common fund for commodities

Annual Report 2022

Cover photos:
Above: Mrs. Kandotho inspecting her millet. KIT
Left, above: Farmer harvesting rice, Thailand. Adobe stock
Left, below: Cacao Tree. Adobe stock
Right: Beans, nuts, corn and seeds at a farmers market in Villarrica, Paraguay, South America. Adobe stock

Common Fund for Commodities

Annual Report 2022

Photos left to right: Adobe stock | Adobe stock | © FAO/Desmond Kwande

common fund for commodities

Contents

Photo: Msanga Villlage, Tanzania. © FAO/Simon Maina

Photo: Sorghum plant. Adobe stock

Foreword: a message from our **Managing Director**

It was yet another challenging year for our smallholders, SMEs (small and medium enterprises) and the community we serve. It was indeed a year unlike any. Please take time to read our piece on this at page 17 on '2022: A year like no other'.

Amidst the undeniable trials of 2022, backed up with the resolve and resilience of our team CFC, we had numerous inspiring accomplishments to highlight. The Covid-19 pandemic and the ongoing war in Ukraine, the appreciation of the currency of the United States posed significant difficulties for numerous businesses we support. But it also paved the way for novel ideas and opportunities to initiate transformative changes.

We are immensely proud of our accomplishments this year. 2022 has been the year with the highest number of projects seeking CFC financial support ever, with well over 500 applications received. Although a record 13 new investments were approved by the CFC's Executive Board, this is still only a fraction of what our valued applicants wish us to invest in.

These approvals accounted for a total value of nearly USD 60 million, with USD 13.4 million coming directly from CFC. These investments are aligned with the core Sustainable Development Goals (SDGs), targeting areas such as poverty alleviation (SDG 1), hunger eradication (SDG 2), gender equality (SDG 5), economic growth (SDG 8), innovation (SDG 9), reducing inequalities (SDG 10), responsible consumption and production (SDG 12), and climate action (SDG 13).

These partnerships reach over 95,000 farmers, a net additional income of up to USD 2,750 per annum. An additional 1,860 hectares of land are expected to be cultivated for food crops, and thereby enabling CFC to contribute towards enhancing food security of the poor and underprivileged.

The demand for CFC financing is growing because we serve the 'missing middle' providing resources directly to SMEs and smallholders.

Doing our part to strengthen the capacity of the CFC, we have initiated the process of launching our Agricultural Commodities Transformation Fund (ACT), a new fund aimed at magnifying our positive global impact. We remain grateful to the members of our Governing Council for their foresight as this initiative came at a time when the demand for our investments peaked at a new high.

Each year, our commitment to do more remains as crucial as it was when CFC was first established. At UNCTAD's inaugural session in 1964, commodity price volatility was a key topic, leading to discussions about the creation of a common fund. Fast forward to 59 years later, the economies of many developing nations are primarily reliant on commodities, making them vulnerable to economic shocks. UNCTAD rightly cautions these nations that this dependency is a trap they will not escape from in the foreseeable future unless they undergo 'a process of technology-enabled structural transformation'. With ACT Fund the CFC will mobilize the resources of private investors towards this transformation. You can read more about this initiative on page 19 (Section II.2 ACT Fund).

We act as a bridge between the developed and developing world, transferring technology and innovations from our base in the innovation rich European mainland. We rely on the innovation around us, with several of our projects enriched by Dutch entrepreneurs and businesses, benefiting both them and agripreneurs in the developing world.

Photo: Bananas Guinea-Bissau. © M. T. Palazzolo

Managing Director, H.E. Sheikh Mohammed Belal

Despite developing nations facing substantial technological challenges, their access to scientific and technical knowledge has increased. At the CFC, we strive to merge innovation with local knowledge to devise solutions that make a significant difference on the ground. In our quest to localise the development we work to implement a working model where local knowledge are called to action with the admixture of science and technology, where possible. The nexus between smallholders and small to medium-sized enterprises (SMEs) are bonded with strategic interventions and inputs so that we can bring more income for smallholders and outsize impacts along the sustainability roadmap.

To gain more insight into how we support smallholders through value chain innovation, read about the impact of our investments in: Enimiro (page 89), NEI (page 87), Meridia (page 91). This is only a snapshot of what we have been doing.

You will be pleased to see how Enimiro brought outsize benefits for smallholders simply by shortening the value chain and thereby freeing it up from parasitic middlemen. In the process it establishes traceability that we aspire to see as a new standard in the world of commodities. NEI helped increase the incomes of farmers at the foot of Mount Kilimanjaro. All that is needed is innovative crop ecology with an admixture of banana, coffee, and vanilla.

In Meridia we took upon us undue burden of an investment of very limited size simply to make it possible for them to implement highly innovative land mapping project using remote sensing and satellite technologies in Ghana, Côte d'Ivoire and

Indonesia and thereby benefitting farmers, mostly women farmers, getting their land right secured and resultant income from their cocoa planations.

Demand is higher than ever; supply needs to rise to the challenge. As the world grapples with climate change and destabilizing impact of conflict, it is unsurprising that demand for CFC's services has escalated worldwide. Given the magnitude of the challenges confronting us, we need to venture out of our comfort zones to discover innovative solutions. We are aware of our limited size.

We are small, effective, and impactful. But to do more, we need larger partners such as the FMO, KfW, World Bank, IMF, IFC, GCF, EU and the broader UN ecosystem, to de-risk our investments.

We chose Millets as our cover given the United Nations General Assembly's decision at its 75th session in March 2021 declaring 2023 the **International Year of Millets (IYM 2023)**. While this may be news for much of the world, millets have been staple food in India and parts of Africa for several centuries, having come from China at least 5,000 years ago. At this pandemic wrecked world, millets are no longer our 'coarse grains'. Rather they are our 'nutricereals" which can provide us with nutritious and healthy alternatives to the usual re-fined grains in the global market. Millets are gluten-free with a low-glycaemic index making them a great food option for those with celiac disease or gluten intolerance, high-blood sugar, or diabetes. They can also be a cost-effective source of iron.

Millets have a short cycle and can be grown between major crop seasons, and they also enrich the soil with their own set of micronutrients. Millets can grow on arid lands with minimal inputs and are resilient to changes in climate. They are therefore an ideal solution for countries to increase self-sufficiency and reduce reliance on imported cereal grains. We urge all to be a part of #IYM2023 and make time to peruse our exclusive feature article titled 'All-in on millet?' (page 41).

In 2022, we also completed a study on 'Finding Opportunities for Niche Commodities from Selected Landlocked Developing Countries in Health Food Markets' with UNCTAD. The findings of this study – Harnessing the potential of nutraceutical products in landlocked developing countries – underscores the important point of the need for identifying products that will enable LLDCs to diversify their exports and foster the process of structural transformation.

As an impact investor, CFC takes the issue of technical assistance with utmost importance. As it houses a talented team of TA experts capable of working as consultants for other impact investment fund, we are proud to see their diversified portfolio across the world. The activities of our TA team in the Africa Agriculture and Trade Investment Fund (AATIF) only helped rolling out 108 projects in 17 (Benin, Botswana, Côte d'Ivoire, Ghana, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe) African countries. We remain eager to significantly scale up our TA activities as we believe technology enabled transformation of the commodity world demands steady flow of updated information and knowledge sharing.


Photo: Shalem warehouse. Shalem

At the end of the day, we want to work for a world where we will have a battalion of *Ruth Kinoti's, Charity Ndegwa's, Loise Maina's, Jane Maigua's etc.* No matter wherever you are born, what race or religion or orientation you are from, irrespective of your zip code either in the developing South or the developed North, the only mantra we preach, as much as we practice, is each and every human being deserves to be treated with the dignity they truly deserve.

We invite you to read this report and get inspired by our work. Let's come together and strive for a world where everyone has a fair opportunity for a decent life. Let's walk this path together, transforming our world, with one smallholder at a time.

Here's to more progress and success in the year ahead!

Sheikh Mohammed Belal

I

CFC **at a glance**

Photos top to bottom: Sifting rice in Thailand. Adobe stock | Sisal fiber, raw material, China. Adobe stock

CFC **Highlights**

Expected Impact*

440,000
farmers

31%
women among the farmers impacted

60,000
hectares cultivated

10,895
jobs supported

10
projects in LDCs

Organization

33 YEARS
years of project experience

101
member states

9
institutional members

7
investment partners

23
staff members of which **61%** are women

9
commodity experts of which **56%** are women, form the Consultative Committee

**Current loan portfolio, most recent reporting as of 31 May 2023*

Operations – 33 years supporting commodity producers*

455
projects approved

70
commodities financed

104
different countries supported of which
36 LDCs

974 million*
of total project costs (in USD)

374 million*
of capital committed (in USD)

600 million*
co-financing/ counterpart contr. (in USD)

293 million**
disbursed (in USD)

*Amounts as submitted and approved by the Executive Board

**As of 31 December 2022

Commodity value chain*

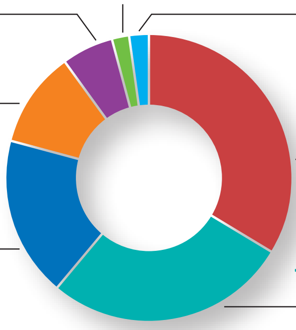
Economic Development 5%
25 projects

Partnership 2%
8 projects

Finance 2%
8 projects

Market Access/ Extension 11%
52 projects

Processing 34%
153 projects



Technical Assistance 17%
79 projects

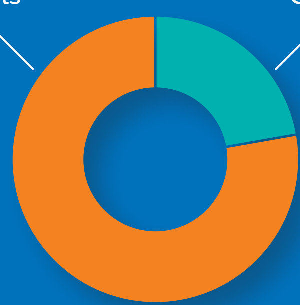
Production 29%
130 projects

*% based from number of projects

CFC projects in LDCs*

78% | 36 countries
LDCs with CFC projects

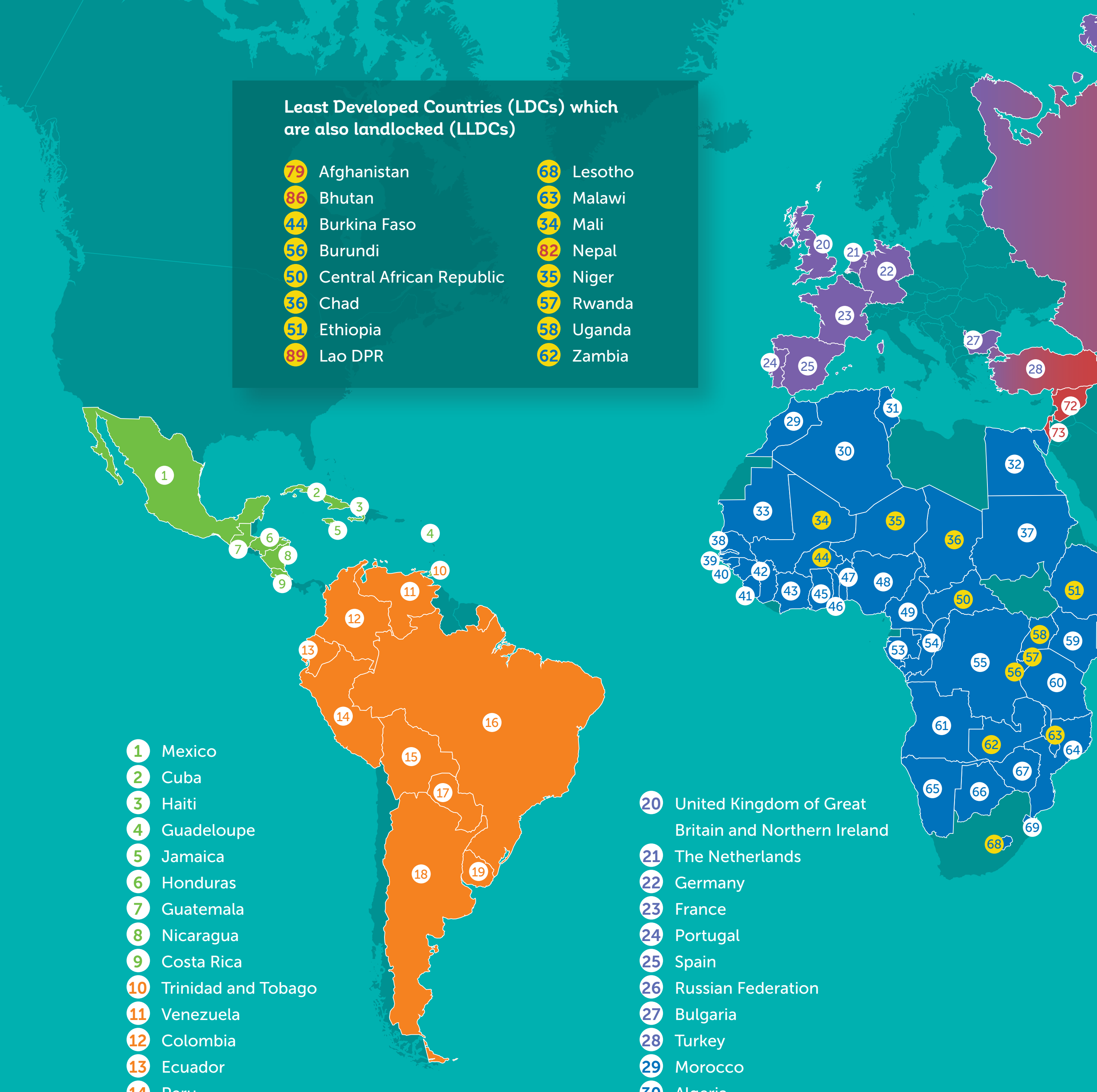
22% | 10 countries
LDCs with no CFC projects



*Grand total since 1989

Photo: Lychee fruits,Thailand. Adobe stock

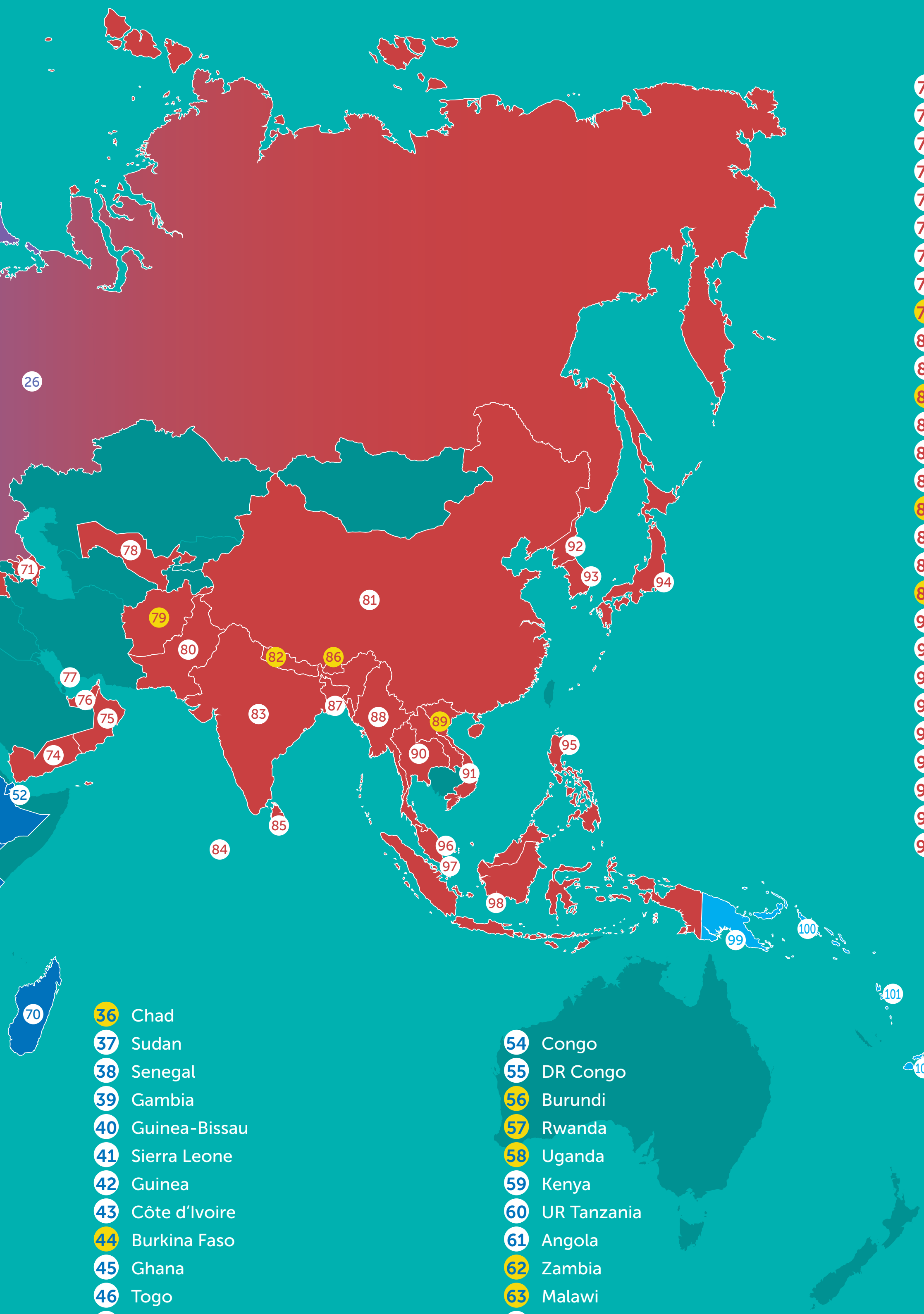
Countries participating in **CFC projects since 1989**



Least Developed Countries (LDCs) which are also landlocked (LLDCs)

- 79 Afghanistan
- 86 Bhutan
- 44 Burkina Faso
- 56 Burundi
- 50 Central African Republic
- 36 Chad
- 51 Ethiopia
- 89 Lao DPR
- 68 Lesotho
- 63 Malawi
- 34 Mali
- 82 Nepal
- 35 Niger
- 57 Rwanda
- 58 Uganda
- 62 Zambia

1. Mexico
2. Cuba
3. Haiti
4. Guadeloupe
5. Jamaica
6. Honduras
7. Guatemala
8. Nicaragua
9. Costa Rica
10. Trinidad and Tobago
11. Venezuela
12. Colombia
13. Ecuador
14. Peru
15. Bolivia
16. Brazil
17. Paraguay
18. Argentina
19. Uruguay
20. United Kingdom of Great Britain and Northern Ireland
21. The Netherlands
22. Germany
23. France
24. Portugal
25. Spain
26. Russian Federation
27. Bulgaria
28. Turkey
29. Morocco
30. Algeria
31. Tunisia
32. Egypt
33. Mauritania
34. Mali
35. Niger



71 Azerbaijan
72 Syria
73 Israel
74 Yemen
75 United Arab Emirates
76 Oman
77 Bahrain
78 Uzbekistan
79 Afghanistan
80 Pakistan
81 China
82 Nepal
83 India
84 Maldives
85 Sri Lanka
86 Bhutan
87 Bangladesh
88 Myanmar
89 Lao PDR
90 Thailand
91 Vietnam
92 DPR Korea
93 Republic of Korea
94 Japan
95 Philippines
96 Malaysia
97 Singapore
98 Indonesia

36 Chad
37 Sudan
38 Senegal
39 Gambia
40 Guinea-Bissau
41 Sierra Leone
42 Guinea
43 Côte d'Ivoire
44 Burkina Faso
45 Ghana
46 Togo
47 Benin
48 Nigeria
49 Cameroon
50 Central African Republic
51 Ethiopia
52 Djibouti
53 Gabon

54 Congo
55 DR Congo
56 Burundi
57 Rwanda
58 Uganda
59 Kenya
60 UR Tanzania
61 Angola
62 Zambia
63 Malawi
64 Mozambique
65 Namibia
66 Botswana
67 Zimbabwe
68 Lesotho
69 Eswatini
70 Madagascar

99 Papua New Guinea
100 Solomon Islands
101 Vanuatu
102 Fiji
103 Samoa

Driving sustainable development through commodities

From the bread on your table and the cotton in your shirt, to the copper and lithium in your smartphone, commodities are part of the fabric of our daily lives[1]. But for centuries the rewards that come from producing and trading commodities have not been shared equally. The CFC was founded to change this.

Our work is driven by the principle that commodity production, processing and trade should benefit producers across the world. In practice, this means it should deliver positive economic, social, and environmental outcomes to everyone, particularly vulnerable communities in commodity-dependent developing countries (CDDCs).

Addressing commodity dependence

According to UNCTAD, a country is commodity-export dependent when more than 60% of its total merchandise exports are commodities. The organisation's State of Commodity Dependence 2021 report[2] noted that the number of commodity-dependent countries has increased during the past decade from 93 in 2008–2009 to 101 in 2018–2019. As a result, much of their populations are left poor and vulnerable.

Commodity dependence is an issue that impacts many least developed countries (LDCs) with around 80% of LDCs classed as commodity dependent between 2018 and 2020[3]. This issue is often perpetuated by the fact that commodity dependence is caused by economic vulnerability and is hard to overcome due to a lack of competitiveness in other sectors. During the same period, LDCs accounted for 2.4% of the global trade in primary commodities, but only 0.6% of the global trade in manufactured goods, highlighting the persistent challenge of export diversification.

Through the Doha Programme of Action (DPoA) for 2022-31, we and our partners will strive to tackle this challenge. DPoA sets out different action points to support LDCs in production and export diversification, which requires more sustainable forms of financing.

By providing access to affordable financing, we can help address the issue of poverty in commodity value chains. As stated in the DPoA: 'Of greatest concern is that one in three people in least developed countries still live in extreme poverty, and the coronavirus disease (Covid-19) pandemic has caused this figure to rise further. We are determined to foster peaceful, just, and inclusive societies that are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.'

At the CFC, we were already committed to the Vienna Programme of Action 2010-2024 (VPoA) and the alleviation of poverty in landlocked least developed countries (LLDCs). We also made specific investment commitments supporting the implementation of the VPoA. We are also working with other partners in the UN ecosystem, such as the UN High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS), the Office of the Special Adviser on Africa (OSAA), ECOSOC Forum on Financing for Development (FfD), the Department of Economic and Social Affairs (UN DESA) and others. By providing access to affordable finance and supporting private enterprise we aim to develop a rural agri-commodity-based value chain that unleashes entrepreneurship at the farm level. We agree with OHRLLS that: 'Without a structural transformation that prioritises economic diversification and addresses institutional and capacity constraints, the least developed countries will remain vulnerable to various socio-economic, health and environmental shocks.'[4]

We are committed to reducing the vulnerability of CDDCs, LDCs and LLDCs. We invest in businesses that support smallholders to add value and boost productivity while promoting climate resilience and gender equality. In turn, this will reduce the poverty many of them experience.

Strengthening food security

The world's population is expected to reach 9.7 billion by 2050 and 10.9 billion by 2100. It is estimated that global food production in 2050 will need to increase by 70% from 2009 levels[5] to meet demand. This will place an even greater strain on global food systems.

Addressing the issue of food security is one of our priorities. This shapes how we contribute to the United Nations' Sustainable Development Goals (SDGs) through our investments. We aim to support all the SDGs, but have a core focus on: SDG 1 (No poverty), SDG 2 (Zero hunger), SDG 5 (Gender equality), SDG 8 (Decent work and economic growth), SDG 10 (Reduce inequality within and among countries) and SDG 13 (Climate action).

1 World Economic Forum. We must help developing countries escape commodity dependence (accessed on May 18, 2023)
2 UNCTAD. More than 100 countries depend on commodity exports (accessed on May 18, 2023)
3 UNCTAD. Least developed countries report 2022 (accessed on May 18, 2023)
4 https://www.un.org/ldc5/doha-programme-of-action (accessed on May 18, 2023)
5 https://www.fao.org/fileadmin/templates/wsfs/docs/Issues_papers/HLEF2050_Global_Agriculture.pdf (accessed on May 24, 2023)

CFC MISSION

To contribute to poverty alleviation by strengthening the income-generating capacity of commodity producers and mitigating risks to their economic well-being.

CFC VISION

To strengthen and diversify the commodity sector in developing countries and transform it into a major contributor to poverty alleviation and sustained economic growth and development.

Prioritising climate action and social good

We are keenly aware of the relationship between commodities and climate change, and the pressing need for countries to reduce their dependence on the extraction and consumption of fossil fuels. We are working hard to facilitate the transition to renewable energy in developing countries by increasing our investments in businesses that are tackling climate change in line with the UN's SDG 13 (Climate action).

For many countries, commodities are the main source of income. Understandably producers are keen to earn more by producing more. But this frequently reduces selling prices and puts pressure on natural resources, which compromises sustainability and development in the medium to long term. In addition, concentrating heavily on a few commodities has profound social consequences.

Take the case of commodities that require long-term investment, such as coffee. While a small number of plantation owners may benefit from a growth in trade, many workers toil in tough conditions for very little reward. In countries dominated by this model, it can lead to underperforming economies, which is known as the 'resource curse'. The CFC was founded to rebalance this model so that the production, processing and trade of commodities benefit all actors across the value chain, from producers and their communities to the consumers.

Our work with the commodity sector contributes to sustainable development that benefits the social, economic, and environmental fabric of a country. Of course, sustainable development is a broad term. There is no one-size-fits-all formula, which is why we make sure our investments align with the strategies and development needs of each country and area we operate in.

The key starting point for all our investments is how it will increase food security, financial security and market access for the smallholder farmers who account for up to 80% of food production in Africa and Asia, but whose livelihoods are on a knife edge.

To address the issues they face, we provide financial support to innovative projects that will positively impact smallholder farmers, and small and medium enterprises (SMEs) engaged in commodity production, processing, and trading in developing countries. By providing impact financing at the grassroots level, we enable smallholders and SMEs to raise production, connect to markets and improve their incomes.

Advocating for guardrails as the world rushes for African minerals

Innovation across a number of sectors is accelerating as the demand for smaller and more powerful devices grows and governments embrace the green economy. It has led to the rapid evolution of products and tools such as electric vehicles, renewable power, energy storage, 5G mobile technology and artificial intelligence (AI). The building blocks of these are mined materials including copper, silver, zinc, nickel, tin, lithium and palladium.

Many of these are found in Africa. Without proper guardrails in place this may prompt a damaging new rush for African minerals which does not benefit the local communities in which they are mined.

We are committed to increasing awareness of this issue, while working closely with governments and investing in viable local businesses, to ensure African artisanal miners are not left behind and are rewarded fairly for their part in making tech innovation possible.

Our core activities

As an impact investor, we support communities that rely on the commodities sector and are most exposed to its risks. We are based in the Netherlands where we can harness innovation to help agri-SMEs and smallholder farmers in CDDCs, LDCs and LLDCs to thrive.

We offer financing up to USD 2 million[6] to qualifying investment proposals from SMEs. This bottom-up strategy ensures our investments are targeted to their needs and those of their local communities, while preserving the environment and creating stronger value chains.

We also manage technical assistance facilities for other impact investors operating in areas connected to our mission. This collaborative and knowledge sharing approach enables us to extend our support to more SMEs and smallholder farmers in more countries.

Financing that makes a difference

The CFC supports and invests in commodity value chains, in partnership with the public and private sectors, development institutions, and civil society. We leverage the potential of commodity production, processing, manufacturing, and trade, for the benefit of the poor.

We invest in organisations and activities that:

1. are innovative and target new opportunities in commodity markets that lead to commodity-based growth, create employment, increase household incomes, reduce poverty, and enhance food security.
2. are scalable, replicable, and financially sustainable.
3. have the potential to positively and measurably impact the socio-economic and environmental situation of the people and places involved in commodity value chains.
4. develop stronger connections with existing markets or create new markets along the value chain.
5. increase the financial, and other services available to commodity producers and commodity-based businesses.
6. enhance knowledge generation and information sharing.
7. build effective and cost-efficient collaboration between producers, industry, governments, civil society organisations and other stakeholders for commodity-based development.
8. connect the modern, digitally aware consumer with hard-working smallholders using technology. We call this 'walking back along the value chain' to directly benefit the smallholders who put food on our tables.

[6] Exception is possible based on impact outcome of the investment.

Key areas we support

We provide technical and financial support from field to fork. That means we operate along the value chain from production to consumption and reach across local, national, regional and international markets. Here are some examples of specific areas we target:

- Production, productivity, and quality improvements
- Processing and value addition
- Product differentiation
- Diversification
- Marketing
- Technology transfers, upgrades and innovation
- Measures to minimise physical marketing and trading risks
- Facilitation of trade finance
- Risk management, such as price and weather volatility
- Awareness of how to address commodity dependence
- Technical assistance

Investment with impact

We fund projects that are sustainable and deliver measurable development impact within the framework of the SDGs. Our support is usually in the form of loans, including working capital, trade finance or similar financial instruments. In rare cases we will consider providing equity, quasi-equity, lines of credit and guarantees. We also offer limited grants to qualifying organisations, for example, to enable specific new activities in areas of strategic interest or to support loan-based projects through activities such as capacity building and technical assistance.

Our activities are financed through voluntary contributions and capital subscriptions by member countries, as well as interest earned from our investments. The more generous member states are, the more we can invest in overcoming the commodity dependence that exacerbates poverty, creating a fairer and healthier world.

Photo: CFC consultative committee. CFC

The Organization of the Common Fund for Commodities

Establishment and Membership

The Common Fund for Commodities (CFC) is an autonomous intergovernmental financial institution, focussing on impact investment, within the framework of the United Nations. The Agreement Establishing the Common Fund for Commodities was negotiated in the United Nations Conference on Trade and Development (UNCTAD) from 1976 to 1980 and came into effect in 1989. Financing for the first development project was approved in 1991.

The Common Fund for Commodities is a partnership of 101 member states and nine institutional members. Membership of the Fund is open to all states that are members of the United Nations and its specialised agencies, the International Atomic Energy Agency, and intergovernmental organisations that focus on regional economic integration and have expertise in our areas of operation.

Governing Bodies

The governing bodies of the Fund are its Governing Council and the Executive Board. The Managing Director is the Chief Executive Officer of the Fund. The Executive Board is advised by a Consultative Committee, composed of nine independent experts, on technical and economic aspects of proposals submitted to the Fund. The Governing Council meets annually, and the Executive Board and Consultative Committee twice a year.

Headquarters

The Common Fund is based in Amsterdam, the Netherlands.

Partnering up to grow our impact

We can achieve more working together. We seek to build partnerships with public and private institutions, bilateral and multilateral development organisations, cooperatives, producer organisations, SMEs, processing and trading companies, and local financial institutions. We look for several elements when selecting a partner, including that they:

- operate in commodity value chains or provide financial and other services to small business operators, SMEs, cooperatives or producer organisations.
- have a proven track record in commodity development.
- can invest in the value chain to reduce transaction costs or increase revenues of producers, processors, storage or marketing.
- have a clear plan focusing on developing and/or diversifying their production or services.
- have a clear plan to expand their markets at the local, national, regional and international level.
- have the technical, managerial and financial capacity to effectively and efficiently implement their activities.
- include social, economic and environmental aspects in their scope of work.
- share the CFC's values, including internationally recognised principles concerning human rights, labour standards, the environment and anti-corruption.
- will collaborate with the CFC to extend their core activities and create additional opportunities for everyone in the commodity value chain.

Connecting consumers with producers in the digital era

Enabling sustained growth in agricultural productivity has a key role to play in fighting poverty and is central to our mission. But this is one part of a complex puzzle – smallholders still need help to profit from their work.

Value chains are influenced by a range of forces on a national, regional and global level. Many of which are beyond our reach. We're seeking support from member states and the UN ecosystem to tackle the non-competitive behaviour of multinationals and brands in dominant positions in local markets.

Inevitably smallholders suffer in this context, struggling to attract a fair price for their produce. It also leaves them exposed to price shocks from events outside their control, such as Covid-19 and the war in Ukraine. Where there is a dominant player, they are forced to take the price on offer, no matter how low it is. And these prices tend to fall faster in tough times than they rise in better times.

To redress this power imbalance, the bargaining capabilities of smallholders need to be enhanced. This will take collective political will and the adoption of digital technologies, including AI, blockchain and the internet of things, that directly connect producers and consumers. This kind of connectivity could open the door to a more sustainable system, in which smallholders earn a fairer income and we all appreciate where our food has come from.

The CFC will continue to search for innovative ways to deliver on its promise to make commodities work for everyone in the coming years.

Overwhelming rise in the demand for CFC investments

The combined impact of the pandemic, the war in Ukraine and the rapid appreciation of the United States dollar, has increased the number of agricultural SMEs in developing countries that struggle to access financing.

They often fall into the 'missing middle' investment gap – too small for large international investors but seen as too risky by local banks. This limits their ability to invest in improving productivity and expanding their businesses in a way that drives rising incomes and job creation, which are both critical to overcoming issues such as youth unemployment in rural areas. This year alone, we received more than 500 investment applications through our biannual calls for proposals. We, therefore, have hundreds of shovel-ready investment applications in the pipeline.

To help provide them with the investments they need, we are working to establish the Agricultural Commodity Transformation (ACT) Fund which is designed to attract private sector investors. ACT will support SMEs to create sustainable, low-carbon supply chains that promote income growth and climate resilience on a large scale. To find out more, go to page 19.

With 1.3 billion young people worldwide, including up to 12 million new job seekers per year in Africa, SMEs have an essential role to play in creating economic opportunities and reducing migration. By enabling SMEs and smallholders to grow their businesses and drive up prosperity, we aim to strengthen local communities and generate employment that will encourage local people to stay.

CFC **staff**

Photo: Tony Molenaar, CFC

II

II.1 2022: A year like no other
Navigating new challenges

Photo: Negotiating price of corn seeds at the cereals market, Ouagadougou, Burkina Faso. © FAO/Giulio Napolitano

There have been three major food price spikes in the current century. The first two occurred in 2007-2008 and 2010-2012. We are currently living through the third which has followed the COVID-19 pandemic and the war in Ukraine[1].

What differentiates this third spike from the others is the simultaneous strengthening of the US dollar, which intensifies its negative impacts on the world's poorest people. During the initial two spikes, food prices increased as the value of the US dollar decreased. This depreciation of the US dollar, coupled with the appreciation of other currencies, made imports more affordable, easing food import bills for many developing countries.

The current situation is a new and more challenging scenario for many. In response to high inflation in the United States, the Federal Reserve elevated its interest rates, leading to a 24% appreciation in the US dollar from May 2021 to October 2022. This increase presented a dual challenge to developing countries: rising food prices and the depreciation of their local currencies against the US dollar, which they use to purchase food.

Furthermore, the strengthening dollar has made loan repayments more expensive for many borrowers. This has escalated issues around loan provisioning and debt stress, which has made fiscal discipline and economic stability harder to achieve in 2022.

As of October 2022, the average price of wheat was 89% higher than the average in 2020. The exchange rate effect then amplifies that increase. As the graph below shows the combination of rising prices and currency depreciation led to estimated price increases ranging from 106% to 176%. This illustrates how the exchange rate effect drives up food import bills and contributes to inflation, the loss of purchasing power and food insecurity. The situation has been compounded by extreme weather events, putting smallholder farmers' agricultural activities and livelihoods at greater risk.

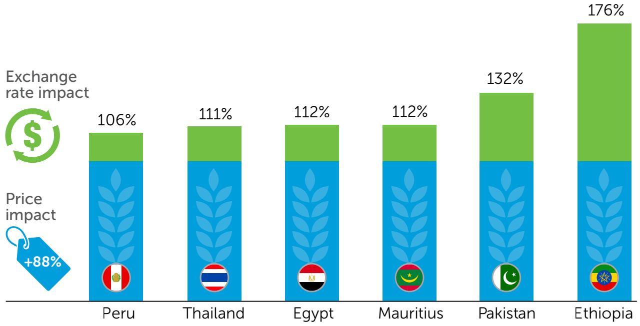
An international response

Many of the agri-SMEs we invest in – and the smallholders they support – operate in countries that rely on imports from Ukraine and are vulnerable to commodity price volatility. The instability of the foreign exchange and commodity markets has made 2022 a difficult year for them.

As counterintuitive as it seems, smallholder farmers rarely benefit from a sharp rise in the price of the crops they produce. Smallholders who grow their crops on a hectare or two of land face more constraints than multinational commodities businesses. Although their crop price may have risen, so have the inputs that enable them to farm it. Smallholder farmers also consume the products made from their crops and spend a disproportionate amount of their income on food – as shop prices rise so does the cost of feeding their families.

[1] A Double Burden: The effects of food price increases and currency depreciations on food import bills (unctad.org)

The combined impact of exchange rates and wheat price increases on affordability for people in developing countries



Source: UNCTAD secretariat calculations.
Note: The increases refer to changes in wheat import prices in local currency.

But thanks to international efforts, they received critical help through the Black Sea Grain initiative, which has played a crucial role in reducing food price shocks.

According to the UN World Food Programme (WFP), Ukraine exported 6 million metric tons of food on 200 vessels per month, before the start of the conflict. This dropped to an average of 1 million tons per month by land and river routes after the invasion, which led to a price spike until the Black Sea Grain initiative was signed in July 2022. Renewing the initiative in November has therefore provided a lifeline to developing and least-developed countries (LDCs), which received 10 million metric tons of grain and other foodstuffs within the first three months of the initiative.

The grain cargo levels in 2022 were still below those of 2021, but the initiative closed the gap, stabilising prices and ensuring food accessibility. It also provided Ukraine's farmers with a reliable buyer, in the form of the WFP, giving them the certainty they need to continue planting and harvesting their crops despite the war going on around them.

Tackling the climate crisis

The effects of climate change put an additional burden on smallholder farmers. Across the world, 2022 saw extreme weather events such as drought and flooding, jeopardising agricultural activities and food security.

If strong action isn't taken climate change is likely to intensify in the coming years. That's why mitigation and adaptation strategies are vital for smallholder farmers. At the CFC we're increasingly investing in agri-SMEs that support smallholder farmers to improve productivity and build resilience, while minimising their environmental impact. For instance, this year we invested USD 800,000 in Enimiro, a Ugandan exporter of organic vanilla, coffee and dry fruits. Alongside training farmers in sustainable agricultural practices, the company works with a digital traceability system that verifies the credentials of the crops they grow and the products that consumers buy. In turn, this enables farmers to sell their produce into premium markets and benefit from the fair and transparent pricing provided by the system. Go to page 89 to find out more about Enimiro's work and how the company has built trusting relationships with vanilla farmers.

Providing support in difficult times

This deluge of issues is one reason we've experienced an overwhelming rise in the number of applications for our investment this year. Many of the SMEs we invest in struggle to access funding from local banks and other financial institutions, particularly at times of economic stress.

Despite the challenges, we've continued to engage with our current partners and explore new investments that have the potential to make commodity value chains more resilient. Our Executive Board approved 13 investment proposals, which are expected to reach about 187,000 smallholder farmers across the world, from Colombia to Indonesia.

But there is a huge demand for our services, and we could only support a fraction of the proposals we received. To help bridge this gap and meet the overwhelming demand, we have worked hard to establish the Agricultural Commodity Transformation (ACT) Fund, previously the Commodity Impact investment Facility (CIIF), which will give the private sector an opportunity to invest with us.

2022 has reinforced the importance of collaborating with our partners and impact investors to provide agri-SMEs and smallholder farmers in LDCs and beyond, with the support they need to build economic and environmental resilience.

Photo: Zimbabwe. © FAO/Desmond Kwande

II.2 Agricultural Commodity Transformation Fund (ACT)[1]

Putting **SMEs** at the heart of **agricultural transformation**

ACT is a USD 100m impact fund that will put SMEs in developing countries at the heart of a transformation in agriculture by financing value chains that create climate and income resilience at scale. ACT will:

- Provide **value chain finance to high-potential SMEs**, bridging the gap between smallholders and markets;
- Drive **USD 290m** in added income to over 1m beneficiaries through **equitable, low carbon value chains**;
- **Deliver impact while managing risk** through due diligence and third-party baseline and endline appraisals;
- Build on CFC's **three decades of experience, global track record** and **established deal flow**;
- Deliver **consistent returns to investors** through **USD 20m in first-loss capital** from CFC as sponsor.

Photo: Adobe stock

The opportunity

Small and Medium-sized Enterprises (SMEs) in developing countries play a critical role in linking smallholder farmers to global markets. However, they face challenges accessing high-value markets due to rising costs and climate change. ACT aims to help SMEs in the agricultural sector by providing capital and technical assistance to create sustainable value chains that benefit smallholder farmers and support low-carbon practices.

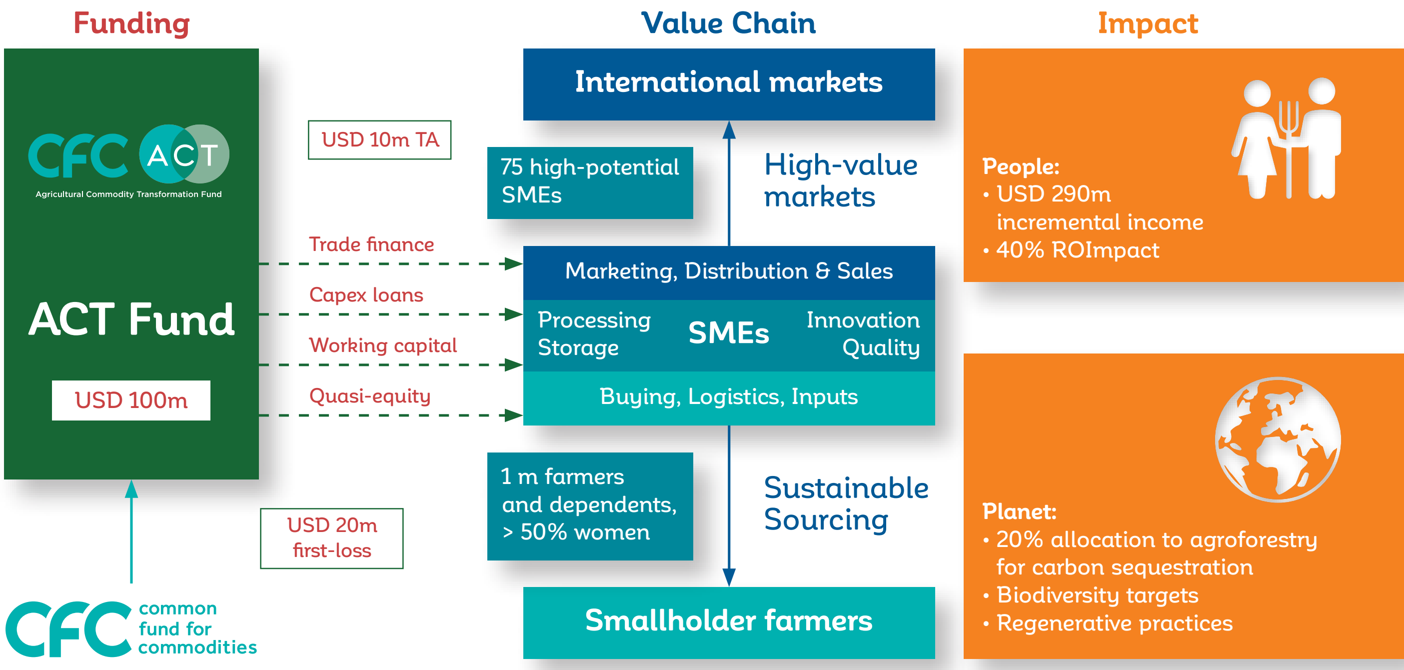
Many SMEs in the agricultural sector fall into the 'missing middle' investment gap which means they struggle to access financing. This limits their ability to invest in improving productivity and expanding their businesses in a way that drives rising incomes and job creation, which are both critical to overcoming issues such as youth unemployment in rural areas. With 1.3 billion young people worldwide, including 10 to 12 million new job seekers per year in Africa, jobs created by SMEs are essential to provide economic opportunities and alternatives to migration.

ACT will provide the necessary support for SMEs to create sustainable, low-carbon supply chains that promote income growth and climate resilience on a large scale.

CFC ACT

Agricultural Commodity Transformation Fund

[1] Accurate as of 31.12.2022. Please see the disclaimer on page 22.



ACT will build upon the CFC's three decades of experience in financing commodity value chains, backed by its contribution of USD 20 million in first-loss capital, world-class impact investment and Technical Assistance team, an innovative USD 10 million TA facility and an established deal flow of more than 400 applications a year. ACT will facilitate climate-smart agriculture and market access, with the aim of creating USD 290 million in incremental income for more than 1 million beneficiaries across SME value chains, alongside carbon savings, as the fund reaches its full capacity of USD 100 million.

Investment model

ACT will deliver an attractive balance of impact and returns for investors, with a focus on capital preservation coupled with high levels of verifiable impact. ACT will invest in established SMEs with revenues exceeding USD 1 million through a range of instruments that balance short and long-term growth. This will primarily be in the form of working capital, trade finance and capex loans, but ACT will also deploy smaller amounts of quasi-equity, as described below. This will be supported by **USD 20 million of first-loss capital** from the CFC, de-risking investments in ACT and demonstrating the CFC's commitment as a sponsor and advisor to the fund.

- **Trade finance** is crucial but rarely available for agri-SMEs. It enables them to pay farmers at harvest time rather than waiting until they receive payments from international buyers for their exports. Typically, trade financing is an unsecured one-year loan backed by the strength of the commercial agreement and credit worthiness of the investee's customers, renewable for up to five years.
- **Working capital loans** provide flexibility in the timing and use of funds, which is vital for boosting the often unpredictable cashflows of SMEs. They are offered as a revolving credit facility with a one-year loan renewable for up to five years.
- **Capex loans** are used to finance capital investments for expansion and enhanced value addition, such as for processing equipment. These will be structured to cover the build-up phase with a reasonable repayment period. Typically, the term loan comes with a tenor of up to five years including a grace period of one year.
- **Quasi-equity and convertible loans** will be deployed to mature SMEs with low-risk profiles, offering medium-term investment capital with an upside to investors.
- **Technical assistance** of initially USD 10 million will be raised alongside ACT to maximise the return on impact through innovative, targeted technical assistance that is beneficiary led and co-funded. This will include carbon mapping of our investees' primary process, leading to mitigation approaches and the establishment of regenerative agricultural practices for SME suppliers and smallholders.

Track record & people

At the CFC, we combine a strong track record of directly financing SMEs with the stability of an intergovernmental institution and an excellent private sector reputation in fund management over three decades. We have been originating, executing and managing trade finance and capex loans since 2014. Prior to this, since 1989 we have financed more than 500 commodity value chain development projects in developing countries.

Impact investment

Since pivoting to impact investing, we have successfully executed 50 loans, with a total value of USD 52 million, of which USD 38 million is currently committed to investees. These agri-SMEs operate in a wide variety of commodities, ranging from staple crops such as sorghum to commercial crops such as coffee and cocoa. With these loans the CFC has positively impacted the lives of 850,000 people in countries across Africa, Asia and Latin America. Our high-touch, hands-on risk management approach is designed to minimise losses and provisions in a high-risk segment.

Technical assistance

The CFC's in-house Technical Assistance (TA) team currently manages TA facilities totalling USD 14 million for several leading agri-impact funds. The team has managed more than 100 projects ranging from piloting climate smart financing mechanisms for smallholders to the design and establishment of full scale outgrower schemes for large processing facilities.

ACT's management team

- **Michael van den Berg** – *ACT Investment Director*
  Michael has two decades of experience in impact investing and financial management with a focus on mobilising, managing and deploying funds in food and agriculture across Africa, Asia and Latin America. He was the CFO of an agricultural social enterprise in Myanmar and fund manager of the global sustainable agriculture fund at Triodos. He is a director on a number of impact fund boards and has qualifications from Harvard, SOAS and IIMA.

- **Fatima-Zohra Yaagoub** – *ACT Impact Manager*
  Zohra is an expert in impact quantification, measurement and development finance with a background in strategy, agriculture and public-private partnerships. She has more than a decade of experience with GIZ, UNECE, the OECD, IFAD and Cambridge University CISL on global development issues and impact, a Masters in Public Policy from Sciences Po and Hertie School of Governance and post graduate qualifications from Cambridge University and INSEAD.

Specialist knowledge at the CFC

A range of in-house expertise at the CFC will provide ACT with a wide network of specialists in cross-commodity issues including climate finance, carbon markets and supply chain management as well as broader management support. They include:

- **Nicolaus Cromme** – Chief Operating Officer. Nicolaus has 23 years of investment experience with KFW and the CFC, holds an MSc in Tropical Agriculture from Hohenheim University and an MBA from Salford, UK.
- **Hector Besong** – Risk manager. Hector has worked for the CFC for over 7 years. Before CFC, he spent nearly 11 years at Siemens Bank GmbH in various roles, including Risk Manager and Director of Project & Export Finance. Earlier, he was a Partner at FGI Financial Services. Hector holds an MBA from Drexel University.
- **Eva M. Johansson** – TA Manager. Eva has wide experience of managing complex programmes for USAID and Sida and has a MSc in International Development from the University of Amsterdam.
- **Peter Nielsen** – Carbon specialist and Impact Investment Manager. Peter has a strong track record in agribusiness, a BSc in economics from SOAS and a MPhil from Cambridge University.
- **Tia Sudjarwo** – Treasury Assistant. Tia has 25 years of treasury experience, is an ACAMS certified associate in KYC/CDD and holds an accountancy degree from Atmajaya University, Jakarta.
- **Michele Schwarz** – Head of Accounting & Administration. Michele has an MBA from Heriot Watt University, a BSc in Business Administration and is an anti-money laundering specialist.

SDG-aligned impact is central to ACT

ACT aims to meet criteria under article 9 of the Sustainable Finance Disclosure Regulation (SFDR), prioritising impact while securing a financial return on investments. ACT targets investments that contribute to the United Nations' Sustainable Development Goal (SDG) 1 No poverty, SDG 5 Gender equality, SDG 8 Decent work and economic growth, SDG 10 Reduce inequality within and among countries, SDG 12 Responsible consumption and production, and SDG 13 Climate action.

Sustainability risks management

The CFC's social and environmental risk management system (SEMS) was co-designed with the International Labour Organisation. ACT will use SEMS to identify social and environmental risks associated with an investment prior to a transaction and during the lifetime of the investment.

Impact assessment

Impact measurement will be appraised by an expert third party at the beginning and end of each investment, with a bespoke approach for investee companies, financial institutions, traders and processors. In addition, investee companies will report their impact on an annual basis to identify areas for impact growth during the investment period and to continually mitigate risks.

The fund in numbers

ACT will drive profitability, enhance incomes and strengthen resilience in times of global market volatility. It will also drive the transition to climate-resilient smallholder agriculture and focus on providing liquidity to high potential agricultural SMEs, a lack of which is the single biggest barrier to growth.

Photo: Tea Picker, Sri Lanka. Adobe stock

Act Fund Mission	Act Fund Indicators	Act Fund Targets*
Leveraging sustainable finance for impact	Funds Employed	USD 100 million in SME value chain finance
	Return On Impact	USD 290 million p.a. incr. beneficiary income (10-year ROImpact of 40% p.a.)
	Net Carbon Footprint	20% of portfolio allocation to agroforestry for carbon sequestration by 2030
	Biodiversity	Will be incorporated in standardised risk approach as part of investment decisions; including concrete targets for positive impact
Reaching people and raising their income at scale	Total People Reached	>1 million employees, suppliers & dependents > 50% women
	Incremental Net Income	USD 262 per direct beneficiary
Capital proposition for investors	Return On Capital	Capital preservation with dividend return for certain share classes
	First-loss Provision	USD 20 million from CFC (sponsor/general partner)
SME capacity building	Technical Assistance Employed	USD 10 million of TA to ACT investees; TA fund to be raised with ACT Fund establishment

**Impact targets are provisional and calculated at a fund level of USD 100 million*

II.3 Five ways export diversification supported by **AfCFTA** can drive **prosperity in Africa**

Photo: Shalem plant. Shalem

After several years of negotiations, the African Continental Free Trade Area (AfCFTA) opened for business in 2021. Once fully implemented, the AfCFTA will be the world's largest free-trade area, connecting 1.3 billion consumers across 54 countries in a single market for goods and services.

This has the potential to drive export diversification among African countries, which is one of our key goals at the CFC. Diverse economies are more resilient, which creates the stability businesses in the agricultural sector need to thrive. This is particularly important in Africa, where more than 80% of countries are classed as commodity dependent, which means most of their export earnings come from raw commodities, leaving them vulnerable to economic and environmental shocks.

Our investments are designed to enable agribusinesses to broaden their activities and add value to raw commodities, improving the incomes of their smallholder suppliers and diversifying the wider economy. In turn, this strengthens their ability to cope with the consequences of unexpected events such as the pandemic and the Ukraine war. We're excited by the potential of AfCFTA to amplify the impact of our investments and accelerate export diversification. Here are five ways we believe it will have a positive impact on the communities and countries we operate in.

Building resilience to shocks

An overreliance on a single commodity isn't good for a smallholder farmer working a hectare or two of land or for a national economy. An economic shock that leads to price volatility or an environmental event that wipes out a particular crop, can have a devastating impact on commodity dependent countries and farmers. For smallholders this reduces their ability to pay for essentials such as food, energy, medication and school fees.

We invest in agribusinesses that help smallholders develop the skills to grow new crops and access new markets. In Tanzania, for example, Natural Extracts Industries (NEI) works with coffee and banana farmers, to intercrop higher value vanilla which NEI then exports as vanilla extract. By diversifying, smallholders increase their incomes and create new revenue streams which builds resilient businesses and a stronger economy. Read more about NEI on page 87.

Increasing economic opportunity

According to the World Economic Forum, 60% of Africa's population is under 25. By 2025 the continent is expected to account for 42% of the world's young people. This creates challenges, but there is also an opportunity to build a dynamic economy around this demographic. One of the keys to achieving this is developing employment opportunities that encourage young people to remain in their communities and generate prosperity.

Diversification across all sectors is needed to make this happen and commodities can play their part. For example, in Senegal, where the average age is 22, rice processing company CNT which we supported with USD1.46m in financing, is investing in irrigation that turns unviable land into productive paddy fields. This enables more people to build careers locally, expands the domestic rice industry and reduces the country's reliance on rice imports.

Encouraging entrepreneurship

Progressing from farming and exporting raw commodities, to manufacturing higher value products from those commodities, generates and retains greater wealth locally. It is progress our investment is designed to unlock, giving entrepreneurs the financing, they need to create new products that drive economic growth.

In Kenya our funding helped a grain aggregator, Shalem, transform into an added value manufacturer. The company built a processing factory, which expanded its capacity to deliver the value-added products that now account for 70% of its revenue, such as its fortified Asili Plus flour. This has created a year-round market for its smallholder suppliers alongside providing essential nutrients to consumers.

Attracting foreign investment

A diversified economy is more attractive to investors. Economies that feature a wide range of businesses selling into international markets tend to offer greater stability and are viewed positively. By adding value to their natural resources and diversifying exports, African countries can become more compelling investment propositions, particularly as trade barriers reduce across the continent.

Alongside this there is an increasing interest among international investors in businesses and funds that address environment, social and governance (ESG) issues. But few have the expertise in sustainable and equitable smallholder supply chains to confidently enter these markets. We launched our ACT Fund to overcome this challenge, by enabling private sector organisations to lean on our expertise in identifying and supporting agribusinesses capable of delivering genuine impact and reliable returns. Read more about ACT Fund on page 19.

Our Technical Assistance Facility also provides expert knowledge and advice to impact-investment funds keen to maximise the impact of their financing. In Africa it works with the Africa Agriculture and Trade Investment Fund (AATIF), which aims to drive inclusive and sustainable growth in agricultural supply chains on the continent.

Taking advantage of tech innovation

Technology can both extend the rewards of diversification to remote smallholder farmers and verify the sustainable credentials of supply chains for food brands, which regulators and customers increasingly demand.

We work with agribusinesses that use tech innovation to embed traceability into their supply chains and ensure farmers are paid fairly by, for example, making direct mobile payments to them. We have also invested in Meridia, a geospatial data company that provides farm mapping and field data collection and verification services, giving smallholders an accurate oversight of their businesses and food companies the transparency they need.

As agribusinesses seek to connect smallholders to more lucrative international markets, this level of oversight is becoming non-negotiable. Read more about our work with Meridia on page 91.

In the coming years, as Africa breaks down barriers to trade through AfCFTA and innovation accelerates, opportunities to create a diverse economy are emerging. We want to help countries grasp them, and unlock prosperity for the poorest smallholders, by realising the full potential of the raw materials they grow.

Implementing the African Continental Free Trade Area

At the CFC, we're committed to supporting the implementation of the AfCFTA and unlocking its full benefits for the people of Africa.

Alongside investing in commodity diversification, we are working hard to develop sustainable supply chains that embed climate resilience. These will strengthen with the greater access to broader regional markets that AfCFTA offers. This aligns with Africa's Agenda 2063 commitment to build environmentally sustainable and climate-resilient economies and communities.

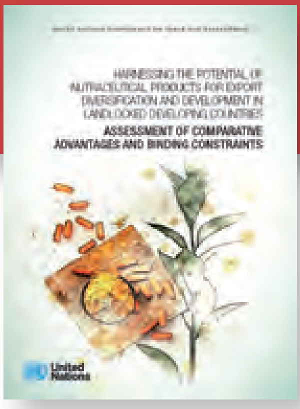
Given that Africa is home to millions of smallholder farmers, our development model of investing in small and medium agricultural enterprises that support smallholders, has a crucial role to play in ensuring they benefit from the increased trading opportunities AfCFTA brings.

The African Union has labelled 2023 as the Year of AfCFTA and predicts it will lift 30 million people out of extreme poverty as it increases income across the continent by USD 450 billion by 2035. We're looking forward to playing our part in achieving this ambition.

Photo: Semien mountains and valley with fields of teff around Lalibela, Ethiopia Adobe stock

III

III.1 Harnessing the potential of **nutraceutical products** in **LLDCs**



The article is an abridged presentation of the findings of the study on the potential of nutraceutical products for export diversification, structural transformation and sustainable development of landlocked developing countries (LLDCs) financed in 2019-2022 by the CFC[1] and implemented by UNCTAD. The findings of the study have been reported in the UN LDC V conference in Doha, Qatar, on 5 March 2023.

Introduction: The challenge of export diversification

There are several significant reasons why new markets for export diversification of landlocked and least developed countries remain an essential part of overcoming their commodity dependence and related vulnerabilities. Some of the best-known reasons to seek export diversification include the following:

1. **Overdependence on a single market:** Many landlocked and least developed countries rely heavily on a single market for their exports. If that market experiences a downturn or shifts its focus, these countries will suffer significant economic losses. Export diversification can help reduce this vulnerability and spread risk across multiple markets. According to the World Bank[2], export diversification can lead to higher growth. Developing countries should diversify their exports since this can help them overcome export instability or the negative impact of terms of trade in primary products.

2. **Increased competition:** By diversifying their export markets, landlocked and least developed countries can increase competition and reduce the market power of dominant players. This can lead to better prices and terms of trade for these countries. Taking one example, Chile is the world's biggest copper producer and its shipments of the metal meet around one-third of global demand and represent about half its goods exports. Yet Chile is also success story of a diversified economy, exporting more than 2,800 distinct products to more than 120 different countries.[3]

[1] Project CFC/2019/14/0001 FT
[2] https://openknowledge.worldbank.org/handle/10986/28040
[3] https://blogs.worldbank.org/psd/economic-diversification-priority-action-now-more-ever

Photo: Farmer examining cardamom plant. Adobe stock

3 **Access to new technologies and knowledge:** Exporting to new markets can provide opportunities for landlocked and least developed countries to learn about new technologies and business practices, as well as to gain access to new sources of capital and investment. For example, technology and global integration can help countries move resources from low productivity to higher productivity and skill-intensive sectors, thereby setting development and economic catch-up into motion.[4] It may be recalled here that one of the factors for this lack of structural transformation is LDCs' overwhelming dependence on commodities for production and exports. According to the UNCTAD Commodities and Development Report 2021[5], over 75% of African LDCs depend on commodity production for over half of their export earnings.

When it comes to technological advancement and its effective use, the LDCs are at the lower end of the ladder. According to the World Intellectual Property Organization (WIPO)'s Global Innovation Index 2021, which monitors the state of technological advancement in 132 countries, 21 out of the 32 countries in the bottom quartile are LDCs. Initiatives gaining significance in this regard include those aimed at fostering meaningful connectivity and digital transformation in hardest-to-hit countries, including Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

4 **Increased foreign exchange earnings:** Export diversification can increase the amount of foreign exchange earnings for landlocked and least developed countries, which can in turn help reduce trade deficits and stabilize the economy. Commodity dependent developing countries must engage actively in global trade to take advantage of their natural endowment. At the same time, according to UNDP, economic openness explains the fact that an economy may be vulnerable to external economic shocks (as reflected by losses in export revenues and growth slowdowns), and the scale of impact depends largely on the degree of concentration of a country's export portfolio.[6] Thus diversification to new export markets is generally an essential measure to secure sustainability and resilience in commodity dependent developing countries. By spreading risk across multiple markets, these countries can better weather economic downturns and maintain stability.

5 **Job creation:** Diversification of exports can lead to the creation of new jobs in industries that may not have existed before in these countries. This can help reduce unemployment rates and provide new opportunities for economic growth. There is a general consensus that trade has high potential to foster inclusive growth and create employment. Classical trade theorists recommended active trade participation for both developed and developing countries

[4] https://www.weforum.org/agenda/2022/01/least-developed-countries-ldc-technology/
[5] https://unctad.org/publication/commodities-and-development-report-2021
[6] https://www.undp.org/sites/g/files/zskgke326/files/publications/Towards_SustainingMDGProgress_Chapter1.pdf

based on comparative advantage.[7] More recent theoretical and empirical studies have emphasized the importance of export diversification, rather than export specialisation or concentration. Key reasons for this paradigm shift include the likelihood that export diversification favourably influences the pattern of growth and structural transformation that countries and regions experience, coupled with the fact that diversification increases a country's ability to meet objectives such as job creation and improvements in income distribution.[8] Many developing countries have adopted export-oriented development strategies. Such development strategies have often been implemented through the establishment of labour-intensive, export-oriented manufacturing sectors over the last three decades.[9]

By opening up new markets, vulnerable countries can reduce their dependence on a single market and increase their resilience, competitiveness, and economic growth potential. Why is there a particular focus on landlocked least developed and lower-middle-income countries? This emphasis arises from their comparatively low levels of economic development and frail infrastructure. As a result, transaction expenses, particularly those associated with transportation and insurance, tend to be higher, thereby obstructing trade flows and diminishing export competitiveness.

The UNCTAD-CFC study underscores the important point of the need for identifying products that will enable LLDCs to diversify their exports and foster the process of structural transformation. Unfortunately, the only form of structural change that has taken place in LLDCs has been a shift from low-productivity agriculture to low-productivity and non-tradable services. Furthermore, despite the growing importance of services, their impact on exports has been minimal. For LLDCs, services exports account for only 11.5% of total exports.

According to UNCTAD, structural transformation does matter for sustainable development.[10] Historically, successful economic growth has been associated with structural transformation, which is the creation of new areas of activities by shifting resources from traditional to modern sectors and from low-technology and low-productivity to high-technology and higher-productivity areas of production. In this context, structural change takes place not only across sectors – say from agriculture to manufacturing or services – but also by moving from low- to high-productivity activities and the production of new and preferably more advanced, sophisticated and competitive products within sectors.

For landlocked countries, it is especially important to produce goods that are easier to transport and get to markets to attain competitiveness, especially in international markets. One way to do this is to explore the potential for developing niche or unique products for export specialisation and shifting resources to the production and exporting of high-value and low-volume products. Some landlocked African countries have done this by encouraging investment in high-value products that are airlifted to high-income markets in Europe.

It is important to note that value-addition, productivity growth, and linkages could take place not only in manufacturing. Development is not an 'either or' option. Transformation and diversification can and does take place in agriculture and services, which are the two areas where landlocked countries need to give priority attention in the coming decades. By recognising one's comparative advantages, biodiversity, and natural resource endowments in their totality, landlocked countries can identify specific products that they can develop and promote as export items.

The global economy is inextricably tied to the health and productivity of terrestrial, marine, and other aquatic ecosystems, and each country has the responsibility not only to protect its biodiversity but also to utilise its rich resources sensibly to maximise income and benefit its citizens in a sustainable manner. Nutraceuticals can be developed and exported competitively as specialised products that landlocked developing countries can produce.

Unutilised natural resources in developing countries are often closely linked to their unique natural endowment such as forests, wetlands, and wildlife facing threats from industrial human activities leading to deforestation, mining, and poaching. These activities not only cause environmental damage but also undermine the economic potential of these resources. However, if the economic value of these resources can be recognised and harnessed in a sustainable manner, it can create incentives for their conservation and protection, which can ultimately contribute to preserving biodiversity.

Another way to add economic value to natural resources is through sustainable resource extraction practices. For instance, harvesting non-timber forest products such as fruits, nuts, and medicinal plants in a sustainable manner can provide livelihoods for local communities while protecting the forest ecosystem. The development of economic value of nutraceuticals can contribute to protecting biodiversity in developing countries

[7] https://unctad.org/publication/exports-diversification-and-employment-africa
[8] https://cmi.comesa.int/wp-content/uploads/2020/11/the-role-of-export-diversification-for-economic-growth-and-employment-creation-in-africa.pdf
[9] https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_452341.pdf
[10] UNCTAD, 2015. Facilitating the Relationship of Landlocked Developing Countries in Commodity Value Chains. UNCTAD/ALDC/2015/2

by creating economic incentives for their conservation and sustainable use. This can provide a win-win solution for both economic development and environmental protection.

UNCTAD report, resulting from CFC-UNCTAD project[11], reviews nutraceutical products from certain landlocked developing countries and the constraints that they face in external markets.

The main objectives of the study

The primary aim of the study was to explore the opportunities for boosting nutraceutical exports from LLDCs and to identify potential market access barriers faced in key markets. As outlined below, the concept of nutraceuticals is somewhat vague.[12] To address these concerns, the following section provides a definition and an overview of nutraceuticals, as well as their distinct characteristics as potential export products for LLDCs and other vulnerable commodity dependent developing countries.

This report resulting from the study focuses on several key topics:

- It offers examples of nutraceutical products that can be exported from LLDCs, but the examples aren't exhaustive. Each country will need to conduct more research to identify all possible nutraceuticals available within its borders.
- The report mainly focuses on LLDCs, but many points also apply to LDCs, especially when it comes to market access. Some of the case studies involve landlocked LDCs such as Burkina Faso, Ethiopia, Bhutan, and Nepal. However, non-landlocked LDCs can also benefit from exporting nutraceutical products, including those derived from marine biodiversity.
- The case studies in the report cover landlocked countries from various developing regions, including one from Eastern Europe. Specifically, it looks at Ethiopia and Burkina Faso in Africa, Bhutan and Nepal in Asia, Bolivia in Latin America, and Azerbaijan in Eastern Europe. Each case study briefly discusses the country's export structure, challenges for export diversification, and implications for nutraceutical exports.
- The report emphasizes production and market access constraints for nutraceutical exports from LLDCs, particularly regarding standards and quality control. It covers both supply and demand aspects, as well as the difference between market access and market entry. It highlights that meeting demand and securing market access doesn't guarantee market entry, as major markets have strict standards that must be met.
- The in-depth analysis of standards and market constraints is useful for potential exporters and policymakers seeking to

Photo: Sesame harvest in Burkina Faso Adobe stock

[11] Project CFC-2019-14-0001FT 'Harnessing the potential of nutraceutical products for export diversification'.

[12] The term 'nutraceutical' itself is a blend of the words 'nutrition' and 'pharmaceutical.' It doesn't fit neatly into the categories of typical foods or medicines, but rather occupies a middle ground. Furthermore, in many countries, nutraceuticals are subject to less stringent regulations than medications, and determining which products possess health-boosting properties that set them apart from ordinary items can be somewhat subjective.

develop the necessary infrastructure, research, testing, and regulations to meet international standards.

- The report looks at market access barriers in areas with growing or potential demand for nutraceuticals, including the European Union (EU), the United States, Japan, China, Korea, and India. While these countries don't represent the global market, they are major markets for nutraceuticals and account for a large portion of the world's population.
- Many LLDCs and other vulnerable countries haven't yet tapped into the potential of their natural resources for economic development. This report aims to encourage further research and exploration in this area.

Nutraceuticals: definition and special features

Nutraceuticals are products derived from food sources that offer additional health benefits beyond basic nutrition. They are designed to improve overall health, prevent disease, or support the proper functioning of the body. Nutraceuticals can be found in various forms, such as functional foods, beverages, and supplements.

To better understand what products could be regarded as nutraceuticals, let's look at some examples that a reader might encounter in their daily life:

1. **Functional Foods:** These are everyday foods that contain ingredients with proven health benefits. Some common examples include:
   - Probiotic yogurt: Yogurt with added live bacteria (probiotics) that can improve gut health and digestion.
   - Fortified cereals: Breakfast cereals enriched with vitamins and minerals like iron, vitamin D, or calcium to help meet daily nutritional needs.
   - Omega-3 enriched eggs: Eggs produced by hens fed with a diet high in omega-3 fatty acids, resulting in eggs with higher levels of these healthy fats, which can help improve heart health.
2. **Health Beverages:** Drinks that contain ingredients known for their health benefits. Examples include:
   - Green tea: Rich in antioxidants called catechins, which can help protect cells from damage and reduce the risk of chronic diseases.
   - Functional water: Water that has been enhanced with vitamins, minerals, or herbs to provide additional health benefits.
3. **Food Supplements:** These are concentrated sources of nutrients or other substances with a demonstrated health effect, usually taken in the form of capsules, tablets, or liquids. Examples include:
   - Fish oil supplements: Containing omega-3 fatty acids, which can help reduce inflammation and improve heart health.
   - Multivitamins: Containing a combination of vitamins and minerals to help ensure adequate nutrient intake.
   - Herbal supplements: Derived from plants with potential health benefits, such as echinacea for immune support or ginseng for energy.
4. **Natural whole foods:** Certain fruits, vegetables, and grains are also considered nutraceuticals due to their inherent health benefits. Examples include:
   - Blueberries: Rich in antioxidants and known for their potential benefits in improving memory and cognitive function.
   - Spinach: High in vitamins, minerals, and antioxidants, which can help maintain a healthy immune system and reduce inflammation.
   - Whole grains: Such as oats and quinoa, known for their high fibre content and potential benefits in managing blood sugar levels and promoting heart health.

These products can reach their customer in grocery stores, pharmacies, or health food shops, under the general marketing promise that incorporating them into daily diet can help improve overall health and well-being. It is neither ordinary food that people consume everyday nor officially recognised medicine. It falls in the middle and includes a wide range of plants and fruits that are traditionally and through modern research considered to have health-related benefits on humans. Essentially, therefore, any food product or derivative sold in a 'health food' store or found on the aisles of the 'health food' section of a supermarket, is claiming the status of nutraceutical.

Furthermore, despite the somewhat vague definition and often scientifically unproven benefits of health food and supplements, consumer demand is rising strongly in developed and developing countries such as China and India. This is exemplified by the rising demand for organic produce and products, despite higher prices than conventionally grown fruits, vegetables, grains, oils etc. For example, in 2016, purchases of organic foods in the United States rose 8.4% compared to 0.6% for all food products. Other examples include essential oils, for which demand is booming even despite controversies about their health benefits.

The nutraceutical market, which includes functional foods and dietary supplements, was worth around USD 382.5 billion in 2019. People all over the world, especially in the US, Europe, Asia Pacific, Latin America, and the Middle East, are increasingly interested in these products. The market was predicted to hit USD 412.7 billion in 2020. The US, Europe, and Japan make up more than 90% of the market, while India represents about 2%.

The growing demand for nutraceuticals can be attributed to factors such as increased income, heightened consumer awareness about health issues as the population ages, a stronger emphasis on prevention over cure, scepticism towards modern medicine's invasive procedures and significant side effects, a deeper interest in and understanding of traditional remedies from other cultures, and concerns about environmental and social sustainability (particularly in the case of organic products). Additionally, there is a global trend shifting from meat to plant-based diets, with an increased focus on ethical food sourcing[13].

All these information flows have created a booming market in health food and supplements and new opportunities for enterprises in developing countries to produce functional plant-based food products for export as nutraceuticals. In many cases, the ingredients in nutraceuticals have long been cultivated or found in the wild in developing countries. If LLDCs can become competitive producers and marketers of nutraceuticals, the effects could be considerable on incomes, employment and poverty reduction. Moreover, increased returns from growing traditional plants can contribute to preserving biodiversity and indigenous cultures.

In order to capitalise on the worldwide demand for nutraceuticals, it is crucial to comply with the stringent regulatory and quality requirements that prevail in developed countries. While it is true that nutraceuticals typically face less regulation than pharmaceuticals, adhering to these standards is still a demanding task for any product, particularly those aimed at discerning consumers who prioritise health effects.

Given the health-related implications of nutraceuticals, governments in developed markets persistently enforce and oversee strict regulations on standards. These rigorous requirements can pose significant obstacles for potential exporters hailing from developing countries. The report delves into these challenges, placing particular emphasis on the discussions surrounding these issues, in order to provide a comprehensive understanding of the barriers faced by nutraceutical exporters.

Exploring the potential that the biodiversity ecosystem offers: bioprospecting

Bioprospecting is the exploration of biodiversity for commercially valuable genetic resources and biochemicals. It involves gathering information from the biosphere on the molecular composition of species to develop new commercial products. These products may be pharmaceutical, agricultural, industrial, or chemical processed end-products derived from biological resources.

In the context of identifying new niche export products that could be marketed as nutraceuticals, bioprospecting can play a crucial role. By exploring a country's diverse ecosystem and untapped reservoir of natural resources, bioprospecting can help discover unique properties of plants, fruits, animals, and microscopic organisms with potential nutraceutical properties. Developing countries can harness bioprospecting to boost economic development by tapping into their native biodiversity. Organizations like UNCTAD's BioTrade[14] Initiative can provide support to these countries in collecting information and transforming and commercialising goods and services derived from their native biodiversity.

Through bioprospecting, researchers identify novel compounds or genetic resources within a country's ecosystem, which could be developed into nutraceutical products. These products could then be marketed internationally, providing an opportunity for developing countries to establish a niche export market based on their unique biodiversity. This process not only helps boost the economy but also promotes sustainable use and conservation of natural resources. The results of bioprospecting can lead to natural ways to grow crops, production of food supplements to improve health, and the treatment of chronic diseases. It can also create economic incentives for the conservation of biodiversity, serve as a foundation for modern biotechnology in the developing world, and provide local and indigenous communities with ways to benefit from their unique understanding of the environment in which they live. This is possible both in marine ecosystems and terrestrial ecosystems.

Bioprospecting in developing countries faces a number of challenges that limit their ability to effectively participate in the global biotechnology industry. One of the main challenges is the lack of scientific capacity to carry out the high calibre research required for patentable discoveries and the establishment of biotechnology companies. Many developing countries have a shortage of scientists and researchers with the expertise needed to carry out advanced stages of biological prospecting research. This results in a limited ability to effectively identify, collect, extract, and screen genetic resources.

To address this challenge, developing countries need to expand their facilities for collection, extraction, and screening of genetic resources, and demonstrate their capabilities to potential investors[15]. This would require significant investment in infrastructure and research facilities to enable the countries to compete in the global biotechnology industry. Developing

[13] 'Surge in Court Cases Over Climate Change Shows Increasing Role of Litigation in Addressing the Climate Crisis.' Retrieved from Prevention Web: https://www.preventionweb.net/news/view/75726.
[14] https://unctad.org/topic/trade-and-environment/biotrade
[15] Weiss, C. & Eisner, T. (1998). Partnerships for Value-Added through Bioprospecting, Technology in Society 20: 481–498

countries should establish partnerships with research institutes, academic and domestic and foreign companies to strengthen their human capital, scientific and organisational resources for manufacturing, marketing, and the management of sustained research and development.

Another challenge that developing countries face is the limited bargaining power of producers of nutraceutical products. To strengthen their bargaining position, producers of nutraceutical products need to establish partnerships in sector-wide networks to increase productivity and trade. Such networking could also help to increase productivity and trade and has considerable economic importance. In addition, producers must adopt an array of standards and codes of conduct related to quality, safety, environmental and health concerns to be able to obtain market access.

Finally, developing countries must ensure that their bioprospecting activities are carried out in a sustainable and ethical manner. This requires effective regulation of bioprospecting activities to prevent over-exploitation of genetic resources and ensure that local communities benefit from the commercialisation of genetic resources. It is important for developing countries to strike a balance between the economic benefits of bioprospecting and the need to protect their natural resources and the rights of local communities.

Selected products with potential as nutraceuticals

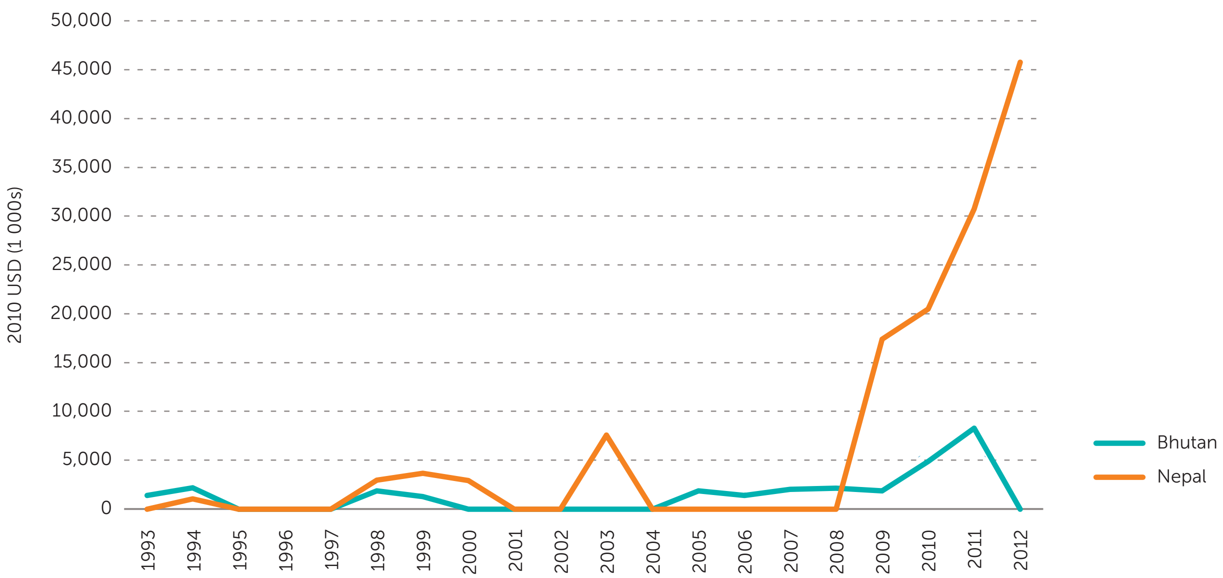
The report examines the cases of nutraceutical products from landlocked countries, including Bhutan, Nepal, Burkina Faso, Ethiopia, Bolivia and Azerbaijan. The products covered in the full report include cardamon, red rice, citrus, ginger, sea buckthorn, shea, sesame, cashes, frankincense, teff, quinoa, amaranth, tropical fruits, hazelnuts, pomegranates, persimmons. Below is the summary of finding regarding some of these products.

Cardamon (cardamom)

Cardamon, a spice with numerous health benefits and versatile applications, holds immense potential as a nutraceutical. The study considers the example of Bhutan where an increasing number of citrus farmers transitioned to cardamon cultivation, demonstrating that cardamon is becoming a viable alternative for under-producing citrus orchards. As one of the world's most valuable spices, alongside saffron and vanilla, cardamon is a well-established cash crop in Bhutan[16].

Although the large, black cardamon variety found in Bhutan is less valuable than its small, green counterpart, it is well-adapted to the cold, steep-sloped conditions of the Himalayas. This makes it a particularly suitable crop for the region. Despite facing export challenges due to India's Goods and Services Tax implementation, this obstacle has shed light on the weaknesses in Bhutan's production that need to be addressed before targeting developed countries.

Figure 1 | Value of cardamon export (Bhutan and Nepal)



Source: Comtrade.

[16] Royal Spices (2017). 'Big Cardamom.' http://www.bhutanbigcardamom.com/#

Cardamon's labour-intensive nature primarily stems from the handpicking of pods from the perennial shrub, a member of the ginger family. Although small, green cardamon is more popular, the large cardamon cultivated in Nepal, India, Indonesia, and Bhutan has a unique flavour that contributes to its appeal. The extensive cultivation of large, black cardamon in Bhutan is indicative of the country's favourable climate conditions for this crop.

Cardamon's market potential as a nutraceutical is mainly based on its numerous health benefits, versatile uses, and high value. As the crop is well-adapted to the Himalayan climate and terrain, countries such as Bhutan have a unique opportunity to capitalise on this lucrative market. By addressing production weaknesses and embracing the unique qualities of the large black cardamon variety, there is substantial scope for growth and expansion in this market.

Cardamon has many health benefits. Pods are packed with antioxidants that help fight against inflammation. Cardamon is also known to relieve a variety of digestive issues, including discomfort, nausea, and vomiting. Some research suggests that consuming cardamon may even help heal ulcers. It is most known for its ability to freshen breath and prevent cavities[17]. Gargling cardamon can help fight against teeth and gum infections and throat discomfort. It has been known to reduce muscle spasms and improve respiratory ease and health. The vitamin C, potassium, and antioxidants in cardamon are said to lead to healthy skin and hair, which makes cardamon fitting for use in cosmetics as well.

Known for its use in masala due to its smoky flavour profile, cardamon is also used to flavour vegetables and is commonly found in mixed spice preparations. Cardamon can also be steeped as tea, though black cardamon is not sweet like its green counterpart[18].

Black cardamon can also be found in coffee, which comprises a significant portion of global cardamon exports. Cardamon can even be taken as an herbal supplement or used in sweet bakery products[19]. Large cardamon is composed of 2–3 per cent oil, from which essential oil can be extracted through steam distillation, maintaining the beneficial properties of the cardamon. It can be inhaled as an aromatic or used in a variety of cosmetics.

Photo: Farmer examining cardamom plant. Adobe stock

Though uncommon on the market, the oil of the cardamon seeds can be used in lip balms, facial cleansers, hand soap, bodywash, and body lotion, as found in Pangea Organics product offerings[20]. Because cardamon is also known to freshen breath, it can be used in breath mints, gums, mouthwash, and toothpaste. Use in bath salts is another option for uses. There are many opportunities for large cardamon use in nutraceuticals, but producers should be aware of the more pungent odour and smoky quality of large cardamon.

The largest producer of cardamon is Nepal. As of 2017, producers from Nepal supplied 68 per cent of international demand for large cardamon, the main markets being the Middle East, South Asia, Southeast Asia, and Europe[21]. India's Sikkim and Darjeeling districts were large producers of black cardamon until the crop was riddled with viral diseases. Old plantations, poor quality planting material, lack of irrigation, and poor canopy management were the largest contributors to India's decline in production[22]. However, global warming was the greatest threat to India's cardamon, as large cardamon grows under cooler, shaded conditions. Bhutan is the only other producer of large, black cardamon, but it has not yet matched the production of Nepal and India. However, as of 2017, Bhutanese cardamon sold for a higher price than Indian cardamon[23]. Although there are no public data on world price of large cardamon, prices since 2017 have been on a downward trend due to a drop in overseas demand, e.g. between 2014 and 2017, Bhutanese and Nepalis newspapers have reported that prices dropped 75 per cent.

[17] Streit, L. (2018). '10 Health Benefits of Cardamom, Backed by Science.' Healthline Media. https://www.healthline.com/nutrition/cardamom-benefits
[18] Bhutan Natural (2018). https://www.bhutannatural.com/about-us
[19] Jadav, K.D., Mehta, B.M. 'Cardamom: Chemistry, Medicinal Properties, Applications in Dairy and Food Industry: A Review', Research and Reviews: Journal of Dairy Science and Technology, Vol. 7 (2018), Issue 3, pp. 9–19
[20] Pangea Organics (2019). https://pangeaorganics.com
[21] Gautam, A. (2017). 'Large cardamom price plunges three-fold.' The Kathmandu Post. https://kathmandupost.com/money/2017/04/15/large-cardamom-price-plunges-three-fold
[22] Jamwal, N. (2018). 'Rise after the fall.' Down To Earth. https://www.downtoearth.org.in/news/climatechange/rise-after-the-fall-61505
[23] Yonten, K. (2017). 'Bhutan Cardamom inferior due to poor drying practices.' The Bhutanese. https://thebhutanese.bt/bhutan-cardamom-inferior-due-to-poor-drying-practices/

Sesame

Sesame is an important emerging crop in many LLDCs, such as Burkina Faso and Ethiopia, boasting significant export potential, with exports having increased tenfold since 2000, largely driven by a high global demand. This crop is well-adapted to Burkina Faso's semi-arid climate and has become the country's second-largest cash crop behind cotton. Sesame is low maintenance, requiring little horticultural support, and can thrive even without significant rainfall or fertiliser.

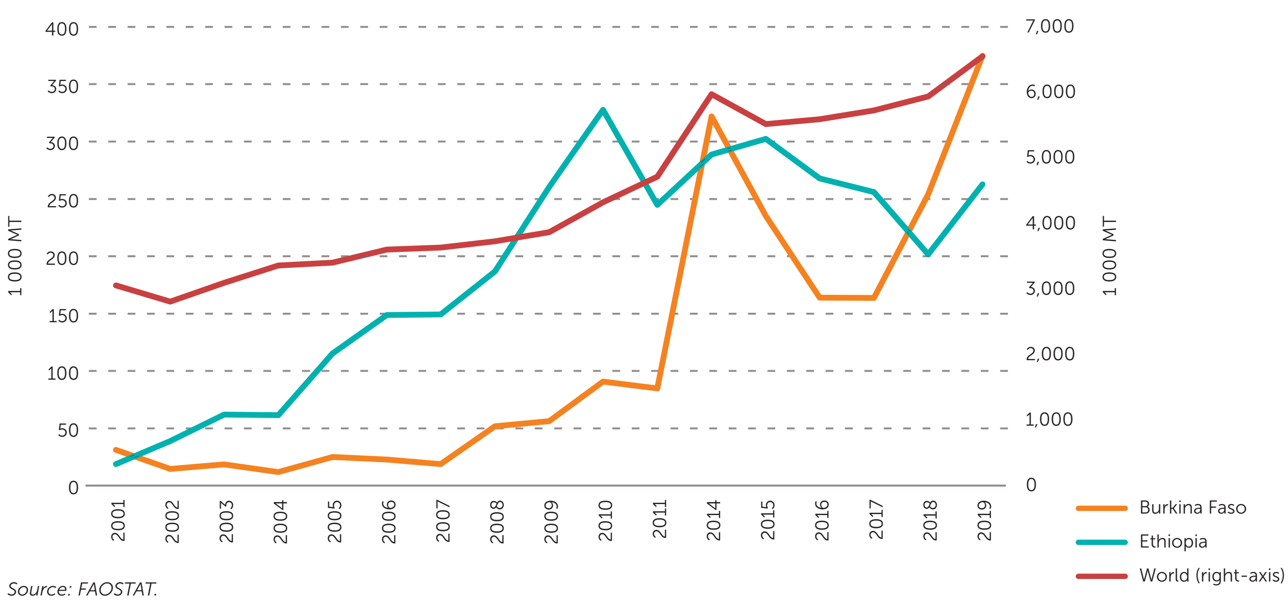
Sesame is known for its notable nutritional and health benefits. It contains the antioxidant gamma-tocopherol, protein, and dietary minerals. Studies have shown that it can slightly reduce blood pressure. Moreover, sesame oil, which is rich in skin-beneficial minerals and proteins that promote hair growth, has become a popular cosmetic product, particularly in Asia, and is gaining increasing popularity in the US. The cosmetic industry currently represents less than 10% of total demand but is the fastest-growing segment in the sesame oil market.

The sesame plant is a bush-like legume mainly grown in Southeast Asia, Central America, and sub-Saharan Africa. It grows as a small bush or upright tree, with pods that burst when ripe to release seeds. The crop varies in quality from high-value white sesame seeds to lower-value brown seeds. Despite its high potential yields, a significant portion of the global sesame output is lost due to 'shattering' – the scattering of seeds from unmonitored ripe pods. The sesame seed is commonly used in bread and other wheat-based goods in North America and Europe or processed into oil for flavouring in many Asian dishes. From a health perspective, sesame serves as an antioxidant, lowers cholesterol, and boosts immune response.

The greatest obstacle, at present, to developing downstream oil production is in fact the sheer profitability of crude sesame production. Crude sesame prices have risen to such an extent that selling raw seeds is nearly as profitable per unit as selling medium-quality oil, and consequently entrepreneurs have little price incentive to invest in oil production[24]. If prices stabilize, oil production may become a viable expansion sector, but under current conditions farmers can do well for themselves by simply selling crude sesame[25].

Since 2005, international demand for sesame has consistently exceeded supply, leading to some key impacts on the value chain. Firstly, due to the high profitability of sesame exports, competition among exporters has largely erased the gap between global and farm-gate prices. In 2012, sesame producers in Burkina Faso received 75% of the country's total sesame export revenue, significantly higher than the 23% that cotton producers received from the total cotton export revenue. Despite Burkina Faso exporting more cotton than sesame by global market value,

Figure 2 | Sesame production (World, Burkina Faso and Ethiopia)



Source: FAOSTAT.
Note: Values for World appear on the right axis.

[24]Gildemacher, P., Audet-Bélanger, G., Mangnus, E., van de Pol, F., Tiombiano, D. & Sanogo, K. (2015). Sesame Sector Development: Lessons Learned in Burkina Faso and Mali. KIT & CFC, Amsterdam

[25]https://www.fortunebusinessinsights.com/cold-pressed-sesame-oil-market-103678

the farm-gate value of the sesame sector surpassed that of the cotton sector. This implies that sesame cultivation could be a more viable option for farmers looking to expand into cash crops, suggesting that sesame may drive pro-poor growth more effectively than cotton or any other major export crop.

Secondly, the competition among exporters has led to a standard practice of immediate payment to sesame farmers at the farm-gate, and even pre-financing of harvests when prices are favourable. This practice helps farmers avoid poor harvests resulting from insufficient use of fertiliser or quality seeds. However, this puts pressure on exporters, who have to pay for an entire year's supply during the 2–3-month harvest season, while their export revenues are spread throughout the year. Larger buyers placing advance orders can ease some of this burden, but often, exporters have to resort to commercial banks to bridge this financial gap. As many regional banks are unfamiliar with the sesame sector, exporters often have to use their capital assets as collateral or face high-interest rates, up to 20%. Therefore, providing market-rate loans to exporters, either by Burkina Faso's government or private entities, could be a cost-efficient way to support the sector.

Some key recommendations regarding the development of sesame as a nutraceutical export include:

1 Enhance productivity by promoting increased use of fertilisers and high-quality seeds. This could involve extending fertiliser subsidies to sesame producers, creating a commercial fertiliser market, supporting private sector seed vendors, and encouraging seed-crossing partnerships with countries like Mali and Nigeria. Additionally, pilot extension services in underserved areas could significantly improve smallholder yields.
2 Improve marketing efficiency in regions with weaker connections to the marketing channels by expanding the warehouse network and implementing an extension programme targeting areas with lower levels of direct sales by producers. This would particularly benefit remote and hard-to-access regions.
3 Prioritise traceability using an electronic tracking system similar to that used in the coffee sector by the Ethiopian Commodity Exchange (ECX). Improved traceability could boost sales, promote ethical sourcing, and potentially result in better sorting and pricing of sesame seeds.
4 Establish official financing channels for sesame exporters, through public-private partnerships including those with NGOs. This would help relay global demand to producers and stimulate necessary investment in seeds, fertiliser, and equipment.

Photo: Sesame © FAO/Peter DiCampo

5 Strengthen ties with Asian buyers through trade missions, building direct relationships, and potentially creating an interprofessional association to facilitate coordination among producers and engagement with buyers.
6 Encourage entrepreneurship in the sesame hulling subsector through grants and integration into existing agricultural extension training programmes.
7 Maintain the focus on road development in outlying areas to reduce transport costs and improve access to major production regions. This should be prioritised in national spending plans.

Teff

Teff, a grain that has been cultivated in Ethiopia and Eritrea for 3,000 years, has recently emerged as a promising nutraceutical due to its high levels of calcium, protein, vitamin C, iron, and fibre, and absence of gluten. This has allowed it to cater to the growing gluten-free market and gain popularity among athletes worldwide, particularly Ethiopian runners. The grain's use in grain-based foods like bread, pasta, and ethnic foods has increased, suggesting its potential to become a significant player in the rapidly expanding health food market. Since 2010, teff has become a global commodity with the Ethiopian diaspora, Ethiopian restaurants, and injera (a traditional flatbread made from teff) exports driving its demand[26].

The rise in Ethiopian immigration to the US has spurred an increase in teff consumption, both as traditional Ethiopian cuisine and as a health food option incorporated into American

[26]https://www.weforum.org/agenda/2019/03/ethiopia-needs-to-improve-production-of-its-golden-crop-teff-heres-how/
https://www.washingtonpost.com/lifestyle/style/as-americans-embrace-ethiopian-cuisine-its-farmers-grow-more-teff/2012/07/29/gJQAvmI4IX_story.html
https://well.blogs.nytimes.com/2016/08/16/is-teff-the-new-super-grain/

staples like pancakes and waffles. These teff-flour products, touted as healthier and gluten-free, have become a staple of the American gluten-free market. Despite this, much of the teff consumed in the US is produced domestically or in countries with similar climates like Australia, due to the high costs associated with traditional Ethiopian teff harvesting and injera production. Additionally, many teff-derived products sold in developed countries emphasize organic, sustainable production, a criterion that the current Ethiopian teff sector, relying heavily on industrial fertilisers and crude threshing processes, is not well-prepared to meet. This poses challenges for the export potential of Ethiopian teff, despite its health benefits and growing global popularity.

Ethiopia, despite its potential to dominate the global teff market, faces significant challenges. Its teff productivity is low due to the lack of mechanisation in production and high labour costs, as teff grains are manually harvested using sickles. The crop also suffers substantial yield loss, between 8% and 30%, primarily during the threshing stage.

Additionally, Ethiopian teff producers may face difficulties meeting international quality standards, which could hinder the scaling-up of exports. The required certifications, such as HAACP, demand exacting quality standards that might necessitate changes in the production process. Furthermore, concerns about the purity of Ethiopian teff could raise quality control issues. To compete globally, both labour cost and yield loss issues must be addressed, and producers need to meet stringent international quality standards.

Teff, with its health benefits and gluten-free properties, holds immense potential as an Ethiopian export. However, challenges like low mechanisation and quality control issues need addressing. The following recommendations could enhance its status as a top-performing export:

Photo: Teff grains. Adobe stock

1. Liberalize teff exports: Remove all export restrictions on teff, potentially replacing the export ban with a duty to encourage domestic supply while avoiding over-exportation.
2. Improve mechanisation: In conjunction with liberalization, invest in research and development of specialised equipment for teff harvesting and threshing.
3. Overhaul extension for teff: Use agricultural extension services to improve planting and harvesting techniques and increase access to mechanised equipment.
4. Include teff in the ECX: This could streamline supply, enhance quality control, eliminate middlemen, and ensure fair market prices for farmers.
5. Develop organic teff: Given the overlap between the health-grain and organic markets, organic certification could be a strong asset for teff producers willing to switch to natural fertilisers.

Quinoa

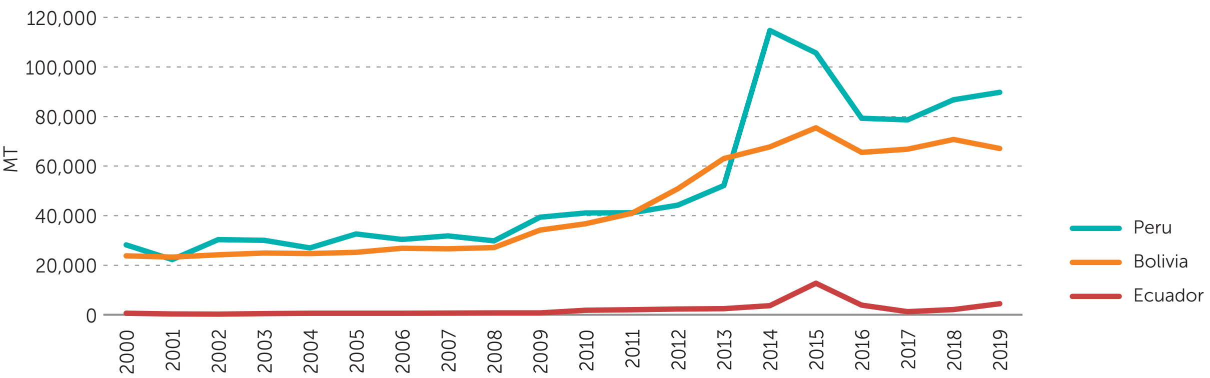
Quinoa, a crop native to the Andes mountains, has displayed immense potential as a nutraceutical product. Traditionally, it has been an important staple food for the indigenous Bolivian population, who continue to consume it frequently. Recent shifts in urban attitudes have led to the destigmatization and increased consumption of quinoa in urban areas.

Bolivian cooperatives, NGOs, and the Bolivian government have all made efforts to develop and promote quinoa production. This was further reinforced by the United Nations declaring 2013 as the International Year of Quinoa, causing a boom in its demand and profits. The demand continues to grow in developed countries, where quinoa is gaining reputation as a superfood.

Quinoa is highly nutritious, providing all 17 essential amino acids that humans require, thereby making it a complete protein. It also offers a gluten-free dietary option, a trend particularly popular in developed countries. Bolivian quinoa is organic and GMO-free, attributes that are likely to bolster its appeal in the health food market. Despite relatively limited modern research, the successful cultivation of quinoa is largely thanks to the indigenous knowledge of Bolivian farmers, making it a crop with significant value, contributing to poverty reduction in rural areas.

Quinoa has now established itself as an alternative to wheat and other grains in developed countries, and demand for quinoa should further increase over time. Currently, the two largest quinoa producers in the world market are Bolivia and Peru. Since the quinoa boom of 2013, over 40 other countries around

Figure 3 | Quinoa production of Bolivia, Peru and Ecuador



Source: FAOSTAT.

the globe have sought to enter the quinoa market. However, countries outside of the Andes have been stymied by lack of knowledge and experience growing quinoa. As a result, in 2017 Bolivia produced 66,700 MT, Peru produced 78,700 MT, and Ecuador produced 1,300 MT. All other countries produced negligible amounts.

Quinoa has positioned Bolivian agricultural products as organic and high-quality, but there is potential to expand its exportation. Key recommendations for growth include:

1 Sustainability: Ensuring quinoa cultivation remains sustainable is critical. Strategies include modernizing and mechanising farming, maintaining community stability, and focusing on sustainable farming practices such as intercropping.
2 Investment and Cooperation: The Bolivian government should invest in development, partner with cooperatives and companies, and harness the expertise of Andean Naturals and Andean Valley to advance the food manufacturing industry.
3 Yield Rates and Processing: Efforts should focus on increasing yields and processing output. Concurrently, large-scale farming development must ensure sustainability and profit return to farming communities.
4 Innovation in Agriculture: The National Institute for Innovation in Agriculture and Forestry should support agricultural development, such as mitigating soil degradation and exploring alternative organic fertilisers, like llama manure.
5 Land Usage: Robust community management strategies surrounding land usage should be reinforced. Cooperatives can play a significant role in developing local rules for maintaining proper land usage ratios between grazing and quinoa production.
6 'Repeastization': This process, involving people returning to villages to farm, should be managed to maintain the fabric of the community, ensuring returnees are invested in the village's success.
7 Support and Training: The government should support the creation of tools and machines for quinoa production and provide educational programmes to train farmers in using these tools sustainably.
8 Irrigation Systems: Given the risk of climate change-induced droughts, the development of irrigation systems for the Altiplano highlands is vital. This is especially important as traditional sources of water, such as glaciers, are rapidly disappearing.

Photo: Quinoa field in Andean region. Adobe stock

Considerations regarding market access constraints

As mentioned earlier, there isn't much information available about potential markets for exporting nutraceutical products. Nevertheless, there is a noticeable change in the consumption patterns of people in developed countries, resulting in an increased demand for health-enhancing specialty products such as nutraceuticals. This shift presents an opportunity for countries that have a natural comparative and competitive advantage in producing nutraceuticals and other high-value natural products for the health, pharmaceutical, and cosmetic industries to diversify their exports. These non-traditional export goods can significantly contribute to export diversification and the structural transformation of countries that are structurally disadvantaged, such as LLDCs. This will enable them to participate in the Global Value Chains (GVCs) for the production and supply of nutraceuticals worldwide. However, linking producers of nutraceutical products to the GVCs is not an easy task, as it involves a complex process from both the supply and demand sides.

From the producers' point of view, businesses in structurally disadvantaged economies have to overcome significant and numerous constraints when exporting to global markets. These constraints are primarily due to high transaction costs, inadequate physical infrastructure, weak institutional capacities, limited skills, and ineffective policy implementation. The most critical constraint, however, remains the development of their productive capacities. These encompass a wide range of elements, including technological and production capabilities, financial resources, infrastructure, private sector development, institutions, energy supply, efficient market systems, and the skills and policy-implementing capacities needed for a country to produce a diverse array of goods and services for domestic consumption or competitive exports. UNCTAD defines these as the 'productive resources, entrepreneurial capabilities, and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop[27]'.

These capabilities collectively enable a country to diversify its economy, add value, produce a broad range of products and services, create well-paying and decent jobs, promote technological learning, improve labour productivity, address environmental challenges, initiate structural transformation, and begin producing new and dynamic products such as nutraceuticals. In essence, the most effective way to advance in development and climb the value and technological ladders, ultimately escaping dependency on commodity exports, is to build and strengthen productive capacities. Market pull of nutraceuticals creates significant opportunities in this which are, however, muted by market access challenges.

A distinction may have to be drawn between market access and market entry. Market entry constraints pertain to demand-related issues and whether markets are open to imports from other countries. Many LLDCs, particularly those in Africa and classified as LDCs and do not face market access problems. This is primarily due to duty-free and quota-free preferential market access opportunities offered by development partners for LDCs and by the US through the Africa Growth and Opportunity Act (AGOA) for African countries.

However, having market access opportunities does not guarantee easy or uncomplicated entry into these markets. In fact, the most significant constraint for LLDCs and LDCs is the capacity for market entry, even into markets where access is readily available due to preferential market access offers.

For exports of nutraceuticals and other health-enhancing products, the most significant constraint is the adherence to standards, quality control measures, and health-related safety requirements imposed by export destination countries to protect their citizens. These non-tariff measures often create obstacles for exports from LLDCs, and these measures tend to be particularly strict for products marketed as health-enhancing or supplementary to modern medicines. Over the past decades, there has also been an increase in 'private standards' introduced by food distributing companies in developed countries. Consequently, exporters from LLDCs will increasingly have to navigate not only public standards but also private standards, which tend to be more stringent.

Understanding the standards and regulations governing the importation of nutraceuticals in major markets is critical for potential suppliers or exporters of these goods from LLDCs. In this respect, the study further considered and analysed a sample of countries that are considered important markets for nutraceuticals and related products namely, EU, USA, Japan, China, Korea and India.

Conclusions and recommendations

Case studies showcase the considerable potential in vulnerable countries for developing or expanding exports of specialty foods and nutraceuticals. Some LLDCs are the best or the only location for growing certain specialty foods or the ingredients in them. Examples include quinoa in the Andes, cardamon in mountainous South Asia and frankincense in Ethiopia. Further, indigenous populations are often repositories of information about growing and using products that they have used for centuries such as quinoa in Bolivia.

Well-to-do and globally informed consumers in developed countries are increasingly seeking alternatives to standard medicine. They also often want to help alleviate poverty,

[27] UNCTAD (2006). Least Developed Countries Report: Developing Productive Capacities. UNCTAD, Geneva


Photo: Adobe stock

preserve traditional cultures and promote environmental sustainability in the most vulnerable countries in the world.

The potential of nutraceuticals stems from consumer interest to promote their own health while also contributing to the well-being of people in producing countries. Relatedly, social entrepreneurship is a rising area of interest to students in business schools and there has been a burgeoning of NGOs and private investors who aspire to assist poor countries while creating successful enterprises. These social entrepreneurs may be from LLDCs themselves but have experience with international firms and have cutting-edge management skills and networks. The French cosmetics firm L'Occitane's role in developing and using shea from Burkina Faso can be mentioned. Another example is Andean Naturals, one of the main companies exporting quinoa from Bolivia. The company was founded by a Bolivian who attended the University of California business school. It is based in California with offices and processing operations in Bolivia.

What can LLDCs do to overcome the obstacles and take advantage of the opportunities? The case studies provide several avenues that are summarized below:

Attract foreign direct investment and global buyers

The demanding quality requirements for nutraceuticals and the ingredients therein require state of the art growing and processing techniques. These skills are mainly found in larger global companies who could pay premium prices to farmers for high quality produce. For example, L'Occitane, the pioneering cosmetics firm in the shea butter market, requires all cooperatives it works with to adhere to the Ecocert sustainability and quality standards. L'Occitane pays roughly double the local market price per kilogram of butter, more than offsetting the costs of annual certification, advanced processing equipment, and hiring experienced managers. It is essential to attract and partner with such companies. This does not mean large subsidies which are often misused and unaffordable for LLDCs. Instead, the most important consideration is to create a hospitable environment for entrepreneurship, both international and domestic. Barriers to FDI such as limits on the share of companies owned by foreign investors should be removed except perhaps for a few strategic sectors.

Improve the overall business climate

To foster both FDI and local entrepreneurship—and collaboration between them—the overall business climate should be improved. While it is unreasonable to expect the quality of infrastructure and public services to be as high in LLDCs as developed countries, reducing the complexity and cost of registering businesses and handling containers need not be expensive. Investment in infrastructure is costly and governments must prioritise. The case studies show that roads connecting agricultural areas are a high priority. A reliable supply of electric power is also essential for all facets of production including cold storage facilities. Foreign investors usually can source in alternative locations and will go where they feel most welcome and are most productive. A case in point is the departure of Lotus Foods from Bhutan where they were sourcing red rice production in favour of Madagascar.

Technical assistance from NGOs and international organisations

The product case studies discussed in this report have revealed numerous instances where beneficial collaboration between international aid agencies and farmers and governments have led to win-win outcomes. For example, the regional research centre International Centre for Integrated Mountain Development (ICIMOD) and Environment Conservation and Development Forum (ECDF) in conjunction with the Rural Livelihoods and Climate Change Adaptation in the Himalayas (Himalica) Programme have been helping farmers in Bhutan and Nepal adapt to the changing climate and properly manage their cardamon plantations. In

Bhutan, the Himalica programme has developed 12 pilot demonstration farms to teach by example through on-site coaching and training in crop management. These demonstration farms emphasize the use of weather tolerant crops and best management practices. The programme encourages farmers to use intercropping to maintain soil nutrients and diversify into nitrogen-fixing beans. Keeping with Bhutan's commitment to minimal environmental impact, the Himalica programme promotes the use of improved dryers that require less fuel wood. By using less wood, farmers can shrink their carbon footprint.

Environmental preservation

As noted above, most LLDCs have the crucial advantage of propitious natural environments for some specialty foods. In many cases, however, the trees or plants that are the source of nutraceutical products are under severe stress due to neglect or overuse, exacerbated by climate change. Frankincense has sturdy drought resistant bark and its ability to grow and prevent erosion in rocky, steeply sloped where few other trees can thrive. Frankincense is thus well suited to Ethiopia's landscape as well as highly prized for its medicinal properties. Yet frankincense production in Ethiopia is threatened by illegal conversion of forests into farmland and over-tapping of trees. It is imperative that governments take steps to preserve the sustainability of the soil and forests. At a local level, cooperatives can help implement better practices but oversight by a central authority is also required.

Support cooperatives for small farmers

Cooperatives have proved to be very positive forces for organising smallholder farmers and providing local public goods. The economic advantages of cooperatives involve pooling of resources to mitigate risk and diffusion of knowledge to improve productivity and quality. Agricultural cooperatives have been particularly vital to informing farmers about the importance of quality inputs and facilitating their access to inputs. Cooperatives played a large role in enabling Bolivian farmers to produce quinoa for export by raising standards and adopting sustainable farming practices. Beyond production improvements, cooperatives have also been helpful in increasing the quality of life across the board in rural communities. The cooperative model is based on democratic decision making among the small farmers in the cooperative and, consequently, it results in an institution that is tied directly to the local communities. As a result, cooperatives tend to be responsive to the communities' needs. In addition, cooperatives often serve as a countervailing force to government agencies and processors. Indeed, in Bolivia and elsewhere cooperatives are structured like unions. The cooperative headquarters supports interactions at the multinational level and secures fair prices leaving the local village cooperatives to conduct the day-to-day activities of cooperatives.

Leverage trade associations

Trade associations can help organise production and distribution. A case study in the report shows how the Azerbaijan government has prioritised this approach, notably in hazelnuts. The Azerbaijan Hazelnut Exporters Consortium (AHEC) is composed of the five major companies involved in the processing and exporting of Azerbaijani hazelnuts. The consortium organises collection of hazelnuts from 12,000 small Azerbaijani farms and promotes greater market access for the export of Azerbaijani hazelnuts. The consortium also promotes modernization of production techniques and food safety standards that meet the norms of developed countries. A possible downside is excessive market power of associations.

Develop competent government extension and quality control services

LLDCs should build the institutions and programmes necessary to assist local firms in raising productivity and meeting quality norms. Many small farmers lack the knowledge and capabilities required for enhancing-productivity and managing sanitary-improving technologies. Information about quality inputs, notably seed and fertiliser is important. In the past decade there has been a global shift in food regulation from policing to facilitating. Instead of punishing violations, developed country food safety agencies now focus on working with producers to prevent incidents. LLDCs can move forward by developing their own domestic food safety agencies that could partner with developed country counterparts. These agencies can help facilitate cooperation between different stakeholders in the agricultural industry. Of course, it is not sufficient to create more of the underfunded agencies that unfortunately have proliferated in some LLDCs. Agencies must be staffed by professionals with up-to-date expertise in agriculture and be shielded from political favouritism.

Greater mechanisation

While developing countries should take advantage of their abundance of labour wherever possible, in some cases artisanal cultivation and processing technologies have very low productivity and provision of equipment for harvesting, washing, and threshing can make the products more competitive, as demonstrated in the case of teff in Ethiopia.

Marketing assistance

Some LLDCs, depend heavily on one or a few foreign markets. For example, Bhutan and Nepal both depend very heavily on India. This is due in part to the dominance of Indian traders in handling Bhutanese produce. This partly reflects lack of information available to farmers and cooperatives on alternative markets. Foreign companies from developed countries are well placed to assist diversify market access. Establishing trade offices abroad may be useful, as in the case of Azerbaijan.

Develop organic production

A fast-growing niche market, organic-certified produce has become a significant sub-sector of the produce market in developed countries. Over the past decade, health food stores have shifted their sourcing to largely or exclusively to organic produce, and most large supermarket chains now allocate a meaningful percentage of their produce stocks to organic produce. Many traditional small farmers do not use chemicals, so they are already organic de facto, but not certified as such. The organic market presents a lucrative opportunity to producers in LLDCs, but organic certification is an intensive and time-consuming process. The primary constraint for many smallholder farmers seeking certification is the difficulty of switching to non-pesticide-based pest management. A significant investment is required to deploy systems like integrated pest management, and if done improperly the entire harvest can be put in jeopardy.

Expand processing where appropriate

The extent to which processing of produce into nutraceuticals is feasible for LLDCs varies by country and product. Countries should only promote local processing where the processes are not overly complex and capital-intensive. For example, sesame hulling provides a viable value addition with noticeable price premiums and little capital-intensity unlike the production of sesame oil. In general, successful processing requires partnerships with foreign companies with specialised expertise. For Burkina's sesame processing, the country is assisted by the NGO Lutheran World Fund and the vegetable oil company Olivera. Processing of frankincense in Ethiopia is not a high priority given the high prices the country can obtain from unprocessed exports; the main priority is to preserve the frankincense trees, as noted in this report.

Facilitate the participation of women in the development, production and sales of nutraceuticals

Access of the poor and women to productive assets such as land and capital are critically important for effectively and fully harnessing the potential of nutraceuticals for jobs creation, poverty reduction and sustainable growth and development. Deliberate policies and concrete actions are necessary to promote, particularly gender equality, improve the productivity and growth prospects of nutraceuticals development and value-addition across the countries discussed in this study. Gender-based obstacles highlighted through the Burkina Faso case study on the shea sector are typical for the agriculture sector in developing countries more broadly, while gender-based obstacles can be found in all sectors and all countries. To move towards a level playing field it is necessary to remove such gender-based obstacles and entry barriers to the poor. These should include legal reform of land tenure; bans on gender-based discrimination in marketplace settings; establishment of well-resourced funds to address gender inequality, including providing capital funding for female-led projects; creation of land-purchasing cooperatives for women; subsidies for female farmers to reduce dependence on male family members; targeted training offer for women, adjusted to their time-poverty and schedules dependent on reproductive and care responsibilities; creating platforms and networks supporting linkages and provision of market intelligence for female entrepreneurs, among other actions. These actions are also necessary to target poor households and other vulnerable sections of the society who lack productive assets due to unequal distribution of land and capital.

Consider registering geographical indications or trademarks

LLDCs should consider the use of Geographical Indications or trademarks to support the branding and marketing of their nutraceuticals. In doing so, LLDCs should weigh the potential costs of implementing Geographical Indications or trademarks, including supporting the collective organisation of producers and processors, setting up Codes of Practise, establishing marketing and surveillance mechanisms, all with the potential benefits in terms of greater economic profits, fostering quality-production, strengthening collective action, as well as improved management of biodiversity resources. Ideally, efforts to register Geographical Indications or trademarks should be part of a broader marketing and sustainability strategy. This requires establishing a reputation for quality and reliability and, very likely, partnering with foreign firms who have the marketing expertise and connections to successfully establish a brand. An example is the US-Bolivian company Andean Naturals in Bolivia which has established brands for quinoa such as Royal Quinoa. LLDCs can also request technical assistance from a range of United Nations bodies for the implementation of Geographical Indications. Member states can also request assistance from CFC for further facilitation in this regard.

Photo: Teff field. Adobe stock

Photo: Tegemeo farmer inspecting his millet. KIT

III.2 All in on millet?[1]

Introduction – the re-emergence of millet

This article explores the re-emergence of millet in domestic value chains and its use by private actors with innovative business models – using fortification or biofortification – to highlight millet's smart food properties. While millet has been in the shadow of rice and wheat production for decades, recently there has been renewed interest in millet to enhance food security and livelihoods for small farmers. According to the CGIAR, the development of new millet products *'needs to make business sense for farmers, seed suppliers, food producers, and consumers.'*[2] While the food security and climate resilience aspects of millets have been the focus of programmes targeting the most vulnerable populations, this article explores the innovators behind changing the narrative around millets: from a 'poor people's food', towards a smart food (Box 1).

Millets have long been a staple food in many regions of Africa and Asia, but their cultivation declined significantly as they came to be associated with poverty and other crops and foods were regarded as more desirable and better tasting. As part of growing efforts

Box 1 | Millet and smart foods

What are millets: Millets are gluten-free cereals of the Poaceae family, more commonly known as the grass family, that have been consumed by humans for about 7,000 years. Millets are mostly grown in the semiarid tropics of Africa and Asia due to their short growing season under dry, high-temperature conditions. There are several types of millets, including pearl millet, finger millet, foxtail millet, proso millet, and kodo millet. While sorghum is also part of the Poaceae family, it refers to grains from the Sorghum bicolor plant, whereas millet refers to grains from the Panicum miliaceum plant. Among the millets, pearl millet is the most widely produced type for human consumption, though all types are renowned for their regional adaptation, high nutritional value, and health benefits.

What are smart foods: highly nutritious crops, which target some of the largest micronutrient deficiencies and needs, especially of women and children (ICRISAT).

[1] The article has been prepared by the Royal Tropical Institute (KIT), Amsterdam. Authors: Bitzer, V., Petrutiu, S., Huet, E. and Diallo, M. (2023). https://www.kit.nl/publications/working-paper-series

[2] https://www.harvestplus.org/home/catalyzing-markets/

to revive global millet production and consumption, the United Nations and its Food and Agriculture Organization, on India's request, named 2023 as **the International Year of Millets** (IYM 2023). Two key properties of millets are repeatedly highlighted: first, their climate-smart properties, as millets can be cultivated in adverse and changing climatic conditions, with few inputs. These cereals can be a potential solution for many regions' self-sufficiency and reduction of reliance on imported cereal grains.[3] Second, millets' health benefits as compared with other cereals: elevated levels of protein, fiber, key vitamins and minerals, including iron, zinc, and calcium.[4] In addition to their nutritive value, millets are the main cereal for many cultural, ceremonial (funeral, wedding and baby showers) and religious (especially during the Muslim fasting month Ramadan) foods. Millets are gluten-free and have several potential health benefits relevant to cardiovascular diseases and diabetes, among others (Saleh et al., 2013).

The FAO's goal in 2023 is to increase awareness of millets' production potential and enable the adoption of necessary policies which can maximise its nutritional and health benefits. Such policies should enable the creation and scaling of new sustainable market opportunities for producers and consumers.[5]

The following sections explore production and consumption patterns developing in key millet-producing regions, using examples of national and international ongoing public and private efforts that are affecting these patterns. Development actors, including financiers, can get new insights into the hypothetical (and audacious) question 'should we go all in on millet?'. While the answer is likely 'no', the question is illustrative of the growing number of public nutrition campaigns, processors and brands which, in recent years, have started to aggressively promote millet's nutritional and health benefits. The article includes case studies enterprises (as well as a project) which exemplify the diverse opportunities of investing in processors and brands to achieve farm-level and consumer-level impact.

Global production and consumption patterns

Production of millets

World millet production is estimated at 30.6 million tons in 2022. While millets are grown in more than 93 countries worldwide, only a few countries have a sizable production. India alone is responsible for 39% of global production, followed by Niger (11%) and China (9%). As a region, West Africa is the largest producer (Table 1).

Table 1 | Top global millet grain producers

India	11.8
Niger	3.4
China	2.7
Nigeria	2.0
Mali	1.8
Sudan	1.5
Ethiopia	1.1
Burkina Faso	1.0
Senegal	1.0

Sources: USDA and Index Mundi[6]

In most millet producing Low- and Middle-Income Countries (LMICs), the crop's production has declined over the past decades due to shifts to other staples, changed food habits, and ensured returns from major commercial crops (Meena et al. 2021). Only few countries, including China, recorded increasing production levels. Recently, however, there are different efforts underway to put millet back in the global spotlight. In India, the government has promoted millet production for over a decade already, starting with rebranding millets as 'nutricereals' instead of calling them 'coarse grains'.[7]

Millets' characteristics as dryland cereals make them much more resilient crops than maize and other major cereals and offer good insurance against crop failure. Millets offer shorter maturity periods – around 60-90 days for some cultivars - and lower post-harvest losses than other staples (Kaminski & Christiaensen, 2017). These can be important advantages for small-scale farmers, who account for the large majority of worldwide millet production, particularly as millets can be grown on arid lands and nutrient-depleted soils with minimal inputs such as water or fertiliser (Hassan et al., 2021). Finally, unlike wheat, maize and rice, millets emit little or no greenhouse gases (Saxena et al., 2019).

There are still a number of major production constraints, including limited access to modern equipment and technologies, such as good quality seeds and improved varieties and incidences of diseases, pests and weed infestations. Additionally, traditional methods of post-harvest processing (dehulling) are labor-intensive and time-consuming, and modern processing facilities are limited (Meena et al., 2021). In Mali, for example, according to the Institute of Rural Economy, the main challenges in promoting millets include limited availability of millet grains as raw material to processors, unattractiveness of packaging

[3] https://www.fao.org/millets-2023/en
[4] https://pressroom.icrisat.org/millets-the-nutritional-powerhouses-making-a-comeback-in-2023
[5] https://www.icrisat.org/smartfood/
[6] https://ipad.fas.usda.gov/cropexplorer/cropview/commodityView.aspx?cropid=0459100 and https://www.indexmundi.com/agriculture/?commodity=millet&graph=production
[7] https://www.bbc.com/travel/article/20230208-why-2023-is-the-year-of-millets

of end products, difficulties in transportation and storage, lack of capital to invest in machinery, lack of available equipment leading to manual labor still widely spread which limits outputs, and a lack of millet-specific capacity building for processors.[8] These challenges speak to the underinvestment in and under-development of millet value chains in major production countries, which makes it difficult to scale up production and meet the growing demand for millet products.

Consumption of millets

The Sahel region of Africa dominates global consumption of millets, followed by India, as the largest single consumer of millets. Most millets are consumed where they are produced, but there is also growing trade and important importers include Indonesia, Germany, Iran, Belgium and South Korea, among others.

About 80% of the millets produced are used for human consumption, while the rest is used as animal fodder and for beer production (Vinoth & Ravindhran, 2017). Individual kernels are commonly ground to make flour, which is then made into a thin or thick consistency porridge in many African countries, while in other areas it is consumed as a flatbread (e.g., dosa in India) or baked into a fried cake (e.g., masa in Nigeria) (Hasan et al., 2021). The shelf life of millet flour is short due to the presence of polyunsaturated (healthy) oils but can be extended using heat treatments and/or antioxidants (such as vitamin E or rosemary extract).[9]

Millets fell out of favor in many countries and started being seen as an old-fashioned poverty crop. In Senegal, for instance, consumption fell from 78 kilograms per capita in 1990 to 49 kilograms per capita in 2009 (Resnick et al., 2020). In India, per capita consumption of millet fell from 32.9 kg to 4.2 kg between 1962 and 2010.[10] British colonizers disregarded millets in favor of wheat and other crops but with the Green Revolution millets' downfall accelerated as the government pushed for hybrid, high-yield varieties of wheat and rice.[11] Crops that were once widely consumed became mere fodder crops. Millets gained a reputation as the food of rural and tribal communities and over time, they simply disappeared from households' menus.

Recently, millets' diverse health and environmental benefits are beginning to be appreciated once more. In the example of India, this is partly due to the country facing the triple burden of hunger, malnutrition and over-nutrition, whilst environmental resources are being depleted. The Indian government made significant investments in promoting millets' many qualities to urban and rural consumers. Demand for millets is increasing and the crop is finding its way back into Indian diets.

At a global level millet is making an impressive comeback, with the global market being estimated at $9 billion in 2018. This is expected to grow to more than $12 billion in 2025.[12] Drivers for the anticipated growth are millets' production advantages over rice and wheat, in particular in a dry climate, and the cereals' multiple health benefits, including calcium, iron, fibers, vitamins, phosphorus, magnesium and manganese. Rising awareness towards healthy diets is expected to drive growth, especially among the rising urban population in Asia. As millets are also gluten-free, they offer opportunities to produce gluten-free products.

In sub-Saharan Africa, and especially in West Africa, many processors are promoting millet consumption by proposing new types of ready-to-cook or ready-to-eat millet foods (as opposed to selling millet products which require overnight processing (i.e., soaking) at home). For example, in Mali, a variety of new millet products are available in most small food stores, supermarkets and outdoor markets, such as couscous, granules of porridge and cream (Degue), millet flour, Larau (a mix of millet, groundnut and spices), millet biscuits, breads, pane cake, Takoula (bread made on vapor), infant foods, etc. In urban areas of Mali millet is considered a cereal for rich people, as higher prices of new millet products make these unaffordable to low-income consumers. Millet is used in many breakfast foods (porridge, fried cake, pane cake), often sold by women in small stands in urban areas.

Today the growing demand in West African countries leads to one of millet processors' main challenges: the low supply of raw material, i.e., millet grains. Although the effort will take long, Indian urban consumers are being educated in the tastes and benefits of new millet products, and here too, demand is on the rise. It remains to be seen if international (Western) markets will catch up.

Millets as a superfood

The United Nations estimate that almost 3.1 billion people could not be able to afford a healthy diet in 2020, an increase of 112 million more people than in 2019 due to rising food costs. Particularly in Africa, a healthy diet is out of reach for 80% of the population, followed by Asia with 44% (FAO et al., 2022). While this may not lead to obvious hunger effects, it can cause different forms of malnutrition, including undernutrition,

[8] Interview with representative of the Institute of Rural Economy (16 May 2023).
[9] https://www.harvestplus.org/wp-content/uploads/2023/02/Iron-Pearl-Millet.pdf
[10] World Food Program and Odisha Millet Mission 2022. Increasing the consumption of millets: need of the hour. https://docs.wfp.org/api/documents/WFP-0000144439/download/?_ga=2.50371434.299532067.1684301226-1701232443.1681377916
[11] https://www.bbc.com/travel/article/20230208-why-2023-is-the-year-of-millets
[12] Oswal, S. (2023). The importance of Millets in today's global scenario. The Times of India. https://timesofindia.indiatimes.com/blogs/voices/the-importance-of-millets-in-todays-global-scenario/

Photo: KIT

micronutrient deficiencies and overweight / obesity (FAO, et al., 2022). Micronutrient deficiencies are widespread, as people rely on staple foods, such as rice, which are low in micronutrients to meet their energy requirements (FAO et al., 2022). Hence, improving micronutrient availability in foods, especially iron (Fe) and zinc (Zn) is important to address underlying causes of malnutrition.

Different efforts to deliver nutrient-dense foods to poor populations can be distinguished: (1) food fortification and (2) biofortification. **Fortification** is the practice of deliberately increasing the content of one or more micronutrients (i.e., vitamins and minerals) in a food or condiment to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.[13] The usage of millets in fortified products has already gained some traction in infant food and nutrition products. Many countries have laws or policies to promote the use of post-harvest, industrial fortification to add iron to flour and other foods, but they are rarely enforced.[14] In addition, while fortification is a cost-effective strategy, it remains difficult to ensure the availability of these fortified foods to people living in remote areas (Gangashetty et al., 2021).

Biofortification, on the other hand, refers to adding micronutrients through techniques of crop crossbreeding with varieties of higher concentration of desired micronutrient(s) such as minerals and vitamins. The advantage here is the potential to supply essential micronutrients to large segments of the population without requiring radical changes in food consumption patterns nor individual decision for compliance (FAO et al., 2022).

The HarvestPlus programme of CGIAR is leading a global effort to breed and disseminate micronutrient-rich crop varieties, including pearl millet, through partnerships in developing countries. In India, a high-iron (Fe) and zinc (Zn) open-pollinated variety (OPV) of pearl millet, called Dhanashakti, was developed and released in 2014, followed by a hybrid pearl millet variety with similar iron and zinc levels. In West Africa, OPVs with higher Fe/Zn levels were tested in different countries (Niger, Nigeria, Mali, Burkina Faso, Senegal and Ghana). To date, two OPVs and nine hybrids of pearl millet have been released in India (since 2014), Niger (2018) and Nigeria (2023). Annex 1 gives a full overview of these new varieties.

Public programmes enabling a re-emergence of millets

Various public and public-private programmes have been initiated in recent years, to promote millets' production and consumption. A few examples from West Africa are given below, as well as a description of India's efforts, a country which has invested heavily in millets over the past decade.

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Mali, is co-lead of the five-year project Enhancing Crop Productivity and Climate Resilience for Food and Nutrition Security (EU-APSAN). This is part of ICRISAT's focused efforts on increasing the popularity of smart foods, starting with millet and sorghum. The institute is training women associations and individual processors on improved new technologies of processing millet. It developed the scientific Smart Foods concept, marketing strategies and messaging, and worked on the classification and accreditation of smart foods.[15] The approach of ICRISAT also aims to create consumer demand through viral campaigns, to facilitate processing of modern convenience products with Smart Foods, and to engage with the health, food service and media industries. ICRISAT is filling knowledge gaps, identifying and addressing scientific research needs on how smart foods affect consumers (nutrition and health), the planet, the farmer and the whole value chain (cooking, processing, marketing).

The EU-APSAN project goals formed the main themes in a recent conference on 'Smart Foods' in which millet's potential for climate mitigation and health were highlighted. Many attendees aimed to learn about the development of millet value chains and how to enable more efficient and profitable millet processing as a Smart Food, attractive to both rural

[13] https://www.who.int/health-topics/food-fortification#tab=tab_1
[14] HarvestPlus (2023). Iron Pearl Millet. Improving food and the food system with a naturally nutritious harvest. https://www.harvestplus.org/crop/iron-pearl-millet/
[15] https://www.icrisat.org/smartfood/

and urban consumers.[16] The EU-APSAN-Mali project is undertaking market demand studies for different improved, hybrid millet varieties, and is planning various interventions to increase this demand.[17]

ICRISAT is providing an agribusiness incubator service and an Innovation Platform which brings together public-private partners, providing training, mentoring, access to finance and research and technology (e.g., on improved millet varieties). In India, 74 women farmers were trained by ICRISAT as nutrition entrepreneurs, to produce ready-to-cook and ready-to-eat millet and legume products that are supplied to childcare centres.[18]

Another example of a project which uses millet as a main 'quality, fortified, manufactured food product to prevent malnutrition' is MERIEM (French for: Mobilizing Sahelian Businesses for Innovative, Large-scale Responses to Fight Malnutrition), active in Mali, Burkina Faso and Niger (Monroy-Gomez et al., 2022).[19] This project is funded by the French Development Agency and the Bill and Melinda Gates Foundation and brings together NGOs and academia to test innovative commercial solutions with Sahelian private sector partners in response to malnutrition and related health issues in Sub-Saharan Africa. The actors aim to tackle anaemia ('45% of women in the target countries'), and malnourishment ('up to 19% in peri-urban areas'). MERIEM addresses availability and affordability of millet products, to address the problems identified in cities such as Ouagadougou where only 14% of outlets offer locally produced fortified foods for young children.

In Senegal, an international consortium (Food Processing and PostHarvest Handling Innovation Lab) aims to alleviate micronutrient deficiencies, reduce post-harvest losses, link farmers to markets, increase marketing opportunities, and increase and diversify food-processing markets for cereal and legume products (De Groote et al., 2021). The project introduced a market-driven model for nutritionally enhanced foods, produced using novel technologies, and promoted consumers' acceptance of four new pearl millet products, each with different traits: instant products, whole meal products, products fortified with commercial premix, and products with food-to-food fortification. Part of the project was an experimental study with 296 consumers from Dakar, which evaluated sensory characteristics as well as willingness to pay (WTP). Some fortified products' sensory attributes were appreciated by consumers, who showed a willingness to pay premiums between 9 and 30 percent if offered nutritional information on the packaging, with the highest premium paid for whole grain instant millet fortified with premix (De Groote et al., 2021).

India and the IYM 2023

Millet diets in India phased out one to two generations ago, but there has recently been a surge in the government's promotion of millets. Hundreds of startups are raising consumers' awareness of the nutritional benefits of millets, and Indian urban consumers are slowly reintegrating millets into their diets (Dayakar and Tonapi, 2021). Realising the potential of millets for food and nutrition security, the Indian government has already taken several steps since 2012 to promote production and consumption, including celebrating the national year of millets in 2018. Now India is seeking to be at the forefront in celebrating IYM 2023, with public support by India's Prime Minister Narendra Modi. Speaking at the Global Millets Conference in March 2023, he called millets a solution for the problem of food and nutritional security faced by the world.

To mark the IYM 2023, India developed a multi-faceted action plan as a concerted effort involving Central Ministries, State Governments and Indian Embassies, but also societal stakeholders including farmers, start-ups, exporters, businesses, and hospitality organisations. The purpose is to position India as the 'Global Hub of Millets' and to enhance their production, processing, consumption, and exports. Activities are planned, aiming at various audiences. To promote millet production, incentives are provided to farmers under the National Food Security Mission, including farmer training, technology demonstrations and seed production programmes. There are also different incentive schemes to promote primary processing and production of millet-based foods, including for micro-entrepreneurs. Linked to this, the Indian Institute of Millets Research, recently upgraded as a Centre of Excellence, is undertaking various research projects related to shelf-life, food standards, value addition and product development. Finally, at consumption level, the government has rolled out several awareness-raising campaigns ranging from millet food festivals, releasing recipe books, including millet in school feeding programmes, and having airlines and railways serve millet dishes.

A recent study points out that millets in India[20] are in the 'boom' phase, and warns of a potential bust, comparing it with teff in Ethiopia and quinoa in the Andes (Andreotti et al., 2022). Risks include price escalations, the rapid increase in non-farming consumers coupled with slowly improving yields which can create a demand-supply gap, and the increase in exports by main producers which may negatively affect local markets.

[16] https://www.icrisat.org/eu-and-icrisat-in-mali/
[17] https://ue-apsan-mali.com/en/home/
[18] https://pressroom.icrisat.org/harvesting-hope-empowering-tribal-women-as-millet-entrepreneurs
[19] http://www.meriem-nutrition.org/en/
[20] Authors' note: and perhaps soon in other producing countries.

Empirical cases

The Common Fund for Commodities (CFC) has been committed to support the cultivation and development of sorghum and millet as food security and income-generating crops since 1994. Over the years, the CFC has committed over USD 8 million to initiatives focused on these vital crops. These cases below explore CFC's and other sorghum development projects, elucidating the strategies employed, funding challenges, and the consequential impact on communities that rely on sorghum and millet for food security and economic sustainability. CFC's continuing support extends beyond mere financial assistance, underpinning a broad spectrum of agricultural development with significant implications for poverty alleviation and socio-economic advancement.

Case 1: *the valorisation of millet by ICRISAT and the Common Fund for Commodities*[21]

Between 2005 and 2009, ICRISAT and the CFC have funded and implemented the project *'Enhanced utilisation of sorghum and pearl millet grains in poultry feed industry to improve livelihoods of small-scale farmers in Asia'*. Active in India, China and Thailand, the partners invested USD 2.1 million (including a USD 1.5 million grant from the CFC) in a range of interventions and technologies, targeting 7,500 small scale farmers organised in farmer organisations. Other targeted beneficiaries included business support service providers, off-takers, processors and local financiers.

A total of 15 partners were associated with the project in India, nine in China and five in Thailand. ICRISAT partnered with local universities and crop research institutes to identify suitable technologies which can increase production and to train farmers in adopting and using them. NGOs and farmers' federations organised farmers into nine associations, which cascaded training, organised demonstrations and marketed the grains. Other partners included improved-varieties seed and input suppliers, feed manufacturers and grain processors who also provided offtake, storage and transport services.

As a precursor to public-private initiatives promoting biofortified varieties for human consumption and nutrition objectives, this project from ICRISAT and the CFC introduced and distributed 35 improved varieties and hybrids of sorghum and pearl millet seeds.

Over 100 training sessions were organised for over 7,500 farmers (including 3,000 women) on improved technologies, new science tools in agriculture, soil testing, planting, intercropping, integrated crop, nutrient and pest management, harvesting, seed production, storage, marketing, organisational management and finance. The project produced information materials in local languages and held over 175 field demonstrations on farmers' fields. Scientists visited farmers regularly to address any production challenges. Farmers were linked to seed and input suppliers and encouraged to make direct purchases. Eight village-level warehouses were built, and the famer associates were trained in managing them, enabling the storage of produce and its sale at favourable times. Partners also organised the provision of low-interest loans, enabling farmers to buy inputs and to store grains until prices improved. Ultimately, the partners organised regular meetings between the farmers' associations and private-sector buyers, which led to strong partnerships and the sale of grains in bulk at price premiums.

Impact achieved by the project

The project reached 6,290 families in 71 Indian villages, and 506 families in seven villages in Thailand, and 631 families in nine Chinese villages. To improve production, the project distributed the seed of these improved varieties and hybrids for farmers to buy. It built village grain storage warehouses and facilitated low-interest loans and links with buyers. It helped the farmers organise themselves into farmers' associations, provided them with training and information materials. A contract farming model was popularised in China, with three buyers making purchasing arrangements with around 150 families. Among project beneficiaries in India, yields of pearl millet grain rose by an average of 32%, and fodder yields went up by 20%. Yields of sorghum increased by 19% to 73%. By buying in bulk, farmers were able to cut the cost of seed by 13–51%. Adoption rates of improved varieties and hybrids ranged from 3 to 88%.

The warehouses attracted several processors to buy grain, and convinced banks to provide short-term credit to the farmers to meet immediate cash needs using the stored grain as collateral. Market links were created between farmers' associations and various food, alcohol and poultry feed processors. In China, associations were engaged in contract farming with the alcohol industry, with three buyers buying sorghum at or above an agreed floor price. In Thailand, two years after the project ended, farmers were selling sorghum to the duck-feed industry and mushroom producers.

While the participation of women in Thailand and China was satisfactory from the start, in India, cultural reasons meant that initially only a few women farmers participated. The project partners promoted women's involvement (e.g., women's self-help groups were included in seed distribution) and women's leadership in trainings and in the management committees of farmers' associations.

[21] All information based on 'From Sorghum to Shrimp' report by Royal Tropical Institute and Common Fund for Commodities (2011)

Photo: KIT

KEPHIS and TEGEMEO representatives inspecting a sorghum farm

Case 2: *the valorisation of millet by Shalem, Kenya*

Shalem Investment Ltd. (Shalem) is an innovative social for-profit business aggregating, transporting, and marketing grains, cereals and legumes for use by agri food processors (i.e. East African Breweries, Unga Ltd, and Bidco). In the last five to six years, Shalem transitioned from a grain aggregator to an added-value manufacturer and deepened its producer engagement. The company provides 46 full-time and 401 temporary jobs.

In 2017 Shalem obtained a loan co-financed by the Common Fund for Commodities (CFC), which was used to build a storage facility, to allow its supplying smallholder farmers to benefit from periods of high prices. Shalem's vision is exemplified in the recent food prices rise (e.g., maize prices in Kenya almost doubled in 2022). The company absorbed the added purchasing costs, aiming to offer affordable products to consumers with limited purchasing power.

The CEO of Shalem reports in 2023 that their use of millet is still limited, but that she recognises the growing interest in biofortified millets. The company so far uses pearl millet and finger millet for producing porridge flour.[22] Shalem built a processing factory in 2019, in which they fortify foods (mainly sorghum) with minerals and vitamins. These value-added products account for 70% of its revenue, which Shalem obtains from its targeted low-income consumers (52,000 individual consumers in 2021).[23]

Marketing activities of Shalem are centered around the promotion of quality milled products. These are ranging from maize flour to porridge, fortified with extra minerals and vitamins 'to provide health benefits that will extend your life and improve your life through what you eat.' The first nutritional products, Asili Plus and Ugali porridge, were launched in 2018 in schools. As of 2020, these are available in over 50 retail locations.

Current and potential impact of Shalem's use of millet

In 2021 alone, Shalem supported more than 40,000 smallholder farmers (100% increase since 2017), of which 74% were women, boosting household incomes by an average of USD 240 per year. Technical assistance and trainings to 20,000 producers have led to average yields of 1,350 kilograms per hectare (kg/ha), up from a minimum of 650 kg/ha in 2020. For the coming five years, Shalem is in the process of expending the topics of its agronomic training programmes, adding soil testing, linking farmers to certified seeds and other farm inputs, assisting them in adopting new technologies and providing access to microloans. These improvements are expected to further increase yields and volume sourced and to create an additional 17 full time jobs.

Besides the support and price stability for smallholder suppliers, Shalem aims to provide affordable nutritional food for the poorest people in the region. More than 50% of its sold products will be fortified with needed minerals and vitamins, although there are no targets yet for millet specific ingredients.

CFC support

CFC provided a loan to Shalem, to enable the company's investment in storage and processing facilities, for Shalem to access the Bottom-of-Pyramid (BoP) market with more innovative nutritious blended food.[24] Shalem aims to invest in a storage facility and in a value addition facility for maize cleaning and blending with sorghum, millet and beans for better nutrition bonding. These investments would reduce the financial risks that local farmers are facing due to volatile maize prices while addressing the need of their nutrition security.

[22] https://shaleminvest.co.ke/index.php/asili-plus/
[23] Information on the business case of millet products versus other products in the portfolio was not obtained.
[24] https://www.common-fund.org/reducing-vulnerability-price-volatility-kenya

Photos: Health Sutra

Products under the brand name Health Sutra, by Fountainhead Foods, India.

Case 3: *the valorisation of millet by Fountainhead Foods, India – Health Sutra brand*

Health Sutra is one of India's first brands that sources millets directly from farmers and processes them for creating innovative and convenient food formats. The founder of Fountainhead Foods Private Limited, with a background in engineering, switched careers as he realised the potential impacts of millets in his home country. The company was established in 2013, with the dual mission to solve farmers' challenges related to growing crops in dry areas, and to help modern urban individuals to eat healthier.

Under the brand name of Health Sutra, the company launched 25 products, in categories of flakes, biscuits, rawas, beverage mixes and diet namkeen. About 80% of sales come from products which are 100% millet. 20% of sales come from products which are 30-40% millet. These are currently sold in over 3,500 retail locations around the city of Hyderabad, with a geographic focus on Southern India.[25]

In 2018, the Indian Chamber of Food and Agriculture selected Health Sutra as one of the 20 best agri-startups.[26] In the last five years the company experienced significant growth and as of 2023 it is processing 30 MT per month. Health Sutra currently employs 25 full-time staff (15 female, 10 male), the majority in production and sales. It has a total annual turnover of USD 500,000. A new USD 6 million factory, partly financed by a local bank, opens in October 2023.

The first and largest over-arching challenge for Health Sutra (and for similar millet-focused companies) is that advanced processing technologies and techniques for millet are not yet available, compared with those used in maize-based breakfast cereals in Western supermarkets.[27] Secondly, the lack of awareness from consumers requires large investments in marketing and millet startups recognise that it is 'early times for the millet sector and there is a long way to go.'[28]

To overcome these challenges, Health Sutra invested in a new factory, and experimented with various marketing and promotional messages (e.g., on packaging, website, through videos and social media). The company believes that millets will be back in mainstream diets, if customers feel that it is easy to use, cook and consume. Consumers should not be required to put in any additional efforts versus what they are already used to when consuming ready-to-eat products. This is why Health Sutra's founder

[25] http://www.healthsutra.in/products.php
[26] https://www.icfa.org.in/assets/doc/reports/all-india-agri-startup-convention-2018.pdf
[27] Interview with Health Sutra CEO.
[28] idem

focuses on the company's innovations in the processing of ingredients, for example by producing ragi from finger millet, which can be consumed simply as a breakfast cereal. The company pre-cooks and pre-soaks millet grains (time and effort-intensive activities which other bottom-of-the-pyramid consumers, for example in West African countries, commonly do themselves at home).

Current and potential impact of Fountainhead Food's use of millet

The creation of innovative millet products was enabled by the Indian Council for Agricultural Research, which provided Fountainhead Foods with technologies and recipes for producing instant millet mixes, jowar vermicelli (a gluten-free and protein rich millet), multigrain atta (a type of flour) and cookies. After working with the public institute on natural processing methods, Fountainhead Foods reintroduced traditional Indian millet grains in tasty formats 'suitable for modern lifestyles'.[29]

The Health Sutra promotional messages currently centre almost entirely on millet's benefits for health-conscious consumers (rather than on socio-economic or environmental benefits for producers). Various myths around millet are broken down in videos on the company's YouTube channel and websites, recipes are promoted, and each product is presented with facts about its nutritional properties. For example, for the brand's foxtail millet products, the following benefits are described:

- Foxtail is packed with good quality fibre which improves digestion, manages obesity, regulates blood sugar levels and curbs the risk of high blood pressure and strokes. 100gm of Foxtail contains more than 8 grams of dietary fibre.

- One cup of Foxtail has 29 grams of Protein. Protein helps in building muscles, cell regeneration, and gives a feeling of satiety which further helps in weight reduction.

- Low glycaemic index, High-fibre and good Protein content of Jowar makes it an excellent diabetic option. Both fibre and protein in Jowar help slow down the release of sugars into the blood preventing sugar fluctuations thereby controlling Diabetes.

- Iron and copper are two important minerals found in Foxtail. Iron is crucial for development of red blood cells in the body, while copper helps enhance the absorption of iron in the body thus improving overall circulation of blood in the body

For Health Sutra's founder and CEO, the opportunities for creating a profitable business case for a millet-brand, coincide with the grain's impact potential opportunities. These can be grouped in three categories: nutritional (millets have a large number of unique selling points in this category, which helped in the growth of Health Sutra sales), climate resiliency (millets are the most climate resilient crop on the planet, although promoting this to consumers did not translate to sales), and traditional diet aspects (which when used in marketing activities also did not result into increase sales).[30] The Health Sutra founder compares millet with quinoa, a grain native to South America, which is exported and consumed around the world: 'Millets can stand on their own against any other super food. Foxtail millet for example has very good amount of protein, a macronutrient in high-demand.'[31]

The business case is positively affected by the brand's distribution and sales through physical retail locations. As the company's breakfast products are voluminous in nature, logistics costs for online sales and delivery would be too high. Such costs cannot be absorbed by an increase in prices. As Health Sutra's customers have many mainstream products (millet alternatives) available, consumer prices need to stay competitive. The company cannot ask for premiums above 20-30%, which it currently charges for the products' nutritional benefits.[32]

The founder of Fountainhead Foods and his partners believe in the potential for an increase in local consumption but also in exports (exemplified by their recent investment in a new factory). India has many advantages in terms of affordable inputs and labor and food production and processing offer many opportunities. Compared with other producing countries, the operating environment is very stable (many producers were affected by the Russia-Ukraine war). According to the Health Sutra founder, large companies in India are also looking at adding millet to their products. Smaller and up-and-coming businesses such as Fountainhead Foods would benefit from an increase in the size of the millet market, with large players driving more consumer awareness and smaller players riding this wave.[33]

Farm-level impact is primarily achieved through the climate-resilient properties of millet and through the increase in prices over the past years. For example, Health Sutra is purchasing pearl-millet at 50-60% higher prices than 7-8 years ago, and its founder recognises the various governmental policies which have contributed to these increases.[34]

[29] http://www.healthsutra.in/our-story.php
[30] Personal communication with Health Sutra CEO.
[31] idem
[32] idem
[33] idem
[34] idem

Photos: Wacoul

Products under the brand name Wacoul Services

Case 4: *the valorization of millet by Wacoul Service, Mali*[35]

From aggregation to value-added processing of biofortified millet

Wacoul Service is a firm specialised in agro-processing in Mali. It was created in 2017 by Mrs. Raihatou Wague with the aim to promote the consumption of locally produced foods and the creation of jobs for women and youth.

Wacoul sources and processes a large number of agricultural products including: fonio, rice, sorghum, millet, groundnut, mangos, bissaps and gengember. Amongst the company's output products are: pre-cooked fonio, pre-cooked djouka, couscous of millet, millet flour, Tiagri, Segou Degue, brisure of maize, Monikourouni (porridge granules), instant drink of mangos, bissaps and gengember, biscuits of millet, Larau (mix of millet, groundnuts and spicies), fried cake of millet and pane cake of millet.

Wacoul sources millet grains, paying in cash, and supports farmer groups from Baraweli in the Segou region. Building sourcing and trust relationships with farmers was difficult in the beginning, but at present a good collaboration is established. Aggregation and processing occur at the company's facilities in Bamako, with end products being sold at the same location or at local retailers (small shops and supermarkets). Small volumes are also exported to Gabon, Guinea, Senegal and France.

The company's processing capacity is 50 metric tons of millet per year. It has 14 employees among which four are permanent. It is managed by the owner, director of production and a director of marketing. Its close partners are the national Laboratory of Food Technology (LTA) of the National Institute of Agriculture Research (IER) of Mali and various NGOs.

Wacoul Service participates regularly to promotional fares where it exhibits its products. The company's director travelled to India for an exposition where she was introduced to new millet products, which she is now aiming to produce in Mali. One of these will contain a fortified millet formula with iron, zinc and vitamins, targeted as a nutritional product for both infants and adults.

Main challenges faced by the company related to its access to raw material (millet grains), in enough quantity and of sufficient quality, the instability of market prices of end products, the lack of 'adapted' equipment to process big quantities, and the inappropriate packaging available on the market for storage over long periods, for transportation over long distances, and for appropriate consumer-friendly, attractive marketing.

The company highlights the opportunities arising from its use of millet compared to other crops, such as: the diversity of food types of millets, the use of millet in almost all cultural, ceremonial (funeral, weeding, baby showers, etc.) religious dishes, the gluten-free and easy to digest properties, the richness in micronutrients, the existence of local and international markets, the availability of biofortified new varieties, and the opportunities to generate new jobs for women and youth.

Current and potential impact of Wacoul Service's use of millet

As millet can be produced on low-fertility soils and tolerates high temperatures resulting from climate change in sub-Saharan Africa, the company considers the use of millet as urgent. It can reduce the productivity losses and it can contribute to fighting against food insecurity and extreme poverty in rural areas.

Wacoul's mission is to leverage the diversity of millet products and markets (domestic, regional and global), to enable job creation for women and youth in processing, distribution and sales. The promotion of processing opportunities for smallholder millet farmers offers a cash alternative and leads to a higher motivation for investing in production, using improved seed varieties and fertilisers to increase productivity.

As a third impact area, the company recognises millet's health benefits, due to its micronutrient rich properties.

[35] All information based on the interview with the company's director.

Conclusions – Do we go all-in?

From the increase in the number of public and private-public programmes promoting millets, and from various recent studies on the crop's climate-resiliency and nutritional properties, we conclude that millets form some of the most dynamic and fastest-growing value chains in LMIC. An increasing number of startups active in processing and branding millets as ready-to-eat or ready-to-cook products are benefiting from the growing interest in millet as well as fuelling this trend. India seems to be positioning itself as a global leader in moving the millet sector towards a modern, consumer-focused market. In West Africa, countries like Senegal and Mali are supporting the upscaling of a large share of micro-businesses into SME processors, brands and retailers, presenting unique opportunities for creating employment and wealth among youth and women entrepreneurs (Resnick et. al., 2020).

The renewed global interest in millets can be seen in conjunction with several global and regional developments, such as the reoccurring droughts (e.g., in Africa), the war forged by Russia in Ukraine which led to a spike in food prices and fertiliser prices across the world, and the increasing realisation of the contribution of wheat, rice and maize production to global warming. However, millet value chain actors are confronted with underinvestment, high marketing costs, unstructured markets and millet's old stigma as a poor person's food (Resnick et. al., 2020). If millet is to make a compelling comeback, innovative, multi-disciplinary partnerships, programmes and technologies must be employed, covering the largest possible spectrum of the crop's value chain, from field-level improvements, innovations in processing and branding and consumer acceptance of new products to the policies affecting the sector. Policies need to target the emerging millet processors to enable access to finance, services, knowledge and technology, to create competitive domestic, regional and global sectors, drive innovation and meet consumers' preferences and food standards.

International organisations are calling for increasing the production of millets, particularly due to their ability to grow in hot and drought-stricken regions. ICRISAT, for instance, estimates that millet production (pearl millet and sorghum) can be enhanced in Africa by at least 2-3 times in 2022/23, to solve food security threats, such as the anticipated wheat crisis. However, with the enthusiasm present in producing countries' markets and in international development discourse, the risk to repeat previous mistakes must be counterbalanced. Millet markets should not repeat the boom-and-bust cycle evidenced for example in the quinoa and teff sectors (Andreotti et al., 2022) (Box 2).

Depending on the audience, the answer to the question of 'going all-in on millet' will obviously vary, per interest, resources and region. Two of the enterprises interviewed for this article (Health Sutra and Wacoul), have certainly placed their bets on millet, and its environmental and climate benefits for producers, its potential for job creation (processing, marketing, sales) and income increase (for producers and successful processors and brands), and its nutritional benefits for a wide range of consumers. Other grain processors (Shalem) are more cautious but are also witnessing an increased interest in millet and are exploring opportunities to source and use more of this grain.

Analysing recent literature and taking a systemic view, it is likely that production and processing-related challenges of millet value chains, such as access to quality seeds and processing equipment, are not that much different from those of other staple crops. Yet the opportunities seem compelling, compared to other cereal crops. The growing public and private support of millet value chains – from production to consumption – is indicative of the vast potential of this crop in supporting farmers' livelihoods, improving nutrition levels of both poor and affluent consumers, and making an important contribution to climate change adaptation. Moreover, by harnessing the potential of millets, we can address the challenges of food and nutrition security, promote sustainable agriculture, support rural livelihoods, and contribute to a healthier and more resilient food system.

Box 2 | Risks for millet markets to enter a boom-and-bust cycle such as those in quinoa and teff

After 2013 was declared International Year of Quinoa, it gained reputation as a superfood. After being promoted globally, demand in Europe and North America quickly grew, international prices elevated, and quinoa markets boomed. As a result, in the Andean region, where quinoa had long been just a locally consumed crop, saw a sudden transformation in its economic and social structures, and the soaring demand led farmers to ignore traditional farming practices, including fallow periods between harvests, and increasingly large-scale farming models were introduced. Soon output was doubled. Meanwhile, production was promoted in several other countries and while quinoa consumption increased, production grew even more, resulting in oversupply and a decline in prices.

Andreotti et al., 2022

References

Andreotti, F., Bazile, D., Biaggi, C., Callo-Concha, D., Jacquet, J., Jemal, O.M., King, O.I., Mbosso, C., Padulosi, D., Speelman, E.N., van Noordwijk. M. 2022. When neglected species gain global interest: Lessons learned from quinoa's boom and bust for teff and minor millet. *Global Food Security*, 32, 100613.

Dayakar, B.R. and Tonapi, V.A. 2021. A Compendium of Millet Start-ups' Success Stories. ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad. https://millets.res.in/pdf/success_stories/Compendium_Success_story_30-09-21_for_web.pdf

De Groote, H., Munyua, B., Traore, D., Taylor, J.R.N., Ferruzzi, M., Ndiaye, C., Onyeoziri I.O. and Hamaker B.R. 2021. Measuring consumer acceptance of instant fortified millet products using affective tests and auctions in Dakar, Senegal. *International Food and Agribusiness Management Review. Volume 24, Issue 3*, 2021. doi: 10.22434/IFAMR2020.0068

FAO, IFAD, UNICEF, WFP and WHO. 2022. The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable. Rome, FAO. https://doi.org/10.4060/cc0639en

Gangashetty P.I., Riyazaddin M., Sanogo M.D., Inousa D, Issoufou K.A., Asungre P.A., Sy O., Govindaraj M. and Ignatius A.I. 2021. Identification of High-Yielding Iron-Biofortified Open-Pollinated Varieties of Pearl Millet in West Africa. *Front. Plant Sci. 12:688937*. doi: 10.3389/fpls.2021.688937

Gebreyohannes, A.; Shimelis, H.; Laing, M.; Mathew, I.; Odeny, D.A.; Ojulong, H. 2021. Finger Millet Production in Ethiopia: Opportunities, Problem Diagnosis, Key Challenges and Recommendations for Breeding. *Sustainability 2021, 13, 13463*. https://www.mdpi.com/2071-1050/13/23/13463

Hassan, Z.M., Sebola, N.A., & Mabelebele, M. 2021. The nutritional use of millet grain for food and feed: a review. *Agriculture & Food Security, 10*. https://doi.org/10.1186/s40066-020-00282-6

Kaminski, J. & Christiaensen, L. 2014. Post-harvest loss in sub-Saharan Africa – what do farmers say? *Global Food Security, 3(3-4),* 149-158.

Meena, R.P., Joshi, D., Bisht, J.K., & Kant, L. 2021. Global scenario of millets cultivation. In: Kumar, A., Tripathi, M.K., Joshi, D., & Kumar, V., *Millets and Millet Technology*, pp. 33-50. DOI:10.1007/978-981-16-0676-2_2

Monroy-Gomez, J., Ferraboschi, C., van Zutphen, K.G., Gavin-Smith, B., Amanquah, D., Kraemer, K. 2022. Small and Medium Enterprises' Perspectives on Food Fortification Amid the Growing Burden of Malnutrition. *Nutrients 2022, 14, 3837*. https://doi.org/ 10.3390/nu14183837

Resnick, Danielle, ed.; Diao, Xinshen, ed.; and Tadesse, Getaw, ed. 2020. 2020 Annual trends and outlook report: Sustaining Africa's agrifood system transformation: The role of public policies. ReSAKSS 2020 Annual Trends and Outlook Report. Washington, DC, and Kigali: International Food Policy Research Institute (IFPRI) and AKADEMIYA2063. https://doi.org/10.2499/9780896293946

Royal Tropical Institute and Common Fund for Commodities. 2011. From sorghum to shrimp: A journey through commodity projects. KIT publishers, Amsterdam.

Saleh, A.S.M., Zhang, Q., Chen, J., & Shen, Q. 2013. Millet grains: nutritional quality, processing, and potential health benefits. Comprehensive Reviews in Food Science and Food Safety, 12. Doi:10.1111/1541-4337.12012

Saxena, R., Vanga, S.K., Wang, J., Orsat, V., & Raghavan, V. 2018. Millets for food security in the context of climate change: a review. Sustainability, 10(7), 2228.

Vinoth, A. & Ravindhran, R. 2017. Biofortification in millets: a sustainable approach for nutritional security. Frontiers in Plant Science, 8, https://doi.org/10.3389/fpls.2017.00029.

Annex 1 – List of biofortified millet varieties released

Variety Name	Other Names	Country	Year Release	Micronutrient concentration (ppm)	Yield (t/ha)	Grain Size	Grain Color	Released for	Maturity	Crop Type
LCIC MV5	**Chakti**	Nigeria	2023	74,2	3,9	Large	Cream	Sahelian Agro-ecologies	Inter-mediate	OPV
LCIC MV6	**ICMP 1970115**	Nigeria	2023	51,7	3,8	Large	Yellow	Sudano Sahelian-ecologies	Inter-mediate	OPV
LCIC MV7	**ICMP 187093**	Nigeria	2023	52,7	3,4	Large	Cream	Sudano Sahelian-ecologies	Inter-mediate	OPV
Chakti	**ICTP 8203**	Niger	2018	65	1.2-1.5	Large/ Shape: bold	Deep grey	WCA : ECOWAS regions (Niger. Togo. Burkina Faso. Nigeria. Senagal)	Extra-Early	OPV
Dhanashakti	**ICTP 8203 (Fe) 10-**	India	2014	72	2,5	Large/ Shape: bold	Deep grey	All India/ recommended for Karnataka. Maharashtra. Telangana and Andhra Pradesh states	Extra-early	OPV
Shakti 1201 (Dhoni)	**MH 2077. ICMH1201**	India	2015	74	3,6	Large/ Shape: bold	Grey	A seed company marketing/ recom-mended for Haryana. Rajasthan. Gujrat states	Early	Single Cross Hybrid
HHB 299	**MH 2076. ICMH 1203**	India	2017	73	3,3	Large/ Shape: bold	Grey	Zones A and B (adapted to Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
AHB 1200 Fe	**MH 2072 . ICMH 1202**	India	2017	77	3,2	Large/ Shape: bold	Grey	Zones A and B (adapted to Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
HHB 311	**MH 2179. ICMH 1501**	India	2018	62	3,2	Medium	Grey	Adapted to Zones A1. A & B (Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
RHB 234	**MH 2174. ICMH 1504**	India	2018	62	3,2	Medium	Grey	Adapted to Zones A1. A & B (Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
AHB 1269 Fe	**MH 2185. ICMH 1502**	India	2018	73	3,2	Large/ Shape: bold	Grey	Adapted to Zones A1. A & B (Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
RHB 233	**MH 2173. ICMH 1503**	India	2018	64	3,2	Large/ Shape: bold	Grey	Adapted to Zones A1. A & B (Rajasthan. Gujarat. Haryana. Punjab. Delhi. Maharashtra. Tamil Nadu)	Inter-mediate	Single Cross Hybrid
Moti Shakti (GHB 1225)	**ICMH 1505**	India	2019	74	3,2	Medium	Deep grey	Gujarat state release	Inter-mediate	Single Cross Hybrid
Phule Mahashakti (DHBH 1211)	**MH 2078. ICMH 1301**	India	2018	78	3,5	Large/ Shape: bold	Grey	Maharashtra state release	Inter-mediate	Single Cross Hybrid

IV

IV.1 Report on progress of **projects under implementation**

Photo: Adobe stock

Whether natural resources are a blessing or a curse depends on how a country uses and manages them. The Common Fund for Commodities (CFC) is mandated to make use of a country's commodities in ways that will bring income and prosperity for its people and the planet. CFC works to bring more income and productivity for the smallholders through a nexus between smallholders and the SMEs (small and medium enterprises) to localise the development through alleviation of poverty. In doing so, we try to provide priority to countries where poverty is widespread as are in LDCs (Least Developed Countries) and Landlocked Developing Countries (LLDCs).

CFC implements projects in partnership with governments, international organisations, and other development partners from both private and public sectors. These partnerships support commodity development measures and actions that promote and accelerate the development, expansion, and modernisation of commodity sectors so that elements of commodity dependence can be addressed.

A country is considered to be commodity export dependent when more than 60 per cent of its total merchandise exports are composed of commodities. Given that commodity dependence can have a negative impact on a country's economic development, it is important to monitor the evolution of such dependence in countries throughout the world.

The CFC supports innovative commodity development financial interventions aimed at improving the structural conditions in markets and at enhancing the long-term competitiveness and prospects of particular commodities *inter alia* including:

- increasing earnings to sustain real incomes;
- enhancing sustainability in commodity value chain activities;
- promoting value addition and enhance the competitive position of marginalised participants in the value chain;
- contributing to enhancing food security; and
- promoting production, productivity, trade, quality, transfer and use of technology and diversification in the commodity sector.

The CFC exercises due attention to the fact that agriculture is a place-based activity and the strategies that reflect the local innovations clusters need to be acknowledged and factored in. As price takers, smallholders remain vulnerable to the fluctuation of the market and thereby making our job even harder.

Commitments, financing and disbursements

The operational guidelines of the Common Fund were originally adopted under the Agreement Establishing the Common Fund for Commodities and entered into force in 1989. They remained in force until 31st December 2012. Under these operational guidelines, the Fund approved financing for 217 Regular projects, plus a further 150 Fast Track projects, totaling 367 projects, with an overall cost of USD 606.5 million. The Fund financed USD 247.5 million of this total (excluding cancelled projects)[1]. CFC financing accounts for about 40% of the overall project cost. The balance of the project costs was co-financed by other institutions and by counterpart contributions, either in cash and/or in kind (USD 359 million or about 60%), provided by the Project Executing Agencies, collaborating institutions, governments, or International Commodity Bodies (ICBs). Financing of projects by the Common Fund under the original operational guidelines comprises USD 233.5 million in grants (96%) and USD 13.9 million (4%) in loans[1].

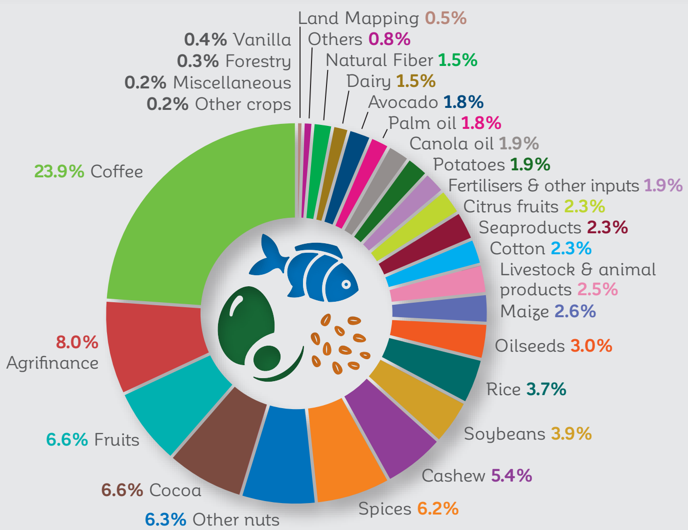
Recognising the new challenges and opportunities facing the CFC Member Countries, led to adoption of the reform package of the CFC, including updated operational guidelines which became effective on 1 January 2013. Under the new operational guidelines, the Fund currently has 63 Regular projects plus a further 25 Fast Track projects, (a total of 88 projects) at various stages of preparation and implementation, with an overall cost of USD 367.6 million. In addition, the Fund is participating in 8 Investment Funds with Equity and partnership financing, which together have the total assets under management of USD 523.0 million. Of the total project cost of USD 367.6 million, CFC contribution totals USD 81.8 million or about 22%[1]. The balance account was paid as co-financing and/or counter-part contribution by the proponents under the new operational guidelines. The Fund financing comprises of USD 77.8 million in loans/equity etc. (95%) and USD 4 million in grants (5%)[1].

According to the Fund's audited statements, the direct project related disbursements in 2022 (unaudited) stood at USD 0.03 million as grant and USD 12.78 million as loan/equity etc. (for both Capital Account and Operations Account)[2]. Special efforts are in place to streamline the components of the Agreements between the Fund and the Recipient of resources to reduce the delays between the approval of project and commencement of actual implementation on the ground and more of these efforts will be in place in 2023.

The CFC has funded projects addressing over 70 different commodity products, in partnership with investment funds and equity investors. The commodities funded include abaca, arachis, bamboo and rattan, bananas, cashews, cassava, castor seeds, citrus, cocoa, coconuts, coffee, coir, copper, cotton, fish, fonio, groundnuts, gum arabic, hides and skins, jute, lead, maize, meat and livestock, medicinal herbs and plants, olives, palm oil, paprika, potatoes, rice, natural rubber, shea nuts, sisal, sorghum and millet, soybean, cane sugar, tea, timber, tropical fruits, spices, and zinc. Most of these are produced almost entirely in developing countries and in partnership with investment funds, among which are the Africa Agriculture & Trade Investment Fund (AATIF), African Agriculture SME Fund, Eco Enterprises Fund, Moringa Agro-forestry Fund, SME Impact Fund, and agRIF Cooperatief U.A.

Distribution of Project per Commodity

as of 31 December 2022*



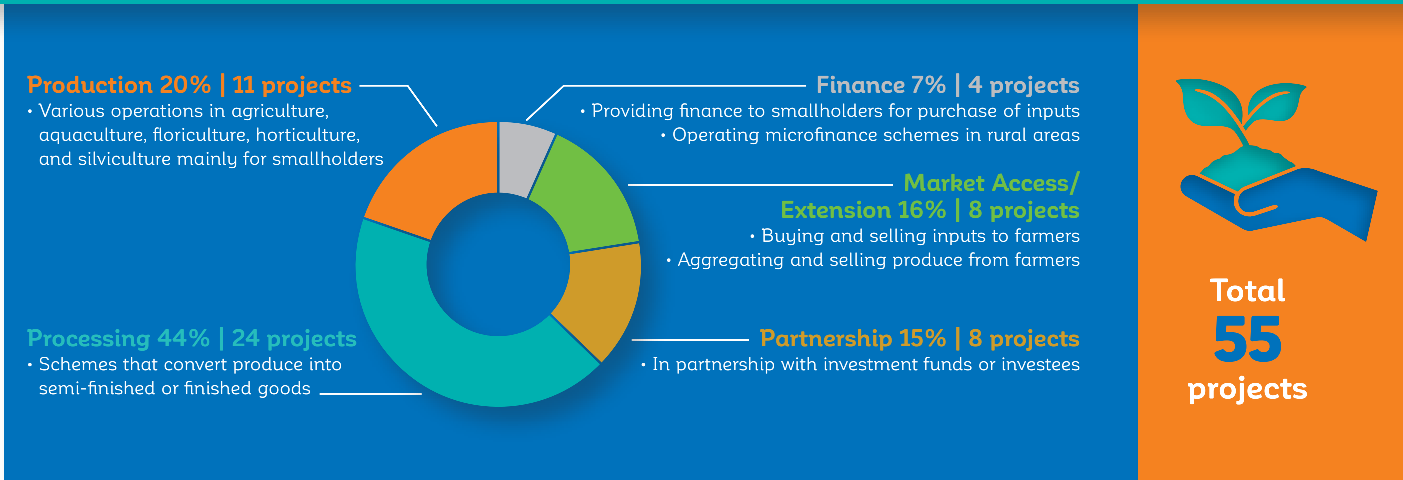
*Total number of commodities reported – 70 commodities (excluding research and miscellaneous others)

CFC-supported Regular Projects by Type

The types of projects have been reclassified following the reform of the CFC in 2014, reflecting a greater emphasis on public-private sector cooperation. The focus is on the commodity value chain, and to monitor its integration into various related activities, the CFC classifies its funded projects into the following categories. The table below presents the classification of 55 regular projects at various stages of imple-mentation or in the preparatory phase.

[1] As reported to the 34th Meeting of the Governing Council (CFC/GC/34/2)
[2] For the year ending 31 December 2022

Distribution of regular projects by value chain*



*Since 2013

As of 31 December 2022, a total of 220 regular projects had been financially closed. The financial resources recovered from completed CFC grants/loans projects are returned to the pool of Second Account resources or the First Account Net Earning Initiative once the project account is closed and are available to finance new projects.

Participation of Private Sector: Private companies provide social, technical, commercial, and financial contributions to projects funded by the CFC, driving greater innovation. Furthermore, to promote and assess the developmental impact, replicability, and sustainability of project results, both within and across countries, relevant private companies are required to document, report, and communicate their findings. This includes both operational and financial performance, as well as the impacts achieved. In the past, over 150 private firms have shared the results of their CFC projects at dissemination workshops, whilst many other operating companies are actively involved in recording, establishing, and maintaining consistent and systematic reporting of impact in projects or interventions that receive CFC financial support. The private sector's interest in technical cooperation with CFC projects is growing daily. Proposals from the private sector seeking finance for specific commodity development activities are also on the rise.

CFC works with UN agencies: As an organisation born out of the UNCTAD process, CFC always remains engaged with the UN agencies like the United Nations Conference on Trade and Development (UNCTAD), the United Nations Industrial Development Organization (UNIDO), Food and Agricultural Organization (FAO), the UN High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS), Office of Special Adviser on Africa (OSAA), UN Department of Economic and Social Affairs (UN DESA) etc. Our aim is to identify and implement innovative measures to enable the sustainable contribution of the commodity sector to economic development, including ways to reduce vulnerability to volatility in commodity prices, as well as to enhance activities in developing countries to improve access to markets.

CFC for innovation: With our base in the innovation-rich Netherlands, it is natural that CFC will endeavour to act as a bridge between the developing and the developed world to transfer technology and innovations. It is expected that a good number of portfolios are enriched by Dutch/European entrepreneurs and businesses, which we wish to present as an example of win-win enterprises in our quest to create agripreneurs in the developing world. Countries in the developing world face significant technological challenges, but they also have increased access to a larger pool of scientific and technical knowledge than was previously available. The CFC endeavours to take advantage of this innovation and scientific knowledge as it explores local innovations as well as indigenous knowledge.

As the UNCTAD's State of Commodity Dependence Report 2021 noted, the best way to address the issue of commodity dependence is to pursue a technology-enabled development model. The CFC considers this aspect of innovation a requirement for value chains that serve both smallholders and consumers.

IV.2 Operational & completed projects in 2022

	EB Meeting	Project Title	Country(ies)/Area Involed	Page
Year 2013				
1	EB55	Commercial Farm Development, Ethiopia – CFC/2012/01/0030	Ethiopia	59
2	EB61	Commercial Farm Development, Ethiopia – CFC/2012/01/0030 FT	Ethiopia	59
3	EB55	SME Agribusiness Development in East Africa – CFC/2012/01/0076 FA	Tanzania, Kenya, Rwanda, Burundi, Malawi, Zambia	59
4	EB55	Partnership with the Africa Agriculture & Trade Invest. Fund – CFC/2012/01/0268 FA	Africa	60
5	EB56	Commercial Meat Processing/Marketing in Lagos – CFC/2013/02/0042 FT	Nigeria	60
6	EB56	Partnership with the Africa Agriculture SME Fund – CFC/2013/02/0084 FA	Africa	60
7	EB56	Partnership with the EcoEnterprise II Fund – CFC/2013/02/0085	Latin America	61
8	EB56	Partnership with the Moringa Agro/forestry Fund – CFC/2013/02/0086 FA	Africa; Latin America	61
Year 2014				
9	EB57	Rural Injini Inclusive Maize Trading and Processing – CFC/2013/03/0120	Uganda	61
10	EB58	MORINGA agroforestry Technical Assistance facility – CFC/2014/04/0103 FT	Africa; Latin America	62
11	EB58	Modern processing Prosopis Charcoal & Animal Feeds – CFC/2014/04/0107 FT	Kenya	62
Year 2015				
12	EB59	Scaling Smallholders based Premium Coffee Production – CFC/2014/05/0079	Congo	62
13	EB59	Scaling Smallholders based Premium Coffee, Congo & Rwanda – CFC/2014/05/0079 FT	Congo; Rwanda	62
14	EB60	Tolaro Global Factory Expansion #2 ('Cashew Benin') – CFC/2015/06/0032	Benin	63
Year 2016				
15	EB61	Intensified Livelihoods Improvement and Environmental Conservation through Social Business Activities (Natural Fertiliser, Myanmar) – CFC/2015/07/0020 FT	Myanmar	63
16	EB61	Accelerating Lending to Food & Agri sector in East AfricaSupply Chain Financing – CFC/2015/07/0028	Kenya, Uganda	63
17	EB61	Irrigated Perfumed Rice, Senegal – CFC/2015/07/0030	Senegal	64
18	EB61	Upscaling the Integrated production Oilseeds/Oil Seeds, Nigeria – CFC/2015/07/0032	Nigeria	64
19	EB61	Commerical Farm, Uganda (Kapanua Project) – CFC/2015/07/0078	Uganda	64
20	EB62	Start-up of Innovative Agriculture Finance Company for Cocoa, Philippines – CFC/2016/08/0064	Philippines	65
Year 2017				
21	EB63	agRIF Cooperatief U.A. – The Netherlands – CFC/2016/09/0089	The Netherlands	65
22	EB63	Acquisition of a processing plant for the aquaculture sector – Peru – CFC/2016/09/0122	Peru	65
23	EB63	Africa Food Security Fund – Ghana – CFC/2016/09/0124	Ghana	66
24	EB64	EcoEnterprises Fund III – CFC/2017/10/0066	Latin America	66
25	EB64	Formulation and fertiliser distribution for smallholder farmers, Côte d'Ivoire – CFC/2017/10/0111	Côte d'Ivoire	66
Year 2018				
26	EB65	Integrated Lime Production in Bahia – Brazil – CFC/2017/11/0005	Brazil	67
27	EB66	Expanding the Vanilla Value Chain – Tanzania – CFC/2018/12/0066	Tanzania	67

	EB Meeting	Project Title	Country(ies)/Area Involed	Page
Year 2019				
28	EB67	East African Nuts & Oilseeds / Kenya – CFC/2018/12/0056	Kenya	67
29	EB67	Nutriceuticals / LDCs and LLDCs – CFC/2019/14/0001 FT	Selected Least Developed Countries and Landlocked Developing Countries	68
30	EB68	Livestock Farming Cameroon – CFC/2018/12/0022	Cameroon	68
31	EB68	Working Capital Kenya – CFC/2019/14/0027	Kenya	68
Year 2020				
32	EB69	Addressing Vulnerabilities of CDDCs to Achieve the SDGs – CFC/2019/15/0003 FT	LDC	69
33	EB69	Fruits and Spices Madagascar / Working Capital – CFC/2019/15/0010	Madagascar	69
34	EB70	High quality cocoa from communities / Colombia – CFC/2020/16/0021	Colombia	69
35	EB70	Scaling/up export of natural & handmade home decoration products / Bangladesh – CFC/2020/16/0036	Bangladesh	70
Year 2021				
36	EB71	Scaling processing and export of macadamia oil and nuts (Exotic) from small-holder farmers – CFC/2020/16/0038	Kenya	70
37	EB71	Carbon/neutral processing of avocados and avocado oil – CFC/2020/17/0008	Kenya, Tanzania	71
38	EB71	Mercon Coffee Group – CFC/2020/17/0047	Brazil, Guatemala, Vietnam, Nicaragua, Honduras	71
39	EB72	Enimiro Integrated Value Chains – Uganda – CFC/2021/18/0027	Uganda	71
40	EB72	Coffee Planet – United Arab Emirates – CFC/2021/18/0014	United Arab Emirates	72
Year 2022				
41	EB73	Gulu Agricultural Cotton – Uganda – CFC/2021/19/0055	Uganda	72

Completed

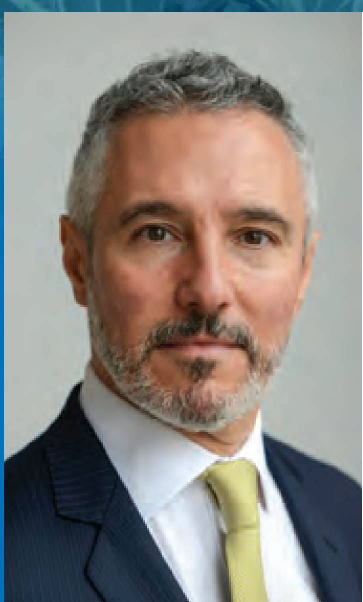
	EB Meeting	Project Title	Country(ies)/Area Involed	Page
1	EB62	Upscaling Coffee Flour Production Plant of Sanam, Colombia – CFC/2016/08/0077 FT	Colombia	73
2	EB63	Reducing Vulnerability to Price Volatility – Kenya – CFC/2016/09/0097	Kenya	73
3	EB71	Reducing Vulnerability to Price Volatility – Kenya – CFC/2021/18/0001 FT	Kenya	73
4	EB67	Development of Social and Environmental Management System – CFC/2018/13/0003 FT	Netherlands	73

Operational Projects as of 2022 under the old rule

	EB Meeting	Project Title	Country(ies)/Area Involed
1	EB12	Reviving Banana Cultivation – Guinea – CFC/FIGB/04	Guinea
2	EB53	Integrated Management of Cocoa Pests & Pathogens – CFC/ICCO/43	Cameroon, Côte d'Ivoire, Ghana, Nigeria, Togo


Photo: Adobe stock

Photo: Cabbage, Kabala Town, Koinadugu, Sierra Leone. © FAO/Sebastian Liste



"In the face of unprecedented challenges during the pandemic, 2022 continued to test our resilience. As we embark on a new chapter, we must acknowledge the emerging hurdles before us. Amidst these uncertainties, intractable poverty and food insecurity in developing countries are looming as a growing concern, which also hold the potential to rise to the occasion. As commodity-producing countries, they possess a unique opportunity to confront these challenges head-on. By leveraging the projects of the CFC, they can fortify and diversify their commodity sectors, providing a ray of hope in alleviating poverty and nurturing sustainable development."

Ambassador Mario Oyarzábal (Argentina), Chairperson of the Governing Council

Photo: © FAO/Pius Utomi Ekpei

IV.3 **Active projects** in 2022

1 and 2. Commercial Farm Development in Central and Northern Ethiopia – CFC/2012/01/0030 and CFC/2013/01/0030 FT

Submitting Institution	Solagrow plc.
Location	Ethiopia (LDC)
Commodity	Potatoes and others
Total Cost	USD 6,255,000
CFC Financing	USD 1,100,000 (loan, of which USD 750,000 financed by the Dutch Trust Fund) USD 120,000 Liquidity support under Fast Track
Counterpart Contribution	USD 5,155,000

Project Description

Solagrow provides seed potatoes supplemented by seeds from other crops and mechanisation services to organised outgrowers and other small farmers. The company works together with the Ethiopian Institute of Agricultural Research (IAR) for new potato varieties and technologies. In addition, the company produces quality food crops for local and export markets on its own nucleus farms, thereby integrating Ethiopian smallholder farmers through the provision of inputs, cropping technology and market access.

The CFC supports Solagrow in equipping further nucleus farms with machinery and equipment. It is anticipated that 1,600 new jobs will be created, and 2,500 new farmers will be involved on around 3,000 ha of land. Further, the company expects to offer its services to another 25,000 farmers around its farms.

3. SME Agribusiness Development in East Africa – CFC/2012/01/0076 FA

Submitting Institution	MatchMaker Fund Management (MMFM)
Location	Burundi, Kenya, Malawi, Rwanda, Tanzania, Zambia
Commodity	Miscellaneous
Total Cost	Euro 10,000,000
CFC Financing	USD 520,000 (Equity)
Co-financing	Balance to be sourced from other consortium partners

Project Description

The SME Impact Fund (SIF) provides meso-level financing to SMEs in agribusiness in East Africa. SIF provides financing as loans, from USD 65,000 to USD 650,000, with an average loan size of USD 200,000. SIF provides financing for SMEs in local currency, at competitive rates ranging between 18-20% per annum, for a period up to 60 months. Project partners are currently Dutch NGO's like Hivos and Cordaid, and private investors including MatchMaker Associates (MMA). The local banking partner is National Microfinance Bank (NMB) Bank of Tanzania, which gives SIF strong outreach to cover rural districts in Tanzania. Technical partners include Financial Alliance for Sustainable Trade (FAST), MatchMaker Associates (MMA), and Tanzania Horticultural Association (TAHA) with Business Development Services (BDS) project.

The target fund size could not be reached in the second closing and the fund will be divesting in the coming years. However, through the investments, SIF has reached 19,000 smallholder farmers and supported 2,500 jobs. SIF estimates that it has supported the livelihood of 98,000 beneficiaries through its investments.

4. Partnership with the Africa Agriculture and Trade Investment Fund (AATIF) – CFC/2012/01/0268 FA

Submitting Institution	Africa Agriculture and Trade Investment Fund (AATIF)
Location	Africa
Commodity	Miscellaneous
Total Cost (Target Fund Size)	N/A (Evergreen Fund)
CFC Financing	USD 2,000,000 (Equity)
Co-financing	Main other current investors are the EU, KFW and Deutsche Bank. The associated grant based Technical Assistance (TA) Facility is being financed by the German Ministry for Development Cooperation and Economic Development (BMZ)

Project Description

The Africa Agriculture and Trade Investment Fund (AATIF) is an innovative public-private partnership dedicated to realising the potential of Africa's agricultural production and related manufacturing, service provision and trade through sustainable investments across the entire value chain. AATIF investments foster agricultural value chain enhancement and is complemented through a TA Facility that provides grant funding for projects to strengthen the developmental aspects of individual investments. This TA Facility is managed by the CFC under a service agreement.

AATIF was established in 2012 and thus far the TA Facility develops an average of nine TA projects per year with project budgets ranging from EUR 6,000 to EUR 500,000. The TA Facility is providing support to investee companies that focus on enhancing direct impact beyond the company itself, specifically targeting lower-income communities. This type of TA support assists AATIF investee companies to create local economic opportunities and employment, for example through the establishment of a smallholder farmer outgrower scheme. The TA Facility also supports investee companies with advisory and technical support that improves business operations and efficiency, as well as capacity development of staff.

5. Commercial Meat Processing/Marketing in Lagos – CFC/2013/02/0042 FT

Submitting Institution	ESOSA Investments Ltd.
Location	Nigeria
Commodity	Livestock
Total Cost	USD 250,000
CFC Financing	USD 120,000 (Zero interest loan)

Project Description

ESOSA Investments Ltd. is a small-scale meat processor operating in Lagos, Nigeria. In 2015, the CFC provided a USD 120,000 loan to support ESOSA in (i) acquiring additional processing equipment, (ii) increasing its profit and product diversification by introducing a range of new snacks, pastries etc., and (iii) strengthening its local supply chains by providing 100 pig farmers with improved breeds and training in improved animal husbandry.

The intervention is expected to create new employment opportunities for about 500 farmhands while the Fulani nomadic cattle herdsmen are also expected to benefit from the advantages of an enhanced commercial beef production.

6. Partnership with the Africa Agriculture SME Fund (AAF-SME) – CFC/2013/02/0084 FA

Submitting Institution	Africa Agriculture SME Fund (AAF-SME)
Location	Africa
Commodity	Miscellaneous
Total Cost (Target Fund Size)	USD 80,000,000
CFC Financing	USD 2,000,000 (Equity)
Co-financing	Other main investors: Agence Française de Développement (AFD), PROPARCO, Spanish Government (AECID) and African Development Bank (AfDB)

Project Description

The AAF-SME Fund is Africa's first Impact Investing Fund with a focus solely on food producing and processing Small and Medium-Size Enterprises (SMEs) throughout the continent. AAF-SME is being complemented through a Technical Assistance Facility (TAF) that provides grant funding with an emphasis on the establishment of out-grower schemes. The CFC joined the Fund on the second close in May 2014.

The fund has invested in eight different agricultural SMEs across Sub-Saharan Africa (SSA) that focus on different value chain segments, from mixed farming operations to organic fertiliser production. The proceeds are mainly used for follow-on investments for existing portfolio companies, till the fund is scheduled to close.

Through its investments, the AAF-SME fund has supported local employment and strengthened commercial relations of smallholders with AAF-SME funded companies, which source their raw materials for processing.

7. Partnership with the EcoEnterprises II Fund (EcoE II) – CFC/2013/02/0085 FA

Submitting Institution	EcoEnterprises Partners II L.P. (EcoE II)
Location	Latin America
Commodity	Miscellaneous
Total Cost (Target Fund Size)	USD 40,000,000
CFC Financing	USD 500,000 (Equity)
Co-financing	Main other investors: Dutch Development Financial Institution (FMO), Interamerican Development Bank (IADB) and European Investment Bank (EIB)

Project Description

The CFC joins the EcoE II fund to invest in small companies with a proven business model at expansion stage which are active in the sustainable agriculture and forestry (products) sector in Latin America. The targeted investee companies supply into a growing market for organic food products and certified wood predominantly in the US.

Since its first closure in 2011, the fund has disbursed in debt and equity investments across different portfolio companies, which are engaged in eco/organic niche products such as tea, juices, baby food and dried fruit. Overall, the fund has supported local employment and connected raw material smallholder suppliers. In addition, EcoE II's portfolio companies manage land in either a sustainable or conserved manner.

8. Partnership with the Moringa Agroforestry Fund – CFC/2013/02/0086 FA

Submitting Institution	Moringa Agroforestry Fund S.C.R.
Location	Latin America/Africa
Commodity	Miscellaneous
Total Cost (Target Fund Size)	Euro 100,000,000
CFC Financing	USD 1,349,613 (Equity)
Co-financing	Main other current investors: FMO, PROPARCO, Spanish Government (AECID) and Latin American Development Bank (CAF)

Project Description

The CFC provides equities to the Moringa Agroforestry Fund (Moringa) which seeks to invest agroforestry projects in Africa and Latin America. These projects are expected to commercially compete with deforestation drivers such as cattle ranching, crop farming and timber harvesting. At the same time, Moringa investments are required to have a demonstrable positive impact on the environment and the livelihoods of local populations, while generate a clear positive impact on local populations and the environment. Moringa investments are complemented through a Technical Assistance (TA) Facility managed by the CFC.
Through its investments, Moringa targets a total of 8,000 new jobs created with an income effect on 35,000 dependents. In addition, about 60,000 out-growers are expected to be associated to commercial investments of Moringa, with a development impact on 340,000 dependents.

9. Rural Injini (Engine) Inclusive Maize Trading & Processing – CFC/2013/03/0120

Submitting Institution	Joseph Initiative Ltd. (JI)
Location	Uganda (LDC)
Commodity	Maize
Total Cost	USD 1,929,000
CFC Financing	USD 500,000 (Financed by the Dutch Trust Fund)

Project Description

The project aims to support Ugandan smallholder farmers to efficiently bulk and process maize to sell to regional wholesalers. Joseph Initiative Ltd. (JI) takes an integrated approach to trading, combining rural collection centres with village buying agents to collect maize in small quantities from remote farmers and making payments to them on the spot.

JI's business model concentrates on 'bottom of the pyramid' farmers producing one metric ton or less per year, as they are below the aggregation thresholds for commercial traders. A reliable market and access to inputs and finance will increase farmers' incomes. Inclusion of a large number of producers, increasing productivity and potentially reducing the current 40% post-harvest losses could lead to substantial improvement in Uganda's food security.

Photo: Joseph Intitative

10. Moringa Agroforestry Technical Assistance Fund – CFC/2014/04/0103 FT

Submitting Institution	Moringa Agroforestry Fund
Location	Africa/Latin America
Commodity	Agroforestry
Total Cost	USD 2,200,000
CFC Financing	USD 100,000 (Grant)

Project Description
The Moringa Agroforestry Technical Assistance Fund (ATAF) is a grant-based fund that supports the development impact of investments made by the Moringa Agroforestry Investment Fund. ATAF develops and finances projects for training, capacity development, and sustainable land management. ATAF was established to mitigate risks and to increase the development impact of Moringa Fund investments. The TA support aims to strengthen the capacity of Moringa investee companies to include and integrate interested members of the local population into agroforestry production systems to improve their standard of living, agricultural practices, and, thus, to protect the environment.

ATAF commenced operations in 2016, after a service agreement was signed with the CFC. The CFC, as the ATAF Manager, has developed 19 TA projects in eight countries across Africa and Latin America.


Photo: Moringa Agroforestry Fund, coffee. ATAF

11. Modern Processing & Value Chain Development for Prosopis Charcoal and Nutritious Animal Feeds, Kenya – CFC/2014/04/0107 FT

Submitting Institution	Start!e Limited (Social Enterprise)
Location	Kenya
Commodity	Timber
Total Cost	USD 214,000
CFC Financing	USD 100,000 (Zero interest loan, financed from the Dutch Trust Fund)
Co-financing	USD 15,000
Start!e Limited (Contribution)	USD 99,000

Project Description
In 2014, Start!e Ltd presented a proposal to turn the unwanted spread of the tree *Prosopis Juliflora* in Kenya's semi-arid areas into an income opportunity for the affected communities by setting up value chains for sustainable charcoal animal feed from the Prosopis fruit pods.

The CFC supports the initiative with a USD 100,000 loan disbursed in December 2014. The investment aims to: (i) enhance the collection of Prosopis; (ii) improve the carbonisation process; (iii) build customer relationships with a few, higher volume consumers and wholesalers; (iv) improve logistics; and (v) increase fundraising.

12 and 13. Scaling Smallholder based Premium Coffee Production in Congo and Rwanda – CFC/2014/05/0079 and CFC/2014/05/0079 FT

Submitting Institution	COOPAC Holding Ltd.
Location	Congo DRC (LDC), Rwanda (LDC)
Commodity	Coffee
Total Cost	USD 3,931,880
CFC Financing	USD 1,500,000 loan (of which USD 750,000 by the Dutch Trust Fund)
Counterpart Contribution	USD 2,194,660 – Root Capital; USD 87,220 – COOPAC Holding Ltd.

Project Description
COOPAC is an enterprise dealing with coffee production, processing, and export of premium specialty coffee. Founded in 2001 with 110 coffee farmers in the Gisenyi region in Rwanda, coffee beans are sourced from over 9,000 smallholder farmers in Rwanda and 7,000 in the Democratic Republic of the Congo (DRC).

COOPAC is among the few Rwandan coffee suppliers benefiting from 3 major coffee production standards: Fairtrade (FLO), Organic, and Rainforest Alliance.

Financing from the CFC allows COOPAC to increase its wet coffee-washing capacity in the DRC, a critical technique in producing quality coffee, and by adding value through processing and certification. Part of the loan is used for working capital purchases to scale sourcing of its organic coffee from smallholders in both countries. With the goal of scaling coffee production up to 16,600 farmers by 2024, COOPAC hopes to create much-needed jobs and improve smallholders' yield and net income.

14. Tolaro Global Cashew Factory Expansion, Benin – CFC/2015/06/0032

Submitting Institution	Tolaro Global
Location	Parakou, Benin (LDC)
Commodity	Cashews
Total Cost	USD 5,464,000
CFC Financing	USD 1,500,000
Co-financing	Tolaro Global USD 464,637, other financiers USD 3,500,000


Photo: Cashew fruit. FreeImages.com/Jose Assenco

Project Description
Tolaro Global is the leading cashew processing company in Benin. Founded in 2010, the company processes and exports more than 3,500 metric tons (MT) of cashews to premium markets in Europe and the United States, with a value of almost USD 4 million. The company buys raw cashews from 7,000 smallholder farmers and employs more than 650 workers, thus creating significant economic impact in Benin.

The CFC is financing the company's expansion plans. The project entails the acquisition of equipment to increase the processing capacity of Tolaro from 3,500 MT in 2018 to 20,000 MT by 2023. The number of farmers delivering raw cashew nuts to Tolaro is expected to increase from 7,000 to 15,000 by 2023. The number of factory jobs is expected to increase from 650 to 1,500 over the same period.

15. Intensified Livelihoods Improvement and Environmental Conservation through Social Business Activities (Natural Fertiliser, Myanmar) – CFC/2015/07/0020 FT

Submitting Institution	Swanyee Group of Company
Location	Myanmar (LDC)
Commodity	Fertiliser
Total Cost	USD 236,171
CFC Financing	USD 117,600 (Loan)
Counterpart Contribution	USD 118,571

Project Description
There are many distributors of chemical fertilisers in Myanmar, but only a few of them are engaged in the supply of natural and bio fertilisers. The Swanyee Group is active in selling organic agricultural inputs mainly to smallholder farmers in Myanmar. It has a research department that has been experimenting with the production of natural fertilisers, in the form of vermiculture. The core of the project is to expand the current levels of vermiculture-based liquid and compost fertilisers. The project aims to demonstrate that organic fertilisers can be offered at lower costs than chemical fertilisers with effective social, economic and environmental impact.

The development impact of the project is the reduction in fertiliser costs for farmers from USD 60/acre to below USD 50/acre.

16. Accelerating Lending to Food & Agri sector in East Africa Supply Chain Financing – CFC/2015/07/0028

Submitting Institution	Financial Access Commerce and Trade Services (FACTS)
Location	Kenya, Uganda (LDC)
Commodity	Miscellaneous Commodities through Supply Chain
Total Cost	USD 7,000,000[1]
CFC Financing	USD 1,200,000 (of which USD 200,000 by Dutch Trust Fund)
Counterpart Contribution	USD 10,300,000

Project Description
Factoring, as a form of supply chain finance, can play a critical role in injecting much-needed short term liquidity in value chains. The demand for factoring services, which support producers and traders to scale activities, however remains largely unmet in many developing countries. Since 2015, FACTS has worked to counter this by servicing the factoring needs of SMEs in Kenya and Uganda. In 2018, the CFC and FACTS East Africa B.V. signed a USD 1,200,000 loan agreement to support and scale FACTS' impact on agricultural value chain participants. FACTS continued service to its portfolio of clients through the COVID-19 pandemic with the backing of shareholders and creditors.

[1] Total Project cost is the outstanding factoring portfolio of the Company. In particular, since the CFC entered into a 9-month facility, the total project cost is considered for the outstanding factoring portfolio for the year 2019 only. The factoring portfolio for the year 2019 amounted to EUR 3.2 million.

17. Irrigated Perfumed Rice and Normal Rice Production in Thiagar, Senegal – CFC/2015/07/0030

Submitting Institution	Coumba Nor Thiam (CNT)
Location	Senegal (LDC)
Commodity	Rice
Total Cost	Euro 3,150,000
CFC Financing	USD 1,459,800
Counterpart Contribution	USD 1,690,200

Project Description

Coumba Nor Thiam (CNT) is the third largest rice processing company in Senegal, with 30 years' experience in the production and processing of normal and perfumed rice. Since 1987, CNT has been growing into a successful rice company, currently employing 2,500 outgrowers on 3,000 hectare (ha) of land and running a 500 ha own plantation in the Northern River Valley region. With a milling capacity of 120 ton/day, CNT is currently processing 15,000 ton/year of paddy rice. CFC financing, part of which provided by the OPEC Fund for International Development (OFID)), will be financing the purchases of farming and irrigation equipment, necessary for the upscaling of CNT's profitable rice milling business. After the investment, the company is expected to increase its processing capacity to 40,000 tons by 2025, while adding 500 smallholders to its outgrower network bringing the total to 3,000 farmers. In total 16 new processing jobs are expected to be created.

18. Upscaling the Integrated Production and Processing of Selected Estranged Oilseeds, Nigeria – CFC/2015/07/0032

Submitting Institution	EFUGO Farms Nigeria Ltd.
Location	Nigeria
Commodity	Oilseeds
Total Cost	USD 3,893,500
CFC Financing	USD 1,500,000
Counterpart Contribution	USD 2,393,000

Project Description

Efugo Farms Limited (EFL), is an agro-industrial company producing various crop and livestock products, established in 1987 and based in Abuja, Nigeria. The company has focused in the production of edible oils (from groundnuts, soybeans, sesame) and non-edible oils (from castor beans, shea butter and neem seeds), responding to the high domestic demand for such products.

Having already established a modern processing plant, Efugo sought financial support for the acquisition of crucial processing machinery and the procurement of seeds from smallholder farmers.

In line with Central Bank of Nigeria (CBN) financing, the CFC term loan provides Efugo with both the necessary working capital for its sourcing activities and the funds needed for its CAPEX expansion. In the lifecycle of this project, Efugo will engage with more than 20,000 smallholder farmers, while creating 110 additional processing jobs and providing a significant income source to about 500 youth/women engaged in the harvesting of neem seeds and shea nuts.

Photo: Soybeans. Adobe stock

19. Commercial Farm, Uganda (Kapanua Project) – Asili Farms Ltd., Uganda – CFC/2015/07/0078

Submitting Institution	Asili Farms Masindi Ltd.
Location	Uganda (LDC)
Commodity	Maize
Total Cost	USD 3,361,229
CFC Financing	USD 1,200,000
Counterpart Contribution	USD 2,161,299

Project Description

Asili Farms is a mechanised farming company that manages dual-season production of high-quality maize and soybeans for supply to regional food processors. Asili became operational in January 2014 and is farming under a conservation agriculture and precision farming approach to maximise yields. The ultimate strategic goal of Asili is to have commercial farming operations on around 6,500 ha. As part of the Agilis Partners Ltd. Holding, Asili Farms (AF) benefits from the guaranteed demand from the sister-company Joseph Initiative Limited (JI, also a borrower of a CFC loan), which is marketing Ugandan grains and pulses with extensive regional market access.

CFC resources are used to further expand commercial farm operations as well as to scale out Asili's engagement in training small-scale farmers in commercial maize and soya production.

20. Start-up of Innovative Agriculture Finance Company for Cocoa, Philippines – CFC/2016/08/0064

Submitting Institution	**Kennemer Foods International Inc.**
Location	**Philippines**
Commodity	**Cocoa**
Total Cost	**USD 11,600,000**
CFC Financing	**USD 1,400,000**
Counterpart Contribution	**USD 10,200,000**

Photo: Kennemer Foods

Project Description
Kennemer Foods International, is an agribusiness company specialised in the production, processing and trading of high-quality cocoa, sourced directly from smallholder farmers. Capitalising on the knowledge and technology transfers, through its long-standing partnership with Mars, Kennemer sought to enhance its sourcing activities by enabling the plantation of new cacao trees, ensuring higher yields and better livelihoods for smallholders. Nevertheless, access to finance remains a challenge for smallholder farmers in the Philippines, limiting their ability to undertake the essential investments for such an expansion. To alleviate this problem, Kennemer set up an affordable smallholder financing mechanism, through its subsidiary, Agronomika Finance Company.

Partnering with other impact investors, such as FMO, CFC provided the necessary funding for the operations of Agronomika. Smallholder beneficiaries are expected to improve their yield from 0.5MT/ha to 2MT/ha, increasing their average annual income from USD 625 to USD 3,750, while more than 50,000 hectares of new cacao trees will be planted.

21. agRIF Cooperatief U.A. – The Netherlands – CFC/2016/09/0089

Submitting Institution	**agRIF Cooperatief U.A.**
Location	**The Netherlands**
Commodity	**Partnership**
Total Cost (Target Fund Size)	**USD 200 million**
CFC Financing	**USD 1,000,000**

Project Description
AgRIF is an impact investing fund that focusses on debt and equity investments into financial intermediaries who are active in, and have a clear commitment towards, financing the agricultural sector. The fund addresses the scarcity of financial services in developing countries, and seeks to enhance financial inclusion in the agricultural value chain, with a focus on smallholder farmers and rural Micro, Small & Medium Sized Enterprises (SMEs).

AgRIF invests globally in countries classified as eligible by the Development Assistance Committee (DAC) of the OECD. While microfinance institutions are to be the major group of clients, agRIF will also invest in small banks, agricultural leasing companies and other financial intermediaries to the agricultural sector down to subsistence farmer level with individual loan size below USD 1,000. Up to 10% of its funds are allocated to debt financing of producer organisations and SMEs working in the agricultural value chains. agRIF is managed by Incofin Investment Management.

22. Acquisition of a processing plant for the aquaculture sector – Peru – CFC/2016/09/0122

Submitting Institution	**Acuacultura Tecnica Integrada del Peru S.A. (ATISA)**
Location	**Peru**
Commodity	**Shrimp**
Total Cost	**USD 4,000,000**
CFC Financing	**USD 1,500,000 (Loan)**
Co-financing	**Acuacultura Tecnica Integrada del Peru S.A. (ATISA): USD 200,000** **Owner: USD 1,850,000**

Project Description
ATISA, is a shrimp aquaculture company located in Tumbes area, North Peru, led by a female entrepreneur who co-founded the business with her husband in 1997. Specialised in breeding, production, and distribution of premium shrimps, ATISA farms produce shrimps for both local and international markets and are recognised through its own brand called COOL!. ATISA is the first Peruvian company that obtained the GLOBALG.A.P. Aquaculture certification in 2016.

By investing in modern shrimp cultivation techniques and sustainable farming practices, the CFC supports ATISA's ambition to introduce organic shrimps and compliance with new social and environmental aquaculture certification standards. ATISA also intends to expand into shrimp processing to increase its offering of peeled shrimps, a high value product with less volatile commodity prices than unprocessed whole or headed shrimps.

23. Africa Food Security Fund – Ghana – CFC/2016/09/0124

Submitting Institution	**Zebu Investment Partners**
Location	**Africa**
Commodity	**Partnership**
Total Cost	**USD 100 million**
CFC Financing	**USD 1,000,000 (Equity)**

Project Description

The Africa Food Security Fund (AFSF) is an impact investing fund that seeks to invest in small and medium size businesses (SMEs) active along the agricultural value chains across Africa with a focus on Sub-Saharan Africa. The fund's investment mainly focuses on primary production, agricultural input and service providers, as well as agro- and food- processing companies.

AFSF finished its second closure in 2020. The target capitalisation has been set at USD 100 million and AFSF's lifetime is set for 10 years. The fund is the follow up fund of the AAF-SME Fund that commenced its operations in 2014 of which CFC invested USD 2 million. Main partners are Zebu Investment Partners (ZIP, previously known as Databank Investment Partners) as AFSF Fund Manager, and CDC, DGGF, EIB, AFDB, BOAD and BIDC as key institutional investors into AFSF.

24. EcoEnterprises Fund III – CFC/2017/10/0066

Submitting Institution	**EcoEnterprises Fund**
Location	**Latin America**
Commodity	**Partnership**
Total Cost (Target Fund Size)	**USD 100,000,000**
CFC Financing	**USD 1,000,000**

Project Description

The EcoEnterprises Fund III (EcoE III) is an impact investing fund that invests in Latin American SMEs which source raw material from collectors or smallholder farmers for value added processing. The target sectors are sustainable agriculture, agro-forestry, aquaculture, and wild- harvested forest products. EcoE III seeks to invest in growing companies that cater to increasing demands for organic food products and certified wood in the US.

The CFC has become a shareholder of EcoE III at its first closure in late 2018. EcoE III is expected to make 18 long-term capital investments, size between USD 2-6 million, within an average duration of 6-8 years. EcoE III aims at the creation of at least 5,000 jobs and to connect 25,000 small-scale producers.

25. Formulation and fertiliser distribution for smallholder farmers, Côte d'Ivoire – CFC/2017/10/0111

Submitting Institution	**AGRITEC S.A.**
Location	**Côte d'Ivoire**
Commodity	**Fertiliser**
Total Cost	**Euro 2,003,000**
CFC Financing	**USD 1,100,000**
Co-financing	**Coris Bank: Euro 530,000**
Counterpart contribution	**Euro 530,000**

Project Description

Founded in 2010, AGRITEC S.A. is a distributor of agricultural inputs (insecticides, herbicides and fungicides) and equipment (irrigation and spraying systems), based in Abidjan. The company has established a network of 60 sales outlets reaching up to 300,000 farmers across the country, providing them with crucial products for the increase of their productivity.

To improve access to fertilisers for smallholder farmers located in remote areas, AGRITEC sought to build a dry bulk fertiliser blending and packaging station in Yamoussoukro.

Partnering with Coris Bank, CFC provided a USD 1,100,000 loan, of which USD 350,000 is financed by the OPEC Fund for International Development (OFID). This will provide resources for capital expenditures associated with the factory building and the purchase of relevant equipment. The successful project completion is expected to create 120 new jobs, while it is estimated that smallholders' productivity, accessing AGRITEC's inputs, will increase by 38%, resulting in a significant increase of their incomes.

Photo: AGRITEC

26. Integrated Lime Production in Bahia – Brazil – CFC/2017/11/0005

Submitting Institution	**Jan Stap B.V.**
Location	**Brazil**
Commodity	**Citrus Fruits**
Total Cost	**Euro 2,375,000**
CFC Financing	**Euro 1,000,000**
Counterpart Contribution	**Euro 1,375,000**


Photo: Torres

Project Description
In 2012, the Torres group established its production of Tahiti limes in the municipality of Pojuca, in Bahia State, Brazil. The group entered the production business with the goal to vertically integrate and control its supply chain in order to obtain the Fair Trade and Global Good Agricultural Practices (GAP) certification.

In December 2018, the CFC signed a loan agreement with the subsidiary Jan Stap B.V., to support the expansion of the group's sustainable lime plantation. While providing an environmental alternative to consumers in Europe, the plantation also contributes directly to local income generation and economic conclusion in one of the poorest municipalities of Brazil.

27. Expanding the Vanilla Value Chain – Tanzania – CFC/2018/12/0066

Submitting Institution	**Natural Extracts Industries Ltd.**
Location	**Tanzania**
Commodity	**Spices**
Total Cost	**USD 1,800,000**
CFC Financing	**USD 500,000 (Loan)**
Counterpart Contribution	**Other impact financiers USD 1,300,000**

Project Description
Natural Extracts Industries (NEI) is a for-profit social enterprise producing, processing, and exporting green vanilla into vanilla pods and extracts to international traders and retailers in the flavours industry. NEI has created a vertically integrated vanilla chain since 2011 by directly sourcing from 5,000 smallholder farmers. Its team of agronomists and field officers is assisting the farmers with trainings in good agricultural practices and other services throughout the full cycle from planting of the vines, pollination of the flowers to harvest of green vanilla. NEI has planted over 200,000 vines to date and using mobile-based technologies to reliably trace the quality and origin of vanilla on farmer level.

The CFC has extended a USD 500,000 working capital loan ensuring its farmers direct access to markets amid the challenges of COVID-19 and declining global vanilla prices. More than 5,000 farmers are expected to benefit from NEI's inclusive sourcing model over the facility's 5 year tenor.

28. East African Nuts & Oilseeds – Kenya – CFC/2018/12/0056

Submitting Institution	**Ten Senses Africa Ltd.**
Location	**Kenya**
Commodity	**Nuts**
Total Cost	**USD 4,200,000**
CFC Financing	**USD 1,500,000 (Loan)**
Counterpart Contribution	**USD 600,000**
Co-financing	**USD 2,100,000**

Project Description
Established in Kenya in 2008, Ten Senses Africa Ltd. (TSA) was created by the Integra Foundation, as the world's first fair-trade certified macadamia nut company. Macadamia exports started in 2010. TSA sources nuts from farmers throughout Kenya and processes them in Nairobi, supporting the local production of high-quality export products.

Joining impact investors such as DOB Equity and Incofin, CFC provided a 7-year trade finance loan giving TSA the ability to scale up and accelerate its business model to include more farmers and improve the quantity and quality of nuts. With CFC's support, TSA expects to reach an additional 10,000 of smallholder suppliers, of which 30% women. The average annual net income of smallholders is expected to increase from USD 750 to USD 980 with about 400 new jobs created.

29. Finding opportunities for niche commodities from developing countries in the health food market – CFC/2019/14/0001 FT

Submitting Institution	UNCTAD
Location	Selected Least Developed Countries and Landlocked Developing Countries
Commodity	Other stimulant crops
Total Cost	USD 240,000
CFC Financing	USD 120,000 (Grant)
Co-financing	USD 120,000

Project Description

This project, implemented in partnership with UNCTAD, aims to explore how LDCs and LLDCs can better harness their biodiversity and traditional knowledge about health foods or nutraceuticals to create jobs, expand exports, and achieve inclusive growth. In particular, the project will study the potential of selected LLDCs as suppliers of health enhancing foods and identify the policy measures needed to expand their exports in this sector.

The findings from the country-case studies and the assessment of the demand of nutraceuticals in advanced markets have been compiled in a comprehensive policy publication, released in early 2023. During the year 2023 a number of dissemination events are expected to take place. In addition to indicating how products could link to potential markets, the publication also makes recommendation for regulatory and institutional capacities of LLDCs to meet the demands of importing countries and assess measures that need to be taken to attract impact investors to the sector. A feature article summarising the findings is included as Section III.1 of this report on page 25.

30. Livestock Farming Cameroon – CFC/2018/12/0022

Submitting Institution	West End Farms
Location	Cameroon
Commodity	Livestock
Total Cost	USD 2,000,000
CFC Financing	USD 1,000,000
Counterpart Contribution	USD 1,000,000

Project Description

West End Farms is an integrated mixed farming SME company, based in Yaounde, Cameroon. Established in 2001, WEF has gradually developed to the largest commercial pork producer of the country adding to local food security. The company also grows maize, cassava and soya on a 300ha fully mechanised farm to produce feed for its porkers. Operating in a country which traditionally has been a net pork importer and where the efforts of local farmers to increase domestic production are hindered by poor infrastructure and high cost of feed, WEF endeavoured to upscale its business model.

Joining the Africa Agriculture SME Fund (AAF-SME), CFC provided WEF USD 1 million for the financing of the construction of a modern finishing facility in Douala and of its increasing working capital needs. CFC financing will enable WEF to increase its annual production from 8,000 to 20,000 animals, while 60 new jobs will be created, 40 % of which female.

31. Working Capital Kenya – CFC/2019/14/0027

Submitting Institution	Olivado
Location	Kenya
Commodity	Fruits
Total Cost	Euro 1,500,000
CFC Financing	Euro 500,000
Co-financing	AgriFI Kenya: Euro 1,000,000

Project Description

Olivado EPZ ('OEPZ') is a Kenyan fresh avocado trader and the world's leading producers of organic extra virgin avocado oil. It operates an integrated farmer-to-market model sourcing the avocados directly from over 2,800 smallholder farmers. The avocado oil is sold for export to traders and retailers in over 30 countries. In 2019, the company installed a biogas plant to utilise all waste and by-products from the avocado oil production to produce energy and fertiliser.

The CFC has extended a trade finance loan to accommodate the increasing international demand for responsibly farmed organic avocado oil. The loan will be used to buy more avocados from the existing farmers and to integrate some 160 new smallholders into Olivado's value chain each year. Every farmer who sells avocados to Olivado joins the certified organic and fair trade programme, gaining access to extensive agronomic training programmes, 95% guaranteed offtake agreements, and cash advances.

32. Addressing Vulnerabilities of CDDCs to Achieve the SDGs – CFC/2019/15/0003 FT

Submitting Institution	UNCTAD
Location	Land Locked Developing Countries (LLDCs) and Least Developed Countries (LDCs)
Commodity	Cross commodity
Total Cost	USD 160,000
CFC Financing	USD 120,000 (Grant)
Co-financing	USD 40,000

Project Description
The project looks at the preparation, presentation and discussion of technical reports on the impact of commodity related vulnerabilities on the efforts in achieving the SDGs. The studies for the reports will be organised by UNCTAD in commodity dependent developing countries selected to be representative of the typical challenges facing Commodity Dependent Developing Countries (CDDCs). The studies propose measures rebalancing global value chains in commodity markets, and come up with ideas that would further enhance the role of international organisations, CFC and International Commodity Bodies in assisting CDDCs to reduce vulnerabilities, and shake off their dependence on commodities. Another focus is on adaptation of the commodity sector to climate change, mitigating climate related vulnerabilities of CDDCs. The outcome of the paper is to come up with evidence-based policies, strategies and actions to help CDDCs overcome those challenges.
The study has concluded with recommendation regarding potential opportunities for CDDCs, drawing on their existing comparative and competitive advantages and natural endowments. The outcomes guide further UNCTAD deliberations on providing policy support to new employment and income opportunities in the commodity sector.

33. Fruits and Spices Madagascar – Working Capital – CFC/2019/15/0010

Submitting Institution	SCRIMAD GROUP
Location	Madagascar
Commodity	Fruits
Total Cost	Euro 2,400,000
CFC Financing	Euro 1,200,000
Co-financing	Euro 1,200,000

Project Description
Created in 1993 and based in a Least Developed country (LDC)-Madagascar, Scrimad is focused on aggregating and processing organic fruits and spices, sourced from local smallholder farming cooperatives. Over the last 5 years, SCRIMAD has been transformed from a small family business to a leading processor and exporter of fruit and spices from Madagascar, establishing significant strategic partnerships with actors such as Ethiquable, a French cooperative specialised in fair trade products.
The CFC financing to Scrimad provides the company with the working capital necessary to meet the growing demand for its products and increase its overall operational capacity and profitability. During the duration of this facility, the number of Scrimad smallholder suppliers is expected to increase from 2,000 to 3,000.

34. High quality cocoa from communities – Colombia – CFC/2020/16/0021

Submitting Institution	Cafexport Colombia S.A.R.L.; Hacienda la Tentación SAS
Location	Colombia
Commodity	Cocoa
Total Cost	USD 2,518,630
CFC Financing	USD 1,384,630
Co-financing	USD 1,134,000

Project Description
Cafexport's cocoa trading business was established in 2012 under the brand name *Colcocoa* to export fully traceable and certified sustainable cocoa beans to. At the time, Cafexport already exported coffee to major corporate buyers. With support of the CFC, Cafexport is looking to expand its own cocoa trading activities and cocoa production in Colombia. For this, the CFC has committed both a trade financing facility and an investment loan.

The project aims at reaching over 1,500 additional smallholders and providing them with off-take opportunities to significantly boost incomes. The additional income generated for smallholders is estimated to amount to USD 1,905 per year. Besides, by providing agronomic advice, reached smallholders can significantly increase crop yields and improve diets. In a region with very scarce formal employment opportunities, the project targets creating 20 permanent jobs, of which 40% are planned for women.

35. Scaling-up export of natural & handmade home decoration products – Bangladesh – CFC/2020/16/0036

Submitting Institution	Classical Handmade Products
Location	Bangladesh
Commodity	Natural Fiber
Total Cost	USD 2,000,000
CFC Financing	USD 1,000,000
Co-financing	Incluvest BV: USD 1,000,000

Project Description

Classical Handmade Products BD ('CHP' or the 'Company') is a privately held company producing home decoration products from indigenous raw material such as seagrass, elephant grass, jute. The Company was incorporated in 2008 by Mr. Tauhid, who currently is the owner and the CEO of the Company. Finished goods are exported to Europe and the USA.

CHP operates a decentralised business model. CHP is operating in the Northern part of Bangladesh, with 20 decentralised units in Rangpur and Bogra, with a primary production facility in Nilphamari. Jessore is the only location in the South of Bangladesh. The Company employs 1,500 people, and provides regular work to about 2,500 people, mostly women, located in various rural villages.

The market of handmade home decoration is dominated by developing countries; internationally Bangladesh competes with Vietnam, Cambodia, India, Pakistan and Indonesia. China competes by selling quasi-industrial products. The competitive advantage of the Company is its decentralised business model that promotes economic inclusion.

The Company intends to scale up its operations, and the intended investments aims at increasing its production capacity and current volumes of sales by 3x in the next 6 years.

36. Scaling processing and export of macadamia oil and nuts (Exotic) from smallholder farmers – CFC/2020/16/0038

Submitting Institution	Exotic EPZ limited
Location	Kenya
Commodity	Macadamia Oil and Nuts
Total Cost	USD 2,200,000
CFC Financing	USD 1,100,000
Co-financing	USD 1,000,000

Project Description

Exotic EPZ Limited ('Exotic') is a female owned agribusiness from Kenya, processing and exporting macadamia nuts and oils to the European market. The company sources unprocessed macadamia nuts-in-shell directly from over 1,300 smallholder farmers. The nuts are aggregated in over 10 collection points distributed in over 10 counties in Kenya. In the factory in Nairobi the nuts are dried, processed and then exported. The company's main customer is Red Rivers Foods, a leading U.S. supplier of premium and ethical nuts and specialty snacks.
Kenya is currently the third-biggest producer of macadamia nuts, after South Africa and Australia. The growing global demand for the nuts stems from their versatility, as it can be used in various food products such as cakes and sweets. It can also be converted into oil to be used in food, pharmaceutical and cosmetics products.

Exotic was acquired by current 3 female owners mid-2017 and is the sole women-owned processor and exporter of macadamia nuts in Kenya, in a sector being traditionally male dominated. The company's mission is to source, produce and supply the finest quality products in the nuts and oils value chains whilst empowering small-scale producers, particularly rural women farmers.

The CFC approved a total of USD 1,100,000 loan financing to Exotic. In February 2022, a USD 600,000 million trade finance loan agreement with Exotic was signed for the purpose of pre-financing macadamia nuts with certain buyers including Red Rivers Foods. The remaining USD 500,000 loan financing from the CFC is not yet signed and its purpose is for increasing production capacity at Exotic processing facility in Nairobi.

Photo: A kernel grader in Exotic's factory. Exotic

37. Carbon-neutral processing of avocados and avocado oil – CFC/2020/17/0008

Submitting Institution	**Olivado EPZ Ltd.**
Location	**United Republic of Tanzania, Kenya**
Commodity	**Avocado**
Total Cost	**Euro 2,000,000**
CFC Financing	**Euro 1,000,000**
Co-financing	**Euro 1,000,000**

Project Description

Olivado EPZ ('OEPZ') is a Kenyan fresh avocado trader and a leading producer of organic extra virgin avocado oil. It operates an integrated farmer-to-market model sourcing the avocados directly from over 2,800 smallholder farmers and installed a biogas plant in 2019 to produce biogas and fertiliser from the avocado waste generated through the oil processing.

Ensuring complete traceability from farm to bottle, Olivado has a rigorous farm-to-market system reliably tracing the quality and origin of avocado on farmer level. A dedicated team of field officers regularly visit the farms and support the farmers during cultivation. To exploit unmet market demand for avocados and avocado oil, the company is expanding its carbon-neutral business model to Tanzania. The Tanzanian oil extraction plant, Olivado Tanzania EPZ Limited, commenced operations in 2020.

The loan will allow Olivado to further grow its farmer-to-market model based on a Fairtrade and Organic certification scheme and pay smallholders in advance. Through this strengthened relationship with the CFC, Olivado expects to include up to 5,000 smallholder farmers in its inclusive small farmer programme in Kenya and Tanzania, enjoying premium prices and a secure income. Olivado will be one of the few, if not the only, carbon positive agri-processor in Kenya.

38. Mercon Coffee Group – CFC/2020/17/0047

Submitting Institution	**Mercon Coffee Group**
Location	**Brazil, Guatemala, Honduras, Nicaragua, Vietnam**
Commodity	**Coffee**
Total Cost	**USD 50,000,000**
CFC Financing	**USD 5,000,000**
Co-financing	**USD 45,000,000**

Project Description

Headquartered in the Netherlands, Mercon B.V. is a vertically integrated group active in the origination, processing and wholesale trading of green coffee. Mercon is one the largest coffee traders in the world, sourcing raw green coffee from all major coffee producing regions and supplying leading coffee roasters such Starbucks, Nespresso and Lavazza.

Mercon has recently initiated LIFT, an innovative, sustainable production platform that provides tools, training and services to smallholder farmers improving their productivity and raising their quality of life.

In 2021, CFC signed a USD 5 million revolving working capital loan agreement with Mercon, to fund the necessary cash advances to LIFT farmers in Nicaragua, Guatemala, Honduras and Brazil. During the duration of the credit facility, the number of farmers participating in the LIFT programme will increase from 3,200 to 5,800, with coffee sourcing increasing to 670,000 60-kg bags from 370,000 per year. The overall number of certified farmers will increase to 6,700 from 4,736.

39. Enimiro Integrated Value Chains – Uganda – CFC/2021/18/0027

Submitting Institution	**Enimiro**
Location	**Uganda**
Commodity	**Coffee**
Total Cost	**USD 1,800,000**
CFC Financing	**USD 800,000**
Co-financing	**USD 1,000,000**

Project Description

Enimiro is a privately owned, organically certified exporter of vanilla, coffee and dry fruits from Uganda. Through its vertically integrated supply chain, it sources raw materials directly from over 1,100 farmers in 5 Ugandan regions. Founded in 2019, it has built a unique model of organic certification schemes with full digital traceability and monitoring software to allow for transparency of the supply chain and data for certification in the smallholder farming sector. Its traceability technology enables the end consumers to have visibility of the supply chain from farm-to-fork and confidence to meet the social responsibility standards. The company is EU Organic certified; Fairtrade and UTZ certifications are currently in process.

The company has built several collection points for the farmer network to deliver their product directly, reducing concerns of contamination and increasing quality assurance. Smallholder farmers working with the company benefit from access to a direct market for their produce, agro-inputs, agronomical training and a quality premium. The collection points also act as agro-hubs, where several products such as fruit, vanilla and coffee can be commercialised.

40. Coffee Planet – United Arab Emirates – CFC/2021/18/0014

Submitting Institution	Coffee Planet LLC
Location	United Arab Emirates
Commodity	Coffee
Total Cost	USD 10,000,000
CFC Financing	USD 2,000,000
Co-financing	USD 8,000,000

Project Description

Headquartered in Dubai, United Arabic Emirates, Coffee Planet LLC was established in 2005 as a provider of freshly ground coffee/fresh milk vending machines for highway convenience stores. In 2008, Coffee Planet opened, in Dubai, a new UTZ, BRC, HACCP and ISO 22000 certified roaster of over 4,320 tonnes roasting capacity per annum. This enabled the company to become the largest specialty coffee roaster in the Middle East, with over 200 employees.

Coffee Planet is focused on end-to-end coffee solutions for diverse local and international customers. Currently, Coffee Planet provides a wide range of B2B and B2C coffee solutions. Coffee Planet serves 800+ local and international customers and operates over 5,000 coffee machines across the UAE.

In 2022, CFC signed a USD 2 million trade finance loan agreement with Coffee Planet to finance the sourcing, roasting and export of conventional and certified coffee for 2 strategic partners. The loan will allow Coffee Planet to increase its indirect sourcing of coffee beans from 2,000 additional producers by 2027.

41. Gulu Agricultural Cotton – Uganda – CFC/2021/19/0055

Submitting Institution	Gulu Agricultural Development Company
Location	Uganda
Commodity	Cotton and Sesame
Total Cost	USD 15,000,000
CFC Financing	USD 1,500,000
Co-financing	USD 13,500,000

Project Description

Gulu Agricultural Development Company (GADC) is an aggregator, processor, and exporter of cotton and sesame. It was established in Gulu, northern Uganda, in 2009 by its owner and CEO Bruce Robertson with the encouragement of the Ugandan government, following the end of the civil war.

Based out of three ginneries and a sesame processing facility in the region, GADC operates an outgrower network through which it offers a market as well as inputs and training on best agricultural practices for approximate 50,000 smallholders. Of these, GADC has direct contractual relationships with more than 30,000 farmers that have been certified organic and fair trade to obtain a premium on their supply. Among the direct beneficiaries are a large number of refugees from conflict zones in the region.

Photo: Cotton. Adobe stock

IV.4 **Projects Completed** in 2022

1. Upscaling Coffee Flour Production Plant of Sanam, Colombia – CFC/2016/08/0077 FT

Submitting Institution	Truvalu Group (for SANAM Company)
Location	Colombia
Commodity	Coffee
Total Cost	USD 312,000
CFC Financing	USD 120,000 (Loan)
Counterpart Contribution	USD 192,000

Project Description

SANAM is a coffee flour production company, based in Colombia and dedicated to the use of waste (husk and pulp) that are usually discarded in the process of coffee processing. These wastes are transformed into Miel de Café (coffee honey liquid) and Harina de Café (flour) which are used as raw materials and supplements for cosmetic, food, pharmaceutical and feed products. The pulp and husk contain elevated levels of antioxidants, proteins and minerals.

The CFC supported SANAM to increase production capacity of the beverage and coffee flour line by investing in machinery and equipment through a loan extended via Truvalu Group (former ICCO Cooperation). SANAM receives coffee waste from over 80 small coffee growers in the region. Collection of coffee waste by SANAM is a major saving for smallholders farmers, as they do not have to pay regular fees for waste management and collection services.

2. and 3. Reducing Vulnerability to Price Volatility – Kenya – CFC/2016/09/0097 and CFC/2021/18/0001 FT

Submitting Institution	SHALEM Investment Ltd.
Location	Kenya
Commodity	Grains
Total Cost	USD 2,100,000
CFC Financing	USD 610,000 (of which USD 500,000 is financed by Dutch Trust Fund (DTF))
Co-financing	Other impact financiers: USD 800,000

Project Description

Edom Nutritional Solutions (ENS) produces Shalem Investments Ltd. ('Shalem'), is a female-led agribusiness aggregating, transporting, and marketing grains, cereals and legumes from a network of over 29,000 smallholder farmers, of which 70% women. Created by the female CEO and founder to help smallholder farmers in successfully marketing their sorghum crops, the CFC extended a loan to diversify into nutritious flour and porridge for low-income consumers. By developing nutritious products from drought-tolerant sorghum and millet in addition to maize, Shalem aims to reduce malnutrition in rural areas and create a stable income source for local farmers.

The nutritious food plant has commenced operations by the end of 2019, producing fortified staple foods, such as maize flour (Ugali) and porridge. Shalem's Asili Plus Porridge and Ugali are supplied to schools and are available in over 50 retail shops and BoP-markets in Meru and surrounding counties, reaching over 46,000 BoP-consumers with affordable nutritious food.

4. Development of Social and Environmental Management System – CFC/2018/13/0003FT

Submitting Institution	International Labour Organisation (ILO)
Location	The Netherlands
Commodity	Cross commodity
Total Cost	USD 105,540
CFC Financing	USD 105,540 (Grant)

Project Description

As an impact investment fund with the mission of alleviating poverty following sustainable road map, the CFC is committed to follow the industry best practices regarding impact management. This project, therefore, concerns the development of CFC's Social and Environmental Management System (SEMS). Such systems are designed to enable a financial service provider to identify social and environmental risks associated with a particular transaction and take this into account when deciding whether or not to provide financing as well as identify opportunities to improve social and environmental performance.

The CFC has always considered these risks when assessing a project. However, recognising the great importance and complexity of this topic, the CFC decided to take a step further, and develop its SEMS. For this task, the CFC has partnered with the Social Finance Programme of the International Labour Organization (ILO), which since 2012, has gained great experience on the development and implementation of SEMS. With proper policies, procedures and tools in place, the CFC intends that its investment practice will be more transparent and consistent with international good practices in achieving the SDGs.

SEMS resulting from this project has now been integrated in the project cycle of the CFC as part of CFC's broader impact management practice.

Photo: Dahra, Senegal. © Benedicte Kurzen/NOOR for FAO

"When the world globally is facing challenges of an almost overwhelming magnitude, the need for enhanced cooperation and new and developed ways forward are greater than ever. A sustainable food system lies at the heart of the United Nations' Sustainable Development Goals (SDGs), but also at the heart of CFC's work. The CFC has an important role to fill, and we can also see a growing interest in the kind of support the CFC can provide. That, and the challenging times ahead, makes our work within the CFC both important and inspiring. CFC is an important part of a sustainable future."

Ms. Anna Tofftén (Sweden), Chairperson of the Executive Board

Photo: AATIF

IV.5 Technical assistance facility overview

AATIF – Market analysis and branding for new soymilk products

Seba Foods is a family-owned food processing company based in Zambia. Established in 1997, the company focuses on producing soy and maize-based products for human consumption and animal feed. Seba Foods is a market leader in Zambia, offering powdered and instant drinks, snacks, as well as textured soy as a meat alternative.

To expand its product portfolio, Seba Foods has ventured into soymilk production as a nutritious and affordable alternative to dairy milk. With raw milk being expensive due to high local production costs and taxes on imported milk powder, Seba Foods aims to provide a healthy and affordable alternative for the Bottom-of-the-Pyramid consumers. So far, the only source of soymilk in Zambia is imported and sold at twice the price of normal dairy milk.

Following a feasibility study and an in-house pilot production of soymilk products, Seba Foods reached out to the AATIF TA Facility Manager to initiate the first steps towards formally launching the new product line. In 2022, the AATIF TA Facility supported Seba Foods to undertake a qualitative market study proposing viable marketing collateral and content, as well as branding strategies for the new soymilk products. Through the TA support, an expert consultant has trialed product and branding samples with different consumer groups and developed marketing material that enabled Seba Foods to launch the finalised products at the end of 2022.

The project aimed to strengthen Seba Foods' core business by diversifying its product portfolio whilst offering local communities nutritional alternatives to imported milk powder products. As a result, Seba Foods is the first and only company in Zambia to locally source and produce a soymilk product line.

17 Countries in Africa where AATIF TA Facility projects are implemented*

7.1 Total TA funds pledged to AATIF TA projects (in million EUR)

34 Total number of agribusinesses and banks that have received AATIF TA support

108 Total number of AATIF TA projects approved

* Benin, Botswana, Côte d'Ivoire, Ghana, Kenya, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe

ATAF – Preserving biodiversity through agroforestry coffee systems for smallholder producers

Since 2017, ATAF has been supporting the Matagalpa Agroforest Resilient Landscape Project (MATRICE), which is implemented in Nicaragua by the Nicafrance Foundation (FNF), an organisation that acts as an engine in vulnerable regions for sustainable progress through innovative social initiatives, scientific research, and new models for climate change.

Through its efforts, the organisation has renovated 660 hectares of coffee plantations with shade trees, captured approximately 500,000 tons of carbon dioxide equivalent, produced a yearly average of 5,000 tons of specialty coffee, and has provided 6,600 seasonal and permanent positions for employees.

The MATRICE is based on the initial experience of agroforestry coffee management of the company Cafetalera Nicafrance and subsequently of the 1,930 hectares of medium and large producers managed by the company Nicafrance Outgrowers. The overall objective was to eliminate existing barriers for small coffee producers to adopt agroforestry systems and consequently become part of a coffee cluster linked to Nicafrance.

10 Countries where ATAF projects are implemented*

1.8 Total TA funds pledged to ATAF projects (in million EUR)

10 Total number of investees

18 Total number of ATAF TA projects approved

* Benin, Belize, Brazil, France, Germany, Ghana, Kenya, Mali, Nicaragua, Togo

Photo: Fundación Nicafrance

Through ATAF support, the MATRICE project benefited a total of 52 smallholder producers, allowing them to rehabilitate a total of 72.75 hectares of coffee plots with sustainable agroforestry production systems and promoting biodiversity. The project also facilitated on-farm technical assistance and field support through the provision of field technicians to accompany and train producers.

The project contributed to the development of a commercial network between the company Exportadora Atlantic, Sociedad Anónima (EXPASA) and Nespresso who has expressed interest in consolidating the final consumer market through the Expresso Master Origin brands.

The implemented agroforestry systems, technical-productive assistance, and access to a commercial network have resulted in an improvement in farmers' income. The effects of MATRICE continue to expand as smallholders in communities near the project's influence have expressed motivation and interest to integrate to the model.

V

CFC's Impacts in 2022

Photo: Adobe stock

Photo: Transporting sacks of seed and fertiliser, Pottuwil, Sri Lanka. © FAO/Prakash Singh

As an impact investor, the CFC finances investments that can generate a greater social and economic impact in developing countries. To be a credible and effective impact investor, the CFC recognises the need for a robust and efficient system for measuring and managing impact. To this end, the CFC's Executive Board approved a new impact strategy in October 2018. This chapter provides further information on the strategic focus, implementation, and impact highlights of the CFC's loan portfolio in 2022. Additionally, three impact stories from featured CFC investments are introduced.

V.1 CFC **impact management practice**

CFC's Impact Strategy Framework – Sustainable Development Goals

CFC's Impact Strategy Framework is based on the Sustainable Development Goals (SDGs) which serve as a universal call to action to put an end to poverty, protect the planet, and ensure prosperity for all people. By building upon the Millennium Development Goals (MDGs), the SDGs balance the economic, social, and environmental dimensions of sustainable development, with a focus on tackling the root causes of poverty and promoting sustainable and prosperous global development.

While every country has primary responsibility for its own economic and social development, collaborative partnerships that bring together governments, civil society, and the private sector are widely believed to be the most effective way to take transformative and bold steps towards a more sustainable and resilient world. The CFC has adopted the SDGs as its impact framework in response to this call to action.

Given the crucial economic role of commodities, CFC-financed projects have the potential to impact the advancement of all 17 SDGs. However, CFC's impact management strategy primarily focuses on identifying its direct positive impact on selected "core" SDGs where the impact is most apparent and measurable across the entire portfolio of supported projects. In doing so, the CFC seeks to have a clear and comprehensive view of its contribution towards achieving the SDGs on a portfolio-wide basis.

The six core SDGs are:

SDG 1 – No poverty – end poverty in all its forms everywhere

SDG 1 is more critical now than ever before. The global extreme poverty rate increased for the first time in over two decades in 2020[1] due to the pandemic. With double-digit inflation and the war in Ukraine, it is estimated that as many as 198 million extremely poor people were added in 2022.[2] Poverty perpetuates a cycle of limited access to basic services, education, and healthcare, impeding the ability of individuals to contribute to their community. Achieving SDG 1 requires investment in social protection systems, empowering marginalised communities, supporting small businesses, and creating sustainable job opportunities. The CFC contributes to SDG 1 by investing in businesses that improve people's livelihoods throughout the supply chain, by among others, training and providing stable demand to smallholder farmers in developing countries.

SDG 2 – Zero hunger – end hunger, achieve food security and improved nutrition and promote sustainable agriculture.

The combined challenges of the pandemic, soaring food prices, and the war in Ukraine have threatened progress toward achieving zero hunger (SDG 2). This particularly applies to rural households that rely heavily on small-scale farming for their meals and income. According to the latest estimates, between 720 and 811 million people worldwide were suffering from hunger in 2020,[3] and this number is likely to have increased due to the COVID-19 pandemic.[4] In addition, over 2.4 billion people were experiencing moderate to severe food insecurity, lacking regular access to adequate food. In 2022, the number of people facing acute hunger rose from 282 million to a record 345 million people in 82 countries.[5] Hunger and malnutrition can lead to a wide range of negative impacts, such as stunting and other health problems, reduced cognitive development, lower productivity, and decreased economic growth.

The CFC supports a world where everyone has access to safe, nutritious, and sufficient food. It invests in SMEs that aim to increase smallholder productivity and build farmers' resilience to external risks. By improving access to credit, technical assistance, and other resources, the CFC helps to ensure that people can access safe and nutritious food year-round, supporting their livelihoods and contributing to global food security.

[1] Source: https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021
[2] Source: https://www.oxfam.org/en/press-releases/terrifying-prospect-over-quarter-billion-more-people-crashing-extreme-levels-poverty
[3] Source: https://www.un.org/sustainabledevelopment/hunger/
[4] Source: https://www.wfp.org/publications/state-food-security-and-nutrition-world-sofi-report-2022
[5] Source: https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021

SDG 5 – Gender Equality – Achieve gender equality and empower all women and girls

Despite efforts to achieve gender equality by 2030, progress has been further hampered by the socioeconomic impact of the pandemic. Women and girls have been disproportionately affected by job loss, interrupted education, increased unpaid care work, and domestic violence. Moreover, despite the effective leadership of women in responding to COVID-19, they are still excluded from decision-making roles. In agriculture, where women make up 43% of the labour force in developing countries, gender disparities persist in access to productive resources, including land rights, technology, finance, and income distribution. By prioritising investments that promote gender equality, such as women-led enterprises, employment creation for women, and high representation of women in senior positions, the CFC contributes to achieving SDG 5, ensuring that women have equal access to resources, opportunities, and decision-making positions.

SDG 8 – Decent work and economic growth – promote inclusive and sustainable economic growth, employment, and decent work for all

Before the pandemic, informal employment already represented a staggering 60% of global employment. However, the pandemic and resulting containment measures had a devastating impact on informal workers. Unlike in previous crises, when laid-off employees and self-employed workers shifted to informal jobs or became unemployed, COVID-19 prevention measures prevented labour reallocation to informal employment. Many workers were forced to leave the labour force altogether, exacerbating the already precarious position of informal workers and their families. This was reflected in a decline in the informal employment rate in some countries, leaving many workers exposed to sudden income losses and at heightened risk of falling into poverty.

While the global unemployment rate declined slightly to 6.2% in 2021,[6] it remains well above the pre-pandemic rate of 5.4%. The International Labour Organization (ILO) estimates that unemployment will remain above its 2019 level until at least 2023. Additionally, almost 1.4 billion workers are in vulnerable forms of employment, lacking job security, regular incomes, access to social protection, and opportunities for social dialogue.

In this context, the importance of creating decent jobs cannot be overstated. The CFC recognises this and supports investments that generate employment with decent working conditions, particularly in SMEs. By investing in these projects, the CFC helps to create quality jobs, promote inclusive and sustainable growth, and uplift vulnerable communities around the world.

SDG 10 – Reduced inequalities – reduce inequality within and among countries

Before the pandemic, certain progress was made in decreasing income inequality in some countries and lowering transaction costs of remittances, among other areas. Nonetheless, inequality remains pervasive in various forms, such as wealth, opportunity, and beyond. Unfortunately, the pandemic has amplified existing inequalities within and between nations, with the most vulnerable individuals and poorest countries bearing the brunt of the impact. To combat inequality, the CFC supports investments in the most vulnerable regions globally. By aiding individuals to earn a fair share of the global value generated from commodities, the organisation is working to decrease inequality and foster more equitable opportunities for all.

SDG 13 – Climate action – take urgent action to combat climate change and its impacts

The profound impacts of climate change on commodities have significant implications for SMEs in developing countries. SMEs operating in this domain face a multitude of challenges arising from climate-related factors, necessitating a comprehensive understanding of the importance of climate change in financing strategies. Extreme weather events, including droughts, floods, and heatwaves, disrupt agricultural production, damage crops, and disrupt value chains. To access international markets and attract discerning customers, SMEs must also demonstrate their commitment to environmentally responsible production and sustainable value chains. As such, CFC-supported SMEs are well-positioned to capture new opportunities that combine both climate action and business sense.

SDG 13 is the most recent addition to the list of core SDGs for the CFC. Climate change has far-reaching implications for commodity production, trade, and livelihoods of smallholder farmers. By including SDG 13, the CFC seeks to bolster the economic prospects of smallholder farmers through climate finance to SMEs.

[6] Source: https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS

Measuring CFC impact across its portfolio

Measuring impact using the SDG framework can be challenging despite its wide-ranging scope. This is because monitoring targets is done nationally and globally, making it difficult to attribute the contribution of a specific organisation to specific goals. To address this challenge, it is necessary to convert the SDG framework into specific indicators. The CFC has adopted the Impact Reporting and Investment Standards (IRIS+) as its main reporting tool, which is a catalogue of the most useful metrics from the impact investing industry. This makes it easier to measure performance. The CFC has mapped the most relevant IRIS+ metrics related to respective SDGs and selected the main indicators to be monitored by its projects. As a result, the CFC can overcome reporting difficulties and ensure that its projects have a positive impact on the SDGs.

Implementing the impact strategy

The selection of proposals that receive support from the CFC is largely based on their potential development impact. For this reason, each investment proposal submitted through the Open Call for Proposals is expected to provide indicators of the intended impact. Since the 13th Call for Proposals in 2018, the CFC has required prospective investees to present the estimated impact of their projects using the SDG framework. Specifically, proponents must explain how their project will contribute to the advancement of the core SDGs and provide target impact indicators for each year of the project, as well as baseline values using the IRIS+ metrics. Projects that fail to provide this information are typically not recommended for further consideration during the screening stage.

At the due diligence stage, the CFC reviews the impact indicators and incorporates them into the project agreement between the CFC and the project proponent. The agreement ensures that the project strives to accomplish its intended outcomes and reports specific impact indicators, as agreed upon with the CFC. This data is submitted to the CFC annually along with financial reporting. The CFC's Impact Strategy is characterised by regular and consistent impact reporting in addition to financial indicators.

The CFC collects diverse information regarding the impact of its projects over their life cycle while seeking to minimise the overhead burden on the operational, organisational, and human resources. The CFC follows a robust approach covering impact indicators and impact measurements requiring project proposals to include the following:

- **Target Indicators:** The indicators should clearly demonstrate the intended level of achievements for each year of the project. The CFC expects that these will be systemically assessed and reported by the proponent, demonstrating that the implementation plans are feasible and not based on unrealistic assumptions;

- **Baselines:** Baseline levels for impact indicators should be included in the proposals. The CFC reviews and compares baseline data with other sources, e.g., similar projects;

- **Data on achievements:** The CFC systematically follows up on the achievements of its supported projects to ensure timely and accurate reporting of the progress and impact. The follow-up procedures are introduced, and project proponents are informed of the consequences of incomplete or late reporting on the implementation and eventual success of the project.

Photo: Peeling cassava Holima Town, Bo District, Sierra Leone. © FAO/Sebastian Liste

- **Monitoring and Evaluation:** Selective monitoring and evaluation for individual projects may be included but is generally constrained by the financial and human resources made available by the project proponents. The current focus of the CFC is on developing a practical approach for monitoring and evaluation across the entire CFC project portfolio.

- **Financing of Project:** Projects receiving CFC support frequently include larger financial institutions as co-financiers. Combining resources and technical facilities of the CFC with co-financiers enables more intense and detailed impact monitoring.

Social and Environmental Management System

In addition to measuring the positive impact of its projects, the CFC recognises the significance of evaluating the potential social and environmental risks associated with its activities. As a result, the CFC has collaborated with the International Labour Organization's Social Finance Programme to establish its Social and Environmental Management System (SEMS).

Systems of this nature are intended to empower financial service providers to identify social and environmental hazards linked to a specific transaction. These systems also allow them to take these risks into account when determining whether to provide funding. Furthermore, these systems assist in identifying prospects to enhance social and environmental performance.

When evaluating a project, the CFC has always considered the environmental, social, and governance (ESG) risks associated with it. This assessment is part of the entire process of evaluating a new proposal, starting with the initial screening of applications, and continuing with the ongoing monitoring of active projects. Despite this, given the significance and intricacy of the matter, the CFC has decided to go beyond its existing practices by aligning its procedures with the industry's current best practices in impact investment. To accomplish this, the CFC developed its own SEMS.

The CFC has partnered with the ILO to create various tools and procedures that methodically evaluate the social and environmental risks associated with potential projects. These bespoke tools consider the CFC's specific configuration and the sectors in which it operates, encompassing all phases of the CFC's investment process. The main result of this initiative was the endorsement of the CFC's Sustainability Policy by the Executive Board. This policy sets the criteria for evaluating the social and environmental risks of CFC's operations.

Impact measurement: an ongoing work

The CFC acknowledges that the impact investing sector lacks a well-established and robust system that enables all investors to manage and track their impact effectively. While the sector has risen to the task of assessing social and environmental impact, substantial advancements in new tools, frameworks, and standards have emerged in recent years. Despite this progress, the development of comprehensive and dependable parameters that match those utilised for risk and return in the traditional financial market is still a long way off.

The CFC recognises these challenges and endeavours to support the advancement of a robust impact management framework within the sector. To this end, the CFC collaborates with numerous relevant stakeholders in the field and strives to stay abreast of the sector's most effective practices.

The CFC recognises that a comprehensive understanding of impact metrics requires an analysis of the projects' operating context to provide a more holistic view of its social and environmental performance. Raw figures alone cannot accurately indicate positive or negative social value, nor can they be easily compared across companies or products. As a result, the CFC fosters close working relationships with its projects and intends to conduct more extensive qualitative and quantitative research on a subset of its investments in the future. This integrated approach serves as the foundation for the CFC to convey a credible narrative of its SDG impact. Additionally, as the CFC gains insights from these experiences, it can make more effective investments by identifying and evaluating sectors, regions, and financial instruments that are crucial to generating practical impact.

Photo: Farmer harvesting rice Viet Nam. © FAO/Hoang Dinh Nam

"The tireless dedication of the CFC in fostering a sustainable, innovative, and resilient world through collaborative efforts is truly commendable. Serving as a crucial mechanism, it has effectively supported vulnerable small businesses in the developing world, empowering them to navigate the complex supply chain crises, as exemplified during the COVID-19 pandemic. As the world continues to grapple with challenges in commodities supply chains, the CFC stands poised to assume an even greater role, actively addressing these issues and forging a path towards a brighter future."

Ms. Jie Chen (China), Chairperson of the Consultative Committee

V.2 CFC's **impact: loan portfolio**

While preparing this Annual Report, it is important to mention that not all projects have provided updated impact reports for 2022. Many projects still face disruptions in their value chains, including fluctuations in input and commodity prices. Consequently, some companies have needed to restructure their financing. Nevertheless, at the portfolio level, the overall operations of the CFC show an increased impact in 2022 compared to previous years, thereby setting a record in reaching farmers.

Below we present a brief analysis of the main indicators corresponding to the SDG framework:

SDG 1 – No poverty

CFC-financed projects have substantial prospective benefits, with approximately **440,000 people** reached. The primary target group encompass small-scale farmers who contend with the challenging circumstances of living below the World Bank's established poverty threshold of USD 2.15 per day and/or the living income. These individuals are likely to witness a significant augmentation in their income; potentially elevating them from their existing impoverished state. Although not all initiatives have submitted their impact figures, the estimated annual net income increment for the beneficiaries ranges between **USD 248** and **USD 5,500**. In the year 2022, CFC-financed projects directly profited **92,000 farmers**. The endeavours of the CFC illustrate the potential for substantial socioeconomic progression through precise interventions and inclusive financial approaches.

SDG 2 – Zero hunger

The additional income received by the people we reach through CFC-financed projects has the potential to contribute to food security, thereby also contributing to SDG 2. Moreover, several projects supported by the CFC play a crucial role in expanding cultivated land areas and enhancing crop productivity for smallholder farmers, which can have a positive impact on SDG 2. In total additional land cultivation amounted to over **60,000 hectares**.

SDG 5 – Gender Equality

The CFC places significant emphasis on empowering vulnerable groups, particularly women, in its projects. Many of the projects supported by the CFC actively contribute to women's empowerment by offering training, employment opportunities, and access to new markets, among other initiatives. Projects are expected to report gender-related metrics such as the percentage of female beneficiaries, total jobs created for women, representation of women in senior positions, and female ownership. In the current portfolio, approximately **31%** of estimated beneficiaries are expected to be women.

SDG 8 – Decent work and economic growth

The projects backed by the CFC are estimated to have supported **11,000 jobs**, thereby providing employment opportunities for individuals in vulnerable circumstances. The annual income per job created ranges from **USD 3,795** to **USD 29,525**. In 2022, CFC projects supported employment opportunities for **3,000 permanent** and **7,900 temporary employees**, offering favourable conditions for decent work and contributing to economic growth.

SDG 10 – Reduced inequalities

The CFC focuses on supporting interventions in developing countries, with particular attention given to projects targeting vulnerable regions and countries, including Least Developed Countries (LDCs) and Landlocked Developing Countries (LLDC). Within the current portfolio, nearly 33% of approved investments are allocated to LDCs across **10 projects** and 15% to LLDCs across five projects.

SDG 13 – Climate action

The CFC is currently evaluating CFC scope 1 emissions, while we explore a rigorous, yet practical, approach to measuring the emissions across the value chain. The CFC may also actively source climate mitigation and adaptation projects in the future.

Total estimated impact of CFC project portfolio[7]

440,500
people reached

(Additional) net income ranging from
USD 248 to
USD 5,550
per annum

60,000
hectares of land cultivated for food and cash crops

31%
of women among the people reached

10,895
jobs supported directly

Annual wage per job ranges from
USD 3,795 to
USD 29,525

Share of CFC committed portfolio[8] allocated to special vulnerable groups (% of CFC portfolio) comprising:

LDCs: **32.5%**

LLDCs: **14.8%**

LDCs which are also landlocked: **14.8%**

Out of
17 LDCs which are also landlocked
16 were involved in CFC projects so far

[7] The estimation methodology for these impact measures had been updated in 2022-23 for greater accuracy and comparability with impact peers. The estimated numbers may not be directly comparable to those in the 2021 Annual Report.
[8] The committed portfolio refers to total investments approved by the Executive Board. This sum may differ from contractual commitments and/or outstanding investments.

Impact of CFC activities in 2022

90,000

farmers reached directly

(Additional) net income ranging from

USD 124 to **USD 2,750**

per annum

1,865

hectares of additional land cultivated for food and cash crops

28%

of women among the people reached directly

5,400

additional jobs created with CFC's support

Annual wage per job ranges from

USD 3,795 to **USD 29,525**

Share of CFC committed portfolio allocated to special vulnerable groups (% of CFC portfolio) comprising:

LDCs: **32.5%**

LLDCs: **14.8%**

LDCs which are also landlocked: **14.8%**

Photo: Display of grain and spices at the street market in Fatehpur Sikri, India. Adobe stock

V.3 Impact stories: **highlights from CFC portfolio in 2022**

Photo: NEI nursery. NEI

Helping smallholders benefit from **vanilla value chains in Tanzania**

Photos: NEI

CFC's investment in Natural Extracts Industries (NEI) came at a particularly opportune time for the Tanzania-based agribusiness. We began working with NEI in 2019, just as the price of vanilla began to fall from its peak and only a few months before the Covid pandemic brought the world to a standstill.

As an impact investor we aim to finance viable agribusinesses that drive positive change in the communities around them. That takes long-term commitment and a willingness to stick with them through challenging times. This was a moment to practise what we preach.

'The double whammy of declining prices and Covid created a lot of uncertainty,' says NEI Co-founder and Managing Director Juan Guardado. 'But the Common Fund kept going with us so we could weather that storm, which was really fantastic because nobody knew what was going to happen to the market. The CFC has always been there to see us through thick and thin and it is a testament to the type of investor they are.'

CFC financing helped NEI to continue paying its smallholder farmers for their vanilla, giving them much needed financial security. It also put NEI into a strong position to take advantage of the opportunities that would emerge during the pandemic. '2020 was actually a really good year,' adds Juan. 'Covid forced everybody to eat and cook at home and we had retail-focused customers who increased volumes significantly. So even though prices were coming down volumes kept up.'

For farmers that meant they could continue planting vanilla crops in the knowledge NEI would provide a secure market for them. This has helped keep the average increase in income per NEI farmer on trend, with that figure hitting USD 291 in 2022, equivalent to more than 25% of GDP per capita in Tanzania.

Since 2020 the number of farmers benefitting from working with NEI has expanded from around 6,000 to more than 10,000. On a recent trip to Tanzania CFC Impact Investment Manager Peter Nielsen visited one of those smallholdings in the Kilimanjaro region near NEI's processing facility in Moshi, accompanied by NEI Field Officer Jacqui Shayo and the Vice President of Operations Godbless Baluhya.

On the farm, run by a smallholder called Priscilla, he met Cleopa, a smallholder champion who represents 100 farmers in the area. Cleopa described how the farm's 100 vines have generated valuable extra revenue for Priscilla. There are costs to cover, including labour and the expense of irrigation during the dry season. But most of that money is reinvested into the farm or used to pay for school fees, creating both economic and educational opportunity.

To help kickstart this revenue stream, NEI provided vines subsidised at 20% of the cost, as well as training in how to intercrop vanilla with the smallholding's coffee and plantain plants. Working with NEI also means Priscilla benefits from its commitment to direct farmer payments, which results in smallholders receiving around 60% of the export price and 25% more than a middleman would offer. The traceability tech that verifies this,

NEI's Godbless (left) and Jacqui (right), smallholder representative Cleopa (middle left) and Reinhart (middle right) grandson of the farm's owner.

Photo: NEI

provided by SourceTrace, also enables NEI to track field work data such as how many times they've trained a farmer and who may need extra support.

From a CFC perspective, Peter says: 'NEI sets smallholders up for success by providing access to inputs such as vines and a connection to international markets that gives them economic certainty in terms of pricing and demand. For many of these smallholders vanilla has become their main cash crop and we're looking forward to helping NEI reach more farmers and expand their processing capabilities.'

The CFC has so far disbursed more than USD 1 million to NEI, and the company aims to build on this support by expanding its reach to around 30,000 smallholders in the years to come. This will help it further develop the reliable supply chains large vanilla buyers are looking for.

'Big buyers wait for scale in a value chain before they commit, so they know the origin can guarantee the volume they need. Many of the top ten global flavour houses are now buying from us,' explains Juan.

The potential to increase the volumes being sold to those influential customers is part of a wider east African story that Juan is eager for NEI to contribute to. He sees an opportunity for the region to provide the diversified vanilla supply chain larger international buyers are looking for, to counter the price volatility that often afflicts the sector. 'There is huge scope for growth left,' he says. 'We're developing a sustainable value chain and operate in more than seven regions in Tanzania, but vanilla's potential goes beyond us as a company. Tanzania's economy has come on in leaps and bounds recently and there is a large young population looking for the opportunities a thriving industry can offer. We need to be focussed on creating industries and taking a systemic view across the value chain.'

The goal is to expand Tanzania's share of the global vanilla market from 1% to 5%. NEI hopes to play a large part in that growth and, importantly, continue to pass the rewards down to the farmers who make it possible. At the CFC, we're excited to see our investment supporting a company that is genuinely enhancing the livelihoods of smallholders. Smallholders are keen to benefit from the programme. After conducting focus groups in just two regions of Tanzania, NEI estimates there is an opportunity to plant more than 100,000 shade trees on over 1,200 acres, benefitting more than 2,000 farmers.

'NEI sets smallholders up for success by providing access to inputs such as vines and a connection to international markets that gives them economic certainty in terms of pricing and demand.'

Growing the impact of agroforestry

NEI has enhanced its commitment to agroforestry and is now working with smallholders to create a regenerative and diversified agroforestry whole farm system.

Following 10 agroforestry demonstration trials, that will prove its potential both on existing vanilla plots and in regenerating forest cover in open maize fields, the company aims to roll out the initiative across its supply chain. This will include additional technical support from its field teams as well as new partnerships with reforestation and carbon credit organisations.

The new model will deepen the resilience of farms, putting them in a stronger position to weather the impacts of climate change, sequester carbon dioxide, improve vanilla productivity through enhanced shade and soil fertility, increase farmer incomes by integrating more high value tree crops, and boost biodiversity by ensuring 50% of the new canopy cover is made up of indigenous trees.

Smallholders are keen to benefit from the programme. After conducting focus groups in just two regions of Tanzania, NEI estimates there is an opportunity to plant more than 100,000 shade trees on over 1,200 acres, benefitting more than 2,000 farmers.

Building trust with **Ugandan vanilla farmers**

One of the keys to a successful agribusiness is the strength of the relationships it has with its smallholder farmers. That's why vanilla producer Enimiro Products Uganda Limited (Enimiro) is committed to building long-term partnerships with smallholders that create economic opportunity and contribute to the growth of the vanilla sector in Uganda.

Founded in 2019, Enimiro now works with more than 4,000 smallholder farmers. We recently spoke to two of them, Manana Stephen and Naduntu Joweira, who have been working with Enimiro since 2020. Both were already growing vanilla, but Enimiro's support has enabled them to expand and improve their production. In fact, Manana's farm has grown from 80 to 240 vanilla vines, and he expects to yield between 100kg and 200kg this year, up from 70kg last year.

The additional income generated by these harvests can significantly boost farmers' livelihoods. It will help Naduntu pay for her children's school fees, renovate her home, and build an animal house: 'I want my animals to sleep better and eat better', she says. As her cultivation area expands, she will also hire someone to help her with the harvest.

Enimiro encourages farmers to grow vanilla and supports those in its network to improve their productivity and growing practices. Extension Officers such as Mercy Naigaga, work alongside smallholders to help them adopt practices that are sustainable both economically and environmentally. This is having a wider positive impact. For example, after seeing his father evolving with the company, Manana's son also started growing vanilla for them, demonstrating the value of establishing trusted relationships with farmers.

For Manana, who has seven children, the additional income from vanilla will help him enhance his farm and improve living conditions for his family. 'I'd like to thank the CFC for their support to Enimiro, and consequently to us farmers', he says. 'Before working with Enimiro, we didn't have a secure market and we used to sell through traders, who would pay us little money. But Enimiro offers a fixed and sustainable price, and they've also helped us get a fence and wheelbarrow to secure and facilitate our activities.'

Both Manana and Naduntu mention that theft is a major issue. Farm security and economic security go hand in hand and Enimiro is keen to support both. Like Manana, Naduntu is receiving help to combat thieves and ensure the smooth running of her farm. She will also use the additional income from her vanilla harvest to purchase a protective fence for her field.

Photos top to bottom: Farmer Manana Stephen in his vanilla field. CFC | Vanilla. Adobe stock

By increasing security, more land can be opened for crops. In the past Manana kept his field as bush to put off thieves. Fencing gives him the confidence to grow valuable vanilla plants, as does the knowledge to take care of it which he's gained from Enimiro.

With the help of Extension Officer Philip Ssentongo he secured the area and transformed it from bush into a field ready for farming. Training in soil and water conservation techniques, such as trenches and mulching, then helped him grow a healthy crop. Philip also advised on how to create shading for vanilla, which is a crucial technique since, says Manana, 'vanilla loves shade, but if there is too much, it won't yield. It needs a balance'.

The benefits of Enimiro's operations are rippling through the local community and wider value chain. The company is leading the push to develop a transparent Ugandan vanilla chain with its traceability system, and through community engagement it is ensuring farmers understand the advantages of working with them. This builds the trust smallholders need to continue investing in their farms and boosting their livelihoods, which in turn has a positive impact on their families' educational and health outcomes.

Farmer Naduntu Joweira (left) and Extension Officer Mercy Naigaga (right) who oversees extension activities in the Eastern region.

Photo: CFC

At the other end of the value chain, the certifications achieved by Enimiro's products show customers they are genuinely driving local impact and improving smallholder lives.

For Enimiro Managing Director, David Wright, the critical part of ensuring this impact is paying farmers on time. That comes down to the availability of working capital, which many agribusinesses in Africa struggle to access and is one challenge our investment can help to overcome. This lack of financing leads to an informal sector, which is prominent across the continent and characterised by delayed payments and increased risks for farmers.

'Without the CFC, we wouldn't be the company we are today. You were the first ones that took the jump, allowing us to become more investment ready with other investors.'

A financial structure that enables timely payments to small-holders is the foundation stone of a business that truly supports them, says David. Enimiro has combined this with direct farmer engagement and a robust traceability system that underpins its activities.

CFC's investment has been critical in unlocking Enimiro's potential. Before receiving USD 800,000 in CFC trade finance in 2022, Enimiro had to wait for customer payments before it could pay farmers, which threatened their income security. With timely payments now possible, Enimiro is building farmer confidence, which makes it easier to work together on quality and certification issues. As David explains: 'It's important to ensure that farmers trust you as a partner'.

'Without the CFC, we wouldn't be the company we are today. You were the first ones that took the jump, allowing us to become more investment ready with other investors. So, a huge 'thank you' for all that the CFC has done for the business and the vanilla sector in Uganda', he adds.

This kind of investment showcases the power of developing trust throughout a commodity value chain. 'When there is trust between the parties involved, they are more likely to work together towards common goals, pooling their expertise, knowledge and resources for sustainable development,' says CFC Chief Operations Officer Nicolaus Cromme.

By continuing to work together, we hope we'll soon have more stories like those of Manana and Naduntu to share.

Investing in innovation to **benefit smallholders**

Photo: Meridia field team members at a cocoa farm in Ghana. Meridia

Much has been written about the potential of big data and tech innovation to revolutionise agriculture and create more efficient food systems. But extending the benefits of technology to remote smallholder farmers and gathering accurate information about them that can shape effective policymaking is a challenge.

At the CFC, we're keen to support technological innovations that improve the ability of smallholders to enhance their livelihoods. We've recently taken our commitment one step further by investing EUR 300,000 in Netherlands-based firm Meridia, which is driving transparency in food chains and ensuring the equitable treatment of smallholder farmers.

Chief Executive Officer Thomas Vaassen describes Meridia as 'a geospatial data company that puts farmers at the centre of its work to make supply chains transparent, sustainable, and inclusive of smallholders.'

From the CFC's perspective, Meridia offers benefits all along the supply chain. The firm specialises in collecting, analysing, and verifying high-quality data in smallholder supply chains. This helps food companies achieve environmental, social and governance (ESG) standards and compliance, while building supply chains that are inclusive of smallholders.

Tracing commodities back to the farms where they were grown has historically been difficult. But, explains Thomas, 'our software provides accurate farm mapping and field data collection – farms can be mapped even in the most remote locations.' Collecting this data has numerous advantages for smallholders. 'They become visible and can access regulated supply chains, sustainability programmes, and investments to maintain a stable income and stop deforestation.'

In addition, farmers gain better insights into their productivity and a deeper understanding of their business. For example, exact farm size and production data enable accurate yield per farm calculations. At the same time, clear parcel boundaries lower the risk of conflict in communities. This verified data also enables smallholders to secure land rights for themselves and future generations. Having land documents embeds prosperity by giving them greater control over land use and the income it generates.

'As increasingly larger volumes of farmer data are collected, farmers need better access, use and ownership of their data to improve their livelihoods,' says Thomas. 'Data needs to be governed in a farmer-centric way. As part of several large consortiums, we have taken up important data stewardship activities to secure land rights and tackle issues related to agroforestry for cocoa farmers and cooperatives in West Africa and Indonesia.'

Photo: Meridia

Meridia field team member in Indonesia.

If this data is unavailable, smallholders risk being excluded from the supply chain. It is also a business imperative for food companies that rely on smallholders, as regulations evolve and consumers become more conscious of a brand's sustainability credentials.

Field data quality is the key to ensure compliance with the upcoming EU Regulation on Deforestation-Free Products (EUDR). However, the rigorous farm data required is hard for companies to achieve. It is particularly challenging to get this data within the tropical commodities sector, where around 75% of crops are grown by smallholder farmers.

'As part of several large consortiums, we have taken up important data stewardship activities to secure land rights and tackle issues related to agroforestry for cocoa farmers and cooperatives in West Africa and Indonesia.'

Meridia helps companies overcome these challenges and prepare for compliance. Through assessing supply chain data and verifying its quality, compliant and none-compliant data are separated. Data verification can also unlock other benefits, like accurate farmer payments and carbon calculations.

Thomas describes the regulation as a 'game changer' because it turns nice-to-have internal policies into organisation-wide requirements necessary to meet mandatory regulations. 'Companies that do not comply with the new regulation risk penalties, supply chain disruptions, and reputational harm, directly affecting their customers,' he says.

Meridia has a track record of providing this much-needed transparency for multi-national companies such as the chocolate and cocoa business Barry Callebaut. The firm's Global Lead of Thriving Nature, Tilmann Silber, says: 'To measure and further strengthen the impact of our agroforestry programme, we rely on high-quality data at the farm level. Our partnership with Meridia helps us to take the next step in data collection and management and will further boost our sustainability activities.'

Working with Meridia will enhance our ability to ensure the agribusinesses we invest in are truly delivering positive change on the ground, says CFC Risk and Portfolio Manager Hector Besong: 'Technology has huge potential to enhance the lives of smallholder farmers and is becoming critical to large food brands that must prove their supply chains are living up to their ESG claims. Meridia's ability to gather and analyse robust and reliable data has a key role to play in creating global food systems in which smallholders can thrive, and net zero can be achieved.'

CFC Managing Director Amb. Sheikh Mohammed Belal added: 'Anything that helps to bring the developing and the developed world closer together is a win-win enterprise for us. By applying innovative technology in countries such as Ghana, Côte d'Ivoire and Indonesia, Meridia is providing us with deep insights into the commodity value chain that we couldn't access before. It is an example of how technology can be used to enhance the value chain for both the producer and the consumer.'

As the potential for tech innovation to reshape agriculture grows, we're excited to have partnered with a leading business in the sector that will support our mission to build more equitable food systems.

Photo: CFC

VI

34th Meeting of the Governing Council highlights the **challenges smallholders face**

The precarious position many smallholders are currently in was emphasised at the 34th Annual Meeting of our Governing Council (GC), held on 13 and 14 December 2022 in The Hague. The meeting gave us the opportunity to reunite GC members in person to discuss the challenges smallholders face, after a series of online meetings during the pandemic.

This year's keynote address was delivered by Ms. Miho Shirotori, Acting Director of the Division of International Trade and Commodities (DITC) of the United Nations Conference for Trade and Development (UNCTAD), on behalf of H.E. Rebeca Grynspan, Secretary General of UNCTAD. She highlighted how collaboration between organisations with common goals, such as UNCTAD and the CFC, can drive positive impact by helping agribusinesses access new markets and enhance smallholder livelihoods. Ms. Shirotori reaffirmed UNCTAD's support for, in her words, the 'excellent work of the CFC'.

CFC Managing Director Amb. Sheikh Mohammed Belal pointed out that rising commodity prices create a double jeopardy for smallholders: 'Their incomes do not rise with prices due to long and opaque value chains that are dominated by large trading houses and financial investors. Yet the price of their inputs has risen sharply. What smallholders make is simply not enough to meet the increased cost of fertilisers, seeds, pesticides, chemicals and other inputs they must buy. So smallholders lose out twice – that's the double jeopardy.'

Amb. Belal reiterated the CFC's commitment to supporting smallholders in developing countries to build prosperity and economic independence in the year ahead. One way to enable this is by connecting them to technological innovation developed in Europe. As the world copes with division and discord, Amb. Belal said he wanted the CFC to remain a place where the global north and south could converge and work together to enhance commodity value chains for everyone.

Governing Council highlights benefits of investment in agri-commodities

During the meeting 27 delegations delivered national statements, including on behalf of the OECD Group, provided by the representative of Sweden. All highlighted the importance of investing in agribusinesses and smallholders to alleviate poverty.

Our 2022 investments have demonstrated this potential. For example, we invested in Ten Sense Africa (TSA) which is managed by Pamoja Farms. Managing Director of Pamoja, Guillaume Maillard, described to the GC how the Kenyan macadamia nut processor and trader connects smallholders to markets, boosting their incomes and resilience.

The GC also noted that 13 investments were approved by the CFC in 2022, totalling USD 58.5 million, including USD 15.4 million of CFC contributions. Combined, these investments are expected to reach around 187,000 smallholder farmers, helping them improve productivity and access markets. The projects not only cover commodities such as herbs and spices, soybeans, oilseeds, coffee, rice, fruits, dairy, sesame, cashew nuts, groundnuts, cotton, lime, but also include services such as land mapping.

Together, the investments target: SDG 1 (No poverty), SDG 2 (Zero hunger), SDG 5 (Gender equality), SDG 8 (Decent work and economic growth), SDG 10 (Reduced inequalities), SDG 12 (Responsible consumption and production), SDG 13 (Climate action), SDG 14 (Life below water) and SDG 17 (Partnerships for the goals).

There was also an update on our Agricultural Commodity Transformation (ACT) Fund, which you can read about on page 19, 2022 operations and finances, and recent Executive Board (EB) decisions. The ACT Fund is expected to help meet the overwhelming demand for CFC investments that we have experienced in the aftermath of the Covid pandemic, the war in Ukraine and the appreciation of the United States dollar.

Chairperson and Vice-Chairpersons of the Governing Council for the Year 2023

The GC elected a new Chairperson at the meeting: H.E. Dr. Eniola Olaitan Ajayi, Ambassador of the Federal Republic of Nigeria to the Kingdom of the Netherlands. Dr. Ajayi is also the CFC's Alternate Governor for Nigeria. Representing a commodity-rich country, Amb. Ajayi's expertise will be invaluable at this challenging time.

The Council thanked outgoing Chairperson H.E. Mr. Mario Oyarzábal, Ambassador of the Argentine Republic to the Kingdom of the Netherlands, and Permanent Representative to the International Organisations in The Hague, for his outstanding contribution to our work.

The Chairperson and Vice-Chairpersons of the Governing Council for the year 2023 are as follows:

Chairperson for 2023

H.E. Dr. Eniola Ajayi (Nigeria)

Vice-Chairpersons for 2023

African Region Group: H.E. Ms. Margaret Shava (Kenya)
Asian and Pacific Region Group: H.E. Ms. Aruni Ranaraja (Sri Lanka)
China: Mr. Jin Yuan
Latin American and Caribbean Region Group: Mr. Diego E. Sadofschi (Argentina)
OECD Group: Ms. Anna Tofftén (Sweden)
The Russian Federation: Mr. Alexander Dyukarev

13
investments approved

90,000
smallholder farmers to benefit

Total investment: **58m**
CFC contribution: **15.4m**
(in USD)

Project goals:

- Support commodities and services such as herbs and spices, soybeans, oilseeds, coffee, rice, fruits, dairy, sesame, cashew nuts, groundnuts, cotton, lime, land mapping
- Operating in countries including Colombia, Côte d'Ivoire, Ghana, Indonesia, Nicaragua, Peru, Tanzania, Thailand, Uganda, Zimbabwe

CFC Core SDGs:

Photo: Sesame, Xaaxi, Somalia © FAO/Isak Amin

Photo: Wheat harvest, Afghanistan. © FAO/Giulio Napolitano

VII Financial Reports

Photo: Adobe stock

Statement of Financial Position – First Account, as at 31 December 2022
(expressed in United States Dollar and Special Drawing Rights)

	2022 USD	2021 USD	2022 SDR	2021 SDR
ASSETS				
Non-current				
Right of Use Asset	574,900	768,300	432,000	548,900
Promissory Notes	31,958,900	34,159,900	24,014,100	24,406,900
Debt Securities	68,172,300	74,277,100	51,225,000	53,070,200
Participations in Investment Funds	1,555,200	1,554,900	1,168,600	1,111,000
Non-current assets	**102,261,300**	**110,760,200**	**76,839,700**	**79,137,000**
Current				
Debt Securities	6,941,500	3,006,000	5,215,900	2,147,800
Participations in Investment Funds	687,200	855,300	516,400	611,100
Prepayments and other short-term assets	131,700	104,000	99,000	74,300
Amounts receivable from Members -/- provision	821,200	874,400	617,000	624,800
Cash and Cash equivalents	1,122,200	3,516,700	843,200	2,512,600
Accrued Income on Investments	754,800	697,400	567,200	498,300
Recoverable Taxes on goods & services	48,100	96,500	36,100	68,900
Other current assets	3,100,000	0	2,329,400	0
Other receivables	1,309,500	1,555,300	984,000	1,111,200
Current assets	**14,916,200**	**10,705,600**	**11,208,200**	**7,649,000**
Total assets	**117,177,500**	**121,465,800**	**88,047,900**	**86,786,000**
EQUITY AND LIABILITIES				
Equity				
Paid-in-shares of Directly Contributed Capital	101,086,700	103,340,900	75,957,100	73,836,000
Net Earning Programme	13,901,200	14,043,900	10,445,400	10,034,400
Accumulated Surplus/(Deficit)	486,100	2,310,800	365,500	1,651,000
Total Equity	**115,474,000**	**119,695,600**	**86,768,000**	**85,521,400**
Liabilities				
Non-current				
Operating lease Obligations	521,600	725,400	391,800	518,100
Turkey settlement	156,600	156,600	117,700	111,900
Accrued liabilities	147,500	147,500	110,800	105,400
Non-current liabilities	**825,700**	**1,029,500**	**620,300**	**735,400**
Current				
Operating lease Obligations	159,700	159,700	120,000	114,100
Accured liabilities	718,100	581,000	539,600	415,000
Current liabilities	**877,800**	**740,700**	**659,600**	**529,100**
Total liabilities	**1,703,500**	**1,770,200**	**1,279,900**	**1,264,500**
Total equity and liabilities	**117,177,500**	**121,465,800**	**88,047,900**	**86,786,000**

Statement of Financial Position – Second Account, as at 31 December 2022

(expressed in United States Dollar and Special Drawing Rights)

	2022	2021	2022	2021
	USD	USD	SDR	SDR
ASSETS				
Non-current				
Promissory Notes	5,118,900	5,449,200	3,846,400	3,893,400
Debt Securities	57,159,900	57,114,500	42,950,200	40,807,700
Participations in Investment Funds	1,927,700	1,667,500	1,448,400	1,191,400
Loan Receivable -/- provision	5,294,800	6,911,900	3,978,600	4,938,500
Non-current assets	**69,501,300**	**71,143,100**	**52,223,600**	**50,831,000**
Current				
Debt Securities	7,023,500	9,998,900	5,277,500	7,144,100
Amounts receivable from Members -/- provision	0	0	0	0
Loan Receivable -/- provision	8,138,700	6,737,700	6,115,500	4,814,000
Cash and Cash equivalents	4,299,100	4,599,900	3,230,400	3,286,600
Accrued Income on Investments	1,247,600	1,117,100	937,500	798,200
Other current assets	3,000,000	0	2,254,200	0
Current assets	**23,708,900**	**22,453,600**	**17,815,100**	**16,042,900**
Total assets	**93,210,200**	**93,596,700**	**70,038,700**	**66,873,900**
EQUITY AND LIABILITIES				
Equity				
Paid-in-shares of Directly Contributed Capital	24,534,900	24,865,200	18,435,600	17,765,900
Accumulated Surplus/(Deficit)	66,812,600	66,587,900	50,203,400	47,576,400
Total Equity	**91,347,500**	**91,453,100**	**68,639,000**	**65,342,300**
Liabilities				
Non-current				
Belgium settlement	334,700	356,400	251,500	254,600
Luxembourgh settlement	3,500	3,500	2,600	2,500
Turkey settlement	234,900	234,900	176,500	167,800
Non-current liabilities	**573,100**	**594,800**	**430,600**	**424,900**
Current				
Other payables	1,289,600	1,548,800	969,100	1,106,700
Current liabilities	**1,289,600**	**1,548,800**	**969,100**	**1,106,700**
Total liabilities	**1,862,700**	**2,143,600**	**1,399,700**	**1,531,600**
Total equity and liabilities	**93,210,200**	**93,596,700**	**70,038,700**	**66,873,900**

Statement of Profit or Loss – First Account, for the year ended 31 December 2022
(expressed in United States Dollar and Special Drawing Rights)

	2022	2021	2022	2021
	USD	USD	SDR	SDR
Income				
Net Income from Investments	1,789,200	1,772,500	1,336,900	1,244,200
Other Income	1,708,300	1,863,300	1,276,400	1,307,900
Unrealized (loss)/gain on participations in investment funds	-144,300	-620,200	-107,800	-435,400
Realized Exchange (loss)/gain on Operations	13,600	1,200	10,200	800
Unrealized Exchange (loss)/gain on translation of Balance Sheet items	-2,334,700	-1,365,500	-1,744,500	-958,500
Total income	**1,032,100**	**1,651,300**	**771,200**	**1,159,000**
Expenses				
Staff Salaries & Benefits	2,422,400	2,656,900	1,810,000	1,865,000
Operational Expenses	282,400	280,300	211,000	196,800
Meeting Costs	84,400	60,500	63,100	42,500
Premises Costs	211,900	226,900	158,300	159,300
Total expenses	**3,001,100**	**3,224,600**	**2,242,400**	**2,263,600**
(Loss)/Profit for the year	**-1,969,000**	**-1,573,300**	**-1,471,200**	**-1,104,600**

Statement of Comprehensive Income – First Account, for the year ended 31 December 2022
(expressed in United States Dollar and Special Drawing Rights)

	2022	2021	2022	2021
	USD	USD	SDR	SDR
(Loss)/Profit for the year	-1,969,000	-1,573,300	-1,471,200	-1,104,600
Items that will not be reclassified to profit and loss	0	0	0	0
Items that will be reclassified to profit and loss	0	0	0	0
Total comprehensive income for the year	**-1,969,000**	**-1,573,300**	**-1,471,200**	**-1,104,600**

Statement of Profit or Loss – Second Account, for the year ended 31 December 2022

(expressed in United States Dollar and Special Drawing Rights)

	2022	2021	2022	2021
	USD	USD	SDR	SDR
Income				
Net Income from Investments	1,817,100	1,780,600	1,357,700	1,249,900
Income from Loans	896,700	1,051,600	670,000	738,200
Contribution DTF I	0	475,000	0	333,400
Unrealized (loss)/gain on participations in investment funds	-43,200	45,900	-32,300	32,200
Realized Exchange (loss)/gain on Operations	75,200	-37,200	56,200	-26,100
Unrealized Exchange (loss)/gain on translation of Balance Sheet items	-403,900	-445,600	-301,800	-312,800
Total income	**2,341,900**	**2,870,300**	**1,749,800**	**2,014,800**
Expenses				
Project Payments	29,100	85,800	21,700	60,200
Administrative fee on investment portfolio	1,254,400	1,446,200	937,300	1,015,200
Provision for overdue loan	833,700	959,900	622,900	673,800
Total expenses	**2,117,200**	**2,491,900**	**1,581,900**	**1,749,200**
(Loss)/Profit for the year	**224,700**	**378,400**	**167,900**	**265,600**

Statement of Comprehensive Income – Second Account, for the year ended 31 December 2022

(expressed in United States Dollar and Special Drawing Rights)

	2022	2021	2022	2021
	USD	USD	SDR	SDR
(Loss)/Profit for the year	224,700	378,400	167,900	265,600
Items that will not be reclassified to profit and loss	0	0	0	0
Items that will be reclassified to profit and loss	0	0	0	0
Total comprehensive income for the year	**224,700**	**378,400**	**167,900**	**265,600**

Directly Contributed Capital, as at 31 December 2022 (USD)

	First Account			Second Account		
	Outstanding Contributions[1]	Payments Cash	Payments Promissory Notes	Outstanding Contributions[1]	Payments Cash	Payments Promissory Notes
Afghanistan	0	399,412	348,664	0	0	0
Algeria	0	862,744	0	0	0	0
Angola	0	61,786	0	0	339,823	388,510
Argentina	0	0	358,599	0	635,460	41,900
Bangladesh	134,817	95,062	0	0	308,154	332,060
Benin	4,649	344,491	332,061	0	0	0
Bhutan	0	3,424	3,321	0	338,969	328,739
Botswana	4,649	344,491	332,061	0	0	0
Brazil	0	1,692,815	0	0	701,208	0
Bulgaria	706,645	284,202	0	0	0	0
Burkina Faso	4,649	344,491	332,061	0	0	0
Burundi	0	34,239	33,206	0	308,154	298,854
Cameroon	0	990,853	0	0	0	0
Cape Verde	0	342,393	332,061	0	0	0
Central African Republic	9,297	346,588	332,061	0	0	0
Chad	13,947	364,254	332,061	0	0	0
China	0	3,807,113	3,689,198	0	0	0
Colombia	0	1,060,568	0	0	0	0
Comoros	0	342,393	332,061	0	0	0
Congo	1,037,186	0	0	0	0	0
Dem. Republic of Congo (Zaire)	0	1,213,098	0	0	0	0
Costa Rica	0	833,938	0	0	0	0
Côte d'Ivoire	43	1,273,830	0	0	0	0
Cuba	0	291,399	282,292	0	393,960	280,638
Denmark	0	599,933	379,878	0	718,430	0
Djibouti	0	388,206	332,061	0	0	0
Ecuador	0	126,968	0	0	699,028	0
Egypt	0	616,445	488,130	0	0	0
Equatorial Guinea	0	734,443	0	0	0	0
Eswatini (former Swaziland)	0	94,101	345,342	0	262,885	0
Ethiopia	37,191	187,975	166,031	0	171,197	166,030
Finland	0	586,004	567,824	0	154,611	24,550
Gabon	289,916	455,118	0	0	0	0
Gambia	9,298	346,588	332,061	0	0	0
Germany	0	5,954,753	5,711,450	0	657,485	92,592
Ghana	0	1,085,935	0	0	0	0
Greece	0	347,901	332,061	0	0	0
Guatemala	0	423,346	0	0	408,621	0
Guinea	23,244	13,911	3,321	0	338,969	328,739
Guinea-Bissau	0	342,393	332,061	0	0	0
Haiti	13,947	348,685	332,061	0	0	0
Honduras	36,527	37,758	0	328,739	339,823	0
India	0	370,828	355,305	0	560,088	86,192
Indonesia	0	449,328	109,580	0	579,573	127,769
Iraq	1	878,501	0	0	0	0
Ireland	0	3,455	3,321	0	615,094	98,964
Italy	0	2,558,455	2,477,175	0	612,520	109,063
Jamaica	0	48,056	46,489	0	612,816	119,348
Kenya	0	906,469	0	0	0	0
Dem. People's Republic of Korea	690,687	0	0	0	0	0
Republic of Korea	0	517,919	501,412	0	0	0
Kuwait	0	941,579	0	0	0	0
Lao People's Dem. Republic	0	387,130	335,382	0	0	0

Directly Contributed Capital, as at 31 December 2022 (USD)

	First Account			Second Account		
	Outstanding Contributions[1]	Payments		Outstanding Contributions[1]	Payments	
		Cash	Promissory Notes		Cash	Promissory Notes
Lesotho	0	342,393	332,061	0	0	0
Madagascar	0	48,209	0	0	703,374	0
Malawi	13,947	348,685	0	0	0	332,060
Malaysia	0	832,788	823,511	0	0	0
Maldives	0	34,239	0	0	308,154	332,060
Mali	13,946	40,531	33,206	0	308,154	298,854
Mauritania	37,191	395,774	332,061	0	0	0
Mexico	0	170,697	0	0	770,650	143,225
Morocco	0	471,279	3,321	0	375,021	122,593
Mozambique	0	439,549	313,167	0	0	0
Myanmar	18,595	342,665	334,718	0	0	0
Nepal	4,649	310,251	298,855	0	34,239	33,206
Netherlands	0	752,209	1,427,862	0	730,118	0
Nicaragua	0	98,166	0	0	653,459	0
Niger	4,649	344,491	0	0	0	332,060
Nigeria	0	124,171	116,221	0	624,220	89,622
Norway	0	347,901	342,023	0	608,489	94,054
Pakistan	0	871,363	0	0	0	0
Papua New Guinea	0	120,151	0	0	699,703	0
Peru	0	1,074,903	0	0	0	0
Philippines	0	614,978	0	0	785,857	0
Portugal	0	171,346	0	0	447,097	97,842
Russian Federation	6,192,938	6,368,048	0	0	0	0
Rwanda	13,947	348,685	332,061	0	0	0
Samoa	0	342,393	332,061	0	0	0
Sao Tome and Principe	0	734,443	0	0	0	0
Saudi Arabia	0	360,373	348,664	0	0	0
Senegal	0	959,157	0	0	0	0
Sierra Leone	13,947	348,685	332,061	0	0	0
Singapore	0	227,143	222,481	0	411,896	58,786
Somalia	336,710	344,491	0	0	0	0
Spain	0	2,547,890	0	0	619,883	0
Sri Lanka	0	422,309	411,756	0	0	0
Sudan	111,572	290,011	232,443	0	102,718	99,618
Sweden	0	874,180	876,641	0	640,618	94,892
Syrian Arab Republic	0	916,910	0	0	0	0
United Republic of Tanzania	60,435	198,462	166,031	0	171,197	166,030
Thailand	0	485,578	454,924	0	0	0
Togo	0	763,530	0	0	0	0
Trinidad & Tobago	0	680,870	0	0	0	0
Tunisia	0	959,840	0	0	0	0
Uganda	83,679	380,145	332,061	0	0	0
United Arab Emirates	1,017,046	0	0	0	0	0
United Kingdom	0	3,166,031	2,705,971	0	664,193	0
Venezuela	0	878,775	0	0	0	0
Yemen	9,298	688,981	664,122	0	0	0
Zambia	179,672	912,100	0	0	0	0
Zimbabwe	0	725,106	0	0	0	0
TOTAL	**11,128,912**	**68,306,642**	**31,958,933**	**328,740**	**19,415,954**	**5,118,850**

[1] As stated in Schedule B of the Agreement Establishing the Common Fund for Commodities, Members in the category of least developed countries as defined by the United Nations shall pay only 30% of the number of shares exceeding 100, over a period of three years. The remaining 70% (of shares exceeding 100) shall be paid as and when decided by the Executive Board. This remaining 70% is also included in the Outstanding Contributions.

Voluntary Contributions, as at 31 December 2022 (USD)

	Pledge (3rd 5YAP)		Payments Cash up to 31 Dec. 2021	Payments Cash 2022	Payments Total 31.12.2022	
Country	Currency	USD[1]	USD	USD	USD	SDR
Austria[3]	USD	2,000,000	2,000,000	0	2,000,000	1,502,810
Belgium[3]	EUR	3,000,000	3,235,542	0	3,235,542	2,431,203
Cameroon	USD	0	7,994	0	7,994	6,007
China	USD	2,000,000	2,000,000	0	2,000,000	1,502,810
Denmark	DKR	2,116,098	794,987	0	794,987	597,358
Ecuador	USD	0	45,311	0	45,311	34,047
Finland	USD	2,000,000	2,011,089	0	2,011,089	1,511,143
France[3]	USD	15,000,000	2,385,648	0	2,385,648	1,792,588
Germany	USD	22,549,790	22,549,790	0	22,549,790	16,944,028
India	USD	5,000,000	5,000,000	0	5,000,000	3,757,026
Indonesia	USD	1,000,000	1,000,201	0	1,000,201	751,556
Ireland	USD	250,000	250,000	0	250,000	187,851
Italy	USD	15,000,000	14,999,999	0	14,999,999	11,271,076
Japan[3]	USD	27,000,000	32,231,940	0	32,231,940	24,219,245
Luxembourg[3]	USD	150,000	149,989	0	149,989	112,703
Madagascar	USD	8,643	8,616	0	8,616	6,474
Malaysia	USD	1,000,000	999,922	0	999,922	751,346
Netherlands	USD	17,000,000	19,560,207	0	19,560,207	14,697,640
Nigeria	USD	150,000	150,000	0	150,000	112,711
Norway	USD	22,490,000	22,446,462	0	22,446,462	16,866,387
OPEC Fund[4]	USD	29,250,000	29,250,000	0	29,250,000	21,978,600
Papua New Guinea	USD	0	70,055	0	70,055	52,640
Republic of Korea	USD	300,000	300,000	0	300,000	225,422
Singapore	USD	250,000	250,000	0	250,000	187,851
Sweden	USD	2,345,996	2,345,996	0	2,345,996	1,762,794
Switzerland[3]	USD	6,000,000	3,000,000	0	3,000,000	2,254,215
Thailand	USD	1,000,000	1,000,000	0	1,000,000	751,405
United Kingdom[2]	STG	5,153,009	7,399,909	0	7,399,909	5,560,330
TOTAL		**182,013,536**	**175,443,658**	**0**	**175,443,658**	**131,829,266**

[1] Amounts pledges have been converted to USD equivalent using the IMF rates of 23/12/22
[2] Payment of MOU of GBP 4,270,000 received considered as contribution under Article 18.1.(e)
[3] Not a member of CFC
[4] Observer

2022 Administrative Budget, Summary

	2022	2022
	USD	EUR
Staff Costs	3,091,700	2,555,100
Operational Costs	613,100	506,600
Meeting Costs	219,700	181,500
Contingency	12,100	10,000
Total	**3,936,600**	**3,253,200**

To: the Governing Council of the Common Fund for Commodities

Grant Thornton
Accountants en Adviseurs B.V.
Flemingweg 10
P.O. Box 2259
2400 CG Alphen aan den Rijn
The Netherlands

T 088 - 676 90 00
F 088 - 676 90 10
www.gt.nl

REPORT OF THE INDEPENDENT AUDITOR ON THE ABBREVIATED FINANCIAL REPORTS

Our opinion
The summary financial statements 2022 (hereafter: 'the abbreviated financial reports') of the First Account and Second Account of the Common Fund for Commodities, based in Amsterdam, is derived from the audited financial statements 2022 of the First Account and Second Account of the Common Fund for Commodities.

In our opinion the accompanying summary financial statements are consistent, in all material respects, with the audited financial statements 2022 of the First Account and Second Account of the Common Fund for Commodities.

Abbreviated financial reports
The abbreviated financial reports do not contain all the disclosures required by the International Financial Reporting Standards. Reading the abbreviated financial reports and our report thereon, therefore, is not a substitute for reading the audited financial statements of the First Account and Second Account of the Common Fund for Commodities and our auditor's report thereon. The abbreviated financial reports and the audited financial statements do not reflect the effects of events that occurred subsequent to the date of our auditor's report on those financial statements of June 30, 2023.

The audited financial statements and our auditor's report thereon
We expressed an unmodified audit opinion on the audited financial statements 2022 of the First Account and Second Account of the Common Fund for Commodities in our auditor's report of June 30, 2023.

Responsibilities of management board for the summary financial statements
Management is responsible for the preparation of the abbreviated financial reports in accordance with the accounting policies as applied in the 2022 financial statements of the First Account and Second Account of the Common Fund for Commodities.

Our responsibilities

Our responsibility is to express an opinion on whether the abbreviated financial reports are consistent, in all material respects, with the audited financial statements based on our procedures, which we conducted in accordance with Dutch law, including the Dutch Standard 810, "Engagements to report on summary financial statements".

Amsterdam, June 30, 2023

Grant Thornton Accountants and Adviseurs B.V.

Sabreena Thakur-Rana RA

--this document is signed digitally--

Photo: A woman winnowing rice in Bagre, Burkina Faso. © FAO/Alessandra Benedetti

ANNEX I

Governors and Alternate Governors as of 31 December 2022

Photo: Sorghum. Adobe stock

Chairperson of the Governing Council during 2022:

H.E. Mr. Mario J. Agustín Oyarzábal (Argentina)

Vice-Chairpersons during 2022:

Africa: H.E. Ms. Margaret Shava (Kenya)

Asia and Pacific: H.E. Ms. Aruni Ranaraja (Sri Lanka)

China: Mr. JIN Yuan

Latin America and Caribbean: Argentina

OECD: Ms. Anna Tofftén (Sweden)

Russian Federation: Mr. Alexander Dyukarev

Country	Governor	Alternate Governor
Afghanistan	H.E. Mr. Mohammed Asif Rahimi	Mr. Sayed Mahdi Alawi
Algeria	H.E. Ms. Salima Abdelhak	Ms. Wahiba Boutibane
Angola	H.E. Ms. Maria I. Resende Encoge	Mr. Adelino Naquarta Sepalanga Domingos
Argentina	H.E. Mr. Mario Javier Agustín Oyarzábal	Mr. Diego Emilio Sadofschi
Bangladesh	Mr. Tapan Kanti Ghosh	H.E. Mr. M. Riaz Hamidullah
Benin	H.E. Mr. Eusèbe Agbangla	Mr. Angelo Dan
Bhutan	H.E. Mr. Tenzin R. Wangchuk	Mr. Sonam Gyaltshen
Botswana	Ambassador	Mr. Jimmy Rule Opelo
Brazil	Mr. Alexandre Peña Ghisleni	Mr. Pedro Escosteguy Cardoso
Bulgaria	Mr. Petar Dimitrov	-
Burkina Faso	Amb. Oumarou Ganou	Mr. Seydou Ilboudo
Burundi	Hon. Marie Chantal Nijimbere	Mr. Sébastien Nzimana
Cabo Verde	c/o H.E. Mr. José Filomeno de Carvalho dias Monteiro	-
Cameroon	Mr. Luc Magloire Mbarga Atangana	H.E. Ms. Madeleine Liguemoh Ondoua
Central African Republic	c/o H.E. Mr. Daniel Emery Dede	-
Chad	Mr. Moutaye Whoor Hamit	-
China	Mr. CHEN Ning	Mr. JIN Yuan
Colombia	Mr. Miguel Alberto Gomez Velez	Mr. Julián Camilo Silva Sánchez
Comoros	c/o Ambassador	-
Congo	c/o Ambassador	-
Costa Rica	H.E. Mr. Arnoldo Brenes Castro	Ms. Eliana Villalobos Cárdenas
Côte d'Ivoire	Mr. Kobenan Kouassi Adjoumani	Mr. Aly Toure

Country	Governor	Alternate Governor
Cuba	Mr. Carlos Fidel Martín Rodríguez	H.E. Ms. Anet Pino Rivero
Democratic People's Republic of Korea	c/o H.E. Mr. HAN Tae Song	c/o Counsellor
Democratic Republic of the Congo	c/o H.E. Mr. Paul Empole Efambe	-
Denmark	Ministry of Foreign Affairs	-
Djibouti	c/o H.E. Mr. Aden Mohamed Dileita	-
Ecuador	H.E. Mr. Andrés Terán Parral	Mr. Oscar Felipe Izquierdo Arboleda
Egypt	H.E. Mr. Hatem Elsayed Mohamed Kamaleldin	Ms. Dahlia Tawakol
Equatorial Guinea	c/o H.E. Mr. Juan Ndong Nguema Mbengono	c/o Director General de Comercio
Eswatini	Mr. Newman S. Ntshangase	Mr. Mluleki S. Dlamini
Ethiopia	H.E. Mr. Hirut Zemene	Amb. Fortuna Dibaco Cizare
Finland	Mr. Antti Piispanen	-
Gabon	c/o H.E. Mr. Serge Thierry Mickoto Chavagne	-
Gambia	Ambassador	Mr. Ousainou Senghore
Germany	Dr. Peer Hoth	Mr. Marcus Hicken
Ghana	Hon. Alan Kyerematen	H.E. Mr. Francis Danti Kotia
Greece	Mr. Evangelos Dairetzis	Ms. Eleni Karagianni
Guatemala	H.E. Mr. Eduardo Sperisen Yurt	Ms. Débora Maria Cumes Mariscal
Guinea	Mr. Emile Yombouno	Mr. Housseine Bangoura
Guinea-Bissau	c/o Ambassador	-
Haiti	Mr. Hervey Day	H.E. Mr. Pierre André Dunbar
Honduras	Mr. Mauricio Guevara Pinto	Mr. David Ernesto Wainwright
India	Dr. M. Balaji	Mr. Satya Pinisetty
Indonesia	Mr. Tri Tharyat	Ms. Dian Lestari
Iraq	Mr. Kadhim M. Jawad Al-Hasani	Mr. Munther Abdulameer Asad
Ireland	H.E. Mr. Brendan Rogers	-
Italy	Mr. Lucio Loiero	Mr. Simon Carta
Jamaica	The Honourable Pearnel Charles Jr.	H.E. Ms. Cheryl Spencer
Kenya	H.E. Ms. Margaret Shava	Ms. Josephine Opili
Kuwait	H.E. Mr. Ali Ahmad Ebraheem S. Aldafiri	-
Laos	Mr. Buavanh Vilavong	H.E. Mr. Phoukhong Sisoulath
Lesotho	The Honourable Matsepo Molise-Ramakoae	H.E. Dr. Pontšo Susan Matumelo Sekatle
Madagascar	H.E. Mr. Jean-Omer Beriziky	Mr. Eric Ratsimbazafy
Malawi	H.E. Dr. Naomi A. Ngwira	Mr. Richard Chiputula
Malaysia	Secretary General, MPIC	Mr. Pubadi a/l Govindasamy
Maldives	H.E. Mr. Ibrahim Ameer	H.E. Mr. Ahmed Khaleel
Mali	H.E. Mr. El Hadji Alhouseini Traore	Ms. Mama Mininian Bore
Mauritania	c/o H.E. Mr. Abdellahi Kebd	Mr. Mohamed Moctar Alaoui
Mexico	Mr. Rogelio Ramírez de la O	Mr. Marcelo Ebrard Casaubón
Morocco	H.E. Mr. Mohamed Basri	-
Mozambique	Mr. Claire Mateus Zimba	Ms. Joaquina Gumeta
Myanmar	H.E. Mr. Aung Naing Oo	Mr. Minn Minn
Nepal	H.E. Mr. Gahendra Rajbhandari	Mr. Suresh Adhikari
Netherlands	Mr. Robert-Jan Sieben	Ms. Merel van der Ven
Nicaragua	Mr. Orlando Solórzano Delgadillo	H.E. Mr. Carlos J. Argüello Gómez
Niger	c/o H.E. Mr. Alhassane Ide	-
Nigeria	Dr. Evelyn N. Ngige	H.E. Dr. Eniola Olaitan Ajayi
Norway	Ms. Elisabeth Walaas	Mr. Inge Hausken Thygesen
Pakistan	H.E. Mr. Suljuk Mustansaar Tarar	Mr. Rao Rizwan-ul-Haq
Papua New Guinea	Mr. William Dihm	c/o H.E. Mr. Joshua Kalinoe
Peru	H.E. Ms. Marisol F. Agüero Colunga	Ms. Sandra Luisana Rodríguez Sánchez
Philippines	H.E. Mr. J. Eduardo Malaya	Ms. Kristine Jeanne A. Yap
Portugal	Mr. Fernando Medina	Mr. José Carlos Azevedo Pereira
Republic of Korea	H.E. Mr. Kyungho Choo	Mr. Juyeol Lee

Country	Governor	Alternate Governor
Russian Federation	Mr. Alexander Dyukarev	Ms. Anastasiia Kalenova
Rwanda	Mr. Richard Niwenshuti	Mr. Antoine Kajangwe
Samoa	c/o Deputy Prime Minister	-
Sao Tome and Principe	c/o Ambassador	-
Saudi Arabia	Mr. Ahmad S. Alteraifi	Mr. Saeid M. Alkahtani
Senegal	H.E. Mr. Momar Gueye	Mr. Joseph A.D. Bentaux
Sierra Leone	Mr. James Vibbi	Mr. Charles Mereweather-Thompson
Singapore	H.E. Mr. Hung Seng Tan	-
Somalia	c/o H.E. Ms. Ebyan Mahamad Salah	-
Spain	Mr. Daniel Cascales Núñez	Mr. Oscar Vía Ozalla
Sri Lanka	Mr. S.T. Kodikara	H.E. Ms. Aruni Ranaraja
Sudan	Mr. Abbas Yassin Omer Bakhit	Ms. Rasha Beshir Ahmed Yousif
Sweden	Ms. Anna Tofftén	-
Syrian Arab Republic	Deputy Minister of Economy and Trade	-
Thailand	Deputy Permanent Secretary, Ministry of Agriculture and Cooperatives	Mr. Chantanon Wannakejohn
Togo	Mr. Kommabou Fandjinou	-
Trinidad & Tobago	Senator the Honourable Kazim Hosein	Ms. Coomarie Goolabsingh
Tunisia	H.E. Mr. Slim Ghariani	Ms. Haifa Ben Alaya
Uganda	Mr. Emmanuel Mutahunga	H.E. Ms. Mirjam Blaak Sow
United Arab Emirates	Ambassador	-
United Kingdom of Great Britain and Northern Ireland	Mr. Paul Whittingham	-
United Republic of Tanzania	Mr. Ally S. Gugu	H.E. Ms. Caroline Kitana Chipeta
Venezuela	Mr. Rubén Darío Molina	H.E. Mr. Calixto Ortega Rios
Yemen	H.E. Ms. Sahar Mohammed Abduljabbar Ghanem	Mr. Mohammed Fakher
Zambia	Ambassador	Ms. Lina Mutandwa Chambwe
Zimbabwe	Amb. James Manzou	H.E. Mr. Ammon Mutembwa
Andean Community (CAN)	c/o Dr. Jorge Hernando Pedraza	-
African Union (AU)	Agriculture, Rural Development, Blue Economy, and Sustainable Environment (ARBE)	Economic Development, Trade, Industry, Mining (ETIM)
Caribbean Community (CARICOM)	Dr. Carla Natalie Barnett	Ms. Desiree Field-Ridley
Common Market for Eastern and Southern Africa (COMESA)	Ms. Chileshe Kapwepwe	Mr. E.A. Mohammed
East African Community (EAC)	Hon. Dr. Peter Mutuku Mathuki	Director for Trade
Economic Community of West African States (ECOWAS)	c/o H.E. Dr. Omar Alieu Touray	-
European Union (EU)	Mr. Regis Meritan	-
Southern African Development Community (SADC)	c/o H.E. Elias Mpedi Magosi	-
West African Economic and Monetary Union (WAEMU/UEMOA)	c/o Mr. Abdoulaye Diop	-

Photo: Wheat, Muminobod, Tajikistan. © FAO/Nozim Kalandarov

ANNEX II

Member States, Institutional Members and Votes as of 31 December 2022

Country	Region	No. of votes	LDC
Afghanistan	Asia	357	X
Algeria	Africa	395	
Angola	Africa	391	X
Argentina	LAC	496	
Bangladesh	Asia	426	X
Benin	Africa	347	X
Bhutan	Asia	343	X
Botswana	Africa	347	
Brazil	LAC	1,024	
Bulgaria	Europe	417	
Burkina Faso	Africa	347	X
Burundi	Africa	343	X
Cameroon	Africa	389	
Cabo Verde	Africa	343	
Central African Republic	Africa	349	X
Chad	Africa	351	X
China	Asia	3,000	
Colombia	LAC	490	
Comoros	Africa	343	X
Congo	Africa	351	
Costa Rica	LAC	393	
Côte d'Ivoire	Africa	476	

Photo: Weeding cabbages, Mali. © FAO/John Isaac

Country	Region	No. of votes	LDC
Cuba	LAC	584	
Democratic People's Republic of Korea	Asia	355	
Democratic Republic of the Congo	Africa	476	X
Denmark	Europe	643	
Djibouti	Africa	343	X
Ecuador	LAC	391	
Egypt	Africa	476	
Equatorial Guinea	Africa	347	
Eswatini	Africa	355	
Ethiopia	Africa	366	X
Finland	Europe	535	
Gabon	Africa	368	
Gambia	Africa	349	X
Germany	Europe	4,362	
Ghana	Africa	426	
Greece	Europe	309	
Guatemala	LAC	401	
Guinea	Africa	357	X
Guinea-Bissau	Africa	343	X
Haiti	LAC	353	X
Honduras	LAC	372	
India	Asia	621	
Indonesia	Asia	575	
Iraq	Asia	376	
Ireland	Europe	309	
Italy	Europe	2,065	
Jamaica	LAC	380	
Kenya	Africa	387	
Kuwait	Asia	351	
Lao People's Dem. Republic	Asia	345	X
Lesotho	Africa	343	X
Madagascar	Africa	360	X
Malawi	Africa	351	X
Malaysia	Asia	768	
Maldives	Asia	343	
Mali	Africa	351	X
Mauritania	Africa	366	X
Mexico	LAC	469	
Morocco	Africa	449	
Mozambique	Africa	360	X
Myanmar	Asia	355	X
Nepal	Asia	345	X
Netherlands	Europe	1,086	
Nicaragua	LAC	382	
Niger	Africa	347	X
Nigeria	Africa	440	
Norway	Europe	549	
Pakistan	Asia	407	
Papua New Guinea	Asia	389	
Peru	LAC	445	
Philippines	Asia	580	
Portugal	Europe	309	

Country	Region	No. of votes	LDC
Republic of Korea	Asia	490	
Russian Federation	Europe	4,257	
Rwanda	Africa	351	X
Samoa	Asia	343	
Sao Tome and Principe	Africa	345	X
Saudi Arabia	Asia	357	
Senegal	Africa	382	X
Sierra Leone	Africa	351	X
Singapore	Asia	441	
Somalia	Africa	347	X
Spain	Europe	1,126	
Sri Lanka	Asia	413	
Sudan	Africa	413	X
Sweden	Europe	929	
Syria	Asia	382	
Thailand	Asia	449	
Togo	Africa	358	X
Trinidad and Tobago	LAC	353	
Tunisia	Africa	380	
Uganda	Africa	395	X
United Republic of Tanzania	Africa	380	X
United Arab Emirates	Asia	347	
United Kingdom of Great Britain and Northern Ireland	Europe	2,550	
Venezuela	LAC	401	
Yemen	Asia	544	X
Zambia	Africa	505	X
Zimbabwe	Africa	343	
EC	Europe	0	
AU	Africa	0	
COMESA	Africa	0	
EAC	Africa	0	
CAN	LAC	0	
CARICOM	LAC	0	
SADC	Africa	0	
ECOWAS	Africa	0	
WAEMU/UEMOA	Africa	0	
TOTAL		**57,364**	

LDC: Least Developed Country
LAC: Latin America and the Caribbean Countries

Institutional Members of the Common Fund for Commodities

African Union (AU) – Addis Ababa, Ethiopia
Andean Community (CAN) – Lima, Peru
Caribbean Community (CARICOM) – Greater Georgetown, Guyana
Common Market for Eastern & Southern Africa (COMESA) – Lusaka, Zambia
East African Community (EAC) – Arusha, Tanzania
Economic Community of West African States (ECOWAS) – Abuja, Nigeria
European Union (EU) – Brussels, Belgium
South African Development Community (SADC) – Gaborone, Botswana
West African Economic & Monetary Union (WAEMU/UEMOA) – Ouagadougou, Burkina Faso

Designated International Commodity Bodies (ICBs)

1 International Cocoa Organization (ICCO)
2 International Coffee Organization (ICO)
3 International Copper Study Group (ICSG)
4 International Cotton Advisory Committee (ICAC)
5 International Grains Council (IGC)
6 International Lead and Zinc Study Group (ILZSG)
7 International Bamboo and Rattan Organisation (INBAR)
8 International Nickel Study Group (INSG)
9 International Olive Council (IOC)
10 International Rubber Study Group (IRSG)
11 International Sugar Organization (ISO)
12 International Tropical Timber Organization (ITTO)
13 FAO – Intergovernmental Sub-Group on Bananas
14 FAO – Intergovernmental Group on Citrus Fruit
15 FAO – Intergovernmental Sub-Committee on Fish Trade
16 FAO – Intergovernmental Group on Grains
17 FAO – Intergovernmental Group on Hard Fibres
18 FAO – Intergovernmental Sub-Group on Hides and Skins
19 FAO – Intergovernmental Group on Meat and Dairy Products
20 FAO – Intergovernmental Group on Oils, Oilseeds and Fats
21 FAO – Intergovernmental Group on Rice
22 FAO – Intergovernmental Group on Tea
23 FAO – Intergovernmental Sub-Group on Tropical Fruits

Institutions with Memoranda of Understanding

The Common Fund for Commodities has concluded Memoranda of Understanding with the following institutions:

1 African Development Bank (AfDB)/African Development Fund
2 African Export-Import Bank (AFEXIM)
3 Arab Organization for Agricultural Development (AOAD)
4 Authority for Integrated Development of the Liptako-Gourma Region (ALG)/L'Autorité de Developpement Integré de la Region du Liptako-Gourma
5 Food and Agriculture Organization of the United Nations (FAO)
6 Grupo de Paises Latino Americanos y del Caribe Exportadores de Azúcar (GEPLACEA)
7 Inter-American Institute for Cooperation on Agriculture (IICA)
8 International Atomic Energy Agency (IAEA)
9 Islamic Centre for Development of Trade (ICDT)
10 OXFAM
11 Sistema Económico Latino Americano (SELA)
12 United Nations Conference on Trade and Development (UNCTAD)
13 United Nations Convention to Combat Desertification (UNCCD)
14 United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)
15 United Nations Economic and Social Commission for Latin America and the Caribbean (ECLAC)
16 United Nations Human Settlements Programme (UN-HABITAT)
17 United Nations Industrial Development Organization (UNIDO)
18 United States Agency for International Development (USAID)
19 West African Economic and Monetary Union (WAEMU)/Union Economique et Monétaire Ouest Africaine (UEMOA)
20 Dutch-Bangla Chamber of Commerce and Industries (DBCCI)
21 Council on Smallholder Agricultural Finance (CSAF)

Abbreviations

AAF-SME	Africa Agriculture SME Fund
AATIF	Africa Agriculture Trade and Investment Fund
ABP	Anchor Borrowers Program
ACT	Agricultural Commodity Transformation Fund
AECID	Spanish Agency for International Development Cooperation
AFC	Agronomika Finance Corporation
AFD	Agence Française de Développement
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AFSF	Africa Food Security Fund
AGSMEIS	Agri-Business Small and Medium Enterprises Investment Scheme
ATAF	Moringa Agroforestry Technical Assistance Fund
AU	African Union
BDS	Business Development Services
BMZ	German Ministry for Development Cooperation and Economic Development
CAF	Latin American Development Bank
CARDI	Caribbean Agricultural Research and Development Institute
CDDCs	Commodity Dependent Developing Countries
CFC	Common Fund for Commodities
CFGBV	Community Forest Group BV
CGIAR	Consultative Group on International Agricultural Research
COMIFAC	Central African Forests Commission
COVID	Coronavirus Disease
CSAF	Council on Smallholder Agricultural Finance
DIB	Development Impact Bond
DPoA	Doha Programme of Action
DRC	Democratic Republic of Congo
DTF	Dutch Trust Fund
EAFCA	African Fine Coffee Association
EB	Executive Board
EC	European Commission
EcoE II	EcoEnterprises Partners II L.P.
ECOSOC	United Nations Economic and Social Council
ECOWAS	Economic Community of West African States
EDB	Sri Lanka Export Development Board
EFTA	Equity For Tanzania Ltd.
EIB	European Investment Bank
ELF	Emergency Liquidity Facility
ESG	Environmental, Social and Governance
EU	European Union
EU-APSAN	Enhancing Crop Productivity and Climate Resilience for Food and Nutrition Security
EUCORD	European Development Co-operative
FACTS	Financial Access Commerce and Trade Services
FANEI	First Account Net Earnings Initiative
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FMO	The Netherlands Entrepreneurial Development Bank
FSC	Forest Stewardship Council
FSP	Financial Service Provider
FTESA	Food Trade East and Southern Africa
GAIN	Global Alliance for Improved Nutrition
GC	Governing Council
GCF	Green Climate Fund
GI	Geographical Indication
GIIN	Global Impact Investing Network
GIZ	Deutsche Gesellschaft Für Internationale Zusammenarbeit
Ha	Hectares

IADB	Interamerican Development Bank
IAG	Inter-Agency Working Group
ICAC	International Cotton Advisory Committee
ICBR	International Centre for Bamboo and Rattan
ICBs	International Commodity Bodies
ICCO	International Cocoa Organization
ICO	International Coffee Organization
ICRISAT	International Crop Research Institute for Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IJSG	International Jute Study Group
ILO	International Labour Organization
INBAR	International Bamboo and Rattan Organization
IOOC	International Olive Oil Council
IPoA	Istanbul Program of Action
ISO	International Sugar Organization
ITC	International Trade Centre
ITTO	International Tropical Timber Organization
IYM	International Year of Millet
KIT	Royal Tropical Institute
LDC	Least Developed Country
LLDCs	Land Locked Developing Countries
LMICs	Low- and Middle-Income Countries
MD	Managing Director
MDG	Millennium Development Goal
MEDF	Malawi Enterprise Development Fund
MMA	MatchMaker Associates
MT	Metric tonne
NEI	Natural Extracts Industries Limited
NGO	Non-Governmental Organization
NMB	National Microfinance Bank
OFID	OPEC Fund for International Development
PPP	Public Private Partnership
RED	Renewable Energy Directive
REDD+	Reducing Emissions from Deforestation and forest Degradation, plus the sustainable management of forests, and the conservation and enhancement of forest carbon stocks
SDG	Sustainable Development Goal
SEMs	Social and Environmental Management Systems
SFF	Schmidt Family Foundation
SIDS	Small Island Developing States
SIF	SME Impact Fund
SMEs	Small and medium sized enterprises
SSA	Sub Saharan Africa
TA	Technical Assistance
TAF	Technical Assistance Facility
TAHA	Tanzania Horticultural Association
UCO	Used Cooking Oil
UN-OHRLLS	United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECA	UN Economic Commission for Africa
UNIDO	United Nations Industrial Development Organization
VECO	Vredeseilanden Country Office
VPoA	Vienna Programme of Action
WEF	World Economic Forum
WHO	World Health Organization
WTO	World Trade Organization
WUR	Wageningen University and Research

Visiting Address
Rietlandpark 301
1019 DW Amsterdam
The Netherlands

Postal Address
P.O. Box 74656, 1070 BR Amsterdam
The Netherlands
t +31 (0)20 575 4949
f +31 (0)20 676 0231
e managing.director@common-fund.org
i www.common-fund.org

Graphic Design
Anita Simons, symsign, Amersfoort

Printing
VdR druk & print, Nijkerk

common fund for commodities

Mission & Vision Statement

Mission

"To contribute to poverty alleviation by strengthening the income-generating capacity of commodity producers and mitigating vulnerability to their economic well being"

Vision

"To strengthen and diversify the commodity sector in developing countries and transform it to be a major contributor to poverty alleviation and sustained economic growth and development"