Union and the Dutch Government. It aims to shift the risk perception of financial institutions by offering guarantees that cover exceptional losses – those beyond the normal expected default rates – rather than first-loss coverage. This encourages banks to expand their lending portfolios to include vulnerable groups without exceeding their risk appetite.

3.4.2 Product specifics

Feature	Details
Who can apply	Local financial institutions (banks, MFIs, fintechs) in eligible regions.
What can be financed	Loans to underserved MSME entrepreneurs: i.e. youth, women, migrants, COVID-19-affected.
Guarantee structure	Covers exceptional losses above the normal NPL threshold of an FI.
Guarantee coverage	Tailored per institution; typically 30-80% of exceptional losses. NASIRA guarantees up to 95% of the local bank’s portfolio.
Loan size to end clients	Varies per institution; typically ranges from USD 500 to USD 50,000 depending on borrower segment and local context
How to apply	Financial institutions apply through FMO; must meet eligibility and impact criteria.

Examples of approved guarantee structures include USD 1.1 million to Ameriabank (Armenia), USD 10 million to I&M Rwanda (with potential to scale to USD 20 million), and GEL 0.8 million to Terabank (Georgia).

3.4.3 Impact

To date, the NASIRA structure has led to over USD 200 million in guarantees issued to financial institutions across Sub-Saharan Africa and the MENA region. Over 50,000 loans have been issued to underserved entrepreneurs under NASIRA-backed portfolio, of which 40% to female entrepreneurs.

3.4.4 Key takeaways

While the focus jurisdictions of NASIRA are beyond the focus of this program (LAC and APR), it still brings valuable takeaways to be considered:

- NASIRA’s model of covering exceptional losses (beyond first-loss) encourages more responsible lending and adequate risk management by FIs.
- The flexible structure of the mechanism allows adaptation across geographies and financial institution types.
- As an additional component, the program supports financial institutions to build internal capacity to serve new client segments.
- The portfolio is monitored on a monthly basis by FMO, using a structured finance reporting and monitoring tool provided by Hypoport and hosted in the cloud for FMO.

3.5 Green-, blue-, gender-bonds issuance by FIRA, Mexico

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.5.1 Context

FIRA has leveraged innovative capital market instruments to raise funding beyond its other sources. By issuing green, blue, and gender-focused bonds under its capital market programs, FIRA broadens its investor base and mobilises private funds for agriculture for longer-term (up to 15 years), something not seen in most other NDBs.

In 2024 FIRA – through its trust fund FEFA – issued Mexico’s first-ever Blue Bond to finance sustainable fisheries and aquaculture projects. This followed after other thematic bonds such as a social gender bond placed during the COVID-19 pandemic to expand credit for women in rural industries.

3.5.2 Product specifics

The below table outlines specific features of the bonds. The bonds are verified pre- and post-issuance by Sustainalytics under ICMA Bond Principles and Climate Bonds Standard.

Feature	Details
Who can invest	(Inter)national investors
Eligible projects	Green bonds: sustainable management of natural resources and land use, sustainable agriculture and livestock breeding, fisheries and aquaculture, renewable energy, efficient and resilient water and wastewater management, and energy efficiency. Blue bonds: sustainable fisheries and aquaculture. Gender bonds: women-led rural enterprises, inclusive agri-value chains for women and youth.
Ticket sizes	Typically USD 5,000 to USD 150,000 per end beneficiary, depending on project type.
Bond size	Green bonds: USD 578 million Blue bonds: USD 240 million Gender bonds: USD 400 million
Loan terms	Up to 15 years, with grace periods depending on investment type.

3.5.3 Impact

The USD 160 million gender bond was oversubscribed 4 times, and the USD 240 million blue bond was oversubscribed 2.3 times, indicating strong investor confidence in FIRA.

3.5.4 Key takeaways

- FIRA’s bond program shows how NDBs can mobilise capital markets to de-risk sustainable and inclusive agricultural production through green bond certification.
- Funds generated by these bonds are well matched funding for longer-term asset finance to the agricultural sector, thereby providing a boost to mechanization and increased productivity.
- Thematic bonds aligned with ESG standards attract strong investor interest and promote transparency and accountability.

3.6 CPR line by BNDES, Brazil^{36 37}

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.6.1 Context

In the 1990s, Brazil faced a collapse in its rural credit system due to economic instability and the withdrawal of subsidised credit. This led to the emergence of private sector solutions, notably the “Cédula de Produto Rural” (CPR) – a promissory note backed by future agricultural production. In line with this, BNDES introduced the CPR credit line in 2024, a financial instrument based on the rural product note which allows producers to access working capital by pledging future agricultural production as collateral.

The CPR credit line is designed to enhance liquidity for small and medium-sized rural producers, and can be used to carry out operations with CPR certificates or Agribusiness Credit Rights Certificates (CDCA) backed by agribusiness credit rights. The securities can be issued by producers active in commercialisation, processing or industrialisation of agricultural, livestock, forestry, aquaculture and extractive products.

3.6.2 Product specifics

Feature	Details
Who can apply	Micro-, small, and medium-sized rural producers/cooperatives with annual revenues of up to BRL 300 million (USD 54.5 million).
What can be financed	Working capital for agricultural production, including purchase of inputs, equipment rental, and labour costs.
Ticket sizes	Up to BRL 3 million (USD 545,000) per operation. Multiple operations can be contracted per year, with a loan limit per customer of BRL 20 million (USD 3.6 million) every 12 months.
Interest rates	Depending on size and sustainability practices of producers. The final rate is composed of the BNDES basic remuneration of 1.3% per year; financial agent’s remuneration of up to 4.3% per year; and financial cost reference.
Loan terms	The total payment period is up to 60 months, including a grace period of up to 24 months.
How to apply	<ul style="list-style-type: none"> Producers issue a CPR through a BNDES-accredited financial institution. This must include a production plan and proof of land use. Financial intermediary evaluates and submits to BNDES for funding.

3.6.3 Impact

Considering the overall impact of the CPR, this credit line has become crucial in Brazil’s agricultural finance system. As of May 2024, over BRL 350 billion (USD 63 billion) in CPR has been issued, representing nearly 10% of Brazil’s overall GDP

³⁶ Source: BNDES. (2025). *BNDES Crédito Rural*. [BNDES Crédito Rural](#)

³⁷ Source: BNDES. (2024). *Relatório Anual Integrado 2024*. [8173c015-0f5f-81c0-c203-607f55ff5586](#)

in agriculture. This growth has been driven by the increasing adoption of digital CPRs, which improved transparency, reduced transaction costs, and enabled integration with capital markets.

The CPR instrument has facilitated greater access to pre-harvest financing, especially in key value chains such as soybeans, maize, sugar, and cattle. It has also contributed to the formalisation of rural credit markets and improved traceability in agricultural supply chains.

Looking at BNDES' credit line specifically, it has not been reported yet how much has been disbursed through this since the launch in 2024. BNDES has indicated that they expected to disburse BRL 10 billion (USD 1.8 billion) in the first year.

3.6.4 Key takeaways

While this credit line by BNDES is relatively new, some first key takeaways can be noted:

- Using future production as collateral can unlock credit for producers with limited assets.
- CPR BNDES represents a shift from traditional subsidised credit to market-based instruments, increasing efficiency and scalability.
- With a target of BRL 10 billion in 2024, the program has significant potential to scale. Also the model's adaptability to different crops, regions, and producer profiles contributes to scalability.

3.7 Farmer Producer Organisation- guarantee by NABARD, India

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.7.1 Context

In February 2020, the Indian government (GoI) launched the "Formation and Promotion of 10,000 Farmer Producer Organisations (FPOs)" scheme to enhance productivity and farmers' income through collective production and marketing.³⁸ With a budget of USD 803 million until 2027–28, the scheme aims to reduce production costs and promote sustainable farming. So far, USD 30 million in equity grants has been disbursed to 4,761 FPOs. Recently, the 10,000th FPO was launched, connecting around 30,000 farmers, 40% of whom are women.

As part of this initiative, NABARD aims to strengthen FPOs through credit guarantee schemes of its subsidiary NABSanrakshan. A Credit Guarantee Fund for FPOs with a pool of funds of USD 116.2 million with equal contribution from GoI and NABARD. The aim of the fund is to facilitate collateral-free institutional credit to FPOs by providing credit guarantees to lending institutions. This reduces the risk for banks and encourages them to lend to FPOs.

3.7.2 Product specifics

Feature	Details
Who can apply	Lending institutions
What can be financed	Credit guarantee for Working Capital and Term Loans

³⁸ Source: Ministry of Agriculture & Farmers Welfare. (2025). *10,000 FPOs Achieved under Government's Flagship Scheme A Step Towards Atmnirbhar Krishi*. [Press Release: Press Information Bureau](#)

Ticket sizes	<p>The guarantee is available for FIs that provide FPOs with Working Capital and Term Loan ticket sizes ranging from USD 10,000 to USD 200,000.</p> <p>Credit guarantee coverage:</p> <ul style="list-style-type: none"> • Up to USD 100,000: 85% of sanctioned amount • Up to USD 200,000: 75% of sanctioned amount
Fees	<p>For a loan ticket size:</p> <ul style="list-style-type: none"> • up to USD 100,000: 0.75%; and • up to USD 200,000: 0.85% with a ceiling of USD 1,970.
Loan terms	<p>Guarantee is available for working capital with a tenure of 12 months and term loans, with a tenure of maximum 60 months.</p>
How to apply	<ul style="list-style-type: none"> • The FPO has to meet certain eligibility parameters before the lending institution can get Credit Guarantee approval from the trust: <ul style="list-style-type: none"> ○ FPOs must be incorporated under companies act or cooperative societies act ○ Have a minimum FPO membership of 300 members (except for hilly areas and states in the North-east) ○ FPO must be eligible as per criteria provided by NABARD via an eligibility tool. This tool looks at financial performance, governance & management, business operations, and processes and systems. ○ Meet capital requirements (approx. USD 4500) ○ Have ongoing business operations for at least 2 years ○ Be profitable for at least 2 years ○ Submit application form at a selected FI (can be private sector or cooperative bank)

3.7.3 Impact

So far credit guarantees with a total worth of USD 53 million have been issued to 1,900 FPOs. This has enabled these FPOs to access institutional credit without collateral, which was a major barrier earlier. FPOs now facilitate market linkages on behalf of their members, enhancing both their bargaining power and access to broader markets. In addition, they provide smallholder farmers (SHFs) with essential agricultural inputs and a range of agri-related services. Around 3 million Indian farmers are currently part of FPOs, with women making up 40% of the membership.

3.7.4 Key takeaways

- Financial institutions often require risk-mitigation mechanisms, such as guarantee structures, to confidently extend collateral-free credit to newly established entities like FPOs.
- The FPO Credit Guarantee Fund stands out as a successful example of collaboration between the government and an NDB.
- Having supported 1,900 FPOs since its inception, the credit guarantee fund demonstrates significant potential for scalability and wider impact.

3.8 Group-lending product by Agribank, Vietnam

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.8.1 Context

To address the imbalance between the demand and supply of small-scale capital—and as part of a broader national strategy to reduce poverty, promote rural development, and expand credit access for small-scale farmers and rural households—Agribank introduced a group-lending product. This community-based lending model relies on local authorities and socio-political organizations, such as Women’s Unions and Farmers’ Associations, to organize and manage borrowing groups (a.k.a. joint liability groups). These associations are familiar with the individual borrowers, fostering a sense of accountability. Borrowers are motivated to maintain good repayment behaviour to avoid reputational consequences within their community. This peer-driven accountability has proven highly effective, with the program achieving a remarkably low default rate of just 0.6%.

3.8.2 Product specifics

Feature	Details
Who can apply	Households and individuals
What can be financed	Capital for production, business and for living expenses
Ticket sizes	No information available
Interest rates	The interest rates depend on the loan term and borrower’s profile: <ul style="list-style-type: none"> For short-term and medium loans no information is available on interest rates For long-terms: a minimum rate of 7.0% per year is applied³⁹
Loan terms	<ul style="list-style-type: none"> Borrowers can apply for a short and medium term loan or a long-term loan. Definitions of short, medium, and long-term are not specified online. The product offers flexible repayment terms, allowing borrowers to align payments with their income cycles. While most loans under this program are unsecured, they are backed by a group guarantee, ensuring accountability and reducing credit risk.⁴⁰
How to apply	<ul style="list-style-type: none"> Borrowers must be part of a borrowing group, such as a Women’s Union or Farmers’ Association. A team leader must be authorized to borrow capital and to collect interest from the member and submit it to Agribank where the loan is assessed when all conditions are met as prescribed. Loans are processed and disbursed through Agribank’s rural branch network

3.8.3 Impact

As of June 30, 2023, Agribank had lent to 63,615 loan groups with over 1.21 million customers, with outstanding loans reaching approximately USD 8.33 billion.⁴¹ In addition to the loan itself, members of these groups receive additional benefits, such as support with loan documentation, trainings related to production techniques, and support with market

³⁹ Source: VietNamNet. (2024). *Agribank giảm lãi suất cho vay ngay từ đầu năm. Agribank giảm lãi suất cho vay ngay từ đầu năm*

⁴⁰ Source: Do, G. Q., Dao, T., Hoang, A., Huyen, V. N., Thao, L. P., Huu, D., Do, Van, T. M. (2022). *Evaluating the Group Lending Development at the Vietnam Bank for Agriculture and Rural Development: A Case Study in Bac Giang Branch*, 3(3), 679-688. (PDF) [Evaluating the Group Lending Development at the Vietnam Bank for Agriculture and Rural Development: A Case Study in Bac Giang Branch II The Vietnam Bank for Agriculture and Rural Development-Bac Giang Branch II](#)

⁴¹ Source: Vietnam Investment Review. (2023). *Green credit gaining traction at Agribank. Green credit gaining traction at Agribank*

linkage. A noteworthy evaluation study examined the effectiveness of Agribank’s group-lending product at one of its branches. Among the lending groups, 20% were affiliated with Women’s Unions, while 77% were part of Farmers’ Unions. Interestingly, despite representing a smaller share of the groups, Women’s Unions accounted for 36% of the outstanding loan volume in 2018, compared to 63% for Farmers’ Unions in the same year.⁴²

3.8.4 Key takeaways

- This product effectively reaches its intended beneficiaries—small-scale farmers and rural households—and plays an active role in advancing Vietnam’s national objectives of poverty reduction, rural development, and financial inclusion.
- With a default rate of just 0.6%, the program shows exceptional repayment performance, which can in part be attributed to peer accountability. However, the strength of peer accountability can vary significantly across different cultural and national contexts, meaning that similar group-lending models may yield very different outcomes in other markets.

3.9 Livestock insurance scheme by PKSF, Bangladesh

Category	Digital	Climate	Gender	Smallholders	Financial	Non-financial
Included?						

3.9.1 Context

To protect the livelihoods of marginal farmers engaged in animal husbandry, PKSF, in collaboration with ADB, has introduced a Livestock Insurance Scheme under the DIISPSo (Development of Insurance Industry Support Project).⁴³ This initiative aims to reduce vulnerability to risks such as disease and natural disasters, which often result in severe financial losses for small-scale livestock farmers. 40 MFIs, along with their 2947 branches, were selected to engage in the pilot that ADB and PKSF set up in 2010, which consisted of four components: market assessment and product development, strengthening policy, legal and regulatory framework, awareness creation and capacity development, and executing the microinsurance pilot scheme. Currently the project has moved beyond the pilot phase and has become business as usual for PKSF.

Livestock farmers are required to pay a premium for insurance, which is only available when they apply for a loan through one of the 40 designated MFIs. In addition to insurance coverage, farmers benefit from access to vaccination programs, feed advisory services, and veterinary care. Each insured animal is issued a health card, which serves as a record of vaccinations, check-ups and insurance coverage details. These services are delivered in partnership with government agencies and research institutions affiliated with PKSF.

3.9.2 Product specifics

Feature	Details
Who can apply	Individual livestock farmers

⁴² Source: Do, G. Q., Dao, T., Hoang, A., Huyen, V. N., Thao, L. P., Huu, D., Do., Van, T. M. (2022). *Evaluating the Group Lending Development at the Vietnam Bank for Agriculture and Rural Development: A Case Study in Bac Giang Branch*, 3(3), 679-688. [\(PDF\) Evaluating the Group Lending Development at the Vietnam Bank for Agriculture and Rural Development: A Case Study in Bac Giang Branch II The Vietnam Bank for Agriculture and Rural Development-Bac Giang Branch II](#)

⁴³ Source: Roundtable (annex B) and PKSF. (n.d.). *Developing Inclusive Insurance Sector Project (DIISP)*. [DIISP - Palli Karma-Sahayak Foundation \(PKSF\)](#)

What is insured	Livestock (primarily cattle)
Insurance type	Health card-based livestock insurance
Insurance premium	0.7% of the loan amount per cattle for a 6 months insurance
Terms	<ul style="list-style-type: none"> • The premium for cattle insurance has to be paid by the borrower during the time of policy issuance and at the beginning of the loan cycle. • In case of death of cattle-head during the insured period due to conventional mortality or Natural Catastrophe/Epidemic 100% loan amount of the borrower with the MFI is waived. • Additionally, borrowers could opt for a life insurance against an additional payment of 0.3% of loan as premium.
How to apply	<ul style="list-style-type: none"> • The borrower must be enrolled in the beef fattening program • The borrower must meet the lending requirements of the MFI

3.9.3 Impact

During the pilot phase of the broader DIISP, which lasted from 2010 to 2014, more than 5.5 million microinsurance policies were issued and over 23,000 claims were made for multiple insurance categories. For the livestock insurance specifically, 4,19,757 cattle were insured during the pilot, with USD 0.5 million premiums collected by PKSf through its partner organisations. The mortality rate reduced to 0.5% during this project, which is very low compared to overall mortality rates for livestock in Bangladesh to be between 5-10%, according to ADB.⁴⁴

Due to the absence of data on policies issued and claims made following the pilot phase, it is not possible to assess the scheme’s impact beyond 2014.

3.9.4 Key takeaways

- Livestock insurance is essential for risk minimization and poverty reduction in Bangladesh’s livestock sector. The insurance scheme along with the additional services provided has drastically reduced mortality of livestock and increased the ability of farmers to repay their cattle loans.
- PKSf’s initiative with ADB is a pioneering model for integrating insurance with microfinance.
- While the scheme has been successfully implemented, its adoption required substantial support and guidance from ADB and PKSf. This raises questions about the scalability of the model across all PKSf partner organizations and the broader livestock sector in Bangladesh.

⁴⁴ Source: ADB. (2025). *Basic Statistics 2025*. [Basic Statistics 2025 | Asian Development Bank](#)

4 Concluding remarks

The inception phase of the IFE-FST initiative has showcased current practices, successes, and challenges of the current landscape of agricultural finance in LAC and APR. It started by confirming the critical role that NDBs can play in bridging the financing gap for smallholder farmers. Unlike commercial banks, which tend to focus on medium- and large producers due to risk perceptions, NDBs are guided by public mandates that allow them to prioritise underserved segments. Their ability to offer long-term, concessional finance, deploy risk mitigation instruments, and coordinate with public and private actors positions them as central actors in the transformation of food systems.

At the same time, NDBs are not without challenges. Many face high operational costs, are impacted by the political environment they are operating in, and limited risk management capacity. Their reach is often constrained by institutional inefficiencies or a lack of digital infrastructure. To overcome these challenges, best practices from around the world demonstrate how both financial and non-financial services can enhance rural finance.

The next phase of this project will focus on co-developing a practical and adaptable toolkit for NDBs and their partners, based on the best practices. The toolkit is envisioned to be centred around three core pillars:

1. Risk-sharing mechanisms, to reduce the perceived and actual risks of lending to smallholder farmers through instruments such as credit guarantees, insurance schemes, and portfolio de-risking.
2. Blended finance solutions, to mobilise public and private capital by combining concessional finance with commercial funding, enabling scale and sustainability.
3. Digital financial services, to lower transaction costs, improve service delivery, and enhance data-driven decision-making through digital platforms, e-KYC, mobile banking, and agri-fintech solutions.

These topics will be elaborated on in further detail, and afterwards tailored to the local context of selected focus countries.

Upon alignment on the scope with IFAD and priorities of the way forward, the program will enter the solution design phase which takes four months. Here, the insights and established connections from the inception phase will serve as a solid foundation. The findings show the importance of a systems approach – one that recognises the interconnectedness of financial institutions, public policy, technology, and farmer capabilities. By building on this foundation, the IFE-FST initiative is well-positioned to create solutions that contribute to more inclusive, sustainable food systems.