

White paper

Moringa

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Editorial

The magnitude of the pandemic once again emphasized the urgent need to address global warming and protect our planet's biodiversity. Governments, public authorities and investors are currently renewing their efforts to prevent further damage to our ecosystem. The ratification of the Paris Agreement is at the forefront of climate discussions once more.

The pandemic is a reminder that we are biological beings that are part of an interconnected ecosystem. It has also reaffirmed the importance of nature for our societies.

In 2010, Edmond de Rothschild launched the first investment fund focused on agroforestry, aiming to reinforce the resilience of our ecosystems and reconnect with a long-term approach to respond to these challenges: **Moringa**.

Moringa's foundational goal is to have notable and measurable impact through replicable and sustainable projects. Moringa wants solutions that are anchored in the real economy, actions that are curated to each territory and its particular ecosystem, and local communities at the centre of it all.

This has always been a bold strategy. When risks materialised, we took on the responsibility of our learning curve and addressed the financial and operational risks through good management. Thanks to our determination and commitment, we were able to rise to the challenge and find solutions.

Today, we stand proud of our achievements.

The teams, management teams, investors, partners, hold unique expertise in the market. A new asset class is being structured on natural capital, and large financial vehicles are in development. We have now fulfilled our objective as a "pioneer" by attracting more investment, inventing new and sustainable methods of action and contributing to changing the financial sector.

Finance will continue to evolve to meet the major challenges of tomorrow. We need to propose new, large-scale solutions using lessons learned from Moringa's experiences. This is a major opportunity for us all.

A handwritten signature in white ink that reads "A. de Rothschild". The signature is written in a cursive, flowing style. Below the signature, there is a single horizontal line that starts under the first letter and extends towards the right, ending under the last letter.

THE GENESIS OF THE MORINGA FUND

1 — An alternative path between philanthropy and investments

Initial thoughts over the Moringa project were marked by controversy and contradictions surrounding climate change. The Kyoto Protocol and the Clean Development Mechanism (CDM) raised a significant number of questions, with numerous voices offering diverging solutions.

The integration of “living things” (forests, agriculture, natural ecosystems) became a focus of climate discussions. Though representing around 30% of global greenhouse gas emissions (GHG), this sector had previously been largely left out of the Kyoto Protocol in 1997. One fact became evident—a climate policy cannot be efficient without reducing deforestation and restoring the soil and ecosystems.

Unsustainable agricultural practices employed to meet the growing needs of the market, and the poverty of the farmers living near the large tropical forests of the Amazon, the Congo Basin, and Southeast Asia are two of the main causes of deforestation. There are solutions—agroecology, regenerative agriculture and agroforestry. The key is to produce while restoring natural resources. The large-scale deployment of these technologies requires mobilising massive financing.

For this, philanthropy and public grants are evidently insufficient. Philanthropic projects depend on outside financing, are often limited to certain time frames, and do not guarantee lasting support to the local communities. On the other hand, corporate projects, almost exclusively targeting high economic returns, make any long-term action impossible. The alternative path was therefore necessary in order to provide a sustainable and profitable response to the issues of climate change and persistent poverty.

This is how Moringa’s strategy was first formed: to propose an alternative path via a profitable, inclusive and sustainable model. This strategy targets a “triple bottom line” approach through investment designed to maximise the social and environmental value of the portfolio while generating a return on investment for its investors, a key condition for a long-term strategy.

2 — A “blended finance” partnership

Moringa was born in 2010 from a meeting between the two founders, Clément Chenost and Hervé Bourguignon, of ONF International and the Edmond de Rothschild group. They were brought together over a shared conviction—urgently providing solutions to environmental issues through sustainable land management.

The theme was new and the approach appealing. Development Finance Institutions and private investors joined the project. Moringa thus became one of the pioneers of “*blended finance*”¹ by responding to two major challenges:

- **Promote the engagement of the private sector on social and environmental themes, alongside public players, to meet growing needs for financing;**
- **Reduce the risks inherent in investing in the agricultural and forestry sectors in developing countries thanks to the presence of locally established development banks.**

Other major technical players, such as The French Agricultural Research Centre for International Development (CIRAD) and the World Agroforestry Center, ramped up efforts, each one contributing specific expertise to better manage the risks and strengthen the impacts of the investments.

This ability to bring together very diverse and complementary actors was a key factor in the success of setting up the fund.

3 – Moringa: the first impact fund dedicated to agroforestry

Moringa therefore became the only private equity player entirely dedicated to agroforestry.

The main existing private investments are concentrated in less risky geographical regions, with less complex farming systems, such as large industrial plantations or agricultural infrastructures.

By making risk capital investments through inclusive, sustainable, resilient, and profitable agroforestry projects, Moringa closely supports farmers and seizes on an opportunity that has been neglected by the financial sector.

Case study 1 - Why agroforestry?

Agroforestry combines trees, crops and/or livestock to obtain a high level of production while restoring natural resources. It is “a dynamic natural resources management system based with ecological foundations that diversifies and maintains production by integrating trees into farms with the overarching goal of improving the social, economic and environmental conditions of all those who live off the land”².

By using the root systems of trees and creating ecological synergies, agroforestry restores biological activity in the soil, favours the recycling of the nutritive elements of crops and improves the efficiency of water cycles³. Agroforestry also enables greater carbon sequestration, reduces soil erosion, preserves water quality, and regulates the microclimate. Agroforestry thus

1 – Blended finance is defined as “the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries” (OCDE, 2017)

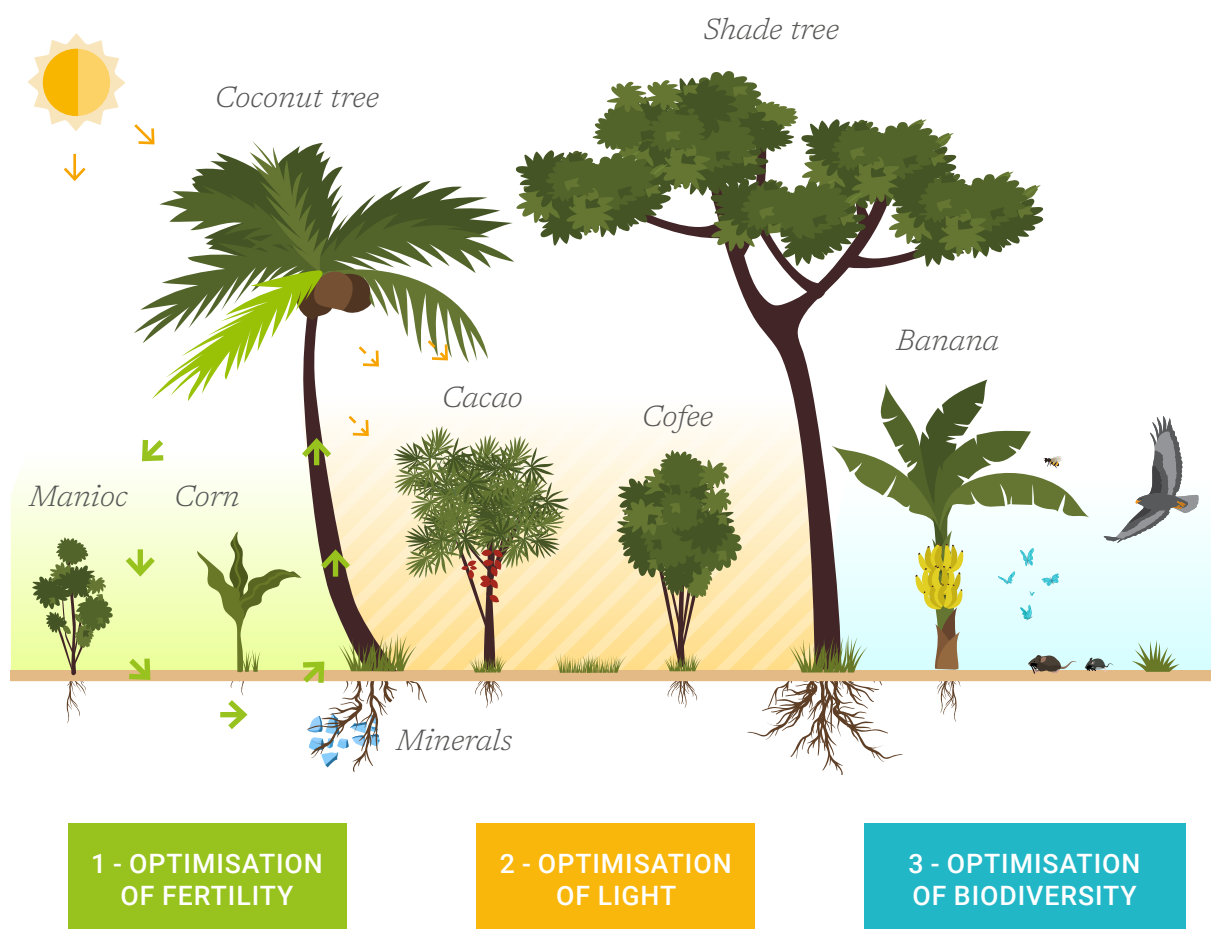
2 – Dupraz and Liagre, 2008

3 – Lapeyre de Bellaire et al., 2016

“enhances the soil”⁴, allowing for the optimisation of production systems in order to mitigate the effects of climate change and reduce the vulnerability of the farmers. Trees have great social significance, especially in rural societies⁵. A mark of property, social status, savings or dowry in some communities, trees are a permanent resource for rural societies –like the palaver tree of the African villages. Used for firewood, building houses or as cash crops, trees outside forests are a crucial resource for people. They also provide precautionary savings and are an important resource for those who are older.

Reintroducing trees into fields therefore can reduce the vulnerability of the local populations and reduce the stress placed on forestry resources by communities. By taking an ecosystemic and inclusive approach to managing rural spaces, agroforestry (as an agroecological solution) offers a transversal response to the regions’ challenges.

This approach stands apart from “conventional” farming, where monoculture allows for high crop yields, but often at the expense of natural resources.



4 – Torquebiau, 2007

5 – Michon, 2015

4 – An innovative structure adapted to risks

The idea of a fund dedicated to agroforestry was appealing due to its novelty, but also raised many questions:

- **No sector track record, repeated failures of agriculture investments in emerging countries in the 80s, 90s and 2000s, notably linked to the high volatility of agricultural markets;**
- **Lack of a climate agreement at the Copenhagen Summit (2009) and the end of the Kyoto Protocol leaving a lasting impact on the carbon markets;**
- **The financial crisis of 2008, 2009 and 2010, and the increased investor demand for liquid investments;**
- **Political instability in Africa and Latin America causing governments to be less favourable to investments and to the sale of assets, lack of necessary infrastructure to ensure the marketing of products⁶ ;**
- **Lack of practical knowledge of agroforestry techniques in comparison to monoculture;**
- **Difficulty to reconcile social and environmental objectives and generate real financial returns in the most disadvantaged rural areas of the world.**

While the investment case remained the same, these questions helped refine and anchor an innovative investment model and address the above mentioned issues. This convinced 18 investors, allowing the first closing of the fund in 2013, then the second closing in 2015, for an amount of more than 80 million euros.

We would like to thank all the investors who made this project possible, and particularly the Global Environment Facility, the African Development Bank, the Latin American Development Bank, Instituto de Crédito Oficial on behalf of the Spanish government, Proparco, the Netherlands Business Development Bank (FMO) and FinnFund.

THE MORINGA MODEL

1 – A “farm to fork” investment strategy

The fund has now deployed its capital to 10 agroforestry companies in 8 countries. The investment tickets range between €2.6 and €8 million. Investments are generally made through a combination of equity and mezzanine debt, resulting in minority and majority stakes between 20 to 90% of the share capital.

All invested companies share the following four main characteristics:

Contribute to the development of agroforestry systems

The companies support the development of agroforestry systems. They encourage the inclusion of trees whenever the system in place is focused on crops, and likewise promote the addition of crops into tree-focused systems.

Case study 2 - Nicafrance (Nicaragua)

Climate change affects seasonality and rainfall patterns. According to several recent studies, a rise in temperature of 2° to 2.5°C would significantly reduce the available surface area for growing coffee plants⁷. Climate change affects seasonality and rainfall patterns. According to several recent studies, a rise in temperature of 2° to 2.5°C would significantly reduce the available surface area for growing coffee plants⁸. Climate change also contributes to the spread of fungal and vector-borne diseases and a consequence of this is productivity loss in plots that are abandoned by farmers who are unable to bear the production costs of a plantation that is no longer profitable. The abandonment of plantations then accelerates the degradation of the land.

In Nicaragua, the coffee sector was heavily impacted by coffee leaf rust and led several growers to abandon their plantations. The remaining plots are ageing and poorly maintained. Agroforestry is traditionally practised in the coffee plantations in Latin America, but with insufficient control over the tree canopy. The amount of shade of the plots is often not adequate. Too much shade leads to the proliferation of fungal diseases; but if there is not enough shade, the trees may not be protected from heavy rains and rising temperatures.

It is therefore of vital importance to disseminate examples of appropriate agroforestry models in coffee-growing regions: with (1) local tree species that will enable soil restructuring and provide economic benefits for growers, if needed, (2) optimal shade levels (40%-50% of coverage), (3) a variety of coffee plant resistant to coffee rust and (4) the adoption of good farming practices. The large and medium-sized farms developed in the regions of Matagalpa and Jinotega have become examples of good management of coffee farms. The thousands of growers employed by Nicafrance and Nicafrance Outgrowers are trained in the proper

⁷ – Intergovernmental Panel on Climate Change, 2014; Bunn et al., 2015

⁸ – Assad et al., 2004

management of agroforestry plantations. They can then replicate these good practices on their own plots.

7 million trees (including coffee plants) have been planted in Nicaragua since 2015. The project will therefore enable the sequestration of between 500,000 and 1 million tons of carbon over the next 10 years. Agroforestry is thus a promising solution for adapting to and mitigating climate change.

Develop wide-reaching partnerships with grower associations and cooperatives

Rural zones of Sub-Saharan Africa and Latin America have enough land to meet global food requirements, but they are also among the poorest regions of the world.

Today, family farmers:

- **Face new constraints and new risks related to climate change such as the rise in fungal and vector-borne diseases on their plantations;**
- **Often find themselves left out of the production strategies designed by and for downstream players;**
- **Remain disorganised and with their production often immobilised ;**
- **Do not have access to credit, innovative techniques, secure and profitable markets.**

Persisting poverty is one of the direct causes of the overexploitation of natural resources resulting in environmental degradation.⁹ For this reason, a global response that places family farms at the core of the solution is vital.

This is the approach chosen by Moringa—establish networks of producers around a central production unit (processing factory, plantation) or cluster, and support them in their development.

Farmers are thus trained in new techniques and receive continuous technical support. They have access to credit, inputs, information, innovations and secure market outlets.

This access allows for (1) an increase in production volumes, (2) the diversification of products, (3) guaranteed stable income and (4) the adoption of agroforestry models.

9 – Cavendish, 2000 ; Rozelle, 1997

These structures respond to a dual challenge: economic and social. They ensure food security in communities and include more women in production models. They enable a more steady and uniform supply to the agri-food industries (in quantity and quality) and easier access to land—this is especially important in countries where land is becoming scarce and is subject to many disputes.

Case study 3 - Comafruits (Mali)

In Mali, mangoes are often called “the green gold of Mali”. The country is the largest producer of mangoes in Africa. However, the country only exports 40% of its production¹⁰, while the remaining 60% are not sold because of inadequate means of transportation, preservation and/or processing. This represents a considerable shortfall for the overall Malian economy but especially for the rural populations. In this context, Comafruits contributes to deriving value from Mali’s agricultural potential by supporting more than 2,300 smallholder farmers and processing more than 6,000 tonnes locally.

In 2019, Comafruits reinforced its supply chain by working in close collaboration with several cooperatives, the objective was to strengthen the capacities of farmers and their cooperatives in order to obtain the Fair Trade, Rainforest Alliance and organic labels in Europe and the United States. To help farmers improve their practices and fulfil the quality criteria for the processing plant, Comafruits partnered with GIZ to train farmers and establish the foundation of contract farming between the selected cooperatives and Comafruits. Thanks to this partnership, 25 growers participated in an exchange visit with pilot farmers who are managing innovative and diversified orchards. 1,750 producers were trained in orchard maintenance, irrigation, and surface water collection. A programme is under way to define the optimal agroforestry model for the mango growers in the region and set up pilot orchards within Comafruits’s network of growers.

Processing locally to capture the added value of the products and promote a circular economy

Subject to the volatility of commodities prices, and with low margins, primary production alone is not enough to develop sustainable value chains.

To address this issue, Moringa promotes local industrial processing (primary or secondary processing) by targeting high added value activities. For example, in Belize, TexBel built the only *HPP*¹¹ juice processing plant in Central America. In Mali, Comafruits is developing freezing and drying transformation units (in addition to a concentrate line), to process a broad range of fruit and vegetables for local and international markets.

10 – Jeune Afrique, 2018

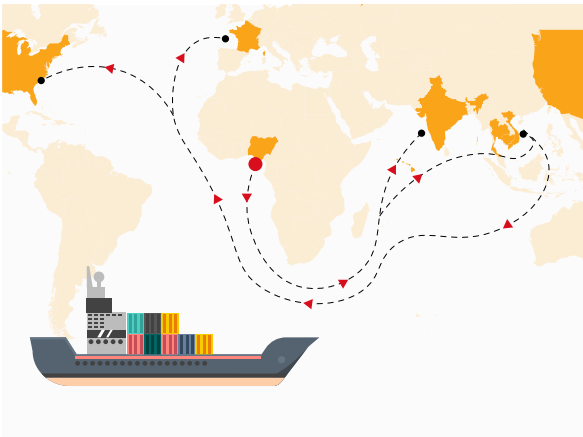
11 – HPP - High Pressure Processing or Pascalisation consists of exposing food products to very high pressure in order to better preserve the products, maintain their natural freshness and organoleptic and nutritional properties. This allows for the production of high-quality juice.

Case study 4 - Tolaro (Benin)

Africa supplies around 39% of the world's cashew production, but processes less than 10% of it. In a traditional scheme, the cashews are shelled in Asia, and then roasted and packaged in Europe or the United States. Each ton of cashew produced therefore involves a journey of nearly 70,000 km. This fragmented value chain increases the carbon footprint of cashews and prevents the added value from being captured at the local level.

By constructing a secondary processing plant in Parakou to roast and season the nuts, Tolaro has been able to reduce the number of kilometres traveled by around 90%, and thus considerably reduce carbon emissions.

With these new facilities, Tolaro is also able to derive value from the broken nuts that cannot be sold by producing cashew flour and butter. In the future, the shells will be used to generate electricity for the plant and the national grid.



Traditional journey of cashew nuts:

- *Shelled in Vietnam (11,750 km)**
- *Roasted in the United States (12,480 km)*
- *Roasted in Europe (9,692 km)*

**To produce 1 container of shelled cashews, 5 containers of unshelled nuts have to be exported to Vietnam*



Journey of Tolaro's cashew nuts:

- *Shelled and roasted locally*
- *Exported to Europe*
- *Exported to the United States*

The investments in processing facilities create jobs, provide access to new technologies, modernise value chains and implement the highest standards of quality (BRC, ISO 22000).

Lastly, new technologies makes a circular economy possible. Biomass power plants and cogeneration plants use the organic waste from the primary processing to generate electricity. This reduces the use of fossil fuels at the factory level and redistributes the surplus energy produced to increase communities' access to clean energy.

“The target of obtaining BRC certification required a greater commitment for a company that was starting from scratch and did not have experienced managers in food safety regulation matters [...]. But the results made the time and efforts taken to work out the details worth it. Following the audit, we received a rating of A+. An impressive success.”

*Fred Richter,
BRC consultant at Tolaro*

Meet consumer demands for healthy food that is beneficial to the farmers and the planet

The last pillar of the strategy is to ensure the sale of the products and to obtain premiums on the prices to derive economic value from the services provided by the companies.

The markets and consumer demand have changed greatly in recent years to favour certified organic products, and for short and more transparent food value chains. Product characteristics, organoleptic or ethic, and product traceability are in high demand.

Between 2008 and 2018, the global organic food market tripled, and experts are expecting further growth of the market in the coming years.¹² The health benefits of food, short value chains or packaging are issues that are gaining public interest. Meeting these new needs provides a differentiating positioning on less competitive, more secure and more profitable markets for farmers.

Case study 5 - Nespresso Master Origin Nicaragua capsules

The coffee chain is global and fragmented. But this fragmentation is currently called into question with the growing demand for quality coffee which requires greater control of the stages of production. Coffee roasters now seek partners with whom they can secure their supply.

The Nicafrance cluster, consisting of a central farm, La Cumplida, and a network of rehabilitated farms, represents a unique opportunity for roasters. The cluster enables (1) quality control of the product (2) a significant supply volume of homogeneous quality, with close to 2,000 hectares of coffee plants under agroforestry system. The entire post-harvest processing is controlled, and each stage is managed to obtain uniform and unique organoleptic properties. Thanks to these exceptional features, the Nicafrance cluster now sells its coffee to Nespresso, which has launched a specific capsule on the market: the Master Origin Nicaragua capsule.

Given their high quality ethical and organoleptic standards, these selections are different from conventional products, whose prices are set on extremely volatile stock markets. The

12 – Agence Bio, 2020

shift from a “commodity product” to a local speciality product justifies asking for a higher price, the only factor guaranteeing stable and attractive prices for the farmers.

Despite the sharp and extended downward cycle of coffee prices since 2016 and a major political and economic crisis in the country, the Nicafrance cluster has been able to maintain its activities, continue to rehabilitate degraded land and support rural communities. While many growers have had to abandon the cultivation of coffee, with production costs exceeding expected revenues and the suspension of local loans, the small growers integrated into the cluster were able to benefit from the 2019-2020 harvest with prices four times higher than those offered by local intermediaries, representing an estimated 100% rise in their income.

Lastly, local processing enables local markets to be targeted. In general, raw tropical products are exported to Europe or the US for processing and local farmers do not have access to the finished product.

“More than 2,000 people have access to new sources of income thanks to our efforts. Today, farmers are able to survive for 3 to 4 months thanks to the revenues generated by the mango plantations. In Africa, what is most important is to create local factories, otherwise all efforts towards agriculture will be in vain. The development of the agri-food industry is the foundation for growth in these countries. Today, African countries are importing mango juice, which is completely absurd.”

*Dino Ballestra,
founder of Comafruits & Sobema*

These markets are growing rapidly because of demographic changes and the changing lifestyles of the middle class. But the demand is often met by imported products.

Moringa therefore also focuses on enabling consumers to discover local products (mango juice in Mali, coconut water in Belize, cashew nuts in Benin, etc.). This double positioning offers international markets and local markets more resilience to the volatility of raw material prices.

Moringa’s investment model therefore reaches beyond the concept of agroforestry alone, making it a real vector for growth of sustainable and fair food value chains. Seven years after its launch, the strategy has supported more than 12,500 smallholder farmers, created or protected jobs in rural areas for 2,300 people, and sustainably managed 15,400 hectares of land.

2 — Joint construction of business models

Moringa is a “first time fund, first time team, first time theme”. A particularly rigorous investment selection criteria was put into place, and out of 800 projects that were studied, only 10 investments were selected. A full set of specifications was established at the launch of the fund, summarising all the best practices in terms of sustainable investment.¹³

The first opportunities presented to the investment committee were rejected. The first two investments did not take place until 2015. Once the model was set up, the pace of investment

13 – IFC Performance Standard, FAO, ICRAF, FSC, etc.

accelerated, and the lion's share of transactions were concluded between 2016 and 2018. To limit the risks, the transactions were generally structured in tranches.

The Moringa team, supported by a network of experts formed over time, dissected the business models in all their aspects—the partners, agronomic models, sources of supply, industrial systems and the markets or macroeconomic context –to better assess the viability of the project.

The commitment to positive social and environmental impact requires considerations that are broader than a conventional fund's requirements: supply and transport networks, logistics and markets, potential land disputes and risk of land grabbing, deforestation and biodiversity loss, integration of local communities into the business project, child labour, water use and the level of water tables, waste management, in difficult rural contexts with insufficient or even a total lack of infrastructures, etc.

Once the risks have been identified, the growth strategy and business models are developed jointly with the entrepreneurs.

3 – Teams at the center of the transactions

At the heart of the project, the Moringa team supports entrepreneurs in several ways (1) through the set-up of a real corporate governance, which is not always obvious for small agricultural enterprises in very poor rural areas, (2) by securing funding for ordinary or specific operations (e.g. crop loans, grants), (3) by developing sales networks in the United States and in Europe and (4) by providing technical support for the management of networks of farmers and cooperatives, the development of innovative agroecological technical itineraries, the improvement of industrial practices and obtaining certifications.

The exchanges are constant. Field visits provide the opportunity to closely monitor the progress of the different action plans, verify the operations and their real impact on the populations, create and maintain contact with the teams on site.

Case study 6 - Strategies adapted to country risk

Moringa invests in countries that still have land available for sustainable agroforestry. These countries also carry risks and receive very little investment generally.

For each investment, the Moringa team establishes specific risk mapping and identifies the weak points of the business model in terms of these risks. Mitigations, the points to watch, backup plans are then defined. Some risks cannot be minimised. Among these are political instability and governance problems, difficulties in applying contracts, the lack of competent managers and technicians, lack of infrastructure, or difficult access to bank lending.

The fund's investments are located in isolated rural areas, the marketing strategy of the companies are often based on export and access to ports is therefore crucial. Substitute roads and ports are necessary in the event of blockades, such as in Mali during the recent coup d'état. Comafruits therefore used other borders, in particular those with Senegal and the Republic of Côte d'Ivoire, to receive the spare parts needed for the factory. All investments in West Africa can ship containers from at least two ports.

Competition rules set by governments are rarely complied with, and local producers have to contend with very strong international competition. For example, local cashew processors in Africa compete with opportunistic traders. The taxes which are in place to protect the local industry are rarely enforced. Companies' business models must plan for this, but they can never rely on advantages or protection, even when mandated by law, as they can too easily be called into question.

A PROVEN AND RESILIENT MODEL

The Moringa investment case is bold, innovative and carries risks that match its ambition.

In developed countries, farmers and entrepreneurs use hedging tools against things like country risk, market volatility and exchange rates. Such tools are generally not available in the geographic regions targeted by Moringa or involve risk premiums that are too high.

Several market or operating risks have materialised in the past years. The agility of the teams, and their proximity to the companies, have enabled Moringa to adapt, and to rebound in several cases. The learning curve has sometimes been steep, but the teams have learned, developed, and acquired new expertise. The strategy has evolved to be stronger.

1 – Managing the volatility of commodity prices

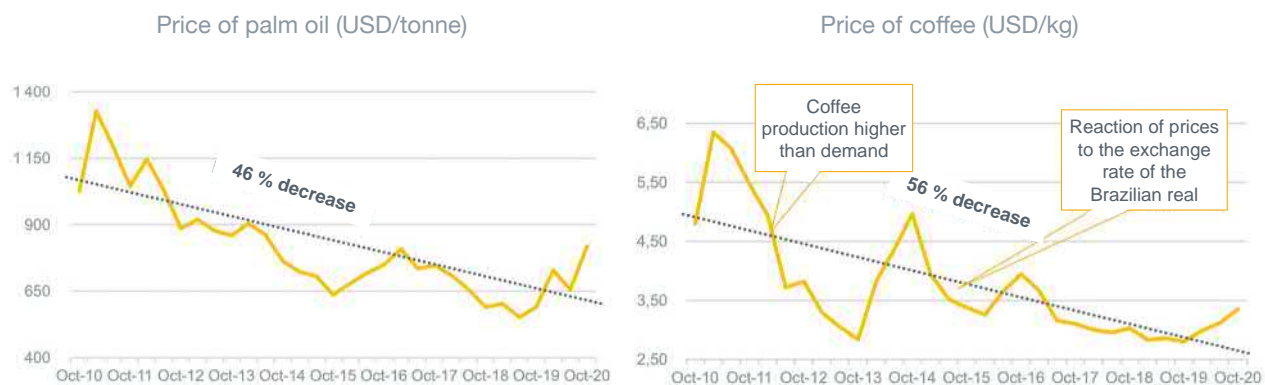
Since the beginning of investment activities in 2015, Moringa has operated within highly volatile agricultural markets, with significant price fluctuations.

At the time of the fundraising, between 2010 and 2013, the prices of agricultural commodities were at peak levels—the highest in over 30 years. Analysts explained this explosion by unexpected long-term trends. Among these trends were the demographic growth of emerging countries, the change in the modes of consumption of a booming middle class, the lack of investment in the farming sector in decades and the use of agricultural land to produce biofuels. There were also more cyclical factors, such as weather disasters and their recurring nature to which the *IPCC*¹⁴ and numerous other scientists had already been alerted.

These very high prices made it difficult to find profitable investments. Prices then collapsed starting in 2015.

For example, Moringa invested in the coffee sector in Nicaragua in 2014. While coffee was trading at around US\$200/lb, Moringa took account of a price assumption of US\$150/lb, deemed very conservative, as a basis of its negotiations and for its financial forecasts. However, the price of coffee has since hardly ever strayed from the US\$90 -120/lb range, except for a brief episode in 2016. The premiums on quality coffee that Moringa and its partners target enabled them to mitigate the shock. But they are fixed and could not compensate for this huge gap.

Among the factors highlighted to explain this drop in prices was the political instability in Brazil, the biggest coffee producer in the world, that had caused the Brazilian real to plummet. The costs of producers plunged while they benefited from price fixes in US dollars. This context encouraged producers to increase their production volume. Excellent harvests in Brazil compounded the decline in the price of coffee.



Source: World Bank

The volatility also affected the currency markets. Moringa invested in countries with stable currencies (CFA franc) as well as ones with weak currencies (Ghanaian cedi, Brazilian real, the Kenyan shilling). The export activity to countries with strong currencies (US dollars and euro) reduced the currency risk.

Lastly, it should be noted that the markets themselves experience fluctuations, contractions, and slowdowns. Moringa's positioning on local markets has proved to be a useful strategy. Consumption growth in Africa is generally decorrelated from international growth rates. While the volatility of prices and of the markets represents a major risk for Moringa's companies, their impact on family farms is vast. The volatility of agricultural prices is also an ongoing problem for countries that depend on the export of their agricultural raw materials. In a context where these countries also have to find additional resources to adapt to climate change or to a pandemic like Covid-19, human disasters can be severe.

Quality and diversification as adaptation strategy

In choosing to work on the structural factors of the strategy, Moringa strengthens the resilience of companies to market shocks. This involves (1) offering a differentiated market positioning thanks to high-quality agricultural products (2) seizing the opportunities offered by the local markets, decorrelated from global prices (3) promoting the local transformation of raw materials into end products that are less exposed to price fluctuations and (4) diversifying production. After several years of decline, the prices of many commodities have recently surged. Could this be the start of a sustainable upwards cycle?

2 – Human capital, a factor for success

In rural areas, the lack of a supportive entrepreneurial environment, which is currently noticeable in cities, is even greater.

Government policies do little to relieve these areas from poverty. The illiteracy rate among farmers is high. Entrepreneurs suffer from a lack of technically skilled locals and appropriate infrastructure (schools, hospitals, well-equipped housing, etc.) to be able to welcome trained managers from other regions or from Europe. The team has often had to fill the gap from Paris, not able to find a financial manager, technical director, or experienced agronomist locally.

Engaged partners with atypical profiles

A successful investment depends, above all, on the people behind it. For Moringa, choosing the “right” partners is a top priority.

Some of these partners have invested a significant portion of their assets to engage in a development adventure, sacrificing a brilliant career path, salary, and comfort to live in a place where life is precarious. Others, following the end of their careers, have dedicated all their time and a portion of their wealth to the development of their social and environmental impact project. In this context, the negotiations of the terms of the partnerships (notably with respect to dilution and liquidity) have often kindled strong emotional reactions.

Their motivations are nevertheless very diverse. For some, it is a long-standing social engagement, a personal calling. They have a clear view of the market opportunities and margins they can make but want this development to make a difference for the farmers and their communities.

Some also work for a very low salary. They provide extreme care in offering an environment that encourages women to become independent, with day-care units, and healthy and balanced canteens.

Others have a more entrepreneurial vision and are willing to comply with the environmental and social requirements of the fund, understanding that this would strengthen the resilience of their business model. Over the years, some of these partners have become the strongest advocates of a system providing environmental and social benefits.

There were also those who were able to support Moringa up to a certain stage, but further skills were needed from them to move forward. Casting errors have happened but have been rare.

Success requires knowing how to grow and manage all components of a company in a chaotic environment. In addition to knowledge about the country and its idiosyncrasies, partners must know the markets they are addressing, be an agronomy expert, an accomplished industrialist, an exceptional manager, etc. They have to be able to compensate, often alone, for the absence of local talent and find solutions for the lack of quality infrastructure.

Electricity shortages are frequent and can damage the electrical equipment. This has led some companies to invest in solar panels or cogeneration plants that produce green energy through the recycling of processing waste. This is notably the case in Benin, Ghana and Mali. Roads sometimes need to be built to provide access to certain regions, as was the case in Nicaragua, where the travel time to the closest village was reduced from 6 hours by horse to a half-hour by truck or scooter.

The entrepreneurs have to become “super-entrepreneurs” with various skills. They must know how to do everything! The most successful teams are the ones with a successful multicultural balance. Dual partnerships in which the power is shared between local and international expertise are generally better able to react to crises.

“I grew up in a village with my grandfather and I worked with him in the fields using traditional methods. In the North, there are no pineapples. I discovered this fruit when I lived in Lomé and worked as an intern in a pineapple drying processing plant.

I also discovered organic farming which was very different from the traditional methods that I used as a child with my grandfather. Something needed to be done to develop organic farming

on a large scale. I also wanted to do something better, more coherent with the pineapple sector. This sector, with little competition and high potential, needed to be developed to give more added value to production and improve the means of subsistence of the farmers.

I started by publishing messages on the Internet to promote fresh pineapple by talking about the taste, the quality and origin of the products. I organised groups of producers, trained them, motivated them and spent a lot of time developing grower networks. The positive reaction to my posts led me to certify the plots. I then started to sell 500kg to 1 tonne of fruit per week.

In 2008, I crossed paths with Diego Garcia, and we started our partnership. We gradually increased the volume of pineapples and diversified into fresh papaya, passion fruit and soya. The most important thing when developing a value chain is to have end-markets for the products. As soon as we have that security, we can start to develop a supplier network.”

*Gustav Bakoundah,
President of Jus Délice*

A network of experts

The success of the strategy also depends on the partnerships and human ecosystems developed over the years.

The depth of Moringa’s investment case requires not only agronomic but industrial, financial, and marketing expertise. While the team supports the companies in their search for financing—having virtually no banking network in the regions of intervention—strategic decisions are generally taken on the basis of external studies and with the support of specialised experts in very specific fields. Moringa has therefore established a network of organizations, such as ONF International, Nitidae, Earthworm Foundation, Okan, Technoserve, CIRAD, ICRAF and others. This network supports the portfolio companies by addressing their needs and helping them with issues that arise.

In addition to this network of experts, there is another network of patient and attentive financial institutions with a good knowledge of Africa (Oikocredit, Incofin, Triodos, etc.) and the Agroforestry Technical Assistance Facility (ATAF).

Case study 7 - The Agroforestry Technical Assistance Facility (ATAF)

ATAF is a tool aimed to strengthen, extend and replicate Moringa fund's impact through technical assistance projects. For social impact, ATAF focuses mainly on small farms and vulnerable persons, to include them in the value chains. On the environmental front, ATAF focuses on transforming negative externalities into positive externalities.

ATAF aims to eliminate the obstacles in developing sustainable agriculture, based on the principles of agroforestry and the inclusion of small farmers, via public-private partnerships with the companies benefiting from the investments. In the short term, this is implemented by defining solutions, tools, recommendations, and training to drive a change in practices. In the long term, the impact sought by ATAF is to improve income and living conditions in rural areas and to better protect the environment.

ATAF has mobilised more than 4 million euros in grants, deployed via 18 projects.

The Moringa team

Their diverse profiles and experience helps the team tackle a variety of issues and challenges. Beyond the financial expertise required for the analysis, making the investments, and monitoring the performance of the portfolio, the team has additional agronomic, forestry, economic and social expertise, notably in developing smallholder farmer networks. Knowledge of Sub-Saharan Africa and Latin America is necessary to understand the target markets in Europe and the United States.

The team's experience in these regions allows it to understand the unique contexts of the portfolio, identify competent partners, and maintain solid and sustainable relationships with them.

The team has thus acquired an ability to identify investments in geographical regions where numerous traps and risks can materialise. It has learned to build investments in collaboration with the entrepreneurs and agricultural SMEs, which operate in very different environments from traditional European or North American venture capital, and to set up a dialogue between them.

A lot has been learned but there are still notable avenues of improvement. The pooling of financial, marketing, and technical functions at the portfolio level could be better used to maximise synergies among companies.

Case study 8 - The main success factors of the investments

- 1 – A **partner** experienced in agronomy and farm management and the processing industry, and who is knowledgeable of the markets
 - 2 – A **dual market positioning** with the potential to generate income from environmental and social practices in the field (export) and through local markets
 - 3 – Building a **lasting competitive advantage** over time (organoleptic, ethical, local, etc.)
 - 4 – **Vertical integration** to capture the added value of the products and no longer be dependent on the volatility of the markets
 - 5 – **Long-term partnerships with buyers** that can perpetuate transactions (via the acquisition of a stake/a company)
 - 6 – An **economic model** that does not depend on tax advantages or accommodative regulations
 - 7 – **Pooling of expertise** to capitalise on synergies between the portfolio companies
-

PROMOTING FOOD THAT IS TRACEABLE AND HEALTHY FOR THE CLIMATE AND BIODIVERSITY.

The state of living things is at the core of the major issues that the world faces. Certain underlying trends that began in recent years are accelerating with the global pandemic. A growing population and reduced access to resources such as arable land and water are becoming a dangerous reality. Such factors can prove to be devastating in a vulnerable rural world.

The systems that produce food and fibre, cosmetics and forestry products need to change in order to preserve the ecosystems, increase yields, shorten supply chains and provide farmers with a fair income.

1 – The “decommoditisation” of value chains

Our food comes, to a great extent, from commodities, i.e., standardised products differentiated only by price. Their mode of production is largely based on the industrial model: large-scale monoculture, use of chemical products (fertilizers, pesticides) and automation. The financial markets (derivatives) offer protection against price fluctuations. Agricultural commodities generally come from selected varieties that guarantee high yield, resilience to pests, and a uniform taste that matches the average consumer demands. Their affordable price enables their broad distribution.

This model, combined with the “green revolution”, drove an unprecedented increase in productivity following World War II to address the great famines. Many negative outcomes are attributed to it such as soil erosion and exhaustion, pollution of water sources, greenhouse gas emissions, reduction in biodiversity and land grabbing.

The distribution of commodities is dominated by a few powerful agents controlling certain links in the value chain, production, trading, or distribution. The lack of transparency and the opaqueness of these industries are reflected in the difficulty to access information on the origin of products and their production method.

Many European surveys confirm the mistrust of consumers vis-à-vis mass-market products. 9 out of 10 French people say they are worried about the quality of their food. Various scandals—mad cow disease, horse meat, contaminated milk in Europe and in China—have made a lasting dent in consumer confidence in mass market products. Consumers are now demanding full transparency of supply chains, ingredients, origin, and production methods. Consumers are now better educated and are changing the industry. Product characteristics have to be totally traceable and transparent from farm to fork. Environmental and social criteria are alerting us to risks such as deforestation.

The interconnection between health and food is much more direct than before. Certain applications are available to inform consumers about a product’s ingredients and their health benefits. Short food value chains and packaging are also becoming increasingly important when choosing a product.

This trend is gaining ground for many products such as tropical fruit, which are now

known by the names of their varieties in specialty grocery stores: for example, the Victoria, Cayenne or Pain de sucre pineapple (a speciality of Togo).

Case study 9 - The health benefits of some of the products from the Moringa portfolio

Mangoes are known as the “king of tropical fruits”. They are rich in polyphenols, beta carotene, minerals, vitamins A, B and C, which are antioxidants, and contribute to supporting the digestive system and reinforcing the immune system.

Coconut water is rich in potassium, fibres and enzymes that support the digestive system. It contains lauric acid, which acts as an antibacterial agent, and therefore protects and reinforces the immune system.

Cashews provide 20g of protein for 100g of nuts. They are currently in high demand, notably for the preparation of vegetarian meat alternatives or dairy milk.



**1 mango = 50%
of the daily recommended
intake of vitamin C.**



**Cashews provide 20g
of protein for 100g of nuts.**



=



**1 glass of coconut water
= 5 oranges !**

The demand for fully traceable health products, which reduce the intermediaries between producers and consumers, holds many entrepreneurial opportunities. New high-growth start-ups are competing with the traditional agri-food players.

The fragmentation of the market is illustrated by the many distribution channels. The major food retail banners (supermarkets and hypermarkets) are rivalled by the development of e-commerce on the one hand, and by “direct” sales by the growers on the other.

The increase in the number of distribution channels represents more opportunities for the companies in the Moringa portfolio to sell their products.

2 – Two accelerators: new technologies and the COVID-19 crisis

Better traceability is now available through new technologies.

Satellite technologies make it possible to map the origin of agricultural products and determine their link to deforestation. Applications use such data to advise farmers in good

farm management and the implementation of agroecological practices. Databases allow consumers to choose products according to health benefits for themselves, for the earth and to the farmers. Lastly, digital platforms directly linking producers and consumers favour better allocation of the added value of the products.

These technologies provide easier access to information and guide consumer choices. They can also contribute to the implementation of new regulations, such as the European policy addressing imported deforestation.

Lastly, it is important to note that Covid-19 has been accelerating these trends¹⁵. The prospect of another pandemic gives the food sector strategic importance in developed economies. The products derived from short food value chains respond to this need and consumer demands.

3 – Climate and biodiversity risks and opportunities

Borders do not stop viruses, nor do they block global warming. The main biodiversity hotspots are in the tropics, where Moringa is invested.

Under increasing pressure from the general public, alarmed by the natural disasters and Covid-19, the climate emergency is at the forefront of actively discussed global issues. 66 countries have announced that they will achieve carbon neutrality in 2050-60. This number includes China, which is responsible for a quarter of GHG emissions. The United States has also rejoined the Paris Agreement. More than 1,100 listed companies have committed to a zero emissions target. Amazon launched the Climate Pledge Fund in June 2020, a vehicle intended to finance the low-carbon economy with funds of \$2 billion USD. Microsoft launched the \$1 billion USD Climate Innovation Fund.

Health, biodiversity, and global warming are evidently interconnected. The development of agriculture and the destruction of forests increases the places where man and fauna meet, raising the possibilities for the emergence of zoonosis.

The preservation and restoration of “natural capital” has thus become a major subject in light of the rapidity of the destruction of biodiversity. The Dasgupta report (2021) shows that global economic growth caused a 40% decline in natural capital per person since 1992. The Convention on Biological Diversity (CBD) proposes protecting at least 30% of the planet by 2030 to fight against the accelerated deterioration in nature. Governments, international companies, intergovernmental organisations are following suit and committing to similar objectives.

The global commitment to protecting climate and biodiversity creates a long-term trend that would highlight the value of the services provided by companies such as those in the Moringa portfolio.

The international climate finance market is set to reach 640 billion dollars this year¹⁶ and companies such as Walmart, Amazon, Nestlé, Alibaba and Mahindra Group have committed to reducing their emissions and investing in nature. Demand for agricultural and forestry carbon offsets could exceed supply between now and 2025, the price of carbon could quadruple by 2030 and the offset market could be worth US\$ 125-150 billion each year by 2050.

This presents a real opportunity to strengthen the economic viability of assets that protect and develop “natural capital”.

Case study 10 - The key role of Africa

A recent report by the McKinsey¹⁷ consulting firm underlined the potential of the sector of living things (Nature-Based Solutions) to respond to the climate challenge and it also highlighted that most opportunities are located in tropical regions.

Africa will see its population increase from 1.2 billion in 2019 to 2.5 billion inhabitants in 2050. The challenge is therefore to feed its population, bring development to isolated and vulnerable rural areas that live off agriculture and livestock. Sahelian Africa has to confront a climate and environmental challenge with the degradation of soil, the spread of desertification, and give meaning back to the lives of its youth. Central Africa and the Congo Basin, covered in dense forests with rich biodiversity, have to fight against deforestation. East Africa has already lost all its forest and is seeing the salinisation of its great lakes, the disappearance of its fauna of large mammals, and must face similar challenges placing agriculture at the core of the economic, social and environmental stakes.

16 – NatWest Markets, 2020

17 – Why Investing in Nature is key to climate mitigation, 2021

Conclusion

With the sale of its stakes three years from now, the Moringa fund is entering the last phase of its development.

The major market trends underpin its initial vision: agroforestry is no longer a “niche”. Numerous funds and investment platforms are developing around the themes of agroecology, healthy food and natural capital. The food industry is changing rapidly and is favouring production platforms capable of demonstrating a real impact for the planet and farmers. These initiatives are welcome and constitute opportunities for the takeover, development and replication of Moringa’s assets.

Business plans anticipate contingencies but never chaos. The simulations and projections based on steady, Gaussian growth do not take into account the many “black swans”. The fund’s partners have done wonders. The teams succeeded in turning around some businesses that had been considered past hope. Time and determination are required to consolidate positions.

Moringa’s investments are excellent platforms that can be developed further to maximise their environmental and social impact. The associations of farmers now only ask to supply other products. The platforms can protect the natural capital while playing an economic role in the countries and a social function in vulnerable rural areas.

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